

SEVENTH EDITION



TANYA HEMPHILL

DAVID EDMUNDSON-BIRD

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DIGITAL BUSINESS AND E-COMMERCE MANAGEMENT



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DIGITAL BUSINESS AND E- COMMERCE MANAGEMENT

SEVENTH EDITION

**DAVE CHAFFEY,
TANYA HEMPHILL
DAVID EDMUNDSON-BIRD**



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PEARSON EDUCATION LIMITED

KAO Two
KAO Park
Harlow CM17 9SR
United Kingdom
Tel: +44 (0)1279 623623
Web: www.pearson.com/uk

First published 2002 (print)
Second edition published 2004 (print)
Third edition published 2007 (print)
Fourth edition published 2009 (print)
Fifth edition published 2011 (print)
Sixth edition published 2015 (print and electronic)
Seventh edition published 2019 (print and electronic)

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© Marketing Insights Limited 2002, 2009, 2011
© Marketing Insights Limited 2015 (print and electronic)
© Pearson Education Limited 2019 (print and electronic)

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ISBN: 978-1-292-19333-5 (print)

978-1-292-19335-9 (PDF)

978-1-292-19336-6 (ePub)

British Library Cataloguing-in-Publication Data

A catalogue record for the print edition is available from the British Library

Library of Congress Cataloging-in-Publication Data

Names: Chaffey, Dave, 1963- author. | Edmundson-Bird, David, author.

| Hemphill, Tanya, author.

Title: Digital business and e-commerce management : strategy, implementation and

practice / Dave Chaffey, David Edmundson-Bird and Tanya Hemphill.

Other titles: E-business and e-commerce management

Description: Seventh edition. | Harlow, England ; New York : Pearson, [2019]

Identifiers: LCCN 2018048265| ISBN 9781292193335 (print) |

ISBN 9781292193359 (pdf) |

ISBN 9781292193366 (epub)

Subjects: LCSH: Electronic commerce. | Business enterprises--
Computer networks.
Classification: LCC HF5548.32 .C472 2019 | DDC 658.8/72--dc23
LC record available at [https://urldefense.proofpoint.com/v2/url?
u=https-3A_lccn.loc.gov_20
18048265&d=DwIFAg&c=0YLnzTkWOdJlub_y7qAx8Q&r=DHV
3lB6NYyi5k52Oyd75rqJsJAnt
DLt1_vXNeqFI9Y&m=0nlHtyBYQs36TSi0YZg4vQ0e3aIvW_P-
7krILSmqLEI&s=BG19fgbHozu
ya0aTHRnmreWctZMpky2owjRZEtZJTj8&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A_lccn.loc.gov_2018048265&d=DwIFAg&c=0YLnzTkWOdJlub_y7qAx8Q&r=DHV3lB6NYyi5k52Oyd75rqJsJAntDLt1_vXNeqFI9Y&m=0nlHtyBYQs36TSi0YZg4vQ0e3aIvW_P-7krILSmqLEI&s=BG19fgbHozuya0aTHRnmreWctZMpky2owjRZEtZJTj8&e=)

10 9 8 7 6 5 4 3 2 1
23 22 21 20 19

Cover Image: DrAfter123/DigitalVision Vectors/Getty Images Plus

Print edition typeset in 10/12 pt Sabon MT Pro by Pearson CSC
Printed and bound by L.E.G.O. S.p.A., Italy

NOTE THAT ANY PAGE CROSS REFERENCES REFER TO
THE PRINT EDITION

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Preface

In 1969, the United States was able to land two men on the Moon, only seven years after John F. Kennedy's famous 'We choose to go to the Moon' speech in Houston in 1962 as part of NASA's Apollo space programme. NASA used advanced computing (for the time) to get their payload into orbit and then send the crew to the Moon and land there. Known as the Apollo Guidance Computer (AGC), the system remained unmatched in power for more than a decade, until the advent of the personal computing era.

Only 50 years later, a device many times more powerful than the AGC is carried around by several billion people. Smartphones contain more computing power and offer a dizzying array of functions compared to NASA's computers. Even modern washing machines now contain more computing power.

The smartphone is a gateway for many digital business opportunities, and most users of smartphones are blissfully unaware of the intricacies of the infrastructure that supports their telephony, their access to the Internet or the functionality of their apps. The development of everything that underpins digital business is not straightforward and fraught with difficulties of selecting the correct strategic direction and surviving in an increasingly harsh competitive environment. Not all who follow the route survive. But whether it's the start-up businesses or an existing business, what they have in common is that those who prosper learn to optimise to take the right strategic decisions about digital technology, digital marketing and supply chain management.

This book is intended to equip current and future managers with some of the knowledge and practical skills to help them navigate their organisation towards digital business.

A key aim of this book is to identify and review the key management decisions required by organisations moving to digital business and consider the process by which these decisions can be taken. Key questions include: What approach to digital business strategy do we follow? How much do we need to invest in digital business? Which processes should be our digital business priorities? Should we adopt new business and revenue models? What are the main changes that need to be made to transform an organisation that uses technology to a true digital business?

Given the broad scope of digital business, this book takes an integrative approach drawing on new and existing approaches and models from many disciplines, including information systems, strategy, marketing, supply chain management, operations and human resources management.

What is digital business management?

As we will see in Chapter 1, **digital business** is aimed at enhancing the competitiveness of an organisation by deploying innovative digital technologies throughout an organisation and beyond, through links to partners and customers and promotion through digital media. It does not simply involve using technology to automate existing processes, but is about digital transformation by applying technology to help change these processes to add value to the business and its customers. To be successful in managing digital business, a breadth of knowledge is needed of different business processes and activities from across the value chain, such as marketing and sales, through new product development, manufacturing and inbound and outbound logistics. Organisations also need to manage the change required by new processes and technology through what have traditionally been support activities such as human resources management.

Digital business

How businesses apply digital technology and media to improve the competitiveness of their organisation through optimising internal processes with digital and traditional channels to market and supply.

From this definition, it is apparent that digital business involves looking at how electronic communications can be used to enhance all aspects of an organisation's **supply chain management**. It also involves optimising an organisation's **value chain**, a related concept that describes the different value-adding activities that connect a company's supply side with its demand side. The digital business era also involves management of a network of interrelated value chains or **value networks**.

Supply chain management (SCM)

The coordination of all supply activities of an organisation, from its suppliers and partners to its customers.

Value chain

A model for analysis of how supply chain activities can add value to products and services delivered to the customer.

Value networks

The links between an organisation and its strategic and non-strategic partners that form its external value chain.

What is e-commerce management?

To set the scope of this text, in its title we reference both 'digital business' and '**e-commerce**'. Both these terms are applied in a variety of ways; to some they mean the same, to others they are quite different. As explained in Chapter 1, what is most important is that they are applied consistently within organisations so that employees and external stakeholders are clear about how the organisation can exploit digital communications. The distinction made in this text is to use electronic commerce (e-commerce) to refer to all types of electronic transactions between organisations and stakeholders, whether they are financial transactions or exchanges of information or other services. These e-commerce transactions are either **buy-side** e-commerce or **sell-side** e-commerce and the management issues involved with each aspect are considered separately in Part 2 of the book. 'Digital business' is applied as a broader term encompassing e-commerce but also including all digital interaction within an organisation.

Electronic commerce (e-commerce)

All electronically mediated information exchanges between an organisation and its external stakeholders.

Buy-side e-commerce

Transactions between an organisation and its suppliers and other partners.

Sell-side e-commerce

E-commerce transactions between an organisation and its customers.

Management of e-commerce involves prioritising buy-side and sell-side activities and putting in place the plans and resources to deliver the identified benefits. These plans need to focus on management of the many risks to success, some of which you may have experienced when using e-commerce sites, from technical problems such as transactions that fail, sites that are difficult to use or are too slow, through to problems with customer service or fulfilment, which also indicate failure of management. Today, the **social media** or peer-to-peer interactions that occur between customers on company websites, blogs, apps and social networks have changed the dynamics of online commerce. Likewise, the frenzied consumer adoption of **mobile technology platforms** via **mobile apps** offers new platforms to interact with customers that must be evaluated and prioritised. Deciding which of the many emerging technologies and marketing approaches to prioritise and which to ignore is a challenge for all organisations!

Social media

A category of media focusing on participation and peer-to-peer communication between individuals, with sites providing the capability to develop user-generated content (UGC) and to exchange messages and comments between different users.

Mobile technology platforms

Devices and services used by consumers to interact with other consumers and companies, including smartphones, tablets and wearable technology.

Mobile apps

A software application that is designed for use on a mobile phone or tablet, typically downloaded from an app store. iPhone apps are best known, but all smartphones support the use of apps, which can provide users with information, entertainment or location-based services such as mapping.

How is this text structured?

The overall structure of the text, shown in Figure P.1, follows a logical sequence: introducing the foundations of digital business concepts in Part 1; reviewing alternative strategic approaches and applications of digital business in Part 2; and how strategy can be implemented in Part 3. Within this overall structure, differences in how electronic communications are used to support different business processes are considered separately. This is achieved by distinguishing between how electronic communications are used, from buy-side e-commerce aspects of supply chain management in Chapters 6 and 7, to the marketing perspective of sell-side e-commerce in Chapters 8 and 9. Figure P.1 shows the emphasis of perspective for the particular chapters.

Part 1: Introduction (Chapters 1-4)

Part 1 introduces digital business and e-commerce. It seeks to clarify basic terms and concepts by looking at different interpretations of terms and applications through case studies.

- **Chapter 1: Introduction to digital business.** Describes the impact of digital communications on traditional businesses and shows the difference between a digital business and an e-commerce business.
- **Chapter 2: Opportunity analysis for digital business and e-commerce.** Introduction to new business models and marketplace structures enabled by digital communications.
- **Chapter 3: Managing digital business infrastructure.** Background on the technology that needs to be managed to achieve digital business.

- **Chapter 4: Key issues in the digital environment.** Describes the macro-environment of an organisation, which presents opportunities and constraints on strategy and implementation.

Part 2: Strategy and applications (Chapters 5-8)

In Part 2 of the text, approaches to developing digital business strategy and applications are reviewed for the organisation as a whole (Chapter 5), and with an emphasis on buy-side e-commerce (Chapters 6 and 7) and sell-side e-commerce (Chapters 8 and 9).

- **Chapter 5: Digital business strategy.** Approaches to developing digital business strategy. How to do strategic analysis and define strategic objectives. The link with business strategy. How to implement a digital business strategy.
- **Chapter 6: Supply chain and demand.** A supply-chain perspective on strategy, with examples of how technology can be applied to increase supply-chain and value-chain efficiency. How to manage demand. Dealing with e-procurement.
- **Chapter 7: Digital marketing.** Understanding digital marketing. Planning for digital marketing.
- **Chapter 8: Customer relationship management.** Reviewing marketing techniques that apply ‘digital’ for acquiring and retaining customers.

Part 3: Implementation (Chapters 9-10)

Management of digital business implementation is described in Part 3 of the text, in which we examine practical management issues involved with creating and maintaining digital business solutions.

- **Chapter 9: Customer experience and service design.** Analysis for digital projects. Business processes. Designing a digital business. Looking at customer experience.
- **Chapter 10: Managing digital transformation and growth hacking.** An overview of the key elements of digital transformation. Principles of growth hacking and measuring the performance of digital.

Part 1 INTRODUCTION

Chapter 1
Introduction to
digital business

Chapter 2
Opportunity
analysis for digital
business and
e-commerce

Chapter 3
Managing
digital business
infrastructure

Chapter 4
Key issues in the
digital
environment

Part 2 STRATEGY AND APPLICATIONS

Chapter 5
Digital business
strategy

Chapter 6
Supply chain
and demand

Chapter 7
Digital
marketing

Chapter 8
Customer
relationship
management

Part 3 IMPLEMENTATION

Chapter 9
Customer
experience and
service design

Chapter 10
Managing digital
transformation and
growth hacking

Key

 Sell-side e-commerce emphasis

 Digital business emphasis

P.1

Who should use this text?

Students

This text has been created as the main student text for undergraduate and postgraduate students taking specialist courses or modules that cover

digital business, e-commerce information systems or digital marketing. The book is relevant to students who are:

- *undergraduates on business programmes* that include modules on the use of the Internet and e-commerce; this includes specialist degrees such as digital business, e-commerce, digital marketing and marketing, or general business degrees such as business studies, business administration and business management;
- *undergraduate project students* who select this topic for final-year projects or dissertations - this book is an excellent resource for these students;
- *undergraduates completing work placement* involved with different aspects of digital business, such as managing digital resources or company digital communications;
- postgraduate students on specialist master's degrees in e-commerce, digital business or digital marketing and generic MBA, Certificate in Management or Diploma in Management Studies that involve modules or electives for e-commerce and digital marketing.

What does the text offer to lecturers teaching these courses?

The text is intended to be a comprehensive guide to all aspects of deploying digital business and e-commerce within an organisation. The text builds on existing theories and concepts and questions the validity of these models in the light of the differences between the 'digital' and other media. It references the growing body of literature specific to digital business, e-commerce and digital marketing. As such, it can be used across several modules. Lecturers will find that the text has a good range of case studies, activities and exercises to support their teaching. These activities assist in using the text for student-centred learning as part of directed study. Web links given in the text and at the end of each chapter highlight key information sources for particular topics.

Practitioners

There is also much of relevance in this text for the industry professional, including:

- *senior managers and directors* seeking to apply the right digital business and e-commerce approaches to benefit their organisation;
- *digital managers* who are developing and implementing digital business and e-commerce strategies;
- *marketing managers* responsible for defining a digital marketing strategy and implementing and maintaining organisational digital communications channels;
- *supply chain, logistics and procurement managers* wanting to see examples of best practice in using e-commerce for supply chain management;
- *technical project managers* who may understand the technical details of building digital resources, but have a limited knowledge of business or marketing fundamentals.

Student learning features

A range of features has been incorporated into this text to help the reader get the most out of it. The features have been designed to assist understanding, reinforce learning and help readers find information easily. They are described in the order you will encounter them.

At the start of each chapter

- *Chapter at a glance*: a list of main topics, ‘focus on’ topics and case studies.
- *Learning outcomes*: a list describing what readers can learn through reading the chapter and completing the activities.
- *Management issues*: a summary of main issues or decisions faced by managers related to the chapter topic area.
- *Web support*: additional material on the companion website.
- *Links to other chapters*: a summary of related topics in other chapters.
- *Introductions*: succinct summaries of the relevance of the topic to marketing students and practitioners, together with content and

structure.

Within each chapter

- *Activities*: short activities in the main text that develop concepts and understanding, often by relating to student experience or through reference to websites. Model answers to activities are provided at the end of the chapter where applicable.
- *Case studies*: real-world examples of issues facing companies that implement digital business. Questions at the end of the case study highlight the main learning points from that case study.
- *Real-world digital business experiences*: interviews with e-commerce managers at a range of UK, European and US-based organisations concerning the strategies they have adopted and their approaches to strategy implementation.
- *Digital trends updates* (in Chapters 1 and 3): references to relevant statistical sources to update information on the latest consumer and business adoption of digital technology.
- *Box features*: these explore a concept in more detail or give an example of a principle discussed in the text.
- *'Focus on' sections*: more detailed coverage of specific topics of interest.
- *Questions for debate* : suggestions for discussion of significant issues for managers involved with the transformation required for digital business.
- *Definitions*: when significant terms are first introduced in the main text, succinct definitions can be found in the margin for easy reference.
- *Web links*: where appropriate, web addresses are given for further information, particularly those that update information.
- *Chapter summaries*: intended as revision aids and to summarise the main learning points from the chapter.

At the end of each chapter

- *Self-assessment exercises*: short questions that will test understanding of terms and concepts described in the chapter.

- *Discussion questions*: questions requiring longer essay-style answers discussing themes from the chapter, which can be used for essays or as debate questions in seminars.
- *Essay questions*: conventional essay questions.
- *Examination questions*: typical short-answer questions found in exams, which can also be used for revision.
- *References*: list of books, articles or papers referred to within the chapter.
- *Web links*: these are significant sites that provide further information on the concepts and topics of the chapter. All website references within the chapter, for example company sites, are not repeated here. The website address prefix 'http://' is omitted from www links for clarity.

At the end of the book

- *Glossary*: a list of definitions of all key terms and phrases used within the main text.
- *Index*: all key words and abbreviations referred to in the main text.

Learning techniques

The text is intended to support a range of learning styles. It can be used for an active or student-centred learning approach whereby students attempt the activities through reflecting on questions posed, answering questions and then comparing their answer to a suggested answer at the end of the chapter. Alternatively, students can proceed straight to suggested answers in a more traditional learning approach, which still encourages reflection about the topic.

Module guide

Table B presents one mapping of how the text could be used in different weekly lectures and seminars through the core eleven weeks of a module where the focus is on management issues of digital business and e-commerce.

A full set of PowerPoint slides and accompanying notes to assist lecturers in preparing lectures is available for download at www.pearsoned.co.uk/chaffey.

Enhancements for the seventh edition

The effective chapter structure of previous editions has been retained, but many other changes have been incorporated based on lecturer and student feedback. We now refer to ‘digital business’ throughout, rather than the dated term ‘e-business’ which we had included from the first edition in 2002. The rationale is that the term e-business is less used now in industry; instead, companies increasingly reference management of digital technologies, channel strategies, digital marketing and digital transformation.

You will see from the listing of updates below that the most significant additions to the content reflect the growth in importance of mobile marketing and commerce and inbound marketing, including content marketing and social media marketing.

Each chapter has been rationalised to focus on the key concepts and processes recommended to evaluate capability and develop digital business strategies. The main updates for the seventh edition on a chapter-by-chapter basis are:

- *Chapter 1.* The chapter starts by introducing the major trends now determining selection of digital services, which are a major theme in the text, but the focus is increasingly around the nature of ‘digital’ as opposed to simply technology or ‘e’ components. There are new cases on businesses where digital is at the heart of the proposition, particularly Uber and Amazon.

- *Chapter 2.* Increased emphasis on new business models for digital start-up businesses, of particular interest to students. Mini case studies on Boden and Macys have been added to give recent examples of how businesses are evolving with changes in consumer behaviour because of mobile.
 - There is also a new case on the Dollar Shave Club.
 - Updated review of *online ecosystem* to explain the increasing role of *omnichannel in the customer journey*.
 - A focus on tech start-ups introduced. A useful guide for students to consider emerging business models driven by technology and understand new terms, such as unicorn businesses.
- *Chapter 3.* Updates to cases and enhancements to the language to reflects changes in the technology and changes to professionals' views of the technology, with an emphasis on the understanding of the capability of technology rather than knowing exactly how it works. There are many new cases and a big update to reflect changes in Google.
- *Chapter 4.* A lot of updates have been made in this new edition because of changes in consumer attitudes and behaviour. This includes discussions on showrooming, influencer marketing and multiscreening. It also includes sections on M-shopping segmentation and attitudes to behavioural ad targeting. Other updates include recent political changes and how they link to micro-localisation vs globalisation.
- This update also includes changes to data protection and privacy laws, in relation to the 2018 EU General Data Protection Regulation (GDPR). Other changes include information on the UK government's digital strategy and discussion around how companies are utilising tech incubators and accelerators for innovation.
- *Chapter 5.* This chapter has been updated with new sections on disruptive innovation and platform strategy. A new case study on how Zappos has innovated a marketplace and the company's unique culture has been added. There are also two new mini case studies from Onedox about peer-to-peer lending and Arriva Bus and their M-ticket app.
- *Chapter 6.* This chapter has merged Chapters 6 and 7 from the last edition and has been renamed 'Supply chain and demand'. It covers supply chain management (SCM) and e-procurement.

- Most of the updates include how technology is making the supply chain and e-procurement more efficient and effective. A new case study on Zara explains how the fashion retailer uses the supply chain to gain competitive advantage. Mini case studies from Boots and Honeywell have also been added.
- *Chapter 7.* This has now become the chapter on digital marketing. It has been updated with an interview from the co-founder and marketing director of Country Attire, an independent online retailer. There are also two new mini case studies, one about how Firebox used crowdfunding to tap into a ready-made distribution network and the other about Hotel Chocolat's brand identity.
- *Chapter 8.* This chapter covers customer relationship management. It includes discussions on changes to customer service expectations and the growing use of new technologies such as Live Chat. A new case study has been added, which explains how Warby Parker has disrupted the eyewear market. There are also new mini cases from Hubspot and First Choice.
 - A discussion on eCRM versus social CRM has also been added.
- *Chapter 9.* This is a revised chapter, which was Chapter 11 in the last edition. It has been renamed 'Customer experience and service design' and has a focus on customer experience (CX). Updates include an interview with the Head of Digital at Domino's Pizza UK and an introduction to the six pillars of customer experience, as well as a CX management framework. A new B2B mini case study has been added from Miele. The cyber security section has been updated and massive security breaches at TalkTalk and Uber are discussed.
- *Chapter 10.* This is a completely new chapter, in line with changes in the marketplace, which includes a section on digital transformation and growth hacking. The section on digital transformation looks at the way organisations as a whole now have to think of themselves when they engage in change that is centered around a digital opportunity. The section on growth hacking is a relatively new concept that is particularly relevant to digital start-ups, but can be applied to existing businesses too. Case studies and mini case studies from Spotify, Hotmail, Instagram, Leon and others have been added.

Chapter	Case study	
1 Introduction to digital business and e-commerce	1.1	The Uber business model
	1.2	Amazon - the world's largest digital business?
2 Opportunity analysis for digital business and e-commerce	2.1	How Boden grew from an eight-product menswear catalogue to an international brand with over £300 million in sales
	2.2	Unilever demonstrates strategic agility
	2.3	Macy's - using omnichannel growth strategies to improve customer experience
	2.4	i-to-i - a global marketplace for a start-up company
3 Managing digital business infrastructure	3.1	Innovation at Google (2017 update)
4 Key issues in the digital environment	4.1	The implications of micro-localisation vs globalisation based on consumer attitudes
5 Digital business strategy	5.1	Hrriva Bus redesigns its m-ticket app and boosts revenue by over 17%
	5.2	Setting the Internet revenue contribution at Sandvik Steel
	5.3	Zappos innovates in the digital

		marketplace
	5.4	Boo hoo - learning from the largest European dot.com failure
6 Supply chain and demand	6.1	Hast-fashion retailer Zara uses its supply chain to achieve competitive advantage
	6.2	Shell Chemicals redefines its customers' supply chains
	6.3	Argos uses e-supply chain management to improve customer convenience
	6.4	RFID - keeping track starts its move to a faster track
	6.5	Honeywell improves efficiency through SCM and e-procurement
7 Digital marketing	7.1	The evolution of easyJet's online revenue contribution
	7.2	Dell gets closer to its customers online
8 Customer relationship management	8.1	How Warby Parker disrupted the eyewear industry
	8.2	Tesco.com increases product range and uses triggered communications to support CRM
9 Customer experience and service design	9.1	Providing an effective online experience for local markets
10 Managing digital business transformation and growth hacking	10.1	Transforming an entire industry and supply chain: Spotify and Spotify Connect

10.2 Learning from Amazon's culture of metrics

Table B

Module guide

Week	Lecture topic		Se minar or tutorial topics		Notes
1	L1	Introduction to digital business and e-commerce	Activity 1.1 Case study 1.2 Debate 1.2	Introduction Amazon Limited SME adoption of digital business	Chapter 1 and Chapter 3 (technical introduction)
2	L2	Opportunity analysis for digital business and e-commerce (micro-environment)	Activity 2.1 Case study 2.1 Debate 2.1 Debate 2.2	Introduction Boden Countermediation Innovative business models	Chapter 2
3	L3	Managing digital business infrastructure key environmental issues (macro-environment)	Activity 3.1 Case study 4.1 Activity 4.4	Introduction Globalisation Government e-communications	Chapters 3 and 4
4	L5	Digital business strategy: (a) Situation analysis and objectives setting	Activity 5.1 Case study 5.1 Debate 5.1	Digital business strategies Zappos Digital business responsibility	Chapter 5
5	L5	Digital business strategy: (b) Strategy and tactics	Activity 5.2 Case study 5.2 Debate 5.2	Digital channels Boo.com Board-level representation	Chapter 5
6	L6	Digital business applications: (a) Supply chain management	Activity 6.1 Case study 6.1 Case study 6.3 Debate 6.1	Introduction Zara Argos Value chain	Chapter 6
7	L7	Digital business applications: (b) E-procurement	Activity 6.4 Case study 6.5 Debate 7.3	Introduction Honeywell Cost savings	Chapter 6
8	L8	Digital business applications: (c) Digital marketing	Activity 7.3 Case study 7.1 Debate 7.1	Competitor benchmarking easyJet Digital marketing planning	Chapter 7
9	L9	Digital business applications: (d) E-CRM	Activity 8.1 Case study 8.1 Debate 8.1	Introduction Warby Parker Permission marketing	Chapter 8
10	L10	Customer Experience (CX)	Activity 9.1 Mini Case study 9.1 Debate 9.2	Introduction Miele Website design	Chapter 9
11	L11	Digital transformation	Activity 10.1 Case study 10.1 Case study 10.2	Introduction Spotify Amazon	Chapter 10

About the authors

Dave Chaffey BSc, PhD, FCIM, HIDM

Dave manages his own digital business, Smart Insights (www.smartinsights.com), an online publisher and analytics company providing advice and alerts on best practice and industry developments for digital marketers and e-commerce managers. The advice is also created to help readers of Dave's books. The most relevant information is highlighted at www.smart-insights.com/book-support.

Dave also works as an independent Internet marketing trainer and consultant for Marketing Insights Limited. He has consulted on digital marketing and e-commerce strategy for companies of a range of sizes from larger organisations like 3M, Barclaycard, HSBC, Mercedes-Benz and Nokia to smaller organisations like Arco, Confused.com, Eurooffice, Hornbill and i-to-i.

Dave's passion is educating students and marketers about the latest and best practices in digital marketing, so empowering businesses to improve their online performance through getting the most value from their web analytics and market insight. In other words, making the most of online opportunities and avoiding waste.

He is proud to have been recognised by the Department of Trade and Industry as one of the leading individuals who have provided input to, and influence on, the development and growth of e-commerce and the Internet in the UK over the past 10 years. Dave has also been recognised by the Chartered Institute of Marketing as one of 50 marketing 'gurus' worldwide who have helped shape the future of marketing. He is also proud to be an Honorary Fellow of the IDM.

Dave is a visiting lecturer on e-commerce courses at different universities, including Birmingham, Cranfield, Derby, Manchester Metropolitan and Warwick. He is a tutor on the IDM Diploma in Digital Marketing, for which he is also senior examiner.

In total, Dave is author of five best-selling business books, including *Internet Marketing: Strategy, Implementation and Practice*, *eMarketing eXcellence* (with PR Smith) and *Total Email Marketing*. Many of these books have been published in new editions since 2000 and translations include Chinese, Dutch, German, Italian and Serbian.

When offline he enjoys fell-running, indie guitar music and travelling with his family

Tanya Hemphill BA (Hons), MSc (Dist.), Chartered Marketer, MCIM, MCIPR

Tanya runs her own digital marketing training and consultancy firm WeDisrupt (www.wedisrupt.co.uk). She has worked with a wide range of different-sized organisations to help them with digital marketing strategy and digital transformation, including: the Chartered Institute of Marketing, Harvey Nash, Ingredion, KPMG, the NHS, Alder Hey Hospice, Monsanto and AkzoNobel.

Passionate about technology, Tanya is one of the UK's leading experts in growth hacking for tech start-ups and is often asked to be a keynote speaker on the subject. She is an Associate Lecturer at Manchester Metropolitan University and has developed and taught MBA units and undergraduate courses such as Retail Life.

She has also worked closely with the Chartered Institute of Marketing to speak at their conferences, run commercial training workshops and has been a Level Verifier for a number of their professional qualifications. Her personal blog can be found at www.digitaltanya.co.uk and she often Tweets from @DigitallTanya.

Outside of work, Tanya enjoys travelling with her family, dancing (Salsa and Ceroc) and watching action thrillers.

David Edmundson-Bird BA (Hons), MSc, FRSA

David is Principal Lecturer in Digital Marketing & Enterprise at Manchester Metropolitan University and has worked there since 2004. He has worked in a variety of organisations, including Leeds Metropolitan (now Beckett) University, The University of Salford and Sheffield Hallam University. He helped set up Manchester's second web

design agency, Sozo, in 1995 and was Chief Learning Architect at Academee from 1999 until 2002.

David set up Manchester Met's first MSc in Digital Marketing in 2007 in collaboration with Econsultancy and their full-time MSc Digital Marketing Communications in 2016. He teaches full time on undergraduate, postgraduate and MBA programmes, specialising in digital strategy, search engine marketing and content strategy. David has also worked on many commercial programmes for clients including JD Sport and McCann Erickson. He speaks widely about digital education and about digital transformation in the marketing business at conferences and in the media.

Outside of work, David spends time with his family as much as possible, is an avid chef and enjoys discovering and using new ingredients from all over the world. He is a huge fan of Scandi-noir literature and can be seen tweeting a mixture of industry-relevant and personal tweets as @groovegenerator

Acknowledgements

The authors would like to thank the team at Pearson Education in Harlow, in particular Eileen Srebernik, Andrew Miller, Rhian McKay, Angel Daphnee and Emily Anderson for their help in the creation of this book. We would particularly like to thank the reviewers who undertook detailed reviews for the second, third and fourth editions - these reviews have been important in shaping the book: Magdy Abdel-Kader, University of Essex; Poul Andersen, Aarhus Business School, Denmark; Michelle Bergadaa, University of Geneva, Switzerland; Bruce Bowhill, University of Portsmouth; Yaw Busia, University of Middlesex; Hatem El-Gohary, Bradford University; Janet French, Barking College; Andy Gravell, University of Southampton; Ulf Hoglind, Örebro University, Sweden; Judith Jeffcoate, University of Buckingham; Britt-Marie Johansson, University of Jönköping, Sweden; Matthias Klaes, Keele University; Mette P. Knudsen, University of Southern Denmark; Tuula Mittila, University of Tampere, Finland; Barry Quinn, University of Ulster; Gerry Rogers, EdExcel Qualifications Leader; Chandres Tejura, University of North London; Ian Watson, University of Northumbria; Steve Wood, Liverpool John Moores University.

Thanks also to these reviewers who were involved at earlier stages with this book: Fintan clear, Brunel University; Neil Doherty, Loughborough University; Jean-Noel Ezingard, Henley Management College; Dr Felicia Fai, University of Bath; Lisa Harris, Brunel University; Sue Hartland, Gloucestershire Business School at Cheltenham and Gloucester College of Higher Education; Mike Healy, University of Westminster; Eric Van Heck, Rotterdam School of Management, The Netherlands; Dipak Khakhar, Lund University, Sweden; Robert Proops, University of Westminster; Professor Michael

Quayle, University of Glamorgan; Richard Riley, University of Central England; Gurmak Singh, University of Wolverhampton; John Twomey, Brunel University; Gerry Urwin, Coventry University.

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Part 1

Introduction

Part 1 introduces digital business and its relevance to organisations, buyers, suppliers, stakeholders and consumers. It clarifies terms and concepts, such as the term ‘digital business’, and puts business, revenue and technology models in context by reviewing alternative applications through activities and case studies.

1

Introduction to digital business p. 3

- The impact of digital communications on traditional businesses
- What is the difference between a digital business and an e-commerce business?
- Digital business opportunities
- Barriers to the adoption of technology by digital business stakeholders
- Barriers to consumer digital adoption

portunity analysis for digital business and e-commerce p. 36

- Digital marketplace analysis
- A process for digital marketplace analysis
- Location of trading in the marketplace
- Business models for e-commerce

Focus on...

- Digital start-up companies

3

Managing digital business infrastructure p. 72

- Digital business infrastructure components
- A short introduction to digital technology
- Management issues in creating a new customer-facing digital service
- Managing internal digital communications through internal networks and external networks
- Technology standards

Focus on...

- The development of customer experiences and digital services
- Internal and external governance factors that impact digital business

- Social factors
- Legal and ethical factors
- Economic factors
- Political factors
- Technology factors
- Cultural factors
- Factors affecting e-commerce buying behaviour
- Privacy and trust in e-commerce
- Environmental and green issues related to Internet usage
- Taxation
- Freedom-restrictive legislation
- Economic and competitive factors
- The implications of e-commerce for international B2B trading
- Government and digital transformation
- Technological innovation and technology assessment

1 Introduction to digital business

Chapter at a glance

Main topics

- The impact of digital communications on traditional businesses
- What is the difference between a digital business and an e-commerce business?
- Digital business opportunities
- Barriers to the adoption of technology by digital business stakeholders
- Barriers to consumer digital adoption

Case studies

1.1 The Uber business model

1.2 Amazon - the world's largest digital business?

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Define the meaning and scope of digital business and the difference between digital business and e-commerce
- Summarise the main reasons for becoming a digital business and barriers that may restrict it

- Outline the ongoing business challenges of managing digital business in an organisation, particularly tech start-ups

Management issues

The issues for managers raised in this chapter include:

- How do we explain the scope and implications of digital business to staff?
- What is the full range of benefits of introducing digital business and what are the risks?
- How do we evaluate our current digital capabilities?

Links to other chapters

The main related chapters are:

- *Chapter 2* examines the principal e-commerce business and marketplace models in more detail
- *Chapter 3* introduces the technical infrastructure of software and hardware that companies must incorporate to achieve e-commerce
- *Chapter 5* describes approaches to digital business strategy introduced in *Chapter 1*

Introduction

Organisations have now been adapting to technology opportunities based on **the Internet**, **World Wide Web** and **mobile communications** innovations to transform their businesses for more than 25 years, since the

creation of the first website (<http://info.cern.ch>) by Sir Tim Berners-Lee in 1991. Deploying these **disruptive digital technologies** has offered many opportunities for innovative businesses to transform their services and organisations. Table 1.1 highlights some of the best-known examples, and in Activity 1.1 you can explore some of the reasons for the success of these companies.

In *Digital Business* we will explore approaches managers can use to assess the relevance of different digital technologies and then devise and implement strategies to exploit these opportunities. We will also study how to manage more practical risks such as delivering a satisfactory customer service experience, maintaining customer privacy and managing security. In this chapter we start by introducing the scope of digital business. Then we review the main opportunities and risks of digital business, together with the drivers and barriers to adoption.

For the author, digital business is an exciting area to be involved with, since many new opportunities and challenges arise yearly, monthly and even daily. Innovation is a given, with the continuous introduction of new technologies, new business models and new communications approaches. For example, Google innovates relentlessly. Its service has developed a long way since 1998 (Figure 1.1), with billions of pages now indexed and other services such as web mail, pay-per-click adverts, analytics, shopping services, social networks and artificial intelligence all part of its offering. Complete Activity 1.1 or view Table 1.1 to see other examples of the rate at which new innovations occur.

The Internet

The ‘Internet’ refers to the physical network that links computers across the globe. It consists of the infrastructure of network servers and wired and wireless communication links between them that are used to hold and transport data between the client devices and web servers.

World Wide Web (WWW)

The most common technique for publishing information on the Internet. It is accessed through desktop or mobile web browsers that display interactive web pages of embedded graphics and HTML/XML-encoded text.

Mobile communications

Digital business processes and communications conducted using mobile devices such as laptops, tablets, mobile phones (including fixed access platforms) and ubiquitous devices with different forms of wireless connection, including services on wifi, 3G, 4G, 5G and satellite.

Disruptive digital technologies

Technologies that offer opportunities for business for new products and services for buyers, suppliers, partners and customers and can transform business processes. Danneels (2004) defined disruptive technologies as ‘a technology that changes the bases of competition by changing the performance metrics along which firms compete. Customer needs drive customers to seek certain benefits in the products they use and form the basis for customer choices between competing products.’ (There isn’t a better definition and this remains the most widely cited definition.)



Figure 1.1

Google circa 1998

Source: Wayback machine archive:

<http://web.archive.org/web/19981111183552/google.stanford.edu>.

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Table 1.1

Timeline of innovation in business model or communications approach

Year founded	Company/site	Category of innovation and business model
1994	Amazon	Retailer
1995 (March)	Yahoo! (yahoo.com)	Directory and portal
1995 (Sept)	eBay	Online auction
1995 (Dec)	AltaVista (altavista.com)	Search engine
1996	Hotmail (hotmail.com)	Web-based email
		Viral marketing (using email signatures to promote service) Purchased by Microsoft in 1997
1998	GoTo.com (goto.com), became Overture (2001)	Pay-per-click search marketing Purchased by Yahoo! in 2003
1998	Google	Search engine

	(google.com)	
1999	Blogger (blogger.com)	Blog publishing platform Purchased by Google in 2003
1999	Alibaba (alibaba.com)	B2B marketplace with \$1.7 billion IPO on Hong Kong stock exchange in 2007
1999	MySpace (myspace.com), formerly eUniverse	Social network Purchased by News Corp. in 2005
2001	Wikipedia (wikipedia.com)	Open encyclopaedia
2002	Last.fm	A UK-based Internet radio and music community website
2003	Skype (skype.com)	Peer-to-peer Internet telephony VoIP - Voice over Internet Protocol Purchased by eBay in 2005
2003	Second Life (secondlife.com)	Immersive virtual world
2004	Facebook (facebook.com)	Social network applications and groups
2005	YouTube (youtube.com)	Video sharing and rating
2006	Spotify (spotify.com)	Music track streaming
2009	Foursquare (foursquare.com)	A location-based social media website designed for mobile access
2011	Pinterest	Social network offering image sharing
2013	Slack (slack.com)	Collaborative team-working tool

2014	Google Glass	An example of a wearable computing device
2015	Apple Watch	An example of a wearable computing device
2016	Pokémon Go	Augmented reality gaming
2018	IBM Watson	An example of machine learning

Virtual world

An electronic environment that simulates interactions between online characters known as avatars.

Activity 1.1

Innovative digital businesses

Purpose

To illustrate innovation in digital business models and communications approaches.

Questions

- 1 Think about the innovation that you have witnessed during the time you have used a mobile device. What would you say are the main businesses that work in your country that have changed the way people spend their time or buy online?
- 2 We talk about these businesses being ‘successful’, but what *is* success for a start-up business? And when does a start-up stop being a start-up?
- 3 What do these services have in common that you think has made them successful?

The impact of digital communications on traditional businesses

During the period shown in Table 1.1, managers at established businesses have had to determine how to apply new digital communications technologies to transform their organisations. As we will see later in this chapter, existing businesses have evolved their approaches to digital business through a series of stages. Innovation is relentless, with the continuous introduction of new technologies, new business models and new communications approaches. So, all organisations have to review new digital communications approaches for their potential to make their business more competitive and also manage ongoing risks such as security and performance. For example, many businesses are reviewing the benefits, costs and risks of digital business technologies they are currently implementing as part of **digital transformation** projects.

Digital transformation

Stolterman and Forse describe digital transformation as the changes that occur in any part of human society through the application of digital technology. Digital transformation in business occurs when there are significant changes to organisational processes, structures and systems, implemented to improve organisational performance through increasing the application of digital technology.

At the time of writing, there are two key opportunities of digital transformation open to most businesses, which we focus on in this text: **inbound marketing and mobile marketing**. Do we decide which one we are adding or are these remaining the same?

Inbound marketing

In the digital world it is often the customer who initiates contact and is seeking information by discovering information on an organisation's

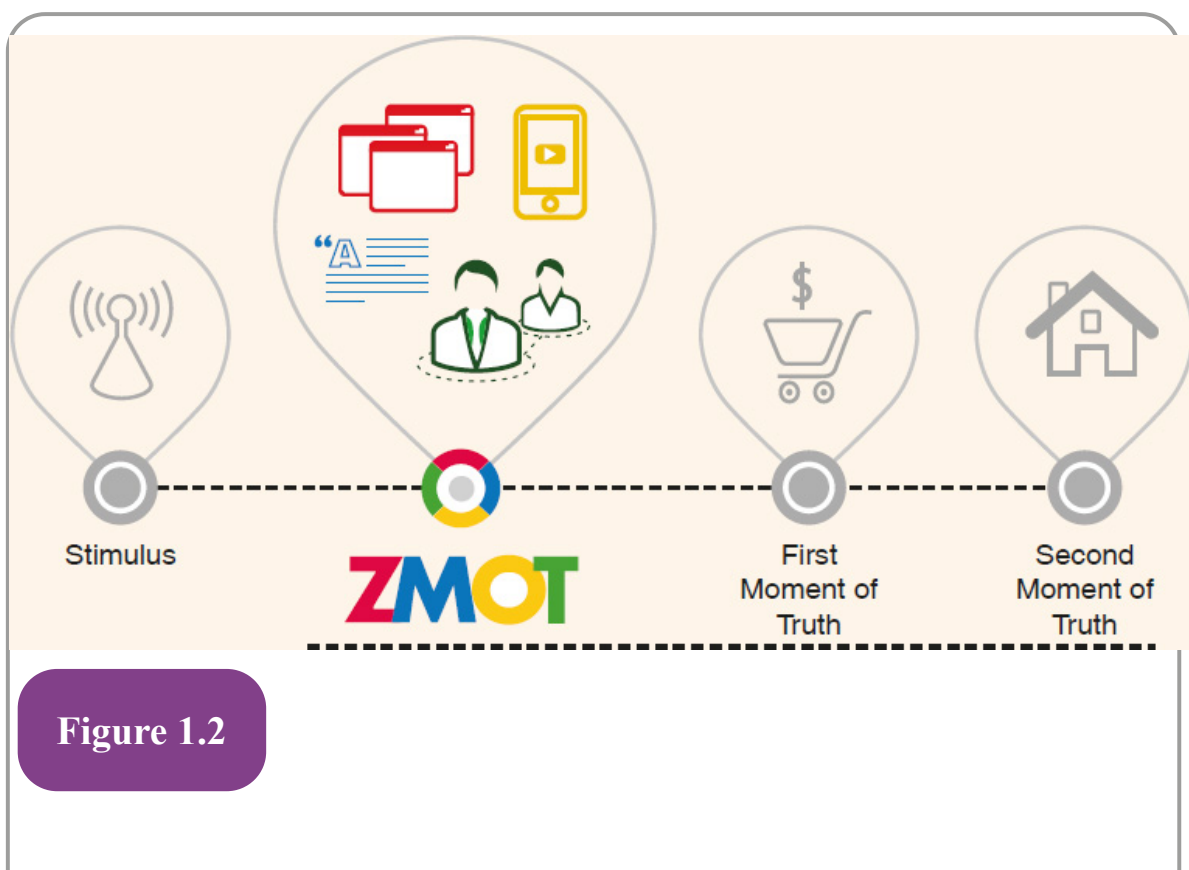
digital presence. In other words, it is a **'pull' mechanism** - historically it has been particularly important to have good visibility in search engines when customers are entering search terms relevant to a company's products or services, but also includes the need for organisations to make sure they are 'visible' in the social media environment too. Among marketing professionals this powerful approach to marketing is now commonly known as **inbound marketing** (Shah and Halligan, 2009). Google refers to this consumer decision-making before they visit a retailer as the **Zero Moment of Truth (ZMOT)** in a handbook by Lecinski (2012). This describes the combination of multi-channel influences on a purchase, as shown in Figure 1.2.

Inbound marketing

The customer is proactive in actively seeking out information for their needs, and interactions with brands are attracted through content, search and social media marketing.

Zero Moment of Truth (ZMOT)

A summary of today's multichannel consumer decision-making for product purchase where they search, review ratings, styles, prices and comments on social media before visiting a retailer.



Zero Moment of Truth

Source: Google, Lecinski (2012).

Inbound marketing is powerful since marketing wastage is reduced. **Search marketing**, **content marketing** and **social media marketing** can be used to target prospects with a defined need - they are proactive and self-selecting. But this is a weakness, since marketers may have less control than in traditional communications where the message is pushed out to a defined audience and can help generate awareness and demand. Advocates of inbound marketing such as Dharmesh Shah and Brian Halligan argue that content, social media and search marketing do have a role to play in generating demand.

Social media marketing

The increasing popularity of **social media** is a major trend in digital business - in particular **social network sites (SNS)** such as Facebook, Twitter and, for business-to-business users, LinkedIn and **RSS feeds**. In the last few years there has also been the rise of more private networks such as WhatsApp and Snapchat. Some might also include game environments such as Minecraft as a niche social media site. Added to this, the growth of **blogs** created by many individuals and businesses is still a significant force, and these have become more diverse as bloggers move away from simple text content and develop richer, often video-based content. The focus has also moved very heavily into a mobile context, with both creation and consumption being focused on mobile devices. Social media marketing also includes **rich media** such as online video and interactive applications featured on specialist social networks such as YouTube or embedded into websites.

Search marketing

Companies seek to improve their visibility in search engines for relevant search terms by increasing their presence in the search engine results pages.

Content marketing

'... the marketing and business process for creating and distributing relevant and valuable content to attract, acquire, and engage a clearly defined and understood target audience - with the objective of driving profitable customer action.' (Pulizzi, 2012)

Trends update

Social media usage

The popularity of different social platforms in different countries constantly changes. Visit this compilation to find out the latest in your region or country: <http://bit.ly/smartsocialstats>.

Social media marketing

Monitoring and facilitating customer-customer interaction and participation throughout the web to encourage positive engagement with a company and its brands. Interactions may occur on a company site, social networks and other third-party sites.

Social media

A category of media focusing on participation and peer-to-peer communication between individuals, with platforms providing the capability to develop user-generated content (UGC) and to exchange messages and comments between different users.

Social network sites (SNS)

A site that facilitates peer-to-peer communication within a group or between individuals through providing facilities to develop user-generated content (UGC) and to exchange messages and comments between different users.

It's important for all businesses to understand the business and revenue models of the major social networks and platforms that are today so influential in shaping people's opinions about brands. Figure 1.3 summarises the main types of social sites that companies need to consider.

Since there are so many types of social presence, it is helpful to simplify the options to manage them. For this we recommend these six

categories based on chapters in Weinberg (2010). You can see there's more to social media than social networks:

- 1 Social networking.** The emphasis here is on listening to customers and sharing engaging content. Facebook tends to be most important for consumer audiences and LinkedIn for business audiences, although newer platforms such as WhatsApp and Snapchat are becoming increasingly important.
- 2 Social knowledge.** These are informational social networks such as Quora, where you can help an audience by solving their problems and subtly showing how your products have helped others. Reddit is another site in this category, although great caution must be taken when embarking with an audience in this environment.
- 3 Social sharing.** These are social bookmarking sites, such as Delicious (<https://del.icio.us>), which can be useful for understanding the most engaging content within a category
- 4 Social news.** Twitter is the best-known example.
- 5 Social streaming.** Rich and streaming media social sites for sharing photos, video and audio, such as Spotify.
- 6 Company user-generated content and community.** Distinct from the other types of social presence, which are independent of companies, these are the company's own social spaces, which may be integrated into product content (reviews and ratings), a customer support community or a blog.

Really Simple Syndication (RSS) feeds

Blog, news or other content is published by an XML standard and syndicated for other sites or read by users in RSS reader software services. Now typically shortened to 'feed', e.g. news feed or sports feed.

Blog

An online presence for content prepared by an individual or a group of people.

Rich media

Digital assets such as ads are not static images, but provide animation, video, audio or interactivity as a game or form to be completed.

SOCIAL MEDIA MARKETING RADAR

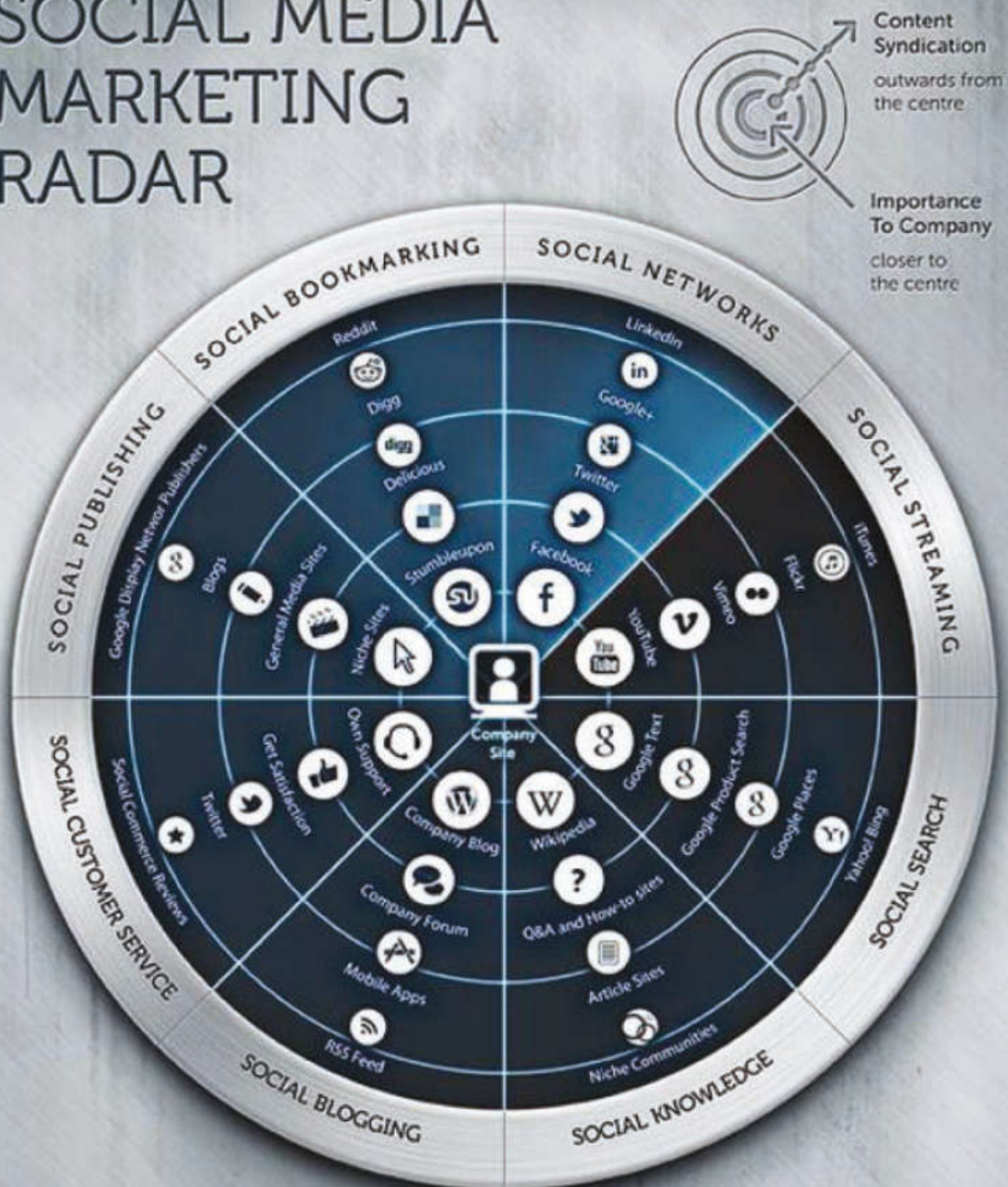


Figure 1.3

Social media marketing radar

Source: Smart Insights (www.smartinsights.com), with permission

Case study 1.1 considers the growth of Uber, the largest hail-riding company in many countries.

Case Study 1.1

The Uber business model

Context

This case is about the taxi-hire app company Uber -which hardly requires an introduction at all. It started as a small app effectively offering taxi journeys to travellers in San Francisco. It's a great case study in that it shows many of the success factors needed for the launch of a new digital business, but also shows the risks of alienating customers, drivers and wider society when certain issues are not dealt with in a way that satisfies a broad range of stakeholders. At the time of writing, Uber had 8 million active app users and hundreds of thousands of drivers, yet very few actual Uber employees. Bear in mind that this business and its environment are rapidly changing, so new issues and factors will have emerged between writing, publication and reading this text. But the history and fundamentals should remain the same.

In line with other case studies in the text, the case study features a summary using the key categories of the Business Model Canvas (which is introduced in the business models section in Chapter 2).

Value proposition

In 2016, the Uber mission was *'Uber is evolving the way the world moves. By seamlessly connecting riders to drivers through our apps, we make cities more accessible, opening up more possibilities for riders and more business for drivers.'*

Consumer value proposition

Uber customers hail an Uber taxi through an app, as opposed to either the traditional hailing of a cab on the street or by calling a local taxi company to arrange a pick-up. Payment for the journey is made via a credit or debit card connected to the app, so there is no need to carry money for the fare. There are many occasions where rides are offered free or discounted as part of a promotional drive. Taxi fares are, on the whole, equal to the existing cheapest fares or cheaper than taxis in the locality, and in some

cases involve a fixed-fare deal to specific destinations such as airports. The same Uber app can be used anywhere globally, removing the need for consumers to try and find a local taxi provider.

Value proposition for drivers

Uber drivers are not employees of the business (a factor that became a risk factor in some countries, which we discuss later). Uber regards each driver as a freelance contractor, although the exact nature of this relationship varies between countries and jurisdictions. Uber proposes to drivers that it will pay them more than the local competition pays its drivers (whether freelance or employed). This is a relatively easy task, as most cab- and taxi-driving work is poorly paid. Uber offers more money, and thus many drivers sign up. Added to this, Uber incentivises driving at peak times (known as ‘surge pricing’), with higher sums of money as payment. Uber can provide higher general incomes to drivers as they provide a continual supply of hailing work via the Uber app. Ultimately, the drivers decide when they work, and the decision of drivers about when to work will be driven by self-interest.

Revenue model

Uber’s investment has almost all been about developing brand awareness in a global context, and marketing the proposition to local audiences and local driver communities. This has provided them with strong brand recognition. Uber doesn’t own fleets of taxis but relies on owner-drivers providing the vehicles themselves - something in common with many local taxi-hire companies. They make arrangements in some markets to provide leasing arrangements for vehicles. Other money is spent on the technical infrastructure supporting the ride management. However, most money is spent developing and maintaining the marketplace as it builds up to high levels of market share in a local taxi economy.

Typically, Uber takes between 20-30% of the price of a ride, depending on local conditions. When demand is high, Uber introduces ‘surge pricing’ (when a multiplier is added to a proposed and final price in the hailing app). Surge is supposed to attract more drivers into the area where demand is high but driver availability is low. It also creates a situation where price-sensitive customers will delay a journey until the surge pricing drops.

Uber also has different pricing strategies for different qualities of vehicle available in certain markets. There are premium prices charged when customers order a premium grade of vehicle such as a minibus or executive limousine.

Uber's strategy

Uber's strategy is one of digital disruption. Taxi hailing is an industry where there are few standards and competition is widely based around price. In common with a number of other disruptive businesses, Uber 'doesn't own the hardware' - it takes on drivers who own the cars and provides them with access to the ride-hailing infrastructure. It also has a well-developed review system (which both consumers and drivers use). A new location will have a large marketing effort to acquire and retain customers. This will largely consist of offering many free trips to customers new to the app, along with significant financial incentives for drivers to join Uber from other taxi companies. The target is to achieve significant market share so that Uber becomes the largest player in a local market. At this point, Uber then starts to alter its pricing structure for fares and payments to drivers. The vast majority of Uber's investment is ploughed into this activity. Weak and fragmented competitor marketplaces make the task straightforward. Its large pool of cash allows it to offer the best rates to new drivers in new markets, thus poaching drivers from existing taxi companies.

Uber's competitors

Uber has different competitors in its different geographical areas of operation. In the taxi-hailing business, there is the usual competition of local taxi-hire companies, whether private hire or on-street hailing. These are often limited to a particular city or regional location (although not always). There are also the wider app-based competitors: Lyft (in the US and some countries in Asia), Curb (in the US), Didi Chuxing (in China), Grab (in some Asian countries) and Ola in India. Competition in China ultimately caused Uber to sell its Chinese operation to Didi Chuxing in early 2016. To make matters more complicated, a number of these Asian competitors have combined forces in various territories to compete with Uber directly.

Risk factors

At the time of writing, rarely a day goes by without critical commentary or discussions of legal and ethical behaviour by the company. In the United Kingdom, Uber was found to be in breach of employment laws when the tribunal found that it should regard drivers as employees rather than freelancers. Prior to publishing this book, Uber planned to appeal against this ruling, but if the ruling is upheld this could have extreme implications for the way the company organises its labour.

In numerous cities, Uber has found itself at the wrong end of organised protests from existing taxi drivers - particularly in London, where black-cab taxi drivers held several protests and 'strikes', and there were angry protests in Asia and South America, some of which turned violent. In Europe Uber found itself being fined for flouting local laws and regulations with regard to unlicensed drivers. It also faced significant criticism when concerns about rider safety were raised in jurisdictions where drivers were not required to be registered taxi drivers.

One of the biggest future risk factors for Uber to consider is the role of autonomous vehicles. Uber started experimenting with autonomous versions of its ride service in a number of US cities. Autonomous vehicles create an interesting dilemma for the company. On the one hand, it reduces the need to employ drivers - problematic from an ethical perspective - however, it would require the company to actually invest in the hardware of autonomous vehicles, which would have implications for the use of capital in the business. The real issue is what role autonomous vehicles will play in future society and transportation. One possible avenue of concern is that a car manufacturer may decide to compete in a marketplace as a provider of autonomous taxi services into any number of marketplaces. Private owners of autonomous vehicles might themselves make their cars available for private hire through a ride-sharing technology that doesn't belong to Uber. Uber's biggest barrier to entry - its ability to pay new drivers significant sums of money - disappears when faced with autonomous vehicles. A significant change in direction would be necessary.

Sources: <http://nextjuggernaut.com/blog/how-uber-works-business-model-revenue-uber-insights/>
<https://newsroom.uber.com/>

Questions

- 1 As an investor in a digital business such as Uber, which financial and customer-related metrics would you use to assess and benchmark the current business success and future growth potential of the company?
- 2 Complete a situation analysis for Uber focusing on an assessment of the main business risks that could damage the future growth potential of the Uber business.
- 3 For the main business risks to Uber identified in Question 2, suggest approaches the company could use to minimise these risks.

Mobile commerce

The potential of **mobile commerce and mobile business** is evident from the predictions of Mary Meeker, an analyst at Kleiner Perkins Caufield Byers, who shares her insights about the current state of the Internet in a presentation called 'Internet Trends' (see the link to her insights at the end of this chapter). One of Meeker's bravest predictions from 2008 was that **mobile web use would surpass desktop web use** by 2014, and this has certainly turned out to be true.

The growth in popularity of **mobile apps** (Chapter 3), from the iPhone store, Google Android Play, Microsoft Windows app store and other handset vendors, is another significant development in mobile communications. Yahoo Flurry (2014) released a summary of categories of app usage across smartphones and tablets and it showed that 90% of mobile time was in apps rather than the browser. You do have to be careful in interpreting this, though, since some app data usage is effectively browser usage within an app.

Location-based use of mobile devices is another significant trend as users may use apps or browsers while shopping, for example (see Mini case study 1.1). Related to this activity is location-based tracking of goods and inventory as they are manufactured and transported.

Mobile commerce and mobile business

Mobile commerce refers to the online transactions and communications conducted using mobile devices such as smartphones and tablets, and typically with a wireless connection. Mobile business refers to the business models employed by organisations that exploit the technology surrounding such mobile devices and allow employees and stakeholders to benefit from the ability to be freed from a fixed location.

Trends update

Mobile usage

Mobile usage overtook desktop usage as a total percentage of accessing online services and information, but the actual amount of time spent on desktop and laptops hasn't changed much - they are still widely used as the prime device during office hours. Find out the latest statistics on mobile and app usage at: <http://bit.ly/smartmobilestats>.

Mini Case Study 1.1

Google local results and reviews

The increasing use, success and popularity of mobile has had a significant impact on the way people use search engines such as Google. The context of people's use of 'Search', and where they do it, means that results from the search engine have taken a big leap in the last few years.

The algorithm in Google's search engine uses many factors to determine what results are seen, but mobile use and location, along with the subject matter being searched for, have a big impact on what is shown.

As an example, a customer searching using the keywords 'Chinese restaurants' on a mobile device will be shown an array of choices heavily geared towards choices within that locality - even

though no mention of the district occurs in the original search words. Google uses the location and the context of the mobile device to make assumptions about the kind of results the users wants - in this case the user is likely to be looking for a local restaurant - and reviews of local restaurants are often high in the results.

The combination of mobile context, location and other factors make for a highly relevant service that maintains Google's dominance in this area.

Activity 1.2

The most popular apps today

This can be completed individually or as a group activity comparing popular apps for different mobile handsets. Review the most popular apps today, using either the app store for your mobile phone or a compilation from an information provider such as Flurry, comScore or Nielsen.

Questions

- 1 Identify the most popular categories of apps from the top 10 or 20 most popular ones, including browser applications such as Google's Chrome or Apple's Safari.
- 2 Discuss the opportunities for companies to promote their brands or services using apps in comparison with mobile sites delivered through web browsers.

What is the difference between a digital business and an e-commerce business?

The rapid advancement of technology and its application to business has been accompanied by a range of new terminology and jargon, such as e-CRM, multichannel retail and digital e-procurement. Do we need to be concerned about the terminology? The short answer is no; Mougayer (1998) noted that it is understanding the services that can be offered to customers and the business benefits that are obtainable through digital technology that is important. However, labels are convenient in defining the *scope* of the changes we are looking to make within an organisation through using digital communications. Managers within an organisation need to agree and communicate to employees, customers and partners the digital transformation they are proposing through using digital technologies.

E-commerce defined

The scope of **electronic commerce (e-commerce)** is narrower than digital business. It's often thought simply to refer to buying and selling using the Internet; people immediately think of consumer retail purchases from companies such as Amazon. But e-commerce can be considered as *all* electronically mediated transactions between an organisation and any third party it deals with. By this definition, non-financial transactions such as customer support and requests for further information would also be considered to be part of e-commerce. Kalakota and Whinston (1997) referred to a range of different perspectives for e-commerce that are still valid today:

Mobile app

A software application that is designed for use on a mobile phone, typically downloaded from an app store. iPhone and Android apps are best known, but all smartphones support the use of apps, which can provide users with information, entertainment or location-based services such as mapping.

Electronic commerce (e-commerce)

All electronically mediated information exchanges between an organisation and its external stakeholders.

- 1 A *communications perspective* - the delivery of information, products and services or payment by electronic means.
- 2 A *business process perspective* - the application of technology towards the automation of business transactions and workflows.
- 3 A *service perspective* - enabling cost-cutting at the same time as increasing the speed and quality of service delivery.
- 4 An *online perspective* - the buying and selling of products and information online.

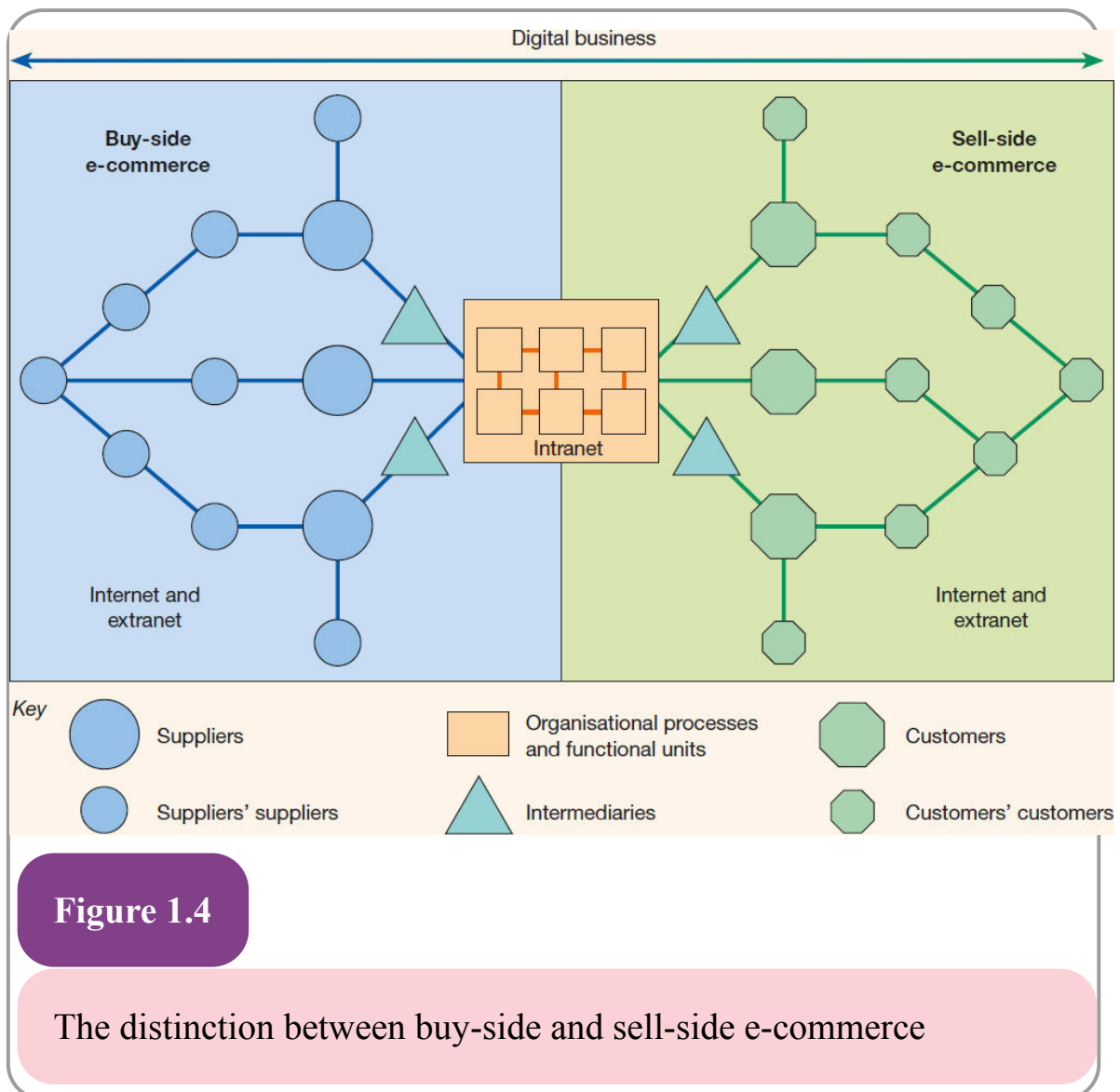
These definitions show that electronic commerce is not solely restricted to the actual buying and selling of products, but also includes pre-sale and post-sale activities across the supply chain.

Trends Update

E-commerce growth rates

There is an annual growth rate of around 10% in e-commerce sales in most countries: <http://bit.ly/smartetailstats>.

When evaluating the strategic impact of e-commerce on an organisation, it is useful to identify opportunities for buy-side and sell-side e-commerce transactions, as shown in Figure 1.4, since systems with different functionalities will need to be created in an organisation to accommodate transactions with buyers and with suppliers. **Buy-side e-commerce** refers to transactions to procure resources needed by an organisation from its suppliers. **Sell-side e-commerce** refers to transactions involved with selling products to an organisation's customers.



Social media commerce is an increasingly important part of e-commerce for site owners since incorporating reviews, ratings and other social media interactions into a site and linking to social networking sites can help understand customers' needs and increase conversion to sale. It can also involve group buying, using a coupon service such as Groupon.

Buy-side e-commerce

E-commerce transactions between a purchasing organisation and its suppliers.

Sell-side e-commerce

E-commerce transactions between a supplier organisation and its customers.

Digital business defined

Digital business is broader in its scope than e-commerce. It is similar to the term e-business, which was first coined by IBM in 1997 and described as:

e-business (e'biz'nis) - the transformation of key business processes through the use of internet technologies.

In the sixth (and previous) edition of this book we changed from using the term 'e-business' to using 'digital business' since it reflected the current usage in industry and research on the impact of digital technologies on business.

Debate 1.1

Is digital business any different to just 'IT'?

'Digital business is just a new label -there is no distinction between the role of digital business and traditional IT.'

In Figure 1.4 the key digital business processes are the organisational processes or units in the centre of the figure. They include research and development, marketing, manufacturing and inbound and outbound logistics. The buy-side e-commerce transactions with suppliers and the sell-side e-commerce transactions with customers can also be considered to be key digital business processes.

Intranets and extranets

The majority of Internet services are available to any business or consumer that has access to the Internet. However, many digital business applications that access sensitive company information require access to be limited to qualified individuals or partners. **If information is restricted to employees inside an organisation, this is an intranet**, as is shown in Figure 1.5.

Social media commerce

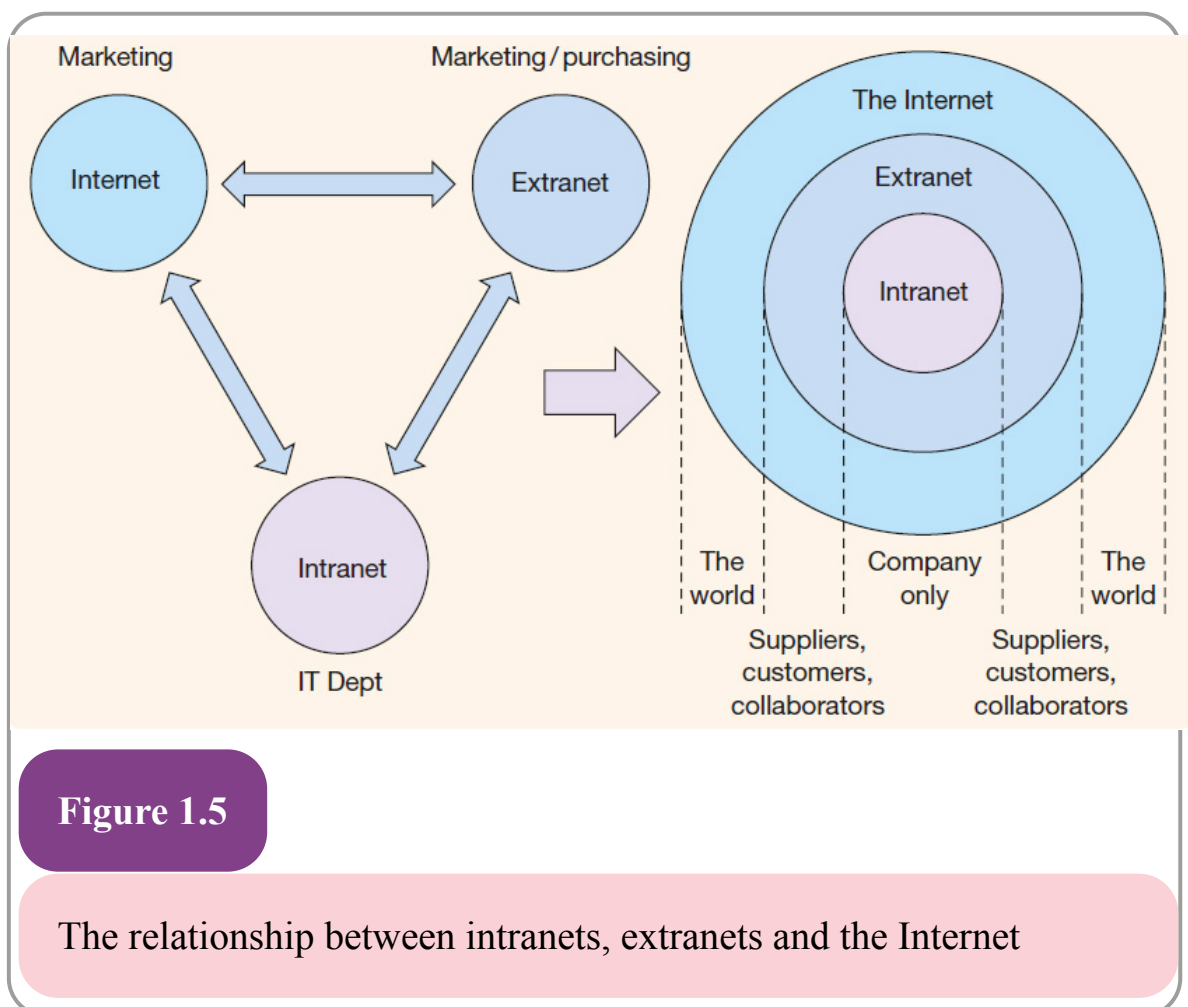
A subset of e-commerce that encourages participation and interaction of customers in rating, selecting, buying products and other social media interactions. This participation can occur on an e-commerce site or on third-party sites.

Digital business

How businesses apply digital technology and media to improve the competitiveness of their organisation through optimising internal processes with online and traditional channels to market and supply.

Intranet

A private network within a single company using Internet standards to enable employees to access and share information using web technology.



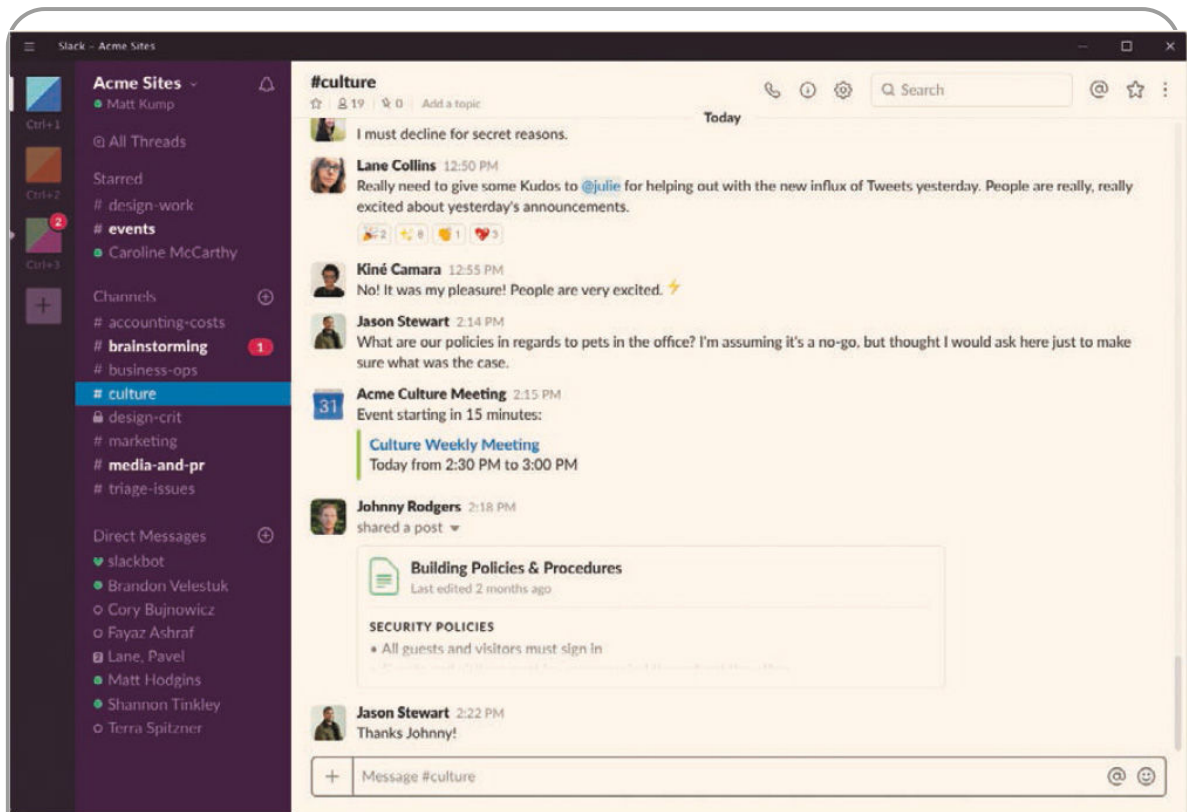


Figure 1.6

Slack workspace tool

Source: with permission from Slack

Today, the term intranet is still used, but software services similar to Twitter and Face-book are being implemented within companies to achieve similar goals of information sharing and collaboration. Mini case study 1.2 shows an example of one such **enterprise social media software** tool, Slack (Figure 1.6).

If access to an organisation's web services is extended to some others, but not everyone beyond the organisation, this is an **extranet**. Whenever you log on to an Internet service, such as that for an e-retailer or online news site, this is effectively an extranet arrangement, although the term is most often used to mean a business-to-business application such as that described in Case study 6.1, where certain customers or suppliers are given shared access. We look at issues around intranets and extranets in Chapter 3.

Different types of sell-side e-commerce

Sell-side e-commerce doesn't only involve selling products online, but also involves using digital technologies to market services using a range of techniques (which we will explore in Chapters 7 and 8). Not every product is suitable for sale online, so the way in which a website is used to market products will vary. It is useful to review these **five main types of online presence for sell-side e-commerce**, each of which has different objectives and is appropriate for different markets. These are not clear-cut website categories since any company may combine these types, but with a change in emphasis according to the market they serve. As you review websites, note how organisations have different parts of the site focusing on these five functions:

Enterprise social media software

Systems used inside organisations to enable real-time collaboration between employees and other stakeholders, such as customers and suppliers, to support business processes such as customer services, supply chain management and new product development.

Extranet

A service provided through Internet and web technology delivered by extending an intranet beyond a company to customers, suppliers and collaborators.

Mini Case Study 1.2

Slack

Slack is a collaboration hub that helps people work together as easily online as they do in person.

Teamwork in Slack happens online in channels, with conversations organised by topic, project, or location, ensuring the right people are included and relevant information is in one place.

The more Slack is used across a company, the more value it provides — conversations and information in Slack are easily searchable and shareable across departments helping teams collaborate across office locations, time zones or functions.

Slack also integrates with thousands of other apps, including Google Drive, so that files can be shared directly in the channels.

Slack makes working lives simpler, more pleasant and more productive.

Source: Slack 2018 www.slack.com

- 1 Transactional e-commerce sites.** These enable purchase of products online. The main business contribution of the site is through sale of these products. The sites also support the business by providing information for consumers who prefer to purchase products offline. These include retail sites, travel sites and online banking services.
- 2 Services-orientated relationship-building sites.** These provide information to stimulate purchase and build relationships, particularly where products are not suitable for sale online. Information is provided through the website and e-newsletters to inform purchase decisions. The main business contribution is through encouraging offline sales and generating enquiries or leads from potential customers, known as lead generation.
- 3 Brand-building sites.** These sites provide an experience to support the brand. Products are not typically available for online purchase. Their main focus is to support the brand by developing an online experience of the brand. They are typical for low-value, highvolume, fast-moving consumer goods (FMCG brands).
- 4 Publisher or media sites.** These provide information, news or entertainment about a range of topics, both on the site and through links to other sites. Media sites have a diversity of options for generating revenue, including advertising, commission-based sales and sale of customer data (lists).
- 5 Social network sites (SNS).** Social networks could be considered to be in the previous category, since they are often supported by advertising, but the influence of social networks such as Facebook, LinkedIn and Twitter on company and customer communications suggests they form a separate category. Ironically, Facebook has begun to regard itself as a publishing platform.

Complete Activity 1.3 to consider examples of these different types of site.

Purpose

To help you assess how different types of digital presence are used for marketing.

Activity

Review the popularity of the different site types in your country or globally. The recommended information sources are:

- Similar Web (**www.similarweb.com**) or GoCompare (**www.gocompare.com**) site comparison services. Have a look to see whether these are still appropriate.
- The Hitwise Data Centers (e.g. **www.hitwise.com/white-papers**) available for Australia, Canada, France, Hong Kong, Singapore, New Zealand, the UK and US.

Visit each of the sites below and then indicate which of the five categories of online presence are their primary and secondary focus:

- 1 transactional e-commerce site;
- 2 services-orientated relationship-building site;
- 3 brand-building site;
- 4 portal or media site;
- 5 social network site.

Example sites

- Business media site: The Financial Times (**www.ft.com**). Think of a different example, or Mashable (**www.mashable.com**)
- Bank, e.g. HSBC (**www.hsbc.com**)
- Fast-fashion retail, e.g. Missguided (**www.missguided.co.uk**)
- Management consultants such as PricewaterhouseCoopers (**www.pwc.com**) and Accenture (**www.accenture.com**)
- Beverage manufacturers, e.g. Bacardi (**www.bacardilimited.com**) and Guinness

(www.guinness.com)

- Travel company, e.g. Kuoni (www.kuoni.co.uk)
- An end-product manufacturer such as BMW (www.bmw.com)
- Consumer site, e.g. Yahoo! (www.yahoo.com) or Money Saving Expert (www.moneysavingexpert.com)
- Online retailer such as Amazon (www.amazon.com)

Digital marketing

Digital marketing is yet another field that is closely related to e-commerce and it is explored in more detail in Chapters 7 and 8.

How do we understand the phrase ‘digital marketing’? The first part of the description illustrates the range of access platforms and communications tools that form the online channels that marketers use to build and develop relationships with customers. We look at the philosophical meaning of the word ‘digital’ in more depth in Chapter 10.

Different access platforms deliver content and enable interaction through a range of different online communication tools or media channels. Some are well-established techniques that will be familiar to you, such as websites, search engines, email, social media sites and text messaging. One of the most exciting things about working in digital media is the introduction of new tools and techniques, which have to be assessed for their relevance to a particular marketing campaign.

Recent innovations (which we discuss further in Chapters 7 and 8) include ‘**dark social**’ systems such as WhatsApp and Snapchat. The growth of social networks has been documented by Boyd and Ellison (2007), who describe a social networking site as:

A site which facilitates the easy creation and sharing of content with contacts. Text, audio and video can be uploaded and shared with contacts (and the wider world). Content uploaded and shared by others can be commented on and shared too. Social networking sites generally rely on users having a public or semi-public profile within the boundaries of the site and growing and maintaining connections with other users.

Digital marketing

This has a similar meaning to ‘electronic marketing’ - both describe the management and execution of marketing using digital media such as the web, email, digital TV, social media and mobile media in conjunction with digital data about customers’ behaviour, location and personal qualities.

Dark social

Although dark social sounds mysterious and perhaps illicit, it is often confused with the dark web. It isn’t the same thing. Dark social simply describes the phenomenon where you cannot identify the source of traffic to an asset (such as a landing page) in your digital realm with analytical software such as Google Analytics.

Trends update

Social network usage

Social media accounts for a significant amount of online usage, particularly on mobile devices. This update shows varying use in different countries: www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research.

Options for organisations to reach a digital audience

For organisations to be successful in their digital communications they must decide how they invest their time and budget in the sometimes bewildering range of online communications tools. In Chapters 8 and 9 we review these tools in detail, but here is a summary of the main options for investment.

Owned, earned and paid media options

To help develop a strategy to reach and influence a potential digital audience it has become commonplace today to refer to three main types of media channels that marketers need to consider (Figure 1.7):

- 1 Paid media.** This is bought media where there is investment to pay for visitors, reach or conversions through search, display advertising networks or affiliate marketing. Offline, traditional media such as print and TV advertising and direct mail remain important, accounting for a large proportion of paid-media spend.
- 2 Earned media.** Traditionally, earned media has been the name given to publicity generated through PR invested in targeting influencers to increase awareness about a brand. Now, earned media also includes word-of-mouth that can be stimulated through viral and social media marketing and includes conversations in social networks, blogs and other communities. It's useful to think of earned media as developed through different types of partners such as publishers, bloggers and other influencers, including customer advocates. Another way of thinking about earned media is as different forms of conversations between consumers and businesses occurring both online and offline.

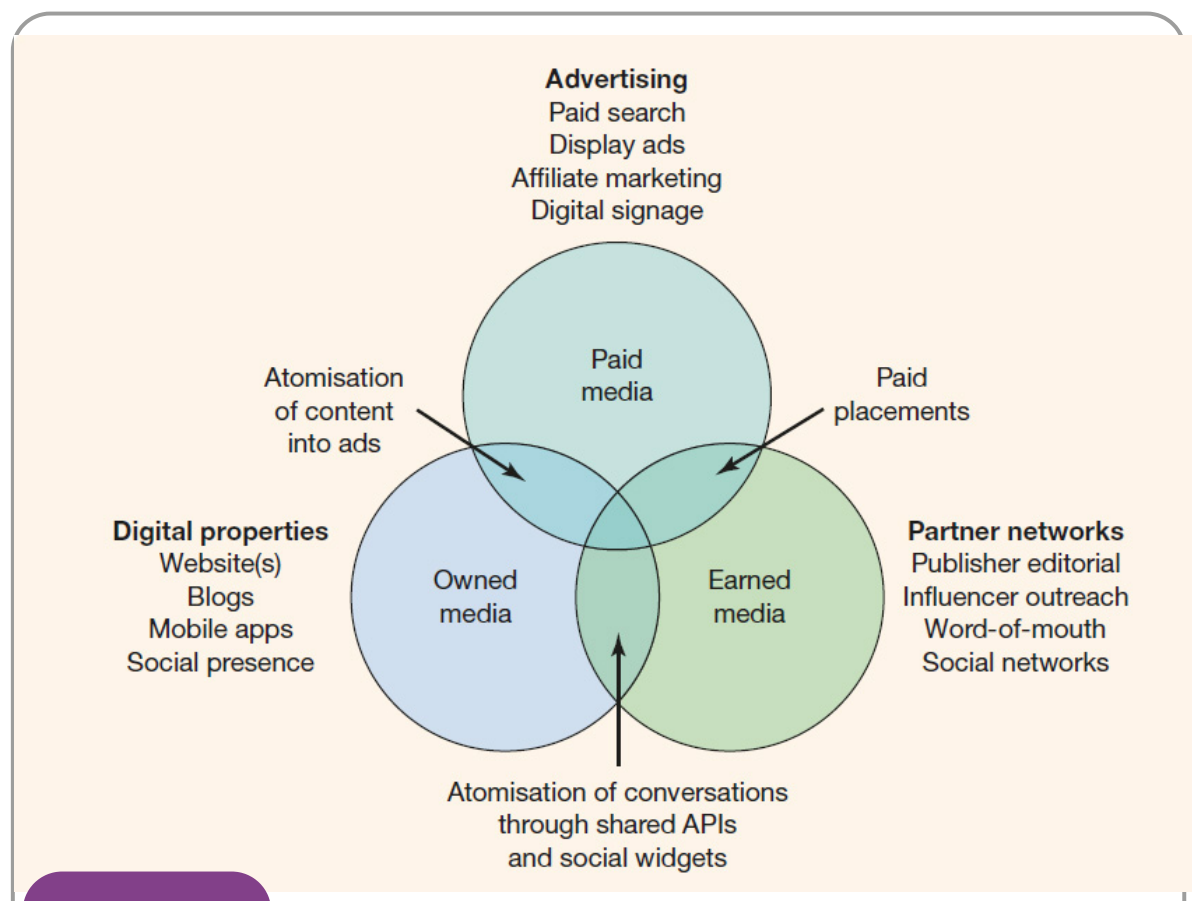


Figure 1.7

The three main options for online media investment

3 Owned media. This is media owned by the brand. Online, this includes a company's own websites, blogs, email list, mobile apps or their social presence on Facebook, LinkedIn or Twitter. Offline, owned media may include brochures or retail stores. It's useful to think of an organisation's own presence as media in the sense that they are an alternative investment to other media and they offer opportunities to promote products using similar ad or editorial formats to other media. It emphasises the need for all organisations to become multichannel publishers.

You can see in Figure 1.7 that there is overlap between the three different types of media. It is important to note this, since achieving this overlap requires integration of campaigns, resources and infrastructure. Content on a content hub or site can be broken down (atomised) and shared between other media types through **widgets** powered by program and data exchange APIs such as the Facebook API.

The six key types of digital media channels

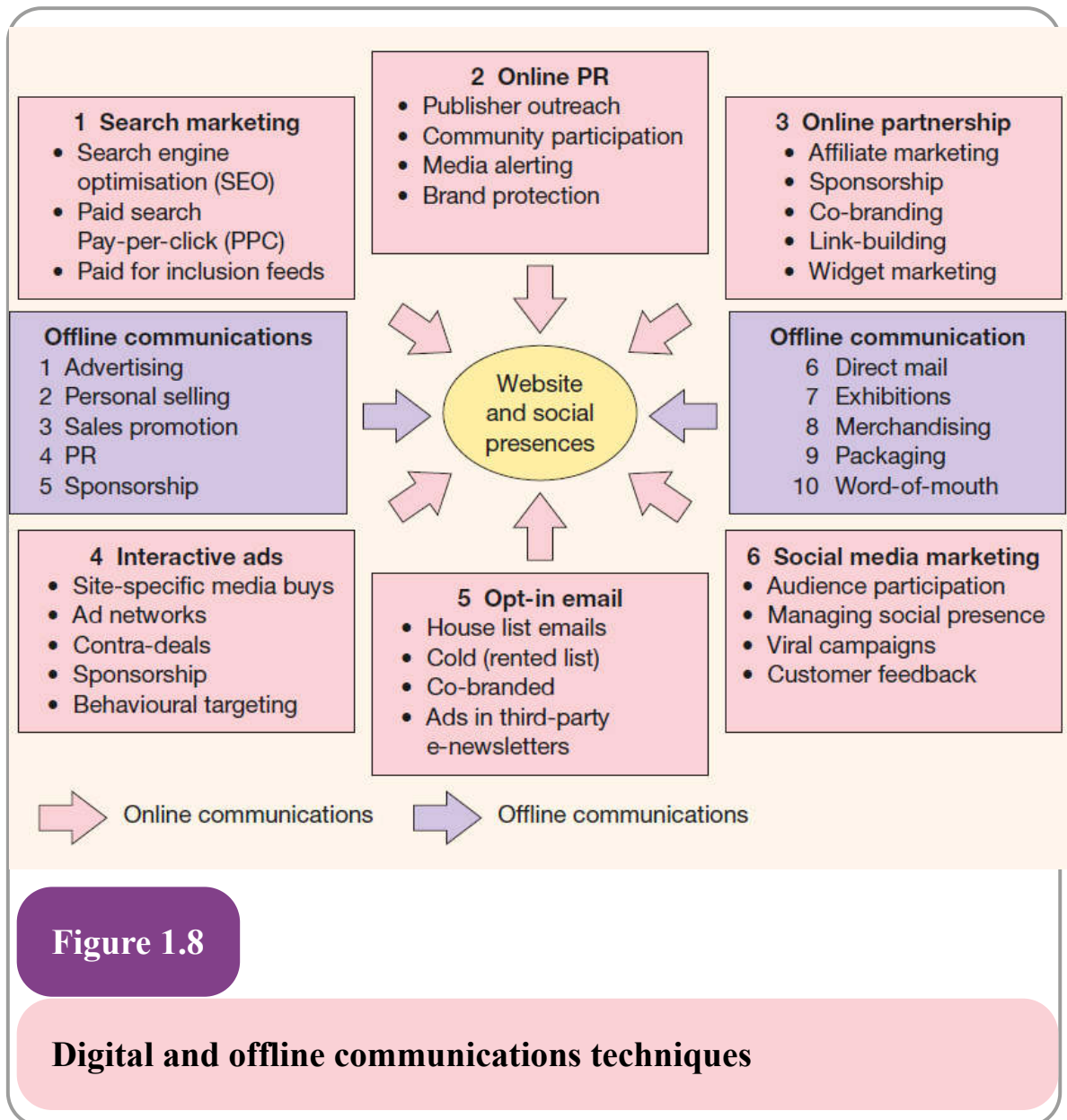
There are many online communications techniques that marketers must review as part of their digital business communications strategy or as part of planning a digital marketing campaign. To assist with planning, Chaffey and Smith (2012) recommend reviewing the six main types of **digital media channels** for reaching audiences, shown in Figure 1.8. Note that offline communications should also be reviewed for their role in driving visitors to a company website or social network presence.

Widget

A badge or button incorporated into a site or social network space by its owner, with content or services typically served from another site, making widgets effectively a mini-software application or web service. Content can be updated in real time since the widget interacts with the server each time it loads.

Digital media channels

Digital communications techniques used to achieve goals of brand awareness, familiarity, favourability and to influence purchase intent by encouraging users of digital media to visit a website to engage with the brand or product and ultimately to purchase digital or offline through traditional media channels such as by phone or in-store.



1 Search engine marketing. Placing messages on a search engine to encourage clickthrough to a website when the user types a specific keyword phrase. Two key search marketing techniques are paid placements or sponsored links using **pay-per-click (PPC)**, and

placements in the natural or organic listings using **search engine optimisation (SEO)**.

- 2 Digital PR.** Maximising favourable mentions and interactions with a company's brands, products or websites using third-party sites such as social networks or blogs that are likely to be visited by your target audience. It also includes responding to negative mentions and conducting public relations via a site through a press centre or blog. It is closely related to social media marketing.
- 3 Digital partnerships.** Creating and managing long-term arrangements to promote your digital services on third-party websites or through email communications. Different forms of partnership include link building, affiliate marketing, aggregators (such as price-comparison site MoneySuperMarket, **www.moneysupermarket.com**), digital sponsorship and co-branding.
- 4 Interactive advertising.** Use of digital ads such as banners and rich media ads to achieve brand awareness and encourage clickthrough to a target site.
- 5 Opt-in email marketing.** Renting email lists or placing ads in third-party e-newsletters or the use of an in-house list for customer activation and retention.
- 6 Social media marketing.** Social media marketing is an important category of digital marketing that involves encouraging customer communications on a company's own site, or a social presence such as Facebook or Twitter, or in specialist publisher sites, blogs and forums. It can be applied as a traditional broadcast medium - for example companies can use Facebook or Twitter to send messages to customers or partners who have opted in. However, to take advantage of the benefits of social media it is important to participate in customer conversations. These can be related to products, promotions or customer service and are aimed at learning more about customers and providing support, thus improving the way a company is perceived. (In Chapter 9 we identify six main applications of social media.)

Mini case study 1.3 gives an illustration of how a small start-up business can use the combination of marketing tools illustrated in Figure 1.8.

Pay-per-click (PPC) search marketing

Refers to when a company pays for text ads to be displayed on the search engine results pages as a sponsored link (typically above, to the right of or below the natural listings) when a specific key phrase is entered by the search users. It is so called because the marketer pays for each time the hypertext link in the ad is clicked on. If a link is clicked repeatedly, then this will be detected by the search engine as click fraud and the marketer will not be charged.

Search engine optimisation (SEO)

A structured approach used to increase the position of a company or its products in search engine natural or organic results listings (the main body of the search results page) for selected keywords or phrases.

marketing

Case Study 1.3

Brand new businesses and digital

Small businesses face a double-edged sword with digital marketing. It can be very simple and easy to do, and digital can provide an almost level playing field against larger incumbents. On the other hand, organic ('free' marketing with no media buy) digital marketing is increasingly difficult to do when many of the major social platforms need to increase their advertising revenues and thus make it more difficult to achieve organic visibility.

Start-ups increasingly discover that great digital marketing and great product must go hand in hand (and we cover this more in the sections on 'growth hacking' in Chapter 10). The product itself becomes part of the marketing. Products such as Spotify and Dropbox marketed themselves through their virality. Spotify was a relatively late arrival on the music streaming scene, but the virality of a free but legal music streaming service was an enormous boost to its visibility to its target audience. Spotify relied heavily on early users sharing the experience with their network of contacts on social media. In its early days, access to Spotify was by invitation only, so the virality was created by the apparent rationing of access to the free product while it was possible to join the paid version.

Likewise, Dropbox's free 2GB storage offer (linked to additional free storage if you persuaded a friend to join) was viral enough to acquire a huge audience. The lure of an additional 250MB of storage for each new customer that a Dropbox user brought meant that Dropbox was introduced to many new users through effectively a form of affiliate marketing. The cost of the digital marketing was borne heavily in the delivery of free product.

Freemium (where there are free and paid-for versions of a product or service) models feature very heavily in successful viral spread of new business offerings, particularly where the product or service is delivered via an app.

The second part of the definition of digital marketing shows that it should not be the technology that drives digital marketing, but the business returns from gaining new customers and maintaining relationships with existing customers. It also emphasises how digital marketing does not occur in isolation, but is most effective when it is integrated with other communications channels such as phone, direct mail or face to face. The role of the Internet in supporting **multichannel and omnichannel marketing** and **multichannel marketing strategy** is another recurring theme in this text. (Chapters 2 and 6, in particular, explain its role in supporting different customer communications channels and distribution channels.) Digital channels should also be used to support the whole buying process or **customer journey** from pre-sale to sale to post-sale and further development of customer relationships. This clarifies how different marketing channels should integrate and support each other in terms of their proposition development and communications based on their relative merits for the customer and the company.

The final part of the description summarises approaches to **customer-centric marketing**. It shows how digital success requires a planned approach to migrate existing customers to digital channels and acquire new customers by selecting the appropriate mix of e-communications and traditional communications. Gaining and keeping digital customers needs to be based on developing **customer insight** by researching their characteristics and behaviour, what they value and what keeps them loyal, and then delivering tailored, relevant web and email communications.

The social internet and user-generated content

From 2004, the **Web 2.0 concept** increased in prominence among website owners and developers. The main technologies and principles of Web 2.0 have been explained in an influential article by Tim O'Reilly (O'Reilly, 2005). Behind the label 'Web 2.0' lies a bewildering range of interactive tools and social communications techniques such as blogs, podcasts and social networks, which are still in use today.

Web 2.0 also references methods of exchanging data between sites in standardised formats, such as the feeds that merchants use to supply shopping comparison sites with data about products offered and their prices. The main characteristics of Web 2.0 that are still key characteristics of successful digital brands typically involve:

(i) Web services or interactive applications hosted on the web such as Flickr (**www.flickr.com**), Google Maps (**<http://maps.google.com>**) or blogging services such as Blogger. com or WordPress (**www.wordpress.com**).

(ii) Supporting participation - many of the applications are based on altruistic principles of community participation, best represented by the most popular social networks such as Bebo, MySpace and Facebook.

(iii) Encouraging creation of user-generated content - blogs are the best example of this. Another example is the collaborative encyclopaedia Wikipedia (**www.wikipedia.org**).

(iv) Enabling rating of content and digital services - for example, social commerce on e-retail sites.

(v) Ad funding of neutral sites - web services such as Google Gmail™ and many blogs are based on contextual advertising such as Google AdSense™.

(vi) Data exchange between sites through XML-based data standards. RSS is based on XML, but has relatively little semantic mark-up to describe the content. Data can also be exchanged through standard **microformats** such as hCalendar and hReview, which are used to incorporate data from other sites into the Google listings (see **<http://microformats.org>** for details). New classes of content can also be defined and **mashups** created.

Multichannel and omnichannel marketing

Customer communications and product distribution are supported by a combination of digital and traditional channels at different points in the buying cycle. Omnichannel references the importance of social media and mobile-based interactions in informing purchase.

Multichannel marketing strategy

Defines how different marketing channels should integrate and support each other in terms of their proposition development and communications based on their relative merits for the customer and the company.

Customer journey

A description of modern multichannel buyer behaviour as consumers use different media to select suppliers, make purchases and gain customer support.

Customer-centric marketing

An approach to marketing, based on detailed knowledge of customer behaviour within the target audience, which seeks to fulfil the individual needs and wants of customers.

Customer insight

Knowledge about customers' needs, characteristics, preferences and behaviours based on analysis of qualitative and quantitative data. Specific insights can be used to inform marketing tactics directed at groups of customers with shared characteristics.

Web 2.0 concept

A collection of web services that facilitate interaction of web users with sites to create user-generated content and encourage behaviours such as community or social network participation, **mashups**, content rating, use of **widgets** and tagging.

Microformats

A simple set of formats based on XHTML for describing and exchanging information about objects including product and travel reviews, recipes and event information.

(vii) Use of rich media or creation of rich Internet applications (RIA), which provide for a more immersive, interactive experience. These may be integrated into web browsers or may be separate applications, such as that downloaded for Second Life (**www.secondlife.com**).

(viii) Rapid application development using interactive technology approaches known as 'Ajax' (Asynchronous JavaScript and XML). The best-known Ajax implementation is Google Maps, which is responsive since it does not require refreshes to display maps.

Figure 1.9 summarises the evolution of digital and web-related technologies. Note that the terms Web 2.0, 3.0 and 4.0 are not terms commonly used today, yet it's useful to understand the principles of Web 2.0 in particular since they are important to creating interactive, integrated desktop and mobile experiences. Many sites still don't have these characteristics.

Supply chain management

When distinguishing between buy-side and sell-side e-commerce we are looking at different aspects of managing an organisation's supply chain. **Supply chain management (SCM)** is the coordination of all supply activities of an organisation from its suppliers and delivery of products to its customers. (The opportunities for using e-commerce to streamline and restructure the supply chain are described in more detail in Chapter 6.) The **value chain** is a related concept that describes the different value-adding activities that connect a company's supply side with its demand side. We can identify an *internal* value chain within the boundaries of an organisation and an *external* value chain where these activities are performed by partners. Note that in the era of digital business, a company will manage many interrelated value chains, so we also consider the concept of a **value network** (see Chapter 6).

Mashups

Websites, pages or widgets that combine the content or functionality of one website or data source with another to create something offering a different type of value to web users from the separate types of content or functionality.

Supply chain management (SCM)

The coordination of all supply activities of an organisation from its suppliers and partners to its customers.

Value chain

A model for analysis of how supply chain activities can add value to products and services delivered to the customer.

Value network

The links between an organisation and its strategic and non-strategic partners that form its external value chain.

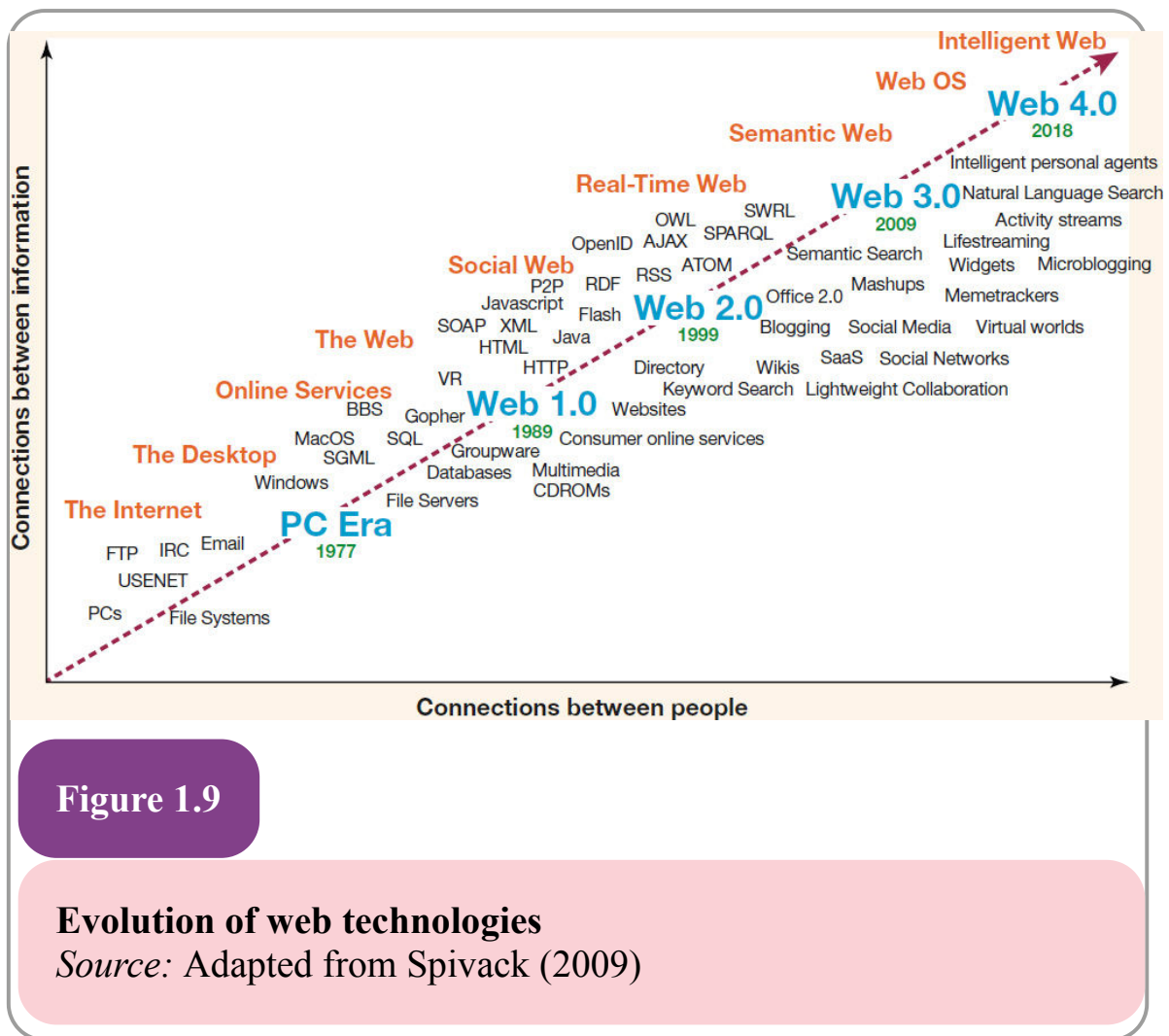


Figure 1.9

Evolution of web technologies

Source: Adapted from Spivack (2009)

Business or consumer models of e-commerce transactions

It is now commonplace to describe e-commerce transactions between an organisation and its stakeholders according to whether they are primarily with consumers (**business-to-consumer - B2C**) or other businesses (**business-to-business - B2B**).

Figure 1.10 gives examples of different companies operating in the business-to-consumer (B2C) and business-to-business (B2B) spheres. Often companies such as BP or Dell Computer will have products that appeal to both consumers and businesses, so will have different parts of their site to appeal to these separate audiences.

Referring to the well-known digital companies in Table 1.1 initially suggests that these companies are mainly focused on B2C markets. However, B2B communications are still important for many of these companies since business transactions can drive revenue, as for example with eBay Business Supply (www.ebay.com/rpp/ebay-business-supply), or the B2C service may need to be sustained through advertising provided through B2B transactions; for example, Google's revenue is largely based on its B2B AdWords (<http://adwords.google.com/>) and advertising service, and advertising-based revenue is also important to sites such as YouTube and Facebook.

Figure 1.10 also presents two additional types of transaction, those where consumers transact directly with other consumers (**C2C**) and those where they initiate trading with companies (**C2B**). These monikers are less widely used (e.g. *Economist*, 2000), but they do highlight significant differences between Internet-based commerce and earlier forms of commerce. Consumer-to-consumer interactions (also known as peer-to-peer or person-to-person, P2P) were relatively rare, but are now very common in the form of social networks.

Business-to-consumer (B2C)

Commercial transactions between an organisation and consumers.

Business-to-business (B2B)

Commercial transactions between an organisation and other organisations (inter-organisational marketing).

Consumer-to-consumer (C2C)

Consumers approach other consumers (or peers) with a proposition.

Consumer-to-business (C2B)

Consumers approach a business with an offer.

		From: Supplier of content/service		
		Consumer or citizen	Business (organisation)	Government
To: Consumer of content/service	Consumer or citizen	Consumer-to-Consumer (C2C) - eBay - Peer-to-Peer (Skype) - Blogs and communities - Product recommendations - Social networks: Instagram and Snapchat	Business-to-Consumer (B2C) - Transactional: Amazon - Relationship-building: BP - Brand-building: Unilever - Media owner – News Corp - Comparison intermediary: Kelkoo, Pricerunner	Government-to-Consumer (G2C) - National government transactional: tax – Inland Revenue - National government information - Local government services
	Business (organisation)	Consumer-to-Business (C2B) - Priceline - Consumer-feedback, communities or campaigns	Business-to-Business (B2B) - Transactional: Eurooffice - Relationship-building: BP - Media Owned: Emap business publications - B2B marketplaces: EC21	Government-to-Business (G2B) - Government services and transactions: tax - Legal regulations
	Government	Consumer-to-Government (C2G) Feedback to government through pressure group or individual sites	Business-to-Government (B2G) Feedback to government businesses and non-governmental organisations	Government-to-Government (G2G) - Inter-government services - Exchange of information

Figure 1.10

Summary and examples of transaction alternatives between businesses, consumers and governmental organisations

Mini Case Study 1.4

Craigslist and Gumtree

There are many customer-to-customer (C2C) digital businesses. Indeed, eBay is probably one of the most recognisable, but its growth as a major platform for brands means that it doesn't entirely remain faithful to its C2C roots. However, other platforms for C2C do exist. Craigslist and Gumtree probably do remain a little more faithful to their C2C roots.

Gumtree started out as a simple classified ads site in the UK in 2000 as a way of connecting English-speaking foreign nationals who

were moving to London and needed work, accommodation and connections. It was acquired in 2005 by eBay but retains its unique brand identity and expanded to other parts of Europe and overseas locations where there was a significant UK expat community.

Listing is free, but users can pay to ‘promote’ a specific listing. More recently, Gumtree has moved to allow businesses, and in particular car dealers, to advertise on the site.

Craigslist has a similar history but grew up in San Francisco in the late 1990s expanding to many other countries over time, as well as adopting languages other than English. The site has a distinctive and at times controversial reputation for developing relationships and selling adult services. Craigslist relies on a community policing of adverts by other Craigslist users. Most of Craigslist revenue comes from job listings.

Both of these sites remain interesting because of the community nature and feel of their organisation. The localised C2C nature is what draws both advertisers and consumers who might not naturally be drawn to Amazon Marketplace or eBay.

Hoffman and Novak (1996) suggested that C2C interactions are a key characteristic of the Internet that is important for companies to take into account, but it is only in recent years with the growth of always-on broadband connections and mobile access to the web that these have become so popular. P2P transactions are also the main basis for some business models for digital businesses such as Craigslist and Gumtree (see Mini case study 1.4) and Amazon (see Case study 1.2), which are still run on a business basis, and some blogs, which are not run by companies but by individuals.

Finally, the diagram also includes government and public services organisations that deliver digital or e-government services. As well as the models shown in Figure 1.10, it has also been suggested that employees should be considered as a separate type of consumer through the use of intranets; this is referred to as employee-to-employee, or E2E.

Dot Gov defined

Dot Gov refers to the application of digital technologies to government and public services. In the same way that digital business can be understood as transaction and engagement with customers (citizens), suppliers and internal communications, Dot Gov covers a similar range of applications:

- *Citizens* - facilities for dissemination of information and use of digital services at local and national levels. For example, at a local level you can find out when refuse is collected and at national level it is possible to fill in tax returns.
- *Suppliers* - government departments have a vast network of suppliers. The potential benefits (and pitfalls) of electronic supply chain management and e-procurement (described in Chapters 6 and 7) are equally valid for government.
- *Internal communications* - this includes information collection and dissemination and email and workflow systems for improving efficiency within government departments.

Dot Gov is now viewed as important within government in many countries. The European Union set up ‘i2010’ (*European Information Society in 2010*) whose aims included

providing an integrated approach to information society and audio-visual policies in the EU, covering regulation, research, and deployment and promoting cultural diversity. (eEurope, 2005)

Dot Gov

The application of digital technologies to government and public services for citizens and businesses.

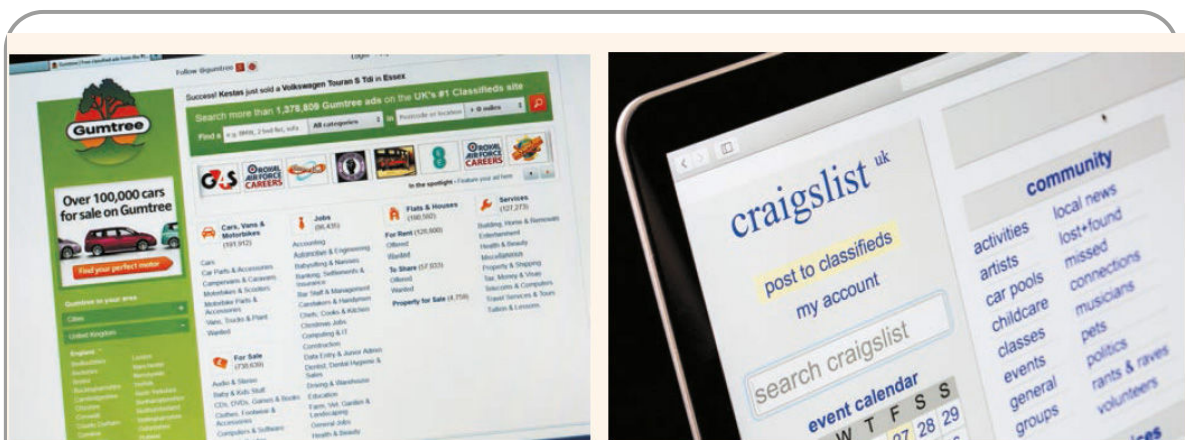


Figure 1.11

Gumtree and Craigslist side by side

Source: sjscreens/Alamy Stock Photo; True Images/Alamy Stock Photo

Digital business opportunities

Digital business has introduced new opportunities for small and large organisations to compete in the global marketplace. As we observed at the start of this chapter, many commentators have noted that one of the biggest changes introduced by electronic communications is how approaches to transmitting and transforming information can be used for competitive advantage. A significant commentary on the disruptive, transformational nature of electronic communications is provided in Box 1.1.

The Internet also provides significant opportunities for many businesses to build closer relationships with their existing digital customers and suppliers to help achieve customer retention. Encouraging use of digital business services by customers and suppliers can significantly reduce costs while providing a new, convenient channel for purchase and customer service. Through providing high-quality digital services, organisations can build lasting relationships with their stakeholders. While it is sometimes said that *'Your digital customers are only a click or a finger-press away from your competitors'*, this is a simplification, and encouraging use of digital services can help achieve **'soft lock-in'**. This means that a customer or supplier continues to use a service since they find the service valuable, they have invested time in learning the service or integrating it with their systems and there are some costs in switching. Think of digital services you use for different purposes. How often do you switch between them? Of course, the ideal is that the service meets the needs of its users so well and delivers value such that they are satisfied and do not consider switching.

Business adoption of digital technologies for e-commerce means that, as managers, we need to assess the impact of e-commerce and digital

business on our marketplace and organisation. What are the drivers of changed consumer and business behaviour? How should we respond? How much do we need to invest? What are our priorities and how quickly do we need to act? Answering these questions is an essential part of formulating a digital business and digital marketing strategy (and is considered in more detail in Part 2). To answer these questions, marketing research will need to be conducted (as described in Chapters 2 to 4) to determine the current levels of adoption of the Internet for different activities among customers and competitors in our market sector and in other sectors.

Soft lock-in

Customers or suppliers continue to use certain digital services because of the switching costs.

Evans and Wurster on the impact of disruptive Internet technologies

Evans and Wurster of Harvard argue in their classic 1997 paper 'Strategy and the new economics of information' that there are three characteristics of information that, when combined with disruptive Internet technologies, can have a major impact on a marketplace. These characteristics of information are reach, richness and affiliation:

- 1 *Reach*. Conventionally, 'reach' refers to the potential number of customers a business can interact with. The Internet enables reach to be increased nationally and internationally at low cost through making content available via search engines. 'Reach' also refers to the number of different categories and products a consumer interface (e.g. store, catalogue or website) can cover: witness the large range of products available through digital businesses such as Amazon, eBay and Kelkoo. com and existing companies such as easyJet.com and Tesco.com, which have used the web to extend their product range.
- 2 *Richness*. This is a characteristic of the information itself. The Internet enables more detailed information about

products, prices and availability to be made available. It also enables more interactivity and customisation to engage customers and to provide more up-to-date information. But, Evans and Wurster also note that richness is limited by bandwidth (the volume of information that can be transmitted using a communications link in a given time), the accuracy or reliability of information and its security.

3 Affiliation. This refers to the effectiveness of links with partners. In a digital context, an organisation that has the most and richest links with other compatible organisations will be able to gain a larger reach and influence. Consider how digital businesses such as eBay, Google and Yahoo! have successfully formed partnerships or acquired other companies to provide new diverse information services such as social networking, mapping, voice communications and digital photography, to name just a few.

In markets such as car sales, which have been transformed by the Internet, understanding how to improve reach, richness and affiliation is crucial. This is not because a large proportion of people buy cars via digital means, but rather the majority research their preferred make, model and supplier using digital tools.

Drivers of digital technology adoption

Business adoption of e-commerce and digital business is driven by benefits to different parts of the organisation. First and foremost, businesses are concerned about how the benefits of digital business will impact on profitability or generating value to an organisation. The two main ways in which this can be achieved are:

- potential for increased revenue arising from **increased reach** to a larger customer base and encouraging loyalty and repeat purchases among existing customers;
- **cost reduction** achieved through delivering services electronically - reductions include staff costs, transport costs and costs of materials such as paper.

At an early point in digital technology adoption, a government report (DTI, 2000) identified two main categories of drivers that remain relevant today for introducing new technology:

Cost/efficiency drivers

- 1 Increasing speed with which supplies can be obtained
- 2 Increasing speed with which goods can be dispatched
- 3 Reduced sales and purchasing costs
- 4 Reduced operating costs.

Competitiveness drivers

- 5 Customer demand
- 6 Improving the range and quality of services offered
- 7 Avoiding losing market share to businesses already using e-commerce.

More recently, in interviews with Australian businesses, Perrott (2005) identifies four key areas driving performance: **cost-benefit, competitive pressures, market advantage and value-adding, i.e. improving customer satisfaction while building strong relationships.**

When reviewing potential benefits, it is useful to identify both tangible benefits (for which monetary savings or revenues can be identified) and intangible benefits (for which it is more difficult to calculate cost savings). The types of potential benefits are summarised in Table 1.2.

Doherty *et al.* (2003) researched the drivers and barriers to retailers' adoption of Internet technologies to determine the most important factors. Table 1.3 summarises the ranking in importance for different degrees of Internet adoption, from static **brochureware** (A), through an active website containing product information (B) to a transactional site where items can be purchased (C). You can see that the two most important factors that correlate with adoption are 'Internet target segment', i.e. customers in their market are typically adopters of the Internet, and 'Internet strategy' (a defined Internet strategy is in place). This suggests, as would be expected, that companies that do not have a coherent Internet or digital business strategy are less likely to use higher levels of Internet services. Many larger organisations that have responded to the challenge

of digital business have created a separate e-commerce plan and separate resources to implement it. This text covers what needs to go into such a plan and the issues to consider when implementing it.

Case study 1.2 illustrates the benefits of setting up a digital operation for an SME. It also highlights some of the challenges of managing a digital business and highlights the need for continued investment to refine digital services and the marketing needed to attract visitors to the website.

Brochureware

Brochureware describes a website to which a company has simply migrated its existing paper-based promotional literature without recognising the differences required by this medium.

Table 1.2

Tangible and intangible benefits of e-commerce and digital business

Tangible benefits	Intangible benefits
• Increased sales from new sales leads giving rise to increased revenue from: - new customers, new markets - existing customers (cross-selling) • Marketing cost reductions from: - reduced time in customer service - digital sales - reduced printing and distribution costs of marketing communications • Supply chain cost reductions from: - reduced levels of inventory - shorter cycle time in ordering • Administrative cost reductions from more efficient routine business	• Corporate image communication • Enhancement of brand • More rapid, more responsive marketing communications, including PR • Faster product development lifecycle enabling faster response to market needs • Improved customer service

processes such as recruitment, invoice payment and holiday authorisation

- Learning for the future
- Meeting customer expectations to have a website
- Identifying new partners, supporting existing partners better
- Better management of marketing information and customer information
- Feedback from customers on products

Table 1.3

Summary of factors most important in encouraging digital adoption among e-commerce retailers

Factor influencing adoption		A	B	C
1	Internet target segment	3	2	1
2	Internet strategy	1	1	6
3	Internet marketplace	4	5	2
4	Infrastructure and development capability	2	3	5
5	Internet communications	5	6	4
6	Cost of Internet trading	8	9	10
7	Internet cost opportunity	6	8	7
8	Market development opportunity	7	4	3
9	Concerns	9	10	9
10	Consumer preferences	10	7	8

A = Internet adoption (static website), B = active website, C = digital sales (transactional site)
Source: Based on a compilation from separate tables in Doherty *et al.* (2003)

Barriers to the adoption of technology by digital business stakeholders

Opportunities have to be balanced against the risks of introducing digital business services, which include strategic and practical risks. One of the main strategic risks **is making the wrong decision about digital business investments**. In every business sector, some companies have taken advantage of digital business and gained a competitive advantage. But others have invested in digital business without achieving the hoped-for returns, either because the execution of the plan was flawed, or simply because the approaches were inappropriate. The impact of the Internet and technology varies by industry. Andy Grove, Chairman of Intel, one of the early adopters of digital business, noted that every organisation needs to ask whether, for them:

The Internet is a typhoon force, a ten times force, or is it a bit of wind? Or is it a force that fundamentally alters our business?

(Grove, 1996)

This statement still seems to encapsulate how managers must respond to different digital technologies; the impact will vary through time from minor for some companies to significant for others, and an appropriate response is required. However, there is a very compelling argument for any organisation in the second decade of the 21st century, that managers must respond to the digital challenge they face when their broad network of stakeholders demands it.

There are also many practical risks to manage that, if ignored, can lead to bad customer experiences and bad news stories, which damage the reputation of the company. In the section on digital business opportunities, we reviewed the concept of soft lock-in; however, if the customer experience of a service is very bad, they will stop using it and switch to other digital options. Examples of poor digital customer experience include:

- websites that fail because of a spike in visitor traffic after a peak-hour TV advertising campaign;
- hackers penetrating the security of the system and stealing credit card details;
- a company emails customers without receiving their permission, thus annoying customers and potentially breaking privacy and data protection laws;
- problems with digital fulfilment of goods ordered, meaning customer orders go missing or are delayed;
- customer service enquiries through email, contact forms and social media don't reach the right person and are ignored.

Debate 1.2

Limited SME adoption of digital business

'Adoption of digital business by established SMEs is generally less than that in larger businesses. This is principally a consequence of the negative attitude of managing directors and CEOs to the business benefits of information and communication technology (ICT).'

The perception of these risks may result in limited adoption of digital business in many organisations, which is suggested by the data in Figure 1.10. This is particularly the case for SMEs. (We study adoption levels and drivers in this type of business further in Chapter 4.)

Another approach to reviewing the strategy issues involved with implementing digital business is the classic McKinsey 7S strategy instrument (Waterman *et al.*, 1980).

Evaluating an organisation's digital business capabilities

Assessment of an organisation's existing digital business capabilities is a starting point for the future development of their digital business strategy. We will see in Chapter 5 how different forms of **stage models** can be used to assess digital business capability. An example of a basic stage model reviewing capabilities for sell-side and buy-side e-commerce is shown in Figure 1.12. This shows how companies can introduce more complex technologies and extend the range of processes that are digital business-enabled. Stage 5 includes social commerce.

Drivers of consumer technology adoption

To determine investment in sell-side e-commerce, managers need to assess how to adopt new services such as web, mobile and interactive TV and specific services such as blogs, social networks and feeds. (In Chapter 4, we see how such demand analysis is conducted in a structured way.)

Stage models

Used to review how advanced a company is in its use of information and communications technology (ICT) to support different processes.

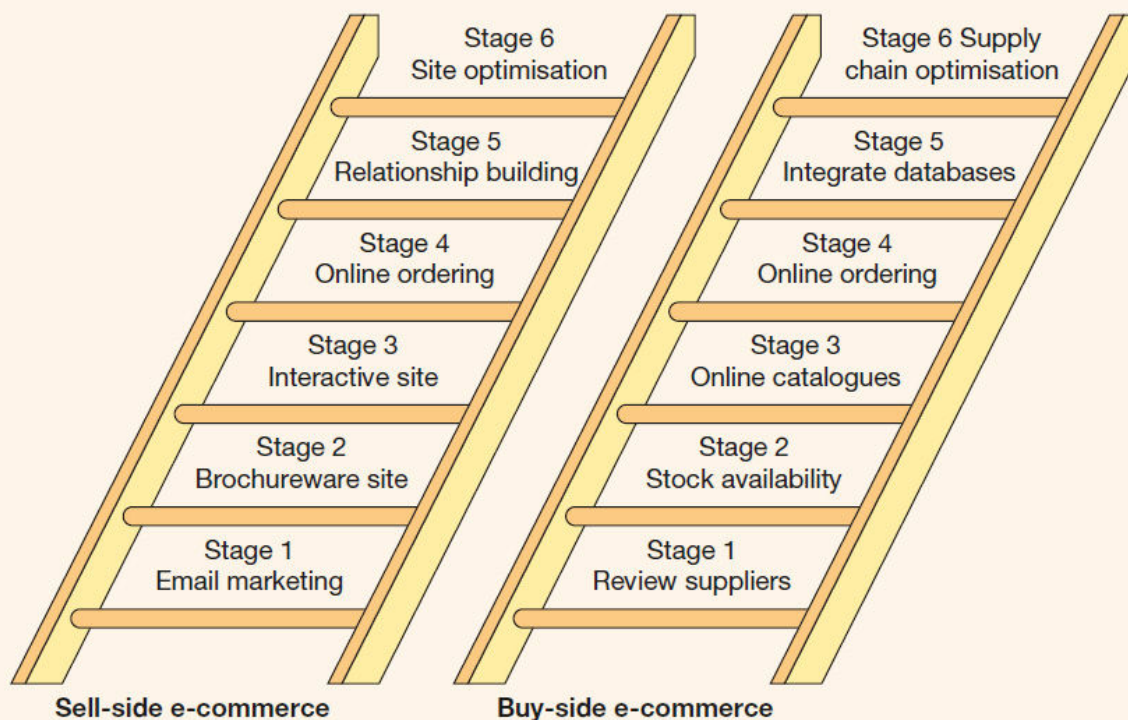


Figure 1.12

A simple stage model for buy-side and sell-side e-commerce

We will see (in Chapter 5 on strategy development for digital business) how it is important that companies offering e-commerce services create a clear **digital value proposition (DVP)** to encourage customers to use their specific digital services. Typical benefits of digital services are summarised by the **‘Six Cs’**, a simple mnemonic to show different types of customer value:

- 1 Content** - In the mid-1990s it was often said that ‘content is king’. Well, relevant rich content is still king. This means more detailed, in-depth information to support the buying process for transactional or relationship-building sites or branded experiences to encourage product usage for FMCG brands.
- 2 Customisation** - In this case mass customisation of content, whether received as website pages such as ‘Amazon recommends’ or email alerts, and commonly known as ‘personalisation’.

- 3 Community** - The Internet liberates consumers to discuss anything they wish through forums, chat-rooms and blog comments. (We will explore these techniques more in Chapters 2 and 3.)
- 4 Convenience** - This is the ability to select, purchase and in some cases use products from your desktop at any time: the classic 24 x 7 x 365 availability of a service. Usage of digital products is, of course, restricted to digital products such as music or other data services. Amazon has advertised offline using creative ads showing a Christmas shopper battling against a gale-swept street clutching several bags to reinforce the convenience message.
- 5 Choice** - The web gives a wider choice of products and suppliers than via conventional distribution channels. The success of digital intermediaries such as Kelkoo (**www.kelkoo.com**) and Reevoov (**www.reevoo.com**) is evidence of this. Similarly, Tesco.com provides Tesco with a platform to give consumers a wider choice of products (financial, travel, white goods) with more detailed information than is physically available in-store.
- 6 Cost reduction** - The digital world is widely perceived as a relatively low-cost place of purchase. Often customers expect to get a good deal as they perceive that digital traders have a lower cost-base as they have lower staff and distribution costs than a retailer that runs a network of high-street stores. A simple price differential is a key approach to encouraging usage of digital services. In the late 1990s, low-cost airline easyJet encouraged the limited change behaviour required to move from phone booking to digital booking by offering a £2.50 discount on digital bookings.

Note that the 7Cs of Rayport and Jaworski (2003) provide a similar framework of Context, Content, Community, Customisation, Communication, Connection and Commerce.

Digital value proposition (DVP)

A statement of the benefits of digital services that reinforces the core proposition and differentiates from an organisation's non-digital offering and those of competitors.

Barriers to consumer digital adoption

An indication of some of the barriers to using the Internet, in particular for consumer purchases, is clear from a survey (Booz Allen Hamilton, 2002) of perceptions in different countries. It noted that consumer barriers to adoption of the Internet included:

- no perceived benefit;
- lack of trust ;
- security problems;
- lack of skills;
- cost.

These barriers to Internet services, still present in every country, need to be taken into account when forecasting future demand.

To complete this chapter, read Case study 1.2 for the background on the success factors that have helped build one of the world's biggest digital businesses.

Case Study 1.2

Amazon - the world's largest digital business?

This case summarises the strategic approach used by Amazon to take advantage of increasing consumer engagement in the digital world of the Internet. It summarises Amazon's objectives, strategy and proposition, along with issues and risks that Amazon faces. You will see that many of its success factors are similar to those for other digital businesses, particularly those in e-commerce.

Context

Amazon is a business that feels as if it has been with us since the dawn of the Internet, but it started life in 1994 as a company called Cadabra, set up by Jeff Bezos after he left his Wall Street job. Bezos reportedly created a list of 20 products he could retail on the Internet, from which he chose 5

to focus on before finally settling on books -the business started in his garage (seemingly like all famous US case study start-ups). By 2015, the firm reported annual revenues of \$107 billion and was thought to be worth more than the whole of Walmart - standing only behind Apple, Google and Microsoft in market capitalisation in 2016.

Mission

Amazon describes its mission as to be earth's most customer-centric company; to being the most customer-focused organisation globally, and as a place where anyone can buy anything. While that statement might not tick all the boxes for the best mission statement, it certainly provides an insight into the firm.

At the time of writing, Amazon consisted of a dizzying array of different retail offerings, subsidiary businesses, content and products:

- Retail goods - the business for which Amazon is familiar to most people is also the one it started with -books, but also music, video, grocery, non-food and consumer electronics, to name but a few;
- Marketplace - the Amazon platform as an e-commerce environment for other retailers and individuals to sell new and/or second-hand items;
- Associates - an affiliate marketing system allowing Amazon to advertise on other users' websites and digital presences in return for a fee to the owners of those assets.

Subsidiaries include, among others:

- A9.com - the part of the business that manages and develops the technology behind Amazon's search and advertising interests;
- Amazon Web Services - provides cloud and on-demand computing services and platforms;
- Alexa.com Analytics - provides web traffic and analytics data;
- Audible - a business focused on downloadable content such as podcasts, audiobooks and other informational and educational audio content;
- Goodreads - a social cataloguing service that, among other things, allows users to share reviews and rate books with other users, as well as annotate sections of reading material for sharing;
- IMDB - an online database and app containing information about films, TV and video games;

- Zappos - a shoe and clothing business.
The products include:
- Amazon Appstore - a substitute Android appstore;
- Amazon Video (in its various geographic areas) - a streaming video service, along with Amazon Studios, responsible for the production of original Amazon content;
- Kindle - a broad range of tablet hardware from simple e-readers to more sophisticated tablet devices;
- Twitch.tv - a live-streaming platform to show video gameplay and musical content;
- Echo - an 'Internet of Things' voice-enabled device that can be used to stream content as well as control other Internet of Things (IoT) devices as part of a home automation system.

Revenue model

Amazon's revenue comes from a variety of sources, but these can be clearly divided into four areas:

- 1 The retail income stream:
 - goods, which as a sales revenue model provide the largest sources of income to the business.
- 2 The Amazon platform - this can be split into:
 - the wholesale reuse of the Amazon technical platform (through the AWS product), which is used by thousands of household names (such as Dropbox and Airbnb) as a cloud computing platform;
 - the use of the retail platform by individuals (as an alternative to sites such as eBay) and retailers as a specific environment to conduct retail activity.
- 3 The content business:
 - the sale or rental of streaming or downloadable content.
- 4 The subscription business:
 - the 'Prime Business' - subscriptions to Amazon Prime, which allow for free rapid delivery in certain countries as well as privileged access to Amazon Prime digital content such as music, video, TV, film, literature and games.

Proposition

Amazon's consumer retail proposition has grown from a simple bookstore to a complex supplier of almost anything required by a modern consumer. The core proposition is for a customer to be able to buy anything at a low price with a high level of convenience and receive it very quickly.

Amazon's AWS core proposition is to lower the costs, increase the speed and enable global operation of a cloud application rapidly.

The two core key concepts that stand out here are about lowering costs and increasing speed.

Risks

Amazon's business faces a series of issues and risks.

The competitive environment

The competitive environment just within retail is huge, and Amazon face the same risks as any other retail player in a multichannel world. The benefits that Amazon sought from the relatively low cost of entry in a digital marketplace also put it at risks from other organisations who might do the same.

Global and offering expansion

The constant march into a global business environment can have significant effects on any business, not just Amazon. But there are inevitable impacts on the organisation's resources as it increases its global reach and offers new products and services. Each geographic location provides new legal issues to contend with, while there is an inevitable inner tension that emerges when new products and services compete with existing ones for a finite set of resources. Amazon needs to retain its existing customer base while growing its new customer acquisitions, and this acquisitive approach can sometimes allow an organisation to lose touch with an existing customer base that might already be open to Amazon's new offerings.

Managing inventory, fulfilment and the technical infrastructure

Like any business, there are risks associated with managing stock and inventory. Although some level of planning is possible, it's difficult for

Amazon (or any business) to totally predict what people want and will buy. This becomes a bigger headache with a global marketplace and an enormous product range. There are risks of over-supply or under-supply if the business doesn't get its forecasts correct. Fluctuating demand for goods and services can make it difficult for Amazon to deliver goods on time, making promises to deliver next day notoriously difficult to keep - this is particularly true with seasonal changes in demand around times such as Christmas and the notorious Black Friday. Relying on a public digital network infrastructure makes it difficult to be sure that streamed or downloaded content can be delivered with certainty and reliability.

Security and safety in digital

Like any digital business, Amazon faces a potential risk from a series of different risks in digital. There are possibilities of a breach of security surrounding customer data, including things such as bank details. An event like this could cause trust to disappear in the firm, with customers becoming increasingly unlikely to return to the company or engage with its other products.

Third-party illicit activity on Amazon platforms

Other firms use Amazon in two ways - by retailing through its existing retail platform or by managing their businesses on the AWS business. It's possible that illicit retailer activity on the retail platform could reflect badly on Amazon's reputation - there are numerous cases where Amazon has been accused of acting with impunity while third-party retailers sell counterfeit or faulty equipment from the platform. Such action has affected Amazon's very visible reputation, and so they have had to act rapidly to deal with this. When there are potentially millions of products and many thousands of retailers, it can be difficult to police.

Alternatively, AWS could be used to host and support an illegally acting business. Again, it becomes very difficult for Amazon to police and there is always the danger of complicity - which could lead to expensive legal proceedings.

The constant rate of change

The character of Amazon is to constantly innovate. This permanent sense of a state of change creates a volatility in the organisation. Add to this a constant change of state in the outside world - particularly evolving legal circumstances in different geographic locations - and a highly complex, difficult-to-manage situation emerges. Constant innovation into areas that have not been previously considered in legal terms creates huge unknowns. One such area at the time of writing is the use of autonomous drones in product delivery. It's difficult to plan such a service beyond experimentation when there are so many unknowns within just the legal environment.

Competition

Within the retail sector, Amazon faces a myriad of competitors. None are as big, hold as much inventory nor have the variety of stock that Amazon carries. That brings its own problems, but it also makes identifying competitors difficult. Competition can be identified in specific verticals (such as music and books, downloadable or streaming content) or in very specific products.

Competitors themselves may well target very specific product lines where they may be specialist operators. In that sense, Amazon's size might make it difficult to operate profitably in certain areas. Conversely, its very size makes it more able to absorb short-term costs issues.

Amazon often refers back to its original 1997 letter to shareholders to identify those things that enable it to contend with competition - these are focusing on long-term rather than short-term wins, the very visible 'obsessing with customers' narrative' and the constant, long-term investment and development in the technical infrastructure to support the business. Arguably, these three factors have allowed Amazon to have a unique position within the marketplaces it operates - whether that is in its 'traditional' retail business, its contentserving business or its AWS business.

Objectives and strategy

Amazon repeatedly refers back to some fundamental rules from 1997 that guide its business in the long term:

- Focus relentlessly on our customers.
- Make bold investment decisions in light of long-term leadership considerations rather than short-term profitability considerations.

- Focus on cash.
- Work hard to spend wisely and maintain our lean culture.
- Focus on hiring and retaining versatile and talented employees, and weight their compensation to significant stock ownership rather than cash.

Amazon's growth strategy

Amazon highlights:

- Sustainability:
 - in the form of increasingly efficient use of existing energy supply and a growth in the amount of sustainable carbon-free energy production from its own renewable energy sources;
 - in the form of sustainable packaging that reduces the amount of packaging used, as well as reduces transport and logistics costs associated with inappropriate packaging;
- A wide range of products and services that allows Amazon to reduce its risks in any one market or vertical;
- A constant programme of cost reduction and/or maximising value out of existing costs that simply have to be paid.

Question

Assess how the characteristics of digital, together with strategic decisions taken by its management team, have supported Amazon's continued growth.

Summary

- 1 E-commerce traditionally refers to electronically mediated buying and selling.

- 2 Sell-side e-commerce or digital marketing involves all electronic business transactions between an organisation and its customers, while buy-side e-commerce involves transactions between an organisation and its suppliers. Social commerce encourages customers to interact to support sales goals.
- 3 'Digital business' is a broader term, referring to how technology can benefit all internal business processes and interactions with third parties. This includes buy-side and sell-side e-commerce and the internal value chain.
- 4 Digital marketing involves investment in paid, owned and earned media across the six key digital marketing media channels of search engine marketing, online PR and social media, partnerships, display advertising, email marketing and viral marketing. Inbound marketing describes the use of integrated content, social media and search marketing to influence consumers as they select products, sometimes referred to as the Zero Moment of Truth.
- 5 Web 2.0 is used to refer to web services that facilitate interaction of web users with sites to create user-generated content and encourage behaviours such as community or social network participation, mashups, content rating, use of widgets and tagging.
- 6 The main business drivers for introducing e-commerce and digital business are opportunities for increased revenues and reducing costs, but many other benefits can be identified that improve customer service and corporate image.
- 7 Consumer adoption of the digital technology is limited by lack of imperative, cost of access and security fears. Business adoption tends to be restricted by perceptions of cost, making return on investment difficult to quantify.
- 8 Introducing new technology is not all that is required for success in introducing e-commerce and digital business. Clearly defined objectives, creating the right culture for change, a mix of skills, partnerships and organisational structure are arguably as, if not more, important.

Exercises

Self-assessment questions

- 1 Distinguish between e-commerce and digital business.
- 2 Explain what is meant by buy-side and sell-side e-commerce.
- 3 Explain the scope and benefits of social media and social commerce to an organisation of your choice.
- 4 Summarise the consumer and business adoption levels in your country. What seem to be the main barriers to adoption?
- 5 Outline the reasons why a business may wish to adopt e-commerce.
- 6 What are the main differences between business-to-business and business-to-consumer e-commerce?
- 7 Summarise the impact of the introduction of digital business on different aspects of an organisation.
- 8 What is the relevance of intermediary or influencer sites to a B2C company?

Essay and discussion questions

- 1 Suggest how an organisation can evaluate the impact of digital technology on its business. Is it a passing fad or does it have a significant impact?
- 2 Explain the concepts of social media and social commerce and how they can assist organisations in reaching their objectives.
- 3 Similar benefits and barriers exist for the adoption of sell-side e-commerce for both B2B and B2C organisations. Discuss.

- 4 Evaluate how social media marketing techniques can be applied within an organisation and with its stakeholders.
- 5 The digital presence of a company has similar aims regardless of the sector in which the company operates.

Examination questions

- 1 Explain the relationship between the concepts of e-commerce and digital business.
- 2 Distinguish between buy-side and sell-side e-commerce and give an example of the application of each.
- 3 Summarise three reasons why a company may wish to introduce e-commerce.
- 4 Describe three of the main barriers to adoption of e-commerce by consumers and suggest how a company could counter these.
- 5 Outline the internal changes a company may need to make when introducing digital business.
- 6 Summarise the benefits of applying social media marketing approaches to an organisation.
- 7 Name three risks for a company that introduces buy-side e-commerce.
- 8 Name three risks for a company that introduces sell-side e-commerce.

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Web links

Sites giving general information on market characteristics of digital business:

ClickZ Stats (www.clickz.com/stats) The definitive source of news on Internet developments, and reports on company and consumer adoption of the Internet and characteristics in Europe and worldwide. A searchable digest of most analyst reports.

European Commission Information Society Statistics (http://ec.europa.eu/information_society/digital-agenda/index_en.htm) Reports evaluating digital business activity and consumer adoption across the European Union.

Econsultancy.com (www.econsultancy.com) Research, best practice reports and supplier directory for online marketing.

Mary Meeker (<https://kleinerperkins.com/people/mary-meeker>) An analyst at Kleiner Perkins Caufield Byers who presents trends and forecasts on digital technology yearly, with a focus on mobile channels.

Ofcom (<http://stakeholders.ofcom.org.uk/>) The Office of Communication has an annual Communications Market report on the adoption of digital media including telecommunications and the Internet (including broadband adoption), digital television and wireless services.

Smart Insights (www.smartinsights.com) Guidance on digital marketing best practice from Dave Chaffey to help businesses succeed online. It includes alerts on the latest developments in applying digital technology and templates to create marketing plans and budgets.

2 Opportunity analysis for digital business and e-commerce

Chapter at a glance

Main topics

- Digital marketplace analysis
- A process for digital marketplace analysis
- Location of trading in the marketplace
- Business models for e-commerce

Focus on. . .

- Digital start-up companies

Case studies

- 2.1** How Boden grew from an eight-product menswear catalogue to an international brand with over £300 million in sales
- 2.2** Unilever demonstrates strategic agility

2.3 Macy's - using omnichannel growth strategies to improve customer experience

2.4 i-to-i - a global marketplace for a start-up

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Complete an online marketplace analysis to assess competitor, customer and intermediary use of digital technologies and media as part of strategy

development

- Identify the main business and marketplace models for digital communications and trading
- Evaluate the effectiveness of business and revenue models for online businesses, particularly digital start-up businesses

Management issues

The fundamentals of e-commerce imply these questions for managers:

- What are the implications of changes in marketplace structures for how we trade with customers and other partners?
- Which business models and revenue models should we consider in order to exploit the Internet?
- What will be the importance of online intermediaries and marketplace hubs to our business and what actions should we take to partner these intermediaries?

Links to other chapters

The main related chapters are:

- *Chapter 3* explains the hardware and software infrastructure enabling these new business models
- *Chapters 4 and 5* consider appropriate strategic responses to these new models and paradigms
- *Chapter 6* explores new models of the value chain in more detail and explores the effect of new intermediaries and marketplaces on procurement
- *Chapter 8* discusses models of online customer behaviour, which is another aspect of environment analysis

Introduction

In the first part of Chapter 2 we show how companies can review their presence in the **digital marketplace** to increase their visibility across different customer touchpoints. The **path to purchase** is now much more complex, since purchase decisions are influenced by many more touchpoints today (see Figure 2.1). For example, decisions are influenced when accessing social media sites via desktop and mobile sites plus communications in traditional channels. Increasingly, multiple devices are used simultaneously, for example when using smartphones or tablets while watching TV - the process known as **multiscreening**.

The path to purchase (from start to finish) is rarely a linear journey - sometimes one search can lead to a new idea or a change in what a customer wants to buy. The customer journey in Figure 2.1 shows a typical search path, i.e. tablets, smartphones, laptops and TVs.

Microsoft conducted research with a sample of US adults who were technology decisionmakers looking to purchase a consumer electronics device over the next 30 to 90 days, that cost \$100 or more (Cosley, 2015). The questions they were trying to answer were:

- When on the journey do consumers cross over from the Internet to the physical world - and vice versa?
- Which influencers have the greatest reach and impact on consumers?
- Along the journey, where are the pain points? Conversely, what delights along the way resonated the most?

In this ‘typical’ customer journey map, you can see that most consumers follow a fairly consistent pattern when seeking to purchase an electronics product. They tend to start with general searches on features, prices and store locations; they also seek out information from product manufacturers.

Once they have some basic information, potential buyers search for user reviews from blogs, Amazon and traditional retailers such as Best Buy, etc. At this point, they typically visit a bricks-and-mortar retailer to validate their purchase decision and then complete their purchase either online or in-store, depending on pricing considerations.

Tip: visit www.thinkwithgoogle.com/tools/customer-journey-to-online-purchase.html to explore customer journeys across different industries, business sizes and regions.

To determine the best way to influence purchasers requires careful consideration. Businesses must collect and review insights that help them understand this behaviour and then improve their visibility and communications on different channels to improve this. Consider a B2B organisation; traditionally, it will have sold its products through a network of distributors. With the advent of e-commerce, it now has the opportunity to bypass distributors and trade directly with customers via a destination website, and it also has the opportunity to reach customers through new types of online sites such as blogs and B2B marketplaces. Similarly, for B2C organisations such as an e-retail **destination site**, there is the opportunity to market its products through **online intermediaries** or influencers such as search engines, price comparison sites, social networks, blogs and other publisher sites. We will show you how different information sources can be used to assess customer usage of different types of intermediary. We then look at how digital communications have facilitated restructuring of the relationships between members of the digital marketplace - a key feature of e-commerce.

Business and revenue models for e-commerce

Digital communications have given rise to many exciting new business and revenue models that we evaluate in the second part of this chapter. We will use the Business Model Canvas, which is an excellent framework for reviewing the business models for both digital start-up businesses and existing businesses who are developing new propositions. Throughout this chapter we mainly consider the sell-side elements of e-commerce rather than the digital business as a whole. (A review of the entire supply chain is completed in Chapter 6.)

Digital marketplace

Exchanges of information and commercial transactions between consumers, businesses and governments completed through different forms of online presence such as search engines, social networks, comparison sites and destination sites.

Path to purchase

The different sites, channels, devices and information sources that consumers use to inform their purchase decision for a product or service. Also known as conversion pathways on a site.

Multiscreening

A term used to describe simultaneous use of devices such as digital TV and tablets.

Destination site

Typically a retailer or manufacturer site with sales and service information. Intermediaries such as media sites may be destination sites for some.

Online intermediaries

Websites that help connect web users with content they are seeking on destination sites. Includes new online intermediaries such as search engines and shopping comparison sites and traditional brokers, directories and newspaper and magazine publishers with a digital presence.

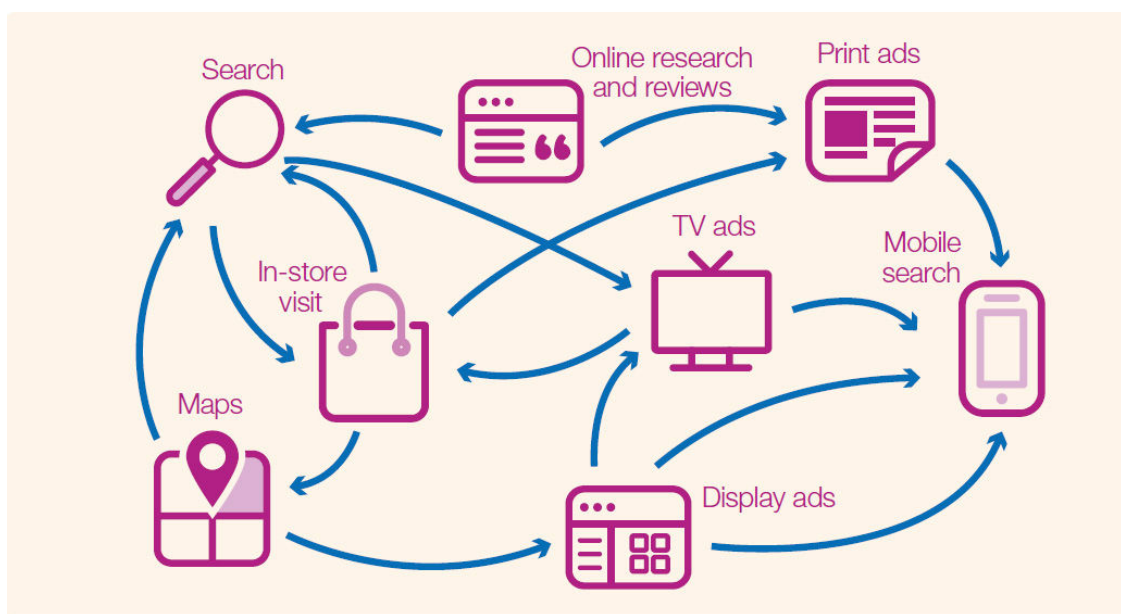


Figure 2.1

The path to purchase

Source: White paper, From campaigns to context, Experian, <https://www.experian.co.uk/assets/marketing-services/white-papers/wp-contextual-marketing.pdf>, Page 5. used with permission.

Case study 2.1 provides the history behind successful British clothing retailer Boden and gives an example of what a well-managed, customer-focused online business can deliver.

Digital marketplace analysis

Understanding the online elements of an organisation's environment, which are shown in Figure 2.2, is a key part of **situation analysis** for digital business strategy development. There is also the need for a process to continually monitor the environment, which is often referred to as **environmental scanning and analysis**.

Knowledge of the opportunities and threats presented by these marketplace changes is essential to those involved in defining business, marketing and information systems strategy (which we cover in Chapter 5). In this chapter we introduce a number of frameworks for analysing the immediate marketplace of the micro-environment.

To inform e-commerce strategy, the most significant influences are those of the immediate marketplace of the micro-environment that is shaped by the needs of customers and how services are provided to them through competitors and intermediaries and via upstream suppliers. (In Chapter 4 we examine the issues of the broader e-commerce environment in more detail using the SLEPT framework to examine Social, Legal, Economic, Political and Technological issues.)

Situation analysis

Collection and review of information about an organisation's external environment and internal processes and resources in order to inform its strategies.

Environmental scanning and analysis

The process of continuously monitoring the environment and events and responding accordingly.

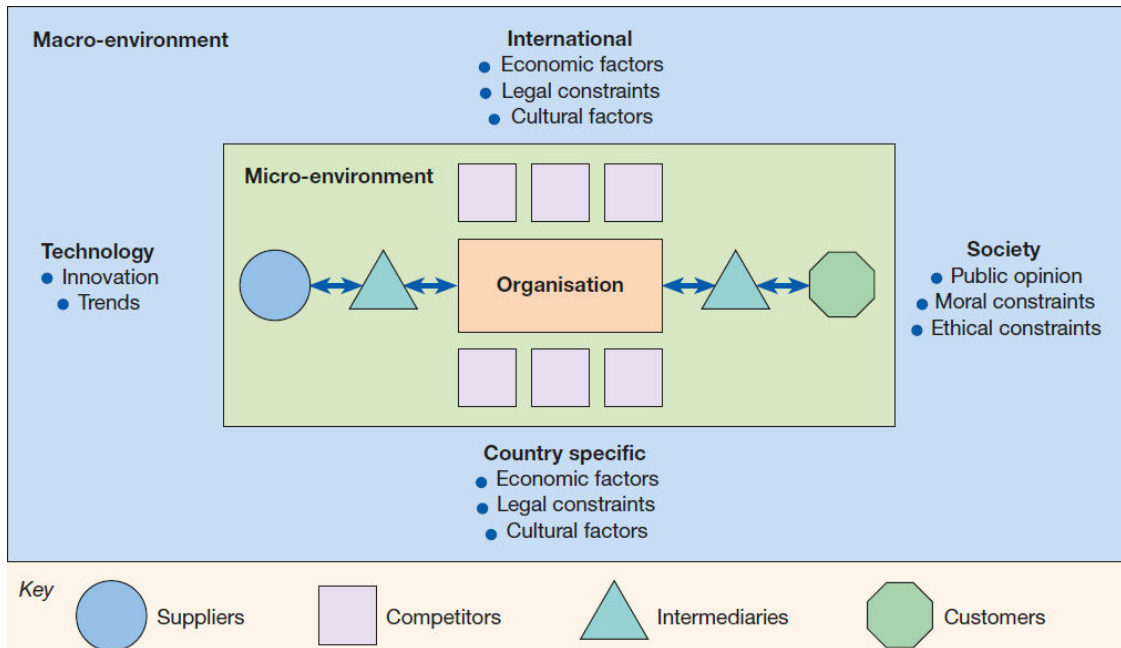


Figure 2.2

The environment in which digital business services are provided

catalogue to an international brand with over £300 million in sales

This case study is about a global clothing mail-order and e-commerce company, focusing on 'middle-class' customers. It illustrates some of the issues of starting up an omnichannel business and key areas of customer acquisition.

Boden background

Online clothing retailer Boden was set up in 1991 and has gradually grown to become a British success story. In 2015, the company generated sales worth £300 million -around 55% coming from overseas trading. Boden is the second-largest British clothing brand in America (where it was launched in 2002) and employs over 800 people in the UK. Around 1.5 million people wear Boden clothes.

The typical household income of a UK Boden customer is between £60,000 and £70,000. The brand targets women aged 25 to 50 but their 'bull's eye' is a

35-year old woman who typically has children and is looking for clothes that provide a flattering fit.



Figure 2.3

Johnnie Boden

Source: Alex Lentati/Evening Standard/Shutterstock

The history of Boden

Johnnie Boden, founder of the middle-class clothing company Boden, which has fans such as David Cameron and Michelle Obama, initially had a 10-year 'rocky ride' as a mail-order and Internet start-up.

Johnnie left university to work in the City as a stockbroker and, by his own admission, 'was not very good at it'. He went on to work in America and noticed that a lot of his colleagues bought clothes via mailorder catalogues. In 1991, when his uncle left him an inheritance, Johnnie decided to set up a mail-order clothing business. Initially, he offered eight menswear products - operating in a niche industry sector, selling 'basic classics'. However, Boden soon realised that the menswear market was very small and, at the time, men spent limited amounts on clothes. Therefore, he followed the market and a

year later launched a wom-enswear range and, in 1996, 'Mini Boden' - a child-renswear product line.

To help provide financing for the next stage of its growth, Boden raised capital from Piper Private Equity (www.piper.co.uk/portfolio/boden) in 1999 and 2003. It was hard to work out what was important, so a lot of different things were tried. Also, the womenswear market is constantly evolving; for example, nowadays, women no longer want to dress their age - instead they want innovation. Clothing companies can never become complacent; business, by its very nature, is competitive and Boden takes the view 'you are only as good as last season's range'. The company's turning point came in 2001, when Johnnie could take a small dividend. When the private equity firm exited in 2007, Boden had delivered a 30x multiple on its investment. Johnnie's perseverance has paid off - he is now listed on the Sunday Times Rich List with an estimated personal worth of around £215m.

Main acquisition channels

Boden initially started as a mail-order catalogue and then in 1999 launched its first UK website. Even now, catalogues still remain an important part of the company's marketing strategy. Although 80% of sales are online, around 60-70% can be attributed to catalogues as part of the customer journey (tracked via key codes/offer codes).

Johnnie takes the view: 'For most people, receiving a catalogue is the most *unimportant* event in their life, so you have to use every device in your disposal to attract their attention'.

In the early years, the main customer acquisition channels used were:

- rented mailing lists;
- two-stage advertising;
- public relations;
- recommend a friend;
- promotional deals with publications such as *Country Living* and *Red* magazines.

The company has found there has not been a single channel that has constantly out-performed the rest. They recommend trying a mix of different activities and not to overly focus on one marketing communication channel. In terms of profitability, 'recommend a friend' has always been the best marketing tactic, and using rented mailing lists has been an ongoing customer acquisition tool for the company. Boden takes the view that a company should 'always follow the numbers' - if a channel is performing badly, stop using it.

The Boden brand

Boden positions itself as a 'lifestyle' company and has a distinctive tone of voice. Some of the main features of the brand proposition are:

- *Personal business*: Customers like being spoken to honestly. The company uses 'plain-speaking communications' - they want to engage with people's emotions. All of the letters/emails come from Johnnie and, despite having a team of copywriters, he still approves everything before it goes out. They take the approach that brand communications should be informative and uplifting - the only way to get that is to employ people who share the same values as the company.
- *PR*: This is always focused on the products and marketing offers. All of the company's PR is done in-house (agencies have not worked well for the brand in the past - they like to keep control of the messaging).
- *Photography*: Having a great product is the most important thing; photography is the second most important thing. Boden's mantra is that a good shot should look like a really nice photo in your family's photography album.
- *Brand building*: It is important to define the brand proposition. However, do not spend money unless there's a return. The company's catalogues and website(s) are the brand.
- *Free returns*: Everyone expects them, and Boden uses them as a tactical device. Offering free returns works well regarding uplifting sales (although postage and packaging has to be built into product margins). The company is always testing offers against each other using a segmented database. They also take the view that offering free returns is a good acquisition tactic -if items are easy to send back, it demonstrates confidence in the product. This encourages speculative buying.

Johnnie's start-up tips

Always focus on the core business. Boden opened a couple of shops in 2000 and tied up a lot of capital into offline retail. However, they captured customer data in the stores and realised that cannibalisation was very high - only 40% of sales were incremental; the majority were from existing Boden customers. They decided that growth was important in other markets, rather than via other channels, and launched in America and Germany. America was a more difficult market to penetrate but, in its first year, £2 million of sales came from Germany and they were relatively easy to fulfil from the UK.

Johnnie's advice to anyone launching an online clothing business is:

- Be clear who you are in the marketplace (customers have a lot of options - direct and high street). Provide a compelling offer that stands out from the competition.

- Listen to your customers - a lot of mistakes were based on trusting instincts, rather than listening to customers. You have to be ruthless; if something isn't working, stop doing it!
- Hire good people - don't quibble about paying people a bit more for a good employee and make sure you spend time on recruitment.
- Listen to the numbers - use quantitative and qualitative research to help decision-making.

Sources: Johnnie Boden - Interview at ECMOD2010:

www.youtube.com/watch?v=Jj59atgaQ8o

www.youtube.com/watch?v=Aa2ukPYK9Vk

www.youtube.com/watch?v=iMnMIFt1zA0

www.youtube.com/watch?v=3EcSnF422jQ

High50 - www.youtube.com/watch?v=3fFMJyFKUeQ

www.bbc.co.uk/news/business-26334330

<http://startups.co.uk/10-secrets-of-claoting-brand-bodens-success/>

Strategic agility

The capacity to respond to these environmental opportunities and threats is commonly referred to as strategic agility. **Strategic agility** is a concept strongly associated with knowledge management theory and is based on developing a sound process for reviewing marketplace opportunities and threats and then selecting the appropriate strategy options.

Strategic agility

The capability to innovate and so gain competitive advantage within a marketplace by monitoring changes within an organisation's marketplace and then to efficiently evaluate alternative strategies and select, review and implement appropriate candidate strategies.

Case Study 2.2

Unilever demonstrates strategic agility

Unilever: Strategic agility in the personal care market

In July 2016, Unilever acquired online-only subscription service Dollar Shave Club for a rumoured \$1 billion. The digital start-up delivers razors by post for a fixed monthly price and, according to Euromonitor, currently holds 54% of

the online shaving market in the US. Dollar Shave Club has rapidly disrupted the shaving market, which has traditionally been dominated by Gillette (owned by Procter & Gamble). Gillette has seen its overall share of the shaving market drop from 71% in 2010 to 59% in 2015.

The monthly subscription service has also branched out into other product categories, including hair gels and body washes. According to Unilever, the acquisition was a push to 'embrace disruption' and the start-up's direct-to-consumer business model provides Unilever with unique consumer and data insights. By moving from selling single products through third-party retailers, to targeting consumers directly via a subscription service, Unilever are becoming a consumer service company. Building relationships and nurturing customer loyalty will help secure longer term revenues.



Figure 2.4

Dollar Shave Club

Source: <https://www.dollarsaaveclub.com/>

Disrupting the supply chain model by building more direct relationships with consumers means that Unilever will be less reliant on one route to market (via retailers) and the company can cross-sell and bundle personal care products.

This direct-to-consumer approach has come at a time when a power struggle between ‘brand and retailer’ was recently demonstrated, after grocery giant Tesco removed a number of Unilever’s brands from its shelves, following a pricing row between the two companies. The fall-out happened when Unilever increased the price of a number of household brands by up to 10%, to help offset the fall in the value of the pound following ‘Brexit’.

In contrast, Procter & Gamble (P&G) has struggled with sustainable growth since 2010, following a slowdown in the global economy. As a result, it has undergone a strategic shift to shed almost 100 brands. According to CEO David Taylor, in order to ‘restart’ growth, P&G needs to ‘get back to making consumers aware of its products and communicating their benefits’. One way they have been trying to win back market share (from Dollar Shave Club) has been by launching ‘Gillette Shave Club’, an online subscription service, in June 2015. The company has also launched a subscription service for its Tide Pods laundry brand, to try to stop other markets it operates in being disrupted by online start-ups.

P&G has been shifting its resources and investment into digital (particularly mobile) to make the most of e-commerce - reports have said that the company is growing its e-commerce businesses at a rate of up to 180 per cent per annum and is worth around \$100m in business, across six of its eight major markets.

Unilever has also seen the importance of e-commerce for its business; the channel is growing at 20% per annum globally, and e-commerce in the UK and Ireland is growing at around 15%. Online transactions have led to a significant change in the way Unilever communicates with consumers and the way they shop.

Unilever has identified the need for digital innovation for a number of years and, in 2014, launched the Unilever Foundry in the UK - a start-up accelerator designed to mentor and invest in digital marketing start-ups, in exchange for insight into new technology and trends. Since then, the Unilever Foundry has also launched a global crowdsourcing community, to encourage people to collaborate and aid its sustainability efforts.

The company has also been using other forms of collaborative innovation, such as an annual e-commerce hackathon in London. Participants are given multiple briefs, highlighting challenges faced by the company and its retail partners, such as:

- How do we get delivery for any grocery shop within 60 minutes or quicker and still drive profit?
- What business models can brands and retailers create to win sales using voice, VR, sensors and gesture-based technology?
- How can technology help drive efficiency in the supply chain for online grocery shopping and thus increase profitability?

- How can technology enable a seamless branded shopping experience no matter where you shop: online, in store, on your mobile, on your TV, etc.?

Strategic agility and incorporating innovation via entrepreneurial start-ups seems to be at the core of Unilever's business, whereas P&G appear to be lagging behind and playing 'catch up'.

A process for digital marketplace analysis

Analysis of the digital marketplace is a key part of developing a long-term digital business plan or creating a shorter-term digital marketing campaign. Completing a marketplace analysis helps to define the main types of online presence that are part of an '**online ecosystem**', which describes the customer journeys or flow of online visitors between search engines, media sites and other intermediaries to an organisation and its competitors. Prospects and customers in an online marketplace will naturally turn to search engines to find products, services, brands and entertainment. Search engines act as a distribution system that connects searchers to different intermediary sites for different phrases, so the flow of visits between sites must be understood by the marketer in their sector.

Online ecosystem

Describes the customer behaviour or flow of online visitors between search engines, media sites and other intermediaries to an organisation and its competitors.

Major online players such as Facebook, Google and Salesforce have developed their own infrastructure, or online market ecosystem, which connects websites through data exchange, giving opportunities to enhance the customer experience and extend their reach and influence. For example, Facebook has developed the Facebook platform API to enable exchange of data between websites and applications, including mobile apps. This enables other site owners to incorporate information about consumer Facebook interactions into their own websites and apps and share social objects across the Facebook ecosystem to extend their reach. Google has developed its own ecosystem related to search marketing and mobile - the Android ecosystem. As part of marketplace analysis, companies have to evaluate the relative importance of these ecosystems and the resources they need to put into

integrating their online services with them, to create a plan. Nowadays, most retailers take either a multichannel or omnichannel strategy approach, which are defined in Figure 2.5. Case study 2.3 highlights how Macy's department store uses omnichannel growth strategies to help improve its customer experience.

Analysing the impact of different ecosystems on online consumer behaviour or customer journeys is, today, as important as observing their physical behaviour in the real world.

The main elements of the online marketplace map presented in Figure 2.8, which should be reviewed as part of the process of marketplace analysis, are:

Multichannel strategy

Offers a range of direct and indirect communication channels for consumers to interact with, but channels have limited or no integration and consumers are forced to repeat steps or receive different messages as they switch channels - e.g. websites, retail stores, mail-order catalogues, direct mail, email, mobile, etc.

Omnichannel strategy

Fully integrates all consumer touchpoints and data sources to provide consumers with a *seamless* experience, regardless of how or where they choose to interact with the brand (i.e. desktop or mobile device, by telephone or in a physical store, etc.).

	Multichannel strategy	Omnichannel strategy
Concept	Division between the channels	Integration of all widespread channels
Degree of integration	Partial	Total
Channel scope	Retail channels: store, website, and mobile channel	Retail channels: store, website, mobile channel, social media, customer touchpoints
Customer relationship focus: brand vs. channel	Customer-retail channel focus	Customer-retail channel-brand focus
Objectives	Channel objectives (sales per channel, experience per channel)	All channels work together to offer a holistic customer experience
Channel management	Per channel Management of channels and customer touchpoints geared toward optimising the experience with each one Perceived interaction with the channel	Cross-channel Synergetic management of the channels and customer touchpoints geared toward optimising the holistic experience Perceived interaction with the brand
Customers	No possibility of triggering interaction Use channels in parallel	Can trigger full interaction Use channels simultaneously
Retailers	No possibility of controlling integration of all channels	Control full integration of all channels
Sales people	Do not adapt selling behavior	Adapt selling behavior using different arguments depending on each customer's needs and knowledge of the product

Figure 2.5

Multichannel vs Omnichannel Strategy

Source: Juaneda-Ayensa, M., Mosquera, A. & Sierra Murillo, Y. (2016)

Activity 2.1

Digital ecosystems

Purpose

To explore the increasing importance of facilitating communications through online platforms and service providers.

Activity

Discuss in a group, or make notes to identify, the main companies (e.g. Facebook) and platforms (e.g. mobile phones) used by consumers that are important for companies to review their presence on. Once you have identified the main companies or service types, group them together so that their overall importance can be reviewed.

using omnichannel growth strategies to improve customer experience



Figure 2.6

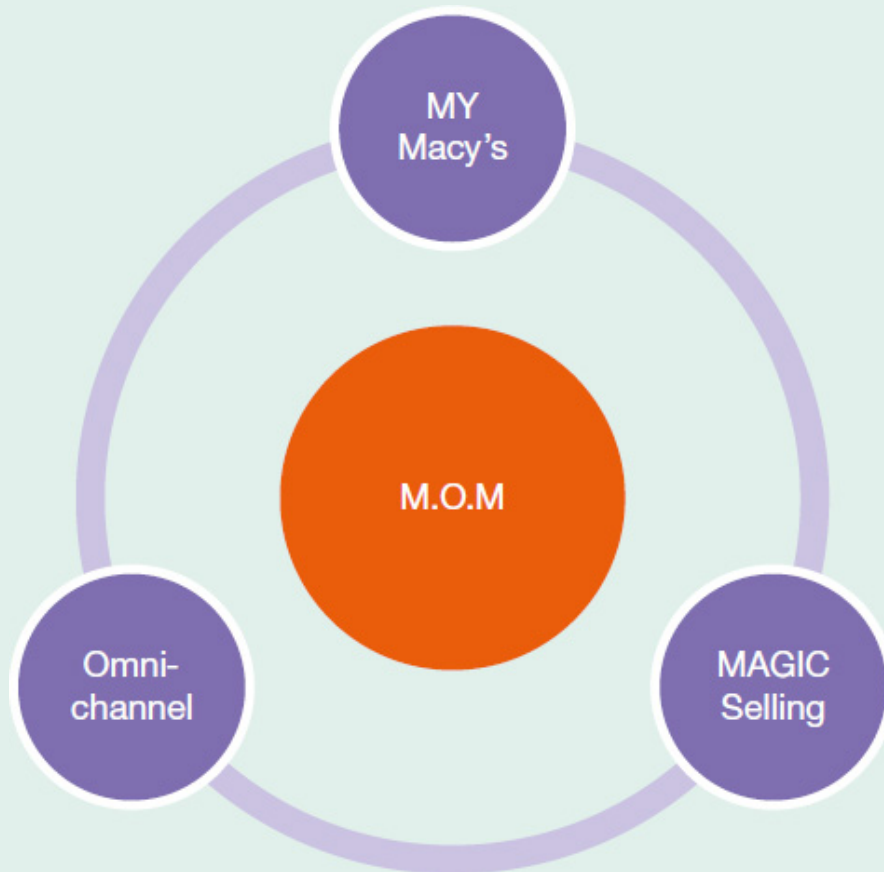


Figure 2.7

Macy's has developed a MOM customer engagement strategy

Macy's, known as the 'Great American Department Store', opened in 1858 and is now a global brand. The retailer has a total of 887 stores, including Bloomingdale's and Blue Mercury.

Macy's has grown through a combination of organic growth and acquisition. More recently, the company has been aggressively expanding its digital capabilities and services across channels, while regularly refreshing its store portfolio.

Macy's has seen many years of consecutive growth, despite industry experts forecasting the 'death of the department store'. The company rapidly

responds to shoppers' new digital behaviours and calls itself 'America's Omnichannel Store' - by adopting a 'digital hybrid' model, the company uses technology to create a tailored shopping experience.

According to Brian Leinbech, Senior VP of Systems Development & Field Services, 'Ninety per cent of [Macy's] customers research online at least occasionally before purchasing in-store'. As a result, the retailer has introduced, and is constantly refining, a 'My Macy's' campaign, which is focused on guiding purchase behaviour in local markets. This includes initiatives and technologies ranging from customer-facing smart fitting rooms to RFID pilot programs. Some of the digital initiatives used include:

- Macy's and Bloomingdale's adopting Apple Pay;
- unveiling the Macy's/Bloomingdale Wallet through the mobile apps to easily store and access offers;
- integrating buy online/pick-up in-store ('click and collect');
- order fulfilment across store portfolio and distribution centres;
- testing same-day delivery for items purchased online and through its mobile app;
- developing new technologies at the Ideas Lab;
- handheld PSO devices to engage with customers and manage inventory;
- shopBeacon technology in stores to improve sales, providing more personalised sales to Shopkick app users.

M: My Macy's localisation - delivering a merchandise collection and shopping experience in each location that meets the needs of the local customer.

O: Omnichannel integration - creating a seamless experience for the customer.

M: Magic selling - selecting products to meet the needs of specific consumers.

Ultimately, Macy's uses technology as an enabler to help the customer experience across different communication channels. For example, its shopBeacon program involves the integration of iBeacon technology with the Shopkick app. The beacons help deliver personalised discounts, product recommendations and rewards to Shopkick app users via their smartphones. As shoppers enter Macy's stores, shopBeacon reminds Shopkick users who have opted-in to receive notifications to open their app.

Sources: www.slideshare.net/DwigatHill/macys-omnichannel-innovations-case-study
<http://marketingland.com/macys-100162>

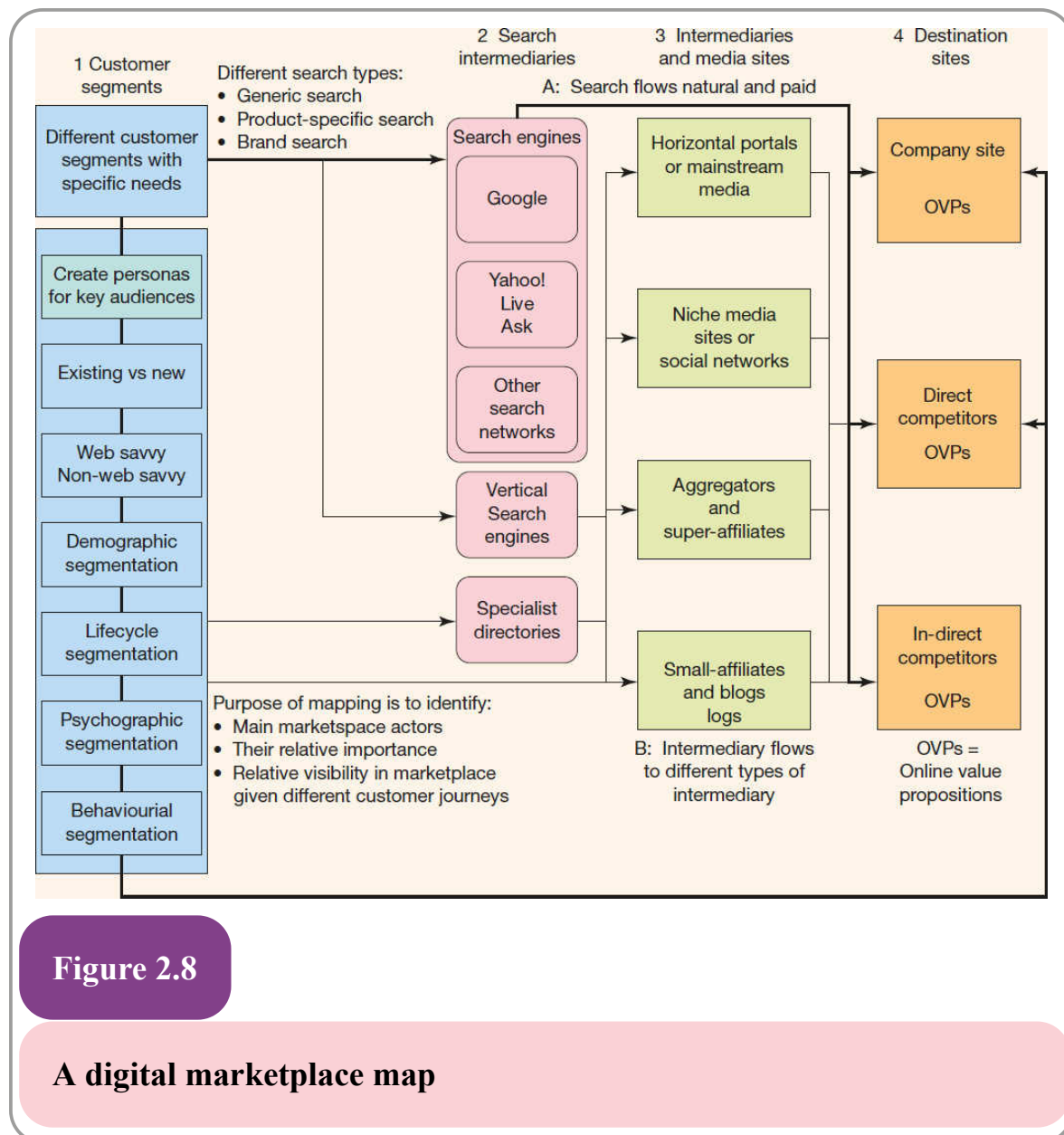


Figure 2.8

A digital marketplace map

1 Customer segments

The marketplace analysis should identify and summarise different target segments for an online business in order to then understand their online media consumption, buyer behaviour and the type of content and experiences they will be looking for from intermediaries and your website. (We cover customer analysis further in Chapter 8.)

2 Search intermediaries

These are the main search engines in each country. Typically they are Google, Bing and Yahoo!, but others are important in some markets, such as China (Baidu), Russia (Yandex) and South Korea (Naver). You can use the audience panel data from different providers indicated in Box 2.1 to find out their relative importance in different countries. The Google Trends tool (Figure 2.9) is a free tool for assessing site popularity and the searches used to find sites and how they vary seasonally, which is useful for student assignments. The example in Figure 2.9 shows relative preference for five social networks.

Choi and Varian (2011) note that Google Trends data may help in predicting the present, or ‘nowcasting’. They argue that ‘. . . the volume of queries on automobile sales during the second week in June may be helpful in predicting the June auto sales report, which is released several weeks later in July’. They found that Google Trends queries can be useful indicators for subsequent consumer purchases in situations where consumers start planning purchases significantly in advance of their actual purchase (the research/discovery phase).

Companies need to know which sites are effective in harnessing search traffic and either partner with them or try to obtain a share of the search traffic using the search engine marketing and affiliate marketing techniques explained in Chapter 7. Well-known, trusted brands that have developed customer loyalty are in a good position to succeed online since a common consumer behaviour is to go straight to the site through entering a URL, a bookmark, email or searching for the brand or URL. Hitwise provides this type of insight, as shown in Table 2.1. Through evaluating the type and volume of phrases used to search for products in a given market, it is possible to calculate the total potential opportunity and the current share of search terms for a company. ‘**Share of search**’ can be determined from web analytics reports from the company site, which indicate the precise key phrases used by visitors to actually reach a site.

Share of search

The audience share of Internet searches achieved by a particular audience in a particular market.

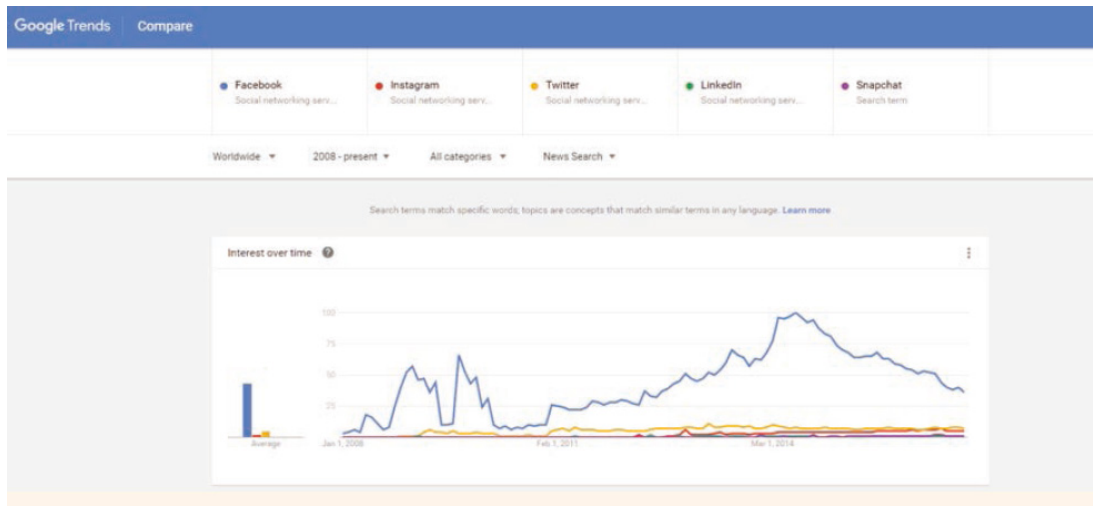


Figure 2.9

Google Trends - useful for consumer interest in products

Source: www.google.com/trends

Table 2.1

Search terms

Search term	Food retailers	Volume of search relative to the top term	Textiles clothing and footwear	Volume of search relative to the top term
1 Top term	Tesco	100	Shoes	100
2	ASDA	50	Boots	75
3	Tesco Direct	15	Dress	55
4	Morrisons	10	Clothes	45
5	Sainsbury's	10	Next	40
6	Aldi	5	Dresses	35
7	Clubcard	5	Nike	35
8	George ASDA	5	River island	35
9	Ocado	5	Watches	35
10	Sainsbury	5	New look	30

Source: Chamberlin (2010)

3 Intermediaries, influencers and media sites

Media sites and other intermediaries such as aggregators, affiliates and influencers such as blogs and vlogs are often successful in attracting visitors via a search, or direct since they are mainstream brands. Companies need to assess potential online media and distribution partners in the categories shown in Figure 2.8, such as:

- (a) **Mainstream news media sites or portal**, including traditional, e.g. FT.com or Times, or pureplay, e.g. Google news, an aggregator.
- (b) **Social networks**, e.g. Facebook, Instagram, Snapchat, Pinterest, Twitter and LinkedIn.
- (c) **Niche or vertical media sites**, e.g. Smartinsights.com, SearchEngineLand.com, ClickZ. com, Econsultancy.com, covering B2B marketing.
- (d) **Price comparison sites** (also known as **aggregators**), e.g. MoneySuperMarket, Price-Runner, Comparethemarket, uSwitch.
- (e) **Superaffiliates, affiliates** gain revenue from a merchant they refer traffic to using a commission-based arrangement based on the proportion of sale or a fixed amount. They are important in e-retail markets, accounting for tens of per cent of sales.
- (f) **Niche affiliates, influencers or bloggers/vloggers**, these are often individuals, but they may be important; for example, in the UK, Martin Lewis of MoneySavingExpert.com receives millions of visits every month and lifestyle vlogger Zoella has significantly more YouTube subscribers than the BBC. Smaller affiliates and bloggers can be important collectively.

Again, the relative importance of these site types can be assessed using the services summarised in Box 2.1.

4 Destination sites

These are the sites that the marketer is trying to generate visitors to, whether these are transactional sites, like retailers, financial services or travel companies, or manufacturers or brands. Figure 2.8 refers to OVP, or **online value proposition**, which is a summary of the unique features of the site (see Chapters 4 and 7). The OVP is a key aspect to consider within marketplace analysis - marketers should evaluate their OVPs against competitors' as part of competitor analysis and think about how they can refine them to develop a unique online experience. (Competitor analysis is also covered in Chapter 7.)

Aggregators

An alternative term for price comparison sites. Aggregators include product, price and service information, comparing competitors within a sector such as financial services, retail or travel. Their revenue models commonly include affiliate revenues (CPA), pay-per-click advertising (CPC) and display advertising (CPM).

Affiliate

A company promoting a merchant typically through a commission-based arrangement, either directly or through an affiliate network.

Online value proposition (OVP)

A statement of the benefits of the brand positioning (content/products/services/experiences) to help engage customers online, which ideally should not be available from competitor offerings.

Box 2.1

Resources for analysing the online marketplace

There is a wealth of research about current Internet usage and future trends that strategists can use to understand their marketplace. In Table 2.2, we summarise a selection of free and paid-for services that can be used for online marketplace analysis to assess the number of people searching for information and the popularity of different types of sites measured by the number of unique visitors.

Unique visitors

These are the individual visitors requesting pages from a website, measured through cookies or IP addresses on an individual computer or device that the user is browsing from.

Econsultancy (www.econsultancy.com) provides a summary of much of the latest research from these sources, together with its own reports such as the Internet Statistics compendium. The pages author Dave Chaffey curates on Smart Insights link to the latest sources on online consumer behaviour, which we introduced in Chapter 1 (www.smartinsights.com/book-support).

Table 2.2

Research tools for assessing your digital marketplace

Service	Usage
1 Google tools. Mainly included within their AdWords service (http://adwords.google.com).	Google is one of the best sources of accurate tools for marketplace analysis, including: • Display Planner (this Adwords tool generates targeting ideas, impression estimates and historical costs) associated with running a campaign on Google's Display Network. • Keyword Planner - this tool available within AdWords gives additional detail (sign-in required). • Google Trends - variation through time of search volume by country - no sign-in required. • Think with Google (thinkwithgoogle.com) - market research and digital trends.
2 Alexa (www.alexa.com). Free tool, but not based on a representative sample, see also www.similarweb.com .	Free service owned by Amazon that provides traffic ranking of individual sites compared to all sites. Works best for sites in top 100,000. Sample dependent on users of the Alexa toolbar.
3 Connexity (www.connexity.com). Paid tool, but free research available in its 'Resources' section.	Paid service available in some countries to compare audience size and search and site usage. Works through monitoring IP traffic to different sites through ISPs.
4 Nielsen (www.nielsen.com).	Panel service based on at-home and

Paid tool. Free data on search engines and intermediaries available from 'Insights' section.	at-work users who have agreed to have their web usage tracked by software. Top rankings on-site give examples of most popular sites in several countries.
5 ComScore (www.comscore.com). Paid tool. Free data on search engines and intermediaries available from 'Insights' section.	A similar panel service to Nielsen, but focusing on the US and UK. A favoured tool for media planners.
6 Google Analytics	Free and paid-for services, which provide insight into website audience behaviour.
7 Forrester (www.forrester.com). Paid research service. Some free commentary and analysis within the 'Research' section.	Offers reports on Internet usage and best practice in different vertical sectors such as financial services, retail and travel. Free research summaries available in media resources section (www.forrester.com/mediaresources) and on its marketing blog (blogs.forrester.com).
8 Smart Insights Digital Marketing Statistics (http://bit.ly/smartstatistics).	A regularly updated compilation of statistics including the top 10 recommended statistics sources.
9 Internet or Interactive Advertising Bureau (IAB). US: www.iab.com, UK: iabuk.net, Europe: www.iabeurope.eu.	Research focusing on investment in different digital media channels, in particular display ads, affiliate marketing and search marketing.
10 Internet Media in Retail Group (IMRG) www.imrg.org.	The IMRG has compilations on online e-commerce expenditure and the most popular retailers in the UK.
11 YouGov Profiles. Free audience profiling tool (today.yougov.com/profileslite) and professional service (yougov.com).	UK media planning and audience segmentation tools for brands and their agencies. There is a free and paid-for audience profiling tool – they also offer BrandIndex, which

measures brand perception and customised research services.

Location of trading in the marketplace

While traditional marketplaces have a physical location, an Internet-based market has no physical presence - it is a virtual marketplace. This has implications for the way in which the relationships between the different actors in the marketplace occur.

The digital marketplace has many alternative virtual locations where an organisation needs to position itself to communicate and sell to its customers. Managers need to understand the relative importance of different types of sites and consumer and business interactions and information flows. In this section we will review how marketplace channel structures, the location of trading and multichannel marketing models can be assessed to inform digital business strategy. Finally, we will review commercial arrangements for transactions.

Review of marketplace channel structures

Marketplace channel structures describe the way a manufacturer or organisation delivers products and services to its customers. Typical channel structures between business and consumer organisations are shown in Figure 2.10.

A distribution channel will consist of one or more intermediaries such as wholesalers and retailers. The relationship between a company and its channel partners shown in Figure 2.10 can be dramatically altered by the opportunities afforded by the Internet. This occurs because the Internet offers a means of bypassing some of the channel partners. This process is known as **disintermediation** or 'cutting out the middleman'. For example, a music company today can distribute digital tracks straight to sites such as iTunes and Spotify, a major change to their channel strategy that has led to the closure of many music stores.

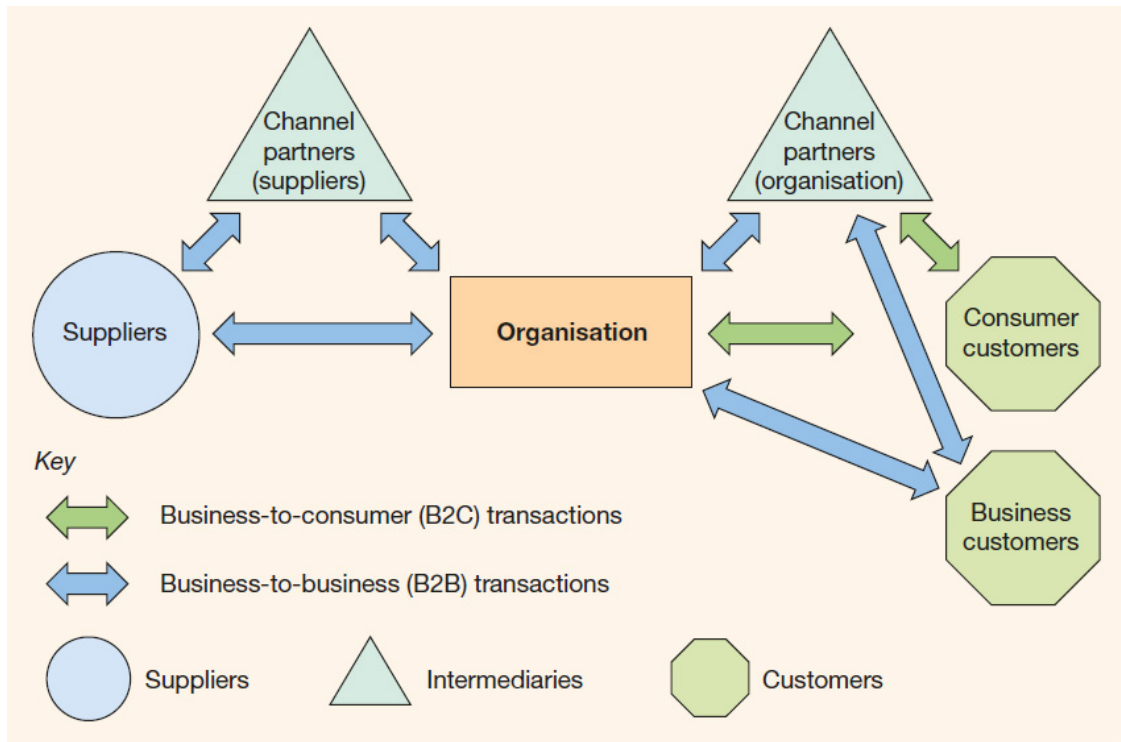


Figure 2.10

B2B and B2C interactions between an organisation, its suppliers and its customers

There are a number of tech companies that are disrupting traditional business models - if you look at some of the recent start-up **unicorns**, they do not have many physical assets. For example, Uber is the world's largest taxi company but it does not own vehicles, Airbnb is the world's largest accommodation provider but it does not own properties and Facebook is the world's most popular media owner but it does not create content.

Figure 2.11 illustrates disintermediation in a graphical form for a simplified retail channel. Further intermediaries such as additional distributors may occur in a business-to-business market. Figure 2.11(a) shows the former position, where a company marketed and sold its products by 'pushing' them through a sales channel. Figure 2.11(b) and Figure 2.11(c) show two different types of disintermediation in which the wholesaler (b) or the wholesaler and retailer (c) are bypassed, allowing the producer to sell and promote direct to the consumer (a direct-to-consumer model- see Case study 2.2). The benefits of disintermediation to the producer are clear - it is able to remove the sales and infrastructure cost of selling through the channel. Benjamin and Weigand (1995) calculated that, using the sale of quality shirts as an example, it is

possible to make cost savings of 28% in the case of (b) and 62% for case (c). Some of these cost savings can be passed on to the customer in the form of cost reductions.

Although disintermediation has occurred, **reintermediation** is perhaps a more significant phenomenon resulting from digital communications. Figure 2.12 illustrates this concept. Figure 2.12(a) shows the traditional situation in which many sales were through brokers such as the Automobile Association (**www.theaa.co.uk**). With disintermediation (Figure 2.12(b)) there was the opportunity to sell direct, initially via call centres and then transactional websites; one example is Direct Line (**www.directline.co.uk**). Purchasers of products still needed assistance in the selection of products and this led to the creation of new intermediaries, the process referred to as reintermediation (Figure 2.12(c)). Examples of this approach are:

- the use of new e-intermediaries such as Adwords for digital marketing;
- the use of new e-markets such as Alibaba.com for e-sourcing (buyers' perspective) or marketing and sales (sellers' perspective);
- the use of new e-intermediaries for payment (PayPal) or identity authentication (Verisign).

Disintermediation

The removal of intermediaries such as distributors or brokers that formerly linked a company to its customers.

Unicorns

Tech start-ups valued at over \$1 billion; according to Venturebeat (Koestsier, 2016) there were 229 unicorns up to January 2016. This includes companies such as: Uber, Airbnb, Snapchat, Dropbox and Pinterest. Start-ups valued over \$10 billion are called decacorns - Facebook, Uber, Palantir and Xiaomi are on this list.

Reintermediation

The creation of new intermediaries between customers and suppliers providing services such as supplier search and product evaluation.

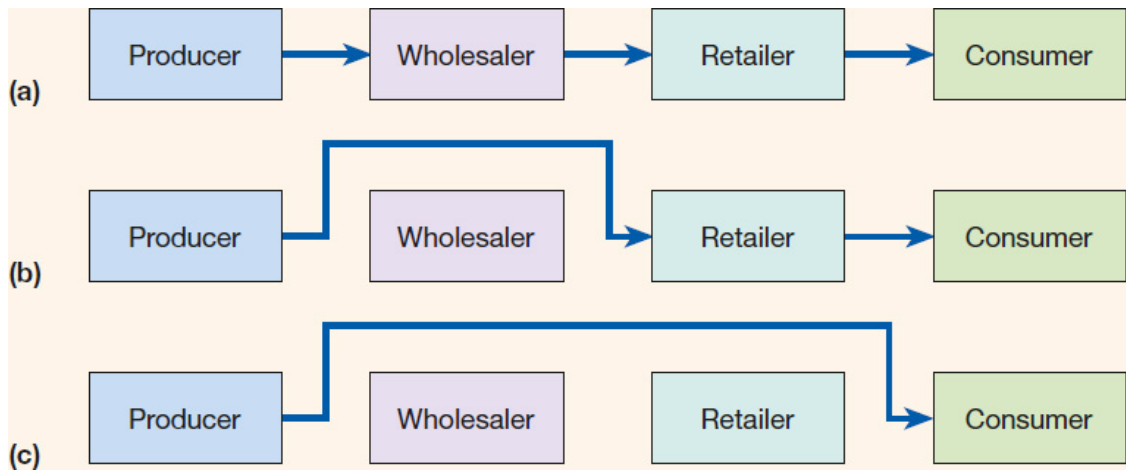


Figure 2.11

Disintermediation of a consumer distribution channel showing (a) the original situation, (b) disintermediation omitting the wholesaler, and (c) disintermediation omitting both wholesaler and retailer

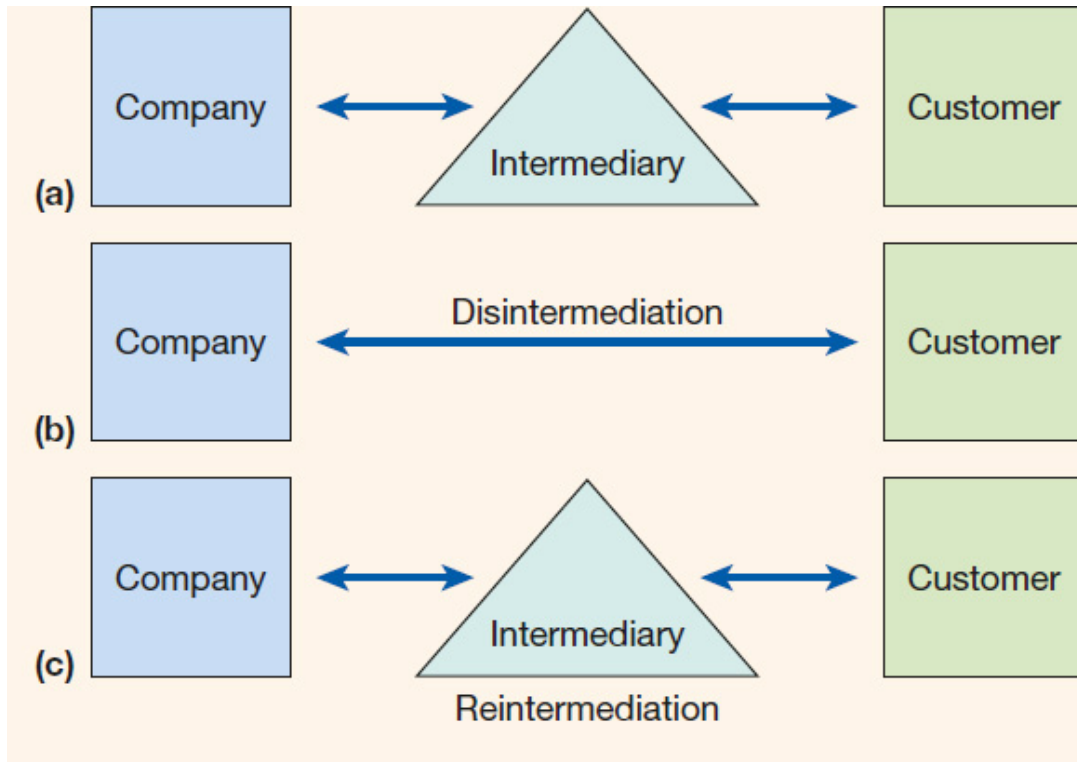


Figure 2.12

From original situation (a) to disintermediation (b) and reintermediation (c)

These new intermediaries are needed for companies to function properly as online businesses, even as they have disintermediated other traditional intermediaries such as retail stores.

In the UK, MoneySuperMarket.com and Confused.com are examples of an intermediary providing a service for people to find online insurance at a competitive price. Esurance.com and Insurance.com are US examples.

What are the implications of reintermediation for the e-commerce manager? Firstly, it is necessary to make sure that your company, as a supplier, is represented on the sites of relevant new intermediaries operating within your chosen market sector. This implies the need to integrate databases containing price information with those of different intermediaries. Forming partnerships or setting up sponsorship with some intermediaries can give better online visibility compared to competitors.

Secondly, it is important to monitor the prices of other suppliers within this sector (possibly by using the intermediary website). Thirdly, it may be appropriate to create your own intermediary; for example, DIY chain B&Q set up its own intermediary to help DIYers, but positioned separately from its owners. Such tactics to counter or take advantage of reintermediation are sometimes known as **countermediation**. A further example is Opodo (www.opodo.com), which was set up by nine European airlines, including Air France, BA, KLM and Lufthansa.

Countermediation

Creation of a new intermediary, such as a publisher or comparison site by an established company. May be a new site, or acquired through purchase or partnering.

Debate 2.1

Countermediation

'The advent of e-commerce means that marketers cannot rely on the online presence of existing intermediaries -instead they must create their own online intermediaries.'

Location of trading in the marketplace

Another perspective on the configuration of the marketplace relates to the position of trading and relative strength between different players within the marketplace.

Berryman *et al.* (1998) created a useful framework for this, identifying three different types of location. Seller-controlled sites are the main home page of the company and are e-commerce enabled. Buyer-controlled sites are intermediaries that have been set up so that the buyer initiates the market-making. In procurement posting, a purchaser specifies what they wish to purchase, and a message is sent by email to suppliers registered on the system and then offers are awaited. Aggregators involve a group of purchasers combining to purchase a multiple order, thus reducing the purchase cost. Neutral sites are independent evaluator intermediaries that enable price and product comparison.

The framework of Berryman *et al.* (1998) has been updated by McDonald and Wilson (2002), who introduce two additional locations for purchase that are useful, buyer-oriented and seller-oriented.

We will see in Chapter 6 that the most successful procurement intermediaries are often those that are not independent, but are seller-orientated or seller-controlled.

As noted in Chapter 1, Evans and Wurster (1999) have argued that there are three aspects of navigation that are key to achieving competitive advantage online. These are reach, richness and affiliation.

The importance of omnichannel marketplace models

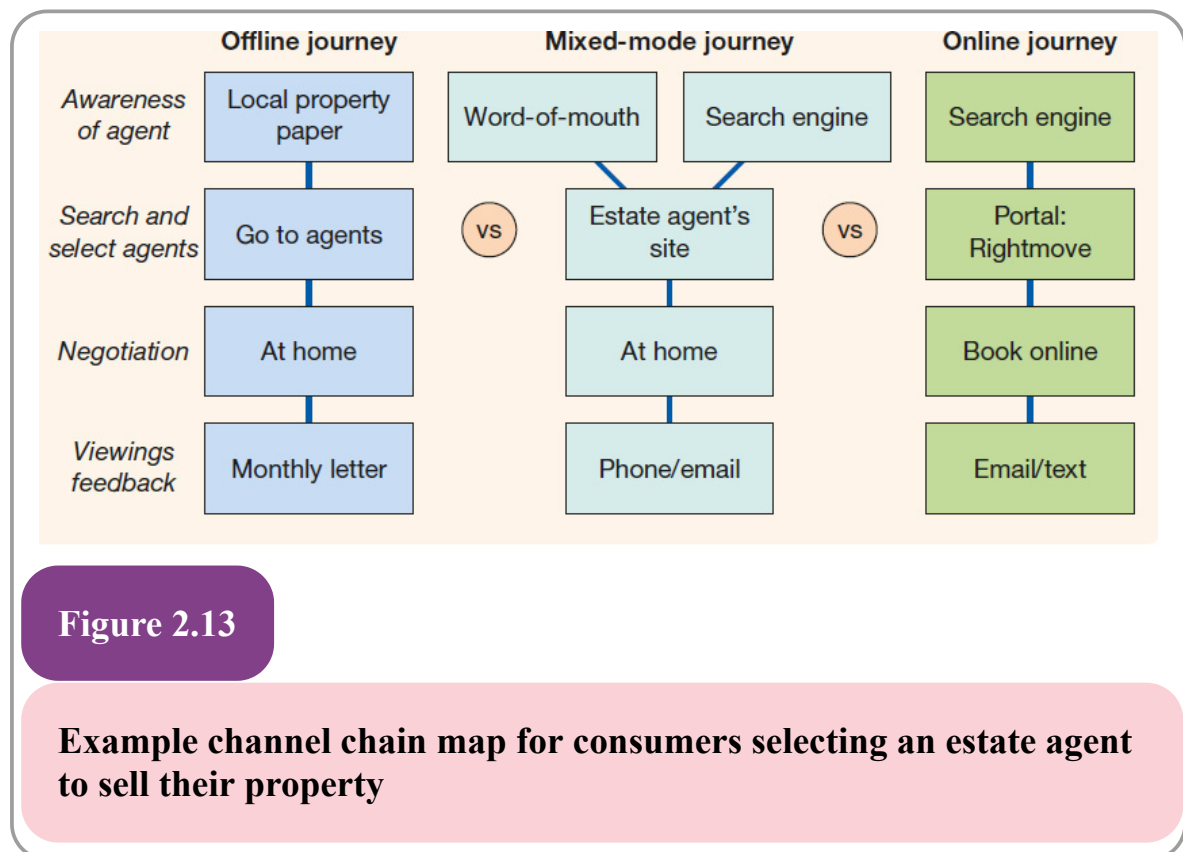
Online purchasers typically use a combination of channels as they follow their **customer journeys**. As they select products and interact with brands, they do not use digital channels in isolation - they consume other media such as print, TV, direct mail and outdoor ads. It follows that an effective approach to using digital communications is part of an omnichannel marketing strategy. This defines how different marketing channels should integrate and support each other in terms of their proposition development and seamless communications across different channels and devices.

Developing 'channel chains' to help us understand omnichannel behaviour is a powerful technique recommended by McDonald and Wilson (2002) for

analysing the changes in a marketplace introduced by the Internet. A channel chain shows alternative customer journeys for customers with different channel preferences. It can be used to assess the current and future performance of these different customer journeys. An example of a channel chain is shown in Figure 2.13. A market map can show the flow of revenue between a manufacturer or service provider and its customers through intermediaries and new types of intermediaries. Thomas and Sullivan (2005) give the example of a US omnichannel retailer that used cross-channel tracking of purchases through assigning each customer a unique identifier to calculate channel preferences, as follows: 63% bricks-and-mortar store only, 12.4% Internet-only customers, 11.9% catalogue-only customers, 11.9% dual-channel customers and 1% three-channel customers.

Customer journey

A description of modern omnichannel buyer behaviour as consumers use different media to select suppliers, make purchases and gain customer support.



Motivation	Consumer attitudes/behaviour
Hedonic	• Being able to use multiple channels throughout the customer journey is enjoyable/pleasurable/interesting
Performance expectancy	• Being able to use multiple channels throughout the customer journey: • allows the user to purchase quickly • is useful/makes their life easier
Effort expectancy	• Visitors find the brand's different online platforms (e.g. website and mobile app) easy to use
Social influence	• Key influencers think the user should use different channels, choosing whichever is most convenient at any given time • People whose opinions the user values prefer they use different channels (or use different channels themselves)
Habit	• The use of different channels (e.g. physical store, website, mobile app) throughout the customer journey has become habit
Security	• 'Using credit cards to make purchases over the Internet is safe' • Giving personal details to the online business seems safe
Innovativeness	• When users hear about new technology, they search for a way to try it • Before testing a new product/brand, users seek the opinion of people who have already tried it • They like to experiment with new technologies

Source: Adapted from Juaneda-Ayensa *et al.* (2016)

Figure 2.14

Consumer attitudes and behaviour on omnichannel purchase intention

Juaneda-Ayensa *et al.* (2016) believe that personal innovativeness, i.e. the degree to which a person prefers to try new and different products/channels and seek out new experiences, can positively affect omnichannel purchase intention. Figure 2.14 summarises buyer motivations and their acceptance of technology. Research on consumer buying behaviour with fashion retailer Zara.com found that effort expectancy and performance expectancy were significant factors in purchase intention.

Debate 2.2

Innovative business models

'The new business models associated with the dot.com era were, in fact, existing models in an online context. Business models and revenue models have not changed.'

Commercial arrangement for transactions

Markets can also be considered from another perspective - that of the type of commercial arrangement that is used to agree a sale and price between the buyer and supplier. The main types of commercial arrangement are shown in Table 2.3.

Each of these commercial arrangements is similar to traditional arrangements. Although the mechanism cannot be considered to have changed, the relative importance of these different options has changed with the Internet. Owing to the ability to publish new offers and prices rapidly, auction has become an important means of online selling. A turnover of several billion dollars has been achieved by eBay from consumers offering items such as cars and antiques.

Different types of online intermediary and influencers

As we showed through Figure 2.8, identifying different types of online intermediary as potential partners to promote an online business is a key part of marketplace analysis. In this section, we take a more in-depth look at the different types of intermediaries and the business and revenue models they adopt.

Sarkar *et al.* (1996) identified many different types of intermediaries (mainly from a B2C perspective and slightly adapted), which we can still recognise today:

- directories (such as Yahoo!, Excite);
- search engines (Google, Bing, Yahoo!);
- shopping aggregators (FarFetch.com, Lyst.co.uk);
- virtual resellers (own-inventory and sell-direct, e.g. Amazon);
- financial intermediaries (offering digital cash and cheque payment services, such as PayPal);
- forums, fan clubs and user groups (referred to collectively as ‘virtual communities’);
- evaluators (sites that perform review or comparison of services).

Table 2.3

Commercial mechanisms and online transactions

Commercial (trading) mechanism	Online transaction mechanism of Nunes <i>et al.</i> (2000)
1 Negotiated deal <i>Example:</i> can use similar mechanism to auction	Negotiation - bargaining between single seller and buyer Continuous replenishment - ongoing fulfilment of orders under pre-set terms
2 Brokered deal <i>Example:</i> intermediaries such as Comparethemarket (www.comparethemarket.com)	Achieved through online intermediaries offering auction and pure markets online
3 Auction <i>Examples:</i> C2C: eBay (www.ebay.com); B2B: industry-to-industry (www.alibaba.com)	Seller auction - buyers' bids determine final price of sellers' offerings; buyer auction - buyers request prices from multiple sellers; reverse - buyers post desired price for seller acceptance
4 Fixed-price sale <i>Example:</i> all e-commerce retailers	Static call - online catalogue with fixed prices; dynamic call - online catalogue with continuously updated prices and features
5 Pure markets <i>Example:</i> electronic share dealing	Spot - buyers' and sellers' bids clear instantly
6 Barter <i>Example:</i> www.bartercard.co.uk	Barter - buyers and sellers exchange goods
<i>Source:</i> Adapted from 'The All-In-One-Market', <i>Harvard Business Review</i> , pp. 2-3 (Nunes, P., Kambil, A. and Wilson, D. 2000) © 2000 by the Harvard Business School Publishing Corporation, all rights reserved.	

Summary of the types of intermediary

Intermediaries vary in scope and the services they offer, so naturally terms have evolved to describe the different types. The main types of intermediary you will identify as part of an online marketplace analysis are shown in Table 2.4. It is useful, in particular for marketers, to understand these types since they act as a checklist for how companies can be represented within the different types of intermediaries, online publishers and media owners.

Table 2.4

Different types of online intermediary

Type of intermediary	Characteristics	Example
Access portal	Associated with ISP or mobile service provider	• BT (www.bt.com) • MSN (www.msn.com)
Blog	Content updated through time, typically text-based, but can include audio and video (video bloggers - vloggers/YouTubers)	• Blogger (www.blogger.com) hosts many blogs • Many company blogs are created using WordPress (www.wordpress.com) • Vlogging channels are usually set up on YouTube
Directory	Listings of sites and businesses' details in categories	• Business.com (www.business.com), Yell (www.yell.com)
Geographical (region,	May be: • horizontal • vertical	• Google country versions • Yahoo! country and city versions

country, local)		• Craigslist (www.craigslist.com)
Horizontal or functional portal	Range of services: search engines, directories, news, recruitment, personal information management, shopping, etc.	• Yahoo! (www.yahoo.com) • Microsoft MSN (www.msn.com) • Google (www.google.com), which for a long period just focused on search
Marketplace or auction site	May be: • horizontal • vertical • geographical	• EC21 (www.ec21.com) • eBay (www.ebay.com)
Price- comparison site or aggregator Publisher site	Compares products or services on different criteria, including price Main focus is on consumer or business news or entertainment	• PriceRunner (www.pricerunner.com) • Shopping.com (www.shopping.com) • BBC (www.bbc.co.uk) • Guardian (www.guardian.co.uk) • Information Week (www.informationweek.com)
Search engine	Main focus is on search	• Google (www.google.com) • Bing (www.bing.com) • Baidu in China (www.baidu.com) • Naver in South Korea (www.naver.com)
Media type	May be: • voice (audio podcasts) • video (video webcasts) Delivered by streaming media or downloads of files	• Audio podcasts, for example Apple iTunes • Video, for example YouTube (www.youtube.com) • Multimedia publisher, e.g. BBC iPlayer (www.bbc.co.uk/iplayer)

Vertical intermediary

Covers a particular market or niche audience, such as construction, with news and other services

- Build UK (www.builduk.org)
- Phaidon Atlas of Architecture (www.phaidonatlas.com)

The importance of search engines

Search engines are a key type of intermediary for organisations marketing their services online, since today they are the primary method of finding information about a company and its products. Research compiled by Search Engine Watch (www.searchenginewatch.com) shows that over 90% of web users state that they use search engines to find information online. Their importance can also be seen from their audience sizes by applying the tools in Table 2.2. We will show how search engines can be used for marketing in more detail in Chapter 7. As part of marketplace analysis, they are useful for companies to assess demand for products and brand preferences in different countries using tools such as Google Trends (Figure 2.9).

Search engines, spiders and robots

Automatic tools known as ‘spiders’ or ‘robots’ index registered sites. Users search this by typing keywords and are presented with a list of pages.

Business models for e-commerce

Defining a clear **online business model** is essential for a new start-up online business to be successful. But it’s also important for existing businesses thinking about options to refine their business model or add new services to their offerings in the light of new opportunities made possible by the Internet. The Business Model Canvas developed by Osterwald and Pigneur (2010) is a valuable framework for summarising strategy for online businesses. It was published as part of a co-creation project involving 470 practitioners from 45 countries. It’s also available as an app and downloadable templates on the Strategyzer site (www.strategyzer.com).

The main sections of the canvas, in a logical order to consider them, are:

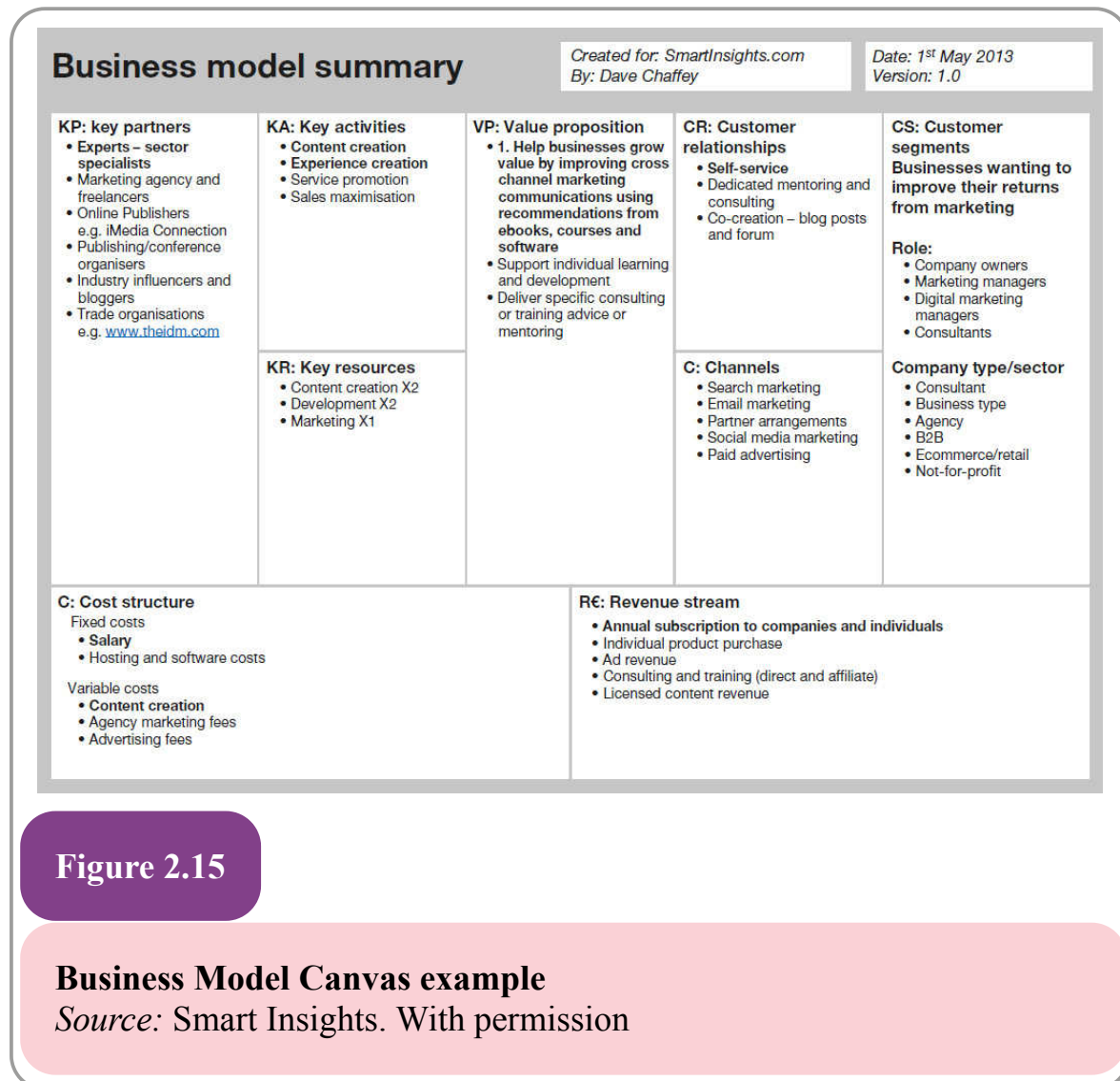
- 1 Value proposition.** This is at the heart of what the business offers to its audiences and is arguably most important to success.
- 2 Customer segments.** Different target audiences to whom the value propositions will appeal. In the Business Model Canvas the alternatives recommended are mass market, niche market, segmented (broken down further) or a range of diverse segments.
- 3 Customer relationships.** The types of relationships that will be formed - for example, self-service, automated services, communities or more personal assistance. Co-creation of content may be part of this.
- 4 Channels.** The methods by which the organisation's services will be delivered and the audiences reached.
- 5 Key partners.** To exploit online and offline value networks, forming partnerships gives an opportunity of expanding reach and taking advantage of existing organisations and online influencers that have built an audience.
- 6 Activities.** The main activities that need to be performed to deliver the value proposition to develop revenue.
- 7 Resources.** Different types of process and people to complete the activities to create and deliver the value proposition.
- 8 Cost structure.** Different cost elements; these should be checked against activities and resources. Costs are classically broken down into fixed and variable costs and economies of scale.
- 9 Revenue stream.** This is the method by which a business derives income. Common online options are: ad revenue, subscription fees, sales of physical or virtual goods or affiliate-based commission arrangements. Licensing and leasing are other alternatives.

An example of how these nine different elements of a business model can be applied is shown in Figure 2.15.

It's a great framework, but it's always worth considering what the missing elements of frameworks are. It's arguably missing a method of specifying key performance indicators (KPIs) for evaluating performance of the business model. We recommend adding these to the relevant sections, in particular for revenue stream, cost structure and key activities. It also doesn't directly consider the impact of different forms of competitors. To help here, it's also useful to think through how the canvas would look for successful companies already active in this market. (We will look further at how to define elements of the business model, such as value proposition and targeting, in Chapters 5 and 7.)

Online business model

A summary of how a company will generate a profit, identifying its core product or service value proposition, target customers in different markets, position in the competitive online marketplace or value chain and its projections for revenue and costs.



Michael Rappa, a professor at North Carolina State University, has a useful compilation of examples of online business models in the link shown at the end of the chapter. At a lower level, Rappa identifies utilities providers that provide digital services (such as the Internet service providers and hosting companies we discuss in Chapter 3). Now complete Activity 2.2 to evaluate some successful digital business models and read Case study 2.2 to see examples of new revenue models that can be used by a forward-looking corporate organisation.

Activity 2.2

Exploring business models

Purpose

To explore different types of business that have been disrupted by digital technology and evaluate the structure of their business model(s).

Question

Review the following digital businesses against Michael Rappa's basic categories of business models (see <http://digitalenterprise.org/models/models.html>). Can you group the companies into different business models? Are any models missing or can they be simplified? Do you think these business models operate in isolation?

- www.zopa.com
- www.zeek.me
- <https://deliveroo.co.uk>
- www.lyst.co.uk
- www.blablacar.co.uk
- <http://trussle.com>

Figure 2.16 suggests alternative perspectives for reviewing different business models. There are three different perspectives from which a business model can be viewed. Any individual organisation can operate in different categories, as the examples show, but most will focus on a single category for each perspective. Such a categorisation of business models can be used as a tool for *formulating digital business strategy*. The three perspectives, with examples, are:

- 1 Marketplace position perspective.** The book publisher here is the manufacturer, Amazon is a retailer and Yahoo! is both a retailer and a marketplace intermediary.
- 2 Revenue model perspective.** The book publisher can use the web to sell direct while Yahoo! and Amazon can take commission-based sales. Yahoo! also has advertising as a revenue model.
- 3 Commercial arrangement perspective.** All three companies offer fixed-price sales, but, in its place as a marketplace intermediary, Yahoo!

also offers alternatives.

Revenue models

Revenue models specifically describe different techniques for generation of income. For existing companies, revenue models have mainly been based upon the income from sales of products or services. This may be either for selling direct from the manufacturer or supplier of the service or through an intermediary that will take a cut of the selling price. Both of these revenue models are, of course, still crucial in online trading. There may, however, be options for other methods of generating revenue; a manufacturer may be able to sell advertising space or sell digital services that were not previously possible.

Revenue models

Describe methods of generating income for an organisation.

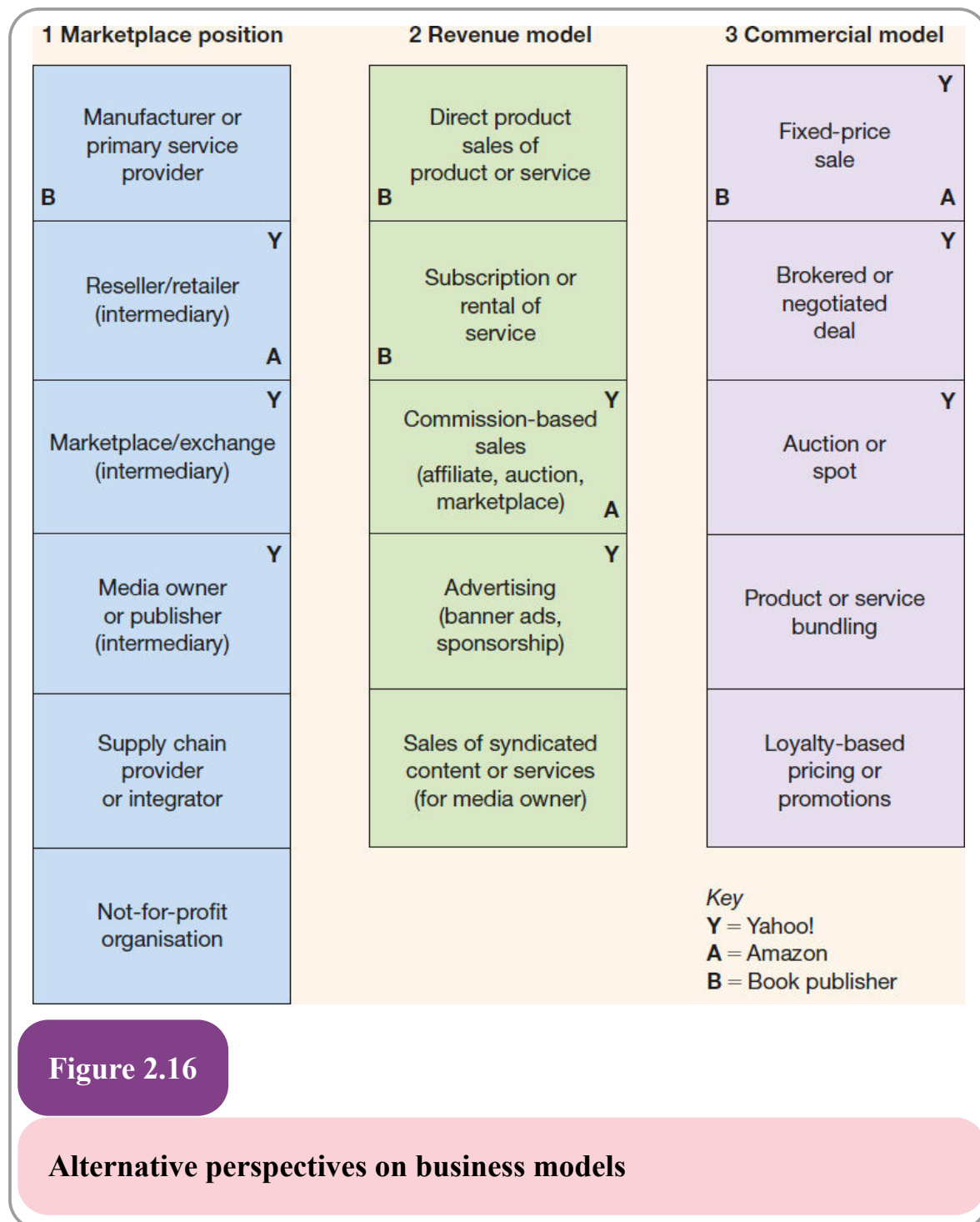
Online publisher and intermediary revenue models

For a publisher, there are many options for generating revenue online based around advertising and fees for usage of online services. These options, particularly the first four in the list below, can also be reviewed by other types of business such as price comparison sites, aggregators, social networks and destination sites, which can also carry advertising to supplement revenue. The main types of online revenue model are:

- 1 **CPM display advertising on-site.** **CPM** stands for ‘cost-per-thousand’, where M denotes ‘mille’. This is the traditional method by which site owners charge a fee for advertising. The site owner charges advertisers a rate card price (for example, £50 CPM) according to the number of times ads are served to site visitors. Ads may be served by the site owner’s own ad server or, more commonly, through a third-party ad network service such as DoubleClick (which is owned by Google).

CPM (cost-per-thousand)

The cost to the advertiser (or the revenue received by the publisher) when an ad is served 1,000 times.



2 CPC advertising on-site (pay-per-click text ads). **CPC** stands for ‘cost-per-click’. Advertisers are charged not simply for the number of times their ads are displayed, but according to the number of times they are clicked upon. These are typically text ads served by a search engine such as Google (www.google.com) on what is known as its content network. Google has its AdSense (<http://adsense.google.com>) program for publishers, which enables it to offer text or image-based ads typically on a CPC basis, but optionally on a CPM basis. Typical costs per click

can be surprisingly high, i.e. they are in the range £0.10 to £5, but sometimes up to £40 for some categories such as ‘life insurance’. The revenue for search engines and publishers from these sources can also be significant: Google (which is owned by Alphabet Inc) produces annual reports (<http://investor.google.com>) showing that this accounts for between a quarter and a third of Google’s revenue.

3 Sponsorship of site sections or content types (typically fixed fee for a period). A company can pay to advertise a site channel or section. For example, the bank HSBC used to sponsor the Money section on the Orange broadband provider portal now known as ee, (www.ee.co.uk). This type of deal is often struck for a fixed amount per year. It may also be part of a reciprocal arrangement, sometimes known as a ‘contra-deal’, where neither party pays.

4 Affiliate revenue (CPA, but could be CPC). Affiliate revenue is commission-based, for example Amazon books are displayed on Dave Chaffey’s site Smart Insights (smartinsights.com) and he receives around 5% of the cover price as a fee from Amazon. Such an arrangement is sometimes known as **cost-per-acquisition (CPA)**. Increasingly, this approach is replacing CPM or CPC approaches, where the advertiser has more negotiating power. For example, manufacturing company Unilever negotiates CPA deals with online publishers where it is paid for every email address captured by a campaign, rather than a traditional CPM deal. However, it depends on the power of the publisher, who will often receive more revenue overall for CPM deals. After all, the publisher cannot influence the quality of the ad creative or the incentivisation to click, which will affect the click-through rate and therefore earnings from the ad.

CPC (cost-per-click)

The cost to the advertiser (or the revenue received by the publisher) of each click of a link to a third-party site.

5 Transaction fee revenue. A company receives a fee for facilitating a transaction. Examples include eBay and PayPal, which charge a percentage of the transaction cost between buyer and seller.

6 Subscription access to content or services. A range of documents can be accessed from a publisher for a fixed period. These are often referred to as premium services on websites.

7 Pay-per-view access to documents. Here payment occurs for single access to a document, video or music clip that can be downloaded. It may or may not be protected with a password or **digital rights management**. For example, Smart Insights pays to access detailed best-

practice guides on Internet marketing from Marketing Sherpa (www.marketingsherpa.com).

- 8 Subscriber data access for email marketing.** The data a site has about its customers are also potentially valuable, since it can then send different forms of email to its customers if they have given their permission that they are happy to receive email from either the publisher or third parties. The site owner can charge for adverts placed in its newsletter or can deliver a separate message on behalf of the advertiser (sometimes known as ‘list rental’). A related approach is to conduct market research with the site customers.

Calculating revenue for an online business

Site owners can develop models (Figure 2.16) of potential revenue depending on the mix of revenue-generating techniques from the four main revenue options they use on the site.

Consider the capacity of a site owner to maximise revenue or ‘monetise’ their site - which factors will be important? The model will be based on assumptions about the level of traffic and number of pages viewed, plus the interaction with different types of ad unit. Their ability to maximise revenue will be based on these factors, which can be modelled in the spreadsheet shown in Figure 2.17:

- *Number and size of ad units.* This is a delicate balance between the number of ad units in each site section or page - too many obtrusive ad units may present a bad experience for site users, too few will reduce revenue. Figure 2.17 has a parameter for the number of ad units or containers in each ad revenue category. There is a tension with advertisers who know that the awareness and response they generate from their ads is maximised when they are as large as practical and in prominent placements. A more accurate revenue model would develop revenue for different page types such as the home page and different page categories, e.g. the money or travel sections.
- *Capacity to sell advertising.* Figure 2.17 also has a parameter for the percentage of ad inventory sold in each category - for example, for the CPM ad display revenue, only 40% of inventory may be sold. This is why you may see publisher sites with their own ‘house ads’ - it is a sign they have been unable to sell all their ad space. A benefit of using the Google AdSense publisher program is that inventory is commonly all used.
- *Fee levels negotiated for different advertising models.* These will depend on the market competition or demand for advertising space. For ‘pay-per-performance’ advertising options, such as the CPC and CPA models, it

also depends on the response. In the first case, the site owner only receives revenue when the ad is clicked upon and, in the second case, the site owner only receives revenue when the ad is clicked upon and a product is purchased on the destination merchant site.

CPA (cost-per-acquisition)

The cost to the advertiser (or the revenue received by the publisher) for each outcome such as a lead or sale generated after a click to a third-party site.

Digital rights management (DRM)

The use of different technologies to protect the distribution of digital services or content such as software, music, movies or other digital data.

Ad revenue option	Measure	Site
	Pages served	100,000
Display advertising (CPM)	CPM (Cost Per Thousand)	£2
	% Inventory served	40%
	Avg. Clickthrough (CTR %)	0.10%
	Ad units served per page	2
	Clicks – CPM ads	80
	Revenue – display ads	£160
	Earnings per 100 clicks (EPC)	£200.0
	eCPM – display ads	£1.60
Fixed run-of-site sponsorship	% Inventory served	100%
	Avg. Clickthrough (CTR %)	0.30%
	Ad units served 1	1
	Clicks – fixed	300
	Revenue – fixed sponsorship	£3,000
	Earnings per 100 clicks (EPC)	£1,000.0
	eCPM – fixed	£30.00
Text ad advertising (CPC)	% Inventory served	100%
	Avg. Clickthrough (CTR %)	1.00%
	Avg. Cost Per Click	£0.30
	Ad units served per page	1
	Clicks – CPC ads	1,000
	Revenue – CPC ads	£300
	Earnings per 100 clicks (EPC)	£30.0
	eCPM – CPC ads	£3
Affiliate commission	% Inventory served	100%
	Avg. Clickthrough (CTR %)	0.50%
	Ad units served per page	1
	Clicks – Affiliates	500
	Desination conversion rate (%)	3%
	Average order value	£100
	Commission %	10%
	Revenue – affiliates	£150
	Earnings per 100 clicks (EPC)	£30.0
	eCPM – affiliates	£1.50
Overall metrics for site	Clicks – total	1,880
	Revenue – total	£3,610
	Earnings per 100 clicks (EPC) – total	£192.02
	eCPM – total	£36.10

Blue cells = input variables – vary these for 'what-if' analysis

Orange cells = Output variables (calculated – do not overtype)

Figure 2.17

Example spreadsheet for calculating a site revenue model

Note: Available for download at www.smartinsights.com/conversion-model-spreadsheets

- *Traffic volumes.* More visitors equate to more opportunities to generate revenue through serving more pages (which helps with CPM-based advertising) or more clicks to third-party sites (which helps generate revenue from CPC and CPA deals).
- *Visitor engagement.* The longer visitors stay on a site (its ‘stickiness’), the more page views that will accumulate, which again gives more opportunities for ad revenue. For a destination site, a typical number of page views per visit would be in the range 5 to 10, but for a social network, media site or community the figure could be greater than 30.

Considering all of these approaches to revenue generation together, the site owner will seek to use the best combination of these techniques to maximise the revenue. An illustration of this approach is shown in Figure 2.17.

To assess how effective different pages or sites in their portfolio are at generating revenue using these techniques, site owners will use two approaches. The first is eCPM, or effective cost per thousand. This looks at the total the advertiser can charge (or cost to advertisers) for each page or site. Through increasing the number of ad units on each page, this value will increase. The other alternative to assess page or site revenue-generating effectiveness is revenue per click (RPC), also known as ‘earnings per click’ (EPC). Alternatively, revenue can be calculated as ad revenue per 1,000 site visitors. This is particularly important for affiliate marketers who make money through commission when their visitors click through to third-party retail sites, and then purchase there.

Activity 2.3 explores some of the revenue models that are possible.

Activity 2.3

Revenue models at online media sites

Purpose

To illustrate the range of revenue-generating opportunities for an online publisher we look at alternative approaches for publishing, referencing three different types of digital publishing platforms.

Question

Visit each of the following websites:

- Marketing Profs (www.marketingprofs.com)
- Smart Insights (www.smartinsights.com)
- MarketingSherpa (www.marketingsherpa.com).

Then do the following activities:

- 1 Summarise the revenue models that are used for each site by looking at the information for advertisers and affiliates.
- 2 What are the advantages and disadvantages of the different revenue models for the site audience and the site owner?
- 3 Given an equivalent audience, which of these sites do you think would generate the most revenue? You could develop a simple spreadsheet model based on the following figures:
 - Monthly site visitors: 100,000; 0.5% of these visitors click through to affiliate sites where 2% go on to buy business reports or services at an average order value of 100 CPM.
 - Monthly page views: 1,000,000; average of three ads displayed for different advertisers at 20 CPM (we are assuming all ad inventory is sold, which is rarely true in reality).
 - Subscribers to weekly newsletter: 50,000; each newsletter broadcast four times per month has four advertisers each paying at a rate of 10 CPM.

Note: These are not actual figures for any of these sites.

Focus on Digital start-up companies

To conclude the chapter, we review how to evaluate the potential of digital start-ups. According to research commissioned by Google and carried out by the National Institute of Economic and Social Research (Nathan, 2013), there are at least 270,000 companies that form the UK's digital economy. The

revenue reported by these digital businesses is growing 25% faster than non-digital companies and they employ 15% more people.

Digital industries often have lower barriers to entry - for example, reduced transaction and labour costs, compared to more traditional companies (which have more physical assets). Technological change is exponential and people are using it to disrupt most industries with alternative business models that were not possible before. Snow (2014) claims it took the oil tycoon John D. Rockefeller 46 years to make a billion dollars, compared to the 14 years it took Michael Dell, 12 years it took Bill Gates, 4 years for the founders of Yahoo, 3 years for the founder of eBay and just 2 years for the founder of Groupon. We look at some of the ways these businesses gain traction via growth hacking in Chapter 10.

Assessing digital businesses

As with all new companies, it is difficult for investors to assess the long-term sustainability of start-ups. There are a number of approaches that can be used to assess the success and sustainability of these companies. There have been many examples where it has been suggested that dot-com companies have been overvalued by investors who are keen to make a fast return from their investments. There were some clear anomalies if traditional companies are compared to digital start-ups.

Valuing tech start-ups

Hudson (2015) points out that valuation of a pre-revenue company is usually one of the first points of contention between **angels** and entrepreneurs - entrepreneurs want the value to be as high as possible and angels want a lower value to enable them to buy a reasonable portion of the company for their financial investment. Following interviews with various experts, four valuation models work well for start-ups:

- 1 Venture capital method**, which calculates valuation based on expected rates of return on exit.
- 2 Berkus method**, which attributes a range of monetary values to the progress start-up entrepreneurs have made in the commercialisation of their activities.
- 3 Scorecard valuation method**, which adjusts the median pre-money valuation for seed/start-up deals in a particular geographical area and in the business vertical of the target, based on seven characteristics of the

company. The seven elements are: strength of entrepreneur and team, size of the opportunity, product/technology, competitive environment, marketing/sales/partnerships, need for additional investment and other factors (i.e. great early customer feedback).

- 4 Risk factor summation method**, which compares 12 characteristics of the target company to what might be expected in a fundable start-up enterprise. The 12 characteristics are: management, stage of the business, legislation/political risk, manufacturing risk, sales and marketing risk, funding/capital risk, competition risk, technology risk, litigation risk, international risk, reputation risk and potential lucrative exit.

Angels

An angel investor or business angel is a private, high net-worth individual or seed investor who provides capital for a business start-up, usually in exchange for an equity stake in the company (part ownership). They can invest individually or as part of a syndicate (a group of angels). Generally, angels invest between £10,000-£50,000 and seek a return on their investment over a period of three to eight years.

Companies such as Uber initially raised funding from angel investors. According to the UK Business Angels Association (UKBAA), if a start-up can 'tick the box' for five or more of the considerations below, they are more likely to attract angel investment:

- 1 Solving a problem** - Does the product, technology or service address a real challenge in the market or society - what is the pain you are solving?
- 2 Disruptive** - Is it likely to be disruptive and make a real impact in the marketplace or establish a new niche?
- 3 Protected** - Does the product or technology have identifiable intellectual property? This may be patentable or may be in the form of copyright or branding or other intangibles - and can you confirm ownership?
- 4 Competitive** - Do you have a defensible market position? What other businesses are in competition with this project? How does it compare and what is the unique selling point or advantage - or does it have first-mover advantage?
- 5 Revenue** - How does your business make money? Are there clear identifiable revenue streams? Are there likely to be good gross/net margins?
- 6 Scalability** - Do you have a scalable business model? Are you able to achieve explosive growth?
- 7 Proven model** - What kind of validation have you had in the marketplace? Are you already selling or has this been tested out with potential customers? Can you show results of market testing/surveys?

- 8 Market** - What is the market size? Can you achieve a realistic potential market share?
- 9 Tax relief opportunity** - is the deal EIS/SEIS eligible and do you have advanced clearance (see below)?
- 10 Exit** - Do you have a desire and strategy for exit?
- 11** And finally, are you prepared to **give up shares** in return for investment and to have an investor on your board?

As would be expected intuitively, modelling using these variables indicates that for companies with a similar revenue per customer, contribution margin and advertising costs, it is the **churn rate** that will govern their long-term success. To look at this another way, given the high costs of customer acquisition for a new company, it is the ability to retain customers for repeat purchases that governs the long-term success of companies. This then forces online retailers to compete on low prices with low margins to retain customers.

A structured evaluation of the success and sustainability of UK digital start-ups has been undertaken by management consultancy Bain and Company in conjunction with *Management Today* and was described in Gwyther (1999). The six criteria used to assess companies are still relevant today:

1 Concept

This describes the strength of the business model. It includes:

- potential to generate revenue including the size of the market targeted;
- superior ‘customer value’ - in other words, how well the value proposition of the service is differentiated from that of its competitors;
- first-mover advantage (less easy to achieve today).

2 Innovation

This criterion looks at another aspect of the business concept, which is the extent to which the business model merely imitates existing real-world or online models. Note that imitation is not necessarily a problem if it is applied to a different market or audience, or if the experience is superior and positive word-of-mouth/PR is generated. Ultimately, very successful digital start-ups disrupt the marketplace they operate in - i.e. they offer a better/faster solution to customers’ needs/problems. This is also known as **digital disruption**.

Churn rate

The proportion of customers (typically subscribers) that no longer purchase a company’s products or services within a certain time period.

Digital disruption

The change that occurs when new technologies and business models affect the value proposition of existing goods and services.

According to Pierre Nanterme (2016), CEO of Accenture: ‘Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since the year 2000’.

Caudron and Peteghem (2016) have identified ten business models behind digital disruption:

- 1 The subscription model** (Netflix, Dollar Shave Club, Apple Music): Disrupts through ‘lock-in’ by taking a product or service that is traditionally purchased on an ad hoc basis, and locking-in repeat custom by charging a subscription fee for continued access to the product/service.
- 2 The freemium model** (Spotify, LinkedIn, Dropbox): Disrupts through digital sampling - users pay for a basic service or product with their data or time usage (rather than money), and then get charged to upgrade to the full offer. This works where marginal cost for extra units and distribution are lower than advertising revenue or the sale of personal data.
- 3 The free model** (Google, Facebook): Disrupts with an ‘if-you’re-not-paying-for-the-product-you-are-the-product’ model that involves selling personal data or ‘advertising eyeballs’ harvested by offering consumers a ‘free’ product or service that captures their data/attention.
- 4 The marketplace model** (eBay, iTunes, App Store, Uber, Airbnb): Disrupts with the provision of a digital marketplace that brings together buyers and sellers directly, in return for a transaction or placement fee or commission.
- 5 The access-over-ownership model** (Zipcar, Peerbuy, Airbnb): Disrupts by providing temporary access to goods and services traditionally only available through purchase. Includes ‘sharing economy’ disruptors, which take a commission from people monetising their assets (home, car, capital) by lending them to ‘borrowers’.
- 6 The hypermarket model** (Amazon, Apple): Disrupts by ‘brand bombing’ using sheer market power and scale to crush competition, often by selling below cost price.
- 7 The experience model** (Tesla, Apple): Disrupts by providing a superior experience, for which people are prepared to pay.
- 8 The pyramid model** (Amazon, Microsoft, Dropbox): Disrupts by recruiting an army of resellers and affiliates who are often paid on a commission-only model.

- 9 The on-demand model** (Uber, Operator, TaskRabbit): Disrupts by monetising time and selling instant access at a premium. This includes taking a commission from people who are time-poor but have money that are happy to pay for goods/services delivered or fulfilled by people with time but little money.
- 10 The ecosystem model** (Apple, Google): Disrupts by selling an interlocking and interdependent suite of products and services that increase in value as more are purchased, which creates consumer dependency.

3 Execution

A good business model does not, of course, guarantee success. If there are problems with aspects of the implementation of the idea, then the start-up will fail. Aspects of execution that can be seen to have failed for some companies are:

- Gaining **market traction** - online or offline marketing techniques are insufficient to attract sufficient visitors to the site.
- Performance, availability and security - some sites have been victims of their own success and have not been able to deliver fast access to the sites, or technical problems have meant that the service is unavailable or insecure. Some sites have been unavailable despite large-scale marketing campaigns due to delays in creating the website and its supporting infrastructure.
- Fulfilment - the site itself may be effective, but customer service and consequently brand image will be adversely affected if products are not dispatched correctly or promptly.

Market traction

Evidence that there is market demand for your product/service. Higher traction means that investors are more likely to be attracted to the start-up.

4 Traffic

This criterion is measured in terms of the number of visitors, the number of pages they visit and the number of transactions they make that control the online ad revenues. Page impressions or visits are not necessarily an indication of success but are dependent on the business model. After the viability of the business model, how it will be promoted is arguably the most important aspect for a start-up. For most companies, a critical volume of loyal, returning and

revenue-generating users of a service is required to repay the investment in these companies.

Acquiring new customers for a new start-up that is not known in the marketplace is difficult and costly. An important decision is the investment in promotion and how it is split between online and offline techniques. Start-ups are usually under extreme resource constraints and need to gain traction quick and cheaply, which is why growth hacking has become increasingly important in the tech start-up eco system (see Chapter 10). Companies such as insurance price comparison site GoCompare spend a lot of money on TV advertising to make the brand stand out from the crowd. Their use of opera singer Gio has helped generate a 60% increase in sales and a 450% uplift in brand awareness. However, many start-ups (such as Moonpig, Mumsnet and Zopa) did not initially have the amount of capital needed for TV advertising and have grown organically by other marketing methods such as PR (favourable word-of-mouth and mentions in the media), partnerships and search engine marketing, etc.

5 Financing

This describes the ability of the company to attract seed investment/venture capital or other funding to help execute the idea. It is particularly important given the cost of promoting these new concepts.

6 Profile

This is the ability of the company to generate favourable publicity/PR and to create awareness within its target market.

These six criteria can be compared with the other elements of business and revenue models that we discussed earlier in this chapter.

Case study 2.4 describes how a specialist travel and education company scaled to become a global business.

Case Study 2.4

i-to-i - a global marketplace for a start-up

This case is about a specialist travel and education company, focusing on its online TEFL (Teaching English as a Foreign Language) courses. The case illustrates the importance of marketplace analysis.

i-to-i background

i-to-i (www.i-to-i.com) is an international organisation with offices in the UK, USA, Ireland and Australia. Twenty thousand people have selected i-to-i as they travel on ventures to support 500 worthwhile projects on five continents and it has also trained a further 80,000 people as TEFL teachers.

The history of i-to-i

The founder of i-to-i, Deirdre Bounds, was inspired to create the company following a career break that took her to teach English in Japan, China and Greece and drive a backpackers' bus in Sydney. The company initially started through creating TEFL courses, eventually leading to organising volunteer projects.

Since 2003 the company has supported the i-to-i Foundation, a registered charity committed to providing funds to the most needy community and ecological projects in the i-to-i family. In 2007, i-to-i became part of the TUI travel group.

Proposition

The main features of the i-to-i TEFL proposition are:

- *International accreditation:* i-to-i is externally accredited by the ODLQC in order to ensure that its courses are rigorously monitored and always meet the highest industry standards.
- *World-class reputation:* i-to-i has four offices worldwide and over 12 years' experience teaching TEFL.
- *Partnership:* i-to-i is the preferred TEFL course provider for STA Travel, Opodo and Lonely Planet.
- *Complete student support:* Students receive advice on how to get work abroad, how best to prepare for their time away and up-to-the-minute advice on current job opportunities.
- *Highly experienced tutors:* All i-to-i tutors have at least three years' overseas teaching experience.

This proposition is backed up by 'the i-to-i TEFL Promise':

- 1 We will beat any equivalent and cheaper course by 150%.
- 2 If you're not entirely satisfied after the first seven days, we'll give you a full refund.
- 3 Our experience, our high academic standards and the quality of our courses mean that i-to-i TEFL certificates are recognised by thousands of language schools worldwide.

Additionally, i-to-i can help students to find TEFL jobs abroad.

Audience segmentation

The main segmentation used by i-to-i is geographic:

- UK
- North America
- Europe
- Australia and New Zealand
- Rest of world

Different brochures are also available for each geographical area.

Information is also collected on an optional basis about prospects' age and status, although this is not used for targeting emails. Status categories are:

- Student
- Employed
- Self-employed
- Career break
- Unemployed
- Retired

Since optional information is restricted to certain lead tools, it is not used to target emails. For weekend TEFL courses, postcode/city is used to target courses to prospects.

Competitors

Some of the main competitors for online TEFL courses based in the UK and Australia include:

- **www.cactustefl.com**
- **www.teflonline.com**
- **www.eslbase.com**

In the US, competitors who also operate in the UK and other countries include:

- **www.teflcorp.com**
- ITTP (International TEFL and Tesol Training)
<https://teflonline.net/about-ittt>

Media mix

i-to-i uses a combination of these digital media channels to drive visits, leads and sales:

- pay-per-click (PPC) (mainly Google AdWords);

- social media marketing using Facebook, Twitter and i-to-i's own traveller community;
- natural search (SEO);
- affiliate marketing;
- display advertising;
- email marketing.

Conversion process

Detailed content to help visitors decide on purchasing a course is available on the site. This includes module outlines and FAQs. Specific landing pages have not been used to convert visitors from paid search or affiliates, for example. Instead, the destination page for visitors from referring sites is the main category page for the product preference indicated by the search performed (for example, online TEFL).

A number of engagement devices are used to generate leads, including brochures, 'TEFL tasters', an email guide and campaign promotions such as winning a course.

Such leads are followed up through a series of welcome emails. Results are monitored, but emails are not proactively followed up on. There is no phone follow-up of leads due to the relative low value of the products, but site visitors are encouraged to ring or set up a call-back, which often leads to higher conversion rates.

Marketplace challenges

The main marketplace challenges faced by i-to-i are:

- 1 Increasing its presence and conversion effectiveness in a competitive market in different geographies:
 - (a) i-to-i has good exposure in the UK, its primary market, but operates in a cluttered marketplace, with price being the main differentiator (products are similar and some competitors are just as established, etc.).
 - (b) Research suggests that there is good opportunity within the US, but exposure is more limited because of the cost of pay-per-click advertising and because presence in natural search favours the US.
 - (c) Rest-of-world sales (outside of UK, USA, Canada, Ireland/Europe, Australia, New Zealand) are increasing and this is believed to be a

growing market. i-to-i seeks to penetrate these markets, but in a cost-effective way that will not distract attention from main markets.

- 2 Increasing demand through reaching and educating those considering travel who are not aware of TEFL courses and the opportunities they unlock. For example, many will look for casual work in other countries, e.g. in bars or in agriculture, but will be unaware of TEFL.

Questions

- 1 Select one country that i-to-i operates in and summarise the main types of sites and businesses involved using a marketplace map (see Figure 2.8).
- 2 Outline the different factors that i-to-i will need to review to gauge the commercial effectiveness of its online presence in different geographic markets.

Source: Smart Insights (2012) i-to-i case study. Written by Dave Chaffey and Dan Bosomworth with agreement from the company

Summary

- 1 The constantly changing digital business environment should be monitored by all organisations in order to be able to respond to changes in social, legal, economic, political and technological factors together with changes in the immediate marketplace that occur through developments in customer requirements and competitors' and intermediaries' offerings.
- 2 The online marketplace involves transactions between organisations and consumers (B2C) and other businesses (B2B). Consumer-to-consumer (C2C) and consumer-to-business categories (C2B) can also be identified.
- 3 The Internet can cause disintermediation within the marketplace as an organisation's channel partners, such as wholesalers or retailers, are bypassed. Alternatively, the Internet can cause

reintermediation as new intermediaries with a different purpose are formed to help bring buyers and sellers together in a virtual marketplace or marketspace. Evaluation of the implications of these changes and implementation of alternative countermediation strategies are important to strategy.

- 4 Trading in the marketplace can be sell-side (seller-controlled), buy-side (buyer-controlled) or at a neutral marketplace.
- 5 A business model is a summary of how a company will generate revenue, identifying its product offering, value-added services, revenue sources and target customers. Exploiting the range of business models made available through the Internet is important to both existing companies and start-ups.
- 6 The Internet may also offer opportunities for new revenue models such as commission on affiliate referrals to other sites or banner advertising.
- 7 The opportunities for new commercial arrangements for transactions include negotiated deals, brokered deals, auctions, fixed-price sales and pure spot markets, and barter should also be considered.
- 8 The success of Internet start-up companies is critically dependent on their business and revenue models and traditional management practice.

Exercises

Self-assessment questions

- 1 Outline the main options for trading between businesses and consumers.
- 2 Explain the concepts of disintermediation and reintermediation with reference to a particular industry; what are the implications for a company operating in this industry?
- 3 Describe the three main alternative locations for trading within the electronic marketplace.

- 4 What are the main types of commercial transaction that can occur through the Internet or in traditional commerce?
- 5 Digital business involves re-evaluating value chain activities. What types of change can be introduced to the value chain through digital business?
- 6 List the different business models identified by Timmers (1999).
- 7 Describe some alternative revenue models for the website of a magazine publisher.
- 8 Draw a diagram summarising the different types of online marketplace.

Essay and discussion questions

- 1 'Disintermediation and reintermediation occur simultaneously within any given market.' Discuss.
- 2 For an organisation you are familiar with, examine the alternative business and revenue models afforded by the Internet and assess the options for the type and location of e-commerce transitions.
- 3 For a manufacturer or retailer of your choice, analyse the balance between partnering with portals and providing equivalent services from your website.
- 4 Contrast the market potential for B2B and B2C auctions.
- 5 Select an intermediary site and assess how well it makes use of the range of business models and revenue models available to it through the Internet.

Examination questions

- 1 Explain disintermediation and reintermediation using examples.
- 2 Describe three different revenue models for a portal such as Yahoo!
- 3 What is meant by buy-side, sell-side and marketplace-based e-commerce?
- 4 What are the different mechanisms for online auctions?
- 5 Describe two alternative approaches for using digital business to change a company's value chain.
- 6 Explain what a business model is and relate it to an Internet pureplay of your choice.

- 7 Outline the elements of the digital business environment for an organisation and explain its relevance to the organisation.
- 8 Give three different transaction types that an industry marketplace could offer to facilitate trade between buyers and suppliers.

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Web links

Adoption of Internet and online services

These sources are listed at the end of Chapter 4 and examples given in that chapter.

Business model development

FastCompany (www.fastcompany.com) Covers the development of business models with a US focus.

The Next Web (<http://thenextweb.com>) Covers media and technology news (with a focus on social media).

Gigaom (www.gigaom.com) Covers emerging technology research.

Commentators on online business models

Mohansawhney.com (www.mohansawhney.com) Papers from e-business specialist, Mohanbir Sawhney of Kellogg School of Management, Northwestern University, Evanston, IL, USA.

Michael Rappa's Business Models page (<http://digitalenterprise.org/models/models.html>) Michael Rappa is a professor at North Carolina State University.

Dave Chaffey's Smart Insights (www.smartinsights.com) Discussion on business models and spreadsheets for modelling publishing and e-commerce revenue.

3 Managing digital business infrastructure

Chapter at a glance

Main topics

- Digital business infrastructure components
- A short introduction to digital technology
- Management issues in creating a new customer-facing digital service
- Managing internal digital communications through internal networks and external networks
- Technology standards

Focus on...

- The development of customer experiences and digital services
- Internal and external governance factors that impact digital business

Case studies

3.1 Innovation at Google (2017 update)

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot-com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Outline the range of digital technologies used to build a digital business infrastructure within an organisation and with its partners
- Review the management actions needed to maintain service quality for users of digital platforms

Management issues

The issues for managers raised in this chapter include:

- What are the practical risks to the organisation of failure to manage the digital infrastructure adequately?
- How should we evaluate alternative models of delivering digital services?

Links to other chapters

This chapter is an introduction to Internet hardware and software technologies. It gives the technical background to Chapters 1 and 2 and to Parts 2 and 3. Its focus is on understanding the technology used but it also gives an introduction to how it needs to be managed. The main chapters that cover management of the digital business infrastructure are:

- *Chapter 9* Customer experience and service design
- *Chapter 10* Managing digital business transformation and growth hacking

Introduction

Defining an adequate digital technology infrastructure is vital to all start-ups and existing companies making the transformation to digital business. The infrastructure and support of different types of digital platform directly affect the quality of service experienced by users of the systems in terms of speed and responsiveness. The range of digital services provided also determines the capability of an organisation to compete through differentiating itself in the marketplace. At the time of writing, Georgiou (Georgiou, 2016), Managing Director of Code Computerlove (part of MediaCom), believes that

technology really is becoming a mainstream item for any organisation, and not just those that describe themselves as ‘tech’ or digital, and that not dealing with digital technology leaves one open to vulnerability. He says:

Predicting (and responding to) trends undoubtedly gives brands a competitive edge. Knowing what’s on the horizon - and using this insight to help shape business strategy - can help organisations exceed consumer expectations, deliver an experience that drives positive reviews and recommendation, and future proof entire business operations. Brands that fail to incorporate change, or don’t adopt new practices such as a ‘test and learn’ mentality, may even fall by the wayside.

Digital business infrastructure refers to the combination of hardware such as servers and client desktop computers and mobile devices, the network used to link this hardware and the software applications used to deliver services to workers within the business and also to its partners and customers. Infrastructure also includes the architecture of the networks, hardware and software and where it is located. Finally, infrastructure can also be considered to include the methods for publishing data and documents accessed through applications. A key decision with managing this infrastructure is which elements are located within the company and which are managed externally. Increasingly, we shall see that many of these elements are being managed externally.

Through being aware of potential infrastructure problems, managers of an organisation can work with their partners to ensure that a good level of service is delivered to everyone, internal and external, who is using the digital business infrastructure. To highlight some of the problems that may occur if the infrastructure is not managed correctly, complete Activity 3.1.

Digital business infrastructure

The architecture of hardware, software, content and data used to deliver digital business services to employees, customers and partners.

Activity 3.1

Digital business infrastructure risk assessment

Purpose

To indicate potential problems to customers, partners and staff of the digital business if technical infrastructure is not managed adequately.

Activity

Make a list of the potential technology problems faced by customers of an online retailer. Consider problems faced by users of digital business applications that are either internal or external to the organisation. Base your answer on personal problems you have experienced on a website that can be related to network, hardware and software failures or problems with data quality.

In this chapter we focus on the management decisions involved with creating an effective technology infrastructure rather than explaining the technology in detail. In this edition, the technology introduction is covered through references to other sources and online material taken from other editions. Research and feedback from users of the book have shown that this knowledge usually exists from other courses, modules or from work, so there is little value in duplicating it. Instead, there is a demand to learn more about the management issues of deploying the technology, as summarised in Table 3.1.

Table 3.1

Key management issues of digital business infrastructure

Main issue	Detail	Where covered?
Which digital access platforms should we support?	Mobile platforms such as smartphones lead the way in importance, so the right investment decisions need to be taken here. Other data exchange methods between services, such as feeds and APIs, also need to be considered	We introduce the key types of consumer access platforms and data exchange options, and the opportunities of mobile marketing at the start of the chapter
Setup and selection of services for	Many managers are involved in managing the introduction of a new service where they	A section on set up of customer-facing digital service

a new digital service	have to select a platform, suppliers and models for access and data storage	addresses these management decisions, including domain selection, use of hosting providers and cloud services
How do we achieve quality of service in digital services? Where do we host applications?	Requirements are: business fit, security, speed, availability and level of errors Internal or external sourcing and hosting	Section on ISPs in this chapter and in Chapter 9 Management issues in creating a new customer-facing digital service in this chapter
Application integration	Integration of digital business solutions with: - legacy systems - partner systems - B2B exchanges and intermediaries	Section on technology standards
How do we publish and manage content and data quality?	How content and data are updated so that they are up to date, accurate, easy to find and easy to interpret	Introduced in this chapter
How do we manage employee access to the Internet? How do we secure data?	Staff can potentially waste time using the Internet or can act illegally Content and data can be deleted in error or maliciously	Introduced in Chapter 4 Introduced in Chapter 4

The interview with Jim Conning at Royal Mail gives an example of how integration of a service into a website can help deliver better results for a

business.

sights interview with Jim Conning, head of data services at Royal Mail

Q. Personalised messaging based around customer's life events is a great way to cut through the noise and reach customers in a way that is meaningful to them. Can you give some idea of what capabilities marketers need in place to be able to achieve this kind of messaging?

First and foremost, marketers need to understand the value of their customers' life events, and what life events are relevant for your business and products. For example, moving home represents a major opportunity for the utilities providers because around 65% of consumers switch suppliers when they move. Once the life events have been identified, businesses need to act on this insight by combining the science of data analysis with the art of relevant, meaningful communication.

To do this, they need direct access to up-to-date, accurate and permissioned customer life-event data from trusted third-party providers. But if they are to take full advantage of this information, businesses need agile systems, processes and technologies in place that enable them to act dynamically on customer life events as they happen. And to have the sturdy data protection policies in place to ensure it can happen. In addition, they should have the capability, resources and tools to conduct 'closed-loop' marketing. This is where the ROI and effectiveness of their life-event-specific campaigns is constantly measured and insights from this are applied to future actions.

Q. Only one-third of marketers realise that a life event increases the chances of a customer switching to a new company, and thus presenting a business with new customer acquisition opportunities. Why do you think it is such a low proportion of marketers that realise this?

This is symptomatic of an over-reliance on static customer data. Such data generalises and looks at consumers historically, rather than at what's currently happening in their lives as individuals. Most

marketers simply aren't aware of how to tap into and exploit customer life events and struggle to keep pace with consumers' fickle purchasing behaviours.

However, a significant proportion of marketers are now looking for better ways to use customer data. But they need help understanding how to correlate internally held customer data with third-party life-event data such as moving home. There needs to be more education and promotion of the value of such customer-centric, data-driven marketing strategies and techniques, because those organisations that are conducting life-event marketing are witnessing significant increases in their response and conversion rates.

Q. Marketers ranked quality of contact data as the single most important factor in delivering marketing effectiveness, far higher than creative design or the timing of campaigns. Why do you think data quality is so critical?

Data quality is the absolute bedrock on which any successful marketing campaign is built. There's no point doing great creative, data segmentation, analytics or personalised marketing unless the contact data you're using is as accurate and clean as you can make it. All the smart stuff won't make a difference if the base information you're working from is inaccurate.

Q. If data quality is so critical to marketing success, what are some key things organisations can do to improve the quality of their data collection?

Organisations need to be able to automatically validate and check contact and address data at the point of capture, whether that's online, in-store, or over the phone. But it's vital that the validation process doesn't just stop here - companies need to ensure they have systems and processes in place to ensure customer data is cleaned and updated on a continuous, automated basis rather than as a one-off job, which currently tends to be the case. It's also essential, when collecting customer data, to make sure that the correct permissions are attached to individual records.

Q. Marketers see the change of an email address as more important than having children. Can you explain why this is?

Over the past ten years, email has become a popular marketing channel for many marketers, with companies relying on it as a low-cost way to reach customers and prospects. So, a change of email address means potentially losing that route to send messages to a customer. However, marketers are increasingly realising that email is

not the answer to all their acquisitions or CRM challenges. In fact, our recent research report shows that 67% of marketers consider postal address data as the most important type of data to be collected for marketing purposes. This is no surprise - after all, it's impossible to deliver a new sofa to an email address!

Q. Some companies focus on collecting data via their own channels, while others partner with third-party providers. Which do you think is the better approach, or is the best way some combination of the two?

For true marketing effectiveness, companies have to mine their own customer data for insight and then combine this with information and intelligence from third-party providers. Internally held, first-party details such as email addresses and purchase histories can get you so far, but third-party data - all subject to obtaining the relevant permissions - form a far more powerful version of this by providing the why, when and how elements.

Companies also have to consider how willing a customer may be to share personal information with them. For example, if you're buying a new piece of furniture, you're happy to share your name, address, email and mobile number. Often this decision relies on the value exchange and what customers get in return.

Q. Collecting data and drawing insights from that data that can lead to actionable steps are two very different kettles of fish. What do you recommend companies do to make sure their data will be actionable?

The first step is always to ensure that customer data is up to date, accurate, correctly permissioned and complete - if your data fails to meet any of these criteria, then any actions taken based on it won't be wholly successful. Once you have 'action-ready' data, you need in place the agile systems and processes necessary to perform 'just-in-time', fully permissioned marketing. You also need to assess how third-party data can help existing data to become more actionable.

Q. Only 15% of marketers think data privacy is an obstacle to data-driven marketing, and only 7% think data security is an obstacle. Do you think they are underestimating the size of the issue, or are the legal directives on this issue fairly easy to become compliant with?

Marketers aren't underestimating the size of the issue. But they don't consider it an obstacle either because, for the most part, they recognise the need to ensure their data collection, use and

management procedures adhere to new regulations. In other words, they view compliance as a given, not an obstacle. However, as our research report shows, technology remains the principal barrier to the adoption of data-driven marketing.

Q. Do you think permission marketing becoming a legal requirement will prove beneficial for the industry overall?

Any new legislation also presents new opportunities. So yes, this is a positive for the industry and it should already go without saying that marketers need to be appropriate, relevant and meaningful in how they operate if they want to deliver a successful customer experience. This legislation should help marketers to refocus and think more in terms of ‘What is it that my customers want or need from me and how do they want me to engage?’ rather than ‘What is it that I have to sell to them?’.

Q. Can you sum up the importance of data to marketers in a single sentence?

If you could increase the return on your marketing investment by reaching people at the exact time when they’re actively in the market for your products and services, would you ignore the opportunity?

Source: Smart Insights

Supporting the growing range of digital business technology platforms

If you think of the options to reach and interact with customers or partners digitally, these interactions have traditionally been via desktop software and browsers. The desktop and laptop have been dominant for years and remain very important, but mobile access has exceeded desktop use since late 2016 (StatCounter, 2016), enabled by the growing range of mobile platforms available - principally Apple’s IOS and Google’s Android. Combining with these hardware platforms, there are also different software platforms that marketers can use to reach and interact with their audience through content marketing or advertising, so let’s look at the range of options that are available:

Desktop, laptop and notebook platforms

- 1 Desktop browser-based platform.** This is traditional web access through the consumer's browser of choice, whether Internet Explorer, Google Chrome or Apple Safari.
- 2 Desktop apps.** We don't see this platform talked about much, but Apple users access paid and free apps from their desktop via the Apple App Store. This gives opportunities for brands to engage via these platforms.
- 3 Email platforms.** While email isn't traditionally considered as a platform, it does offer a separate option from browser and app-based options to communicate with prospects or clients, whether through editorial or advertising, and email is still widely used for marketing.
- 4 Feed-based and API data exchange platforms.** Many users still consume data through RSS feeds, and Twitter and Facebook status updates can be considered a form of feed or stream where ads can be inserted.
- 5 Video-marketing platforms.** Streamed video is often delivered through the other platforms mentioned above, particularly through browsers and plug-ins, but it represents a separate platform.

It could be argued that the major social networks, Facebook, LinkedIn and Twitter, also provide a form of platform, but these really exist across all of these technology platforms so they haven't been identified separately.

Mini Case Study 3.1

Location-based marketing

Location-based marketing is not a new phenomenon. Patents by mobile phone manufacturer Ericsson were published in 1998 that described a system for connecting marketing systems to the location of mobile phone users in a mobile phone network (Rouhollahzadeh *et al.*, 2001).

At the time of writing there are a few ways of thinking about location-based marketing.

Firstly, there is the familiar and well-established geo-targeting approach, whereby the location of a user is determined by the user's IP address, ISP or by given (for example through registration) location such as postal/zip code or an actual postal address. The location is then used to target the user with marketing relevant to that user's location. Local search results rely on IP addresses, as introduced by Google in 2012 (Google, 2017), or an explicit declaration of the user's location in

the key phrases used in the search query (e.g. ‘Chinese Restaurants in Helsinki’). Display advertising on platforms such as Facebook as well as on mobile apps also use a user’s location to deliver location-relevant content. You will be exposed to many of these throughout your daily use of the Internet, and mobile applications and organisations of all sizes make use of them.

Things become a little more interesting when we consider the application of several other technologies that support location-based marketing. One such technology is geofencing.

Geofencing is the effective ring-fencing of physical locations to target audiences using technologies on mobile devices, such as GPS, or ownership of a specific app. When a user with the technology (and requisite permission to be engaged) moves within the ring-fenced zone, then marketers can target that user with location-relevant communications. The ring-fenced zone is often called a geofence.

Domino’s used a location-based approach to marketing by targeting users of specific apps that were associated with room access in hotels in Florida. Many hotel chains use mobile apps to allow guests to access their rooms during their stay. Domino’s wanted to target users of these apps with a pizza offering that was an alternative to room service. Geofences were set up in various hotel locations. This allowed Domino’s to target many different hotel guests at different locations. When guests who had the hotel app were within the geofence, specific Domino’s adverts were shown to those users that encouraged the user to download the specific Domino’s ordering app onto their device and ultimately make an order as an alternative to regular room service (Thumbvista, 2015).

The other technology that is beginning to see significant use is beaconing (Lewis, 2016). Beacons are small objects that can be placed or left in specific physical locations and have a very short range. They generally use a technology based around Bluetooth that uses very little power to work. You might be familiar with the technology through applications such as TileApp (**www.thetileapp.com**). Beacon technology relies on the user having Bluetooth turned on. When this happens, users can receive specific marketing information through an app that uses this technology (Proxbook, 2017).

MLB, a US sports league business, uses beacon technology in association with its official app (MLB.com). Beacons are placed at different locations in different baseball stadia. The app, in conjunction with the beacon, allows baseball fans to access offers for specific things in different locations within stadia, such as accessing parking,

discovering discounts and offers on goods at nearby sales points and ordering food.

Location-based marketing is not without its criticisms. In 2013, US retailer Nordstrom was criticised for the way it tracked physical-world shopper behaviour from mobile phones. Nordstrom were open about the fact to customers, but while online shoppers seemed conscious about being tracked through digital behaviours, they seemed less inclined to like being tracked in the real world by retailers. Nordstrom said they stopped tracking customers shortly afterwards (Hardy, 2013).

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Rouhollahzadeh, B. and Bhatia, R. (2001) 'System and method for location-based marketing to mobile stations within a cellular network'

Thumbvista (2015) 'Geofencing case study Domino's - geofences for mobile ads'. Available at: www.thumbvista.com/2015/10/geofencing-case-study-dominos-geofences-for-mobile-ads-around-hotels

Mobile phone and tablet platforms

Mobile device use has transformed the way consumers access online content and services for entertainment, socialising and purchase decisions. The options on mobile hardware platforms are similar in many ways to the desktop. Since they can be used in different locations, there are many new opportunities to engage consumers through **mobile marketing** and **location-based marketing**. We cover the design challenges of creating mobile experiences in Chapter 9, where options for responsive web design are reviewed. Box 3.1 introduces some of these challenges.

Mobile marketing

Marketing to encourage consumer engagement when they're using mobile phones (particularly smartphones).

Trends update

Mobile usage

Mobile usage finally overtook desktop usage in 2016. Find out the latest statistics on mobile and app usage at:
<http://bit.ly/smartmobilestats>.

The main mobile platforms are:

- 6 Mobile operating system and browser.** There are mobile browsers that are closely integrated with the operating system.
- 7 Mobile-based apps.** Apps are proprietary to the mobile operating system (although the same app has often been converted for use on a number of mobile platforms), whether Apple iOS or Google Android. (At the time of writing there are other very minor players such as RIM or Microsoft.) A big decision is whether to deliver content and experience through a browser and/or a specific app, which provides an improved experience.

With the growth in mobile platform usage by consumers it becomes important to assess whether companies are gaining similar or ever greater levels of business from consumers using mobile platforms as they did from desktop platforms. Table 3.2 shows how companies can assess this using the approach to strategy development from Chapter 5.

Location-based marketing

Location or proximity-based marketing is mobile marketing based on the GPS built into phones or based on interaction with other local digital devices such as wifi routers or mobile phone towers.

Table 3.2

Examples of objectives for mobile platforms and the strategies used to achieve these goals

Objectives	Substantiation (informed by situation analysis or insight, for example)	Strategies to achieve goals	Key performance indicators (critical success factors)
1 <i>Reach objectives.</i> Deliver 2 million mobile site visitors in year	Extrapolation of current growth in mobile segments on current site plus 25% increment from promotion in other digital channels	Start investment in Google AdWords for mobile and mobile display networks Use device detection to access mobile site Promotion in-store	Clickthrough rates from mobile-specific campaigns and impression share delivered by AdWords
2. <i>Act objectives.</i> Obtain a 4% add-to-basket visit conversion rate from mobile	This conversion rate is around two-thirds of desktop site conversion Consistent with reported industry examples	Develop mobile site-specific search Mobile site merchandising	Mobile site search % and add-to-basket rates. Promo clickthrough rates
3 <i>Convert objectives.</i> Mobile AOV = £35 Mobile visit to sale conversion = 2%	This conversion rate is around two-thirds of desktop site conversion. Consistent with reported industry examples	Initial implementation of mobile checkout. This will be optimised in future years	Microstep conversion within checkout process Registration process for new customers
4 <i>Engagement objectives.</i> Customer satisfaction ratings of mobile experience at 80% of online. Reviews placed and repeat-customer conversion at 80% of offline rates	It is expected with the new mobile site that satisfaction ratings and repeat purchase percentages will be slightly lower, but this is unknown. We need to check that emails are still successful in generating reviews	Combination of strategies: Email and mobile messaging specific to mobile site purchasers Mobile couponing	% of reviews

Source: Turner and Chaffey, 2016

The benefits that mobile connections offer to their users are ubiquity (can be accessed from anywhere), reachability (their users can be reached when not in their normal location) and convenience (it is not necessary to have access to a power supply or fixed-line connection). They also provide security - each user can be authenticated since each wireless device has a unique identification code; their location can be used to tailor content; and they provide a degree of privacy compared with a desktop PC. An additional advantage is that of instant access or being always-on. Table 3.3 provides a summary of the mobile access proposition. There are considerable advantages in comparison to PC-based Internet access, but it is still somewhat restricted by the display limitations.

Other hardware platforms

Apart from desktop and mobile access, there are a host of other platforms through which to communicate with customers. For example:

- 1 Gaming platforms.** Whether it's a PlayStation, Nintendo or Xbox variety of gaming machine, there are many options to reach gamers through ads or placements within games, for example in-game ads.
- 2 Indoor and outdoor kiosk-type apps.** For example, interactive kiosks and augmented reality options to communicate with consumers.
- 3 Interactive signage.** The modern version of signage, which is closely related to kiosk apps, may incorporate different methods such as touch-screen, Bluetooth, NFC or QR codes to encourage interaction.

Table 3.3

Summary of mobile access consumer proposition

Element of proposition	Evaluation
No fixed location	The user is freed from the need to access via the desktop, making access possible when on the move
Location-based services	Mobiles can be used to give geographically based services, e.g. an offer in a particular shopping centre Many mobiles have integrated GPS
Instant access/convenience	The latest 3G, 4G and 5G services are always-on, avoiding the need for lengthy connection
Privacy	Mobiles are more private than desktop access, making them more suitable for social use or for certain activities, such as an alert service when looking for a new job
Personalisation	As with PC access, personal information and services can be requested by the user, although these often need to be set up via PC access

Security

Mobiles have become a form of wallet (with services such as Android Pay and Apple Pay), but thefts of mobiles make this a source of concern

Box 3.1

Taking the mobile app vs mobile site decision

A decision that is increasingly important for many digital businesses to consider is whether they should base their proposition around a mobile app or around a mobile website. It's important to understand the differences and the motivations for building either. One thing that often affects the choice is budget - but that may not be the correct lever for making the decision if the outcomes are poor.

Recent changes in the way Google indexes websites mean that websites that are mobile-friendly are ranked more highly in search results than those that are not. Google's proprietary AMP technology (Accelerated Mobile Pages) are regarded by some search engine marketing specialists to receive even greater favour in the index. AMP technology is designed to make pages arrive at mobile devices faster than regular HTML web pages. AMP-based pages and sites are effectively stripped down versions of web pages and therefore are 'smaller' and download faster on mobile devices. At the same time, even excluding AMP, many more websites have become mobile-responsive as the volume of traffic from mobile devices increases at an almost exponential rate.

Apps are specific pieces of application software downloaded to the mobile device and don't use the mobile browser. The app may draw data from a remote location such as a company server, but all processing and action will take place on the device. In many cases, the app can be used without a data connection (depending on the kind of application).

In the end, it is the outcomes one seeks from an app or website (and what endusers want) that should drive the decision to go either mobile site or mobile app. Few app owners have no mobile site, but the complexity of the service offered will often dictate which direction to go down.

What favours a mobile site?

- Instant availability
 - A mobile site is permanently and instantly available through a mobile browser, while an app needs to be downloaded via an app store - this can create a challenge to engagement.
- Ease of compatibility
 - Sites are compatible with all devices, while each platform requires its own mobile app developing. The risk of alienating users on a platform is possible.
- Immediacy of being up to date
 - The latest version of a service and data is available through a site, while an app needs to be continually updated.
- Search visibility
 - Mobile sites are indexed in search engines as normal (more favourably than regular sites in certain circumstances), while app content may not be. Google has started to recently include app content in search results, but at the time of writing this only applies to Android apps.
- Ease of distribution
 - Content on mobile sites is easily shared via linking and social sharing. An app has to have the content-sharing functionality within it to allow this to happen.
- Long shelf-life
 - A mobile site evolves over time, while an app can remain static unless it is updated regularly by the user. Mobile users have a habit of deleting apps they don't use very often, or that age badly.
- Ability to 'simulate' app behaviour
 - Mobile sites can be designed to operate and look like an app.
- Cost
 - The development of a mobile site is probably a lot cheaper and requires significantly fewer technical skills compared to an app.
- Maintenance
 - As with cost, the maintenance of a mobile site is probably a lot easier and can be done incrementally. The relative effort

of maintaining an app, especially across platforms, is significant compared to a site maintenance.

What favours a mobile app?

- Level of complexity of service
 - Apps can deliver a significantly more complex experience than can be delivered by web pages and a website. Apps are complex programs that can exploit the computing power of the device they sit on, while mobile pages and sites have limitations on some of the functionality they can provide.
- Individualised service
 - Apps can be personalised and individual data can be saved to the mobile device itself. This can often improve the functionality of a service compared to a simple personalised website.
- Processing capability
 - Apps can make full use of the processing capability of a mobile device, which is increasingly similar in power to desktop computing. This allows for significant services to be managed at the device purely for the disposal of a single user. Mobile sites rely on a shared and remote processing power, which could be shared between thousands of concurrent users.
- Offline
 - Apps can be used offline and so can be configured to run for extended periods of time without a data connection. This allows for autonomous use of the app when no connection is available. Mobile websites, by their very nature, rely on a persistent data connection.

Increasingly, firms are using a combination of dedicated **mobile apps** and mobile web pages to service the needs of their customers. There is no one-size-fits-all approach, and any organisation has to look at its goals to determine the best approach.

Source: <https://www.ampproject.org/learn/about-amp/>

Mobile app

A software application that is designed for use on a mobile phone, typically downloaded from an app store such as Apple App Store and Google Play. All smartphones support the use of apps, which can provide users with information, entertainment or location-based services such as mapping.

Augmented reality

Augmented reality (AR) is an exciting concept that can help companies improve their customer experience. It is best explained through examples:

- 1 Lacoste used AR to allow shoppers to ‘try-on’ trainers or sneakers in store without actually putting the real shoes on, and share the experience on social networks.
- 2 Tesco allowed customers to see key soft-furnishing products within their own home with the augmented ‘Home Book’ catalogue.
- 3 Ikea created an app that allowed users to see pieces of Ikea furniture in their own rooms by scanning a logo in the paper catalogue.

Mini case study 3.2 turns the concept on its head with the introduction of a real-world store.

Augmented reality (AR)

Blends real-world digital data captured typically with a digital camera in a webcam or mobile phone to create a digital representation or experience mimicking that of the real world.

Mini Case Study 3.2

Amazon opens a real grocery shop

At the end of 2016, Amazon opened a real-world grocery store in Seattle. This was on the back of its significant push into the online grocery market in the US and the UK with AmazonFresh. But it was an interesting move that a digital business should consider moving into a non-digital space, although Amazon had previously opened bookshops and pop-up shops in shopping centres and malls.



Figure 3.1

Amazon Real World Store

Source: Paul Christian Gordon/Alamy Stock Photo

However, this bricks-and-mortar retail space is very unlike any other. There are no checkouts. Instead of placing items into a shopping basket, unloading them at a checkout or even self-service checkout, customers simply place the items in their bags and walk out - seemingly without paying. Sensors, cameras and other technology on shelves detect items that are removed and not returned. The customer is billed as they leave the shop (Dastin, 2016).

At the time of writing there were some teething problems - most notably that the store struggled to deal with tracking many customers and so only a small number of people could be in the shop at any one time (Hartmans, 2017).

Sources: Medhora, N. and Dastin, J. (2016) 'Amazon opens line-free grocery store in challenge to supermarkets.' Hartmans, A. (2017) 'Technical issues are forcing Amazon to delay the public launch of its cashier-less grocery store.'

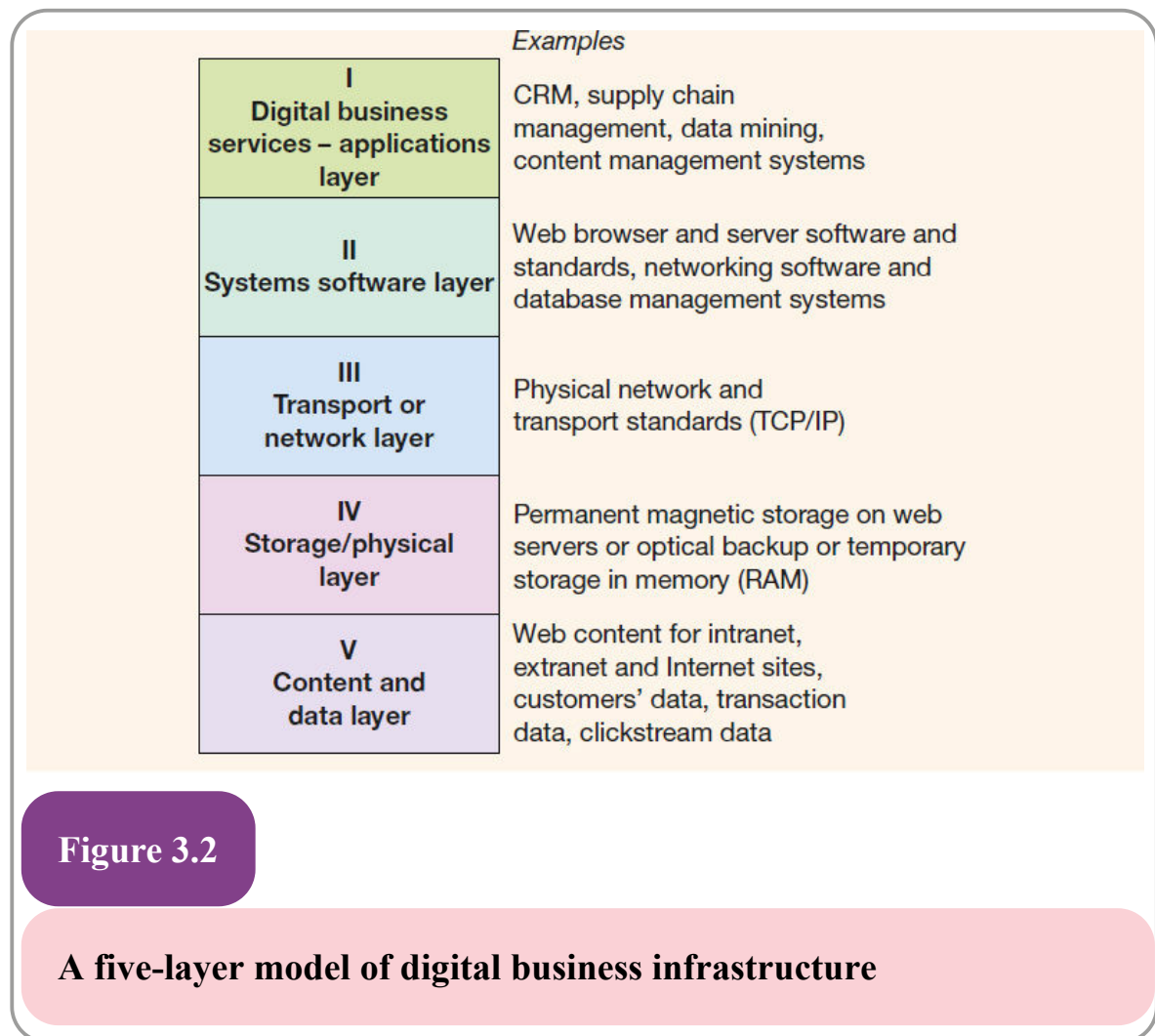
Digital business infrastructure components

Figure 3.2 summarises how the different components of digital business architecture relate to each other. The different components can be conceived of as layers, with defined interfaces between each layer. The different layers can best be understood in relation to a typical task performed by a user of a digital business system. For example, an employee who needs to book a holiday will access a specific human resources application or program that has been created to enable the holiday to be booked (Level I in Figure 3.2). This application will enable a holiday request to be entered and will forward the application to the employee's manager and the human resources department for approval. To access the application, the employee will use a web browser such as Microsoft Internet Explorer, Mozilla Firefox or Google Chrome using an operating system such as Microsoft Windows or Apple OS X. This systems software will then request transfer of the information about the holiday request across a network or transport layer (Level III). The information will then be stored in computer memory (RAM), or in long-term magnetic storage, on a web server (Level IV). The information itself, which makes up the web pages or content viewed by the employee, and the data about their holiday request are shown as a separate layer (Level V in Figure 3.2), although it could be argued that this is the first or second level in a digital business architecture.

Kampas (2000) describes an alternative five-level infrastructure model of what he refers to as 'the information system function chain':

- 1 Storage/physical.** Memory and disk hardware components (equivalent to Level IV in Figure 3.3).
- 2 Processing.** Computation and logic provided by the processor (processing occurs at Levels I and II).
- 3 Infrastructure.** This refers to the human and external interfaces and also the network, referred to as 'extrastructure'. (This is Level III, although the human or external interfaces are not shown there.)
- 4 Application/content.** This is the data processed by the application into information (Level V).
- 5 Intelligence.** Additional computer-based logic that transforms information to knowledge (Level I).

Each of these elements of infrastructure presents separate management issues, which we will consider separately.



A short introduction to digital technology

As you will know, the Internet enables communication between millions of connected computers worldwide, but how does the seamless transfer of data happen? Requests for information are transmitted from client computers and mobile devices whose users request services from server computers that hold

information and host business applications that deliver the services in response to requests. Thus, the Internet is a large-scale **client-server** system.

Figure 3.3 shows how the client computers within homes and businesses are connected to the Internet via local **Internet service providers (ISPs)**, which, in turn, are linked to larger ISPs with connection to the major national and international infrastructure or **backbones** that are managed by commercial organisations. These high-speed links can be thought of as the motorways on the ‘information superhighway’, while the links provided from ISPs to consumers are equivalent to slow country roads.

Globally, many submarine cables form the backbone between countries, and these cables are susceptible to damage. For example, in February 2016 a subsea earthquake damaged several underwater fibre data cables causing problems for Singapore’s data-reliant businesses. Seismic activity causes many problems for the undersea cable network near southeast Asia.

Client-server

The client-server architecture consists of client computers, such as PCs, sharing resources such as a database stored on more powerful server computers.

Internet service provider (ISP)

A provider providing home or business users with a connection to access the Internet. They can also host web-based applications.

Backbones

High-speed communications links used to enable Internet communications across a country and internationally.

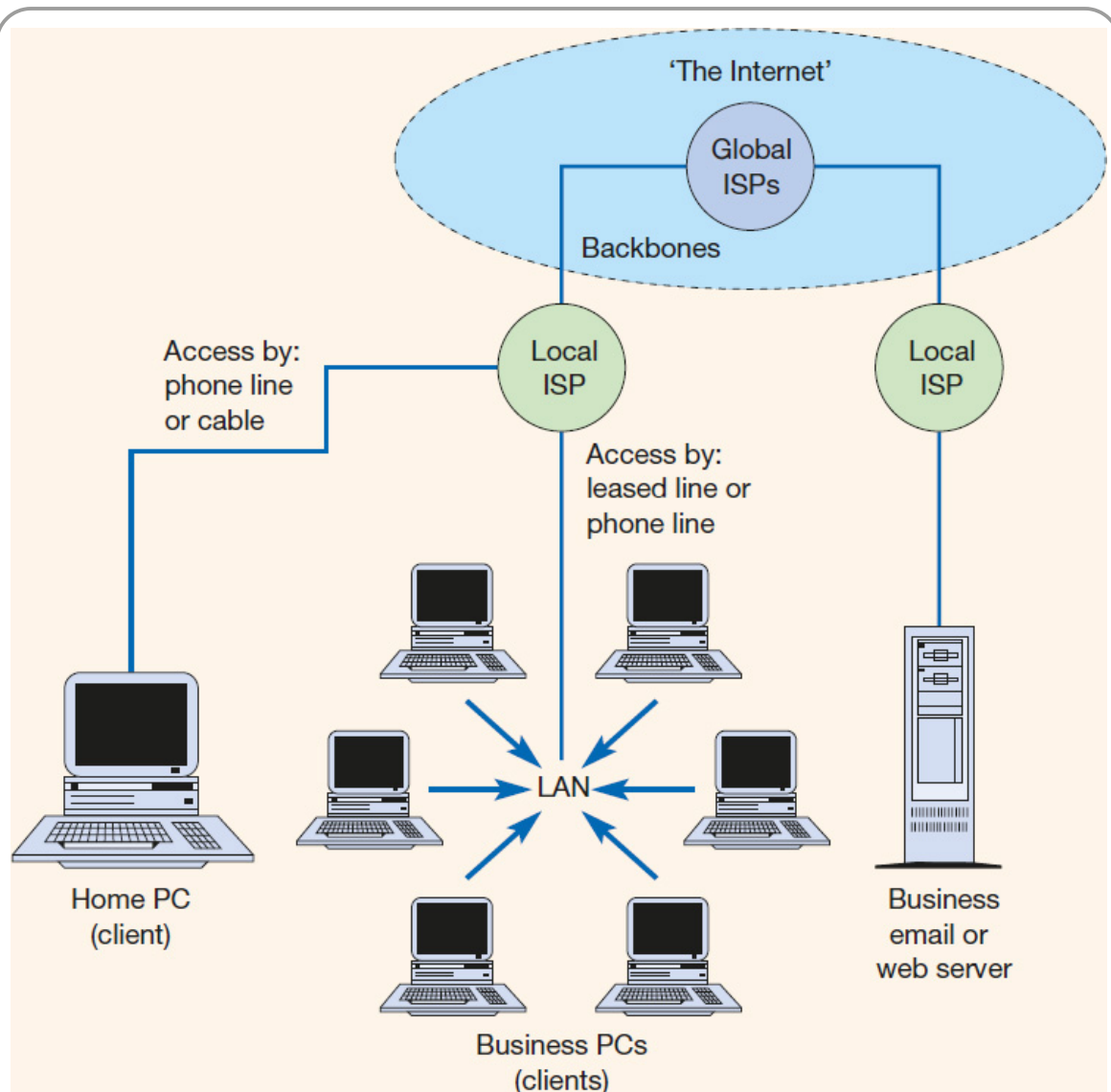


Figure 3.3

Physical and network infrastructure components of the Internet (Levels IV and III in Figure 3.3)

Management issues in creating a new customer-facing digital

service

In this section we consider some of the issues that managers introducing new services need to be aware of, including:

- domain name selection;
- selection of hosting services, including cloud providers;
- selection of additional SaaS (Software as a Service) platforms.

Domain name selection

We start with this relatively simple decision, since there is some basic terminology that managers need to be aware of. Companies typically have many digital services located on different domains, particularly for companies with different domains for different countries. The domain name refers to the address of the web server and is usually selected to be the same as the name of the company, and the extension will indicate its type. The extension is commonly known as the generic top-level domain (gTLD). Common gTLDs are:

- (i) **.com** represents an international or American company such as **www.amazon.com**.
- (ii) **.org** is used by not-for-profit organisations (e.g. **www.greenpeace.org**).
- (iii) **.mobi** is introduced for sites configured for mobile phones.
- (iv) **.net** is a network provider such as **www.demon.net**.
- (v) **.edu** is an academic institution in the US.

There are also specific country-code top-level domains (ccTLDs):

- (vi) **.co.uk** represents a company based in the UK, such as **www.guardian.co.uk**.
- (vii) **.au**, **.ca**, **.de**, **.es**, **.fi**, **.fr**, **.it**, **.nl**, etc. represent other countries (the **co.uk** syntax is an anomaly!).
- (viii) **.ac.uk** is a UK-based university or other higher education institution (e.g. **www.cranfield.ac.uk**).
- (ix) **.org.uk** is for a not-for-profit organisation focusing on a single country (e.g. **www.mencap.org.uk**).

The ‘filename.html’ part of the web address refers to an individual web page, for example ‘products.html’ for a web page summarising a company’s products.

It is worth noting that the list of new types of gTLDs has grown rapidly in the last few years to cover all manner of business types (such as .bank), or even specific products (such as .landrover). These new gTLD types also include support for non-Latin characters such as Arabic or Chinese.

It is important that companies define a URL strategy that will help customers or partners find relevant parts of the site containing references to specific products or campaigns when printed in offline communications such as adverts or brochures.

Uniform resource locators (URLs)

The technical name for a web address is **uniform (or universal) resource locator (URL)**. URLs can be thought of as a standard method of addressing, similar to postcodes or zipcodes, that make it straightforward to find the name of a domain or a document on the domain.

In larger businesses, particularly those with many sites, it’s important to develop a **URL strategy** so that there is a consistent way of labelling online services and resources.

Uniform (universal) resource locator (URL)

A web address used to locate a web page on a web server.

URL strategy

A defined approach to forming URLs, including the use of capitalisation, hyphenation and sub-domains for different brands and different locations. This has implications for promoting a website offline through promotional or vanity URLs, search engine optimisation and findability.

Box 3.2

What’s in a URL?

A great primer on the components of a URL are given by IBM - www.ibm.com/support/knowledgecenter/en/SSGMCP_5.1.0/com.

ibm.cics.ts.internet.doc/topics/dfhtl_uricomp.html (IBM, 2017).

Here are the components of a URL:

- The protocol is http. Other protocols include https, ftp, etc.
- The host or hostname is video.google.co.uk.
- The subdomain is video.
- The domain name is google.co.uk.
- The top-level domain or TLD is uk (also known as gTLD). The uk domain is also referred to as a country-code top-level domain or ccTLD. For google.com, the TLD would be com.
- The second-level domain (SLD) is co.uk.
- The port is 80, which is the default port for web servers (not usually used in URLs when it is the default, although all web servers broadcast on ports).
- The path is /videoplay. Path typically refers to a file or location on the web server, e.g. /directory/file.html.
- The URL parameter is docid and its value is 7246927612831078230. These are often called the ‘name, value’ pair. URLs often have lots of parameters. Parameters start with a question mark (?) and are separated with an ampersand (&).
- The anchor or fragment is ‘#00h02m30s’.

A clean URL that fits many of these aims is

http://www.domain.com/folder-name/document-name. Care must be taken with capitalisation since Linux servers parse capitals differently from lower-case letters.

There is further terminology associated with a URL that will often be required when discussing site implementation or digital marketing campaigns, as shown in Box 3.2.

Domain name registration

Most companies own several domains, for different product lines or countries or for specific marketing campaigns. Domain name disputes can arise when an individual or company has **registered** a domain name that another company claims they have the right to. This is sometimes referred to as ‘cybersquatting’.

Managers or agencies responsible for websites need to check that domain names are automatically renewed by the hosting company (as most are today). Companies that don't manage this process potentially risk losing their domain name since another company could register it if the domain name lapsed. In 2016, TP-Link did not re-register two domains that owners of their router products used to access their router admin software. This could have caused users to be compromised if the two domain names had been used to phish router owner details, although TP-Link denied the domains were used any more.

Mini case study 3.3 shows one example of the value of domains and whether they are worth buying.

Domain name registration

The process of reserving a unique web address that can be used to refer to the company website.

Mini Case Study 3.3

Is a domain name worth the money?

Every website needs a domain name. In the process of acquiring customers, one of the key identifiers is a memorable domain name. A domain name can match a business brand name or be linked to a product, product feature or task. A digital business might generate its domain name and its brand at the same time as part of the development of its identity.

Whatever the reasons for choosing a specific domain name, there are also issues around domain names and search engine marketing. There was a fashion for exact match domains (EMDs), where a domain name was the same as a search query (think buying the domain name 'bestchickenrecipes.com' because you wanted to attract people who typed in the phrase 'what are the best chicken recipes?' in a search engine). There has been some debate that EMDs are no longer part of the algorithm that Google uses to mark a site as relevant as they offered an unfair advantage and were often simply spam sites. Many search engine marketers regard EMDs as a black hat optimisation practice. Google has stated many times it would penalise what it regarded as 'low-quality' websites using EMDs in highly competitive marketplaces.

Which begs the question - is it worth paying for a very specific domain name? In 2014 Gannet bought the site cars.com for \$1.8 billion

- but that included assets associated with the domain name, such as a website (Sherman, 2014). For a domain name alone, Quinstreet paid nearly \$50 million for 'carinsurance.com' (along with over \$35 million for 'insurance.com') in 2010 (Titcomb, 2015). One might expect that there must be very good reasons to pay such a substantial amount of money for a domain - there have to be expected returns or ideas about the level of traffic. But it's an exceedingly difficult issue to deal with when faced with the potential for EMD penalties on Google, and the movement away from website use that mobile apps could create.

Sources: Sherman, A. (2014) *Gannett Agrees to \$1.8 Billion Buyout of Cars.com Site*. www.bloomberg.com/news/articles/2014-08-04/gannett-said-to-agree-to-buy-rest-of-cars-com-for-1-8-billion

Titcomb, J. (2015) "Gold website fetches record price for ".co.uk" domain name.' *The Telegraph*. 2015-09-16. v_J

Managing hardware and systems software infrastructure

Management of the technology infrastructure requires decisions on Layers II, III and IV in Figure 3.1.

Layer II - systems software

A key management decision is whether to standardise throughout the organisation. Standardisation leads to reduced numbers of contacts for support and maintenance and can reduce purchase prices through multi-user licences. Systems software choices occur for the client, server and network. On client computers, the decision will be which browser software to standardise on. Standardised plug-ins should be installed across the organisation. The systems software for the client will also be decided on; this will probably be a variant of Microsoft Windows, but open-source alternatives such as Linux may also be considered. When considering systems software for the server, it should be remembered that there may be many servers in the global organisation, both for the Internet and intranets. Using standardised web-server software such as Apache will help maintenance. Networking software will also be decided on.

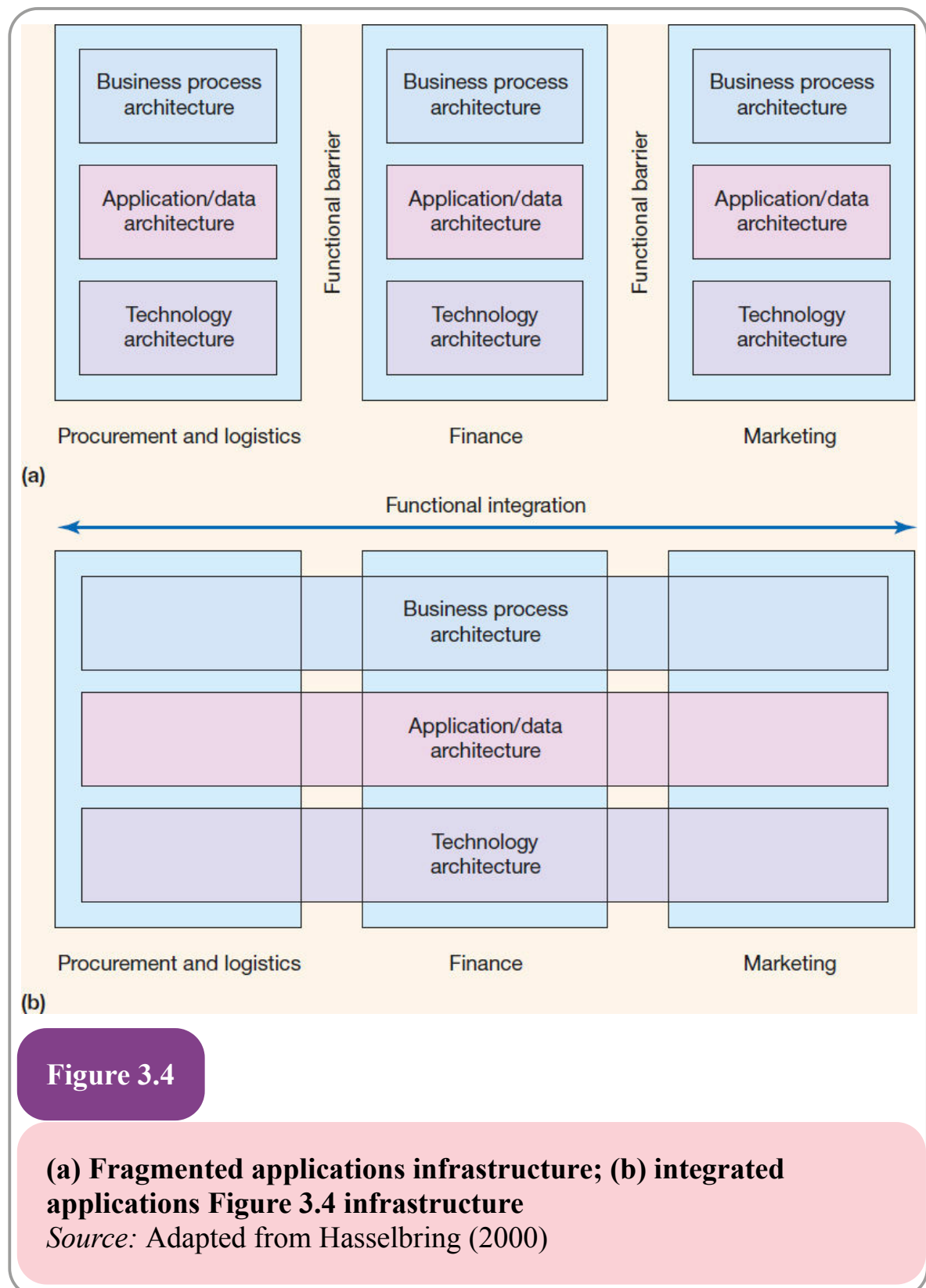
Managing digital business applications infrastructure

Management of the **digital business applications infrastructure** concerns delivering the right applications to all users of digital business services. The issue involved is one that has long been a concern of IS managers, namely to deliver access to integrated applications and data that are available across the whole company. Traditionally businesses have developed applications silos or islands of information, as depicted in Figure 3.4(a). These silos may develop at three different levels: (1) there may be different technology architectures used in different functional areas; (2) there will also be different applications and separate databases in different areas; and (3) processes or activities followed in the different functional areas may also be different.

Digital business applications infrastructure

Applications that provide access to services and information inside and beyond an organisation.

Applications silos are often a result of decentralisation or poorly controlled investment in information systems, with different departmental managers selecting different systems from different vendors. This is inefficient in that it will often cost more to purchase applications from separate vendors, and also it will be more costly to support and upgrade. Such a fragmented approach stifles decision-making and leads to isolation between functional units. For example, if customers phone a B2B company for the status of a bespoke item they have ordered, the person in customer support may have access to their personal details but not the status of their job, which is stored on a separate information system in the manufacturing unit. Problems can also occur at tactical and strategic levels.



For example, if a company is trying to analyse the financial contribution of customers, perhaps to calculate **customer lifetime values (CLV)**, some information about customers' purchases may be stored in a marketing

information system, while the payment data will be stored in a separate system within the finance department. It may prove difficult or impossible to reconcile these different data sets.

To avoid the problems of a fragmented applications infrastructure, companies attempted throughout the 1990s to achieve the more integrated position shown in Figure 3.4(b). Many companies turned to **enterprise resource planning (ERP)** vendors, such as SAP, Baan, PeopleSoft and Oracle.

The approach of integrating different applications through ERP is entirely consistent with the principle of digital business, since digital business applications must facilitate the integration of the whole *supply chain* and *value chain*. It is noteworthy that many of the ERP vendors such as SAP have repositioned themselves as suppliers of digital business solutions! The difficulty for those managing digital business infrastructure is that there is not, and probably never can be, a single solution of components from a single supplier. For example, to gain competitive edge companies may need to turn to solutions from innovators who, for example, support new channels such as WAP, or provide knowledge management solutions or sales management solutions. If these are not available from their favoured current supplier, do they wait until these components become available or do they attempt to integrate new software into the application? Thus managers are faced with a precarious balancing act between standardisation or core product and integrating innovative systems where applicable. Figure 3.4 illustrates this dilemma. It shows how different types of applications tend to have strengths in different areas.

Customer lifetime value

Lifetime value is the total net benefit that a customer or group of customers will provide a company over their total relationship with the company.

Enterprise resource planning (ERP) applications

Software providing integrated functions for major business functions such as production, distribution, sales, finance and human resources management.

ERP systems were originally focused on achieving integration at the operational level of an organisation. Solutions for other applications such as business intelligence in the form of data warehousing and data mining tended to focus on tactical decision-making based on accessing the operational data from within ERP systems. Knowledge management software also tends to cut across different levels of management. Figure 3.5 shows only some types of applications, but it shows the trial of strength

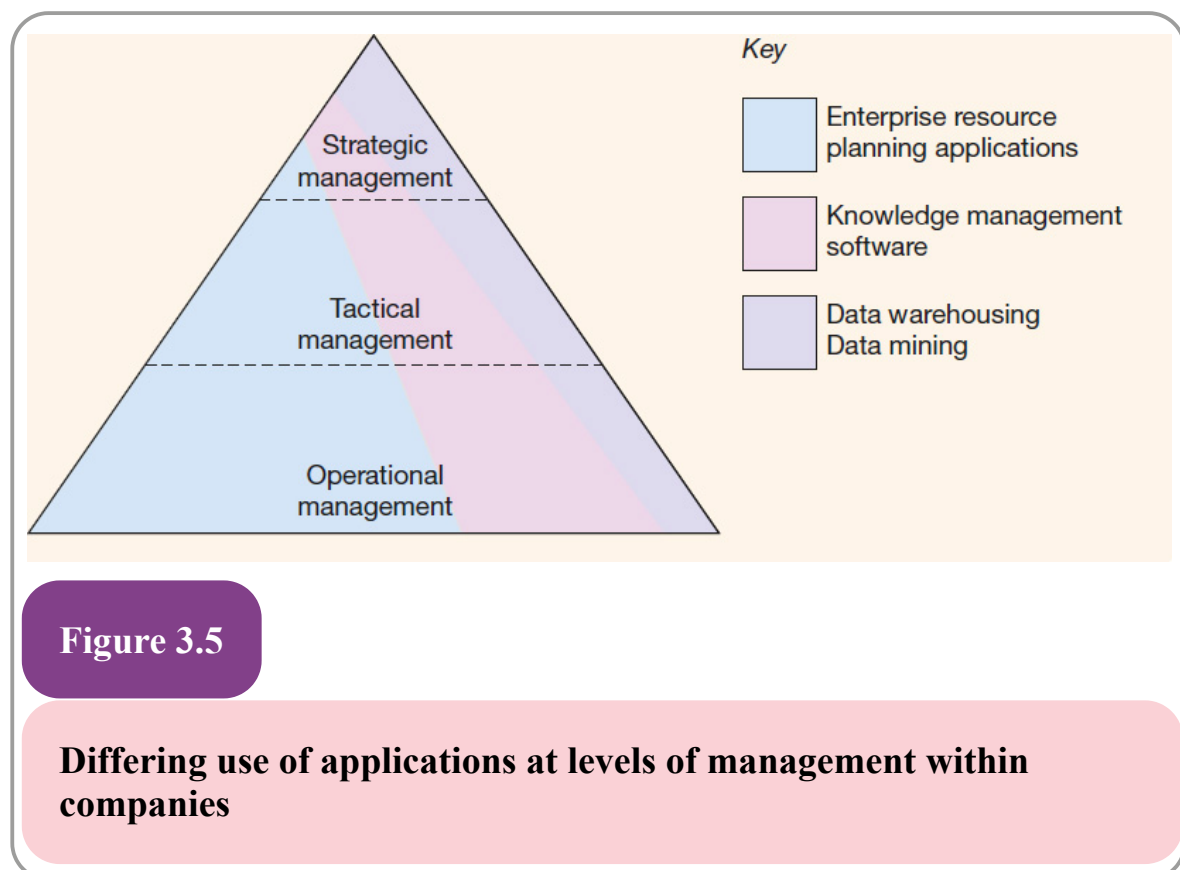
between the monolithic ERP applications and more specialist applications looking to provide the same functionality.

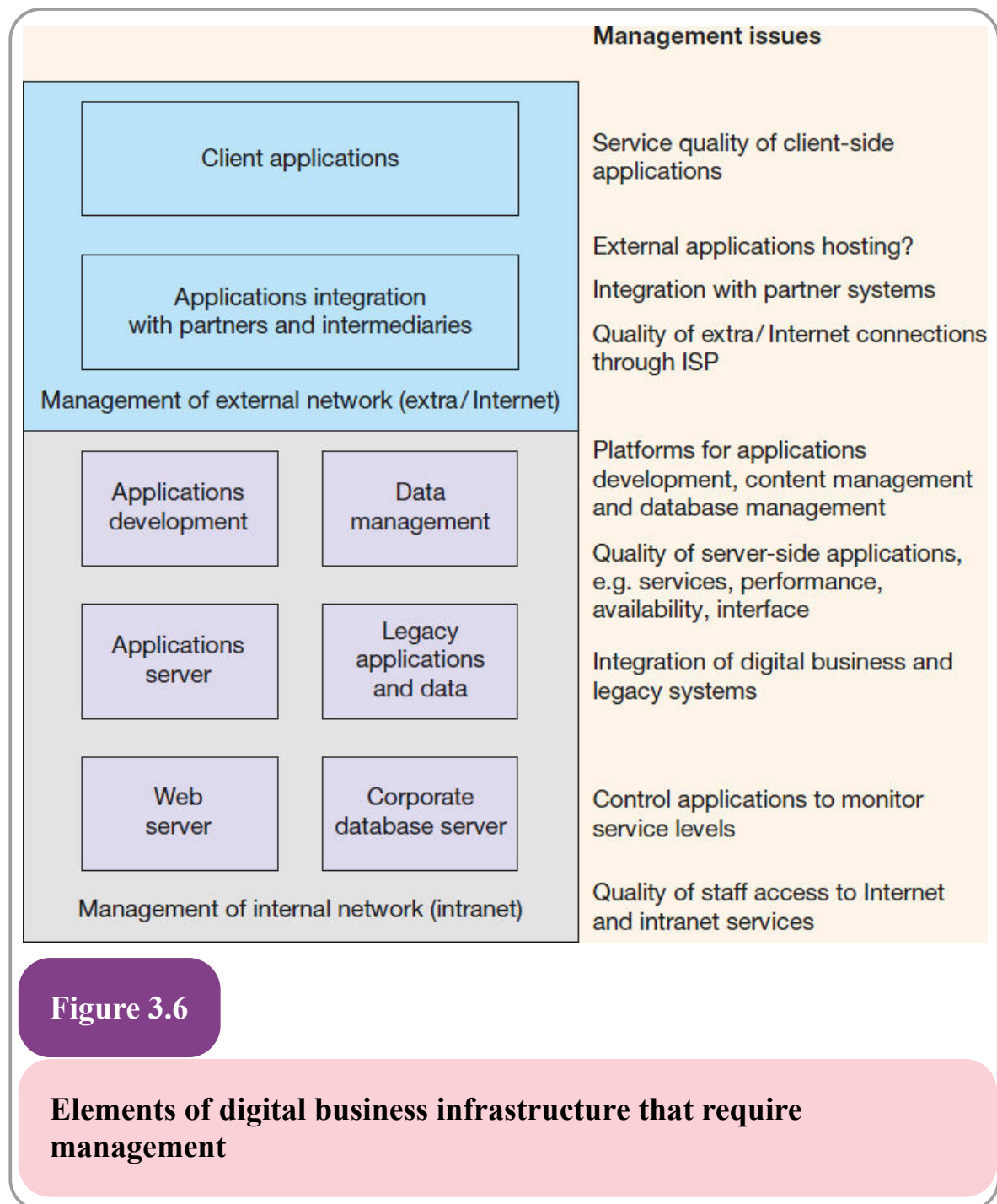
Debate 3.1

Bespoke and proprietary versus open-source

Digital businesses should choose technological solutions based on open-source technology rather than build their own bespoke systems and/or rely on proprietary technology that they create for themselves.

Figure 3.6 summarises some of these management issues and is based on the layered architecture introduced at the start of this section.





Focus on The development of customer experiences and digital services



‘Web services’, or ‘Software as a Service (SaaS)’, refers to a highly significant model for managing software and data within the digital business age. The web services model involves managing and performing all types of business processes and activities through accessing web-based services rather than running a traditional executable application on the processor of your local computer.

Benefits of web services or SaaS

SaaS are usually paid for on a subscription basis, so can potentially be switched on and off or payments paid according to usage, hence they are also known as ‘on demand’. The main business benefit of these systems is that installation and maintenance costs are effectively outsourced. Cost savings are made on both the server and client sides, since the server software and databases are hosted externally and client applications software is usually delivered through a web browser or a simple application that is downloaded via the web.

In research conducted in the US and Canada by Computer Economics (2006), 91% of companies showed a first-year return on investment (ROI) from SaaS. Of these, 57% of the total had economic benefits that exceeded the SaaS costs and 37% broke even in year one. The same survey showed that, in 80% of cases, the total cost of ownership (TCO) came in either on budget or lower. There would be few cases of traditional applications where these figures can be equalled.

Web services

Business applications and software services are provided through Internet and web protocols, with the application managed on a separate server from where it is accessed through a web browser on an end-user’s computer.

Application programming interfaces (APIs)

Traditionally, organisations have sought to keep proprietary information within their firewalls for security reasons and to protect their intellectual property. But in the Internet era, this strategy may limit opportunities to add value to their services or share information via other online companies and their web services to increase their potential reach. Here are some examples

from retail, publishing and software companies where APIs, sometimes known as the ‘Programmable Web’, have been used to help gain competitive advantage:

- Amazon Web Services. One example of AWS allows affiliates, developers and website publishers to use Amazon Product Discovery, which enables other sites to incorporate data about Amazon products and pricing.
- Facebook and Twitter use their APIs to help other sites embed social content into their sites.
- The Guardian Newspaper Open Platform (www.guardian.co.uk/open-platform) enables sharing of content and statistics from *The Guardian*.
- Google APIs exist for a number of its services - most notably Google Maps, which, according to this directory (www.programmableweb.com/apis/directory), is one of the most popular mashups created through an API. The Google Analytics API has enabled many businesses and third-party application developers to visualise web performance data in a more tailored way.
- Kayak is an aggregator that allows third-party sites to integrate **kayak.com** searches and results into their website, desktop application or mobile phone application.

Challenges of deploying SaaS

Although the cost reduction arguments of SaaS are persuasive, what are the disadvantages of this approach? SaaS will obviously have less capability for tailoring to exact business needs than a bespoke system.

The most obvious disadvantage of using SaaS is dependence on a third party to deliver services over the web, which has these potential problems:

- Downtime or poor availability if the network connection or server hosting the application or server fails.
- Lower performance than a local database. You know from using Google’s Gmail or Microsoft’s Outlook.com that, although responsive, they cannot be as responsive as using a local email package such as the Outlook application on Windows or Apple Mail.
- Reduced data security since, traditionally, data would be backed up locally by in-house IT staff (ideally also off-site). Since failures in the system are inevitable, companies using SaaS need to be clear how back-up and restores are managed and the support that is available for

handling problems, which is defined within the service level agreement (SLA). (Data security is covered in more detail in Chapter 9.)

- Data protection - since customer data may be stored in a different location it is essential that it is sufficiently secure and consistent with new data protection and privacy laws, discussed in Chapter 4.

Multi-tenancy SaaS

A single instance of a web service is used by different customers (tenants) run on a single server or load-balanced across multiple servers. Customers are effectively sharing processor, disk usage and bandwidth with other customers.

Box 3.3

Is my SaaS single-tenancy or multi-tenancy?

The debate between single-tenancy versus multi-tenancy often comes down to how much a digital business is prepared to spend on SaaS and how resistant to the idea of multi-tenancy a SaaS supplier is. Multi-tenant SaaS providers can achieve high levels of scalability and operational efficiency that can't be achieved through single-tenant arrangements. The business drivers for both the buyer and the supplier of SaaS shouldn't (just) be about the technology. In providing a service, a SaaS provider needs to understand how much they can gain as a business by providing multi-tenant solutions versus single-tenant. The received wisdom seems to be - the broader the appeal of a SaaS application, the more sensible it seems to offer it as a multi-tenant arrangement (Murphy, 2017).

These potential problems need to be evaluated on a case-by-case basis when selecting SaaS providers. Disaster recovery procedures are particularly important, since many SaaS applications such as customer relationship management and supply chain management are mission-critical. Managers need to question service levels as services often are delivered to multiple customers from a single server in a **multi-tenancy** arrangement rather than a **single-tenancy** arrangement. This is similar to the situation with the shared server or dedicated server we discussed earlier for web hosting. An example of this in practice is shown in Box 3.3.

An example of a consumer SaaS, word processing, would involve visiting a website that hosts the application rather than running a word processor

such as Microsoft Word on your desktop or laptop through starting 'Word.exe' or Apple Write. Both Google and Microsoft run consumer services for office-type applications (word processing, spreadsheets, etc.) - Google Docs and Microsoft Office 365 allow users to view and edit documents online and offline.

A related concept to web services is **utility computing**. Utility computing involves treating all aspects of IT as a commodity service such as water, gas or electricity, where payment is according to usage. A subscription is usually charged per month according to the number of features, number of users, volume of data storage or bandwidth consumed. Discounts will be given for longer-term contracts. This includes not only software, which may be used on a pay-per-use basis, but also using hardware, for example for hosting. An earlier term is '**applications service providers**' (ASPs).

Figure 3.7 shows one of the largest SaaS or utility providers, Salesforce.com, where customers pay on a per-user-per-month basis according to the facilities used. The service is delivered from the Salesforce.com servers to over 150,000 corporate customers in 15 local languages. Salesforce has added new services through acquisition of other SaaS providers -in 2016 alone it acquired 11 other SaaS companies, many for undisclosed sums.

Single-tenancy SaaS

A single instance of an application (and/or database) is maintained for all customers (tenants) who have dedicated resources of processor, disk usage and bandwidth. The single instance may be load-balanced over multiple servers for improved performance.

Utility computing

IT resources and in particular software and hardware are utilised on a pay-per-use basis and are managed externally as 'managed services'.

Applications service provider

A provider of business applications such as email, workflow or groupware, or any business application on a server remote from the user. A service often offered by ISPs.

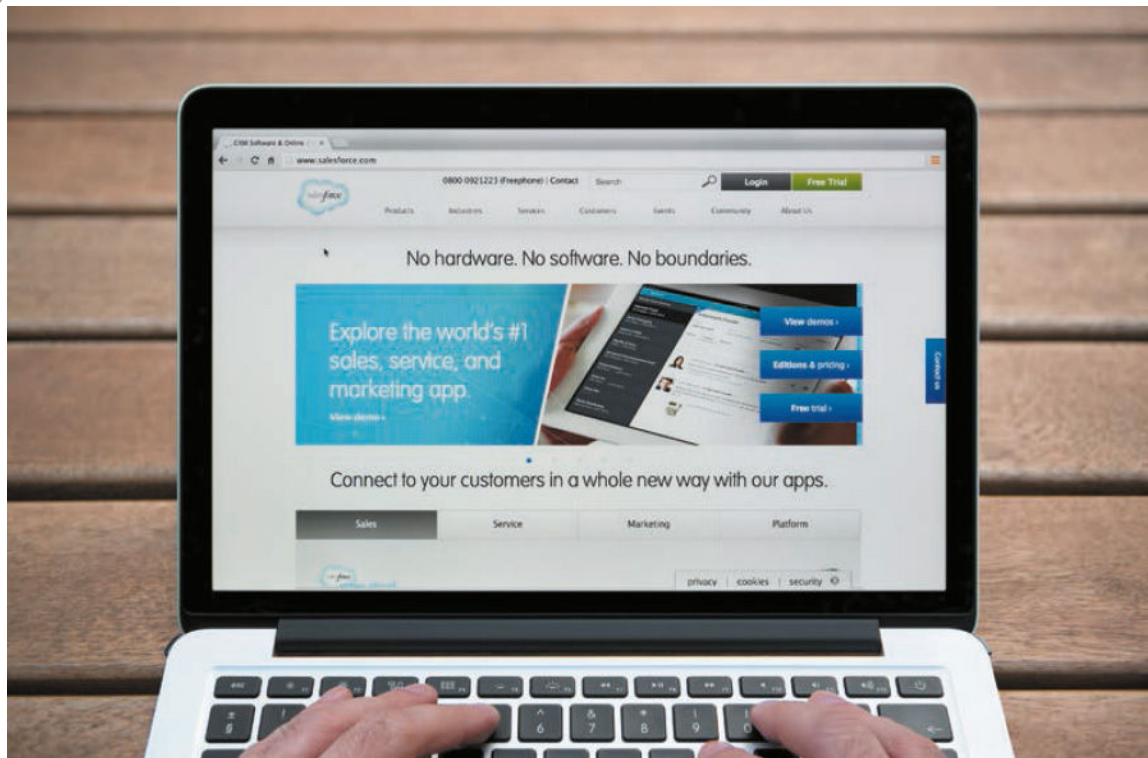


Figure 3.7

Salesforce.com

Source: M4OS Photos/Alamy Stock Photo

Cloud computing

In descriptions of web services you will often hear, confusingly, that they access ‘the cloud’, or you may come across the term ‘**cloud computing**’. The cloud referred to is the combination of networking and data storage hardware and software hosted externally to a company, typically shared between many separate or ‘distributed’ servers accessed via the Internet. So, for example, Google Docs will be stored somewhere ‘in the cloud’ without any knowledge of where it is or how it is managed since Google stores data on many servers. Of course you can access the document from any location. But there are issues to consider about data stored and served from the cloud: is it secure, is it backed up, is it always available? The size of Google’s cloud is difficult to assess, although in March 2017 Google revealed that it has spent almost \$30 billion on data centres across the planet - Gartner reported

in 2016 that they estimated Google has around 2.5 million servers (Knowledge, 2017).

Examples of cloud computing web services

Think of examples of web services that you or businesses use, and you will soon see how important they are for both personal and business applications. Examples include:

- web mail readers;
- e-commerce account and purchasing management facilities, such as Amazon.com;
- many services from Google such as Google Maps, Gmail, Picasa and Google Analytics;
- office application solutions from Microsoft with Office 365;
- customer relationship management applications from Salesforce.com and Siebel/Oracle;

Cloud computing

The use of distributed storage and processing on servers connected by the Internet, typically provided as software or data storage as a subscription service provided by other companies.



Figure 3.8

Google data center in Changhua, Central Taiwan

Source: Sam Yeh/AFP/Getty Images

Mini Case Study 3.4

How a business benefits from the cloud

If we exclude the possible cost benefits that a digital business derives from being located in ‘the cloud’, what are the other reasons to work in that way - even if the costs might actually be higher?

You can do a quick search for ‘business benefits of the cloud’ and find a raft of different cloud vendors proposing their view of non-financial advantages of a cloud platform.

Different businesses might have different reasons, but one of the most commonly cited is the ability to start up and test a business idea quickly without having to invest heavily (and physically) in the technological infrastructure and architecture associated with it - whether small or large.

Additionally, many proponents of ‘the cloud’ talk about the ability to focus on the idea of the business rather than on the technology. Arguably this makes for a better use of human resources, and there could be significantly more expertise available globally to support cloud-based technology than might be available locally for a bespoke technology.

It’s important for each digital business to look beyond the simple ‘Is it cheaper?’ question when looking at how to run the digital business. Though not without certain risks, cloud-based businesses are clearly here to stay.

Netflix is a well-known global video-streaming business that at the time of writing runs its operation on Amazon Web Services (AWS) (Izrailevsky, 2016). Historically, Netflix had relied on private data centres to manage its operation. While this might have worked well had it stayed based in a single country, this would prove to be far less manageable as a global offering. It took a long time for Netflix to move away from its traditional data centre model, but a growing market

outside the US with millions of users in hundreds of countries meant that this was a transformation that had to be dealt with carefully. The reason to do this would be to allow a consistent service offering wherever customers are, not simply because it would be cheaper.

Source: Izrailevsky, Y. (2016) Completing the Netflix Cloud Migration. Netflix.

3.2
company

Opportunities for using cloud services by a B2B

Purpose

To highlight the advantages and disadvantages of the cloud services approach.

Question

Develop a balanced case for the managing director explaining the cloud services approach and summarising its advantages and disadvantages.

- supply chain management solutions from SAP and Oracle;
- social media services such as Facebook, Twitter, Instagram, Google+, Pinterest, Tumblr and LinkedIn.

From the point of view of managing IT infrastructure, these changes are dramatic, since traditionally companies have employed their own information systems support staff to manage different types of business applications such as email. Costs associated with upgrading and configuring new software on users' client computers and servers are dramatically decreased.

As seen in Mini case study 3.5, many smaller businesses and start-ups use cloud computing services to provide web-based services at a relatively low cost with the flexibility to meet short-term (high-demand spikes) or longer-term growth in demand for their services.

Mini Case Study 3.5

Businesses that sit on Amazon's AWS

Amazon Web Services (AWS) is Amazon's global on-demand cloud service, which at the time of writing offered more than 70 different services to digital business customers.

Amazon has had particular appeal for start-up digital businesses, unlike larger and older organisations, because they don't have the same legacy systems. In a way, this creates an uneven playing field, in which smaller newer upstarts have the relative might and scale of the AWS that larger organisations might not have access to (Donnelly, 2015).

Slack, the group messaging platform, is an interesting company to examine with its use of AWS. Originally, Slack was designed as a tool for its parent company to use, but Slack itself became the dominant product. To grow rapidly and provide a freemium product, it would have been financially and possibly technically/technologically impossible to do this using owned data centres and proprietary platforms. Like all cloud-based applications, the ability to grow fast and scale up at incredible rates is really what focuses the attention. AWS global reach has allowed this organisation to grow in ways that would not have been possible ten years earlier. The simple resources would have curtailed growth. In effect, AWS has become a significant facilities manager for many start-ups - the faculty being a platform to face the world (Amazon, 2017).

Sources: Donnelly, C. (2015) 'AWS draws on startup appeal to win over the enterprise'. *Computer Weekly*.

www.computerweekly.com/news/4500257790/AWS-draws-on-startup-appeal-to-win-over-the-enterprise

Slack case study - Amazon Web Services (AWS) (2017) 'Slack Case Study - Amazon Web Services (AWS)'. <http://aws.amazon.com/solutions/>

Virtualisation

The indirect provision of technology services through another resource (abstraction). Essentially one computer is using its processing and storage capacity to do the work of another.

Virtualisation

Virtualisation is another approach to managing IT resources more effectively. However, it is mainly deployed within an organisation. VMware was one of the forerunners, offering virtualisation services that it explains as follows (VMWare, 2017):

A virtual computer system is known as a ‘virtual machine’ (VM): a tightly isolated software container with an operating system and application inside. Each self-contained VM is completely independent. Putting multiple VMs on a single computer enables several operating systems and applications to run on just one physical server, or ‘host’.

A thin layer of software called a hypervisor decouples the virtual machines from the host and dynamically allocates computing resources to each virtual machine as needed.

It goes on to explain that virtualisation essentially lets one computer do the job of multiple computers, by sharing the resources of a single computer across multiple environments. Virtual servers and virtual desktops allow you to host multiple operating systems and multiple applications.

So, virtualisation has these benefits:

- the ability to run many operating systems on a single machine;
- splits individual system resources between many virtual machines;
- stops faults and security breaches at the hardware level;
- maintains system performance;
- one can save the current state of a virtual machine for later use;
- virtual machines can be moved and reused as easily as moving and copying files;
- any virtual machine can be moved to a real server.

businesses

Study 3.6

Do you really need to come to work? Virtual

Industrialisation and the growth of urbanisation historically led to the growth of office jobs. Offices and factories were co-located. People became commuters and travelled every day to work in a central location ‘where the work was’.

Fast forward to the time of writing, and the biggest question one must ask is why would there be a continued need to ‘go to work’? If we

put aside questions of human nature and sociology (which provide very good reasons why people like to work with other people), there must be a lot of reasons why there is no reason to ‘come into the office’.

Virtual companies have sprung up all over the globe, and virtual companies can allow workers to live anywhere and still work and interact with the business and its systems.

One such company is Basecamp (Fried and Hansson). Originally called 37Signals, it does have a headquarters, but many of its employees work away from a traditional office environment. Basecamp’s ethos is that people need to work where they are most productive. This means they need to have a set of work systems that allow a worker anywhere to access and use the same systems as an office-based worker in the same way. Fried argues that by allowing people to work at home, the quality of their work is greater. Rather than look at how long people are spending at work, managers should look at what is being produced. To do this, a company like Basecamp relies on systems and a culture that accepts how those things work. Those systems are also about processes and practices that take advantage of the technology system put in place to enable remote working, and they are quite different to those used in organisations that require people to ‘come into work’ (Fried, 2016).

Sources: Fried, J. (2016) ‘How we structure our work and teams at Basecamp - Signal v. Noise’. Vol. 2017: Basecamp Fried, J. and Hansson, D.H. (2013)

Remote: Office Not Required. Vermilion, London.

Service-orientated architecture

A service-orientated architecture is a collection of services that communicate with each other as part of a distributed systems architecture comprising different services.

Service-orientated architecture (SOA)

The technical architecture used to build web services is formally known as a ‘**service-orientated architecture**’. This is an arrangement of software processes or agents that communicate with each other to deliver the business requirements.

The main role of a service within SOA is to provide functionality. This is provided by three characteristics:

- 1 An interface with the service that is platform-independent (not dependent on a particular type of software or hardware). The interface is accessible through applications development approaches such as Java and accessed through protocols such as SOAP (Simple Object Access Protocol), which is used for XML-formatted messages.
- 2 The service can be dynamically located and invoked. One service can query for the existence of another service through a service directory - for example, an e-commerce service could query for the existence of a credit card authorisation service.
- 3 The service is self-contained. That is, the service cannot be influenced by other services; rather it will return a required result to a request from another service, but will not change state. Within web services, messages and data are typically exchanged between services using XML.

The examples of web services all imply a user interacting with the web service. But with the correct business rules and models to follow, there is no need for human intervention and different applications and databases can communicate with each other in real time. Many banks have legacy systems that are not easy to replace and so they rely on introducing SOA to connect them to more contemporary banking systems. The concept of the semantic web mentioned above and business applications of web services such as CRM, SCM and ebXML are also based on an SOA approach.

Selecting hosting providers

While it is possible for companies to manage their own services by setting up web servers within their own company offices, or to use their ISP, it is common practice to use a specialist **hosting provider** to manage this service. It can be difficult to distinguish some hosting providers from organisations that provide other services such as cloud services or SoaS - Amazon being an example of this.

Hosting provider

A service provider that manages the server used to host an organisation's website and its connection to the Internet backbones.

Managing service quality when selecting Internet service and cloud hosting

providers

Service providers who provide access to the Internet are usually referred to as ‘ISPs’ or ‘Internet service providers’. ISPs may also host the websites that publish a company’s website content. But many organisations will turn to a separate hosting provider to manage the company’s website and other digital business services accessed by customers and partners such as extranets, so it is important to select an appropriate hosting provider.

ISP connection methods

Figure 3.2 shows the way in which companies or home users connect to the Internet. The diagram is greatly simplified, in that there are several tiers of ISPs. A user may connect to one ISP, which will then transfer the request to another ISP that is connected to the main Internet backbone.

High-speed broadband is now the dominant home-access method rather than the previously popular **dial-up connection**.

However, companies should remember that there are still numbers of Internet users who have the slower dial-up access. At the time of writing, it is reported that the proportion of individuals with access to broadband services in the UK is 81% (Ofcom, 2016).

Broadband commonly uses a technology known as ADSL, or asymmetric digital subscriber line, which means that the traditional phone line can be used for digital data transfer. It is asymmetric since download speeds are typically higher than upload speeds. Small and medium businesses can also benefit from faster continuous access than was previously possible.

The higher speeds available through broadband, together with a continuous always-on connection, have already transformed use of the Internet. Information access is more rapid and it becomes more practical to access richer content such as digital video.

Issues in management of ISP and hosting relationships

The primary issue for businesses in managing ISPs and hosting providers is to ensure a satisfactory service quality at a reasonable price. As the customers and partners of organisations become more dependent on their web services, it is important that downtime be minimised. But severe problems of downtime can occur, as shown in Box 3.4, and the consequences of these need to be avoided or managed.

Speed of access

A site or digital business service fails if it fails to deliver an acceptable download speed for users. In the broadband world this is still important as digital business applications become more complex and sites integrate rich media. But what is ‘acceptable’?

Research suggested that content needs to load within two seconds, otherwise site experience suffers (Krishnan and Sitaraman, 2012). However, users are also more likely to consider high product price, shipping costs and problems with shipping. Retailers using mobile devices are incredibly impatient and are more likely to leave more quickly than those using desktops or laptops (Akamai, 2017).

Dial-up connection

Access to the Internet via phone lines using analogue modems. While it might seem surprising, there are still many thousands of UK dial-up users in places where broadband service is not available.

Broadband connection

Access to the Internet via phone lines using a digital data transfer mechanism.

Box 3.4

How long will someone wait for something? Downloads

There is a view that, since widespread use of the Internet became a real thing through the World Wide Web, people have become increasingly impatient and are less willing to wait for content to download than ever before. Users often complain about buffering times for video or audio content. Research shows that the longer a person waits for a video to download, the less likely they are to watch it.

In a study conducted by Akamai and the University of Massachusetts (Krishnan and Sitaraman, 2012), users started to abandon a video download if it took longer than two seconds. Each additional second that the download took reduced the number of users prepared to wait by nearly 6% - suggesting that a 10-second wait for video content might lose almost half of the audience. The implication is that fast download speeds are essential for an audience that has become increasingly used to instant gratification in many areas of life.

Google has taken this very seriously, and speed is officially regarded as one of the factors (among many others) it uses in its algorithm to determine the likely position of a web page in its organic search results. Indeed, Google's increased emphasis on its proprietary AMP technology is inspired by the need for speedier download of content on mobile devices.

Source: Krishnan, S.S. and Sitaraman, R.K. 'Video stream quality impacts viewer behavior: inferring causality using quasi-experimental designs', *Proceedings of the 2012 Internet Measurement Conference*, Boston, Massachusetts, USA. 2398799: ACM, 211-24.

In 2010, Google introduced speed as a signal into its ranking algorithm, effectively penalising slower sites by positioning them lower in its listings. The announcement suggested that this would only affect 1% of sites (Google, 2010). The announcement also supported the recent research from Akamai, which suggested that less than two seconds was now an acceptable download speed for e-commerce site users. With Google taking page download speed into account when ranking some particularly slow sites, it's worth comparing your 'page weight' or bloat compared to other sites. At the time of writing, the average desktop page size is 2,331 KB according to this compilation: <https://httparchive.org/reports/page-weight>.

Speed of access to services is determined by both the speed of the server and the speed of the network connection to the server. The speed of the site governs how fast the response is to a request for information from the end-user. This will be dependent on the speed of the server machine on which the website is hosted and how quickly the server processes the information. If there are only a small number of users accessing information on the server, then there will not be a noticeable delay on requests for pages. If, however, there are thousands of users requesting information at the same time, then there may be a delay and it is important that the combination of web server software and hardware can cope. Web server software will not greatly affect

the speed at which requests are answered. The speed of the server is mainly controlled by the amount of primary storage (for example, 1024 MB RAM is faster than 512 MB RAM) and the speed of the magnetic storage (hard disk). Many of the search-engine websites now store all their index data in RAM since this is faster than reading data from the hard disk. Companies will pay ISPs according to the capabilities of the server.

An important aspect of hosting selection is whether the server is **dedicated** or shared (co-located). Clearly, if content on a server is shared with other sites hosted on the same server then performance and downtime will be affected by demand loads on these other sites. But a dedicated server package can cost 5 to 10 times the amount of a shared plan, so many small and medium businesses are better advised to adopt a shared plan, but take steps to minimise the risks if other sites go down.

Dedicated server

Server contains only content and applications for a single company.

For high-traffic sites, servers may be located across several computers with many processors to spread the demand load. New distributed methods of hosting content, summarised by Spinrad (1999), have been introduced to improve the speed of serving web pages for very large corporate sites by distributing content on servers around the globe, and the most widely used service is Akamai (**www.akamai.com**). These services are used by companies such as Yahoo!, Apple and other ‘hot-spot’ sites likely to receive many hits.

The speed is also governed by the speed of the network connection, commonly referred to as the network ‘**bandwidth**’. The bandwidth of a website’s connection to the Internet and the bandwidth of the customer’s connection to the Internet will affect the speed with which web pages and associated graphics load. The term is so called because of the width of range of electromagnetic frequencies an analogue or digital signal occupies for a given transmission medium.

As described in Box 3.5, bandwidth gives an indication of the speed at which data can be transferred from a web server along a particular medium such as a network cable or phone line. In simple terms, bandwidth can be thought of as the size of a pipe along which information flows. The higher the bandwidth, the greater the diameter of the pipe, and the faster information is delivered to the user. Many ISPs have bandwidth caps, even on ‘unlimited’ Internet access plans, for users who consume high volumes of bandwidth.

Bandwidth

Indicates the speed at which data are transferred using a particular network medium. It is measured in bits per second (bps).

Box 3.5

Bandwidth

A matter closely linked to download speed is bandwidth. Bandwidth affects the download (and upload speed) of content for a business. A business needs to give consideration to bandwidth when it thinks about the size of content items and the number of people it expects to access its content.

Bandwidth really reflects the size of the connection that a digital business has to the outside connected world. It does not just reflect how fast a single piece of content can be downloaded from a business, it also reflects how many downloads can take place at the same time.

It's very easy to confuse the size of a piece of content (measured in megabytes and gigabytes - MB and GB respectively) with the speed or bandwidth of an Internet connection. Bandwidth is normally discussed (and sold) in terms of megabits and gigabits per second - Mbps and Gbps respectively. A byte is eight times larger than a bit.

As an example, a 60MB piece of content will not download in 1 second via a 60Mbps connection - a file eight times smaller (7.5MB) will download in that time. A 60Mbps bandwidth can be described as a 7.5Mbs download connection.

Bandwidth and download speed are then complicated by the number of concurrent downloads. If we look at our sample 60MB piece of content on a 6Mbps/7.5Mbs connection, one downloading user should be able to download that in 8 seconds. If two users try to do that at the same time, the time to download doubles to 16 seconds, because effectively 120MB of content is being downloaded at the same time. Ten concurrent users would find it took 80 seconds to download.

A digital business therefore needs to factor in several variables when procuring data connections - the size of content that it wants to share, the expected number of concurrent users as well as other

technology factors such as latency (how long it takes data to travel a distance on a data network), errors in data transmission that must be corrected and so on.

Availability

The availability of a website is an indication of how easy it is for a user to connect to it. In theory this figure should be 100%, but sometimes, for technical reasons such as failures in the server hardware or upgrades to software, the figure can drop substantially below this. Box 3.6 illustrates some of the potential problems and what happens to organisations when things go wrong.

Service level agreements

To ensure the best speed and availability, a company should check the **service level agreement (SLA)** carefully when outsourcing website hosting services. The SLA will define confirmed standards of availability and performance measured in terms of the *latency* or network delay when information is passed from one point to the next. The SLA also includes notification to the customer detailing when the web service becomes unavailable, with reasons why and estimates of when the service will be restored.

Security

Security is another important issue in service quality. How to control security is considered in detail in Chapter 9.

Service level agreement (SLA)

A contractual specification of service standards a contractor must meet.

3.6
great?

Business uptime - what happens when demand is too

A digital business relies heavily on a series of interconnected systems to ensure it is 'up' - the platform itself, the environment that hosts the platform, the data connection bandwidth and so on. There are many things that can go wrong, and so a digital business needs to know what to do when that happens.

Many digital businesses 'mirror' their websites in alternative locations to either cope with a failure of the main site or to direct traffic if demand becomes great. A digital business that uses a global cloud service provider should find that they have arrangements already for their site to be mirrored and managed in several different locations.

It might be more difficult to deal with the failure of a data connection, and a digital business will be reliant on the provider of their connection for the maintenance of service.

The biggest problem might occur despite hosts and connections working correctly. That moment might be when demand for a digital business content exceeds the supply that the business has anticipated.

In 2007, a UK mobile network provider found that its website could not cope with the number of users trying to access the site after it announced its exclusive partnership with Apple for the launch of the first iPhone in the UK (Collins, 2007). It seems that the problem of high volumes of traffic and concurrent use still plague digital businesses. Over several years, See Tickets, an online reseller of tickets for entertainment venues and events, has seen its site crash on the day that tickets for the famous Glastonbury Festival go on sale as thousands of customers attempt to access the site. It's almost as if it becomes impossible to cater for ever-growing demand.

Source: Collins, B. (2007) 'iPhone rush knocks out O2 website'.
<http://alphr.com/news/personal-technology/125227/iphone-rush-knocks-out-o2-website>

Managing internal digital communications through

internal networks and external networks

In Chapter 1, we introduced the concept of intranets and extranets.

Intranet applications

Intranets are used extensively for supporting sell-side e-commerce from within the marketing function. They are also used to support core supply chain management activities, as described in the next section on extranets. Today, they are typically deployed as web-based services supplemented by messages and alerts delivered by email, or when users login to a company network. A marketing intranet has the following advantages:

- Reduced product lifecycles - as information on product development and marketing campaigns is rationalised we can get products to market faster.
- Reduced costs through higher productivity, and savings on hard copy.
- Better customer service - responsive and personalised support, with staff accessing customers over the web.
- Distribution of information through remote offices nationally or globally.

Intranets are also used for internal marketing communications since they can include:

- staff phone directories;
- staff procedures or quality manuals;
- information for agents such as product specifications, current list and discounted prices, competitor information, factory schedules and stocking levels, all of which normally have to be updated frequently and can be costly;
- staff bulletin or newsletter;
- training courses.

Intranets can be used for far more than publishing information. Web browsers also provide an access platform for business applications, which were traditionally accessed using separate software programs. This can help

reduce the **total cost of ownership (TCO)** of delivering and managing information systems. Applications delivered through a web-based intranet or extranet can be cheaper to maintain since no installation is required on the end-user's PC, upgrades are easier and there are fewer problems with users reconfiguring software. Applications include tools for workgroups to collaborate on projects, self-service human resources (e.g. to book a holiday or arrange a job review), financial modelling tools and a vehicle-build tracking system. Traditional information such as competitive intelligence, company news and manufacturing quality statistics can also be shared.

Total cost of ownership (TCO)

The sum of all cost elements of managing information systems for end-users, including purchase, support and maintenance.

Content management system (CMS)

Software used to manage creation, editing and review of web-based content.

Intranets need to include a suitable technology to enable staff to create and manage their own content. **Content management system (CMS)** features are built into intranet and extranet systems to achieve this. For example, Microsoft Sharepoint Server is commonly used for intranet management (<http://sharepoint.microsoft.com>).

The management challenges of implementing and maintaining an intranet are similar to those of an extranet (Arora, 2012). In the next section, we examine five key management issues of extranets.

Extranet applications

Although an extranet may sound complex, from a user point of view it is straightforward. If you have bought a book or CD at Amazon and have been issued with a username and password to access your account, then you have used an extranet. This is a consumer extranet. Extranets are also used to provide online services that are restricted to business customers. If you visit the Adviserzone (www.adviserzone.com/adviser/public/adviserzone/home) extranet of financial services company Standard Life, which is designed for the independent financial advisers who sell its products, you will see that the website has only three initial options - two types of log-in, register and some individual pieces of free content. The Adviserzone extranet is vital to Standard Life since the majority of business is now introduced through this source. This usage of the term 'extranet', referring to

electronic business-to-business communications, is most typical, as noted by Vlosky *et al.*, 2015:

Box 3.7

Can the cloud save money?

Different sorts of business offer very similar solutions to digital business needs. Amazon, Google and Microsoft come from very different origins and provide different services for organisations - Microsoft offer storage, services and office software, Amazon offer storage and business processes and Google offer storage, business software and processes. But why do people take them up rather than manage their own services?

The big issue that gets quotes more than anything else is 'total cost of ownership (TCO)' and the digital businesses' needs to look at capital (one-time) expenses, operating costs and the costs associated with problems. Cloud service providers will argue that, as they provide the platforms, then the costs associated with capital expenses are not there - they divide the capital expense between their many business customers. Secondly, they will argue that they can divide the operating costs between business customers. Finally, they will argue that as owning the platform is their primary business function, they are able to take greater precautions against indirect costs such as downtime - and to spread the cost of that across all their customers.

Cloud service providers are effectively specialist facilities companies and the model is not new - many companies have outsourced aspects of their business to specialists when there is no competitive advantage to maintaining a service themselves. However, decisions to outsource processes to cloud service providers might not just be about cost but actually about avoiding risk.

There is still some confusion over the exact definition of an Extranet, but the most commonly accepted definition seems to be 'a network that links business partners to one another over the Internet'

Many retail and service organisations provide extranet access to their customers - you can see an easy example of this with any comparison website. In the UK (examples include MoneySuperMarket, Confused.com,

GoCompare and CompareTheMarket), these businesses operate in highly competitive environments with very low margins. But the products they provide for are not low-price everyday items, but service contracts for insurance, energy and finance. Applying for something like insurance can be a time-consuming proposition. By allowing ongoing access to your own profile, you are effectively ‘soft locked-in’ to their service, because you don’t want to have to place all of your personal information into another service. Comparison sites rely on this barrier to exit for your continued custom, and add additional content to encourage your ongoing participation with them. You can also read how the UK government positions British citizen use of what is effectively an extranet in Mini case study 3.7.

Case Study 3.7 resources

How a digital business and its customers share

The boundaries that separate customer from company have become increasingly blurred. The growth of networked businesses and networked customers means that connections between them inevitably grow through those traditional boundaries.

When an organisation looks to using its customers as co-creators it is acknowledging that they bring resources and skills that they themselves do not have (Agrawal and Rahman, 2015). In many cases, those resources are the time and the ‘place’ of the customer. By allowing customers ‘into’ the organisation, the digital business can make use of those customers’ resources.

The UK government adopted a digital-first strategy to deliver services between the agencies of government and UK citizens. The view was taken that, wherever possible, it should not only be feasible to interact with public service digitally, but that UK citizens would prefer to interact digitally. In 2014 the Office of the Public Guardian (which handles the legal arrangements for power of attorney) moved to improve the way that the Office collected information from people. It allowed people, rather than fill in complicated paper forms, to complete much shorter digital forms (and store and submit them) direct within the Office’s digital framework. This meant that people completed ‘paperwork’ themselves and submitted it. It meant the Office had to share the resource with citizens. It meant that citizens were effectively using a system within the government itself. To make it work, the

Office of the Public Guardian had to make the whole process far easier and more desirable to work with than the old paper version (Holloway, 2014).

Sources: Agrawal, A.K. and Rahman, Z. (2015) 'Roles and Resource Contributions of Customers in Value Co-creation.' *International Strategic Management Review*, 3 (1-2), 6//, 144-60.

Holloway, J. (2014) The Public Guardian on agile development - Government Digital Service. Vol. 2017: Gov.uk.

Business benefits of an extranet include:

- Integrating the supply chain using ordering, order tracking and stock control in an online environment - look at how Amazon make this happen.
- Cutting the cost of making documentation available to end-users and business partners-many insurance companies now provide policy documentation this way.
- Allowing collaborative and speedy development of materials and documents between partners, suppliers and customers.
- Improving the customer experience by providing access to information for customers, which they use to solve their own problems - Dropbox provides help files for almost every query for its users.
- A single entry point into the organisation for all outsiders.
- Ensuring consistency, safety and security of service for external users (although there are issues around security of access - a standard issue to deal with).
- The provision of 'only for registered users' propositions, unavailable to people not registered or not customers - many companies lure new users and retain existing customers through the availability of unique content located on extranets.
- The inevitable growth of the virtual company as all resources used by employees, partners and customers alike don't require 'being on the premises'.

Many of the management issues involved with managing extranets are similar to those for intranets. These are five key questions that need to be asked when reviewing an existing extranet or when creating a new extranet:

- 1 Are the levels of usage sufficient?** Extranets require a substantial investment, so efforts need to be made to encourage usage since we are asking the users of the service to change their behaviour. It is in the

organisation's interest to encourage usage, to achieve a return on its investment and to achieve the cost efficiencies intended.

- 2 Is it effective and efficient?** Controls must be put in place to assess how well it is working and improve its performance if necessary. Return on investment should be assessed. For example, visitor levels can be measured for different types of audiences and the level of usage for accessing different types of information can be assessed. The direct and indirect cost savings achieved through each extranet transaction can be calculated to help assess effectiveness. For example, Viking Direct, a wholesaler of office products, has an extranet to connect to their ordering system for both individuals paying via credit card and company purchasers (including stationery retailers) using EDI invoicing (www.viking-direct.co.uk). Buyers access the latest personalised price lists and promotional information such as product pictures. Each digital download represents a significant saving in comparison to shipping physical promotional materials to buyers.
- 3 Who has ownership of the extranet?** Functions with an interest in an extranet include IT (technical infrastructure), finance (setting payments and exchanging purchase orders and invoices), marketing (providing marketing materials and sales data to distributors or providing services to customers) and operations management (exchanging information about inventory). Clearly, the needs of these different parties must be resolved and management controls established.
- 4 What are the levels of service quality?** Since an extranet will become a vital part of an organisation's operating process, a problem with the speed or availability of the extranet could cause loss of a lot of money; it is arguably more important than the public-facing Internet site.
- 5 Is the quality of the information adequate?** The most important attributes of information quality are that it is up to date and accurate.

It will be seen in Chapter 6 that extranets are used extensively to support supply chain management as resources are ordered from suppliers and transformed into products and services delivered to customers.

At any reasonably sized retail organisation, when a new customer order is received through its extranet it automatically triggers a scheduling order for the warehouse (transferred by intranet), an order acknowledgement for the customer and a shipping status when the order is shipped. To enable different applications on the intranet to communicate, **middleware** is used by systems integrators to create links between organisational applications or between different members of a supply chain. For example, within a supply chain management system, middleware will translate requests from external systems such as a sales order so they are understood by internal systems

(relevant fields are updated in the database) and then it will trigger follow-up events to fulfil the order.

Middleware is quite an old term pre-dating the Internet, and is now more often referred to as **enterprise application integration (EAI)** (AIIM, 2001). Such applications include a sales-order processing system and a warehousing system. It now also includes software programs from different organisations.

Middleware

Software used to facilitate communications between business applications, including data transfer and control; sometimes referred to as the 'glue' that joins up disparate services.

Enterprise application integration (EAI)

Software used to facilitate communications between business applications, including data transfer and control.

Encouraging use of intranets and extranets

Intranets and extranets often represent a change to existing methods of working for business people, so encouraging usage is often a challenge. They may be launched to a great fanfare, but if their content is neglected, their usage will dwindle (Castagno, 2016). Common warning signs identified can include:

- staff usage of the intranet is low, and not growing;
- the majority of content is out of date, incomplete or inaccurate;
- the intranet is very inconsistent in appearance, particularly across sections managed by different groups;
- almost all information on the intranet is reference material, not news or recent updates;
- most sections of the intranet are used solely to publicise the existence of the business groups within the organisation.

To explore solutions to limited usage of intranets and extranets, complete Activity 3.3.

Overcoming limited use of intranets and extranets in a B2B company

Purpose

To illustrate solutions to limited usage of intranets and extranets.

Activity

A B2B company has found that after an initial surge of interest in its intranet and extranet, usage has declined dramatically. Many of the warning signs mentioned above are evident. Suggest ways in which the digital business manager could achieve the following aims:

- 1 increase usage;
- 2 produce more dynamic content;
- 3 encourage more clients to order (extranet);

Streaming TV

The growth in popularity of **streaming TV** or TV on demand, where TV and video are streamed via broadband across the Internet, is one of the most exciting developments in recent years. In 2007, services offering streamed viewing of hundreds of channels from providers such as the Europe-based Joost and the US service Hulu (www.hulu.com) launched. At the time of writing, streaming TV is synonymous with Netflix, Amazon Video (through Amazon Fire devices), Now TV (a streaming version of Sky TV), BBC iPlayer and Apple TV.

Streaming TV

Streaming TV is delivered using Internet Protocol, either by a broadband connection or increasingly via mobile 3G/4G or 5G service. Streaming TV can be streamed using real-time broadcasting (such as the synchronous playing of a TV channel), real-time streaming of recorded content (such as a movie) or downloaded before playback.

It will become increasingly essential for marketers and ad agencies to learn how to exploit streaming TV in order to reach online audiences.

Voice over IP (VoIP)

Voice over IP (VoIP) can be used for transmitting voice over a LAN or on a wider scale. You will remember that IP stands for Internet Protocol and so VoIP enables phone calls to be made over the Internet. IP enables a single network to handle all types of communications needs of an organisation, i.e. data, voice and multimedia. VoIP (pronounced 'voyp') is proving increasingly popular for reducing the cost of making phone calls within an office and between offices, particularly internationally. The VoIP Report (Vorodi, 2017) cites that after initial investment, the cost of managing a converged VoIP communications system could be between 50 and 75% lower than managing separate voice and data systems. In the longer term, major telecommunications companies are replacing their existing voice networks with IP networks and new businesses are sprouting up specifically to sell and manage VoIP networks. Other benefits include:

- Click-to-call - users click the number they want from an on-screen directory.
- Call forwarding and conferencing to people at other locations.
- Unified messaging - emails, voicemails and faxes are all integrated into a single inbox.
- Hot-desking - calls are routed to staff wherever they log in - on-site or off-site.
- Cost control - review and allocation of costs between different businesses is more transparent.

Voice over IP (VOIP)

Voice data is transferred across the Internet - it enables phone calls to be made over the Internet.

Several options are available:

- 1 **Peer-to-peer.** The best-known peer-to-peer solution is Skype, which offers free calls or video-conferencing between Internet-connected PCs that are enabled with a headset (sometimes called 'softphones'). A service called SkypeOut enables calls to landlines or mobile phones at a reduced cost compared to traditional billing. This service is only really suited to smaller businesses, but could be used in larger

businesses for some staff who call abroad frequently to bypass the central system.

- 2 Hosted service.** A company makes use of a large centralised IP-based system shared between many companies. This potentially reduces costs, but some companies might be concerned about outsourcing their entire phone directory.
- 3 Complete replacement of all telephone systems.** This is potentially costly and disruptive in the short term, but new companies or relocating companies may find this the most cost-effective solution.
- 4 Upgrading existing telephone systems to use VoIP.** Typically, the best compromise for existing companies.

Widgets

Widgets are tools made available on a website or on a user's desktop. They either provide some functionality, such as a calculator, or they provide real-time information, for example on news or weather.

Site owners can encourage partners to place them on their sites and this will help educate people about your brand, possibly generate backlinks for SEO purposes (see Chapter 8) and also help them engage with a brand when they're not on the brand owner's site. Widgets offer partner sites the opportunity to add value to their visitors through the gadget functionality or content, or to add to their brand through association with you (co-branding).

The main types of widget are:

- 1 Web widgets.** Web widgets have been used for a long time as part of affiliate marketing, but they are getting more sophisticated, enabling searches on a site, real-time price updates or even streaming video.
- 2 Mobile widgets.** Android and Apple mobile phones can use widgets on screens that allow access to a small amount of app functionality without necessarily opening the app itself.
- 3 Desktop and operating system gadgets.** Microsoft Windows and Apple's OS X make it easier to create and enable subscription to these widgets and place them into sidebars.
- 4 Social media widgets.** These encourage site visitors to share content from websites via users' social media profiles.
- 5 Facebook applications.** Facebook has opened up its API (application programming interface) to enable developers to create small interactive programs that users can add to their space to personalise it.

6 Browser extensions. Google has enabled developers to build small programs that change or improve the functionality of the Google Chrome browser. These are, in some cases, full and sophisticated applications and allow developers to build one application to run on any platform where there is a Chrome browser.

Widgets

Badges or buttons incorporated into a website or social network space by its owner, with content or services typically served from another site, making widgets effectively a mini software application or web service. Content can be updated in real time since the widget interacts with the server each time it loads.

Technology standards

The information, graphics and interactive elements that make up the web pages of a site are collectively referred to as **content**. Different standards exist for text, graphics and multimedia.

Content

The design, text and graphical information that forms a web page. Good content is the key to attracting customers to a website and retaining their interest or achieving repeat visits.

Examples of XML applications

One widely adopted XML application is the Dublin Core Metadata Initiative (DCMI) (www.dublincore.org), so called since the steering group first met in Dublin, Ohio, in 1995, which has been active in defining different forms of metadata to support information access across the Internet. An important part of this initiative is in defining a standard method of referencing web documents and other media resources. If widely adopted, this would make it far more efficient to search for a document produced by a particular author in a particular language in a particular date range. Up to now, it has mainly been applied within content management systems to assist in knowledge management for data on intranets and extranets rather than on the public Internet.

The significance of XML is indicated by its use for facilitating supply chain management. For example, Microsoft's BizTalk server (www.microsoft.com/en-us/cloud-platform/biztalk) for B2B application integration is based on XML. Since this is a proprietary standard, an open standard 'RosettaNet' (<https://resources.gs1us.org/RosettaNet>) was created by a consortium of many of the world's leading information technology, electronic components and semiconductor manufacturing companies such as Intel, Sony and Nokia (at the time of writing it is now managed and maintained by GS1 US). Microsoft summarises the benefits of BizTalk as the ability to connect with cloud-native applications, back-end systems and custom-built software applications, and to connect with popular Microsoft business products.

Another widely adopted application of XML is ebXML (www.ebxml.org). This standard has been coordinated by Oasis (www.oasis-open.org), which is an international not-for-profit consortium for promoting Internet standards. The original project was intended to define business exchange using five standards:

- business processes;
- core data components;
- collaboration protocol agreements;
- messaging;
- registries and repositories.

Oasis defines three types of transaction that form business processes:

- 1 Business transaction.** A single business transaction between two partners, such as placing an order or shipping an order.
- 2 Binary collaboration.** A sequence of these business transactions, performed between two partners, each performing one role.
- 3 Multi-party collaboration.** A series of binary collaborations composed of a collection of business partners.

Semantic web standards

The **semantic web** is a concept promoted by Tim Berners-Lee and the World Wide Web Consortium (www.w3.org) to improve upon the capabilities of the current World Wide Web. Semantics is the study of the meaning of words and linguistic expressions. For example, the word 'father' has the semantic elements male, human and parent and 'girl' has the elements female, human and young. The semantic web is about how to define meaning for the content

of the web to make it easier to locate relevant information and services rapidly. As mentioned above, finding information on a particular topic through searching the web is inexact since there isn't a standard way of describing the content of web pages. The semantic web describes the use of metadata through standards such as XML, RDF and the Dublin Core to help users find web resources more readily. Another benefit of the semantic web is that it will enable data exchange between software **agents** running on different server or client computers.

Agents are software programs created to assist humans in performing tasks. In this context they automatically gather information from the Internet or exchange data with other agents based on parameters supplied by the user.

The most visible application of the semantic web is Google's Knowledge Graph, which it uses to improve and enhance search engine results for a user's query. Knowledge Graph appeared in 2012 and provides information in a panel to the right of search results known as the Knowledge Panel. Google's systems attempt to provide meaning around a query and deliver a meaningful result from different sources.

Semantic web

Interrelated content including data with defined meaning, enabling better exchange of information between computers and between people and computers.

Agents

Software programs that can assist humans by automatically gathering information from the Internet or exchanging data with other agents based on parameters supplied by the user.

Microformats

Microformats are a practical example of the way the semantic web will develop. Data can be exchanged through standard microformats such as h-card, h-calendar and h-review, which are used to incorporate data from other sites into the Google listings (see **microformats.org** for details). You can see very visible examples of microformats that Google has incorporated as star ratings and reviews from sites it has indexed if you perform a search on movies, hotels or popular products.

Microformats

A simple set of formats based on XHTML for describing and exchanging information about objects, including product and travel reviews, recipes and event information.

Focus on Internal and external governance factors that impact digital business

(In Chapter 4 we will look briefly at how governments promote and control, through laws, the use of the Internet in their jurisdiction.) In this section, we look at the growth of the Internet as a global phenomenon and how the standards described in the previous section were devised. The Internet is quite different from all previous communication media since it is much less easy for governments to control and shape its development. Think of print, TV, phone and radio and you can see that governments can exercise a fair degree of control on what they find acceptable.

Esther Dyson (1998) has been influential in advising on the impact of the Internet on society; she describes **Internet governance** as the control put in place to manage the growth of the Internet and its usage. The global nature of the Internet makes it less practical for a government to control cyberspace. Dyson says:

Internet governance

Control of the operation and use of the Internet.

Now, with the advent of the Net, we are privatizing government in a new way - not only in the traditional sense of selling things off to the private sector, but by allowing organizations independent of traditional governments to take on certain 'government' regulatory roles. These new international regulatory agencies will perform former government functions in counterpoint to increasingly global large companies and also to individuals and smaller private organizations who can operate globally over the Net.

Dyson describes different layers of jurisdiction. These are:

1 Physical space comprising individual countries in which their own laws such as those governing taxation, privacy and trading and advertising standards hold.

2 ISPs - the connection between the physical and virtual worlds.

There are number of established non-profit-making organisations that control different aspects of the Internet. These are sometimes called ‘supra-governmental’ organisations since their control is above government level.

The Net neutrality principle

Net (or network) neutrality is based on the organic way in which the Internet grew during the 1980s and 1990s. The principle enshrines equal access to the Internet and the web, which is threatened by two different forces. First, and the most common context for Net neutrality, is the desire by some telecommunications companies and ISPs to offer tiered access to particular Internet services. The wish of the ISPs is to potentially offer a different quality of service, i.e. speed, to consumers, based on the fee paid by the upstream content provider. So, potentially, ISPs could charge companies such as TV channels more because they stream content such as video content, which has high bandwidth requirements.

Net neutrality

The principle of provision of equal access to different Internet services by telecommunications service providers.

Box 3.8

Is Net neutrality in danger and does it matter?

Net neutrality is the idea that all data on the Internet is equal, and that networks, platforms and users should treat each piece of data the same without giving any preference or penalty to how fast that data moves around the Internet. The principle means that data will not be slowed down (throttled) or given any kind of preference - hence the idea of all data being equal and ‘the Net’ being neutral (Wu, 2003).

While there are several issues that can affect Net neutrality, the two key themes are that no one should be able to pay a carrier to ‘go faster’ (or be compelled to do so) and no one should find their data goes slower because they come from a competing network.

In 2012, Comcast were accused of creating a situation where Xbox users received preferential treatment using Comcast's Xfinity service but users of services such as Netflix were treated less favourably with download allowances (Mitchell, 2012). The argument from Net neutrality perspectives is that no data should be penalised just because it originates from another network that may be a competitor. The US subsequently declared broadband access as a telecommunications service, which meant neutrality became an aspect of US law (FCC, 2015).

There are repeated conversations where network owners propose to favour one form of traffic over another. The biggest concern for a digital business to consider is whether the business might be asked to pay additional sums of money to allow traffic from its site to reach end-users. Paying for that access might come in the form of exclusive deals with network owners. This means that whoever has the largest pockets for promotion might win. And the argument for Net neutrality is that there should be no special deals for access either.

Sources: FCC (2015) FCC Adopts Strong, Sustainable Rules to Protect the Open Internet.

Mitchell, D. (2012) 'Is Comcast violating net-neutrality rules?' *Fortune Magazine*.

Wu, T. (2003) 'Network Neutrality, Broadband Discrimination.' *Journal on Telecommunications & High Technology Law*, 2, 2003, 141-76.

Concerns over tiered access to services appear strongest in the United States, where two proposed Bills to help achieve neutrality, the 2006 Internet Freedom and Nondiscrimination Act and the 2006 Communications Opportunity, Promotion and Enhancement Act, did not become law. The ISPs were strong lobbyists against these Bills and subsequently it has been alleged that provider Comcast has discriminated against users accessing peer-to-peer traffic from BitTorrent (Paul, 2007). We cover this in more detail in Box 3.8. In European countries such as the UK, ISPs offer different levels of access at different bandwidths but this is a matter of commerce and pricing rather than secretive and arbitrary choice.

The second and less widely applied, but equally concerning, concept of Net neutrality is the wish by some governments or other bodies to block access to certain services or content. For example, the government in China limits access to certain types of content in what has been glibly called 'The Great Firewall of China' (August, 2007), which describes the development

of the Golden Shield - intended to monitor, filter and block sensitive online content. More recently, Google has been criticised for censoring its search results in China for certain terms such as ‘Tiananmen Square’. In 2009/2010 Google considered withdrawing its business from China. Meanwhile, countries in the Middle East such as the UAE routinely blocked access to certain private messaging services such as Skype or Apple FaceTime on the grounds that a local license was required to provide VoIP services (Business, 2014).

The Internet Corporation for Assigned Names and Numbers (ICANN, www.icann.org)

The Internet Corporation for Assigned Names and Numbers (ICANN) is the non-profit body formed for domain name and IP address allocation and management. These were previously controlled through US government contract by IANA (Internet Assigned Numbers Authority) and other entities.

According to the ICANN Fact Sheet (<http://archive.icann.org/en/cctlds/icann-and-the-global-internet-25feb03.pdf>):

In the past, many of the essential technical coordination functions of the Internet were handled on an ad hoc basis by US government contractors and grantees, and a wide network of volunteers. This informal structure represented the spirit and culture of the research community in which the Internet was developed. However, the growing international and commercial importance of the Internet has necessitated the creation of a technical management and policy development body that is more formalized in structure, more transparent, more accountable, and more fully reflective of the diversity of the world's Internet communities.

The independence of such bodies raises several questions, such as who funds them and who they answer to - are they regulated? Incredibly, in 2002 ICANN had just 14 staff and a 19-member volunteer board of directors chaired by Dr Vinton Cerf, who many consider as ‘father of the Internet’. Funding is through the fees charged for domain registration by commercial companies. The policy statements on the sites suggest that ICANN policy is influenced by various stakeholders, but the main control is an independent review body of ten people.

The Internet Society (www.isoc.org)

The Internet Society (ISOC) is a professional membership society formed in 1992. It summarises its aims as:

To provide leadership in addressing issues that confront the future of the Internet, and is the organization home for the groups responsible for Internet infrastructure standards, including the Internet Engineering Task Force (IETF) and the Internet Architecture Board (IAB).

A key aspect of the society's mission statement (www.internetsociety.org/who-we-are/mission) is:

To assure the open development, evolution and use of the Internet for the benefit of people throughout the world.

Although it focuses on technical issues of standards and protocols, it is also conscious of how these will affect global society.

The Internet Engineering Task Force (IETF, www.ietf.org)

This is one of the main technical bodies. It is an international community of network designers, operators, vendors and researchers concerned with the development of the Internet's architecture and its transport protocols such as IP. Significant subgroups are the Internet Architecture Board, a technical advisory group of ISOC with a wide range of responsibilities, and the Internet Engineering Steering Group, which is responsible for overseeing the activities of the IETF and the Internet standards process.

The World Wide Web Consortium (www.w3.org)

This organisation is responsible for web standards. Its director is Tim Berners-Lee. Today, it focuses on improving publishing standards such as HTML and XML. The consortium also aims to promote accessibility to the web, for instance for those with disabilities.

Telecommunications Information Networking Architecture Consortium (TINA-C, www.tinac.com)

This consortium takes a higher-level view of how applications communicate over communications networks. It does not define detailed standards. Its principles are based on an object-orientated approach to enable easier integration of systems. In its terms:

The purpose of these principles is to insure interoperability, portability and reusability of software components and independence from specific technologies, and to share the burden of creating and managing a complex system among different business stakeholders, such as consumers, service providers, and connectivity providers.

Although it has been established since the 1990s, it has had limited success in establishing solutions that are branded as ‘TINA-compliant’.

How can companies influence or take control of Internet standards?

It can be argued that companies seek control of the Internet to gain competitive advantage. For example, Microsoft used what have been judged as anti-competitive tactics to gain a large market share for its browser, Internet Explorer. In a five-year period, it achieved over 75% market share, which has given it advantages in other areas of e-commerce such as advertising revenue through its portal MSN (www.msn.com) and retail through its sites such as travel site Expedia (www.expedia.com). Microsoft has also sought to control standards such as HTML and has introduced rival standards or variants of other standards. Arguably, Google’s prominent position of power in being the most popular search engine makes it possible for Google to influence whole matters of business decision-making. Many companies have complained about Google’s undue influence on the visibility of search results and there have been a number of legal issues raised at governmental level, particularly in Europe (Titcomb, 2017).

The existence of global Internet standards bodies arguably means that it is less likely that one company can develop proprietary standards, although Microsoft has been successfully using this approach for many years. Today,

companies such as Microsoft have to lobby independent organisations to have their input into standards such as XML. Businesses can protect their interests in the Internet by lobbying these organisations or governments, or subscribing as members and having employees involved with development of standards.

Many remain worried about the future control of the Internet by companies; the ‘World of Ends’ campaign (www.worldofends.com) illustrates some of the problems where control can limit consumer choice and stifle innovation. But the future of the Internet is assured because the three core principles espoused in the World of Ends document remain true:

- No one owns it.
- Everyone can use it.
- Anyone can improve it.

Open-source software

The selection of **open-source software** to support digital business applications is a significant decision for anyone managing technology infrastructure for a company. Open-source software is now significant in many categories relevant to digital business, including operating systems, browsers, web servers, office applications and content management systems (including blogs).

The Open Source Initiative (www.opensource.org) explains its benefits as follows:

The basic idea behind open source is very simple: When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. People improve it, people adapt it, people fix bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing.

We in the open source community have learned that this rapid evolutionary process produces better software than the traditional closed model, in which only a very few programmers can see the source and everybody else must blindly use an opaque block of bits.

Table 3.4 summarises some of the main advantages and disadvantages of open-source software. To gain an appreciation of the issues faced by a technical manager pondering the open-source dilemma, complete Activity 3.4.

Open-source software

This software is developed collaboratively, independent of a vendor, by a community of software developers and users.

Table 3.4

Three advantages and three disadvantages of open-source software

Advantages of open-source software	Counter-argument
1 Effectively free to purchase	Cost of migration from existing systems may be high and will include costs of disruption and staff training
2 Lower cost of maintenance since upgrades are free	There is not a specific counter-argument for this, but see the disadvantages below
3 Increased flexibility	Organisations with the resources can tailor the code. Frequent patches occur through collaborative development
Disadvantages of open-source software	Counter-argument
1 Has less functionality than commercial software	Simplicity leads to ease of use and fewer errors. Many functions not used by the majority of users
2 More likely to contain bugs compared to commercial software since	Evidence does not seem to suggest this is the case. The modular design needed by collaborative development enables problems to be isolated and resolved

not tested
commercially

3 Poor quality of
support

Organisations with the resource can fix problems themselves since they have access to the code.

Companies such as IBM, SuSe and RedHat do offer support for Linux for a fee. Finding skilled staff for emerging open-source technologies can be difficult

Activity 3.4

Selecting open-source software

Purpose

This activity looks at a common issue facing technical managers: should they adopt standard software promoted by the largest companies or open-source software or cheaper software from other vendors?

Questions

- 1 For the different alternatives facing a technical manager (listed in question 2), assess:
 - (a) which is most popular (research figures);
 - (b) the benefits and disadvantages of the Microsoft solution against the alternatives.
- 2 Make recommendations, with justifications, of which you would choose of the following options for a small-medium or large organisation:
 - A Operating system: Microsoft/Windows XP/Server or Linux (open-source) for server and desktop clients.
 - B Browser: Internet Explorer browser or rivals such as Mozilla Firefox or Google Chrome, which is part-based on open-source.
 - C Programming language for dynamic e-commerce applications: Microsoft.Net or independent languages/solutions such as the

LAMP combination (Linux operating system, Apache server software plus the MySQL open-source database and scripting languages such as PHP, Perl or Python).

Case Study 3.1

Innovation at Google (2017 update)

Context

Google remains the most popular search engine globally (eBizMBA, 2017), with around 1.8 billion visitors per month at the time of writing. The search engine itself remains the core product, a consequence of original innovation back in the 1990s. But rather than simply remain with that one product, Google has been on a constant search for new areas of business - though not always with commercial success. Google remains an example of a digital business that has grown to be a large industrial concern yet retains the need to be innovative to prosper, so much so that Google is only one part of a larger organisation called Alphabet.

Google and Alphabet's mission

Google, the search engine business, has a current mission based upon organising the world's information and making it readily available.

Amongst other things, Larry Page emphasises ambition, long-term view, encouraging entrepreneurs, improving transparency, making Google better through focussing and thus improving people's lives as parts of the key mission of Alphabet.

The need for Google to simply be a part of Alphabet reflects the growth of an organisation in moving away from just being a search engine business and being a business that manages a lot of other things. These are broken into 'The Google Segment' and 'The Other Bets'.

The Google products are well known and include the familiar services such as Search, AdWords, Google Shopping, Google Maps, YouTube, Google Cloud, Android, Chrome, and the app store Google Play. There are also hardware products including Google's Pixel phone, Google Home, Chromecast and the Daydream View VR headset.

The non-Google segment includes:

- Access/Google Fiber - a fibre-to-premises business providing IPTV and Internet in parts of the US;
- Calico - a biotech business looking into human ageing;
- CapitalG - formerly Google capital, this is a venture capital investment fund;
- GV - formerly Google Ventures, this is another venture capital investment business;
- Nest - a home automation business noted for the Nest Learning Thermostat and Nest Protect smoke alarm;
- Verily - a Life Sciences business tracking long-term health data;
- Waymo - the self-driving car project;
- X - a space exploration technology business.

'The Other Bets' (non-Google segment) businesses show how innovation can actually steer quite far from the original digital business proposition and the formation of Alphabet is the response to that issue.

Where does Google make its money?

There are three major sources of income:

- 1 Advertising and monetisation on Google assets
- 2 Advertising and monetisation on Google Network Member assets
- 3 Miscellaneous other incomes

1 Advertising and monetisation on Google assets

- Advertising income that is generated on Google Search AdWords adverts, including income from traffic that arrives via search distribution partners who use Google as their default search engine in things such as browsers and apps
- Advertising income generated on assets such Gmail, Google Maps, and Google Play
- Advertising income generated on YouTube assets

2 Advertising and monetisation on Google Network Member assets

- Income from AdSense for Search and AdSense for Content
- Income from AdMob
- Income from DoubleClick AdExchange

3 Miscellaneous other incomes

- Income from the cut taken from app sales on Google Play as well as digital content such as film and music, along with in-app purchases
- Income from the sale of things such as Pixel mobile phones, Google Home, Chromecast and Daydream View VR headset
- Income from licensing-out Google intellectual property, such as web services on other websites
- Income from Google Cloud services

While the Google segment has started to increase revenue from more diverse sources in the ‘other income’ bracket, the most significant source of income (and profit) still comes from advertising. Research from SimilarWeb suggests around 5% of searches on Google result in an ad click (this is for desktop only) and this also varies very much on the kind of product being advertised (Zand and Cohen, 2016).

Risk factors

Google declare a whole raft of risk factors in their 2016 annual report (https://abc.xyz/investor/pdf/20151231_alphabet_10K.pdf). The main themes include:

- Risks around increasing competition
- Risks around innovating and getting it wrong: in order to deal with competition, the need to innovate creates its own risks. Google’s history is replete with products that have launched and not been taken forward
- Risks around people not trusting Google: this relates both to privacy concerns as well as the reliability of search results
- Risks around people no longer advertising with Google: linking to trust, advertisers may not choose to advertise as much or at all with Google. This is increasingly a problem if advertisers feel that the return on advertising doesn’t merit the cost.

Sources: Page, L. (2015) *Introduction Letter to Alphabet*. <https://abc.xyz/>

Top 15 Most Popular Search Engines, April 2017. (2017) *Top 15 Most Popular Search Engines, April 2017*. www.ebizmba.com/articles/search-engines

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Question

Explain how Google generates revenue and exploits innovation in digital technology to identify future revenue growth. You should also consider the risk factors for future revenue generation.

Summary

- 1 Businesses need to provide a range of digital business infrastructure that can support users on a range of desktop and mobile platforms and is flexible enough to change with different business demands.
- 2 Mobile platform decisions involve selection of which mobile operating systems to target, provision of mobile-based services and whether additional apps are required.
- 3 A five-layer model for managing digital business infrastructure is reviewed where Level I is the applications layer, II is the systems software layer, III is the transport layer, IV is the storage or physical layer and V is the content or data layer.
- 4 Integrating different web services using Cloud Computing can enable business software functions to be added with limited bespoke development.
- 5 Software as a Service (SaaS) providers are increasingly important as businesses look to reduce infrastructure costs and improve service delivery through external hosting of applications and data outside an organisation.

Exercises

Self-assessment questions

- 1 What is the difference between the Internet and the World Wide Web?
- 2 Describe the two main functions of an Internet service provider (ISP). How do they differ from applications service providers?
- 3 Distinguish between intranets, extranets and the Internet.
- 4 Describe the standards involved when a web page is served from a web server to a user's web browser.
- 5 What are the management issues involved with enabling staff access to a website?
- 6 Explain the following terms: HTML, HTTP, XML, FTP.
- 7 What is the difference between static web content written in HTML and dynamic content developed using a scripting language such as JavaScript?
- 8 What software and hardware are required to access the Internet from home?

Essay and discussion questions

- 1 'Without the development of the World Wide Web by Tim Berners-Lee, the Internet is unlikely to have become a commercial medium.' Discuss.
- 2 'In the future the distinction between intranets, extranets and the Internet for marketing purposes is likely to disappear.' Discuss.
- 3 Discuss the merits and disadvantages of locating company digital business services inside a company, in comparison with outsourcing to a cloud provider.
- 4 You are consultant to a small retailer interested in setting up a transactional e-commerce site. Create a summary guide for the company about the stages that are necessary in the creation of a website and the management issues involved.

Examination questions

- 1 You have been tasked with arranging Internet access for other employees in your company. Summarise the hardware and software needed.
- 2 How would you explain to a friend what they need to purchase to access the World Wide Web using the Internet? Explain the hardware and software needed.
- 3 Explain the term 'electronic data interchange'. Is it still relevant to companies?
- 4 Describe how the following tools would be used by a company hosting a website: HTML, FTP, RSS.
- 5 The existence of standards such as HTML and HTTP has been vital to the success and increased use of the World Wide Web. Explain why.
- 6 What benefits to a business-to-business company does the XML standard offer beyond those of HTML?
- 7 Explain why the digital business coordinator of a company might investigate the use of applications service providers.
- 8 Explain the differences between intranet, extranet and the Internet from a digital business perspective.

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Web links

A brief history of the Internet (www.zakon.org/robert/internet/timeline)
An Internet timeline.

CIO Magazine (www.cio.com) Intranet and extranet research centre.

Google (<http://infolab.stanford.edu/~backrub/google.html>) Interesting, but technical, article on Google, 'The anatomy of a large-scale hypertextual web search engine'.

Howstuffworks (www.howstuffworks.com) Good explanations with diagrams of many Internet technologies.

Intranet Benchmarking Forum (www.ibforum.com). Membership service disseminating intranet best practice from corporate organisations. Their blog has discussion of topical intranet management issues and extracts of research.

Intranet Focus (www.intranetfocus.com) Best-practice guidelines and links on intranets, portals and content management systems.

ReadWriteWeb (www.readwriteweb.com) Site focusing on digital technology trends and developments in content management, web applications and social media.

SmoothSpan (<http://smoothspan.wordpress.com>) Blog by Bob Warfield covering developments in SaaS, Web 2.0 and cloud computing.

XML.com (www.xml.com) XML resources.

Mobile marketing resources

- The worldwide Mobile Marketing Association (www.mmaglobal.com) has case studies and statistics of adoption.
- Mobile Marketing Magazine (<https://mobilemarketingmagazine.com>). An online magazine focusing on emerging approaches and case studies.
- Smart Insights, mobile marketing (www.smartinsights.com/mobile-marketing). Examples and the latest developments in mobile marketing.

4 Key issues in the digital environment

Chapter at a glance

Main topics

- Social factors
- Legal and ethical factors
- Economic factors
- Political factors
- Technology factors
- Cultural factors
- Factors affecting e-commerce buying behaviour
- Privacy and trust in e-commerce
- Environmental and green issues related to Internet usage
- Taxation
- Freedom-restrictive legislation
- Economic and competitive factors
- The implications of e-commerce for international B2B trading
- Government and digital transformation

→ Technological innovation and technology assessment

Case studies

4.1 The implications of microlocalisation vs globalisation based on consumer attitudes

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot-com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Identify the different elements of an organisation's macro-environment that impact on an organisation's digital business and digital marketing strategy
- Assess the impact of legal, privacy and ethical constraints or opportunities on a company
- Assess the role of macro-economic factors such as economics, governmental digital business policies, taxation and legal constraints

Management issues

The issues for managers raised in this chapter include:

- What are the constraints, that such as legal issues, that should be taken into account when developing and implementing a digital business strategy?
- How can trust and privacy be assured for the customer while seeking to achieve marketing objectives of customer acquisition and retention?
- Assessment of the business relevance of technological innovation

Links to other chapters

The main related chapters are:

- *Chapter 2* Marketplace analysis for e-commerce - introduces the different elements of the online marketplace
- The strategic approaches outlined in Part 2 (*in Chapters 5, 6 and 8*) require consideration of the constraints placed on strategy by a company's environment
- *Chapter 10* How to manage digital transformation to make a company gain strategic advantage in a competitive marketplace

Introduction

The starting point of any digital business and/or e-commerce strategy should be to analyse the environment, i.e. the marketplace, in which a business operates. Generally, an organisation has two environments:

- **macro-environment** - i.e. elements outside of the organisation that indirectly influence its operations
- **micro-environment** - i.e. internal factors that directly influence the organisation, such as suppliers, competitors, intermediaries and customers

This is illustrated in Figure 4.1.

Table 4.1 presents the main marketplace or macro-environmental factors and the micro-environmental factors that directly affect an organisation.

In Chapter 2 we introduced the importance of monitoring changes in the online marketplace or micro-environment and how they impact on an organisation. In this chapter we concentrate on the role of the macro-environmental forces, using the widely used SLEPT framework. Often, these factors are known as the PEST factors, but we use SLEPT since it is useful to stress the importance of the law in influencing Internet marketing practices. The SLEPT factors are:

- **Social factors** - these include the influence of consumer perceptions in determining usage of the Internet for different activities.
- **Legal and ethical factors** - these determine the method by which products can be promoted and sold online. Governments, on behalf of society, seek to safeguard individuals' rights to privacy.
- **Economic factors** - variations in economic performance in different countries and regions affect spending patterns and international trade.

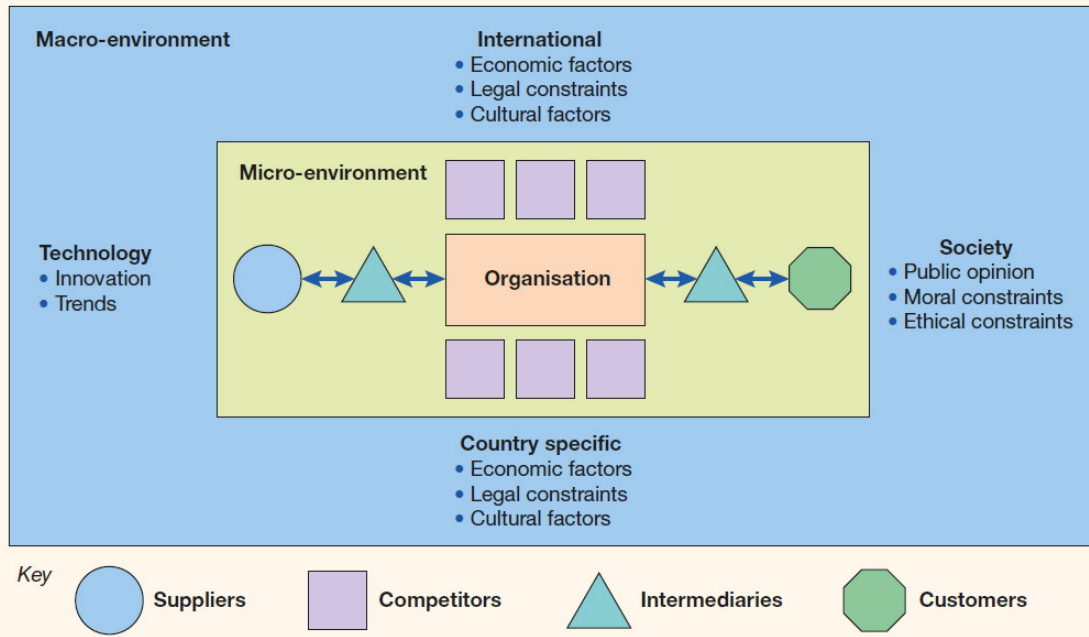


Figure 4.1

The micro- and macro-environment

Source: Chaffey and Ellis-Chadwick (2012), with permission

Table 4.1

Factors in the macro- and micro-environment of an organisation

Macro-environment	Micro-environment (digital marketplace)
Social	The organisation
Legal, ethical and taxation	Its customers
Economic	Its suppliers
Political	Its competitors

Technological	Intermediaries
Competitive	The public at large

- Political factors - national governments and transnational organisations have an important role in determining the future adoption and control of the Internet and the rules by which it is governed.
- Technological factors - changes in technology offer new opportunities for the way products can be marketed.

For each factor we look at new issues raised for managers responsible for e-commerce.

Now complete Activity 4.1 to reflect on the most important macro-environmental factors that have to be considered by the digital business manager. When completing a review it's important not to give all influences equal weighting, but instead focus on the ones that matter most in the current environment, such as legislation and technology innovation.

The issues identified in Activity 4.1 and others such as economic and competitive pressures tend to change rapidly, particularly dynamic factors associated with advances in technology.

An indication of the challenge of assessing the macro-environment factors is presented in Figure 4.1. Managers have to constantly scan the environment and assess which changes are relevant to their sphere of influence. Changes in social culture and the introduction and adoption of new technologies tend to be very rapid (see Figure 4.2). Governmental and legal changes tend to happen over longer timescales but new laws can be introduced relatively fast. The trick for managers is to identify those factors that are critical to competitiveness and service delivery and monitor these. The technological and legal factors are most important to managing e-commerce, so we focus on these.

Since the law is one of the most important issues for the e-commerce manager to address, the seven most important legal issues for managers are introduced in Table 4.2. Each of these is covered in more detail later in the chapter. There are four main acts, directives and laws that e-commerce companies must comply with:

- The Electronic Commerce (EC Directive) Regulations 2002
- The General Data Protection Regulations (see Box 4.1)
- The Distance Selling Act 2000
- ICO Cookie Law

Activity 4.1

Introduction to social, legal and ethical issues

List all the social, legal and ethical issues that the manager of an e-commerce website needs to consider, to avoid damaging relationships with visitors to their website or which may leave the company facing prosecution. You can base your answer on current issues that may concern you, your friends or your family when accessing a website.

Behavioural ad targeting

Advertisers target ads at a visitor as they move within or between sites dependent on their viewing particular sites or types of content that indicate their preferences.

Malware

Malicious software or toolbar, typically downloaded via the Internet, which acts as a 'trojan horse' by executing unwanted activities such as keylogging of user passwords, or viruses that may collect email addresses.

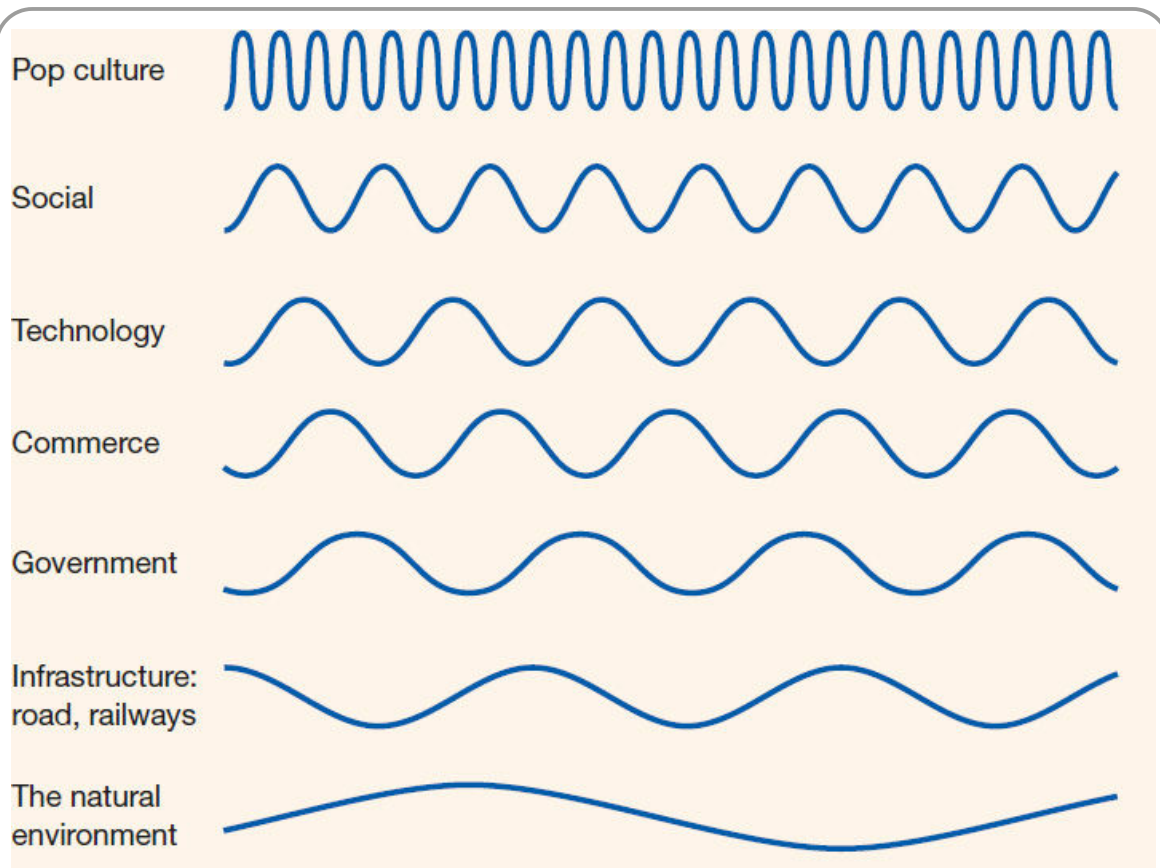


Figure 4.2

'Waves of change' - different timescales for change in the environment

Table 4.2

Significant laws that control digital marketing

Legal issue	Digital marketing activities affected
1 Data protection and privacy law	✓ Collection, storage, usage and deletion of personal information directly through

	data capture on forms and indirectly through tracking behaviour via web analytics ✓ Email marketing and SMS mobile marketing ✓ Use of viral marketing to encourage transmission of marketing messages between consumers ✓ Use of cookies and other techniques for personalising content and tracking on-site ✓ Use of cookies for tracking between sites, for example for advertising networks and company site using ‘behavioural ad targeting’ ✓ Use of customer information from social networks ✓ Use of digital assets installed on a user’s PC for marketing purposes, e.g. toolbars or other downloadable utilities, sometimes referred to as ‘malware’
2 Disability and discrimination law	✓ Accessibility of content such as images for the visually impaired within different digital environments: ✓ Website ✓ Email marketing ✓ Mobile marketing ✓ IPTV ✓ Accessibility affecting other forms of disability including hearing difficulties and motor impairment
3 Brand and trademark protection	✓ Use of trademarks and brand names within: ✓ Domain names ✓ Content on site (for search engine optimisation) ✓ Paid search advertising campaigns (e.g. Google AdWords) ✓ Representation of a brand on third-party sites, including partners, publishers and social networks ✓ Defamation of employees
4 Intellectual property rights	✓ Protection of digital assets such as text content, images, audio and sounds through digital rights

management (DRM)

5 Contract
law

- ✓ Validity of electronic contracts relevant to:
- ✓ Cancellations
- ✓ Returns
- ✓ Errors in pricing
- ✓ Distance-selling law
- ✓ International taxation issues where the e-commerce service provider is under a different tax regime from the purchaser

6 Online
advertising
law

- ✓ Similar issues to traditional media

7 Social
media

- ✓ Representation of offer
- ✓ Causing offence (e.g. viral marketing)
- ✓ Misrepresenting a company by posting a recommendation although the employee works for the company
- ✓ Defamation - libel against other social network users
- ✓ Privacy of customer information in social media
- ✓ Intellectual property - ownership of customer information in social media
- ✓ Promotions and competitions within social media sites
- ✓ Copyright law - posting a photo or video online without the permission of the creator

Box 4.1

GDPR

The Data Protection Act 1998 was established over 21 years ago and does not cater for the 'digital age' and growth of Big Data. In the past, organisations have worked hard to get as much data as possible; they then thought about how to process, profile and analyse that data to get value from it.

The new General Data Protection Regulation (GDPR)

'Consent' plays a very big part in digital and direct marketing as the data controller and processor has to adhere to a very clear set of boundaries. A summary of the dos and don'ts of gaining consent include:

- You must be able to demonstrate how the data subject has consented to the processing, which means marketing must record how and who gave consent.
- The data subject must be able to withdraw consent at any time (the right to object) and it shall be as easy to withdraw consent as to give it. This must be demonstrated by policy and process how to withdraw consent.
- Consent should cover all processing activities carried out for the same purposes.
- If processing for multiple purposes, consent should be given for all those purposes.
- Consent should not be considered freely given if the data subject has no genuine or free choice.
- Silent consent, pre-ticked boxes or inactivity should not constitute consent.

The general rule of thumb is that consent must be given and not assumed. 'Personal data' refers to: a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. The 'online identifier' of GDPR includes IP addresses, cookies, mobile IPs and even search engines.

GDPR has been seen as the biggest shake up in data protection in 20 years. The very nature of digital business and marketing is monitoring behaviour by tracking individuals online to create profiles - in particular to analyse or predict aspects concerning the

natural persons personal preferences, interests, reliability, behaviour, location or movements. Territorial scope (Article 3) specifically applies to the monitoring of behaviour.

Organisations that either do not monitor these environmental factors or do not respond to them adequately will not remain competitive and may fail. The process of monitoring the environment is usually referred to as **environmental scanning**. This often occurs as an *ad hoc* process, but if there is no reporting mechanism then some major changes may not be apparent to managers. Environmental analysis is required to evaluate information and respond accordingly.

Environmental scanning

The process of continuously monitoring the environment and events and responding accordingly.

Social factors

Every country has people with different attitudes and opinions to certain ideas, products/services and communication. Some of the key elements include:

- culture;
- demographics such as age and gender;
- social lifestyles ;
- domestic structures;
- affluence/wealth;
- religion.

A good example of this is the change in consumer buying behaviour because of internet usage. If you take consumer packaged goods, buying behaviour used to be a far more linear process - the 'stimulus' would be some sort of marketing 'push' but most of the decisionmaking process (first moment of truth) would be when the consumer was at the shelf in the supermarket. The second moment of truth would be when the customer purchased the product, took it home, used it and formed an opinion on it.

However, Google's ZMOT (Zero Moment of Truth) is when there's a feedback loop -customers now use the Internet to do pre-purchase research, to educate themselves and compare and contrast products and services. The growing use of sites such as TripAdvisor makes it easy to leave online reviews that influence the buying behaviour of other consumers. This has radically changed the travel industry; research by the World Travel Market (Jan 2013), found that nearly 40% of consumers read online reviews before booking.

In relation to e-commerce, consumers are changing the buying process they go through to purchase a product. There has been an increase in **showrooming**; this is when consumers decide to purchase a product online after looking at it in a physical retailer's store. This is usually driven by a desire to find a cheaper price online. According to research by Columbia Business School and Almia (2013), 21% of all consumers are 'M-Shoppers'; they use mobile devices while in retail stores to assist in their shopping decision. This behaviour is not just displayed by Millennials - 74% of M-Shoppers are over 29 years old. See Box 4.2 for M-Shopping segmentation.

Showrooming

When consumers decide to purchase a product online after looking at it in a physical retailer's store. This usually involves using a mobile device to see if they can buy it cheaper online (or find a promotion/special offer).

Legal and ethical factors

Legislative changes can usually affect the business environment - for example, it took Spotify a number of years to launch in Canada because of the country's royalty and copyright laws. Some of the key legal factors to consider are:

- data protection and privacy law (particularly regarding email), which has been replaced by General Data Protection Regulation (GDPR) - implemented 25 May 2018;
- disability and discrimination law;
- brand and trademark protection;
- intellectual property rights;
- contract law;

- online advertising law.

Box 4.2

M-Shopper segmentation

Columbia Business School and Aimia (2013) have identified five unique segments of the 'M-Shopper' and their buying behaviours:

- 1 Exploiters (6%)** - already planning to buy online and always opting for the lowest price. They tend to showroom in a premediated way, i.e. they have planned to make a purchase online and have only visited a store to preview a purchase in person. They purchase online for things other than price savings, such as free shipping, online loyalty rewards and online return policies. Exploiters are slightly more likely to be female and have a bit lower income.
- 2 Savvys (13%)** - these are the most digitally attuned of all five segments. They are avid and frequent information-seekers and are most likely to use their mobile devices in-store to compare prices, check product details and seek out user reviews. Like 'Exploiters', their showroaming was planned in advance. However, they are still likely to purchase in a retail store, even though they know they can buy it for a lower price online. Savvys are more willing to sign-up for loyalty programmes and are likely to be motivated by retailer offers and rewards. They are generally under 30 years old and are slightly more likely to be male (58% of all M-Shoppers).
- 3 Price-sensitives (19%)** - this segment have high price-sensitivity; they will never purchase a product in a retail store when they know they can buy it for an equal amount or lower price online. However, they can be persuaded to buy from a store if they get a good deal (such as mobile coupons, home delivery, extended warranties, etc.). This segment is likely to be over 29 years old and is equally likely to be a man or woman.
- 4 Traditionalists (30%)** - committed to purchasing in-store, these consumers only use their smartphone to find out more information. They are more likely to use their mobile device to text or call a loved one for advice than to check prices. Traditionalists are more likely to buy in-store than finding a cheaper option online because they have more trust in a physical store and expect the store to have a better returns policy. This type of retail shopper is slightly more likely to be female and are generally older (aged 55+).

5 Experience-seekers (32%) - this is the largest segment. They find a great store experience very important and are willing to buy in-store, even if they find lower prices online. These shoppers are more likely to be motivated by specialist in-store experiences, such as exclusive sales events, pre-shopping nights and celebrity appearances. Experience-seekers are more likely to be young (under 30 years old) and are more likely to have a tablet with a data plan. UK retailer Debenhams has recently tapped into this segment by transforming its stores into 'lifestyle destinations' for friends, by offering beauty makeovers, facials, brow grooming and blow-dry bars, as well as offering coffee and/or food.

We will explore many of these legal factors further, in this section of the text.

Economic factors

These relate to the elements of an economy and its condition. Examples include:

- market growth and employment ;
- inflation rate;
- interest rates ;
- monetary/fiscal policies;
- foreign exchange rates.

Social media under fire

Countries that block Twitter, Facebook, or YouTube

Countries	Facebook	Twitter	YouTube
TURKEY		✓	✓
ERITREA			✓
IRAN	✓	✓	✓
PAKISTAN			✓
CHINA	✓	✓	✓
NORTH KOREA	✓	✓	✓
VIETNAM	✓		

Figure 4.3

Countries that block certain social media sites

Source: Information from

<https://www.motherjones.com/politics/2014/03/turkey-facebook-youtube-twitter-blocked/>

A good example from an e-commerce standpoint is the area of dynamic pricing. This is where a transactional e-commerce site uses algorithms to change the price of its products/services, based on different market conditions, such as competitor pricing, supply and demand, spending habits, time of day, location and operating system. For example, some companies increase the price of goods or services without a fixed price to people browsing on iPads because these are seen as expensive devices, so the visitor is viewed as being more affluent.

Political factors

An organisation needs to consider the political situation of a country and the world in relation to that country. Areas to consider include:

- government/leadership;
- policies;
- tax laws;
- internet governance.

From a digital marketing perspective, if an organisation is operating in a global marketplace and using social media to connect and communicate with its customers, it is worth understanding which countries block Twitter, Facebook and YouTube. Figure 4.3 shows how certain countries around the world block social media sites.

Technology factors

New technology is changing the way that people (and businesses) do things, from connecting with others to purchasing products and services.

Improvements in both hardware and software are key factors in this change - Figure 4.4 shows the demise of desktop computers, towards the use of mobile devices. This demonstrates why mobile optimisation should be a key element of digital marketing strategy.

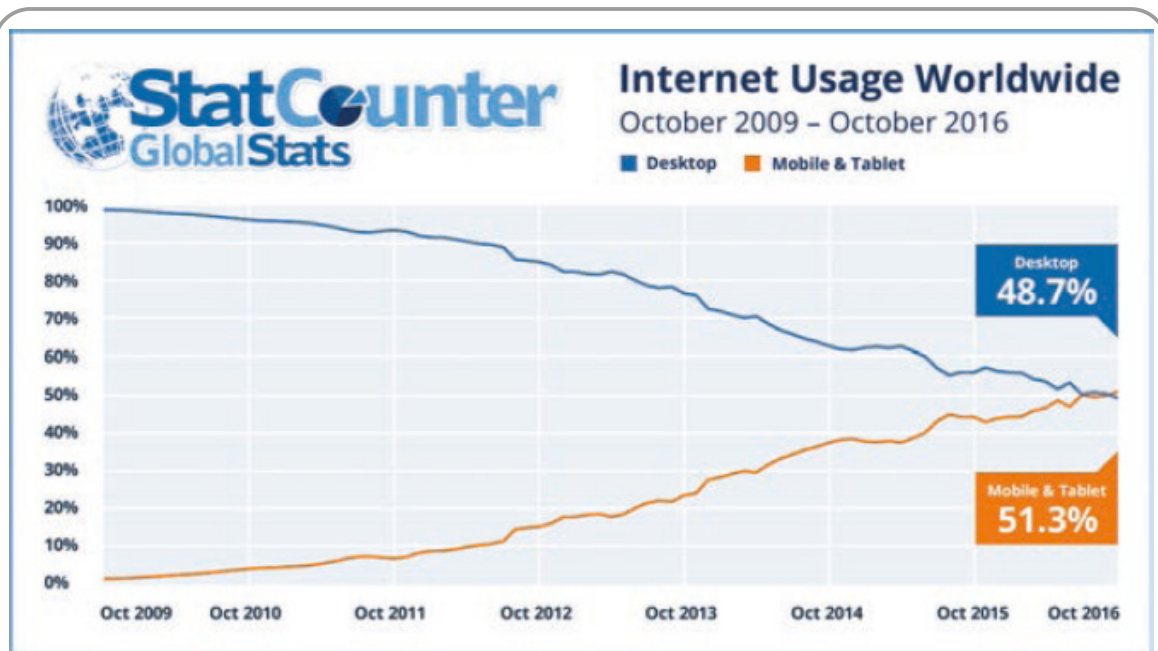


Figure 4.4

Mobile usage is overtaking desktop

Source: <http://gs.statcounter.com/press/mobile-and-tablet-internet-usage-exceeds-desktop-for-first-time-worldwide>

Cultural factors

The social and cultural impacts of the Internet are important from an e-commerce perspective since they govern demand for digital services and propensity to purchase online and use different types of e-commerce services. For example, Blockbuster's business model no longer worked because of the emergence and adoption of video streaming services from companies such as Netflix.

Nowadays, smartphones are changing the way people interact with companies, family and friends. They also offer users the ability to listen to music and take photos - the latter innovation has meant the demise of leading photographic companies Kodak and Polaroid and the closure of

photographic retailer Jessops. In fact, smartphones are now hardly used for calls (see Figure 4.5).

Complete Activity 4.2 to start to review some of the social issues associated with the Internet.

Factors affecting e-commerce buying behaviour

It is useful for digital business managers to understand the fears people have about placing orders online, so that action can be taken to overcome some of these barriers. Common fears include:

- 1 Credit card information being stolen.** Unfortunately, there has been a huge increase in cybercrime recently. According to Canocchi (2017), in the UK, £124 million was stolen by hackers and criminals via the Internet in 2016. One way to help provide shoppers with confidence in the service and protect against cybercrime is to use email authenticity to prevent fraud messages and encrypting all parts of a website.
- 2 ‘Fake’ online stores.** Some people feel anxious purchasing from a ‘virtual’ company that does not have a physical address or location, so their purchase may not exist. E-commerce companies can help overcome this fear by displaying clear contact information, including a company address, and providing links to independent customer reviews (such as Trustpilot, Feefo, etc.). They also add awards, ‘official partner’ logos, etc. to help generate credibility and take away the risk of the business not being real.

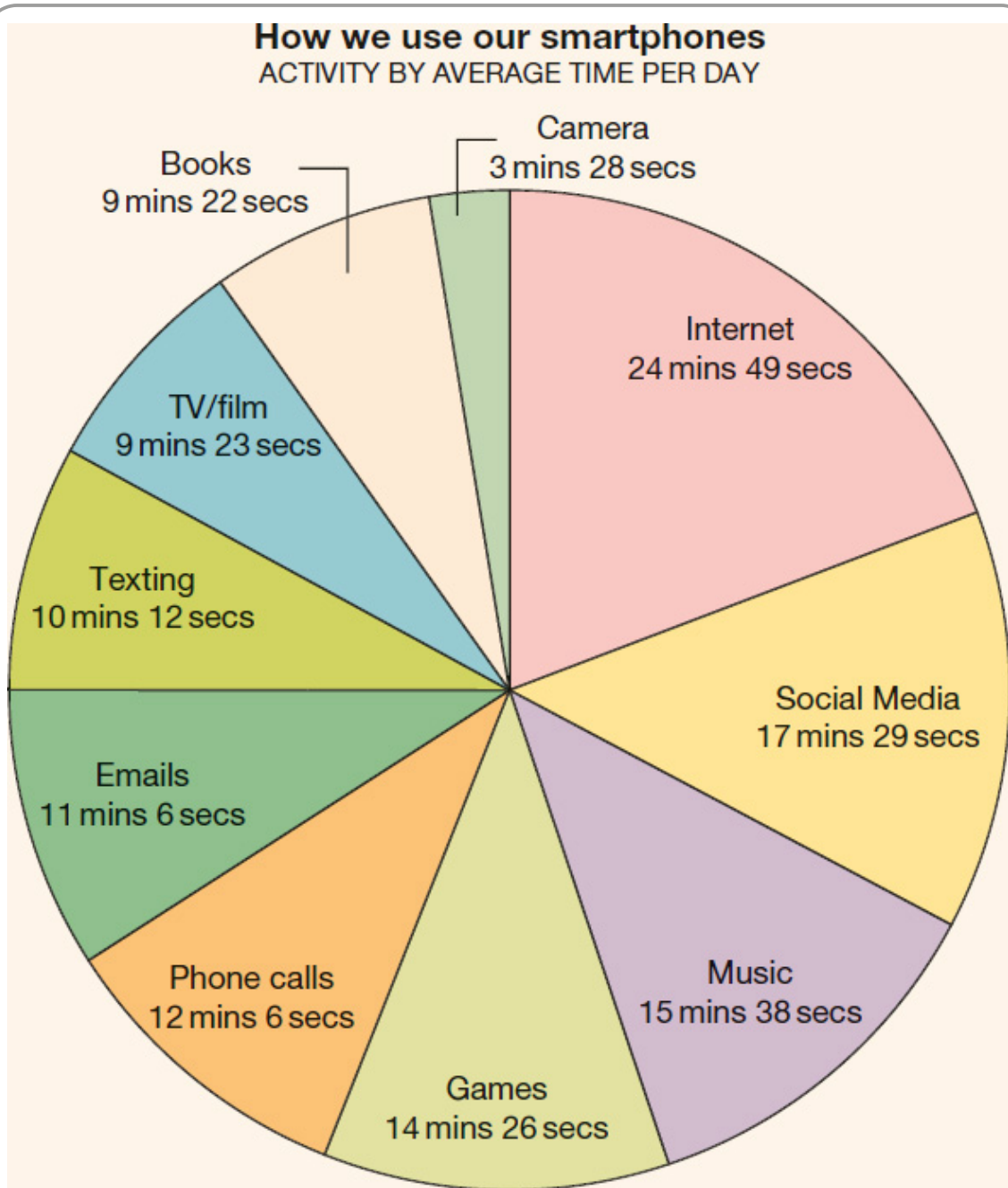


Figure 4.5

How we use our smartphones

4.2
adoption

Understanding enablers and barriers to consumer

Purpose

To identify reasons why businesses or consumers may be encouraged online



Activity

Access a recent survey of attitudes to the Internet in your country. In particular, you should concentrate on reasons why customers have used the Internet or have not used the Internet at all. Note that different activities such as posting updates to social media vary significantly by age, although we see the Internet as ubiquitous.

It's not practical to present the latest data from all countries, so please access the latest data using a compilation of ten key research resources about the Internet and technology adoption, which we have prepared at www.smartinsights.com/digital-marketing-statistics.

Questions

- 1 Summarise and explain the reasons for the levels of usage of the medium for different activities.
- 2 What are the main enablers and barriers to higher levels of adoption of these different activities and which actions should organisations take to increase adoption?

Alternatively, devise an *ad hoc* survey to investigate attitudes to, and use of, the Internet using friends, family or classmates as respondents. Example questions might include the following: What have you bought online? If nothing, why not? Have you bought via a desktop or mobile? Does the value of the purchase determine the device used to purchase it? How many hours do you spend online each month? How many emails do you receive or send? What stops you using the Internet more? What aspects of the Internet are you concerned about?

- 3 Information will get sold.** A common fear is that once information is given for an online purchase, the customer will get bombarded with solicitation emails, catalogues and offers from third parties. One way to help overcome this fear is to provide a clear privacy policy and give customers the option to choose what information they would like to receive and how often they want to receive it.
- 4 Unsure what the product is really like.** Many shoppers rely on the sensory aspect of shopping and because they can't feel, touch or even smell the product, they worry that they are going to make the wrong purchase choice. One way e-commerce companies help overcome this fear is to offer product videos (i.e. clothing videoed on a model walking in a studio), 3D views and detailed information on elements such as product dimensions, materials, weight, etc.
- 5 Lost orders.** Some online shoppers worry that their order will get lost or will not arrive in time. More and more online retailers are offering different shipping options and order tracking, to help customers feel more in control of this element of their shopping experience.
- 6 Need help from a salesperson.** Generally, the idea of buying online is one-sided and some people like the help of a knowledgeable salesperson to discuss their needs. Some e-commerce companies use education videos and comparison tables to help provide additional purchase information. However, more recently, there has been large growth in the adoption of live chat for customer service. According to BoldChat (Richards, 2012), 31% of US and UK online shoppers are more likely to purchase after a live chat.

However, the majority of online buyers in the EU (68%) have said that they have not encountered any problems when purchasing via the Internet. As you can see in Figure 4.6, the problems encountered most often by EU online shoppers are related to the following issues: slower delivery than indicated (17%); technical website failure while ordering or paying; receiving wrong or damaged goods/services (9%); difficulties in finding information on guarantees and other legal rights(5%); and 4% were confronted with final costs higher than indicated or found it difficult to make complaints and seek redress after a complaint. About 3% of online shoppers were confronted with foreign retailers not selling to customers in their country and problems with fraud (e.g. no goods/services received at all, misuse of credit card details).

The extent of adoption also varies significantly by country - for example, a European Commission (2015) report showed that the share of European enterprises offering their goods or services online is still relatively low. Only 15% of European companies sold online in 2013 - 9% sold to other

organisations or public authorities and 10% sold to private consumers, showing the value in targeting countries for online investment carefully.

These barriers to access and usage of the web still remain, and governments are concerned about ‘social exclusion’, where some sectors of society have lower levels of access and opportunity. Other barriers include technological issues such as geo-blocking - the practice of blocking or limiting certain access or content, based on the country of origin of the user.



Figure 4.6

Problems encountered when buying over the Internet

Source: File:Problems encountered when buying over the internet, EU-28, 2016, Eurostat.

Understanding users’ access requirements

To fully understand online customer propensity to use an online service we also need to consider the user’s access location, access device and ‘webographics’. ‘Webographics’ is a term coined by Grossnickle and Raskin (2001), which includes:

- **usage location (from home or work);**
- **access device (browser and computer platform including mobile devices);**
- **connection speed - broadband versus dial-up connections;**
- **ISP;**

- experience level;
- usage type;
- usage level.

Consumers influenced by using the online channel

To help develop effective online services, we need to understand customers' **online buyer behaviour** and motivation (this topic is considered in more depth in Chapters 7 and 8). Finding information about goods and services is a common online activity, as shown by Figure 4.7, but each organisation needs to capture data about online influence in the buying process for their own market. Managers also need to understand how different types of media, intermediary and influencer sites introduced in Chapter 2 influence consumers; for example, are blogs, social networks or traditional media sites more trusted?

Online buyer behaviour

An assessment of how consumers and business people use the Internet in combination with other communications channels when selecting and buying products and services.

Edelman, a global communications marketing firm, produces an annual 'Trust Barometer'. Its 2017 report showed that 'search engines' were the most trusted source for general news and information (above traditional media). There has also been a huge increase in 'online influencers' - predominately young people, who are using social media to communicate their hobbies and interests, from food to fashion. Zoella is a vlogger (video blogger) in her 20s, who has a YouTube following of over 11.5 million subscribers. To put this in context, BBC News only has 1.3 million YouTube subscribers. This shows how influence has shifted from traditional media sources to individuals who have built an online following among their peer group for niche topics such as healthy food, exercise, travel, fashion and beauty, etc.

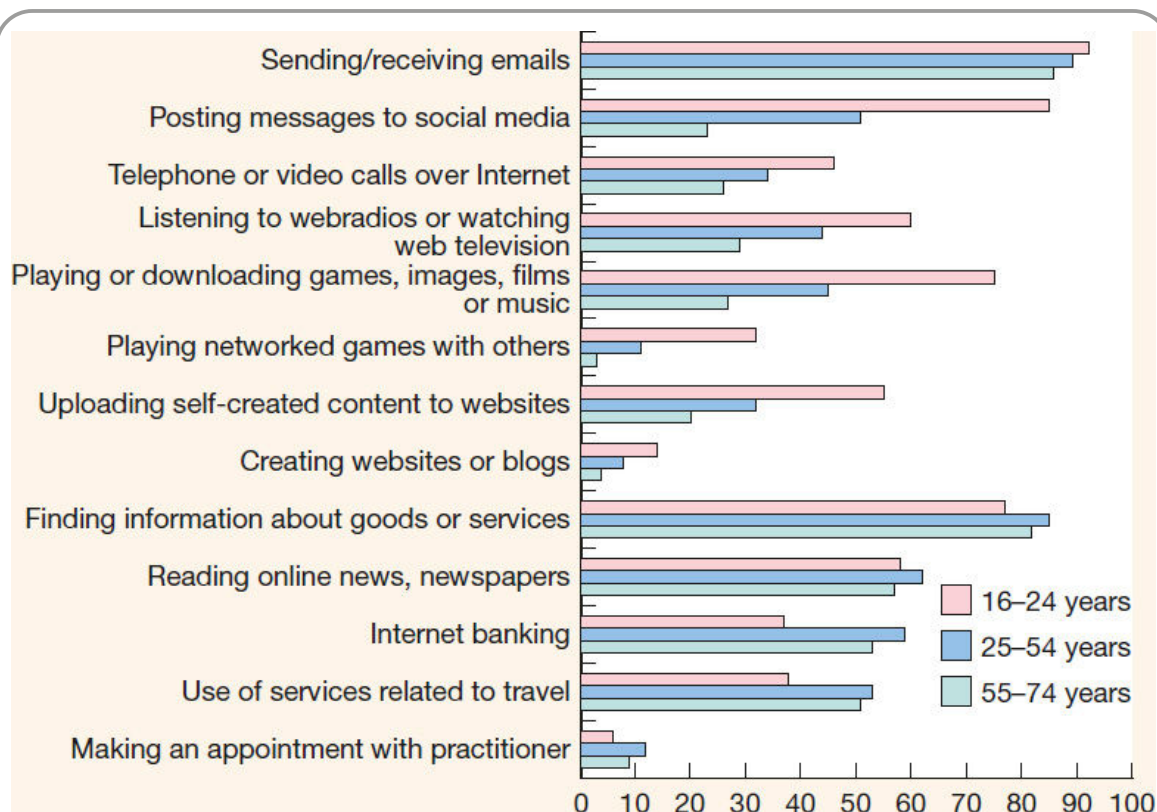


Figure 4.7

Applications of using the Internet

Source: EuroStat (2012)

In fact, when Zoella paired up with Superdrug to release her new range of beauty products, called Tutti Fruity, her first collection broke sales records within just 24 hours, with the website seeing double the amount of traffic than normal and 25% of customers heading directly to the Zoella section of the website. Superdrug's marketing director, Matt Walburn, told Hobbs (2015) from *Marketing Week*: 'I think what we've done with Zoella has shown the brand at its very best as our competitors did not react to the movement as quickly as we did. Identifying the vlogger trend and putting it into product form has helped to significantly boost both online and in-store sales. I think the work we've done with Zoella has transformed the business in a way. Vloggers will be an important part of our marketing mix for the future, I'm certain of that.'

There is also a wide variation in influence and type of information sought according to type of product, so it is important to assess the role of the Internet in supporting buying decisions for a particular market.

Understanding the potential reach of a website and its role in influencing purchase is clearly important in setting digital marketing budgets.

Figure 4.9 shows that most purchases, by a third or more of EU online shoppers, involved clothes and sports goods (61%), travel and holiday accommodation (52%), household goods (44%), tickets for events (38%) and books, magazines and newspapers (33%). Fewer than one in five Internet users bought telecommunication services (18%), computer hardware (17%), medicines (13%) and e-learning material (6%).

The 16-24 age-group had the highest amount of online purchasing of clothes and sport goods (69%), video games software, other software and upgrades (28%) and e-learning material (8%).

The largest proportion of people buying online once or twice is found among those aged 16-24 (42% of online shoppers), followed by individuals aged 55-74 (40%). People aged 25-54 stand out as making more frequent purchases: 17% of online shoppers in this age group bought online 6-10 times in the three months prior to the survey and 16% did so even more often. Four in ten e-commerce shoppers said they had spent EUR 100-499 on their online purchases in the three months prior to the survey. Individuals aged 16-24 led in online purchases worth less than EUR 100 and those aged 25-54 and 55-74 for purchases of EUR 100-499. Purchases worth over EUR 500 were less popular with all age groups (see Figure 4.10).

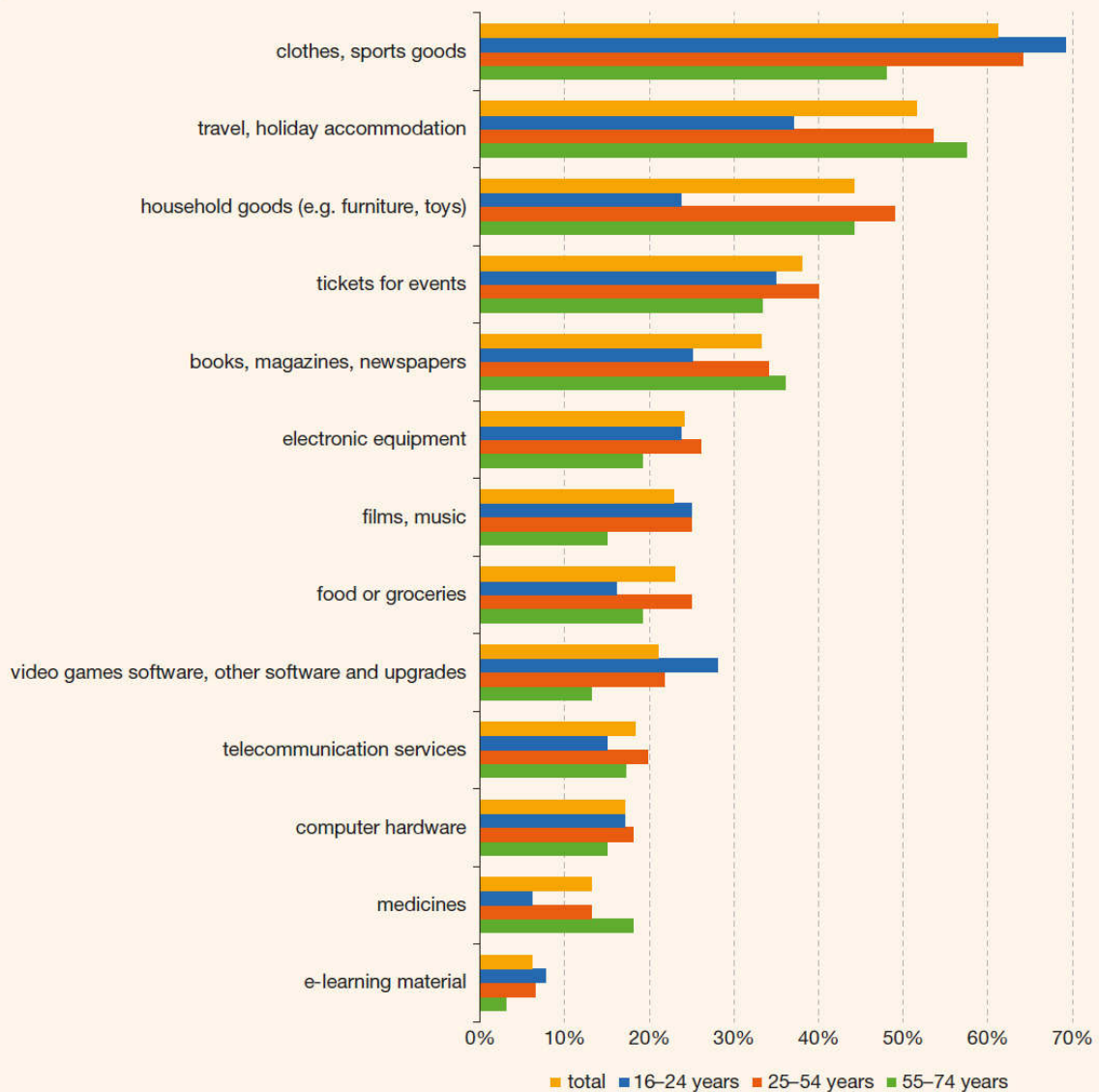


Figure 4.8

E-commerce purchases by EU buyers

Source: EuroStat, 2016

Motivation for use of online services

Marketers can also develop **psychographic segmentations** that divide users/potential users into groups based on their knowledge, attitudes, uses and responses to the brand, product or service. Basically, demographics help

explain ‘who’ your buyer is and psychographics help you understand ‘why’ your customer buys.

Psychographic segmentation

A breakdown of customers according to different characteristics.

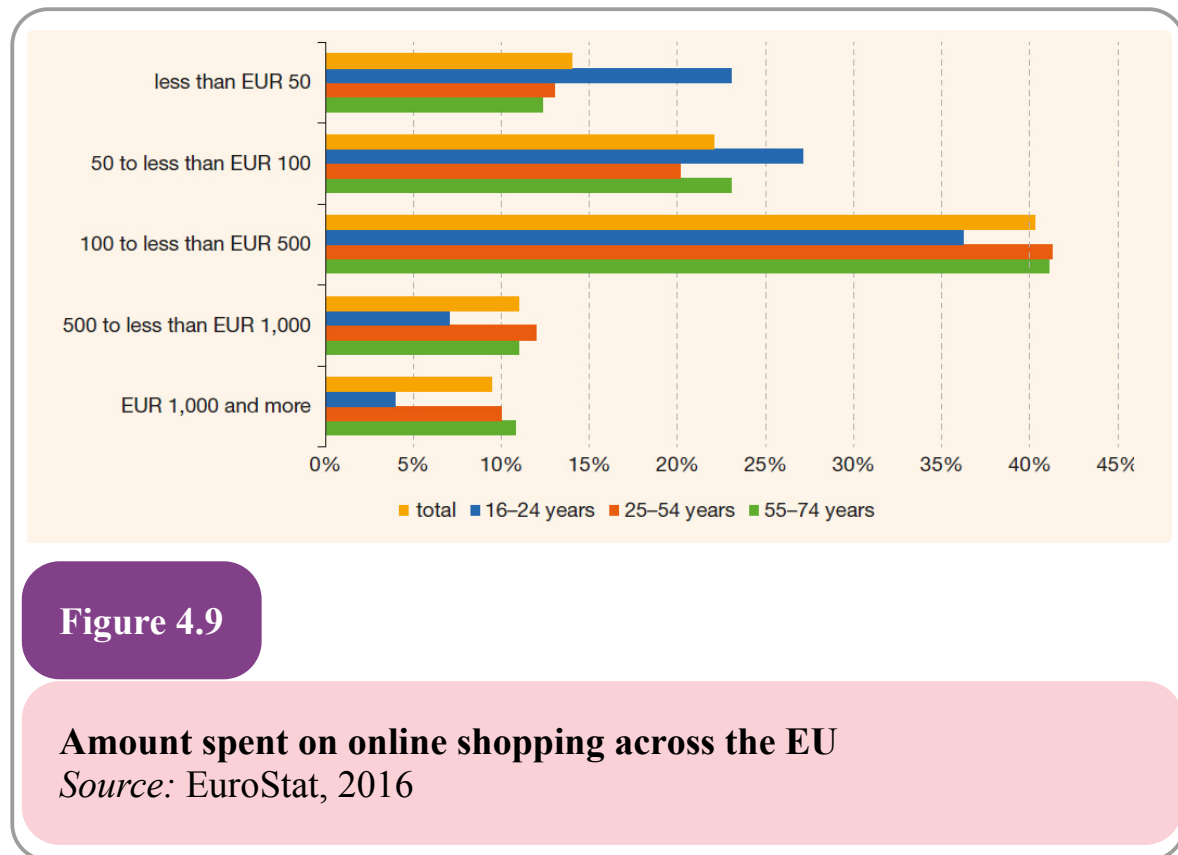


Figure 4.9

Amount spent on online shopping across the EU

Source: EuroStat, 2016

Elements of psychographic segmentation include:

- Occasion - when do they purchase, use or think of buying a product?
- Benefits sought - why are they considering the product? Are they trying to solve a problem? Make their life better?
- Usage rate - heavy, medium or light usage?
- User status - are they non-users, potential users, first-time users, regular users or ex-users of a product or service?
- Loyalty status - are they loyal or likely to switch?

There are a number of different ways you can gather data to help form psychographic profiles for your typical customers:

- 1 **Interviews.** Talk to a few people who are broadly representative of your target audience. In-depth interviews let you gather useful qualitative data to really understand what drives your customers to make purchases. However, this type of research can be expensive and

difficult to conduct; also, small sample sizes can mean that results may not always be representative of the people you are trying to target.

2 Surveys. Surveys let you reach more people than interviews, but they can be harder for you to get insightful answers.

3 Customer data. You may have data on what your customers tend to purchase from you, such as data from loyalty cards or online purchase history. You can use these data to generate insights into what kind of products/brands your customers are interested in and what is more likely to make them purchase. For example, does discounting vastly increase their propensity to purchase?

The revised Web Motivation Inventory (WMI) identified by Rodgers *et al.* (2007) is a useful framework for understanding different motivations for using the web. The four motives that cut across cultures are: research (information acquisition); communication (socialisation); surfing (entertainment); and shopping. These are then broken down further:

1 Community

- Get to know other people
- Participate in an online chat
- Join a group.

2 Entertainment

- Amuse myself
- Entertain myself
- Find information to entertain myself.

3 Product trial

- Try on the latest fashions
- Experience a product
- Try out a product.

4 Information

- Do research
- Get information I need
- Search for information I need.

5 Transaction

- Make a purchase
- Buy things
- Purchase a product I've heard about.

6 Game

- Play online games
- Entertain myself with Internet games
- Play online games with individuals from other countries.

7 Survey

- Take a survey on a topic I care about
- Fill out an online survey
- Give my opinion on a survey.

8 Downloads

- Download music
- Listen to music
- Watch online videos.

9 Interaction

- Connect with my friends
- Communicate with others
- Instant message others I know.

10 Search

- Get answers to specific questions
- Find information I can trust.

11 Exploration

- Find interesting web pages
- Explore new sites
- Surf for fun.

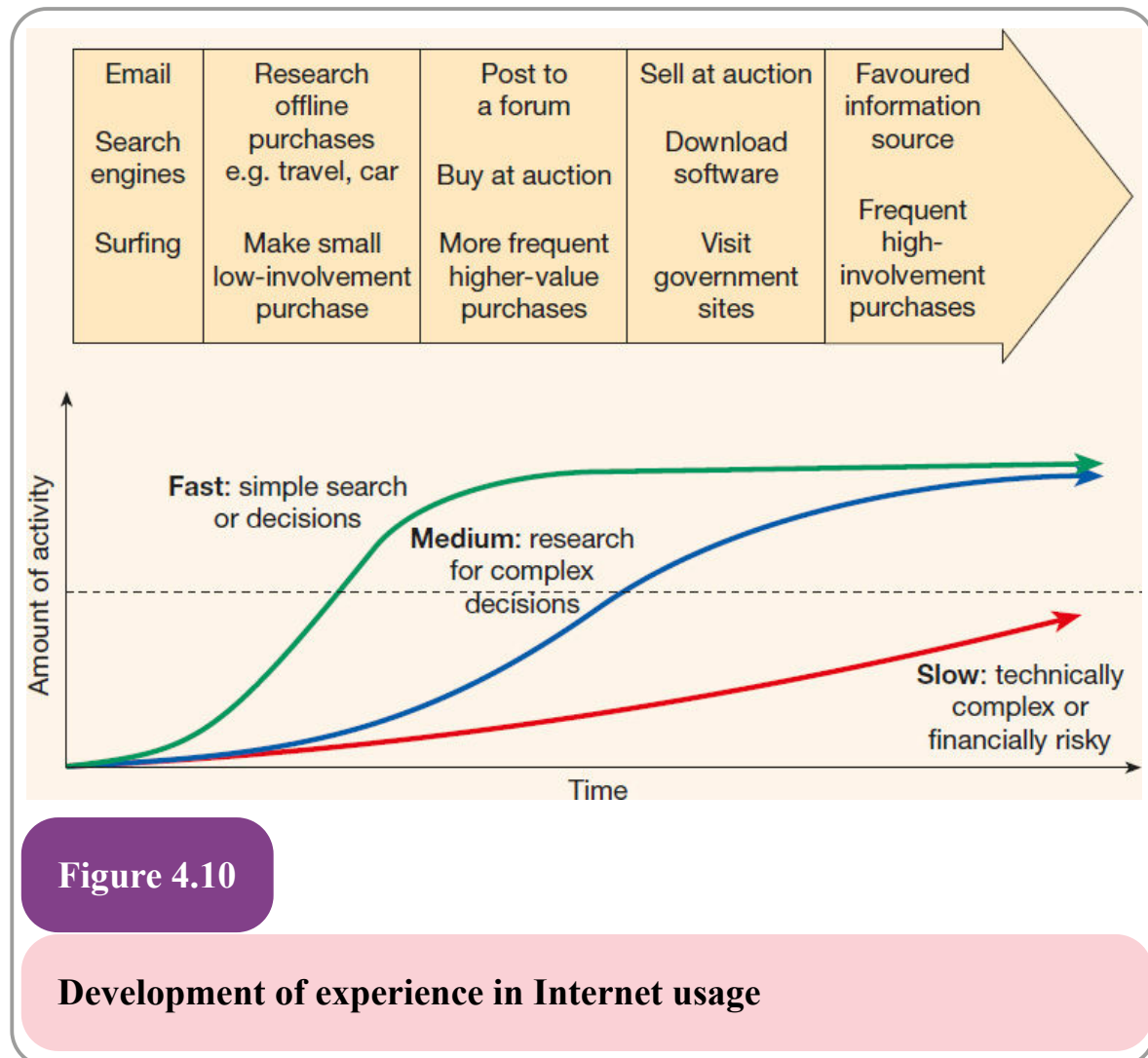
12 News

- Read about current events and news
- Read entertainment news.

Digital advertisers and site owners can use this framework to review the suitability of facilities to meet these needs.

You can see from Figure 4.10 that Internet users take longer to become confident to purchase more expensive and more complex products. This is supported by Figure 4.9, which shows that online shoppers are less likely to spend over EUR 500 purchasing goods online (across all age groups). Figure 4.10 shows that the result is a dramatic difference in online consumer behaviour for products according to their price and complexity. As you can see in Figure 4.8, most EU online shoppers purchase clothes and sports goods online and fewer people purchase e-learning material. Figure 4.10 suggests that the way companies should use digital technologies for

marketing their products will vary markedly according to product type. In some, such as cars and complex financial products such as mortgages, the main role of online marketing will be to support research, while for standardised products there will be a dual role in supporting research and enabling purchase.



This links to the FCB Involvement Grid (see Figure 4.11), a matrix developed by Foot, Belding & Cone (FBC), which plots various consumer purchases against 'think vs feel'. There are a number of variables that drive the level of involvement up or down, such as price and frequency of purchase (e.g. car vs toothpaste), social visibility (designer handbag vs underwear), risk involved (skin cream vs magazine), commitment of time (refrigerator vs paper towels) and complexity of purchase (insurance vs beer).

It's also worth noting that, as products go through different stages in product lifecycles and innovation, they can undergo a change in involvement.

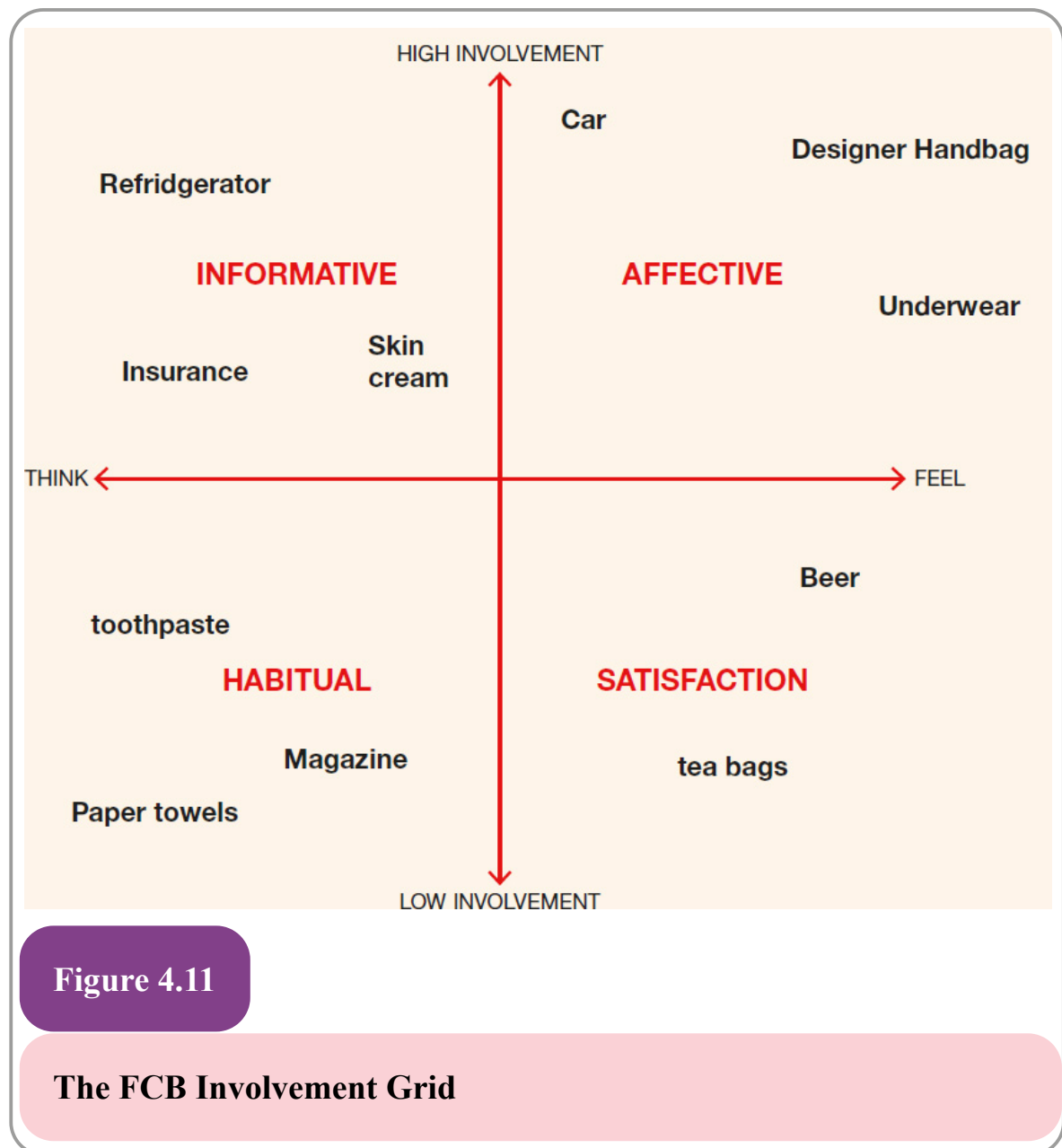
The four quadrants have been segmented into four buying types - Informative, Affective, Habitual and Satisfaction. Each one of these segments requires a particular communication style, type of media and level of repetition.

Business demand for digital business services

The B2B market is more complex than B2C in that variation in demand will occur according to different types of organisation and people within the buying unit in the organisation. This analysis is also important as part of the *segmentation* of different groups within a B2B target market. We need to profile business demand according to:

1 Variation in organisation characteristics

- Size of company (employees or turnover)
- Industry sector and products



- Organisation type (private, public, government, not-for-profit)
 - Division
 - Country and region.
- 2 Individual role**
- Role and responsibility from job title, function or number of staff managed
 - Role in buying decision (purchasing influence)
 - Department
 - Product interest
 - Demographics (age, sex and possibly social group)

- B2B profiles.

We can profile business users of the Internet in a similar way to consumers by assessing:

- 1 The percentage of companies with access.** In the business-to-business market, Internet access levels are higher than for business-to-consumer. Understanding access for different members of the organisational buying unit among their customers is also important for marketers. Although the Internet seems to be used by many companies, it doesn't necessarily reach the right people in the buying unit.
- 2 Influenced online.** In B2B marketing, the high level of access is consistent with a high level of using the Internet to identify suppliers. As for consumer e-commerce, the Internet is important in identifying online suppliers rather than completing the transaction online. This is particularly the case in larger companies.
- 3 Purchases online.** This shows the importance of understanding differences in the environment for e-commerce in different countries.

In summary, to estimate online revenue contribution to determine the amount of investment in digital business we need to research the number of connected customers, the percentage whose offline purchase is influenced online and the number who buy online.

marketplaces

Study 4.1

Alibaba - one of the world's largest B2B

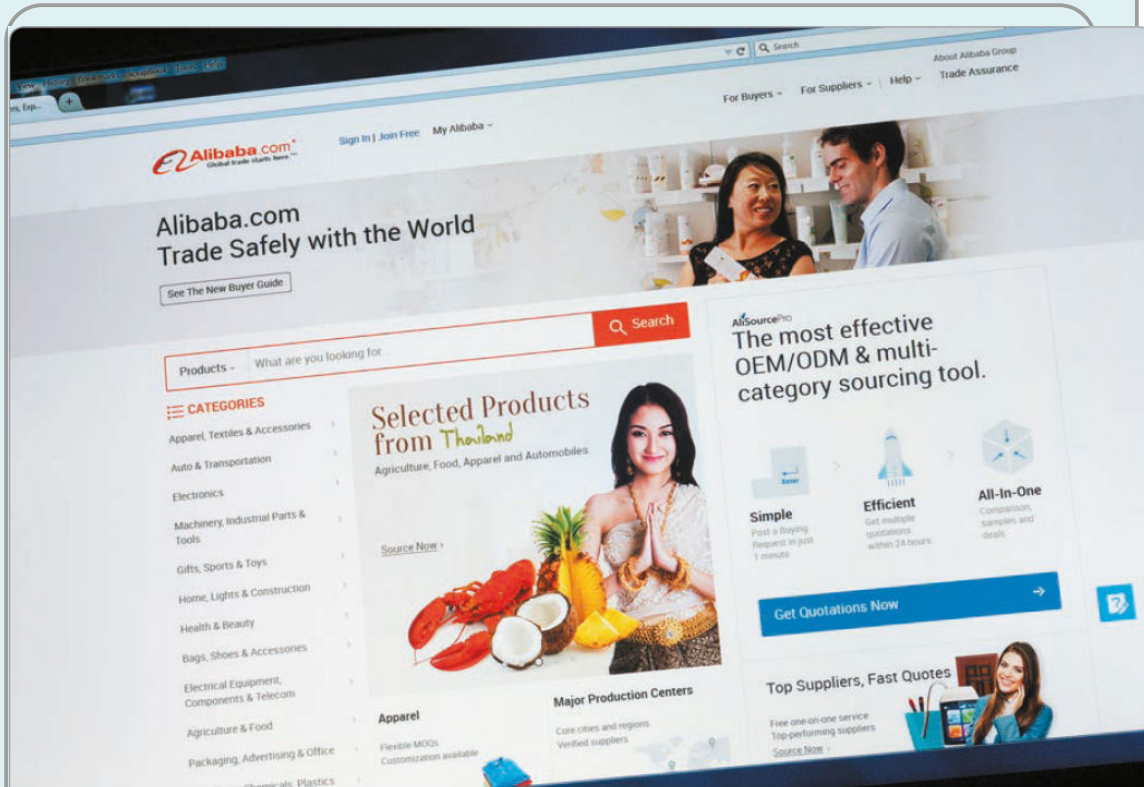


Figure 4.12

Alibaba

Source: sjsscreens/Alamy Stock Photo

Alibaba.com was founded in 1999 by Jack Ma in Hangzhou, China, and has grown to become the leading platform for global wholesale trade, serving millions of buyers and suppliers around the world. In just 13 years (in the year to September 2012), the company made \$485m on revenues of \$4.1 billion. It now employs over 24,000 people and its initial public offering (IPO), in September 2014 on the New York Stock Exchange, ranks as the world's largest at \$25 billion.

The company's founder, Jack Ma, was a former school teacher who visited the US in 1995, after starting a translation company designed to capitalise on China's export boom. While he was in the US, a friend showed him the Internet; Ma did an online search and found that he could hardly find anything about China. Therefore, when he returned home, he set up 'China Pages', a directory of Chinese companies

looking for customers abroad. The business failed but, undeterred, Ma set up Alibaba with 18 other people four years later.

The company's founders shared a belief that the Internet would 'level the playing field' by enabling small enterprises to leverage innovation and technology to grow and compete more effectively in domestic and global markets. Since launching its first website helping small Chinese exporters, manufacturers and entrepreneurs to sell internationally, Alibaba Group has grown into a global leader in online and mobile commerce. Today, the company (and its related organisations) provides leading wholesale and e-commerce marketplaces, as well as businesses in cloud computing, digital media and entertainment and innovation initiatives.



Figure 4.13

Jack Ma, the founder of Alibaba

Source: Christian Charisius/dpa/Alamy Live News

Sources:

www.investopedia.com/articles/investing/011215/top-10-largest-global-ipos-all-time.asp

[www.businessinsider.com/the-story-of-jack-ma-founder-of-alibaba-2014-9?](http://www.businessinsider.com/the-story-of-jack-ma-founder-of-alibaba-2014-9?IR=T)

[IR=T](http://www.businessinsider.com/the-story-of-jack-ma-founder-of-alibaba-2014-9?IR=T)

www.alibabagroup.com/en/about/overview

E-commerce sales across the EU

The European Commission reviewed adoption of the digital business services across Europe (EuroStat, 2017). It found that, in 2016, the vast majority (92%) of EU enterprises employing ten people or more made use of fixed broadband connection to access the Internet. This growth of Internet usage has meant that more than three-quarters (77%) of enterprises in the EU gave importance to their visibility on the Internet and had either a website or home page.

The widespread use of ICT in the workplace has resulted in an increased demand for technology specialists and this has presented recruitment challenges. More than two-fifths (41%) of large enterprises recruited or tried to recruit personnel for jobs requiring specialist ICT skills in 2015, while 20% of large enterprises reported that they had hard-to-fill vacancies for jobs requiring specialist technology skills. Recently, this ‘digital skills gap’ has been reported as a worldwide issue because of the explosive growth of digital devices and communication.

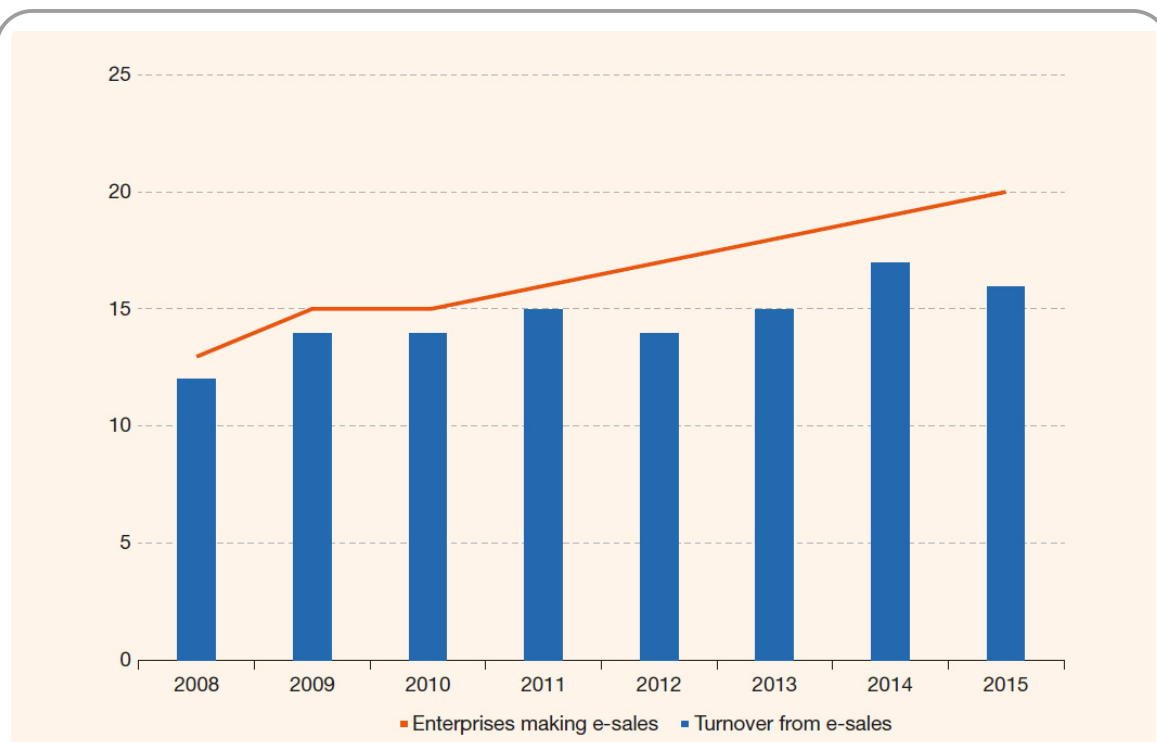


Figure 4.14

B2B companies in the EU generating online sales

Source: EuroStat, 2015

Figure 4.14 shows that, in 2015, 20% of enterprises in the EU made e-commerce sales, reflecting a rise of seven percentage points compared with 2008. As with many other ICT indicators for enterprises, the incidence of online sales is skewed according to enterprise size: 42% of large enterprises made e-sales in 2015, with this share dropping to 28% for medium-sized enterprises and to 18% for small enterprises.

In 2015, the percentage of enterprises making e-sales was 10% or less in Latvia, Bulgaria and Romania, while it reached 25% or higher in the Netherlands, Belgium, the Czech Republic, Sweden, Germany and Denmark, peaking at 30% in Ireland.

Privacy and trust in e-commerce

Ethical standards are personal or business practices or behaviour generally considered acceptable by society.

Ethical standards

Practice or behaviour that is morally acceptable to society.

Ethical issues and the associated laws constitute an important consideration of the Internet business environment for marketers. Privacy of consumers is a key ethical issue that affects all types of organisation regardless of whether they have a transactional e-commerce service.

A further ethical issue for which laws have been enacted in many countries is providing an accessible level of Internet services for disabled users. Other laws have been developed for managing commerce and distance-selling online.

Privacy legislation

Privacy refers to a moral right of individuals to avoid intrusion into their personal affairs by third parties. Privacy of personal data such as our identities, likes and dislikes is a major concern to consumers, particularly with the dramatic increase in **identity theft**. This is clearly a major concern for many consumers when using e-commerce services since they believe that their privacy and identity may be compromised. Unfortunately, online fraud and cybercrime are now the UK's most common offences, becoming almost half of all crime in the country (Evans, 2017).

Privacy

A moral right of individuals to avoid intrusion into their personal affairs.

Identity theft

The misappropriation of the identity of another person without their knowledge or consent.

The government's National Cyber Security Strategy (published in November 2016) defines cybercrime as:

- 1 Cyber-dependent crimes** - crimes that can be committed only through the use of Information and Communications Technology (ICT) devices, where the devices are both the tool for committing the crime, and the target of the crime (e.g. developing and propagating malware for financial gain, hacking to steal, damage, distort or destroy data and/or network or activity).

2 Cyber-enabled crimes - traditional crimes that can be increased in scale or reach by the use of computers, computer networks or other forms of ICT (such as cyber-enabled fraud and data theft).

The Computer Misuse Act (CMA) (1990) is the part of UK legislation relating to offences or attacks against computer systems, such as hacking or denial of service. Unfortunately, one in five UK firms was hit by cyber-attacks in 2016 (BBC News, 2017) and this figure is growing every year. The most common forms of cybercrime that relate to digital business and e-commerce are:

- phishing: using fake email messages to get personal information from Internet users;
- identity theft: misusing personal information;
- hacking: shutting down or misusing websites or computer networks.

Unfortunately, many small businesses have also become targets because larger corporations are constantly improving their Internet security systems. Phishing is one of the most common types of attacks on smaller e-commerce companies.

Box 4.3 summarises two recent large-scale cyber-attacks and highlights the different tactics hackers use to generate particular outcomes.

Box 4.3

Recent cyber-attacks

In October 2015, the Internet service provider TalkTalk suffered a cyber-attack whereby a hacker accessed the personal information of more than 150,000 customers, including sensitive financial information of more than 15,000 people.

The company had come under a distributed denial-of-service (DDoS) attack, by a hacker flooding the site with Internet traffic to overload the digital system and take its website offline. Security experts believe that a second attack may have been occurring at the same time, with intruders targeting the company's database (using the DDOS attack as a distraction).

The company ended up being fined £400,000 for security failings because it did not implement the most basic cyber-security measures.

In May 2017, a large-scale cyber-attack on the NHS caused chaos in hospitals across the UK. The attack resulted in messages

appearing on computers, telling doctors that they need to pay \$300 of **bitcoin*** to a particular address if they wanted to stop their files from being deleted. Affected NHS trusts had to shut down their IT systems to try to protect them, which meant they could not accept incoming calls, scheduled appointments had to be cancelled and working staff had to use pen and paper.

This hack was linked to ‘ransomware’ - when hackers break into computers and only allow their owners back in when they pay enough money.

Note: **Bitcoin is a cryptocurrency/digital payment system that allows peer-to-peer transactions to take place between users directly, meaning that central authorities or banks are not needed.*

Why personal data is valuable for digital business

While there is naturally much concern among consumers about their online privacy, information about these consumers is very useful to marketers. Through understanding their customers’ needs, characteristics and behaviours it is possible to create more personalised, targeted communications, which help increase sales. How should marketers respond to this dilemma? An obvious step is to ensure that marketing activities are consistent with the latest data protection and privacy laws. However, different interpretations of the law are possible, so companies have to make their own business decision, based on the business benefits of applying particular marketing practices against the financial and reputational risks of compliance.

What are the main information types used by the Internet marketer that are governed by ethics and legislation? The information needs are:

- 1 Contact information.** This is the name, postal address, email address and, for B2B companies, website address.
- 2 Profile information.** This is information about a customer’s characteristics that can be used for segmentation. It includes age, sex and social group for consumers, and company characteristics and individual role for business customers. (The specific types of information and how they are used is referenced in Chapters 2 and 7.) Research by Ward *et al.* (2005) found that consumers in Australia were willing to give non-financial data if there was an appropriate incentive.

3 Platform usage information. Through web analytics systems it is possible to collect information on the type of computer, browser and screen resolution used by site users (see Chapter 9).

4 Behavioural information (on a single site). This is purchase history, but also includes the whole buying process. Web analytics (Chapter 10) can be used to assess the web and email content accessed by individuals.

5 Behavioural information (across multiple sites). This can show how a user accesses multiple sites and responds to ads across sites. Typically, this data is collected and used using an anonymous profile based on cookie or IP addresses that are not related to an individual. Complete Activity 4.3 to find out more about behavioural targeting and to form an opinion of whether it should be regulated more.

Activity 4.3

Attitudes to behavioural ad targeting

Imagine you are a web user who has just found out about behavioural targeting.

Use the information sources provided by the industry to form an opinion. Discuss with others studying your course whether you believe behavioural ad targeting should be banned (as has been proposed in some countries) or whether it is acceptable.

Suggested information sources:

- Internet Advertising Bureau guide to behavioural advertising and privacy (www.youronlinechoices.com). If you take a look at this page you will see the number of ad networks that users can potentially be targeted on. How many are you targeted by and how do you feel about it? See www.youronlinechoices.com/uk/your-ad-choices.
- Digital Analytics Association (www.digitalanalyticsassociation.org/?page=privacy). A trade association of online tracking vendors.
- Google ‘Interest-based advertising’: How it works (www.google.com/ads/preferences/html/about.html), which explains the process and benefits as follows:

Google is one of 100+ online ad networks. Google’s ad network consists of Google services, like Search, YouTube, and Gmail, as well as 2+ million non-Google websites and apps that partner with Google to show ads.

Here’s how an ad network works:

Barbara, an avid at-home chef, owns a blog where she writes about cooking. She's called a publisher. In order to make money from her website, she works with Google AdSense to put ad spaces on her blog. In turn, Google pays her money for that ad space.

Joe, a personal trainer, wants to advertise his private training lessons. He's called an advertiser. Joe can use Google AdWords to create ads and show them to people who are interested in fitness. If you visit a lot of pages about exercise workouts, you may have seen Joe's ads because they're relevant to that topic; but you could also see his ads when you visit Barbara's blog because your web activity suggests an interest in fitness.

Table 4.3 summarises how these different types of customer information are collected and used. The main issue to be considered by the marketer is disclosure of the types of information collection and tracking data used. The first two types of information in the table are usually readily explained through a privacy statement at the point of data collection, which is usually a legal requirement. However, with the other types of information, users would only know they were being tracked if they have cookie monitoring software installed or if they seek out the privacy statement of a publisher that offers advertising.

Ethical issues concerned with personal information ownership have been summarised by Mason (1986) into four areas:

- 1 Privacy - what information is held about the individual?
- 2 Accuracy - is it correct?
- 3 Property - who owns it and how can ownership be transferred?
- 4 Accessibility - who is allowed to access this information, and under which conditions?

Fletcher (2001) provides an alternative perspective, raising these issues of concern for both the individual and the marketer:

- Transparency - who is collecting what information and how do they disclose the collection of data and how will it be used?
- Security - how is information protected once it has been collected by a company?
- Liability - who is responsible if data are abused?

All of these issues arise in the next section, which reviews actions marketers should take to achieve privacy and trust.

Data protection legislation is enacted to protect the individual, to protect their privacy and to prevent misuse of their personal data. Indeed, the first

article of the European Union directive 95/46/EC (see https://ec.europa.eu/info/privacy-policy_en) specifically refers to personal data. It says:

Table 4.3

Types of information collected online and related technologies

Type of information	Approach and technology used to capture and use information
1 Contact information	• Online forms - online forms linked to customer database • Cookies - used to remember a specific person on subsequent visits
2 Profile information, including personal information	• Online registration forms collect data on social networks and retail sites • Cookies can be used to assign a person to a particular segment by linking the cookie to a customer database record and then offering content consistent with their segment
3 Access platform usage	• Web analytics system - identification of computer type, operating system and screen characteristics based on http attributes of visitors
4 Behavioural information on a single site	• Purchase histories are stored in the sales order database. Web analytics store details of IP addresses against clickstreams of the sequence of web pages visited • Web beacons in email marketing - a single-pixel GIF is used to assess whether a reader has opened an email • First-party cookies are also used for monitoring visitor behaviour during a site visit and on subsequent visits

5 Behavioural
information
across multiple
sites

- Malware can collect additional information such as passwords
- Third-party cookies are used for assessing visits from different sources such as online advertising networks or affiliate networks (Chapter 7)
- Search engines such as Google use cookies to track advertising through its AdWords pay-per-click program
- Services such as Hitwise (**www.hitwise.com/gb**) monitor IP traffic to assess site usage of customer groups within a product category

Member states shall protect the fundamental rights and freedoms of natural persons [i.e. a named individual at home or at work], and in particular their right to privacy with respect to the processing of personal data.

In the UK, the enactment of the European legislation is the new General Data Protection Regulation (GDPR), which is discussed further in Box 4.1. It is managed by the ‘Information Commissioner’ and summarised at <https://ico.gov.uk>. This law is typical of what has evolved in many countries to help protect personal information. Any company that holds personal data on computers or on file about customers or employees must be registered with the data protection registrar (although there are some exceptions that may exclude small businesses). This process is known as **notification**. The new GDPR includes guidance on:

- consent;
- transparency;
- profiling;
- high-risk processing;
- certification;
- administrative fines;
- breach notification;
- data transfers.

Detailed guidance on each of the key themes can be found on the Information Commissioner’s Office website (<https://ico.org.uk>).

Notification

The process whereby companies register with the data protection registrar to inform about their data holdings.

Worldwide regulations on privacy and electronic communications

In the USA, there is a privacy initiative aimed at education of consumers and businesses (www.ftc.gov/site-information/privacy-policy), and in January 2004, a federal law known as the CAN-SPAM Act (www.consumer.ftc.gov/articles/0038-spam) was introduced to assist in the control of unsolicited email. Guidance also includes ways that people can protect their computers from cyber-attacks and how to detect and get rid of malware.

Anti-spam legislation in other countries can be accessed:

- Australia is implementing a new '@notifiable Data Breaches' (NDB) scheme from February 2018 (www.privacy.gov.au)
- Canada has a privacy Act (www.priv.gc.ca/en/privacy-topics/privacy-laws-in-canada/the-privacy-act)
- New Zealand Privacy Commissioner (www.privacy.org.nz)
- Summary of all countries (www.privacyinternational.org and www.spamlaws.com).

Box 4.4

UK and European email marketing law

An example of European privacy law that covers use of email, SMS, marketing calls and cookies for marketing is the Privacy and Electronic Communications (EC Directive) Regulations 2003. Also known as PECR, or 'E-privacy Directive', the regulations have been amended four times - its most recent update was in May 2016.

Consumer marketers in the UK also need to heed the Code of Advertising Practice from the Advertising Standards Agency (ASA CAP code, www.cap.org.uk/Advertising-Codes.aspx). This has broadly similar aims and places similar restrictions on marketers to the PECR law.

Privacy and Electronic Communications Regulations Act

This is a law intended to control the distribution of email and other online communications.

The PECR law is a surprisingly accessible and common-sense document - many marketers will be practising similar principles already. Regulation 22 relates to email communications. The PECR law:

1 Applies to consumer marketing using email, texts, picture messages, video messages, voicemails and direct messages via social media. 22(1) applies to 'individual subscribers', which currently means consumers, although the Information Commissioner has stated that this may be reviewed in future to include business subscribers as is the case in countries such as Italy and Germany.

2 Is an 'opt-in' regime. The directive talks about 'soft opt-in', about which the ICO states: *The term 'soft opt-in' is sometimes used to describe the rule about existing customers. The idea is that if an individual bought something from you recently, gave you their details, and did not opt out of marketing messages, they are probably happy to receive marketing from you about similar products or services even if they haven't specifically consented. However, you must have given them a clear chance to opt out - both when you first collected their details, and in every message you send.*

The soft opt-in rule means you may be able to email or text your own customers, but it does not apply to prospective customers or new contacts (e.g. from bought-in lists). It also does not apply to non-commercial promotions (e.g. charity fundraising or political campaigning).

Opt-in

A customer proactively agrees or consents to receive further communications.

The approach required by the law has been used by many organisations for some time, as sending unsolicited emails was thought to be unethical and also not in the best interests of the company because of the risk of annoying customers. In fact, the law

conforms to an established approach known as ‘**permission marketing**’, a term coined by US commentator Seth Godin (1999) (see Chapter 8).

Permission marketing

Customers agree (opt-in) to be involved in an organisation’s marketing activities, usually as a result of an incentive.

Box 4.5

Understanding cookies

A ‘cookie’ is a data file placed on your computer that identifies the individual computer.

Types of cookies

The main cookie types are:

- **Persistent cookies** - these stay on a user’s computer between multiple sessions and are most valuable for marketers to identify repeat visits to sites.
- **Temporary or session cookies** - single session - useful for tracking within pages of a session such as on an e-commerce site.
- **First-party cookies** - served by the site you are currently using - typical for e-commerce sites. These can be persistent or session cookies.
- **Third-party cookies** - served by another site to the one you are viewing - typical for portals where an ad network will track remotely or where the web analytics software places a cookie. These are typically persistent cookies.

Cookies are stored as individual text files in a directory on a personal computer. There is usually one file per website. For example: dave_chaffey@british-airways.txt contains encoded information as follows:

```
FLT_VIS'K:bapzRnGdxBYUU'D:Jul-25-1999' british-airways.com/0 425259904 293574 26 1170747936 29284034*
```

The information is essentially just an identification number and a date of the last visit, although other information can be stored.

Cookies are specific to a particular browser and computer, so if a user connects from a different computer or starts using a different browser, the website will not identify him or her as a similar user.

Browser suppliers are keen to protect users' online privacy as part of their value proposition. 2008 saw the launch of Internet Explorer 8 and its InPrivate feature and Google Chrome with its Incognito mode. These are intended for temporary use for a session where someone is browsing sites they don't want others in the family or office to know about. They won't delete previous cookies, but new permanent cookies won't be created in these situations.

What are cookies used for?

Common marketing applications of cookies include:

A *Personalising a site for an individual.* Cookies are used to identify individual users and retrieve their preferences from a database.

Retailers such as Amazon can use cookies to recognise returning visitors and recommend related items. This approach generally has benefits for both the individual (it is a hassle to sign in again and relevant content can be delivered) and the company (tailored marketing messages can be delivered).

B *Online ordering systems.* This enables a site such as Tesco.com to track what is in your basket as you order different products.

Persistent cookies

Cookies that remain on the computer after a visitor session has ended. Used to recognise returning visitors.

Session cookies

Cookies used to manage a single visitor session.

First-party cookies

Served by the site you are currently using -typical for e-commerce sites.

Third-party cookies

Served by another site to the one you are viewing -typical for portals where an ad network will track remotely or where the web analytics software places a cookie.

- C** *Tracking within a site.* Web analytics software such as Webtrends (www.webtrends.com) relies on persistent cookies to find the proportion of repeat visitors to a website. Webtrends and other tools increasingly use first-party cookies since they are more accurate and less likely to be blocked.
- D** *Tracking across sites.* Advertising networks use cookies to track the number of times a particular computer user has been shown a particular banner advertisement; they can also track adverts served on sites across an ad network.

Affiliate networks and pay-per-click ad networks such as Google AdWords will also use cookies to track through from a click on a third-party site to a sale or lead being generated on a destination or merchant site. These approaches tend to use third-party cookies. For example, if conversion tracking is enabled in Google AdWords, Google sets a cookie when a user clicks through on an ad. If this user buys the product, then the purchase confirmation page will include script code supplied by Google to make a check for a cookie placed by Google. If there is a match, the sale is attributed to AdWords. An alternative approach is that different online campaigns have different tracking parameters or codes within the links through to the destination site and when the user arrives on a site from a particular source, this is identified and a cookie is set. When purchase confirmation occurs, this can then be attributed back to the original source and the particular referrer.

Owing to the large investments now made in pay-per-click and affiliate marketing, this is the area of most concern for marketers since the tracking can become inaccurate. However, sale should still occur even if the cookies are blocked or deleted, so the main consequence is that the ROI of online advertising or pay-per-click marketing may look lower than expected. In affiliate marketing, this phenomenon may benefit the marketer in that payment may not need to be made to the third party if a cookie has been deleted (or blocked) between the time of original clickthrough and sale.

Privacy issues with cookie use

The problem for Internet marketers is that, despite these important applications, blocking by browsers or security software and deletion by users has increased dramatically.

Many distrust cookies since they indicate that ‘big brother’ is monitoring your actions. Others fear that their personal details or

credit card details may be accessed by other websites. This is very unlikely since all that cookies contain is a short identifier or number that is used to link you to your record in a database. In most cases, the worst that someone who gets access to your cookies can do is to find out which sites you have been visiting.

Legal constraints on cookies

The PECR law, particularly its update in May 2011, gives companies guidance on their use of cookies. The original 2003 law states: ‘a person shall not use an electronic communications network to store information, or to gain access to information stored, in the terminal equipment of a subscriber or user unless the following requirements are met’.

The requirements are:

- (a) the user is provided with clear and comprehensive information about the purposes of the storage of, or access to, that information; and
- (b) the user is given the opportunity to refuse the storage of, or access to, that information.

Requirement (a) suggests that it is important that there is a clear **privacy statement** and (b) suggests that explicit opt-in to cookies is required - this is what we now see on many sites following the implementation of the law in 2013. In other words, on the first visit to the site, a box has to be ticked to agree to the use of cookies. This was thought by many commentators to be a curious provision, since this facility is already available in the web browser.

Privacy statement

Information on a website explaining how and why an individual’s data are collected, processed and stored.

Viral marketing

In an online context, ‘Forward to a friend’ email used to transmit a promotional message from one person to another; ‘online word-of-mouth’.

Viral email marketing

One widespread business practice that is not covered explicitly in the PECR law is ‘**viral marketing**’, because organisations cannot be sure that friends actually agreed to give them their details (as discussed in Chapter 10).

Several initiatives are being taken by industry groups to reassure web users about threats to their personal information. The first of these is TrustArc (**www.trustarc.com**); validators will audit the site to check each site’s privacy statement to see whether it is valid. For example, a privacy statement will describe:

- how a site collects information;
- how the information is used;
- who the information is shared with;
- how users can access and correct information;
- how users can decide to deactivate themselves from the site or withhold information from third parties.

Another initiative, aimed at *education*, is GetSafeOnline (**www.getsafeonline.org**), which is a site created by government and business to educate consumers to help them understand and manage their online privacy and security.

Government initiatives will also define best practice in this area and may introduce laws to ensure guidelines are followed.

We conclude this section on privacy legislation with a checklist summary of the practical steps that are required to audit a company’s compliance with data protection and privacy legislation. Companies should:

- 1** Follow privacy and consumer protection guidelines and laws in all local markets. Use local privacy and security certification where available.
- 2** Inform the user, before asking for information:
 - who the company is;
 - what personal data are collected, processed and stored;
 - what is the purpose of collection.
- 3** Ask for consent for collecting sensitive personal data, and it is good practice to ask before collecting any type of data.
- 4** Reassure customers by providing clear and effective privacy statements and explaining the purpose of data collection.
- 5** Let individuals know when ‘cookies’ or other covert software is used to collect information about them.
- 6** Never collect or retain personal data unless they are strictly necessary for the organisation’s purposes. If extra information is required for

marketing purposes, this should be made clear and the provision of such information should be optional.

- 7 Amend incorrect data when informed and tell others. Enable correction on-site.
- 8 Only use data for marketing (by the company, or third parties) when a user has been informed that this is the case and has agreed to this. (This is opt-in.)
- 9 Provide the option for customers to stop receiving information. (This is opt-out.)
- 10 Use appropriate security technology to protect the customer information on their site.

Other e-commerce legislation

Sparrow (2000) identified eight areas of law that need to concern online marketers. Although laws have been refined since that time, this is still a useful framework.

1 Marketing your e-commerce business

Sparrow used this category to refer to purchasing a **domain name** for a website, but other legal constraints now also fall under this category.

Domain name

The domain name refers to the name of the web server and it is usually selected to be the same as the name of the company.

Accessibility legislation

Legislation intended to protect users of websites who have disabilities, including visual disability.

Domain name registration

Most companies are likely to own several domains, perhaps for different product lines, countries or for specific marketing campaigns. Domain name disputes can arise when an individual or company has registered a domain name that another company claims they have the right to (see Chapter 3).

A related issue is brand and trademark protection. Online brand reputation management and alerting software tools offer real-time alerts

when comments or mentions about a brand are posted online. Some basic tools are available, including:

- Google Alerts (www.google.com/alerts) and Giga Alert (www.gigaalert.com), which will alert companies when any new pages appear that contain a search phrase such as your company or brand names.
- Copyscape (www.copyscape.com), which is used for locating duplicates of content that may arise from plagiarism.

Accessibility law

Laws relating to discriminating against disabled users who may find it more difficult to use websites because of audio, visual or motor impairment are known as **accessibility legislation**. This is often contained within disability and discrimination Acts. In the UK, the relevant Act is the Equality Act 2010.

Web accessibility refers to enabling all users of a website to interact with it, regardless of disabilities they may have or the web browser or platform they are using. The visually impaired or blind are the main audience that designing an accessible website can help. (Coverage of the requirements that accessibility places on web design are covered in Chapter 9.)

In relation to the Equality Act 2010, many visually impaired visitors use speech synthesiser software to read the text in the HTML code of web pages and translate it into audible speech. However, if a website includes images that contain text as part of the pre-rendered picture file, it might be unreadable by the software. If the text is not embedded in the image properties (using an alt tag) or alternatively available in text somewhere on the website, it could render the content inaccessible to visually impaired users, and could therefore be discriminatory for the purposes of the 2010 Act.

Internet standards organisations such as the World Wide Web Consortium have been active in promoting guidelines for web accessibility (www.w3.org/WAI). The W3 site contains useful guidance regarding web content accessibility.

In 2000, Bruce Maguire, a blind Internet user who uses a refreshable Braille display, brought a case against the Sydney Organising Committee for the Olympic Games. Maguire successfully demonstrated deficiencies in the site that prevented him using it adequately, which were not successfully remedied. He was protected under the 1992 Australian Disability Discrimination Act and the defendant was ordered to pay AU\$20,000. This

was the first case brought in the world, and it showed organisations in all countries that they could be guilty of discrimination if they did not audit their sites against accessibility guidelines. Discrimination Acts are now being amended in many countries to specifically refer to online discrimination.

2 Forming an electronic contract (contract law and distance-selling law)

We will look at two aspects of forming an electronic contract: the country of origin principle and distance-selling laws.

Country of origin principle

The contract formed between a buyer and a seller on a website will be subject to the laws of a particular country. In Europe, many such laws are specified at the regional (European Union) level, but are interpreted differently in different countries. This raises the issue of the jurisdiction in which law applies - is it that for the buyer or the seller (merchant)? In 2002, attempts were made by the EU to adopt the '*country of origin principle*', where the law for the contract will be that where the merchant is located. The Out-Law site produced by lawyers Pinsent Mason gives more information on jurisdiction (www.out-law.com/page-479).

Distance-selling law

Sparrow (2000) advises different forms of disclaimers to protect the retailer. For example, if a retailer made an error with the price, or the product details were in error, then the retailer is not bound to honour a contract, since it was only displaying the products as 'an invitation to treat', not a fixed offer.

One digital retailer offered televisions for £2.99 due to an error in pricing a £299 product. Numerous purchases were made, but the e-commerce company claimed that a contract had not been established simply by accepting the online order, although the customers did not see it that way! Unfortunately, no legal precedent was established since the case did not come to trial.

Disclaimers can also be used to limit liability if the website service causes a problem for the user, such as a financial loss resulting from an action based on erroneous content. Furthermore, Sparrow suggests that terms and

conditions should be developed to refer to issues such as timing of delivery and damage or loss of goods.

The Consumer Protection (Distance Selling) Regulations 2000 also have a bearing on e-commerce contracts in the European Union. It was originally developed to protect people using mail-order (by post or phone). The main requirements are that e-commerce sites must contain easily accessible content that clearly states that *before an order is placed* a company must provide:

- its business name, contact details and address;
- a description of its goods or services;
- the price, including all taxes;
- how a customer can pay;
- delivery arrangements, costs and how long goods will take to arrive;
- the minimum length of their contract and billing period;
- conditions for ending contracts;
- how customers can cancel and when they lose the right to cancel;
- if they will still need to pay reasonable costs for using a service after they cancel;
- a standard cancellation form, if they can cancel;
- conditions for money given as a deposit or financial guarantees;
- what digital content does (for example, the language it's in or how to update software);
- the cost of using phone lines or other communication to complete the contract where it will cost more than the basic rate.

As well as these rules for distance selling, there are additional regulations for selling online. These include:

- making it clear to customers they have to pay when they place an order (for example, a 'pay now' button);
- displaying clearly how customers can pay and including delivery options and costs;
- listing the steps involved in a customer placing an order;
- taking reasonable steps to let customers correct errors in their order;
- letting customers know what languages are available;
- making sure customers can store and reproduce the terms and conditions, for example these can be downloaded and printed off;
- giving a contact email address;
- giving a VAT number (if your business is registered for VAT);

- explaining the cost of using phone lines or other communication to complete the contract where it will cost more than the basic rate;
- giving a description of your goods, services or digital content - include as much information as you can;
- giving the total price or how this will be calculated;
- detailing the total delivery cost or how this will be calculated;
- telling them the minimum length of their contract;
- giving any conditions for ending rolling contracts or contracts with no clear end date.

Once an order has been placed, the consumer has a ‘right to cancel’ and companies must let their customers know that they can cancel their order up to 14 days after it has been delivered (without the need to provide a reason for the return). However, this rule is different for selling digital services that can be downloaded or streamed (such as computer games, books, mobile phone apps, films, music, etc.). In this case, digital businesses must:

- get the customer to confirm before they download or stream content that they are aware they’ll lose their 14-day right to cancel;
- get the customer to agree to an instant download before they start the download;
- include this information in a confirmation of the contract, along with other pre-contract information.

If a company does not follow these rules, the customer will keep their 14-day right to cancel without paying.

The Out-Law site also gives information on distance selling (www.out-law.com/page-424).

3 Making and accepting payment

For transactional e-commerce sites, the relevant laws are those referring to liability between a credit card issuer, the merchant and the buyer. Merchants need to be aware of their liability for different situations, such as the customer making a fraudulent transaction.

4 Authenticating contracts concluded over the Internet

'Authentication' refers to establishing the identity of the purchaser. For example, to help prove a credit card owner is the valid owner, many sites now ask for a three-digit authentication code. This helps reduce the risk of someone who has, for instance, found a credit card number using it to buy fraudulently. Using digital signatures is another method of helping to prove the identity of purchasers (and merchants).

5 Email risks

One of the main risks with email is infringing an individual's privacy. Specific laws have been developed in many countries to reduce the volume of spam, as explained in the previous section on privacy.

A further issue with email is defamation, where someone makes a statement that is potentially damaging to an individual or a company. In 2000, a statement was made on the Norwich Union Healthcare internal email system in England that falsely alleged that rival company WPA was under investigation and that regulators had forced it to stop accepting new business. The posting was published on the internal email system, but it was not contained and became more widespread. WPA sued for libel and the case was settled out of court when Norwich Union paid £415,000 to WPA. Such cases are relatively rare.

6 Protecting intellectual property (IP)

Intellectual property rights (IPR) protect designs, ideas and inventions and include content and services developed for e-commerce sites. Copyright law is designed to protect authors, producers, broadcasters and performers through ensuring that they see some returns from their works every time they are experienced. The European Directive of Copyright (2001/29/EC) came into force in many countries in 2003; it covers new technologies and approaches such as streaming a broadcast via the Internet.

IP can be misappropriated in two senses online. First, an organisation's IP may be misappropriated: it is relatively easy to copy web content and republish it on another site. Reputation management services can be used to assess how an organisation's content, logos and **trademarks** are being used on other websites. Tools such as Copyscape (www.copy-scape.com) can be used to identify infringement of content where it is 'scraped' off other sites using 'screenscrapers'.

Intellectual property rights (IPR)

Protect the intangible property created by corporations or individuals that is protected under copyright, trade secret and patent laws.

Trademark

A trademark is a unique word or phrase that distinguishes your company. The mark can be registered as plain or designed text, artwork or a combination.

Secondly, an organisation may misappropriate content inadvertently. Some employees may infringe copyright if they are not aware of the law. Additionally, some methods of designing transactional websites have been patented. For example, Amazon has patented its ‘One-click’ purchasing option.

7 Advertising on the Internet

Advertising standards that are enforced by independent agencies such as the UK’s Advertising Standards Authority Code also apply in the Internet environment. They are traditionally less strongly policed, leading to more ‘edgy’ creative executions online that are intended to have a viral effect.

The Out-Law site gives more information (www.out-law.com/page-5604).

8 Data protection

Data protection has been referred to in depth in the previous section.

Environmental and green issues related to Internet usage

The future state of our planet is a widely held social concern. Technology is generally seen as detrimental to the environment, but there are some arguments that e-commerce and digital communications can have

environmental benefits. Companies can sometimes also make cost savings while positioning themselves as environmentally concerned.

Potentially, online shopping can also have environmental benefits. Imagine a situation where we no longer travelled to the shops, and 100% of items were efficiently delivered to us at home or at work. This would reduce traffic considerably! Although this situation is inconceivable, online shopping is growing considerably and it may be having an impact. Research by the Internet Media in Retail Group (www.imrg.org) shows the growing importance of e-commerce in the UK, where online retail sales exceeded £130 billion in 2016. In 2007 IMRG launched a Go Green, Go Online campaign in which it identified six reasons why it believes e-commerce is green:

- 1 Fewer vehicle-miles.** Shopping is the most frequent reason for car travel in the UK, accounting for 20% of all trips, and for 12% of mileage. A study by the Swiss online grocer LeShop.ch calculated that each time a customer decides to buy online rather than go shopping by car, 3.5 kg of CO₂ emissions are saved.
- 2 Lower inventory requirements.** The trend towards pre-selling online - i.e. taking orders for products before they are built, as implemented by Dell - avoids the production of obsolete goods that have to be disposed of if they don't sell, with associated wastage in energy and natural resources.
- 3 Fewer printed materials.** Online e-newsletters and brochures replace their physical equivalent, thus saving paper and distribution costs.
- 4 Less packaging.** Although theoretically there is less need for fancy packaging if an item is sold online, this argument is less convincing, since most items such as software or electronic items still come in packaging. At least those billions of music tracks downloaded don't require any packaging or plastic.
- 5 Less waste.** Across the whole supply chain of procurement, manufacturing and distribution, the Internet can help reduce product and distribution cycles. Some even claim that auction services such as eBay and Amazon Marketplace can promote recycling and reuse.
- 6 Dematerialisation.** Better known as 'digitisation', this is the availability of products such as software, music and video in digital form.

But how much could e-shopping reduce greenhouse gas emissions? A study by Finnish researchers Siikavirta *et al.* (2003), limited to e-grocery shopping, has suggested that it is theoretically possible to reduce the greenhouse gas emissions generated by grocery shopping by 18% to 87% compared with the

situation in which household members go to the store. The researchers estimated that this would lead to a reduction of all Finland's greenhouse gas emissions by as much as 1%, but in reality the figure is much lower, since only 10% of grocery shopping trips are online.

Cairns (2005) has completed a study for the UK that shows the importance of grocery shopping - she estimates that car travel for food and other household items represents about 40% of all UK shopping trips by car, and about 5% of all car use. She considers that a direct substitution of car trips by van trips could reduce vehicle-km by 70% or more. A broader study by Ahmed and Sharma (2006) used value chain analysis to assess the role of the Internet in changing the amount of energy and materials consumed by businesses for each part of the supply chain. However, no estimates of savings have been made.

Taxation

How to change tax laws to reflect globalisation through the Internet is a problem that many governments have grappled with. The fear is that the Internet may cause significant reductions in tax revenues to national or local governments if existing laws do not cover changes in purchasing patterns.

Government revenue is normally protected since, taking the UK as an example, when goods are imported from a non-EU territory, an excise duty is charged at the same rate as VAT. While this can be levied for physical goods imported by air and sea, it is less easy to administer for services. Here agreements have to be reached with individual suppliers.

In Europe, the use of online betting in lower-tax areas such as Gibraltar has resulted in lower revenues to governments in the countries where consumers would have formerly paid gaming tax to the government via a betting shop. Large UK bookmakers such as William Hill and Victor Chandler are offering Internet-based betting from 'offshore' locations. Retailers have set up retail operations on Jersey to sell items such as DVDs and CDs that cost less than an £18 Low Value Consignment Relief (LVCR) threshold, so no VAT or excise duty needs to be paid.

This trend has been dubbed LOCI, or 'location-optimised commerce on the Internet' by Mougayer (1998).

Tax jurisdiction

Tax jurisdiction determines which country gets tax income from a transaction. Under the pre-electronic commerce system of international tax treaties, the right to tax was divided between the country where the enterprise that receives the income is resident ('residence country') and that from which the enterprise derives that income ('source country'). In 2002, the EU enacted two laws (Council Directive 2002 /38/EC and Council Regulation (EC) 792 /2002) on how value added tax (VAT) was to be charged and collected for electronic services. These were in accordance with the principles agreed within the framework of the Organisation for Economic Co-operation and Development (OECD) at a 1998 conference in Ottawa. These principles establish that the rules for consumption taxes (such as VAT) should result in taxation in the jurisdiction where consumption takes place (the country of origin principle referred to above). These laws helped to make European countries more competitive in e-commerce.

EU VAT rules changed from 1 January 2015. General rules are as follows. If the supplier (residence) and the customer (source) are both in the UK, VAT will be chargeable:

- exports to private customers in the EU will attract either UK VAT or local VAT;
- exports outside the EU will be zero-rated (but tax may be levied on imports);
- imports into the UK from the EU or beyond will attract local VAT, or UK import tax when received through customs (for which overseas suppliers need to register);
- services attract VAT according to where the supplier is located. This is different from products and causes anomalies if online services are created.

For additional information visit: <https://www.gov.uk/guidance/the-vat-rules-if-you-supply-digital-services-to-private-consumers>.

Freedom-restrictive legislation

Although governments enact legislation in order to protect consumer privacy on the Internet, some individuals and organisations believe that legislation may also be too restrictive. In the UK, a new Telecommunications Act and Regulation of Investigatory Powers Act (RIP) took several years to enact since it involved giving security forces the ability to monitor all communications passing through ISPs. This was fiercely contested due to cost burdens placed on infrastructure providers and in particular ISPs, and of course many citizens and employees were not happy about being monitored either!

Freedom House (www.freedomhouse.org) is a human rights organisation created to reduce censorship. It notes in a report (Freedom House, 2000) that governments in many countries, both developed and developing, are increasingly censoring online content. Only 69 of the countries studied have completely free media, while 51 have partly free media and 66 countries suffer heavy government censorship. Censorship methods include implementing licensing and regulation laws, applying existing print and broadcast restrictions to the Internet, filtering content and direct censoring after dissemination. In Asia and the Middle East, governments frequently cite protection of morality and local values as reasons for censorship. Even the US government tried to control access to certain Internet sites with the Communications Decency Act in 1996, but this was unsuccessful. Refer to Activity 4.4 to discuss these issues.

communications

Government and company monitoring of electronic

Purpose

To examine the degree to which governments and organisations should monitor electronic communications.

Activity

Write down the arguments for and against each of these statements; debate individually or as a group to come to a consensus:

- 1 'This house believes that organisations have no right to monitor employees' use of email or the web.'

2 ‘This house believes that governments have no right to monitor all Internet-based communications passing through ISPs.’

What action do you think managers should take regarding monitoring employee access? Should laws be set at a national level or should action be taken by individual companies?

Economic and competitive factors

Electronic economy (e-economy)

The dynamic system of interactions between a nation's citizens, businesses and government that capitalise upon online technology to achieve a social or economic good

Globalisation

The increase of international trading and shared social and cultural values.

Localisation

Tailoring of website information for individual countries or regions.

The economic health and competitive environment in different countries will determine their e-commerce potential. Managers developing e-commerce strategies in multinational companies will initially target the countries that are most developed in the use of the technology. A comprehensive framework for assessing an ‘**e-economy**’ has been developed by Booz Allen Hamilton (2002). The report authors define the e-economy as:

the dynamic system of interactions between a nation's citizens, the businesses and government that capitalise upon online technology to achieve a social or economic good.

A review of how different governments have tried to improve the health of their e-economies is presented later in this chapter.

Knowledge of different economic conditions is also part of budgeting for revenue from different countries. In China there is regulation of foreign ownership of Internet portals and ISPs that could hamper development.

The trend towards globalisation can arguably insulate a company to some extent from fluctuations in regional markets, but is, of course, no protection from a global recession. Managers can also study e-commerce in leading countries to help predict future e-commerce trends in their own country.

Globalisation refers to the move towards international trading in a single global marketplace and also to blurring of social and cultural differences between countries. (We saw in Chapter 1 that, for both SMEs and larger organisations, electronic communications give the opportunity for increasing the reach of the company to achieve sales around the world.)

Quelch and Klein (1996) point out some of the obvious consequences for organisations that wish to compete in the global marketplace; they say a company must have:

- a 24-hour order-taking and customer service response capability;
- regulatory and customs-handling experience to ship internationally;
- in-depth understanding of foreign marketing environments to assess the advantages of its own products and services.

Language and cultural understanding may also present a problem, and an SME is unlikely to possess the resources to develop a multi-language version of its site or employ staff with sufficient language skills. Similarly, Quelch and Klein (1996) note that the growth of the use of the Internet for business will accelerate the trend of English becoming the lingua franca of commerce. Tailoring e-commerce services for individual countries or regions is referred to as **localisation**. A website may need to support customers from a range of countries with:

- different product needs;
- language differences;
- cultural differences.

The importance of localisation is highlighted by a report by the Common Sense Advisory (2002). According to them, for many US Fortune 500 firms, non-US revenue - or what they refer to as 'xenorevenue' - accounts for 20 to more than 50% of their global income. A similar situation is likely to exist for non-US multinational organisations.

It may be necessary to vary:

- the language that content is provided in;
- tone and style of copy;
- site design - certain colours or images may be unsuitable or less effective in some countries;
- range of product offerings;

- product pricing;
- currency and payment options;
- local customer service/contact points;
- dates and times presented in local formats.

Promotional offers used to encourage acquisition of customer email addresses (see Chapter 8), but this may be affected by local data protection, taxation and trading laws.

Localisation will address all these issues. In order to be effective, a website often needs more than translation, since different promotion concepts may be needed for different countries. For example, Durex (www.durex.com) localises content for many countries since language and the way in which sexual issues can be discussed vary greatly. 3M (www.3m.com), however, only localises content in local language for some countries such as France, Germany and Spain. For large multinational companies, localisation is a significant strategic issue for e-commerce. The decision on the level of localisation will need to be taken on a regional or country basis to prioritise different countries according to the size of the market and the importance of having localisation.

Singh and Pereira (2005) provide an evaluation framework for the level of localisation:

- 1 Standardised websites (not localised).** A single site serves all customer segments (domestic and international).
- 2 Semi-localised websites.** A single site serves all customers; however, there will be contact information about foreign subsidiaries available for international customers.
- 3 Localised websites.** Country-specific websites with language translation for international customers, wherever relevant.
- 4 Highly localised websites.** Country-specific websites with language translation; they also include other localisation efforts in terms of time, date, postcode, currency formats, etc.
- 5 Culturally customised websites.** Websites reflecting complete ‘immersion’ in the culture of target customer segments.

Deciding on the degree of localisation is a difficult challenge for managers, since while it has been established that local preferences are significant, it is often difficult to balance costs against the likely increase or conversion rate. In a survey published in *Multilingual* (2008), 88% of managers at multinational companies stated that localisation is a key issue, with 76% of them saying that it is important specifically for international customer

satisfaction. Yet, over half of these respondents also admitted that they allocate only between 1% and 5% of their overall budget for localisation.

An indication of the importance of localisation in different cultures has been completed by Nitish *et al.* (2006) for the German, Indian and Chinese cultures, assessing localised websites in terms not only of content, but of cultural values such as collectivism, individualism, uncertainty avoidance and masculinity. The survey suggests that, without cultural adaptation, confidence or flow falls, thus resulting in lower purchase intent.

According to Translate Media (2013), a talk by Sri Sharma (Net Media Planet's Managing Director) at the event 'Going Global - maximising the international growth opportunity through Paid Search', Net Media Planet's clients witnessed an average 20% increase in conversion when landing pages and ads were translated into the local language and a 70% increase when their websites were fully localised - with all content translated in the local language and products offered in the local currency.

Sharma also said that when his company's retail client, Karen Millen, wanted to expand internationally, a localised PPC search strategy and YouTube campaign was delivered. The effect of localisation on conversion in other English-speaking countries (such as the USA) was very interesting. They reported that businesses seeking expansion opportunities in the USA were far more successful if they used 'Americanisms' such as the use of a 'z' rather than an 's' in words like 'specialise' and 'organise'. They found that simply changing the text 'autumn' to 'fall' in ads and on-site copy increased conversion rates for Karen Millen in the US by 25%.

These conversion rates highlight the importance of website localisation for organisations who want to expand into new territories.

A further aspect of localisation to be considered is search engine optimisation (SEO, see Chapter 8), since sites that have local-language versions will be listed more prominently by local versions of the search engines. Many specialist companies have been created to help manage these content localisation issues for companies - for example, agency Web Certain maintains a forum advising on localisation (<http://webcertain.com/solutions/multilingual-seo.html>).

To explore the implications of micro-localisation vs globalisation for consumer-orientated companies, refer to Case study 4.1.

micro-localisation vs
globalisation based on consumer attitudes

Recently, we have seen major political changes (the UK's vote for Brexit and the inauguration of Donald Trump as President of the United States), which many claim have reflected people's change in attitude towards globalisation.

Research has shown that the main demographic groups who wanted Brexit have been outside of the workforce - i.e. pensioners, middle-aged homemakers, men with low educational qualifications receiving benefits, etc. In fact, detailed data analysis indicates that cultural and ethnic attitudes, not direct economic motivations, have been the main reasons behind 'antiglobalisation' voting. In the US, polls suggested that gender was an important indicator of support for Trump, above age or education - research found that white men backed Trump by a margin of 40 percentage points. Therefore, there is an argument to say that this 'nationalism' movement and populist voting is not driven by economic grievances and globalisation but reflects battles in cultural wars that have continued since the late 1960s.

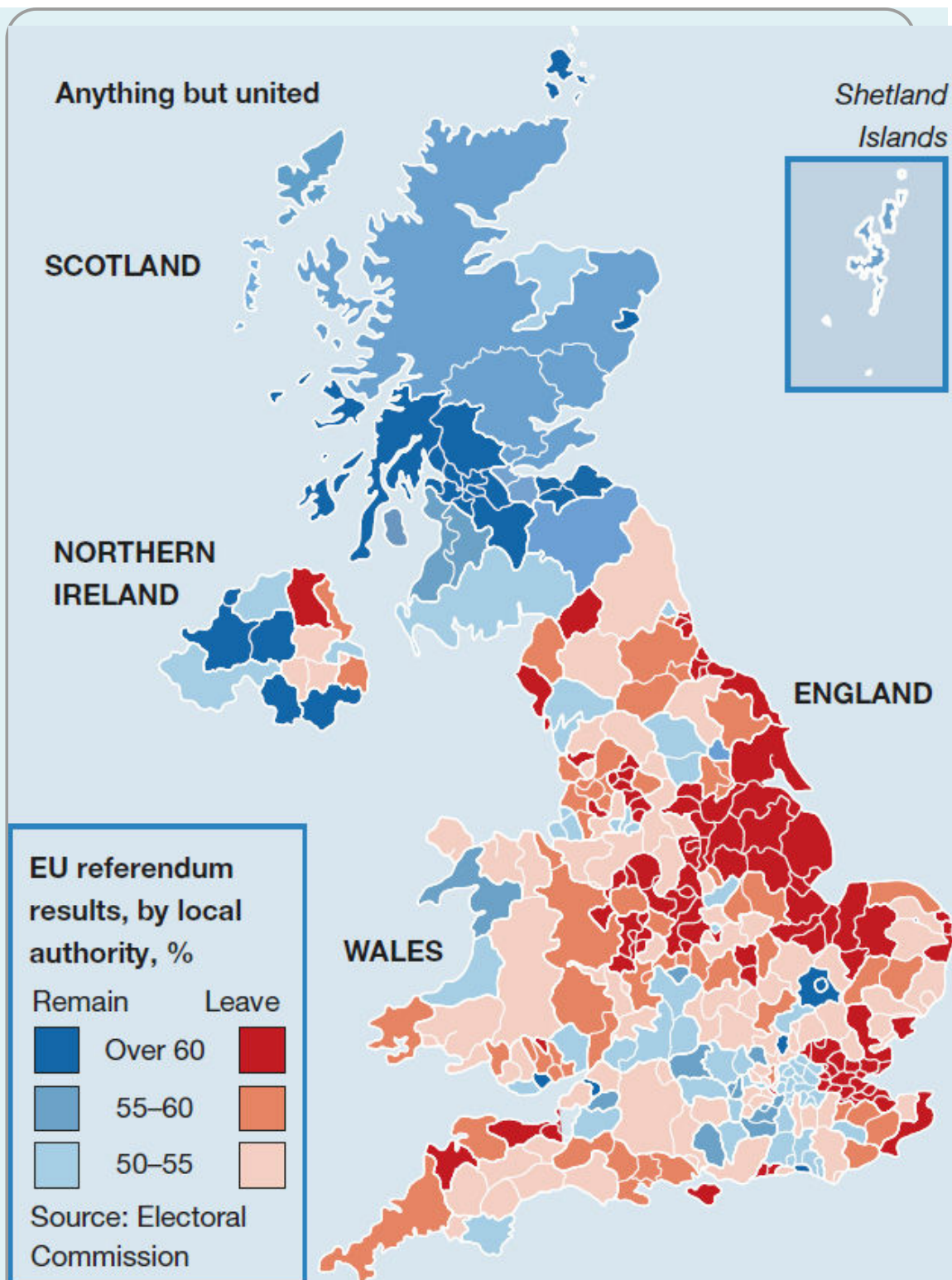


Figure 4.15

Brexit voting

Source:

<https://www.economist.com/britain/2016/07/02/fragmentation-nation>, with permission from The Economist.

Interestingly, two of the most effective slogans of the Brexit and Trump campaigns have been ‘Take back control’ and ‘I want my country back’. Former US President Barack Obama said the following about Trump’s surprise win:

Globalisation combined with technology, combined with social media and constant information has disrupted people’s lives in both concrete and psychological ways. There’s no doubt that has produced populist movements both on the left and the right in many countries in Europe.

MediaCom (2017) commissioned ‘Britain Decoded’ research into the attitudes and behaviour of people across the UK. It revealed a fragmented nation with national, local and regional identities and three different means of ‘community’ across the UK:

- **Physically local:** amenities and people live nearby
- **Shared interest:** communities of interest who may not live close by
- **Trust:** in information, institutions or people

Each area manifests itself differently, depending on where in the country people live. The research also found that people living in London and urban areas are more likely to see their local identity as important and those in the North of England also express a strong regional connection. People in Scotland are most likely to feel their national identity is key to defining their personality.

MediaCom’s research also shows that where we live drives different media needs and behaviour and that social media usage differs by region. For example, Instagram, Pinterest and Tumblr are more city-centric platforms; outside of cities, platforms such as Facebook are used as a central hub for localised events, news and sharing. Interestingly, in rural areas where village pubs/post offices are closing down, communities are coming together digitally on social media such as Facebook.

This research provides useful insights for brands and marketing communications:

- **Right-place marketing** - data analytics and beacon/NFC technology provides opportunities to tap into regional differences

and deliver relevant and hyper-targeted location-based messages.

- **Right-time marketing** - the ability to react at pertinent cultural moments, such as responding to events and trends in real time, using search data.
- **Personalised storytelling** - there is an opportunity to tap into personalised experiences that allow people to express multiple facets of their identity. Companies can both connect individuals to others and help set them apart.
- **Community activations** - there's the opportunity to create non-traditional digital communities by using local activation to embody brand purpose.
- **Collective cultural moments** - advanced data-driven targeting can be used to meet unmet needs for large-scale connection by celebrating collective cultural moments.

One example of a brand tapping into a local issue on a national scale is insurance company Churchill, which helped to fund more lollipop men and women to help increase road safety for children. The campaign celebrated the work of 'lollipopers', which helped rein-vigorate the feeling of trust in local neighbourhoods. The company also set up a £300,000 fund to recruit 50 more lollipopers, and asked people to nominate a school for a 'Churchill lollipop'. The campaign resulted in 53,424 nominations across 6,448 schools (around 25% of all UK schools). Positive social sentiment around the Churchill brand increased from 7% to 70% and there was a 65% increase in clickthrough rate for Churchill search terms.

On a broader level, at the point that this section was written, 'Brand Britain' seems to be stronger than ever post-Brexit. Burberry reported a 30% jump in sales the three months following the Brexit vote and fashion and homeware brand Cath Kidston is continuing to see huge support from overseas customers - especially in Japan and India, where quintessentially British brands are in big demand.

This discussion shows that when it comes to a SLEPT analysis, different elements should not be viewed in silos - in this section we have discussed social, economic political and technology factors that have all combined to have an effect on marketing communications.

Sources:

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Question

Based on this article and your experiences, debate the statement: 'Site localisation is essential for each country for an e-commerce offering to be successful in that country.'

The implications of e-commerce for international B2B trading

Hamill and Gregory (1997) highlight the strategic implications of e-commerce for international business-to-business trading. They note that there will be increasing standardisation of prices across borders as businesses become more aware of price differentials. Secondly, they predict that the importance of traditional intermediaries such as agents and distributors will be reduced by Internet-enabled direct marketing and sales.

Larger organisations typically already compete in the global marketplace, or have the financial resources to achieve this. But what about the smaller

organisation? Most governments are encouraging SMEs to use electronic commerce to tap into the international market. Hamill and Gregory (1997) identify the barriers to SME internationalisation shown in Table 4.4. Complete Activity 4.5 to look at the actions that can be taken to overcome these barriers.

More recent research suggests that SMEs have been relatively slow to adopt the Internet. Research by Arnott and Bridgewater (2002) tested the level of sophistication by which SMEs are using the Internet (see stage models in Chapter 5). They found that the majority of firms are using the Internet for information provision rather than interactive, relationship-building or transactional facilities. Pavic *et al.* (2007) found that the owner-managers of SMEs would like to take a step at a time and incorporate e-business into their existing strategies gradually and when they feel they are ready. Their research did not find any measureable evidence that e-business can create a competitive advantage for SMEs. However, in-depth case studies did indicate that there may be a possibility that when companies integrate the Internet into their overall strategy, the new technology will lead to a competitive advantage.

4.5 commerce

Overcoming SME resistance to international e-

Purpose

To highlight barriers to exporting among SMEs and suggest measures by which they may be overcome by governments.

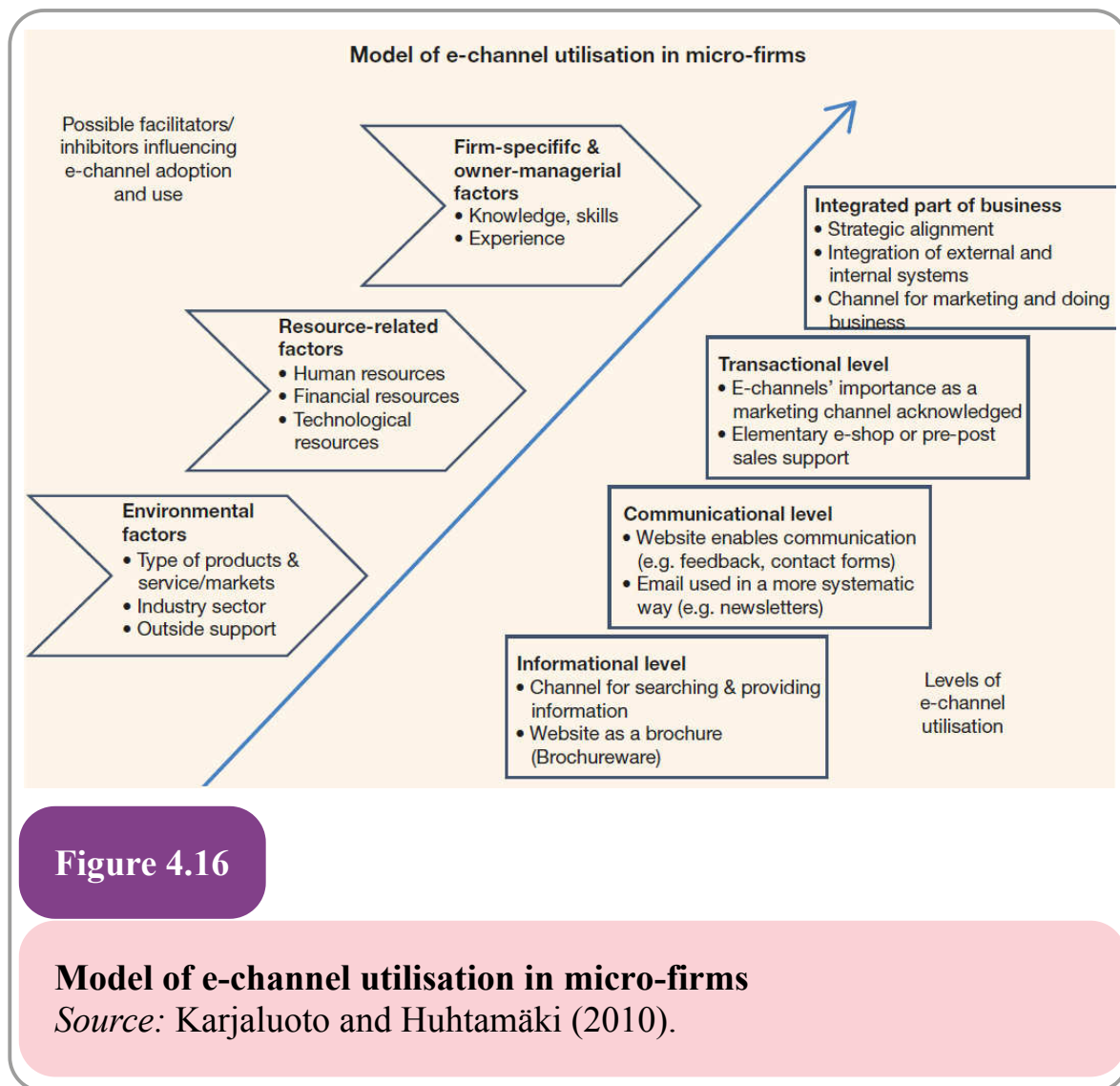
Activity

For each of the four barriers to internationalisation given in Table 4.4, suggest the management reasons why the barriers may exist and actions that governments can take to overcome these barriers. Evaluate how well the government in your country communicates the benefits of e-commerce through education and training.

Table 4.4

Issues in SME resistance to exporting

Barrier	Management issues	How can barrier be overcome?
1 Psychological		
2 Operational		
3 Organisational		
4 Product/market		
<i>Source:</i> Barriers from Hamill and Gregory (1997) and Poon and Jevons (1997).		



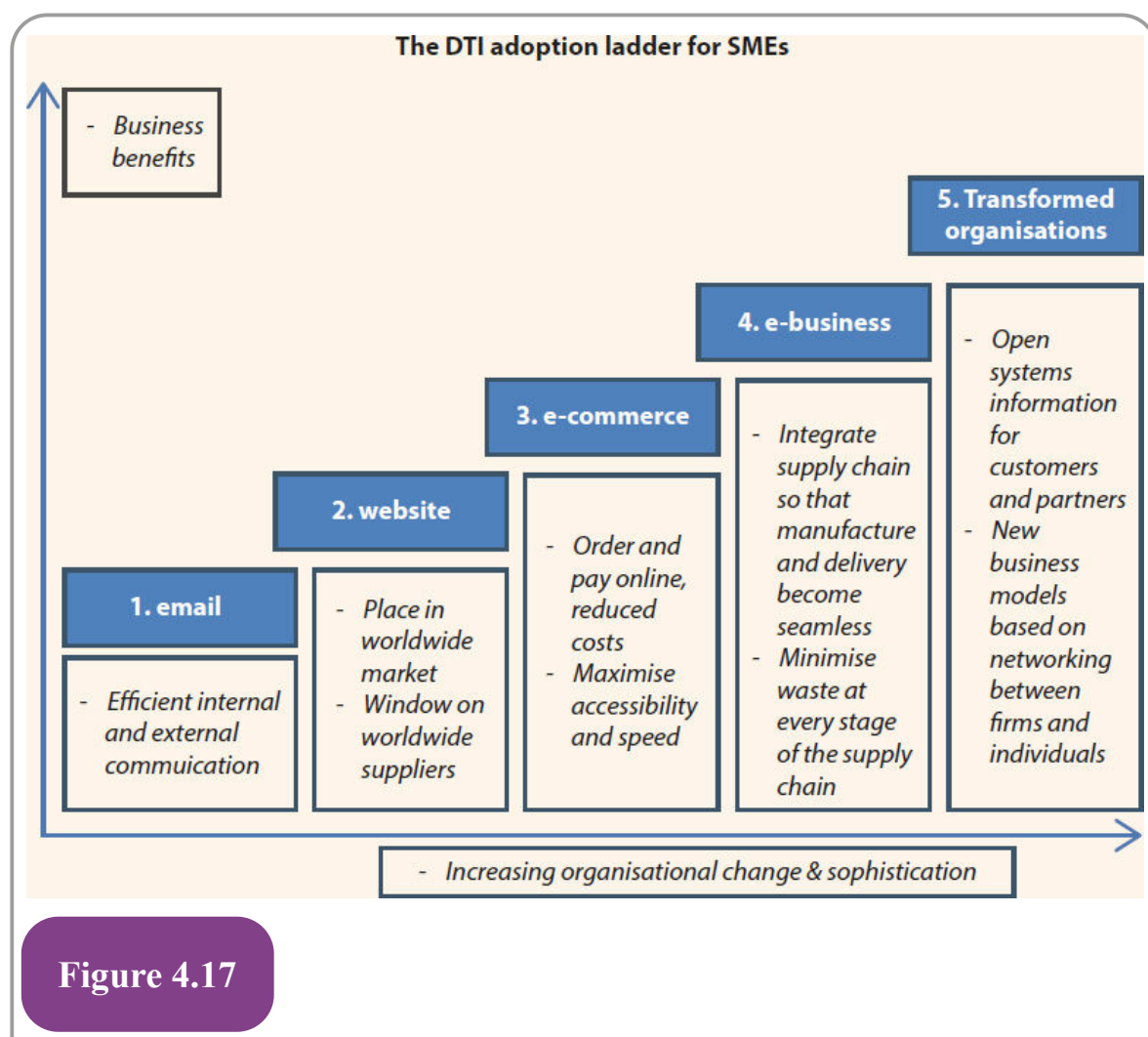
One model, which demonstrates how SMEs can develop an e-commerce strategy (see Figure 4.16), has been developed by Karjaluoto and Huhtamäki (2010). Developed for micro-businesses engaged in retailing, it shows that the business develops through four stages - (1) the use of the Internet for information, (2) communication, (3) transactions and (4) an integrated and strategic part of the business. Driving this development cycle are three main factors, which will either facilitate or impede the level of adoption of e-commerce within the business. The factors are: (1) environmental factors (including SLEPT); (2) the firm's resources; and (3) the characteristics of the owner-manager and their business.

Figure 4.17, which shows an e-business adoption model for SMEs, shows that the starting point for many small businesses is the active use of email to assist with efficient communications. The next step is to build and publish a website, and once the business is engaged in selling or buying online it implements a rudimentary e-commerce strategy. This evolves into an e-

business model when the SME has further integrated its online strategy with its offline operations. The active participation in supply chain management activities using online systems is a good example of this. The final stage is for the business to develop a business model that transforms it into an increasingly virtual and networked organisation.

Although this model is useful in providing a simple evolutionary perspective on how SMEs might develop digital strategies, it assumes a linear process and implies that all firms must follow the same path. This is rarely the case.

However, this adoption ladder model is consistent with research undertaken by Karagozoglu and Lindell (2004), who found that e-commerce strategies by SMEs largely built on their existing ‘bricks and mortar’ business models. While small firms that engaged in e-commerce experienced enhanced sales growth and profitability, procurement via online systems was less successful. The cause here was the high cost of e-commerce platforms and the related technologies that were required.



The Department of Trade and Industry (DTI) e-business adoption ladder for SMEs

Source: Taylor, M., Murphy, A. (2004) "SMEs and e-business", *Journal of Small Business HJhbbbbbbb_H and Enterprise Development*, Vol. 11 Issue: 3, pp.280-289.

Tan *et al.* (2009) studied 55 small online retailers in the United States, who were actively engaged in e-commerce and had developed a model of digital business management. This highlights the importance of the owner-manager making a commitment to growth via a digital strategy (this is covered in more detail in Chapter 5). An important focus for those seeking such growth was the need to differentiate their product offerings and build 'a vibrant online community to increase sales and profitability' (see Case study 4.1 for ideas about building communities). This contrasted with those firms that were seeking to compete primarily on price.

Government and digital transformation

The political environment is shaped by the interplay of government agencies, public opinion, consumer pressure groups such as CAUCE (Coalition Against Unsolicited Email - www.cauce.org), which defends the interests of all users in the areas of privacy and abuse online, and industry-backed organisations such as TrustArc (www.trustarc.com) that promote best practice among companies.

Political action enacted through government agencies to control the adoption of the Internet can include:

- promoting the benefits of adopting the Internet for consumers and business to improve a country's economic prosperity;
- enacting legislation to protect privacy or control taxation, as described in previous sections;
- providing organisations with guidelines and assistance for compliance with legislation;

- setting up international bodies to coordinate the Internet (see Chapter 3).

Political involvement in many of these activities is intended to improve the economic competitiveness of countries or groups of countries. The UK's Cabinet Office and Government Digital Service (GDS) recently published the 'Government Transformation Strategy 2017 to 2020'

(www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020/government-transformation-strategy).

The UK government is one of the most digitally advanced in the world, and the next stage of its 'digitally enabled transformation' has three main components:

- transforming whole citizen-facing services - to continue to improve the experience for citizens, businesses and users within the public sector;
- full department transformation - affecting complete organisations to deliver policy objectives in a flexible way, improve citizen service across channels and improve efficiency;
- internal government transformation, which might not directly change policy outcomes or citizen-facing services but which is vital if government is to collaborate better and deliver digitally-enabled change more effectively.

Objectives not only cover the continued development of world-class digital services, but also:

- growing the right people, skills and culture;
- building better workplace tools processes and governance;
- making better use of data;
- creating shared platforms to speed up transformation.

These goals are typical for many countries, and specific targets are set for the proportion of people and businesses that have access, including public access points for those who cannot currently afford the technology. Managers who are aware of these initiatives can tap into sources of funding for development or free training to support their online initiatives. Alternatively, there may be incentives such as tax breaks.

The European Commission (EC) provides some other examples of the role of government organisations in promoting and regulating e-commerce. According to the working party, a socially inclusive **information society**:

- will have ready, easy-to-use public and individual access to the communication channels without heavy dependence on private or public agencies as intermediaries;

- will ensure that the kinds of information that are essential for day-to-day life, for full participation in society, and for support in times of need, are easily available at no cost or at very low cost;
- will invest heavily in the information handling and communication.

UNESCO has also been active in advancing the information society in less developed countries (<http://portal.unesco.org>).

The European Community has set up ‘i2010’ (European Information Society in 2010), which has ‘three pillars’ of ICT for growth and employment:

- 1** Combines all the regulatory instruments at the Commission’s disposal, which will allow us to create a modern, market-orientated regulatory framework for the digital economy.
- 2** Brings the EU’s research and development instruments into the game of digital convergence and sets priorities for our cooperation with the private sector to promote innovation and technological leadership.
- 3** Seeks to promote, with the tools available to the Commission, an inclusive European Information Society, supported by efficient and user-friendly ICT-enabled public services.

You can find out more about i2010 at: http://europa.eu/rapid/press-release_MEMO-05-184_en.htm?locale=en.

Information society

A society with widespread access and transfer of digital information within business and the community.

Booz Allen Hamilton (2002) review approaches used by governments to encourage use of the Internet. They identify five broad themes in policy:

- 1 Increasing the penetration of ‘access devices’.** Approaches include either home access through Sweden’s PC Tax Reform, or in public places, as in France’s programme to develop 7,000 access points by a specific year/target date. France also offers a tax incentive scheme, where firms can make tax-free gifts of PCs to staff for personal use.
- 2 Increasing skills and confidence of target groups.** These may target potentially excluded groups, as with France’s €150 million campaign to train the unemployed. Japan’s IT training programmes use existing mentors.
- 3 Establishing ‘driving licences’ or ‘passport’ qualifications.** France, Italy and the UK have schemes that grant simple IT qualifications, particularly aimed at low-skilled groups.

- 4 Building trust, or allaying fears.** The US 1998 Child Online Protection Act used schemes to provide ‘Kitemark’-type verification, or certification of safe services.
- 5 Direct marketing campaigns.** According to the report, only the UK, with its UK Online campaign, is marketing directly to citizens on a large scale.

The UK government’s ‘Digital Strategy to make Britain the Best Place in the World to Start and Grow a Digital Business’ (2017) outlines the following aims, which provides a good example of how government policy aims to develop and grow the country’s digital economy:

- Skills, infrastructure and innovation at the heart of new strategy to support Britain’s world-leading digital economy.
- Includes a new Digital Skills Partnership and bold new pledges for millions of free digital training opportunities.
- Backs the UK digital sectors to invest for the long term and includes measures to help all businesses harness the productivity benefits of digital innovation.
- More than four million free digital skills training opportunities will be created as part of a digital strategy to make Britain the best place in the world to start and grow a digital business and ensure our digital economy works for everyone.

The government also recognises that businesses play an important role in developing the strategy. Therefore, the plan includes:

- The creation of five international tech hubs in emerging markets to create and develop partnerships between UK companies and local tech firms. These hubs will help provide British businesses with a global competitive edge and drive collaboration on skills, innovation, technology and research and development. The hubs will be based upon the successful UK-Israel Tech Hub, which to date has delivered more than 80 partnerships with a deal value of £62 million.
- A new competition to spark the development of new **FinTech** products that can support those who struggle to access financial services and provide consumers with the tools they need to manage their finances well. This will build on the UK’s existing lead in the FinTech sector, which was worth more than £6.6 bn in 2015, and make sure the digital economy works for all, not just the privileged few.
- A commitment to create a Secretary-of-State-led forum for government and the tech community to work together to spark growth in the digital economy - through innovation and the adoption of digital in the wider economy.

- A Business Connectivity Forum, to be chaired by the Department for Culture, Media and Sport, to bring together business organisations, local authorities and communications providers to help businesses access fast, affordable and reliable broadband.

FinTech

This means ‘Financial Technology’ and is a growing sector that uses new technology and innovation in the financial services market to create disruptive business models and inclusive products. For example, bKash allows people in Bangladesh (where less than 15% of the population are connected to the formal banking sector) to safely send and receive money via mobile phones.

- Confirmation of £1 billion programme to keep Britain at the forefront of digital connectivity, announced in the Autumn Statement. This funding will accelerate the development and uptake of next-generation digital infrastructure - including full fibre broadband plans and 5G.

You can find more information at: www.gov.uk/government/news/digital-strategy-to-make-britain-the-best-place-in-the-world-to-start-and-grow-a-digital-business.

Internet governance

Internet governance describes the control put in place to manage the growth of the Internet and its usage (as discussed at the end of Chapter 3).

Dyson (1998) describes the different layers of jurisdiction. These are:

- 1 Physical space comprising each individual country where its own laws hold.
- 2 ISPs - the connection between the physical and virtual worlds.
- 3 Domain name control (www.icann.org) and communities.
- 4 Agencies such as TRUSTe, now called TrustArc (www.trustarc.com).

The organisations that manage the infrastructure also have a significant role in governance.

E-government

E-government is distinct from Internet governance. (In Chapter 1, we noted that e-government is a major strategic priority for many countries.)

The European Commission has published an eGovernment Action Plan 2016-2020, to facilitate a ‘digital single market’. The plan has three main aims:

- 1 to modernise public administration;
- 2 to achieve the digital internal market;
- 3 to engage more with citizens and businesses to deliver high-quality services.

The Action Plan aims to support the coordination and collaboration at EU level, so that the availability and take-up of eGovernment services can be increased. To achieve this vision, there are three main policy priorities:

- 1 modernising public administrations using key digital enablers (for example, technical building blocks such as CEF, DSIs like eID, eSignature, eDelivery, etc.);
- 2 enabling mobility of citizens and businesses by cross-border interoperability;
- 3 facilitating digital interaction between administrations and citizens/businesses for high-quality public services.

Internet governance

Control of the operation and use of the Internet.

Electronic government (e-government)

The use of Internet technologies to provide government services to citizens.

Technological innovation and technology assessment

One of the great challenges of managing e-commerce is the need to be able to assess which new technological innovations can be applied to give competitive advantage - what is ‘the next big thing’? The truth is, no one can predict the future, and many companies have misunderstood the market for products:

This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of

no value to us.

Western Union internal memo, 1876

Who the hell wants to hear actors talk?

H.M. Warner, Warner Brothers, 1927

I think there is a world market for maybe five computers.

Thomas Watson, chairman of IBM, 1943

There is no reason for any individual to have a computer in their home.

Ken Olson (President of Digital Equipment Corporation) at the
Convention of the World Future Society in Boston in 1977

Not all organisations have the ability (and in some cases budget) to be technologically innovative. Generally, one of the best things organisations can do is analyse the current situation and respond rapidly where appropriate. A slightly different, and more forward-looking, perspective came from Bruce Tognazzini, who founded the Human Interface Team at Apple and developed the company's first interface guidelines (Econsultancy, 2007):

Successful technology-predicting is based on detecting discontinuities and predicting the trends that will flow from them.

He gives the example of the introduction of the Apple iPhone and the other devices based on gestural interfaces that will follow.

In addition to technologies deployed on the website, the suitability of new approaches for attracting visitors to the site must be evaluated - for example, should registration at a paid-for search engine, or new forms of banner adverts or email marketing, be used (see Chapter 7). (Decisions on strategy are covered in Chapter 5).

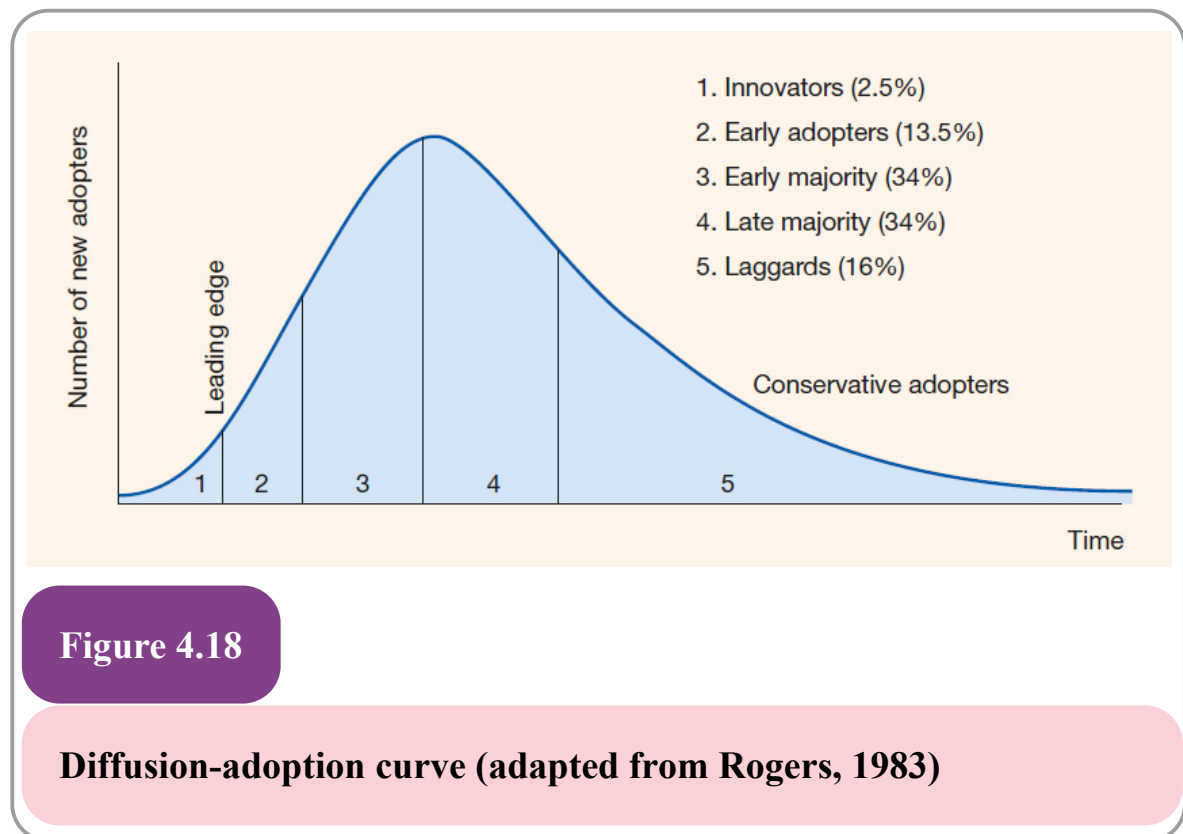
When a new technique is introduced, a manager faces a difficult decision as to whether to:

- ignore the use of the technique, perhaps because it is felt to be too expensive or untried, or the manager simply doesn't believe that the benefits will outweigh the costs - a cautious, 'wait-and-see' approach;
- enthusiastically adopt the technique without a detailed evaluation since the hype alone convinces the manager that the technique should be adopted - a risk-taking, early-adopter approach;
- evaluate the technique and then take a decision whether to adopt it according to the evaluation - an intermediate approach.

This diffusion-adoption process (represented by the bell curve in Figure 4.18) was identified by Rogers (1983), who classified those trialling new products as innovators, **early adopters**, early majority, late majority, or laggards.

Early adopter

Company or department that invests in new technologies and techniques.



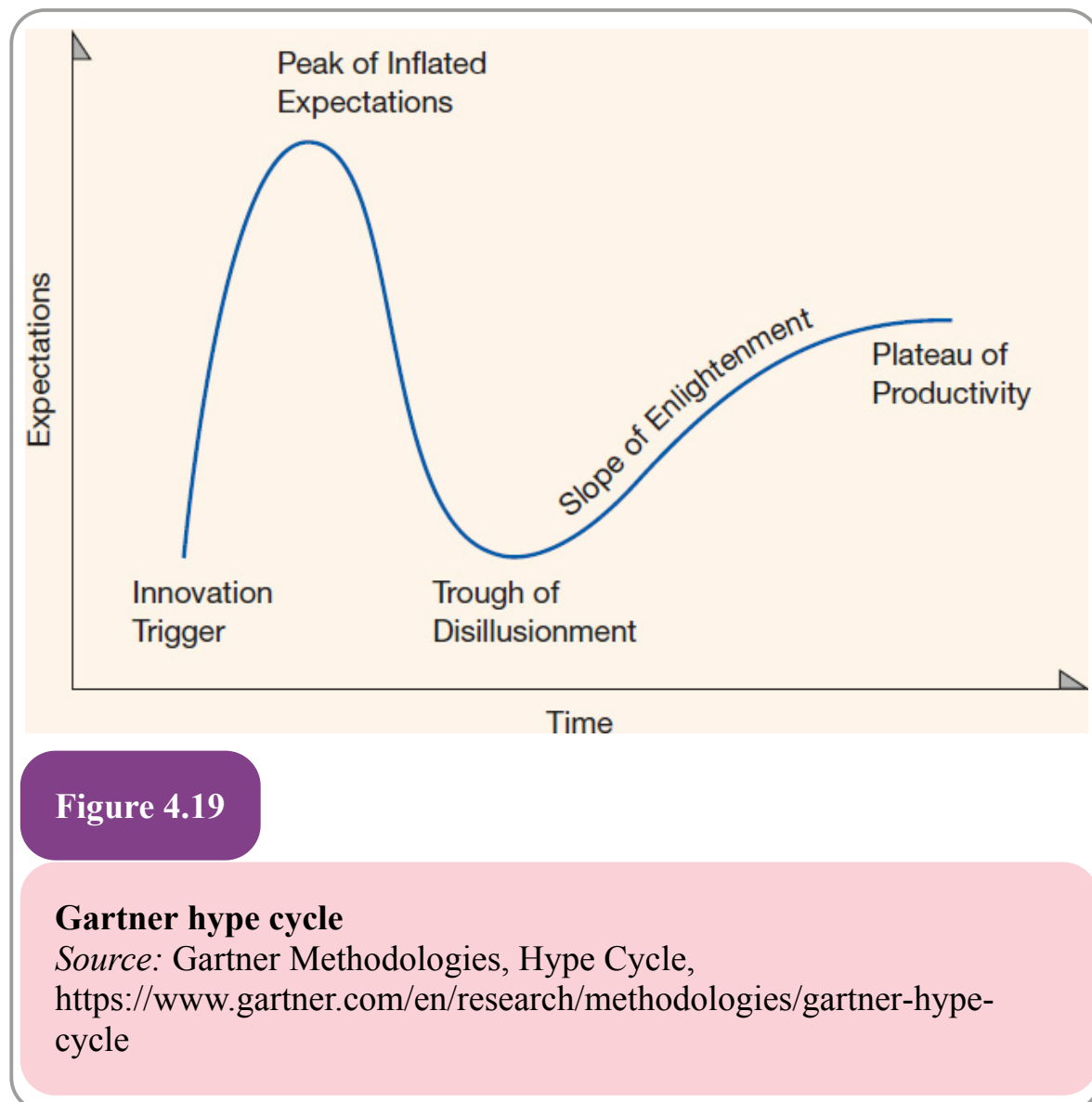


Figure 4.18 can be used in two main ways as an analytical tool. First, it can be used to understand the stage customers have reached in adoption of a technology, or any product. For example, the Internet is now a well-established tool and in many developed countries we are into the late-majority phase of adoption, which suggests that it is essential to use this medium for marketing purposes. Second, managers can look at adoption of a new technique by other businesses - from an organisational perspective. For example, a construction industry supplier could look at how many other digital businesses have adopted personalisation to evaluate whether it is worthwhile adopting the technique.

An alternative graphic representation of diffusion of innovation has been developed by technology analyst Gartner for assessing the maturity, adoption and business application of specific technologies (Figure 4.19). Gartner

(2010) recognises the following stages within a **hype cycle**, an example of which is given in Figure 4.19 for emerging trends current in 2016:

- 1 Innovation trigger** - The first phase of a hype cycle is the 'technology trigger' or breakthrough, product launch or other event that generates significant press and interest.
- 2 Peak of inflated expectations** - In the next phase, a frenzy of publicity typically generates over-enthusiasm and unrealistic expectations. There may be some successful applications of a technology, but there are typically more failures.
- 3 Trough of disillusionment** - Technologies enter the 'trough of disillusionment' because they fail to meet expectations and quickly become unfashionable. Consequently, the press usually abandons the topic and the technology.
- 4 Slope of enlightenment** - Although the press may have stopped covering the technology, some businesses continue through the 'slope of enlightenment' and experiment to understand the benefits and practical application of the technology.
- 5 Plateau of productivity** - A technology reaches the 'plateau of productivity' as the benefits of it become widely demonstrated and accepted. The technology becomes increasingly stable and evolves in second and third generations. The final height of the plateau varies according to whether the technology is broadly applicable or benefits only a niche market.

Hype cycle

A graphic representation of the maturity, adoption and business application of specific technologies.

Trott (1998) identifies different requirements that are necessary within an organisation to be able to respond effectively to technological change or innovation:

- Growth orientation - a long-term rather than short-term vision.
- Vigilance - the capability of environment scanning.
- Commitment to technology - willingness to invest in technology.
- Acceptance of risk - willingness to take managed risks.
- Cross-functional cooperation - capability for collaboration across functional areas.
- Receptivity - the ability to respond to externally developed technology.
- Slack - allowing time to investigate new technological opportunities.
- Adaptability - a readiness to accept change.

- Diverse range of skills - technical and business skills and experience.

The problem with being an early adopter (as an organisation) is that the leading edge is often also referred to as the ‘bleeding edge’ due to the risk of failure. New technologies will have bugs, may integrate poorly with the existing systems, or the marketing benefits may simply not live up to their promise. Of course, the reason for risk-taking is that the rewards are high - if you are using a technique that your competitors are not, then you will gain an edge on your rivals. Chapter 10 covers this in more detail, by discussing digital transformation and growth hacking.

Approaches to identifying emerging technology

PMP (2008) describes four contrasting approaches to identifying new technologies, which may give a company a competitive edge:

- 1 Technology networking.** Individuals monitor trends through their personal network and **technology scouting** and then share them through an infrastructure and process that supports information sharing. PMP (2008) explains that Novartis facilitates sharing between inside and outside experts on specific technologies through an extranet and face-to-face events.
- 2 Crowdsourcing.** **Crowdsourcing** facilitates access to a marketplace of ideas from customers, partners or inventors for organisations looking to solve specific problems. LEGO is well known for involving customers in discussion of new product developments. InnoCentive is one of the largest commercial examples of crowdsourcing. It is an online marketplace that connects and manages the relationship between ‘seekers’ and ‘solvers’. Seekers are the companies conducting research and development that are looking for new solutions to their business challenges and opportunities. Solvers are the 170,000 registered members of InnoCentive who can win cash prizes ranging from \$5,000 to \$1,000,000 for solving problems in a variety of domains, including business and technology.
- 3 Technology hunting.** This is a structured review of new technology through reviewing the capabilities of start-up companies. For example, British Telecom undertakes a structured review of up to 1,000 start-ups to assess relevance for improving its own capabilities, which may ultimately be reduced to five companies with which BT will enter into a formal arrangement each year.

4 Technology mining. A traditional literature review of technologies described in published documents. Deutsche Telekom AG uses technology to automate the process through software such as Autonomy, which searches for patterns indicating potential technology solutions within patents, articles, journals, technological reports and trend studies. A simpler approach is setting up a keyword search for technologies through a free service such as Google Alerts (www.google.com/alerts).

Technology scouting

A structured approach to reviewing technology innovations akin to football scouting.

Crowdsourcing

Utilising a network of customers or other partners to gain insights for new product or process innovations.

Start-up incubators

A company that helps new and start-up businesses develop by providing services such as training, expert mentorship, access to advisors/investors and office space. Some even provide seed money, usually in exchange for a small equity stake in the business.

Internet of Things (IoT)

The interconnection of physical objects, such as buildings, household appliances, etc., by embedding technology so that they can collect and exchange data with each other via the Internet (i.e. 'smart devices').

Accelerators

Designed to accelerate early-stage growth-driven companies, these tend to be fixed-term, cohort-based programmes that include mentorship, training programmes and culminate in a public pitch event or demo day to find investors.

We would like to add another approach to the list:

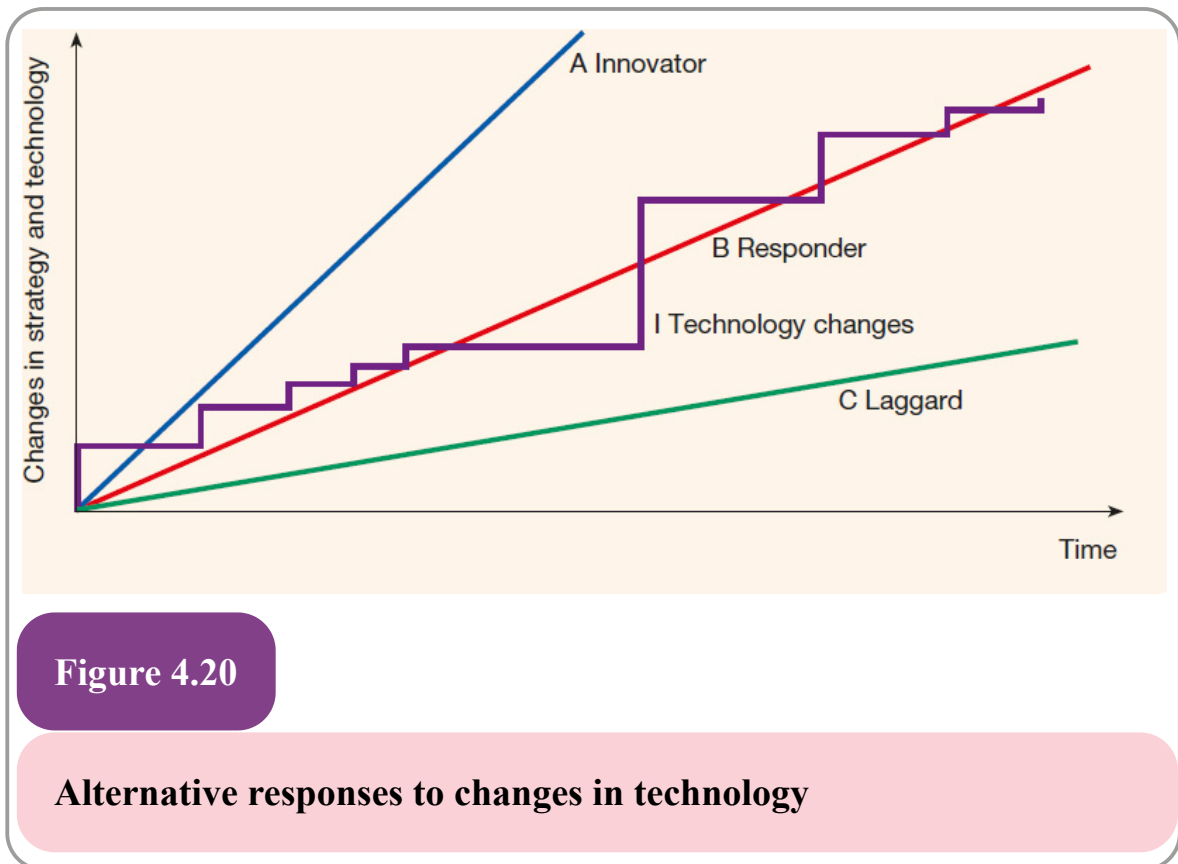
5 Technology incubators. Some corporates are setting up their own **start-up incubators** to find innovative solutions for their particular marketplace. For example, John Lewis has set up J Labs, designed to find new ways to help customers shop across channels, using the **Internet of Things** and technology for in-store personalisation. Unilever has set up 'The Unilever Foundry' (<http://foundry.unilever.com>) and Pernod Richard has launched innovation incubator 'Winnovation Lab', while easyJet has an equity stake in 'Founders Factory' (<http://foundersfactory.com>) to find the

next big thing in travel technology. Finally, online fashion retailer ASOS has partnered with O₂/Telefonica's Wayra **accelerator** to find fashion tech start-ups that can help innovate their business and provide competitive advantage.

It may also be useful to identify how rapidly a new concept is being adopted. When a product or service is adopted quickly, this is known as 'rapid diffusion'. Access to the Internet is an example of this - in developed countries the use of the Internet has become widespread more rapidly than the use of TV, for example. Internet-enabled mobile phones are relatively slow-diffusion products.

So, what action should e-commerce managers take when confronted by new techniques and technologies? There is no straightforward rule of thumb, other than that a balanced approach must be taken. It would be easy to dismiss many new techniques as fads, or classify them as 'not relevant to my market'. However, competitors will probably be reviewing new techniques and incorporating some, so a careful review of new techniques is required. This indicates that benchmarking of 'best of breed' sites within sectors and in different sectors is essential as part of environmental scanning. However, by waiting for others to innovate and reviewing the results on their website, a company may have already lost 6 to 12 months (this is discussed further in Chapter 10).

Figure 4.20 summarises the choices. The stepped curve I shows the variations in technology through time. Some may be small incremental changes such as a new operating system, others such as the introduction of personalisation technology are more significant in delivering value to customers and so improving business performance. Line A is a company that is using innovative business techniques, that adopts technology early, or is even in advance of what the technology can currently deliver. Line C shows the conservative adopter whose use of technology lags behind the available potential. Line B, the middle ground, is probably the ideal situation, where a company monitors new ideas as early adopters trial them and then adopts those that will have a positive impact on the business.



Multiscreening

A term used to describe simultaneous use of devices such as digital TV and tablet.

The growth in use of mobile technology is seen as the most significant trend in consumer adoption of digital media. **Multiscreening** is a trend that needs to be considered for its impact on consumers.

Microsoft 'Cross Screen Engagement' research (2010) was a two-phase study; Flamingo Research and Ipsos OTX interviewed consumers in five markets - Australia, Brazil, Canada, the UK and the US - who own multiple devices and use a second screen daily, and then followed up with market-representative focus groups.

The study identified four kinds of consumer behaviours when engaging with multiple devices:

- 1 Content grazing:** This is the most common way consumers interact with multiple devices. 68% of consumers use two or more screens simultaneously to access unrelated content; for example, watching a show on TV while checking email or texting.
- 2 Investigative spider-webbing:** 57% of consumers use one device to find information related to what they are doing on another device. For

example, they may watch a movie on the TV and look up what other movies the actors have been in on a tablet or PC.

- 3 Quantum journey:** 46% of consumers use multiple devices to accomplish a task. For example, taking a picture of a pair of shoes on a phone then looking up reviews about the shoes on a PC before purchasing.
- 4 Social spider-webbing:** This is the least common use of multiple screens. 39% of consumers share content about activities they've accomplished on other devices. An example of this is sharing scores from a gaming console on a smartphone or tablet.

Summary

- 1** Environmental scanning and analysis are necessary in order that a company can respond to environmental changes and act on legal and ethical constraints on its activities.
- 2** Environmental constraints are related to the micro-environment variables reviewed in Chapter 5 and the macro-environment variables in this chapter using the SLEPT mnemonic.
- 3** Social factors that must be understood as part of the move to the Information Society include buyer behaviour characteristics such as access to the Internet and perceptions about it as a communications tool.
- 4** Ethical issues include the need to safeguard consumer privacy and security of personal information. Privacy issues include collection and dissemination of customer information, cookies and the use of direct email.
- 5** Legal factors to be considered by e-commerce managers include: accessibility, domain name registration, copyright and data protection legislation.
- 6** Economic factors considered in the chapter are the regional differences in the use of the Internet for trade. Different economic conditions in different markets are considered in developing e-commerce budgets.

- 7 Political factors involve the role of governments in promoting e-commerce, but also trying to control it.
- 8 Rapid variation in technology requires constant monitoring of adoption of the technology by customers and competitors and appropriate responses.

Exercises

Self-assessment questions

- 1 Why is environmental scanning necessary?
- 2 Give an example how each of the macro-environment factors may directly drive the content and services provided by a website.
- 3 Summarise the social factors that govern consumer access to the Internet. How can companies overcome these influences once people venture online?
- 4 What actions can e-commerce managers take to safeguard consumer privacy and security?
- 5 What are the general legal constraints that a company acts under in any country?
- 6 How do governments attempt to control the use of the Internet?
- 7 Summarise adoption patterns across the continents.
- 8 How should innovation be managed?

Essay and discussion questions

- 1 You recently started a job as e-commerce manager for a bank. Produce a checklist of all the different legal and ethical issues that you need to assess for compliance on the existing website of the bank.
- 2 How should an e-commerce manager monitor and respond to technological innovation?

- 3 Benchmark different approaches to achieving and reassuring customers about their privacy and security using three or four examples for a retail sector such as travel, books, toys or clothing.
- 4 'Internet access levels will never exceed 50% in most countries.' Discuss.
- 5 Select a new Internet access technology that has been introduced in the last two years and assess whether it will become a significant method of access.
- 6 Assess how the eight principles of the UK Data Protection Act (www.gov.uk/data-protection) relate to actions that e-commerce managers need to take to ensure legal compliance of their site.

Examination questions

- 1 Explain the different layers of governance of the Internet.
- 2 Summarise the macro-environment variables a company needs to monitor.
- 3 Explain the purpose of environmental scanning.
- 4 Give three examples of how websites can use techniques to protect the users' privacy.
- 5 What are the three key factors that affect consumer adoption of the Internet?
- 6 Explain the significance of the diffusion-adoption concept for the adoption of new technologies to:
 - (a) consumers purchasing technological innovations;
 - (b) businesses deploying technological innovations.
- 7 What action should e-commerce managers take to ensure compliance with ethical and legal standards of their site?

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Web links

Smart Insights Digital Marketing Statistics sources

(www.smartinsights.com/advicetype/digital-marketing-statistics) A compilation of the Top 10 statistics sources and a custom search engine to search them.

Google Think Insights Databoard

(www.google.com/think/tools/databoard.html) Google's compilation of latest research.

The Oxford Internet Institute (OII) (www.oii.ox.ac.uk) Research institute focused on the study of the impact of the Internet on society.

The HM Government's 'National Cyber Security Strategy 2016-2021' (www.gov.uk/government/uploads/system/uploads/attachment_data/file/567242/national_cyber_security_strategy_2016.pdf). The government's five-year strategy to protect the UK against cyber-attacks.

Government sources on Internet usage and adoption

- European government (<http://ec.europa.eu/eurostat>).
- OECD (www.oecd.org) OECD broadband research (www.oecd.org/sti/broadband/broadband-statistics).

- UK government (www.statistics.gov.uk).
- Ofcom (www.ofcom.org.uk) Ofcom is the independent regulator and competition authority for the UK communications industries, with responsibilities across television, radio, telecommunications and wireless communications services and in-depth reports on communications markets.
- US government reference centre (www.usa.gov).

Online audience panel media consumption and usage data

These are fee-based data, but contain useful free data within press release sections:

- comScore (www.comscore.com). Data from comScore's global consumer panel is available in its blog and press releases section.
- Hitwise (www.hitwise.com). The Hitwise resources section provides reports on consumer search behaviour and importance of different online intermediaries.
- Nielsen (www.nielsen-online.com) A global audience measurement company.

Other major online research providers

- International Telecommunications Union (<http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>). Adoption of Internet and mobile phone statistics by company.
- The Pew Internet & American Life Project (www.pewinternet.org). Produces reports that explore the impact of the Internet on families, communities, work and home, daily life, education, healthcare and civic and political life.
- Mobile Statistics (www.mobilestatistics.com). Provides data on the mobile smartphone and app market, including reports and market trends.

Privacy

- Office of the Australian Information Commissioner (www.oaic.gov.au). Information on privacy laws in Australia such as the Privacy Act and the Telecommunications Act.
- European Data Protection resources (<https://ec.europa.eu/commission/news/gen-eral-data-protection->

regulation-enters-application-2018-may-25_en). These laws are coordinated centrally, but interpreted differently in different countries.

- Federal Trade commission (**www.ftc.gov/privacy**). US privacy initiatives.
- GetSafeOnline (**www.getsafeonline.org**). Site created by government and business to educate consumers to help them understand and manage their online privacy and security.
- iCompli (**www.icompli.co.uk**). Portal and e-newsletter about privacy and data protection compliance.
- Information Commissioner's Office (**www.ico.org.uk**). Site explaining law for UK consumers and businesses.
- Marketing Law (**<http://marketinglaw.osborneclarke.com>**). Useful email update on the latest privacy law developments.
- Outlaw (**www.out-law.com**). Compilation of the latest technology-related law.
- Privacy International (**www.privacyinternational.org**). A human rights group formed in 1990 as a watchdog on surveillance and privacy invasions by governments and corporations.

Part 2 Strategy and applications

In Part 2 of the text, approaches to developing digital business strategy and applications are reviewed for the organisation as a whole (Chapter 5), with an emphasis on buy-side e-commerce (Chapter 6) and for sell-side e-commerce (Chapters 7 and 8).

5

Digital business strategy p. 179

- What is digital business strategy?
- Strategic analysis
- Strategic objectives
- Strategy definition
- Strategy implementation

Focus on...

- Aligning and impacting digital business strategies

6

Supply chain and demand p. 248

- What is supply chain management and e-procurement?
- Options for restructuring the supply chain
- Using digital business to restructure the supply chain
- Supply chain management implementation
- Goal-setting and performance management for eSCM
- What is e-procurement?
- Drivers of e-procurement
- Barriers and risks of e-procurement adoption
- Implementing e-procurement
- The future of e-procurement

Focus on...

- The value chain
- Estimating e-procurement costs
- B2B marketplaces

7

Digital marketing p. 303

- What is digital marketing?
- Digital marketing planning
- Situation analysis
- Objective setting
- Strategy
- Tactics
- Actions
- Control

Focus on...

- Characteristics of digital media communications
- Digital branding

- What is eCRM?
- Conversion marketing
- The online buying process
- Customer acquisition management
- Customer retention management
- Customer extension
- Technology solutions for CRM

Focus on...

- Marketing communications for customer acquisition, including search engine marketing, digital PR, online partnerships, interactive advertising, email marketing and social media marketing
- Social media and social CRM strategy
- Excelling in e-commerce service quality

5 Digital business strategy

Chapter at a glance

Main topics

- What is digital business strategy?
- Strategic analysis
- Strategic objectives
- Strategy definition
- Strategy implementation

Focus on...

- Aligning and impacting digital business strategies

Case studies

- 5.1** Arriva Bus redesigns its m-ticket app and boosts revenue by over 17%
- 5.2** Setting the Internet revenue contribution at Sandvik Steel
- 5.3** Zappos innovates in the digital marketplace
- 5.4** Boo hoo - learning from the largest European dot.com failure

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Follow an appropriate strategy process model for digital business
- Apply tools to generate and select digital business strategies
- Outline alternative strategic approaches to achieve digital business

Management issues

Consideration of digital business strategy raises these issues for management:

- How does digital business strategy differ from traditional business strategy?
- How should we integrate digital business strategy with existing business and information systems strategy?
- How should we evaluate our investment priorities and returns from digital business?

Links to other chapters

The main related chapters are:

- *Chapter 6* reviews the specific enactment of digital business strategy to supply chain and procurement management processes
- *Chapters 7 and 8* explain how digital marketing and customer relationship management relate to the concept of digital business, and e-commerce and digital marketing planning are approached
- *Chapters 9 and 10* look at practical aspects of the implementation of digital business strategy

Introduction

Developing a digital business strategy requires a fusion of existing approaches to business, marketing, supply chain management and information systems strategy development. One of the key drivers of digital business is ‘**disruptive innovation**’. In the context of a product, it is about transforming an expensive and complicated product used by a few people into something that is more affordable and accessible (creating a brand-new market). One example of this is the transition from the iconic 1980s portable music device, the Sony Walkman, to the Apple iPod, which was launched in

October 2001. The Sony Walkman was one of the first portable audio devices launched into the marketplace; however, it was fairly large and cumbersome and you had to carry around cassette tapes or CDs in order to change what you were listening to.

Disruptive innovation

This is when an innovation creates a new market or makes it easier to do business in an existing market, often displacing established market-leading organisations or accepted ways of doing things.

Then the Apple iPod was launched - a small, portable music player that looked cool and could hold up to 1,000 songs. It was developed on the basis that the computer was the central device or 'digital hub' that could be used to edit photos/movies and manage a large music library. Steve Jobs stated the following at the product's launch event: 'Music is a part of everyone's life, and because it's a part of everyone's life ... it's a very large target market all around the world. It knows no boundaries.'

There are also a growing number of companies providing disruptive innovation in the service industry. They are capitalising on changes in technology, customer behaviour and the availability of data to create innovative alternatives to traditional services - for example, Uber in transportation and Airbnb in hotels and hospitality.

According to a *McKinsey Quarterly* article (D'Emidio *et al.*, 2015), winning approaches to service innovation combine three elements:

- 1** a focus on service innovation matching the intensity and attention that product companies bring to R&D;
- 2** the ability to personalise the customer experience and to help customers do things themselves;
- 3** the will to simplify (and in some cases automate) the way services are delivered.

To achieve this, companies must find more collaborative ways of working to ensure that they remain focused on their customers, not their own internal processes. See Figure 5.1 to view a disruptive innovation model that can help organisations think about market profitability.

Some of the key elements of digital disruption are:

1 A move from product-centric to customer-centric

In the past, large corporates would develop a product and 'push' it into the marketplace via marketing methods such as advertising - hoping that the product would sell. However, nowadays the power has shifted to the consumer, who is actively searching for products and services that meet their

specific needs. Consumers no longer want to be ‘sold’ to . . . they want to buy from authentic companies that care about their needs. One example of this is the demise of Blockbuster - people were no longer prepared to drive to a store, search and find a DVD and then have to return it the following day. Instead, they wanted to be able to stream video from a device that suits them (including tablets and smartphones), 24/7 and have access to a wide range of different movies.

2 A shift from expensive, risky and slow-to-market to cheap, low-risk, fast-to-market/fail

Developing a new product/service used to be time-consuming, expensive and risky - only after launch could a company gauge its success/failure. By this time, expense included both research and development (R&D) and marketing costs. However, the development of digital tools now means that a company can produce a ‘minimum viable product’ (i.e. a basic product without any bells and whistles), test it with a few customers to get feedback and either adapt it or withdraw the product quickly and cheaply (this topic is covered in more detail in Chapter 10).



Figure 5.1

The disruptive innovation model

Source: What Is Disruptive Innovation? By Clayton M. Christensen, Michael E. and Raynor Rory McDonald from December 2015 issue, <https://hbr.org/2015/12/what-is-disruptive-innovation>

3 A move away from innovations taking hold in niche markets first, to impacting the mainstream quickly

Traditional marketing used to be expensive, so companies used to market to niche audiences first, so that costs were kept down. However, nowadays, businesses can create ‘buzz’ about their new product quickly and easily via social media, bloggers, search engine marketing, etc. This helps them impact the mainstream market far more quickly and reach a global audience.

4 From long product-development cycles to rapid ideation, iteration, delivery and optimisation

As mentioned before, the marketing environment has changed to offer companies shorter product-development times and the ability to constantly test (iterate) and improve a product/service. Many products are becoming digitalised to take advantage of production cost savings and offer consumers higher convenience in an international market (e.g. the delivery of ebooks onto Kindle devices, instead of high print and distribution costs). (We cover digital transformation in more detail in Chapter 10).

5 From devices such as fax machines and mobile phones to apps, a sharing economy and crowdfunding

The development of hardware devices, such as fax machines, has been taken over by changes in consumer buying behaviour. More apps for mobile devices are being developed and organisations are operating in a ‘sharing economy’ - i.e. creating value exchanges within communities of like-minded people and seeking ‘authentic’ and personalised experiences with organisations. One example of this is the growth of crowdfunding as an alternative to using a bank to raise money.

Here are four good examples of digitally disruptive companies:

- Uber - the app-based cab-ordering firm;
- Netflix - on-demand video streaming from multiple devices;
- Airbnb - tapping into a global (sharing) community to offer holiday and business accommodation rentals across the world;
- Glenigan - a good example of a business-to-business (B2B) company disrupting the UK construction industry, by offering access to contacts, leads and industry insight.

It is worth noting that digital innovation can link both physical products/objectives and services. Good examples of this can be seen in the area of the ‘Internet of Things’ (IoT) to improve systems, processes and the

user experience. As mentioned in Chapter 4, IoT refers to a network of physical objects (or ‘things’), embedded with technology (such as electronics, sensors, etc.) that enables objects to exchange data with connected devices.

Google - Nest and Smart City

Google bought Nest Labs in 2014 for \$3.2 billion, which makes ‘smart’ thermostats, fire alarms and security cameras. Its most popular product is ‘Nest’, a home thermostat that has been designed to make people’s lives more comfortable and reduce wasted energy (helping the environment and cutting household bills). The device has software algorithms used to monitor and record how it is used, which helps build a usage profile, and then the device intelligently ‘sets’ itself.

Google has also created ‘Sidewalk Labs’, a smart cities start-up, designed to build technologies to help governments run urban areas more efficiently. Smart cities projects aim to help governments cut costs and improve quality of life by promoting more efficient management of a city’s public infrastructure - healthcare, utilities, transport and waste management.

Amazon - Amazon Dash Button

Amazon have announced the launch of a ‘Dash Button’ to Amazon Prime customers, which can be placed around your home - a wifi-enabled button that can be pressed to reorder common household products, such as washing powder. Some manufacturers have added an auto-detection capability to their Dash Button, so that it reorders products from Amazon when they are running low (which can be cancelled via mobile phone).

Apple - Apple Watch

Apple has now launched wearable technology, in the form of a ‘smart’ watch. The device connects to an iPhone and can be used to read emails, retrieve phone calls and access apps that allow it to be used for things such as a fitness tracker.

These are just a few examples of how technology is being used to ‘digitally disrupt’ common tasks/products and services.

In this chapter we seek to show how a digital business strategy can be created through following established business principles, but also through careful consideration of how to best identify and exploit the differences introduced by new digital innovations and channels. In a nutshell, digital business isn’t just about defining ‘how to do business online’; it defines ‘how to do business differently by applying digital technology to improve profitability and processes for both customer-facing, partner-facing and

internal communications’. We look at some examples of business models that need to be developed in the light of the opportunities enabled by digital technology and media in the introductory interview in this chapter.

We start the chapter by introducing digital business strategy and then discuss appropriate strategy process models to follow as a framework for developing digital business strategy. The chapter is structured around this classic four-stage strategy process model:

- 1 Strategic evaluation
- 2 Strategic objectives
- 3 Strategy definition
- 4 Strategy implementation

For each of these elements, we cover management actions to review and refine digital business strategy.

Development of the social business

With the growing consumer and business adoption of social media (which we discuss in Chapter 8), there has been more focus on creating a social business, focused around customer needs. (Since this requires transformation in the structure of the business, we cover this topic in Chapter 10).

Real-world Digital Business

The Smart Insights interview

Roberto Hortal explains why the marketing mix remains relevant today

Roberto Hortal has worked as head of digital business with many years of experience in different types of businesses operating in different countries. Examples of the UK and global enterprises he has worked for include EDF Energy, RSA insurance group, MORE TH>N, easyJet and Nokia. Here he shares his experience of how the marketing mix concept is still applicable when taking real-world decisions in companies to shape their online proposition and increase their commercial value.

Q. We often hear that the concept of the marketing mix isn't that useful any longer in this era of 'customer first'. What's your view

on its relevance today? Are there any particular aspects of the mix that lend themselves to refining online?

Roberto Hortal: The marketing mix is a conceptual framework, and as such it is useful since it enables a common language to be used in the planning, execution and measurement of a number of coordinated activities that deliver the desired marketing outcomes. Customer-centricity demands that organisations become a lot better at collecting and reacting to customer insight and adapt their offering to best suit an ever-growing number of narrowing customer segments - ever approaching the ideal of the completely personalised product. As complexity increases exponentially, it is crucial to be able to rely on tried-and-tested concepts like the marketing mix.

I use the basic components of the marketing mix (such as the Four Ps) at work daily, and as such for me the marketing mix remains a practical tool. In a digital environment routinely identifying and profiling individual consumers over time and adapting to their needs and wants, the Four Ps become elastic. Is my website a Place, or is it an integral part of the Product? When more efficient digital channels directly influence my ability to Price, do Place and Price become synonymous? This elasticity needs to be managed effectively to avoid the pitfalls of too rigidly applying the model. One must always challenge the validity of every tool in the digital marketing armoury; adding, changing and discarding as business and customers evolve. Proposed evolutions of the marketing mix concept (such as the Four Cs) may ensure it remains relevant today. My personal view is we're still some distance from seeing the end of its useful life.

Q. Could you give some examples of where you applied new ways of applying the mix online?

Roberto Hortal: In my view, the key insight is that digital media can contribute to every element of the mix. Therefore we must avoid a narrow categorisation of digital as contributing solely (or even primarily) to a single component of the mix.

While I haven't come across an organisation that fundamentally disagrees with that view, some organisations find it easier than others to put it into practice. I have worked in organisations where the mix is embedded in the corporate structure with separate Pricing, Product, Distribution (Place) and Marketing (Promotion) departments. Embedding a digital mindset across those silos can be a daunting task.

I've experimented with channel pricing, as pricing is a critical driver of conversion and business value in a services organisation:

- Straight online discounts have proven difficult to justify. Online discounts aren't valued by customers (in the age of price comparison, they focus on the total price, rather than its components) and often do not reflect a real lower cost to the business (lower costs to sell and serve are offset by lower transaction value and lower retention rates).
- Using channel data as a pricing factor has proven a lot more successful: as historical data is accumulated, it is possible to really offer competitive prices to those customers identified as high value at the point of application. An accurate value/propensity model can use the wealth of information available from digital visitors (geography, visit trigger/campaign, past visits, customer history, etc.) to drive truly personalised pricing. In this example, price follows place and both price and promotion reflect the individual customer.

I've successfully extended the data-driven approach to other elements of the mix: dynamic packaging (the creation of a personalised offering from the basis of a modular product) has proven successful many times: at easyJet we built a product that included car hire recommendations based on a predictive model that took destination, seasonality and party size as inputs - increasing car hire uptake very significantly. More recently I've applied the same insight-driven dynamic packaging approach to RSA's Central and Eastern European businesses, increasing sales of optional covers and add-ons very significantly.

Further opportunities exist around selecting which default base products to present: are you more likely to want a cheap energy tariff that tracks price rises or a fixed-price deal that ensures protection against future rises? What we know about you from your digital 'shadow' may provide the clues we need.

Q. Online channels bring great opportunities to test propositions online. Can you advise on approaches to testing propositions?

Roberto Hortal: I have used online channels to test propositions in a couple of ways:

- Assign propositions randomly to visitors on first arrival to test interest/sales. I would typically run this against a large control group (being offered the current main proposition) to both protect commercial results and detect the effect of any external

influences that maybe otherwise wrongly influence the experiment. This approach can be extended beyond the site, via randomised allocation of marketing messages on Display, Search etc. to measure a proposition's attractiveness. It's important to test all aspects of the proposition: a very successful proposition at attracting interest may convert badly if it can't be priced at a level that matches customer expectations.

- Provide a modular proposition platform and allow customers to combine proposition elements. We can easily analyse popular combinations as well as secondary correlations such as the propensity to add a certain ancillary product to a particular proposition configuration, and understand the compound impact on profitability, retention and advocacy from what we know about each of the modular components in isolation.

I've found that proposition testing rarely fits neatly an A/B scenario, with tests quickly developing into complex multivariate experiments with a significant number of variables. It is important to ensure the tests are solidly planned, rigorously executed and statistically significant. Free tools like Google Website Optimiser provide information to test and get the best out of website contact. However, such tools will not prevent badly designed experiments from yielding wrong data. In my experience, the only way to ensure valid tests and improved business results is to bring in the best analytical brain you can find. Analytics is the first role I fill when I build a digital team from scratch, it's that important.

Q. Many organisations are now developing social media strategies. How do you see the intersection between social media and the marketing mix since it clearly impacts on product decision-making and service?

Roberto Hortal: If I only had the answer... I take a radically different view of social media than many of my peers. While most people see social media as a branding and customer service channel, I see social media's largest potential in the areas of awareness, consideration and acquisition. This is not to say the best way to use social media sites is to advertise in them. Far from it. The social nature of the Internet demands that brands engage in conversation, and identify and incentivise brand ambassadors to help amplify our messages.

There is general acceptance of this, but also a general shyness about steering conversations and seeking to extract immediate commercial value in the form of direct sales. Risk-aversion takes

over and anecdotes [are] used to prove the point that there is a risk that poor execution may lead to a social backlash.

The risk is clearly real but there is also an opportunity to execute well and generate significant amounts of business and positive buzz. I recently ran a campaign with Poland's largest social network (Nasza Klasa). A fairly simple personality quiz mechanism was executed beautifully by my Polish team, resulting in what our partners characterised as the country's most successful campaign in terms of reach and engagement, one that generated levels of sales comparable to those contributed by mainstream e-marketing channels.

Social media spaces require nurture and respect, but we must not forget that so do physical locations. In the same way that people like to go to the village's Post Office for a chat but also do their banking, branded social media environments have the potential to merge conversation and commerce in a seamless, altogether better proposition for both consumers and brands.

Q. Many organisations now are looking at providing new mobile propositions. A key decision is whether to implement them as a mobile app or mobile site. How do you approach this platform decision?

Roberto Hortal: I start from the point of view of the user:

- Why would they use this proposition?
- Where would they use the proposition?
- How would they find it first time, and subsequently?
- Would they accept/appreciate the added engagement possibilities of an app (alerts, updates, a permanent place on the home screen)?

Some scenarios where I have used this approach in the past include:

- **Insurance/energy sales.** Website - neither mobile app nor mobile site. In this particular case I think the best option is to provide a solidly usable, accessible web sales capability that works well across devices. Rather than building separate sites/capabilities for separate devices I prefer to ensure the basis of the experience is optimised - this principle ensures that device-specificity doesn't catch me off-guard: sales websites I have managed worked well on iPhone the day it came out as they were built of solid principles and standards that apply across devices. I do use extensively the principles of progressive enhancement to provide a great experience to segments of

people on particular channels/devices such as modern PC browsers and mobile browsers. However, the underlying principle of a solid, accessible, easy-to-use site has never let me down.

- **Regular/emergency transaction.** Apps - I look at regular events such as submitting an electricity meter reading or unpredictable ones such as registering a motor insurance claim as ideal candidates for a mobile app. Regularity breeds familiarity, and regular events can benefit from app characteristics such as local storage, transparent login, notifications and a permanent place on the user's screen. These same characteristics, together with the reassurance of being completely contained on the device and not requiring uninterrupted Internet access, support the use of apps for functionality perceived as critical. HTML5 may make these distinctions technically irrelevant, but I expect customer behaviour will lag significantly so they will effectively apply for a long while yet.
- **Seamless access vs perceived value.** An app's installation is quite a disruptive process: you need to open the shop interface, confirm credentials, find the app, start a possibly long download (which may impact on your monthly limits), find the app on the phone screens, start it, watch it initialise (including possibly entering username and password for initial configuration) and finally access it - and from now on it will take space permanently on your device, competing with your music and movies. Quite an expensive process, from a usability point of view. Therefore an app must have quite a high perceived value in order to get installed. On the other hand, if casual use (particularly in conjunction with web searching/browsing) is what is sought, then a mobile site is the best solution.
- **Fragmentation is finally the last of my current worries.** We used to have to contend with the iPhone and the iPad. Two screen sizes in a universal app. Manageable. Suddenly we have myriad versions of iOS, Android, Windows Phone on a continuum of screen sizes and very variable device capabilities (processor speed, camera/s, GPS, NFC, etc.). This is turning into a big argument for HTML5 and mobile sites. Major platform/device combos will continue to be relevant for apps, but I also expect the relative size of this group of devices to

shrink in relation to the universe of mobile devices - serving most of which will only be practical through mobile web.
(Options for reviewing the marketing mix are discussed further at the end of Chapter 7 on digital marketing.)

What is digital business strategy?

Strategy defines the future direction and actions of an organisation or part of an organisation. Johnson and Scholes (2017) define corporate strategy as:

the direction and scope of an organization over the long term: which achieves advantage for the organization through its configuration of resources within a changing environment to meet the needs of markets and to fulfil stakeholder expectations.

Lynch (2000) describes strategy as an organisation's sense of purpose. However, he notes that purpose alone is not strategy; plans or actions are also needed.

Digital business strategies share much in common with corporate, business and marketing strategies. These quotes summarising the essence of strategy could equally apply to each strategy:

- 'Is based on current performance in the marketplace'
- 'Defines how we will meet our objectives'
- 'Sets allocation of resources to meet goals'
- 'Selects preferred strategic options to compete within a market'
- 'Provides a long-term plan for the development of the organisation'
- 'Identifies competitive advantage through developing an appropriate positioning relative to competitors defining a value proposition delivered to customer segments.'

Johnson and Scholes (2017) note that organisations have different levels of strategy, particularly for larger or global organisations. These are summarised within Figure 5.2. They identify *corporate strategy*, which is concerned with the overall purpose and scope of the organisation, *business*

unit strategy, which defines how to compete successfully in a particular market, and *operational strategies*, which are concerned with achieving corporate and business unit strategies. Additionally, *functional strategies* describe how the corporate and business unit strategies will be operationalised in different functional areas or business processes. Functional or process strategies refer to marketing, supply chain management, human resources, finance and information systems strategies.

Where does **digital business strategy** fit? Figure 5.2 does not show at which level digital business strategy should be defined, since for different organisations this must be discussed and agreed. We can observe that there is a tendency for digital business strategy to be incorporated within the functional strategies, for example within a marketing plan or logistics plan, or as part of information systems (IS) strategy. A danger with this approach is that digital business strategy may not be recognised at a higher level within organisational planning. A distinguishing feature of organisations that are leaders in digital business, such as Cisco, Dell, HSBC, easyJet and General Electric, is that digital business is an element of corporate strategy development and that transformation to apply digital platforms and media is prioritised and resourced. (We discuss digital transformation further in Chapter 10).

Strategy

Definition of the future direction and actions of a company defined as approaches to achieve specific objectives.

Digital business strategy

The approach by which the application of new technologies to existing business activities can support and influence business strategy and provide competitive advantage.

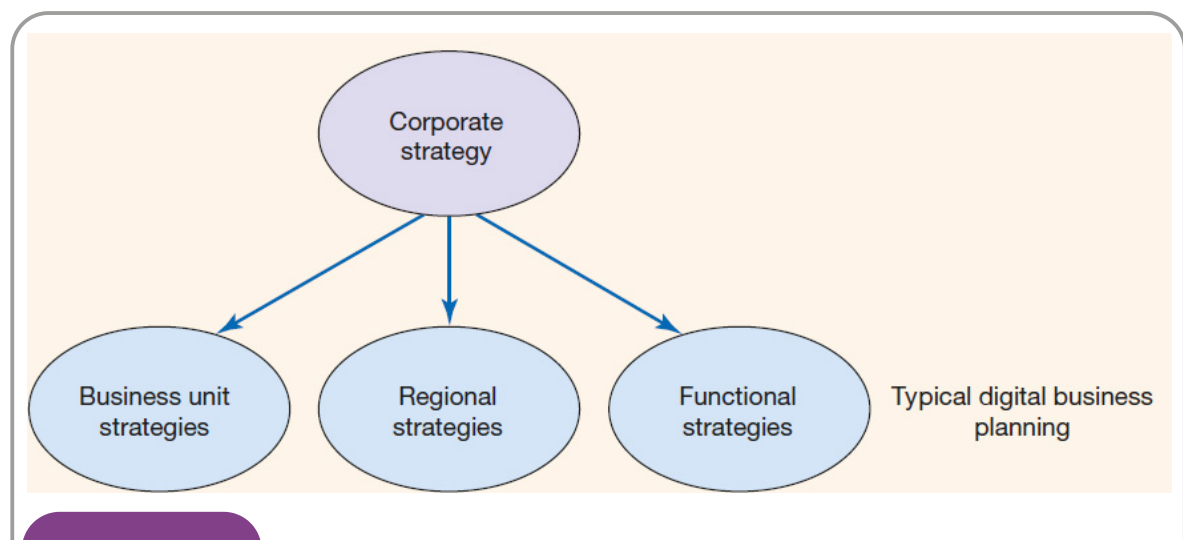


Figure 5.2

Different forms of organisational strategy

The imperative for digital business strategy

Think about the implications if digital business strategy is not clearly defined. The following may result:

- Missed opportunities from lack of evaluation of opportunities or insufficient resourcing of digital business initiatives. These will result in more savvy competitors gaining a competitive advantage.
- Inappropriate direction of digital business strategy (poorly defined objectives, for example, with the wrong emphasis on buy-side, sell-side or internal process support).
- Limited integration of digital business at a technical level, resulting in silos of information in different systems.
- Resource wastage through duplication of digital business development in different functions and limited sharing of best practice.

To help avoid these problems, organisations will want digital business strategy to be based on corporate objectives. As Rowley (2002) pointed out, it is logical that digital business strategy should support corporate strategy objectives and it should also support functional marketing and supply chain management strategies (see Chapter 6 for more information on supply chain management strategies).

However, these corporate objectives should be based on new opportunities and threats related to digital network adoption, which are identified from an environmental analysis. Nowadays, it can be argued that digital business strategy should not only support corporate strategy, but should also influence it. Figure 5.3 explains how digital business strategy should relate to corporate and functional strategies. It also shows where these topics are covered in this text.

Digital channel strategies

An important aspect of digital business strategies is that they create new **‘digital channel strategies’** for organisations. It is important to define specific goals and approaches for these channels, to prevent simply replicating existing processes through digital channels, which will create efficiencies but will not exploit the full potential for making an organisation more effective by utilising digital technologies. We have used the generic ‘digital channels’ term since as new digital platforms and technologies become available, companies should implement strategic initiatives to implement them where relevant. These strategies may be buy-side, sell-side or internal infrastructure related. Examples of digital channel strategies include:

- overarching digital channel, multichannel or omnichannel strategy, with specific channel strategies;
- mobile commerce strategy;
- social media strategy;
- social CRM strategy (see Chapter 8);

Digital channel strategies

These define how a company should set specific objectives and develop specific differential strategies for communicating with its customers and partners through electronic media.

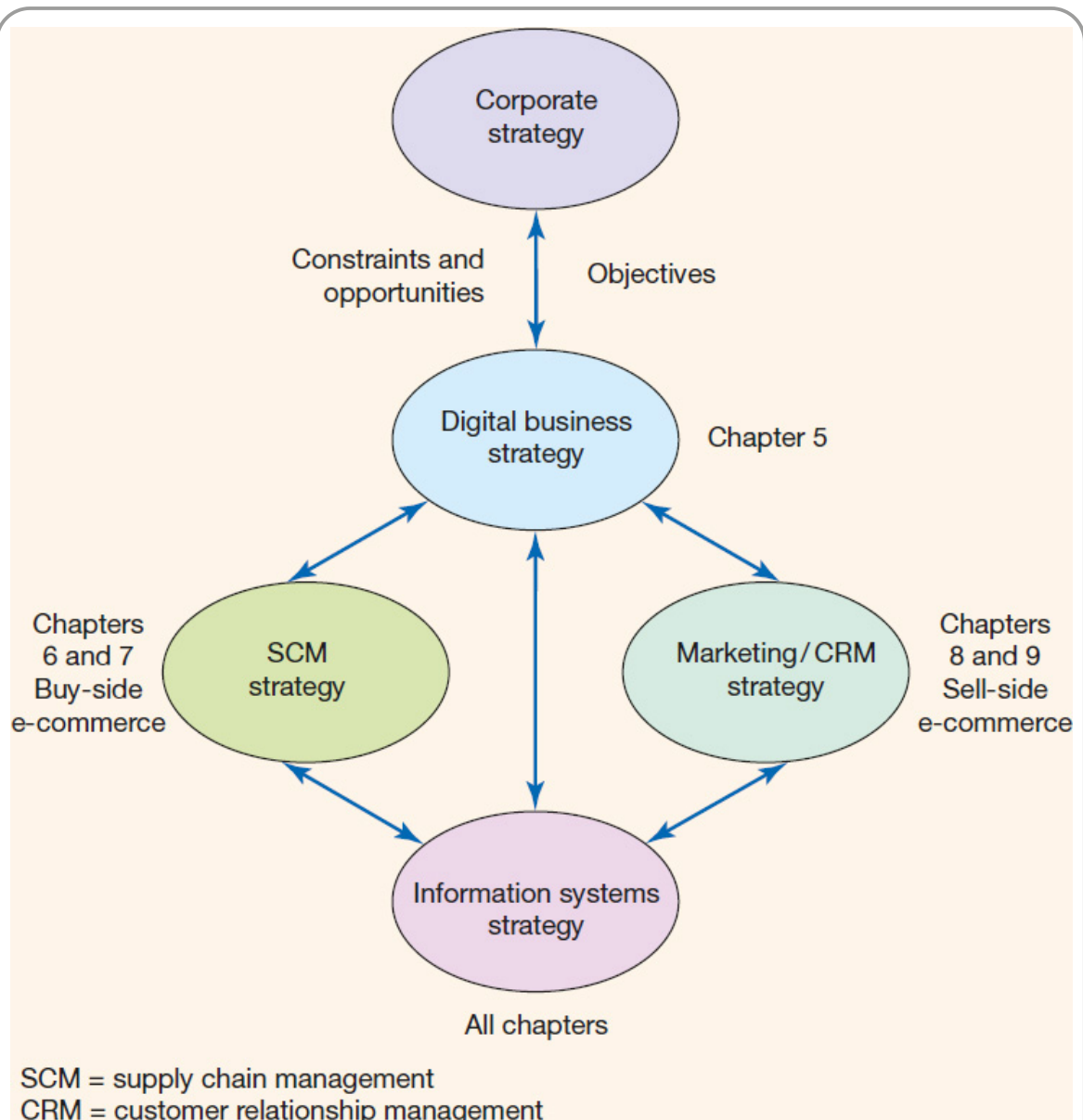


Figure 5.3

Relationship between digital business strategy and other strategies

- supply chain or enterprise resource planning strategy (see Chapter 6);
- e-procurement strategy (see Chapter 6)
- platform strategy

So, at any one time there, will be a lot of potential initiatives that will be not be financially or operationally practical to implement at the same time. Therefore, roadmaps need to be produced and decisions taken over priorities, as described at the end of this chapter.

Digital channel strategies also need to define how online channels are used in conjunction with other channels as part of a **multichannel digital business strategy**. This defines how different marketing and supply chain channels should integrate and support each other in terms of their proposition development and communications based on their relative merits for the customer and the company. Alternatively, an organisation may pursue an **omnichannel business strategy**. This is a cross-channel business model that organisations can use to provide their user/customer experience - it provides a seamless customer experience across offline and online channels (i.e. a website, telephone communication, bricks-and-mortar store, live web chat, mobile application, etc.).

Finally, we also need to remember that digital business strategy also defines how an organisation gains value internally from using digital networks, such as sharing employee knowledge and improving process efficiencies through intranets or closed social networks, such as Slack and Yammer. Myers *et al.* (2004) provide a useful summary of the decisions required about multichannel marketing.

Multichannel digital business strategy

How a business interacts with its customers using a combination of direct and indirect communications channels.

Omnichannel business strategy

'Omni' is a Latin word referring to 'everything'-i.e. the entire purchase process performed by the customer.

The main characteristic of a multichannel (and omnichannel) digital business strategy is that it is a channel strategy, so it follows that:

- Specific digital business objectives need to be set to benchmark adoption of digital channels.
- Digital business strategy defines how we should:
 - 1 *communicate the benefits of using digital channels;*
 - 2 *prioritise audiences or partners targeted for digital channel adoption;*
 - 3 *prioritise products sold or purchased through digital channels;*
 - 4 *achieve our digital channel targets.*
- Digital channel strategies thrive on creating differential value for all parties to a transaction.
- Digital channels do not exist in isolation, so we still need to manage channel integration and acknowledge that the adoption of digital channels will not be appropriate for all products or services or generate

sufficient value for all partners. This selective adoption of online channels is sometimes referred to as ‘right-channelling’ in a sell-side e-commerce context (as shown in Table 5.9). Right-channelling can be summarised as:

- *reaching the right customer*
- *using the right channel*
- *with the right message or offering*
- *at the right time.*
- Digital business strategy also defines how an organisation gains value internally from using electronic networks, such as through sharing employee knowledge and improving process efficiencies through intranets and closed social networks.

Platform strategy

This is a relatively new type of strategy, which is about entering a market that revolves around allowing platform participants to benefit from the presence of others (i.e. creating a community). The platforms themselves are environments (computing or otherwise) that connect different groups and provide benefits from others participating in the platform- i.e. Google, Etsy, eBay, Facebook and the video game platform Steam. They are about co-creating value. Platforms also rely on the power of ‘network effects’ - i.e. as they attract more users, they provide a better experience and become more valuable to those users.

The rise of platforms has been driven by three main technologies: cloud, social and mobile. According to Bonchek and Choudary (2013), the success of a platform strategy is determined by three things:

- 1 Connection: how easy is it for others to use/join the platform and share/transact?
- 2 Gravity: how well does the platform attract participants (both producers and consumers)?
- 3 Flow: how well does the platform foster the exchange and co-creation of value?

Other examples of business-to-business platforms include InnoCentive (www.innocentive.com), which is an open innovation ‘pull’ platform that connects engineering, science and other types of solutions with expert solvers.

According to Hagel (2015), there are three common types of platforms:

- **Aggregation platforms.** These bring together a broad array of different resources and help users connect with them. They tend to be very transaction- or task-focused (i.e. find a solution to a need, do the deal and move on). Within this category there are three sub-categories: (1) data/information aggregation platforms, such as scientific databases; (2) marketplace/broker platforms, such as MoneySuperMarket, the App Store, eBay, etc.; and (3) contest platforms, where people can post a problem and offer a reward/payment to the user that comes up with the best solution, e.g. InnoCentive and Kaggle.
- **Social platforms.** These are about bringing together a lot of people who want to communicate with each other because of a common interest, helping to build and reinforce long-term relationships across participants using the platform. Facebook and Twitter are good examples of this.
- **Mobilisation platforms.** These are designed to take common interests to the next level of action - they are about moving people to act together to accomplish something beyond an individual participant. One example of this is the use of crowdsourcing to fund business ideas/company expansion, etc. Also known as crowdfunding, popular platforms include Crowdfunder (www.crowdfunder.co.uk) and Kickstarter (www.kickstarter.com).

An example of how start-up company Onedox.com worked on defining its digital business strategy and used the crowdfunding platform Crowdcube to raise money can be seen in Mini case study 5.1.

business and used
peer-to-peer lending platform Crowdcube to raise money

Onedox is a free web-based service that provides UK consumers with centralised access to their household bills. It also provides automatic notifications whenever a user should switch to a better deal, which helps consumers save time and money on their household bills.

The company was set up by David Sheridan, Hugh Nimmo-Smith and Richard Lewis in 2014. However, unlike most entrepreneurs, these three friends did not start with an idea; they started with a blank sheet of paper and went through an 'ideation phase'. They used 'environmental scanning' (discussed in Chapter 4) to generate ideas from a broader economic and social trends perspective. Finding Mary Meeker's annual Internet trends and certain sectors on the fundsourcing

platform Kickstarter to be particularly useful, this helped generate a list of ideas, which they reviewed systematically by asking:

- Does it solve an appreciable problem?
- Would the cost of production be sensible versus the retail price?
- Is there a gap within the competitive landscape for the product or service?

The founders then discovered an idea around helping people manage their personal admin more easily and cost-effectively and ‘tested’ to see what people thought via surveys (Google consumer surveys and within their social networks). The next stage was to create a minimum viable product (MVP) and a beta trial for an app called Onedox (MVPs are discussed in more detail within the growth hacking section in Chapter 10).

At the time of writing, Onedox is being used by over 5,000 people, helping them manage over £6 million a year in household spend. They have also been named by Digital Leaders as a Top 10 company for FinTech (financial technology) innovation in 2017.

Using Crowdcube to raise finance so that they can hire additional staff to speed up product development, Onedox had a target to raise £300K for 18.7% equity in the company (a pre-money company valuation of £1.8 million). However, they managed to exceed this target, raising over £416K between 360 investors.

The company is projecting a cost per acquisition (CPA) of £5 per customer (based on recent metrics), with a calculated revenue potential of more than £40 per year, per customer.



Figure 5.4

The Onedox revenue model

Source:

<https://www.crowdcube.com/companies/onedox/pitches/b9nE7q#category>

Sources:

<http://startups.co.uk/diary-of-a-start-up-introducing-david-sheridan-founder-of-onedox-com/>

www.onedox.com/blog/we-are-crowdfunding

www.onedox.com/blog/onedox-announced-as-digital-leaders-100-finalist

www.crowdcube.com/companies/onedox/pitches/b9nE7q#category

Strategy process model

A framework for approaching strategy development.

Debate 5.1

Digital business responsibility

'single person with specific digital business responsibility is required for every medium-to-large business. It is not sufficient for this to be the responsibility of a non-specialist manager'.

Strategy process models for digital business

Before developing any type of strategy, a management team needs to agree the process it will follow for generating and then implementing the strategy. A **strategy process model** provides a framework that gives a logical sequence to follow to ensure inclusion of all key activities of digital business strategy development. It also ensures that digital business strategy can be evolved as part of a process of continuous improvement.

Before the advent of digital business, many strategy process models had been put forward for developing business and marketing strategies. To what extent can management teams apply these models to digital business strategy development? Although strategy process models differ in emphasis and terminology, they all have common elements. Complete Activity 5.1 to discuss what these common elements are.

Figure 5.5 visually summarises the key elements of a strategy process model. This is explained in detail underneath the diagram. Common elements include:

- 1 Internal and external environmental scanning or analysis is needed. Scanning occurs both during strategy development and as a continuous process in order to respond to competitors. Digital business requires a more continuous review of opportunities and threats as new digital platforms are created and adopted by businesses and consumers (see Chapter 4).
- 2 A clear statement of vision and objectives is required. Clarity is required to communicate the strategic intention to both employees and the marketplace since digital business requires a major long-term transformation. Objectives are also vital to act as a check as to whether implementation of strategy is on track.

Table 5.1**Alternative strategy process models**

Jelassi and Enders (2008) Digital business strategy framework	Johnson and Scholes (2017) Parallel corporate strategy model	McDonald (1999) Sequential marketing strategy model	Smith (1999) SOSTAC [®] Sequential marketing strategy model (see Chapter 7)
SWOT summarising external analysis (e.g. marketplace, customers, competitors); internal analysis (e.g. human, financial and operational)	Strategic analysis (environment, resources, expectations, objectives and culture)	Situation review (marketing audit, SWOT analysis, assumptions)	Situation analysis
Mission and objectives	Strategic choice (generation of options, evaluation of options, selection of strategy)	Goal-setting (mission, corporate objectives)	Objective-setting
Strategy formulation to create and capture value through sustaining competitive advantage and exploring new market spaces	Strategic implementation (resource planning, people and systems, organisation structure)	Strategy formulation (marketing objectives and strategy, estimate expected results, identify alternative plans and mixes)	Strategy
Strategy implementation including internal organisation, interaction with suppliers and users or customers		Resource allocation and monitoring (budget, first-year implementation plan)	Tactics Actions Control

Activity 5.1**Selecting a digital business strategy process model****Purpose**

To identify the applicability of existing strategy process models to digital business.

Activity

Review three or four strategy process models that you have encountered. These could be models such as those shown in Table 5.1. Note that columns in this table are independent - the rows do not correspond across models.

Questions

- 1 What are the strengths and weaknesses of each model?
- 2 What common features do the models share? List the key elements of an appropriate strategy process model.

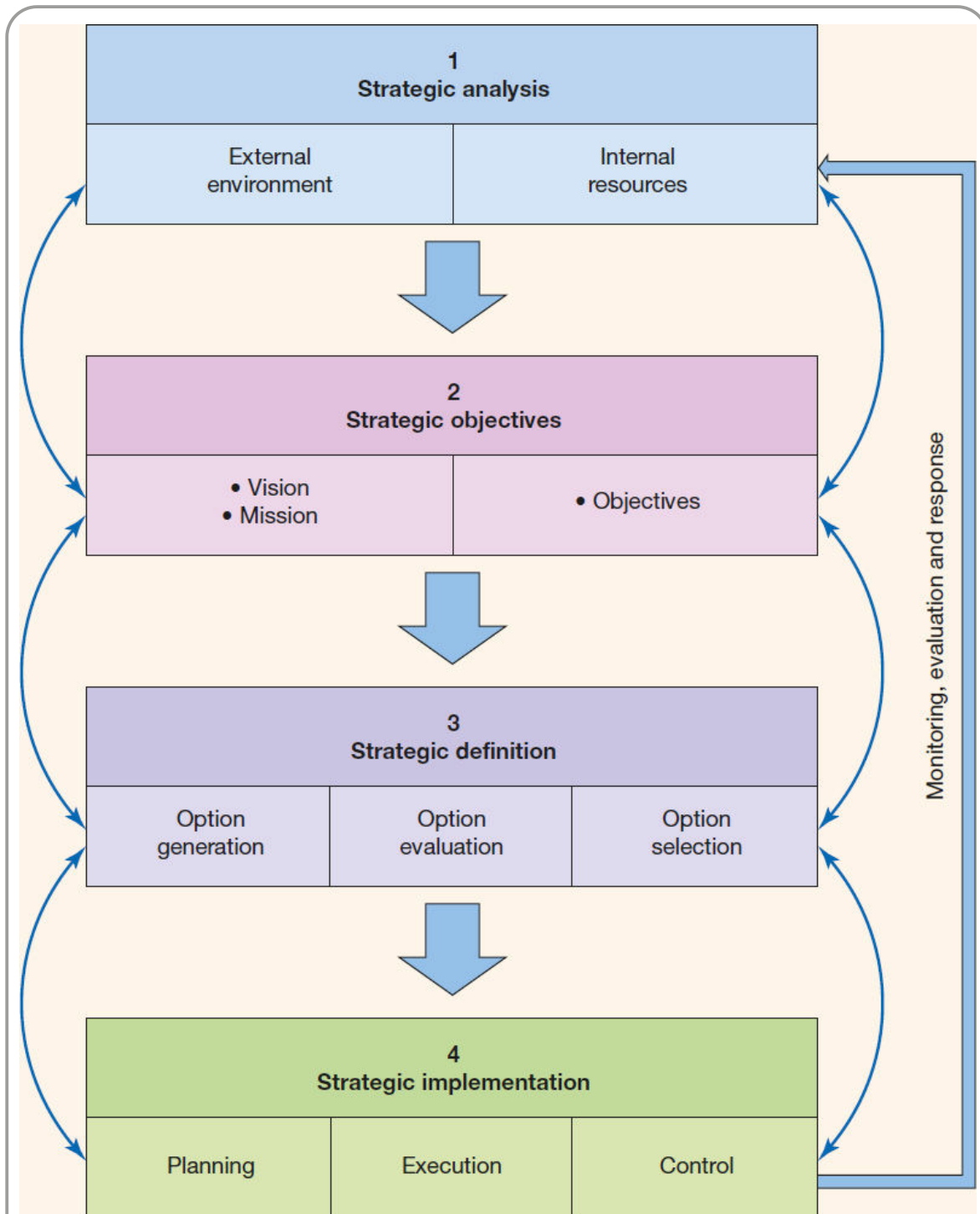


Figure 5.5

A generic strategy process model

- 3 Strategic definition can be broken down into strategy option generation, evaluation and selection.
- 4 After strategy development, enactment of the strategy occurs as strategy implementation.
- 5 Control is required to monitor operational and strategy effectiveness problems and adjust the operations or strategy accordingly. With digital business, optimisation is possible using digital analytics (as described in Chapter 10). This includes tracking of audience behaviour using desktop and mobile services and qualitative feedback via social media. Harnessing this insight is useful to refine the implementation - for example, to gain ideas of how to increase conversion rate to sale for e-commerce services.

Although the models suggest that these elements are generally sequential, in reality they are iterative and require reference back to previous stages.

Jelassi and Enders (2008) suggest that there are three key dimensions for defining an e-commerce strategy:

- 1 Where will the organisation compete? (That is, which markets within the external micro-environment.)
- 2 What type of value will it create? (Strategy options to generate value through increased revenue or reduced costs.)
- 3 How should the organisation be designed to deliver value? (Includes internal structure and resources and interfaces with external companies, as discussed in Chapter 10.)

The arrows in Figure 5.5 highlight an important distinction in the way in which strategy process models are applied. Referring to the work of Mintzberg and Quinn (1991), Lynch (2000) distinguishes between prescriptive and emergent strategy approaches. In the **prescriptive strategy** approach, strategic analysis is used to develop a strategy, and it is then implemented. In other words, the strategy is prescribed in advance. Alternatively, in the **emergent strategy** approach, strategic analysis, strategic development and strategy implementation are interrelated.

Prescriptive strategy

Strategic analysis, strategic development and strategy implementation are linked together sequentially.

Emergent strategy

Strategic analysis, strategic development and strategy implementation are interrelated and are developed together.

In reality, most organisational strategy development and planning processes have elements of prescriptive and emergent strategy. The prescriptive elements are the structured annual or six-monthly budgeting process or a longer-term three-year rolling marketing planning process. But, on a shorter timescale, organisations also need an emergent process to enable strategic agility (introduced in Chapter 2) and the ability to respond rapidly to marketplace dynamics. ‘Econsultancy’ (2008a) has researched approaches used to encourage emergent strategies or strategic agility based on interviews with e-commerce practitioners-see Table 5.2.

Kalakota and Robinson (2000) recommend a dynamic emergent strategy process specific to digital business - see Figure 5.6. It essentially shares similar features to Figure 5.5, but with an emphasis on responsiveness with continuous review and prioritisation of investment in new applications.

Table 5.2

Summary of approaches used to support emergent strategy

Aspect of emergent strategy	Approaches used to support emergent digital strategy
Strategic analysis	• Staff in different parts of organisation encouraged to monitor introduction of new approaches by in-sector or out-of-sector competitors • Third-party benchmarking service reporting monthly or quarterly on new functionality introduced by competitors • <i>Ad hoc</i> customer panel used to suggest or review new ideas for site features • Quarterly longitudinal testing of usability to complete key tasks

Strategy
formulation
and selection

- Subscription to audience panel data (comScore, NetRatings, Hitwise) reviews changes in popularity of online services
- Budget flexible to reassign priorities
- Dedicated or 'ring-fenced' IT budget up to agreed limits to reduce protracted review cycles
- Digital channel strategy group meets monthly, empowered to take decisions about which new web functionality to implement

Strategy
implementation

- Use of agile development methodologies to enable rapid development
- Area of site used to showcase new tools currently under trial (for example, Google X Lab (<http://x.company>)). This area no longer exists

Source: 'Econsultancy' (2008a)

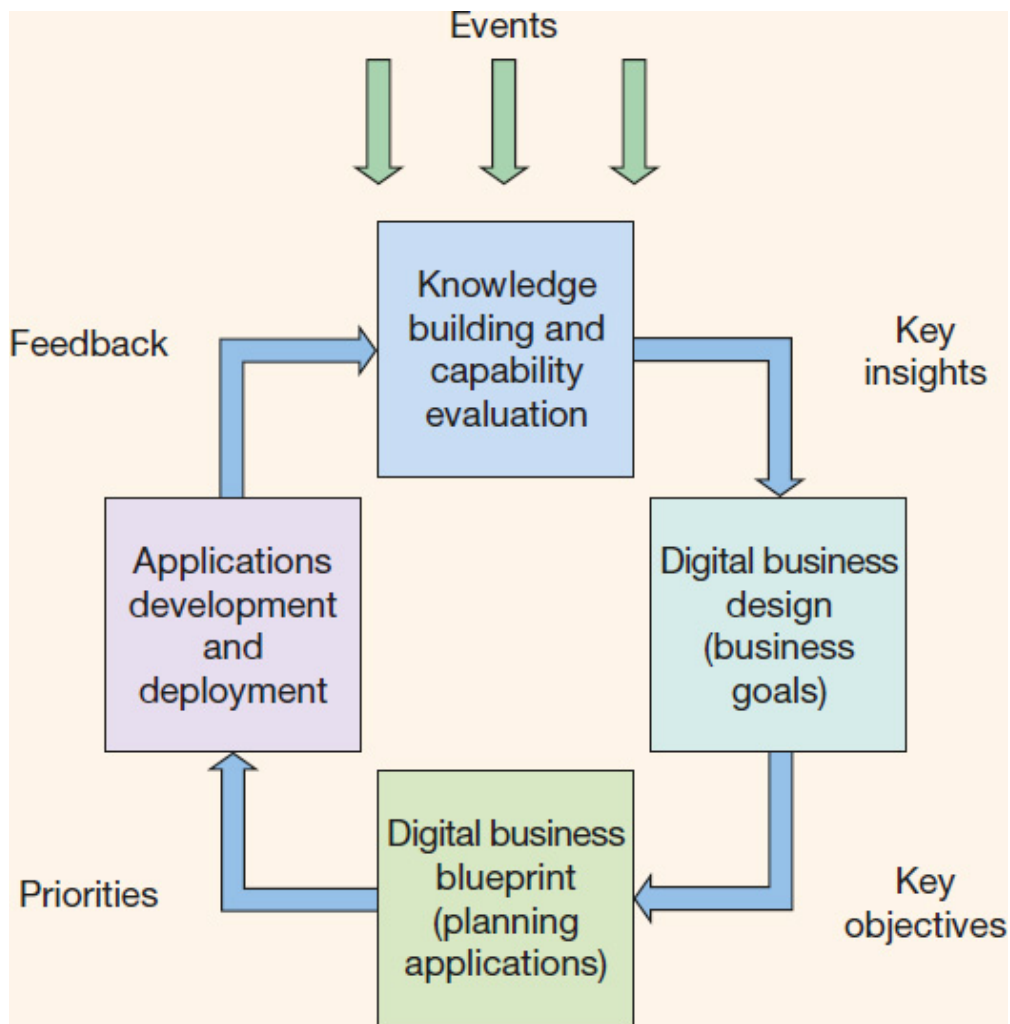


Figure 5.6

Dynamic digital business strategy model

Source: Adapted from description in Kalakota and Robinson (2000)

Strategic analysis

Strategic analysis

Collection and review of information about an organisation's internal processes and resources and external marketplace factors in order to inform strategy definition.

Strategic analysis or situation analysis involves the review of:

- the internal resources and processes of the company to assess its digital business capabilities and results to date in the context of a review of its activity in the marketplace;
- the immediate competitive environment (micro-environment), including customer demand and behaviour, competitor activity, marketplace structure and relationships with suppliers, partners and intermediaries (as described in Chapter 2);
- the wider environment (macro-environment) in which a company operates (this includes the social, legal, economic and political factors reviewed in Chapter 4).

This process is summarised in Figure 5.7. For the effective, responsive digital business, as explained earlier, it is essential that situation analysis or environmental scanning be a continuous process with clearly identified responsibilities for performing the scanning and acting on the knowledge acquired.

Resource and process analysis

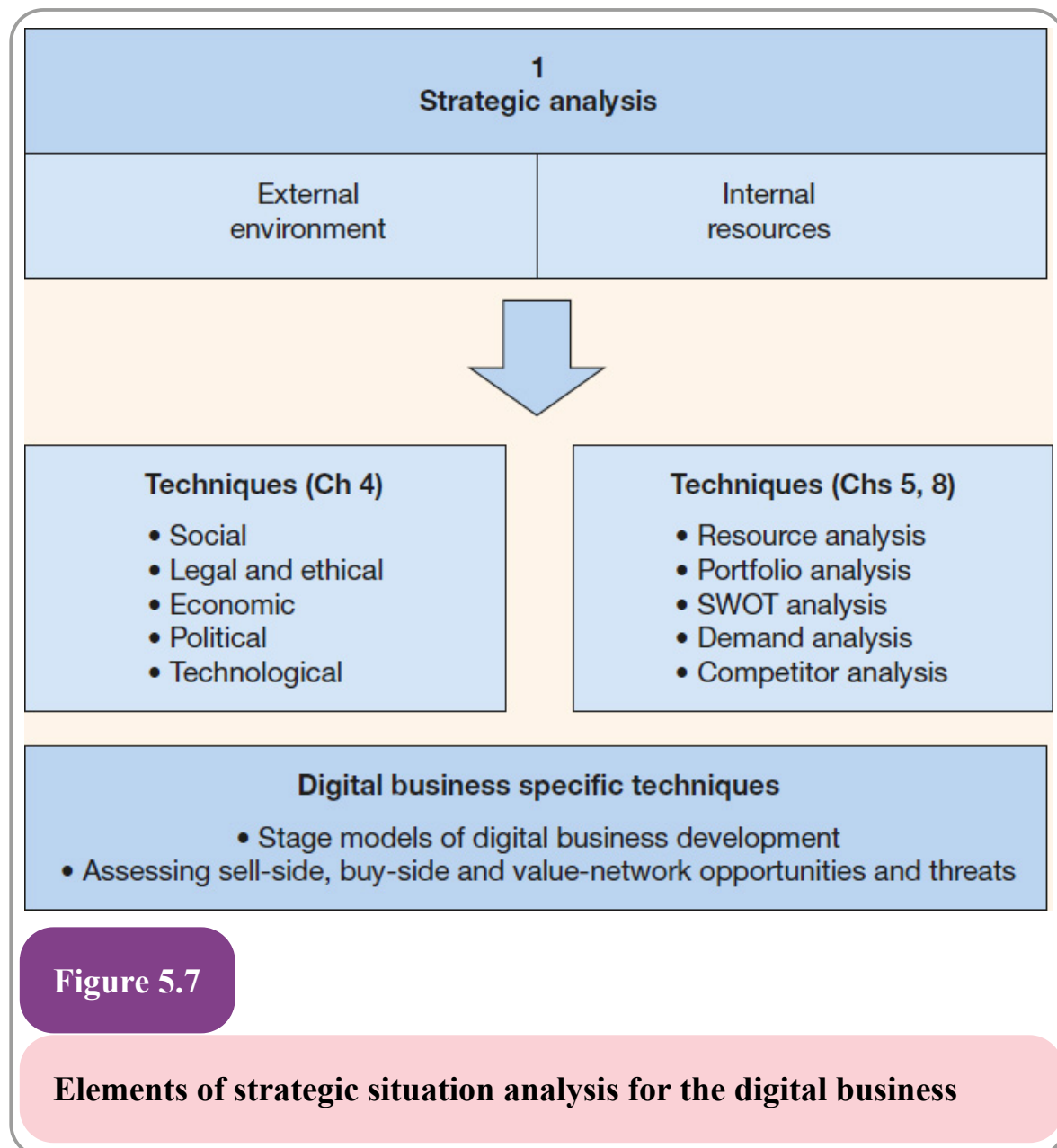
Resource analysis for a digital business is primarily concerned with its digital business capabilities, i.e. the degree to which a company has in place the appropriate technological and applications infrastructure and financial and human resources to support it. These resources must be harnessed together to give efficient business processes.

Resource analysis

Review of the technological, financial and human resources of an organisation and how they are utilised in business processes.

Jelassi and Enders (2008) distinguish between analysis of resources and capabilities:

- Resources are the tangible and intangible assets that can be used in value creation. Tangible resources include the IT infrastructure, bricks and mortar and financial capital. Intangible resources include a company's brand and credibility, employee knowledge, licences and patents.



- Capabilities represent the ability of a firm to use resources effectively to support value creation. They are dependent on the structure and processes used to manage digital business.

Stage models of digital business development

Stage models are helpful in reviewing how advanced a company is in its use of information and communications technology (ICT) resources to support its processes. Stage models have traditionally been popular in the analysis of the current application of business information systems (BIS) within an organisation. For example, Nolan's (1979) six-stage model referred to the

development of use of information systems within an organisation from initiation with simple data processing through to a mature adoption of BIS with controlled, integrated systems. (A simple example of a stage model was introduced in Figure 1.12.)

When assessing the current use of ICT within a company or across a market it is instructive to analyse the extent to which an organisation has implemented the technological infrastructure and support structure to achieve digital business. Quelch and Klein (1996) developed a five-stage model referring to the development of sell-side e-commerce. The stages remain relevant today. Research (referenced in Chapter 1 and Chapter 4) shows that many companies still have limited digital business capabilities and are at an early stage in the model. For existing companies the stages are:

- 1 Image and product information** - a basic 'brochureware' website or presence in online directories.
- 2 Information collection** - enquiries are facilitated through online forms.
- 3 Customer support and service** - 'web self-service' is encouraged through frequently asked questions and the ability to ask questions through a forum or online.
- 4 Internal support and service** - a marketing intranet is created to help with support process.
- 5 Transactions** - financial transactions such as online sales, or the creation of an eCRM system where customers can access detailed product and order information through an extranet.

Considering sell-side e-commerce, Chaffey and Ellis-Chadwick (2012) suggest there are six options:

- *Level 0.* No website or presence on web.
- *Level 1.* Basic web presence. Company places an entry in a website listing of company names. There is no website at this stage.
- *Level 2.* Simple static informational website. Contains basic company and product information, sometimes referred to as 'brochureware'.
- *Level 3.* Simple interactive site. Users are able to search the site and make queries to retrieve information. Queries by email may also be supported.
- *Level 4.* Interactive site supporting transactions with users. The functions offered will vary according to company but they will usually be limited to online buying.
- *Level 5.* Fully interactive site supporting the whole buying process. Provides relationship marketing with individual customers and

facilitating the full range of marketing exchanges.

Stage models have also been applied to SME businesses, where Levy and Powell (2003) reviewed different adoption ladders that, broadly speaking, have the four stages of (1) publish, (2) interact, (3) transact and (4) integrate.

Considering buy-side e-commerce, the corresponding levels of product-sourcing applications can be identified:

- *Level I.* No use of the web for product sourcing and no electronic integration with suppliers.
- *Level II.* Review and selection from competing suppliers using intermediary websites, B2B exchanges and supplier websites. Orders placed by conventional means.
- *Level III.* Orders placed electronically through EDI, via intermediary sites, exchanges or supplier sites. No integration between organisation's systems and supplier's systems. Rekeying of orders into procurement or accounting systems necessary.
- *Level IV.* Orders placed electronically with integration of company's procurement systems.
- *Level V.* Orders placed electronically with full integration of company's procurement, manufacturing requirements planning and stock control systems.

We should remember that typical stage models of website development such as those described above are most appropriate to companies whose products can be sold online through transactional e-commerce. In fact, stage models could be developed for a range of different types of online presence and business models, each with different objectives. As a summary to this section, Table 5.3 presents a synthesis of stage models for digital business development. Organisations can assess their position on the continuum between stages 1 and 4 for the different aspects of digital business development shown in the column on the left.

When companies devise the strategies and tactics to achieve their objectives they may return to the stage models to specify which level of innovation they are looking to achieve in the future.

Application portfolio analysis

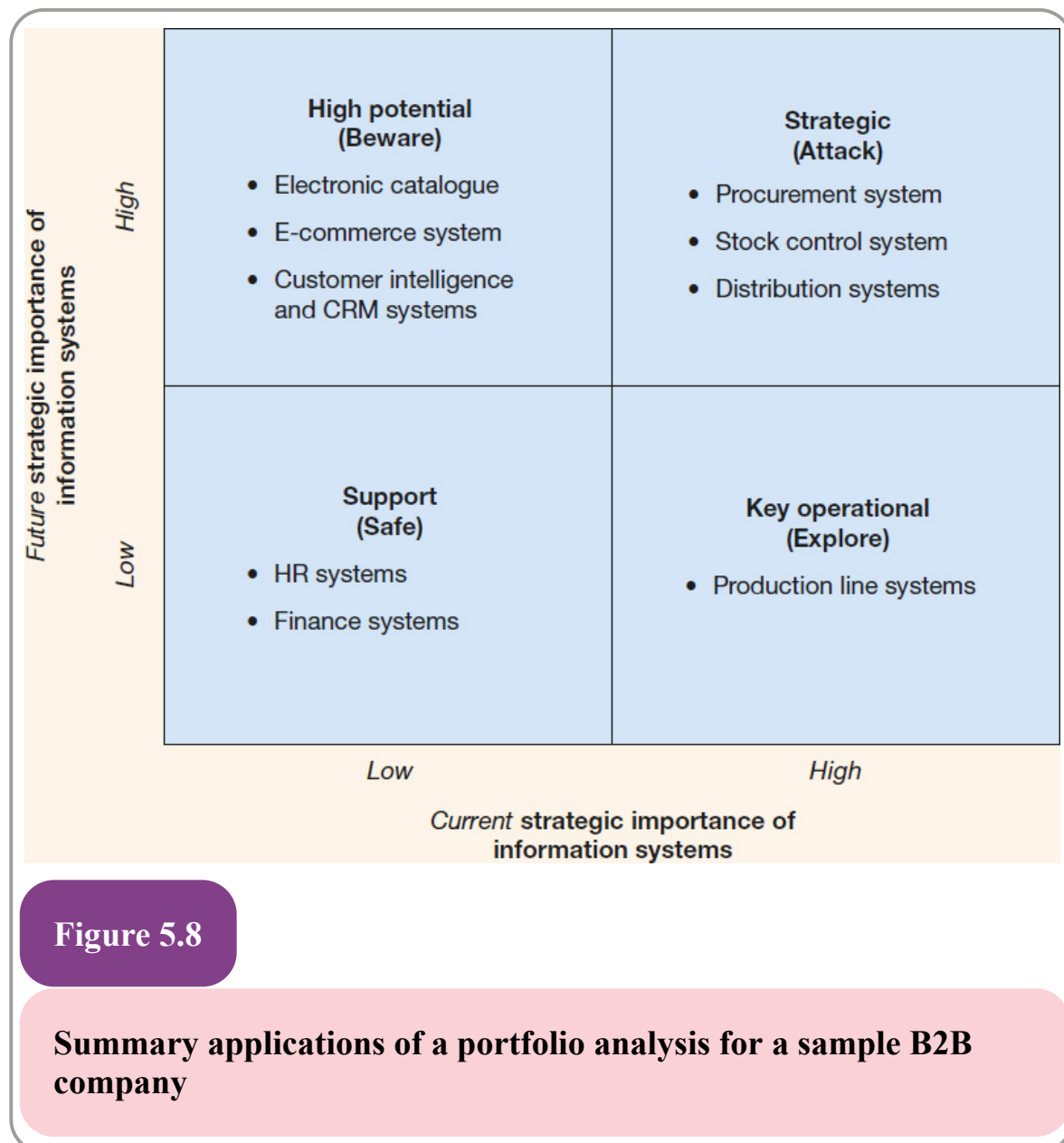
Analysis of the current portfolio of business applications within a business is used to assess current information systems capability and also to inform future strategies. A widely applied framework within information systems study is that of McFarlan and McKenney (1993) with the modifications of

Ward and Griffiths (1996). Figure 5.8 illustrates the results of a portfolio analysis for a B2B company applied within a digital business context. It can be seen that current applications such as human resources, financial management and production-line management systems will continue to support the operations of the business and will not be a priority for future investment. In contrast, to achieve competitive advantage, applications for maintaining a dynamic customer catalogue online, online sales and collecting marketing intelligence about customer buying behaviour will become more important. Applications such as procurement and logistics will continue to be of importance in a digital business context.

Table 5.3

A stage model for digital business development

	1 Web presence	2 E-commerce	3 Integrated e-commerce	4 Digital business
Services available	Brochureware or interaction with product catalogues and customer service	Transactional e-commerce on buy-side or sell-side	Buy- and sell-side integrated with enterprise resource planning (ERP) or legacy systems. Personalisation of services	Full integration between all internal organisational processes and elements of the value network
Organisational scope	Isolated departments, e.g. marketing department	Cross-organisational	Cross-organisational	Across the enterprise and beyond ('extraprise')
Transformation	Technological infrastructure	Technology and new responsibilities identified for e-commerce	Internal business processes and company structure	Change to digital business culture, linking of business processes with partners
Strategy	Limited	Sell-side e-commerce strategy, not well integrated with business strategy	E-commerce strategy integrated with business strategy using a value-chain approach	Digital business strategy incorporated as part of business strategy



Portfolio analysis is also often used to select the most appropriate future Internet projects. A weakness of the portfolio analysis approach is that, today, applications are delivered by a single digital business software or *enterprise resource planning* application. Given this, it is perhaps more appropriate to define the services that will be delivered to external and internal customers through deploying information systems.

In ‘Econsultancy’ (2008a), one of the authors of this book (Dave Chaffey) defined a form of portfolio analysis as the basis for benchmarking current e-commerce capabilities and identifying strategic priorities. The six areas for benchmarking are:

- 1 Digital channel strategy.** The development of a clear strategy, including situation analysis, goal-setting, identification of key target

markets and audience, and identification of priorities for development of online services.

- 2 Online customer acquisition.** Strategies for gaining new customers online using alternative digital media channels (shown in Figure 1.8), including search engine marketing, partner marketing and display advertising.
- 3 Online customer conversion and experience.** Approaches to improve online service levels and increase conversion to sales or other online outcomes.
- 4 Customer development and growth.** Strategies to encourage visitors and customers to continue using online services using tactics such as email marketing and personalisation.
- 5 Cross-channel integration and brand development.** Integrating online sales and service with customer communications and service interactions in physical channels.
- 6 Digital channel governance.** Issues in managing e-commerce services such as structure and resourcing, including human resources and the technology infrastructure such as hardware and networking facilities to deliver these applications.

Organisational and IS SWOT analysis

You will know that **SWOT analysis** is a relatively simple yet powerful tool that can help organisations analyse their internal resources in terms of strengths and weaknesses and match them against the external environment in terms of opportunities and threats. We recommend that, to get the most from SWOT analysis, it's of greatest value when it is used not only to analyse the current situation, but also as a tool to formulate strategies. To achieve this, it is useful once the strengths, weaknesses, opportunities and threats have been listed to combine them into a TOWS matrix, as shown in Figure 5.9. This can be used to develop strategies to counter the threats and take advantage of the opportunities and can then be built into the digital business strategy.

SWOT/TOWS analysis

Strengths, weaknesses, opportunities and threats.

The organisation	Strengths – S 1 Existing brand 2 Existing customer base 3 Existing distribution	Weaknesses – W 1 Brand perception 2 Intermediary use 3 Technology/skills 4 Cross-channel support
Opportunities – O 1 Cross-selling 2 New markets 3 New services 4 Alliances/co-branding	SO strategies Leverage strengths to maximise opportunities = Attacking strategy	WO strategies Counter weaknesses through exploiting opportunities = Build strengths for attacking strategy
Threats – T 1 Customer choice 2 New entrants 3 New competitive products 4 Channel conflicts	ST strategies Leverage strengths to minimise threats = Defensive strategy	WT strategies Counter weaknesses and threats = Build strengths for defensive strategy

Figure 5.9

SWOT/TOWS analysis

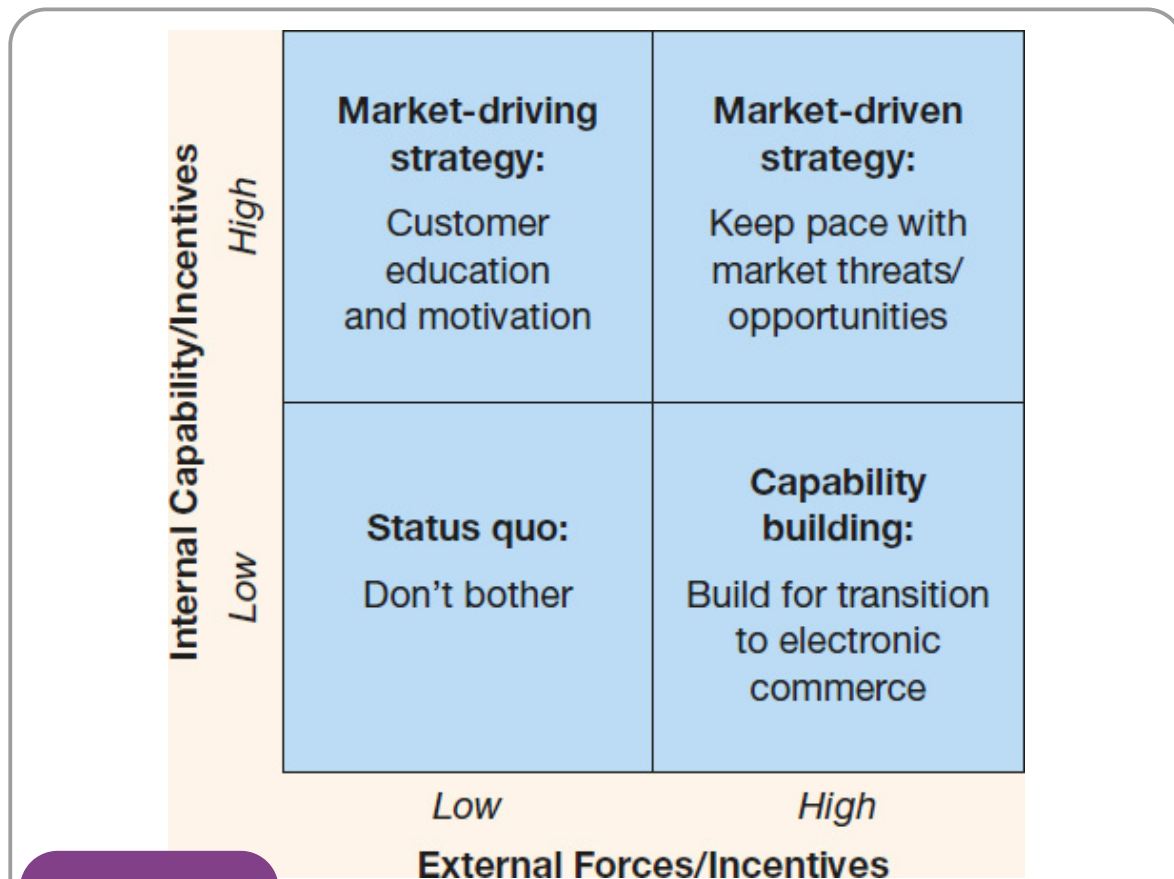


Figure 5.10

Matrix for evaluation of external capability against internal capability

Source: Perrott (2005), with permission

Figure 5.10 gives an example of a digital marketing SWOT using the approach shown in Figure 5.9.

Human and financial resources

Resource analysis will also consider these two factors:

- 1 Human resources.** To take advantage of the opportunities identified in strategic analysis the right resources must be available to deliver digital business solutions.
- 2 Financial resources.** Assessing financial resources for information systems is usually conducted as part of investment appraisal and budgeting for enhancements to new systems, which we consider later in the chapter.

Evaluation of internal resources should be balanced against external resources. Perrott (2005) provides a simple framework for this analysis (Figure 5.10). He suggests that adoption of digital business will be determined by the balance between internal capability and incentives and external forces and capabilities. Figure 5.10 defines a matrix where there are four quadrants that businesses within a market may occupy:

- *Market-driving strategy* (high internal capabilities/incentives and low external forces/incentives). This is often the situation for the early adopters.
- *Capability building* (low internal capabilities/incentives and high external forces/incentives). A later adopter.
- *Market-driven strategy*. Internal capabilities/incentives and external forces/incentives are both high.
- *Status quo*. There isn't an imperative to change since both internal capabilities/incentives and external forces/incentives are low.

An organisation's position in the matrix will be governed by benchmarking of external factors suggested by Perrott (2005), which include the proportion of competitors' products or services delivered electronically, proportion of

competitors' communications to customers done electronically, and proportion of different customer segments (and suppliers or partners on the supply side) attracted to electronic activity. Internal factors to be evaluated include technical capabilities to deliver through internal or external IT providers, desire or ability to move from legacy systems and the staff capability (knowledge, skills and attitudes necessary to conduct electronic business). The cost differential of savings made against implementation costs is also included here.

Table 5.4

Capability maturity model of the adoption of e-business

Carnegie Mellon software development maturity process	Atos Consulting e-business capability framework
Level 1 Initial	<i>Digital business unplanned.</i> Digital business initiatives are <i>ad hoc</i> , unplanned and even chaotic. The organisation lacks the capability to meet commitments consistently
Level 2 Repeatable	<i>Digital business aware.</i> Basic online business processes established necessary to repeat earlier successes but not yet part of planning process. The focus is on developing the capabilities of the organisation
Level 3 Defined	<i>Digital business enabled.</i> Central online business strategy and planning process towards a centralised model (IT and competencies)
Level 4 Managed	<i>Digital business integrated.</i> Online business part of departmental and business unit planning. Detailed performance measures of digital business process and applications collected and used for control

Level 5
Optimised

Extended enterprise. Digital business core part of corporate strategy, with continuous evaluation of digital business improvements enabled by quantitative feedback, piloting innovative ideas and technologies

Stage models can also be used to assess internal capabilities and structures. For example, Atos Consulting (2008, Table 5.4) has defined a capability maturity framework. This is based on the well-known capability maturity models devised by Carnegie Mellon Software Engineering Institute (now transferred to the CMMI Institute, <http://cmmiinstitute.com>) to help organisations improve their software development practices. (Chapter 10 has more detail on how to achieve management of change between these stages.)

Competitive environment analysis

External factors are also assessed as part of strategic analysis. We have already considered how marketplace analysis can be undertaken to identify external opportunities and threats for a business in Chapter 2, but here we consider demand analysis and look at competitive threats in more detail.

Demand analysis

A key factor driving digital business strategy objectives is the current level and future projections of customer, partner and internal access and usage of different types of digital technology platforms and e-commerce services. This is called **demand analysis**; using demand analysis is a key activity in producing a digital marketing plan (described in more detail in Chapter 7).

For buy-side e-commerce, a company also needs to consider the e-commerce services its suppliers offer: how many offer services for e-commerce and where they are located (see Chapter 6).

Assessing competitive threats

Michael Porter's classic 1980 model of the five main competitive forces that affect a company still provides a valid framework for reviewing threats

arising in the digital business era. Table 5.5 summarises the classic analysis by Michael Porter of the impact of the Internet on business using the five forces framework (Porter, 2001).

Demand analysis

Assessment of the demand for e-commerce services among existing and potential customer segments.

Table 5.5

Impact of the Internet on the five competitive forces

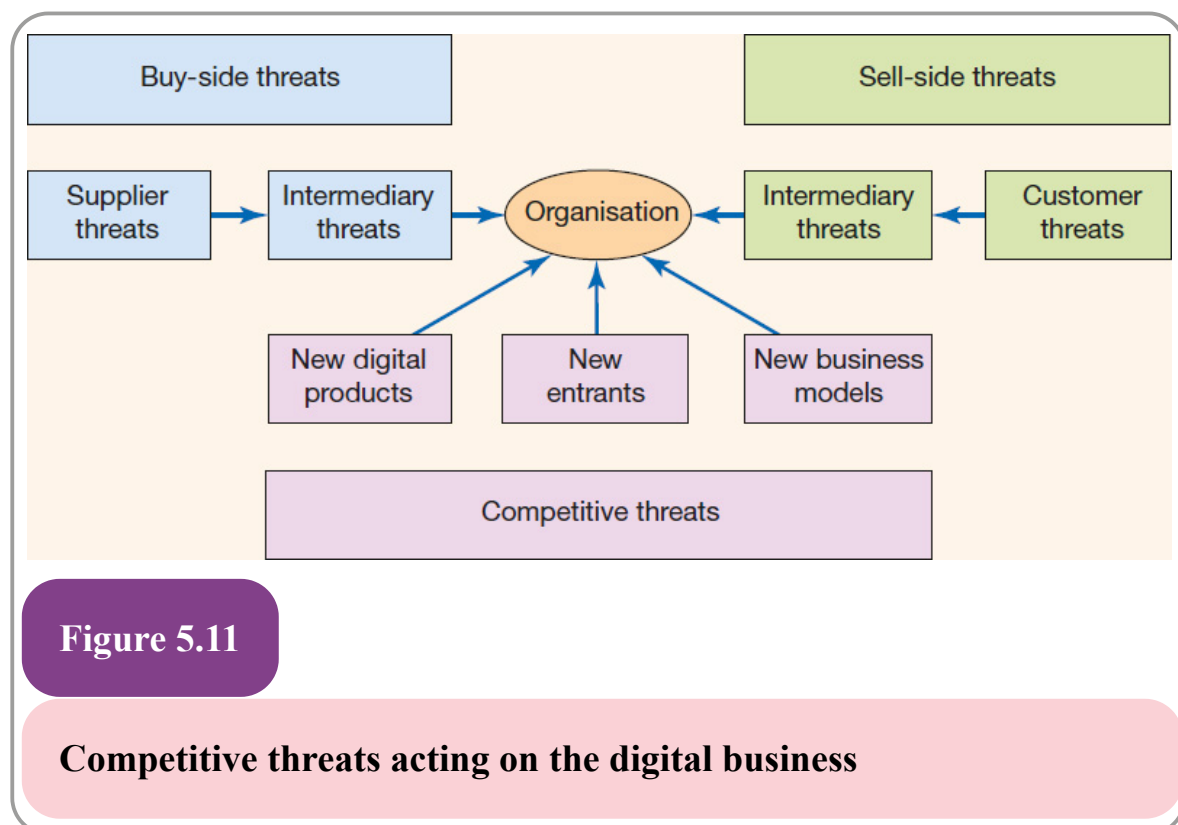
Bargaining power of buyers	Bargaining power of suppliers	Threat of substitute products and services	Barriers to entry	Rivalry among existing competitors
• The power of online buyers is increased since they have a wider choice and prices are likely to be forced down through increased customer knowledge and price transparency, i.e. switching behaviour is encouraged • For a B2B organisation, forming electronic links with customers may deepen a relationship and it may increase switching costs, leading to 'soft lock-in'	• When an organisation purchases, the bargaining power of its suppliers is reduced since there is wider choice and increased commoditisation due to e-procurement and digital marketplaces • The reverse arguments also apply for bargaining power of buyers • Commoditisation reduces differentiation of suppliers • E-procurement can reduce switching costs, although use of preferred systems can achieve lock-in	• Substitution is a significant threat since new digital products or extended products can be more readily introduced. • The introduction of new substitute products and services should be carefully monitored to avoid erosion of market share. • Internet technology enables faster introduction of products and services. • This threat is related to new business models, which are covered in a later section in this chapter.	• Barriers to entry are reduced through lower fixed costs, enabling new competitors, particularly for retailers or service organisations that have traditionally required a high-street presence or a mobile sales force • New entrants must be carefully monitored to avoid erosion of market share • Internet services are easier to imitate than traditional services, making it easy for 'fast followers'. The cost of establishing a recognised, trusted brand is a major barrier or cost of entry and new entrants have to encourage customers to overcome switching costs	• The Internet encourages commoditisation, which makes it less easy to differentiate products • Rivalry becomes more intense as product life cycles shorten and lead times for new product development decrease • The Internet facilitates the move to the global market, with potentially lower cost-base also potentially increasing the number of competitors

Placed in a digital business context, Figure 5.11 shows the main threats updated to place emphasis on the competitive threats applied to digital business. Threats have been grouped into buy-side (upstream supply chain), sell-side (downstream supply chain) and competitive threats. The main difference from the five forces model of Porter (1980) is the distinction between competitive threats from intermediaries (or partners) on the buy-side and sell-side.

Competitive threats

1 Threat of new e-commerce entrants

For traditional ‘bricks-and-mortar’ companies this has been a common threat for retailers selling products such as books and financial services. For example, in Europe, traditional banks have been threatened by the entry of completely new start-up competitors such as Zopa (www.zopa.com) or traditional companies from a different geographic market that use the Internet to facilitate their entry into an overseas market. ING, an existing financial services group, formed in 1991 and based in the Netherlands, has used the Internet to facilitate market development. These new entrants have been able to succeed in a short time since they do not have the cost of developing and maintaining a distribution network to sell their products and these products do not require a manufacturing base. In other words, the *barriers to entry* are low. However, to succeed, new entrants need to be market leaders in executing marketing and customer service. The costs of achieving this will be high.



This competitive threat is less common in vertical business-to-business markets involving manufacture and process industries such as the chemical or oil industry since the investment barriers to entry are much higher.

2 Threat of new digital products

This threat can occur from established or new companies. The Internet is particularly good as a means of providing information-based services at a lower cost. The greatest threats are likely to occur where digital product fulfilment can occur over the Internet, as is the case with delivering share prices, digital media content or software. This may not affect many business sectors, but is vital in some, such as newspaper, magazine and book publishing, and music and software distribution. In photography, Kodak tried to respond to a major threat of reduced demand for traditional film by increasing its range of digital cameras to enhance this revenue stream and by providing online services for customers to print and share digital photographs. Ultimately these approaches weren't successful (mainly because people were using their smartphones to take photos). The extent of this threat can be gauged by a review of product in the context of Figure 5.11.

3 Threat of new business models

This threat can also occur from established or new companies. It is related to the competitive threat because it concerns new methods of service delivery. The threats from existing competitors will continue; however, it can be argued that the Internet has increased rivalry because price comparison is easier and digital businesses can innovate, undertake new product development/introduce alternative business and revenue models in less time than previously possible. This again emphasises the need for continual environmental scanning. (See the section on business and revenue models in Chapter 2 for examples of strategies that can be adopted in response to this threat.)

Sell-side threats

1 Customer power and knowledge

This is perhaps the single biggest threat posed by digital trading. The bargaining power of customers is greatly increased when they are using the Internet to evaluate products and compare prices. This is particularly true for standardised products that can be compared through price comparison platforms. For commodities, auctions on business-to-business exchanges can also have a similar effect of driving down price. The purchase of some products that have not traditionally been thought of as commodities may become more price sensitive. This process is known as '**commoditisation**'.

Examples of goods that are becoming commoditised are electrical goods and cars. (The issue of online pricing is discussed in Chapter 7.)

Commoditisation

The process whereby product selection becomes more dependent on price than differentiating features, benefits and value-added services.

In the business-to-business arena, a further issue is that the ease of use of digital channels makes it potentially easier for customers to swap between suppliers-switching costs are lower.

2 Power of intermediaries

A significant downstream channel threat is the potential loss of partners or distributors if there is a channel conflict resulting from *disintermediation* see (Chapter 2). The tensions between intermediaries and, in particular, aggregators, and the strategies to resolve them are shown by insurer Direct Line's (www.directline.com) approach not to partner with aggregator MoneySuperMarket (www.moneysupermarket.com), despite their coverage of around 80% of the motor insurance market.

An additional downstream threat is the growth in number of intermediaries (another form of partner) to link buyers and sellers. These include consumer portals such as Shopzilla (www.shopzilla.co.uk) and business-to-business exchanges such as EC21 (www.ec21.com). If a company's competitors are represented on a portal while the company is absent or, worse still, they are in an exclusive arrangement with a competitor, this can potentially exclude a substantial proportion of the market.

Buy-side threats

1 Power of suppliers

This can be considered as an opportunity rather than a threat. Companies can insist, for reasons of reducing cost and increasing supply chain efficiency, that their suppliers use digital tools such as EDI or Internet EDI to process orders. Additionally, the Internet tends to reduce the power of suppliers since barriers to migrating to a different supplier are reduced, particularly with the advent of *business-to-business exchanges*. However, if suppliers insist on proprietary technology to link companies, then this creates 'soft lock-in' due to the cost or complexity of changing suppliers.

2 Power of intermediaries

Threats from buy-side intermediaries such as business-to-business exchanges are arguably fewer than those from sell-side intermediaries, but risks arising from using these services should be considered. These include the cost of integration with such intermediaries, particularly if different standards of integration are required for each. They may pose a threat from increasing commission once they are established.

From the review above, it should be apparent that the extent of the threats will be dependent on the particular market a company operates in. Generally, the threats seem to be greatest for companies that currently sell through retail distributors and have products that can be readily delivered to customers across the Internet or by parcel.

Competitor analysis

Competitor analysis for digital business

Review of digital business services offered by existing and new competitors and adoption by their customers. **Core competencies**

Resources, including skills or technologies, that provide a particular benefit to customers.

Competitor analysis is a key aspect of digital business situation analysis. It is also a key activity in producing a digital marketing plan that will feed into the digital business strategy (which is described in more detail in Chapter 7).

Resource-advantage mapping

It is useful to map the internal resource strengths against external opportunities, to identify, for example, where competitors are weak and can be attacked. To identify internal strengths, definition of **core competencies** is one approach. Lynch (2000) explains that core competencies are the resources, including knowledge, skills or technologies, that provide a particular benefit to customers, or increase **customer value** relative to competitors. Customer value is defined by Deise *et al.* (2000) as dependent on product quality, service quality, price and fulfilment time. So, to understand core competencies we need to understand how the organisation is differentiated from competitors in these areas. Benchmarking e-commerce services of competitors (as described in Chapter 7) is important here. The cost-base of a company relative to its competitors is also important, since

lower production costs will lead to lower prices. Lynch (2000) argues that core competencies should be emphasised in objective setting and strategy definition.

Customer value

Value dependent on product quality/service quality, price and fulfilment time.

Strategic objectives

Strategic objectives

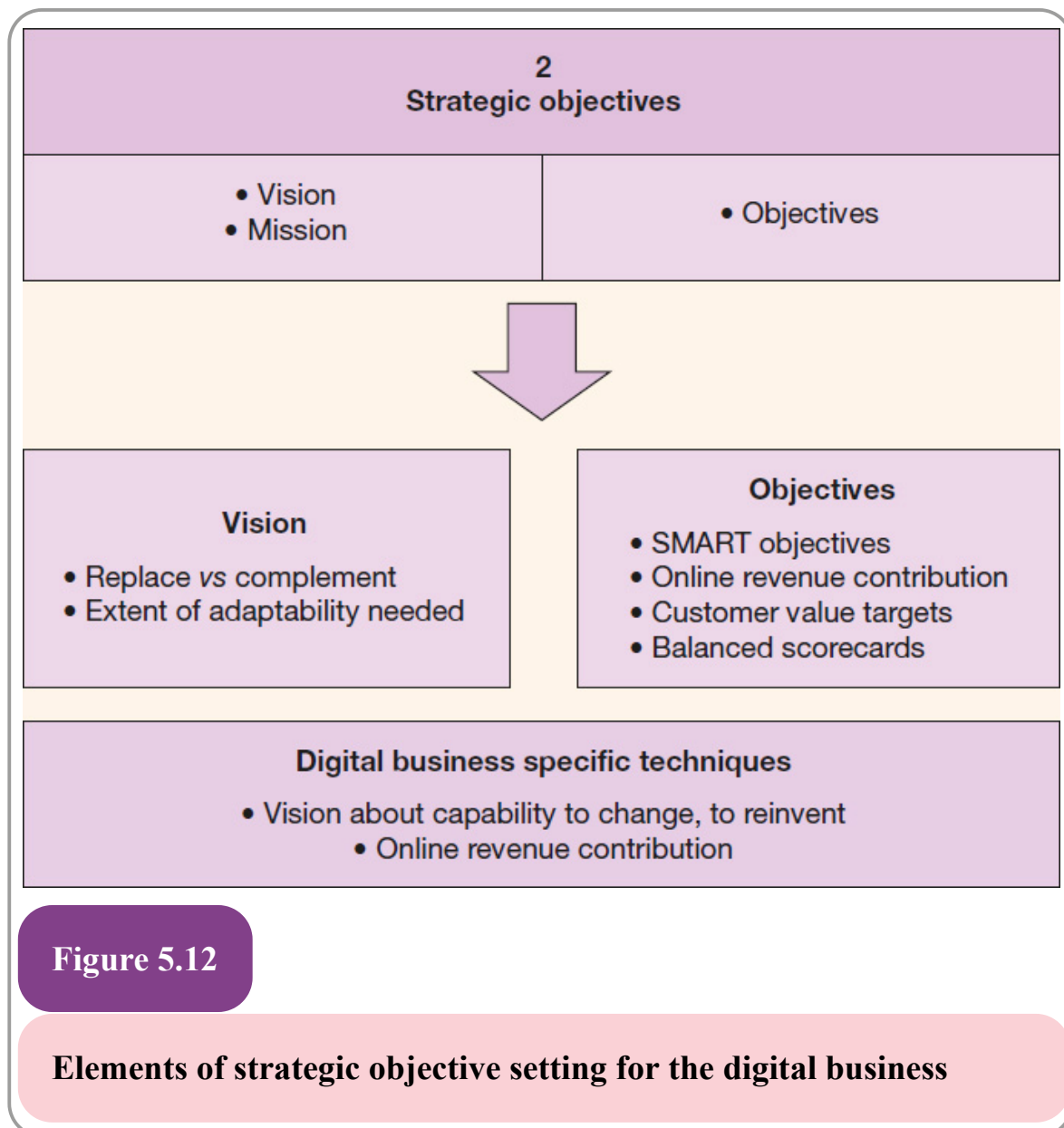
Statement and communication of an organisation's mission, vision and objectives.

Defining and communicating an organisation's **strategic objectives** is a key element of any strategy process model since (1) the strategy definition and implementation elements of strategy must be directed at how best to achieve the objectives, (2) the overall success will be assessed by comparing actual results against objectives and taking action to improve strategy, and (3) clear, realistic objectives help communicate the goals and significance of a digital business initiative to employees and partners. Usually, objective setting is done in parallel with strategic analysis - defining a vision and strategy for digital business as part of an iterative process.

Figure 5.12 highlights some of the key aspects of strategic objective setting that will be covered in this section.

Defining vision and mission

Corporate vision is defined in Lynch (2000) as 'a mental image of the possible and desirable future state of the organisation'. Defining a specific company vision for digital business is helpful since it contextualises digital business in relation to a company's strategic initiatives (business alignment) and its marketplace. It also helps give a long-term emphasis on digital business transformation initiatives.



Vision statement

This is an organisation's clear and inspirational long-term direction.

Mission statement

This should clearly communicate what the organisation does; its purpose.

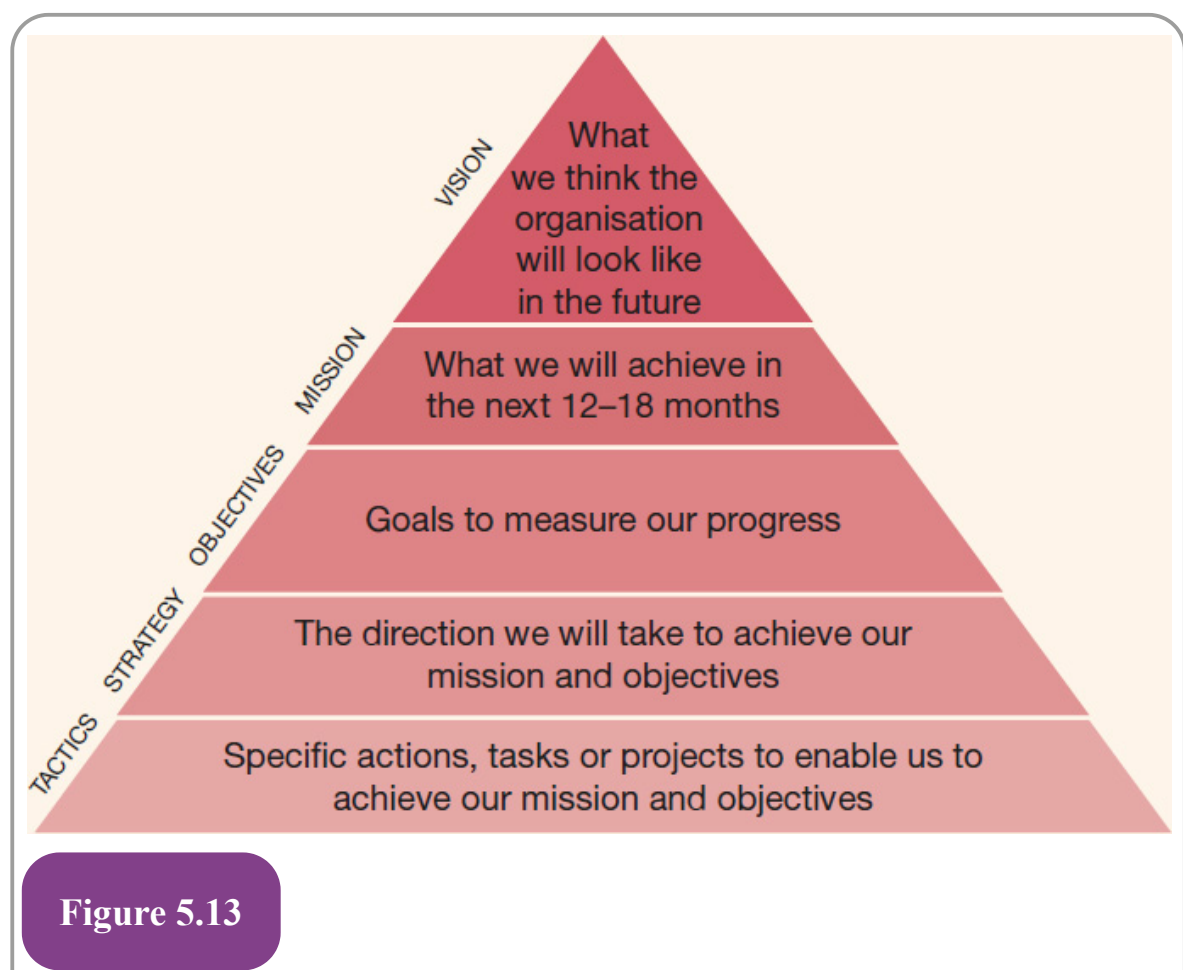
Vision or mission statements for digital businesses are a concise summary defining the scope and broad aims of digital channels in the future, explaining how they will contribute to the organisation and support customers and interactions with partners. Jelassi and Enders (2008) explain that developing a mission statement should provide a definition of:

- business scope (where?): markets including products, customer segments and geographies where the company wants to compete online;
- unique competencies (how?): a high-level view of how the company will position and differentiate itself in terms of digital business products or services;
- values (why?): less commonly included, this is an emotional element that can indicate what inspires the organisation or its digital business initiative.

VMOST

A good starting place for any business is to do a VMOST analysis (see Figure 5.13), which is a simple model that can be used to outline key elements of the business and help determine strategy.

Many organisations have a top-level mission statement that is used to scope the ambition of the company and to highlight the success factors for the business. Some examples are shown in Box 5.1.



VMOST analysis

businesses

Example vision or mission statements from digital

Here are some examples from well-known digital businesses featured in the case studies in this book. Assess how well they meet the criteria we have discussed for an effective vision statement.

Amazon.com Amazon's mission statement sets themselves out as being the most customer-focused organisation globally, and as a place where anyone can buy anything.

Dell Dell listens to customers and delivers innovative technology and services they trust and value.

Zappos Zappos' vision is delivering happiness to customers, employees, and vendors. Their mission statement, also referred to by Zappos' employees as their 'WOW Philosophy', is to provide the best customer service possible. Deliver WOW through service.

Alibaba Alibaba's mission is to enable businesses to transform the way they market, sell and operate. They provide the fundamental technology infrastructure and marketing reach to help merchants, brands and other businesses to leverage the power of the Internet to engage with their users and customers.

Google Google's mission is to organise the world's information and make it universally accessible and useful.

Vision statements can also be used to define a longer-term picture of how the channel will support the organisation through defining strategic priorities. The disadvantage with brief vision statements such as those shown in Box 5.1 is that they can be generic, so it is best to make them as specific as possible by:

- referencing key business strategy and industry issues and goals;
- referencing aspects of online customer acquisition, conversion or experience and retention;

- making them memorable through acronyms or mnemonics;
- linking through to objectives and strategies to achieve them through high-level goals.

Dell expands on the simple vision outlined in the box to explain:

Our core business strategy is built around our direct customer model, relevant technologies and solutions, and highly efficient manufacturing and logistics; and we are expanding that core strategy by adding new distribution channels to reach even more commercial customers and individual consumers around the world. Using this strategy, we strive to provide the best possible customer experience by offering superior value; high-quality, relevant technology; customized systems and services; superior service and support; and differentiated products and services that are easy to buy and use.

Here's a real example of a digital vision statement for a multichannel company that author Dave Chaffey worked for, summarised to staff as:

$$1 \times 2 \times 3$$

- Largest online audience share (No. 1) in Europe by XXXX
- By XXXX, one in two of total sales will be generated online
- One in three of our people and our customers love our online services and will recommend them to a friend
- Two in three customer service contacts will be electronic by XXXX

You can see that this is simple yet specific enough to link to future targets, unlike many vague mission statements. More generic 'calls to arms' that some companies use are '*Digital by Default*', '*Digital First*' and '*Digital DNA*'.

A more detailed vision statement for a multichannel retailer might read:

Our digital channels will make it easy for shoppers to find, compare and select products using a structured approach to merchandising and improving conversion to produce an experience rated as excellent by the majority of our customers.

Scenario-based analysis

Models of the future environment are developed from different starting points.

Different aspects of the vision statement (underlined) can then be expanded upon when discussing with colleagues, for example:

- Digital channels = the website supported by email and mobile messaging.

- Find = improvements to site search functionality.
- Compare and select = using detailed product descriptions, rich media and ratings.
- Merchandising and improving conversion = through delivery of automated merchandising facilities to present relevant offers to maximise conversion and average order value. Additionally, use of structured testing techniques such as AB testing (see Chapter 10) and multivariate testing will be used.
- Experience rated as excellent = we will regularly review customer satisfaction and advocacy against direct competitors and out-of-sector to drive improvements with the website.

Scenario-based analysis is a useful approach to discussing alternative visions of the future prior to objective setting. Lynch (2000) explains that scenario-based analysis is concerned with possible models of the future of an organisation's environment. He says:

*The aim is not to predict, but to explore a set of possibilities;
scenarios take different situations with different starting points.*

Lynch distinguishes qualitative scenario-based planning from quantitative prediction based on demand analysis, for example. In a digital business perspective, scenarios that could be explored include:

- 1 One player in our industry becomes dominant through use of the Internet.
- 2 Major customers do not adopt e-commerce due to organisational barriers.
- 3 Major disintermediation (Chapter 2) occurs in our industry
- 4 B2B marketplaces do or do not become dominant in our industry
- 5 New online entrants or substitute products change our industry

Through performing this type of analysis, better understanding of the drivers for different views of the future will result, new strategies can be generated and strategic risks can be assessed.

From a sell-side e-commerce perspective, a key aspect of vision is whether the Internet will *complement* or *replace* the company's other channels. It is important to communicate this to staff and other stakeholders.

The impact of digital technology will vary in different industries. Kumar (1999) suggested a way to review the impact when:

- 1 customer access to the Internet is high (this is now a given in many markets);

- 2 the Internet can offer a better value proposition than other media (i.e. propensity to purchase online is high);
- 3 the product can be delivered over the Internet (it can be argued that this is not essential for replacement);
- 4 the product can be standardised (user does not usually need to view to purchase).

If at least two of Kumar's conditions are met, there may be a replacement effect. For example, purchase of travel services online fulfils criteria 1, 2 and 4. As a consequence, physical outlets for these products may no longer be viable. The extent to which these conditions are met will vary through time, for example as access to the Internet and propensity to purchase online increase.

A similar vision of the future can be developed for buy-side activities such as procurement. A company can have a vision for how online procurement and e-enabled supply chain management (SCM) will complement or replace paper-based procurement and SCM (covered in Chapter 6).

How can digital business create business value?

As Chaffey and White (2010) have emphasised, much of the organisational value created by digital business is due to more effective use of information and technology to deliver new value-adding services and integrations between processes across the value chain. The main methods are:

- 1 **Adding value.** Incremental revenue is delivered through providing better-quality products and services to an organisation's customers. Information can be used to better understand customer characteristics and needs and their level of satisfaction with services. Information is also used to sense and respond to markets. Information about trends in demands, competitor products and activities must be monitored so that organisations can develop strategies to compete in the marketplace. For example, all organisations will use databases to store personal characteristics of customers and details of their transaction history, which shows when they have purchased different products, responded to marketing campaigns or used different online services. Analysis of these databases using data mining can then be used to understand customer preferences and market products that better meet their needs.

Companies can use **sense and respond communications**. The classic example of this is the personal recommendations provided by Amazon. The increased use of mobile services is currently a significant way by which companies can generate additional value and they also need to consider how to protect their existing revenue. Digital businesses such as Facebook and Google that rely on ad revenue have had to change their advertising services to ensure that their average revenue per user (which we introduced in Chapter 1) from ads is maintained as more users access mobile devices. Other types of business are using mobile to add value. For example, Arriva Bus recently redesigned its m-ticket app to help increase revenue by over 17%, as explained in Case study 5.1.

- 2 Reduce costs.** Cost reduction through information is achieved through making the business processes more efficient. Efficiency is achieved through using information to source, create, market and deliver services using fewer resources than previously. Technology is applied to reduce paperwork, reduce the human resources needed to operate the processes through automation and improve internal and external communications.
- 3 Manage risks.** Risk management is a well-established use of information within organisations. Marchand (1999) notes how risk management has created functions and professions such as finance, accounting, auditing and corporate performance management.
- 4 Create new reality.** Marchand uses the expression ‘create new reality’ to refer to how information and new technologies can be used to innovate, to create new ways in which products or services can be developed. This is particularly apt for digital business.

Sense and respond communications

Organisations monitor consumers’ preferences indicated by their responses to websites or email communications in order to target them with relevant, personalised and targeted communications.

Arriva Bus redesigns its m-ticket app and boosts revenue by over 17%

Arriva Bus wanted to improve the overall user experience of its m-ticket app to help increase its number of users, as well as its App Store star rating, and help drive in-app ticket purchases. The company mapped the optimal customer journey based on customer research, built

and market-tested prototypes and redesigned pages in line with a renewed brand look and feel.

The resulting app received a very positive customer response and rose from one to three stars in the App Store in just two weeks. It has also triggered more than 10,000 extra transactions in its first three months.

Objectives and aims

UK bus operator Arriva services over 1.5 billion bus journeys every year. Recently, business focus had shifted significantly to mobile, with over 1 million Arriva customers a month using mobile devices to access the mobile-optimised website and mobile ticketing app. By late 2014, Arriva recognised that the user experience (UX) design of its m-ticket app needed an overhaul, as part of a re-development programme to increase usage and sales revenue through the mobile channel.

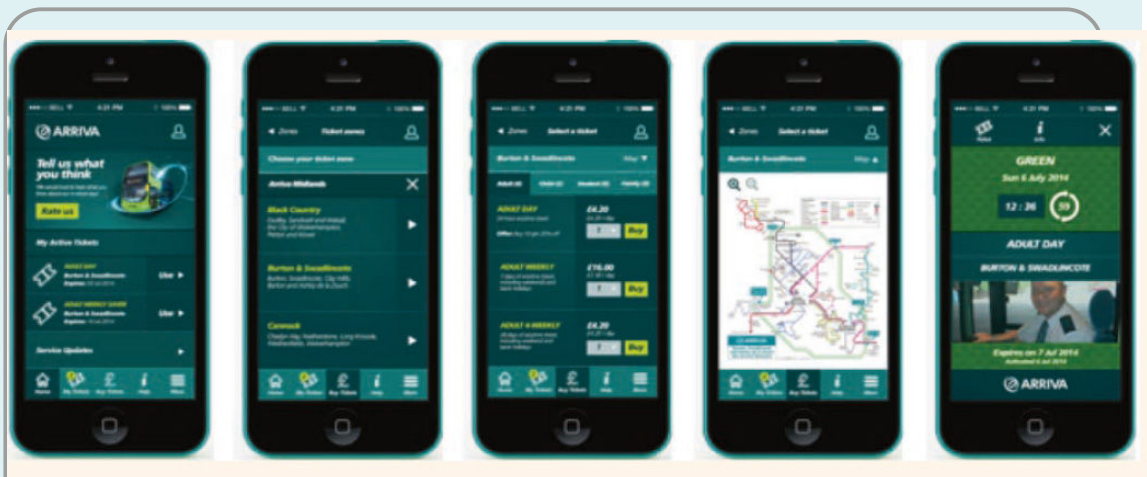


Figure 5.14

Arriva Bus app

Arriva's campaign objectives for improving the m-ticket app broke down as follows:

- increase App Store rating from one star to three stars;
- grow average user revenue for each app purchase;
- reduce the amount of time needed to purchase a ticket;

- make it easier and faster to use a purchased ticket;
- create an experience that reflects the new Arriva Bus brand;
- upsell higher-value tickets such as weekly and annual tickets.

Implementation, execution and tactics

Going back to basics and gathering genuine audience insight became central to the app redesign. Arriva held persona workshops with key stakeholders to better understand the users of the current app and establish their needs and motivations.

This insight fed directly into a clickable prototype, which was then thoroughly tested to further refine the user journey and initial designs.

The number of pages across the purchase journey were reduced, to showcase the full range of tickets on a single page. This helped highlight the cost of tickets and provide an upsell opportunity for higher-value tickets that offered better customer savings. Dropdown interactions were replaced with one-click buttons, and shorter ticket descriptions were introduced along with an offline mode to help increase engagement.

Arriva then aligned the look and feel between the app and the customer website to ensure an intuitive user experience and a clean, modern feel.

Results

By looking at why customers use the m-ticket app and what they need from it, Arriva was able to develop a highly improved user experience, which was in line with its renewed brand look and feel.

As a result of the overhaul, Arriva has seen an overwhelmingly positive response from customers, particularly within App Store reviews on its release. In line with initial campaign objectives, the app hit three stars in two weeks.

In total, Arriva has so far seen increases of over 17% in revenue and over 15% in transaction numbers. That equates to more than 10,000 extra transactions in the first three months.

Source: <https://econsultancy.com/case-studies/view/arriva-bus-redesigned-m-ticket-app-triggers-100000-additional-transactions>

Objective setting

An effective strategy development process links general goals, strategies and more specific objectives and performance measures. One method of achieving this linkage is through tabulation, as shown for a fictitious company in Table 5.6. Each of the objectives should have specific KPIs to ensure progress to the more general goal and also a timeframe in which to achieve these objectives. Despite the dynamism of digital business, some of the goals that require processes to be re-engineered cannot be achieved immediately. Prioritisation of goals can help in communicating the digital business vision to staff and also when allocating resources to achieve the strategy. As with other forms of strategic objectives, digital business objectives should be SMART (Box 5.2) and include both efficiency and effectiveness measures.

Box 5.2

Setting SMART objectives

SMART is used to assess the suitability of objectives set to drive different strategies or the improvement of the full range of business processes.

- (i) **Specific.** Is the objective sufficiently detailed to measure real-world problems and opportunities?
- (ii) **Measurable.** Can a quantitative or qualitative attribute be applied to create a metric?
- (iii) **Actionable.** Can the information be used to improve performance?
- (iv) **Relevant.** Can the information be applied to the specific problem faced by the manager?
- (v) **Time-related.** Does the measure or goal relate to a defined timeframe?

The key performance indicators column in Table 5.6 gives examples of SMART digital business objectives.

Table 5.6

Goals, strategies and objectives (key performance indicators) for a sample B2B company (in order of priority)

Goals	Strategies to achieve goals	Specific objectives (key performance indicators (KPIs))
1 Develop revenue from new geographical markets	1 Create e-commerce facility for standard products and assign	1 Achieve combined revenue of £1m by year end. Online revenue contribution of 70%
2 Increase revenue from smaller-scale purchases from retailers	2 Create e-commerce facility for standard products	2 Increase sales through retailers from 15% to 25% of total by year two. Online revenue contribution of 30%
3 Ensure retention of key account customers	3 Attain soft lock-in by developing extranet facilities and continued support from sales reps	3 Retain five key account customers. Online revenue contribution of 100% from these five
4 Improve efficiency of sourcing raw materials	4 Develop e-procurement system	4 Reduce cost of procurement by 5% by year end, 10% by year two. Achieve 80% of purchasing online
5 Reduce time to market and costs for new product development	5 Use collaboration and project management tools	5 Reduce cost and time to market by average of 10% by year three
6 Protect and increase	6 Create partner extranet and aim	

efficiency of
distributor
and partner
network

for paperless
support

6 Reduce cost of sales
in each of five main
geographical
markets by 30%

Put simply, **efficiency** is ‘doing the thing right’ - it defines whether processes are completed using the least resources and in the shortest time possible. **Effectiveness** is ‘doing the right thing’ - conducting the right activities, producing the required outputs and outcomes and applying the best strategies for competitive advantage. When organisations set goals for digital business and e-commerce, there is a tendency to focus on the efficiency metrics but such measures often do not capture the overall value that can be derived. Effectiveness measures will assess how many customers or partners are using the digital business services and the incremental benefits that contribute to profitability. For example, an airline such as British Airways could use its digital channel services to reduce costs (increased efficiency), but could be facing a declining share of online bookers (decreased effectiveness). Effectiveness may also refer to the relative importance of objectives for revenue generation through online sales and improving internal process or supply chain efficiency. It may be more effective to focus on the latter.

Performance management systems are needed to monitor, analyse and refine the performance of an organisation. (The use of systems such as web analytics in achieving this is covered in Chapter 10.)

The online revenue contribution

By considering the demand analysis, competitor analysis and factors such as those defined by Kumar (1999), an **online revenue contribution (ORC)** objective can be set. This states the percentage of company revenue directly generated through online transactions. An indirect online contribution can be stated where the sale is influenced by the online presence but purchase occurs using conventional channels. Online revenue contribution objectives can be specified for different types of products, customer segments and geographic markets. They can also be set for different digital channels such as web or mobile commerce.

Conversion modelling for sell-side e-commerce

Experienced e-commerce managers build conversion or waterfall models of the efficiency of their digital marketing, to assist with forecasting future sales. This approach can help determine the success of a company in potentially achieving a share of a particular market. **Conversion optimisation** can then be created to convert as many potential site visitors as possible into actual visitors and then convert these into leads, customers and repeat customers. Box 5.3 gives further details. (This topic is covered in more detail in Chapter 10).

Efficiency

Minimising resources or time needed to complete a process: ‘doing the thing right’.

Effectiveness

Meeting process objectives, delivering the required outputs and outcomes: ‘doing the right thing’.

Online or Internet revenue contribution (ORC)

An assessment of the direct or indirect contribution of the Internet to sales, usually expressed as a percentage of overall sales revenue.

Conversion optimisation

Using marketing communications to maximise conversion of potential customers to actual customers.

Box 5.3

Conversion modelling

A widely quoted conceptual measurement framework based on the industrial marketing concepts of purchasing decision processes and hierarchy of effects models, which can be applied for conversion marketing, was proposed by Berthon *et al.* (1998). The model assesses efficiency of offline and online communications in drawing the prospect through different stages of the buying decision. The main measures defined in the model are the following ratios:

- 1 Awareness efficiency:** target web-users/all web-users.
- 2 Locatability or attractability efficiency:** number of individual visits/number of seekers.
- 3 Contact efficiency:** number of active visitors/number of visits.

4 Conversion efficiency: number of purchases/number of active visits.

5 Retention efficiency: number of repurchases/number of purchases.

This model is instructive for improving Internet marketing within an organisation since these different types of conversion efficiency are key to understanding how effective online and offline marketing communications are in achieving marketing outcomes.

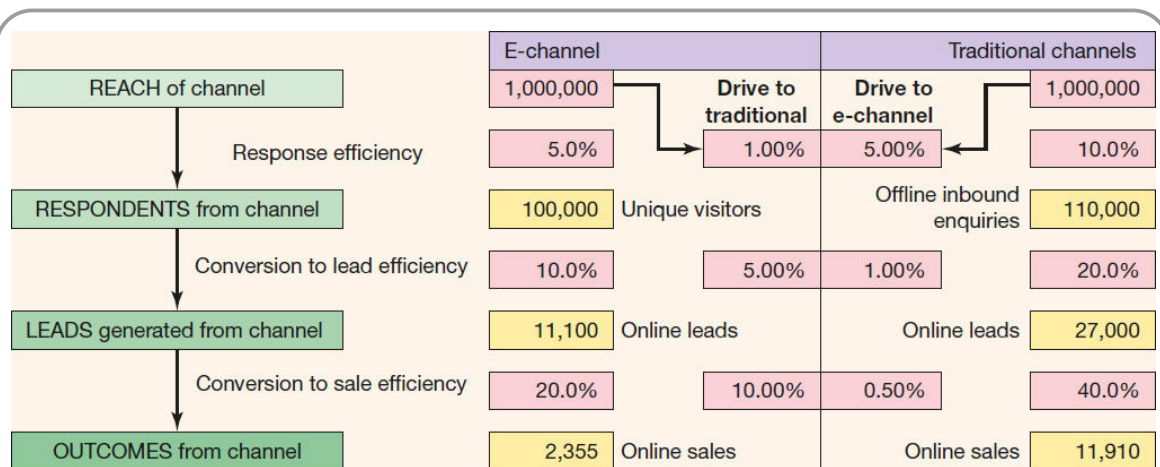


Figure 5.15

An example of conversion modelling for an online retailer

Mobile buyer		Research...	
		Online	Offline
Purchase...	Online	22%	9%
	Offline	37%	32%

Figure 5.16

Research Online Purchase Offline example

Source: Google

So, to assess the potential impact of digital channels it is useful to put in place tracking or research that assesses the cross-channel conversions at different stages in the buying process. For example, phone numbers that are unique to the website can be used as an indication of the volume of callers to a contact centre influenced by the website. This insight can then be built into budget models of sales levels, such as that shown in Figure 5.15. This shows that of the 100,000 unique visitors in a period, we can determine that 5,000 (5%) may actually become offline leads.

The **digital channel service contribution** gives an indication of the proportion of service-type processes that are completed using online channels. Examples include e-service (proportion of customers who use internet self-service), e-procurement (proportion of different types of purchases bought online) and administrative process facilities used via an intranet or extranet.

ROPO is a term coined to describe research published by Google (2010) meaning ‘Research Online Purchase Offline’. This study reviewed the role of the Internet in the decision process for mobile and broadband contracts involving the Vodafone website and stores in Germany, based on a panel of 16,000 web users and questionnaires about their intent and purchase. For both of these services, the contract was signed online by around a third of the

audience. However, a significant proportion signed the contract offline. The matrix presented in Figure 5.16 is a good framework for evaluating and summarising multichannel behaviour, since it also shows the situation where research is offline and purchase occurs online. This behaviour is particularly common for products such as, in this case, handsets, where consumers want to evaluate their purchase online.’

Digital channel service contribution

The proportion of service-type processes that are completed using electronic channels.

ROPO

The Term coined to describe research by Google, meaning ‘Research Online Purchase Offline’.

An example of objective setting within a particular company, then at a relatively early stage of adoption, is provided by Case study 5.2 and for different industries in Activity 5.2.

Case Study 5.2

Setting the Internet revenue contribution at Sandvik Steel

Sandvik Steel, a company selling into many international markets, provides a good illustration of how Internet revenue contribution can be used to set objectives for different geographical markets.

When dot.com mania was at its height, so-called old economy companies, such as Sweden’s Sandvik, tended to be overshadowed as the brash new online stars took the limelight.

But now that the collapse of Internet and other technology stocks has injected a harsh dose of reality into the stock market and business scene, many established names are back in favour again.

As the experience of Sandvik, founded in 1862, shows, skilful use of the Internet can lead to huge improvements in links with customers and suppliers, bringing considerable cost savings.

Based north of Stockholm in Sandviken, the company’s activities seem remote from the virtual world of the Internet. It makes cutting tools, speciality steels and mining and construction equipment.

However, the group is a long-time advocate of IT. Its annual IT budget is some SKr 1 billion.

'We first formulated our IT strategy in 1969,' says Clas Ake Hedstrom, the chief executive. 'We didn't foresee the Internet.' Only recently, he adds, has IT moved from serving the company to benefiting customers.

Transferring its 30-year-old IT experience to the age of the web requires more than a deep understanding of technology, says Arnfinn Fredriksson, director of Internet business development at the group's Coromant tooling business.

'The major challenges are not IT and systems, but "soft" things such as attitudes, insights and getting people to understand and accept that this is part of their daily work.' This means focusing hard on business needs and cutting through the Internet hype.

Sandvik Steel, the speciality steel operation, also goes beyond transactions to find solutions for its customers. Its extranet enables users to obtain worldwide stock information, catalogues and training aids, as well as take part in online discussions.

At both Coromant and Sandvik Steel, digital business activities are mainly directed towards enhancing links with customers. 'Customer value comes when our product is used, not when it is purchased', Mr Fredriksson says.

Thus, Coromant allows customers not only to buy tools over the web but also to design their own products within parameters set by Coromant - and receive advice on how best to use them.

Choosing the right cutting tools and using them effectively can save around 10% of the total cost of manufactured components. The digital business strategy had to take account of this.

It also had to avoid channel conflict, the bypassing of its traditional sales outlets. Most Coromant tools are sold directly to customers, but 40% goes through resellers. Moreover, there are big regional variations: more than 80% of sales in the Nordic region are direct, while most North American sales are indirect.

The company's approach was to work with the traditional sales channels. 'So many companies try to bypass traditional channels and lose sales and relationships', Mr Fredriksson says.

It is the relationship with the customer - including greater personalisation and an extended reach into global markets - that will be the most important pillar of its digital business strategy in the long term, he says.

This is what provides real competitive advantage. Shifting existing customers to the Internet, winning new ones and saving costs are also important. But other companies will be doing the same.

At present, only a small part of Coromant's orders are transacted over the web. Nordic countries are leading the way. Around 20% of all orders from Denmark are online and 31% of those from Sweden.

The proportion in the US, however, is only 3%, since most business goes through distributors and is conducted by EDI (electronic data interchange), the pre-Internet means of e-commerce.

Over the next six months, the company hopes to raise the US figure to 40%. Mr Fredriksson hopes that in two years, between 40 and 50% of total orders will come via the web.

To enhance its online service to customers, Coromant plans to offer each one a personalised web page. This will enable the company to offer new products, materials and advice on productivity improvements. Training will also be part of this expanded web offering, which Coromant aims to have in place later this year.

For both Coromant and Sandvik Steel, the value of the web lies in strengthening and expanding relationships with customers. In the case of Coromant, with some 25,000 standard products, there are numerous customers buying low volumes. With Sandvik Steel, however, a small number of customers buy a high volume of products.

'Our aims were to have 200 key customers using the extranet by a fixed time; and a confirmation from at least 80% of key customers that they consider the extranet to be a major reason to deal with Sandvik', says Annika Roos, marketing manager at Sandvik Steel.

By putting the Internet at the heart of its business, the Sandvik group intends to penetrate deeply into the minds and ambitions of its customers. 'The challenge is not just doing digital business, it is becoming a digital business', she adds.

Source: Andrew Fisher, Sandvik Steel, 4 June 2001.

Questions

- 1 Summarise Sandvik Steel's digital business strategy as described in the article.
- 2 Suggest why the proportion of online purchases varies in the different countries in which Sandvik trades.

Activity 5.2

Assessing the significance of digital channels

Purpose

To illustrate the issues involved with assessing the suitability of the Internet for e-commerce.

Activity

For each of the following products and services, assess the suitability of the Internet for delivery of the product or service and position it on the grid in Figure 5.18, with justification, and make estimates in Table 5.7 for the direct and indirect online revenue contribution in 2, 5 and 10 years' time for different products in your country. Choose specific products within each category. *No suggested answer supplied.*

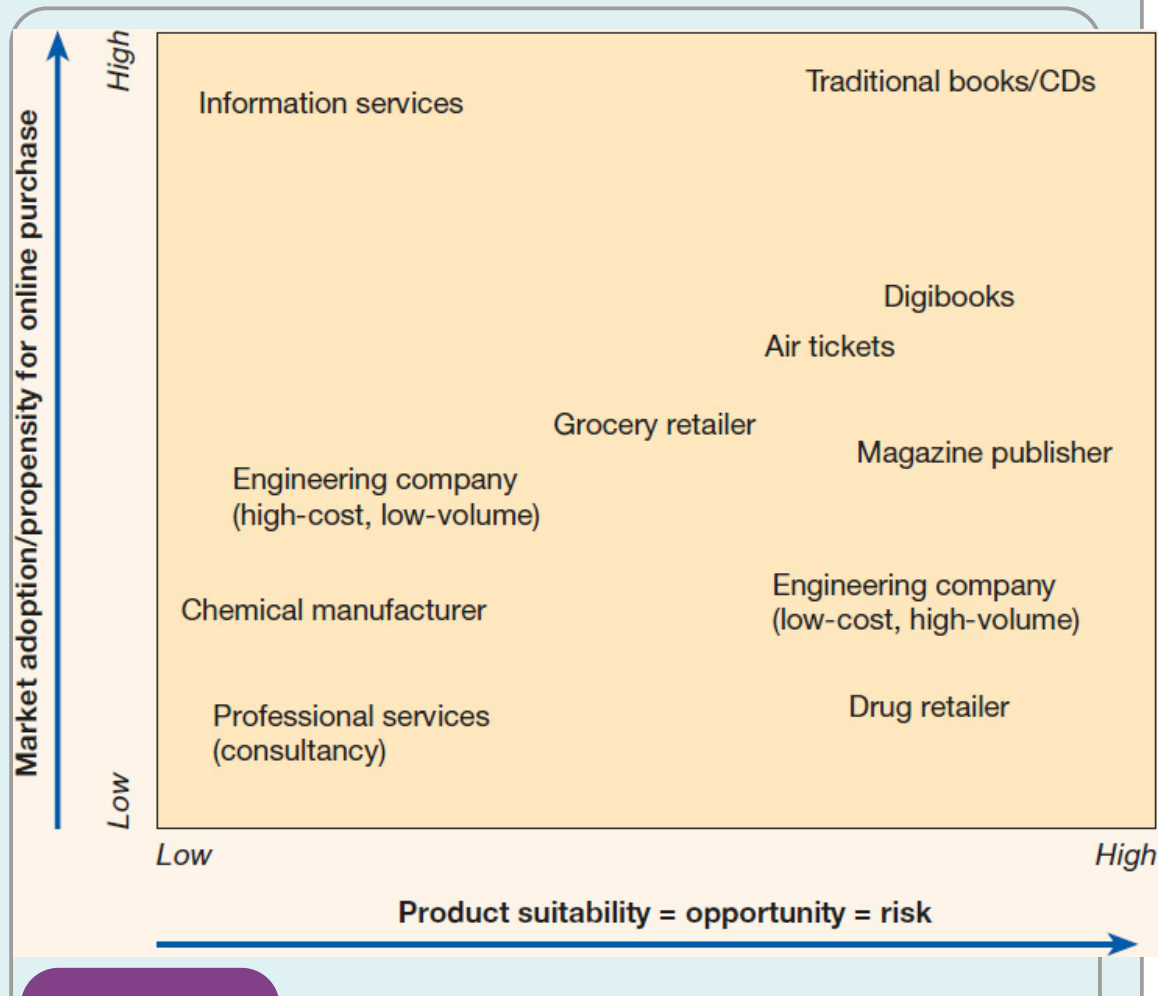


Figure 5.17

Grid of product suitability against market adoption for transactional e-commerce (online purchase)

Table 5.7

Vision of online revenue contribution for a B2B company

Products/services	Now	2 years	5 years	10 years
Example: Cars, US	5%	10%	25%	50%
Direct online sales	50%	70%	90%	95%
Indirect online sales				
Financial services				
Direct online sales				
Indirect online sales				
Clothing				
Direct online sales				
Indirect online sales				
Business office supplies				
Direct online sales				
Indirect online sales				

An equivalent buy-side measure to the online revenue contribution is the proportion of procurement that is achieved online. This can be broken down into the proportions of electronic transactions for ordering, invoicing, delivery and payment (as described in Chapter 6). Deise *et al.* (2000) note that the three business objectives for procuring materials and services should be improving supplier performance, reducing cycle time and cost for indirect procurement, and reducing total acquisition costs. Metrics can be developed for each of these.

The balanced scorecard approach to objective setting

Integrated metrics such as the **balanced scorecard** have become widely used as a means of translating organisational strategies into objectives and then providing metrics to monitor the execution of the strategy. Since the balanced business scorecard is a well-known and widely used framework, it can be helpful to define objectives for digital business in the categories below.

It was popularised in a *Harvard Business Review* article by Kaplan and Norton (1993). In part, it was a response to over-reliance on financial metrics such as turnover and profitability and a tendency for these measures to be retrospective rather than looking at future potential.

The main areas of the balanced scorecard are:

- 1 Customer concerns.** These include time (lead time, time to quote, etc.), quality, performance, service and cost. Example measures from Halifax Bank from Olve *et al.* (1999): satisfaction of mystery shoppers visiting branches and from branch customer surveys.
- 2 Internal measures.** Internal measures should be based on the business processes that have the greatest impact on customer satisfaction: cycle time, quality, employee skills, productivity. Companies should also identify critical core competencies and try to guarantee market leadership. Example measures from Halifax Bank: ATM availability (%), conversion rates on mortgage applications (%), arrears on mortgage (%).
- 3 Financial measures.** Traditional measures such as turnover, costs, profitability and return on capital employed. For publicly quoted companies this measure is key to shareholder value. Example measures from Halifax Bank: gross receipts (£), mortgage offers (£), loans (£).
- 4 Learning and growth.** Innovation and staff development. Innovation can be measured by change in value through time (employee value, shareholder value, percentage and value of sales from new products).

Balanced scorecard

A framework for setting and monitoring business performance. Metrics are structured according to customer issues, internal efficiency measures, financial measures and innovation.

For each of these four areas, management teams will define objectives, specific measures, targets and initiatives to achieve these targets. For some

companies, such as Skandia Life, the balanced scorecard provides a framework for the entire business strategy process. Olve *et al.* (1999) make the point that a further benefit of the scorecard is that it does not solely focus on outcomes, but also considers performance drivers that should positively affect the outcomes. For example, investments in technology and in employee training are performance drivers.

More recently, it has been suggested that it provides a useful tool for aligning business and IS strategy; see, for example, der Zee and de Jong (1999).

Table 5.8 outlines how the balanced scorecard could be deployed in a B2B organisation to support its digital business strategy. (A more detailed example is given in Chapter 7.)

Strategy definition

Strategy definition

Formulation, review and selection of strategies to achieve strategic objectives.

Strategy definition is driven by the objectives and vision referred to in the previous sections. As strategy is formulated based on vision and objectives, so it is necessary to frequently revisit and revise them.

In this section, the key strategic decisions faced by a management team developing digital business strategy are reviewed. For each of the areas of strategy definition that we cover, managers will want to generate different options, review them and select them, as shown in Figure 5.18. We start by considering the sell-side-related aspects of digital business and then review the buy-side-related aspects.

Selection of digital business strategy options

When reviewing digital business strategy options, there will be a range of possible strategies and digital business service alternatives to be evaluated.

Limited resources will dictate that only some applications are practical. Typical options for an organisation that has a brochureware site might be to implement:

- transactional e-commerce facility;
- online catalogue facility;
- eCRM system - lead-generation system;
- eCRM system - customer service management;
- eCRM system - personalisation of content for users;
- e-procurement system for office supplies;
- partner relationship management extranet for distributors and agents;
- social network or customer forum.

Portfolio analysis can be used to select the most suitable digital business projects. Daniel *et al.* (2001) suggest that potential e-commerce opportunities should be assessed for the value of the opportunity to the company against its ability to deliver. Similarly, McDonald and Wilson (2002) suggest that evaluations should be based on a matrix of attractiveness to customer against attractiveness to company.

Tjan (2001) also suggests a matrix approach of viability (return on investment) against fit (with the organisation's capabilities) for digital applications. He presents the following metrics for assessing viability of each application. For 'fit' these are:

- alignment with core capabilities;
- alignment with other company initiatives;
- fit with organisational structure;
- fit with company's culture and value;
- ease of technical implementation.

Table 5.8

An example of a digital business balanced scorecard for a B2B company

Scorecard component	Objective metric
---------------------	------------------

Customer perspective	Customer acquisition rate (leads generated online) Customer retention rate (% using online services) Customer satisfaction index
Process	Average time for new product development (months) Procurement lead times Sales cycle lead time
Financial	Revenue contribution from online channel Margin from online channel Cost savings from partners using different e-services
Innovation and employee development	Number of new product releases per year Training hours attended per employee: target 30 hours/year

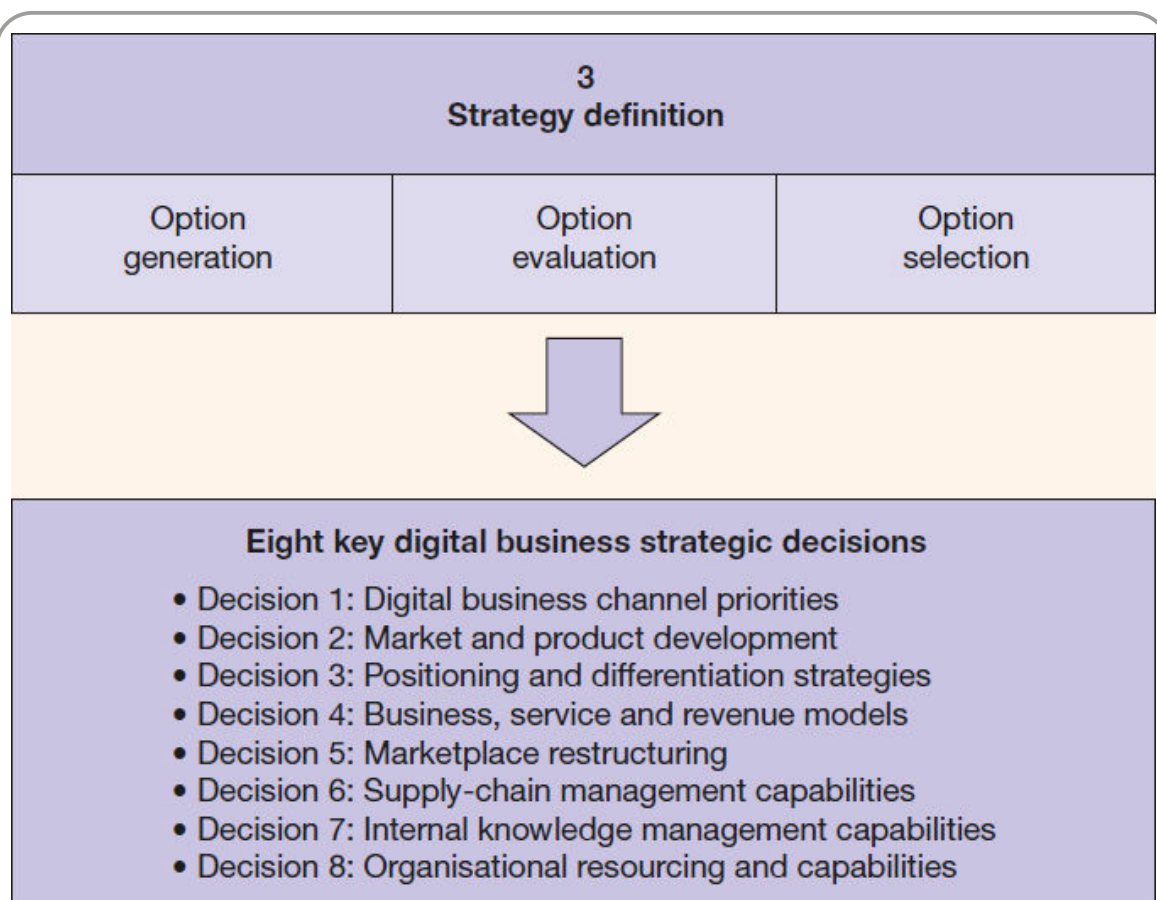


Figure 5.18

Elements of strategy definition for the digital business

For ‘viability’ the metrics are:

- market-value potential (return on investment);
- time to positive cash flow;
- personnel requirement;
- funding requirement.

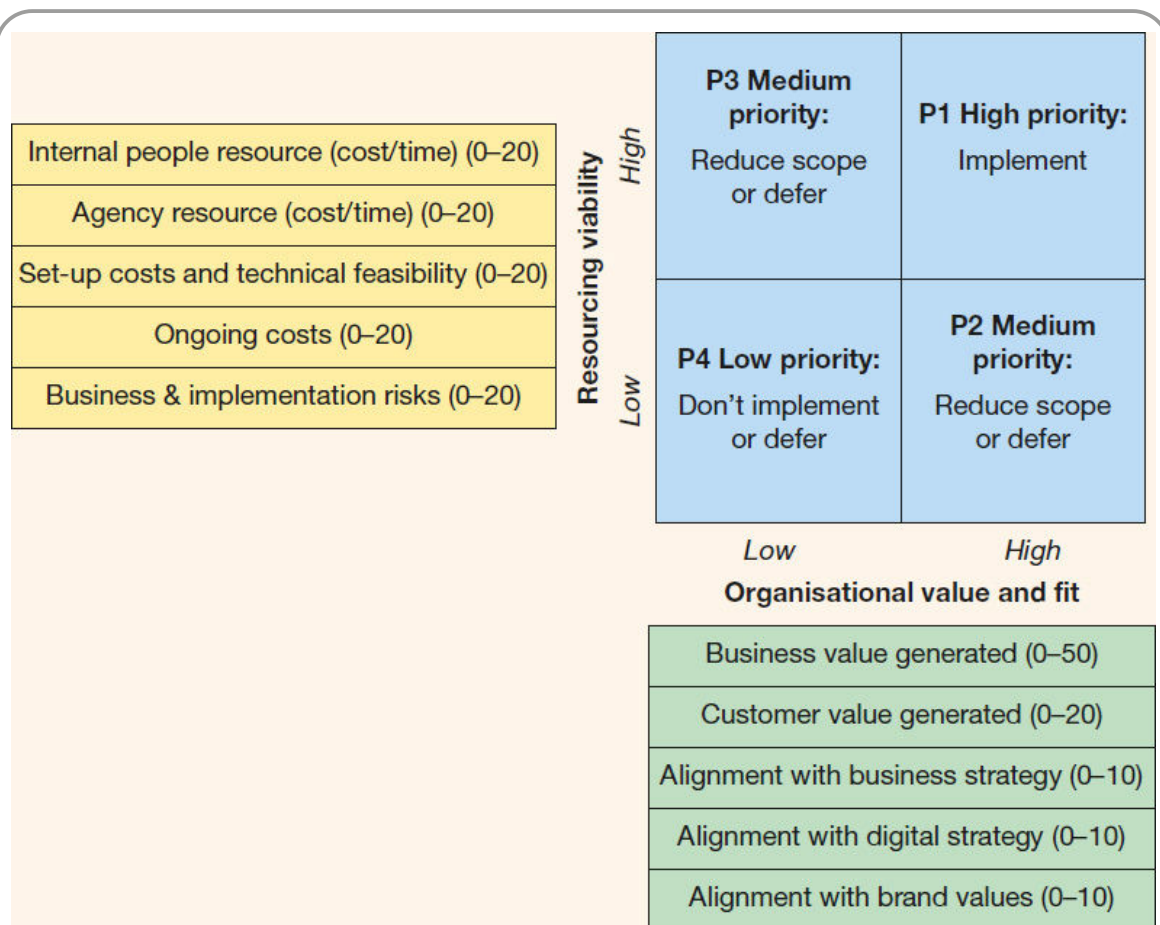


Figure 5.19

Matrix for evaluating digital business strategy alternatives

Source: ‘Econsultancy’ (2008a)

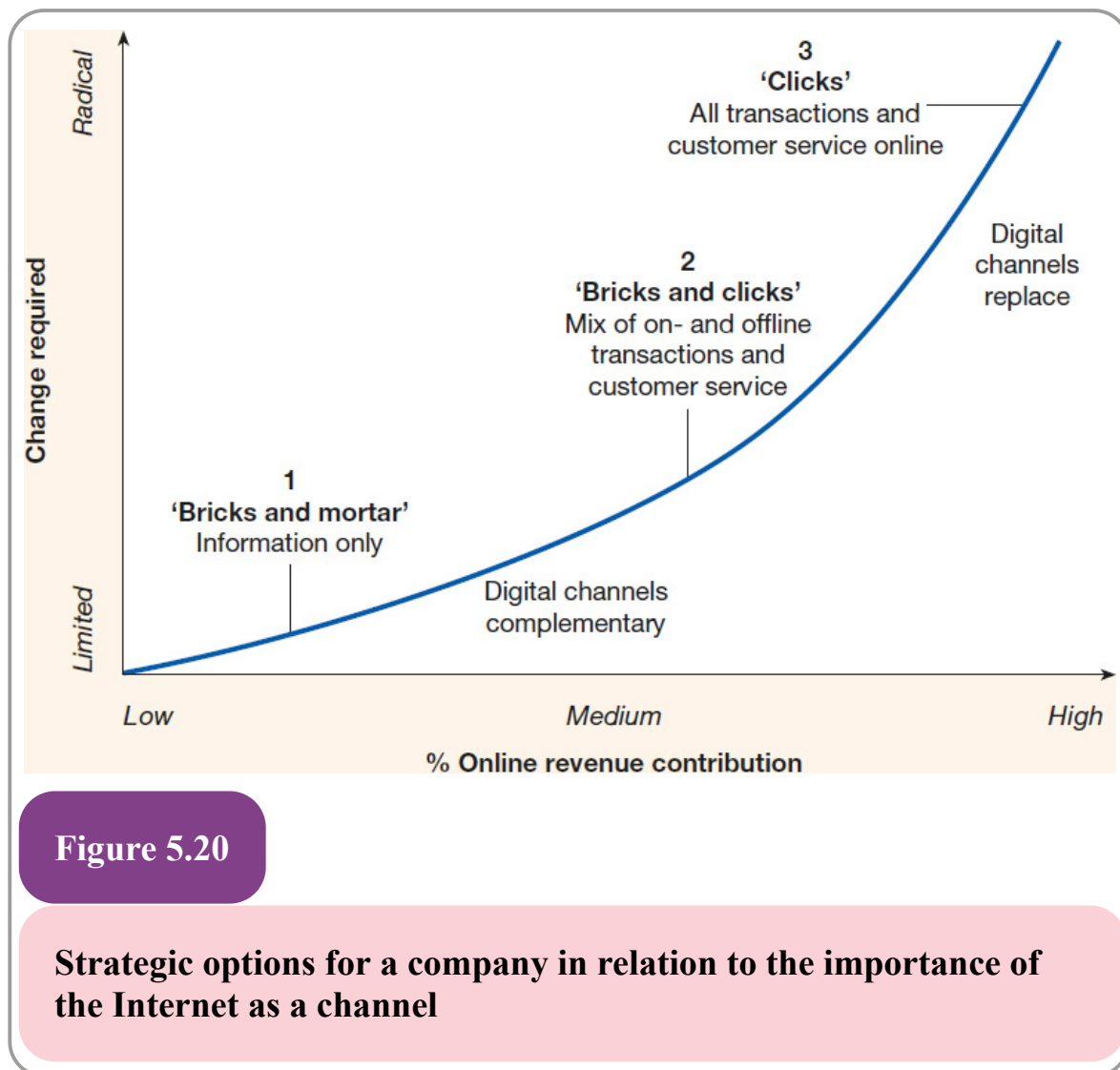
Author Dave Chaffey's 'Econsultancy' (2008a) report recommended a form of portfolio analysis (Figure 5.19) as the basis for benchmarking current e-commerce capabilities and identifying strategic priorities. The five criteria used for organisational value and fit (together with a score or rating for their relative effectiveness) are:

- *Business value generated (0-50)*. This should be based on *incremental* financial benefits of the project. These can be based on conversion models showing estimated changes in number of visitors attracted (new and repeat customers), conversion rates and results produced. Consideration of lifetime value should occur here.
- *Customer value generated (0-20)*. This is a 'softer' measure, which assesses the impact of the delivered project on customer sentiment. For example, would they be more or less likely to recommend a site; would it increase their likelihood to visit or buy again?
- *Alignment with business strategy (0-10)*. Projects that directly support current business goals should be given additional weighting.
- *Alignment with digital strategy (0-10)*. Likewise for digital strategy.
- *Alignment with brand values (0-10)*. And for brand values.

The cost elements for potential digital business projects are based on requirements for internal people resource (cost/time), agency resource (cost/time), set-up costs and technical feasibility, ongoing costs and business and implementation risks.

Decision 1: Digital business channel priorities

The digital business strategy must be directed according to the priority of different strategic objectives, such as those in Table 5.6. If the priorities are for the *sell-side downstream channel*, as are objectives 1 to 3 in Table 5.6, then the strategy must be to direct resources at these objectives. For a B2B company that is well known in its marketplace worldwide and cannot offer products to new markets, an initial investment on *buy-side upstream channel* e-commerce and value chain management may be more appropriate.



For multichannel businesses with a physical and online sales presence digital business channel strategy, priorities can be summarised as getting the right mix of ‘bricks and clicks’, as shown in Figure 5.20. This summarises an organisation’s commitment to e-commerce and its implication for traditional channels.

The diversification of digital platforms

Today, it’s no longer simply a question of investment in digital vs traditional channels; businesses have to decide on the prioritisation of investments and support for different digital platforms (introduced in Chapter 1). Decisions have to be taken about which combination of platforms has the highest level of consumer (or channel partner) usage and will give the best commercial rewards (the options are shown in Table 5.9). It’s not practical and won’t

give the best returns to allocate investments individually. Some key prioritisation decisions that need to be taken include:

- investment and support for mobile applications;
- within mobile platforms, investment in mobile-optimised desktop sites against responsive designs (as discussed in Chapters 3 and 4) and platforms supported for mobile sites (e.g. iOS smartphone and tablet, Android and Windows);
- investment in social media platform support, i.e. Facebook vs LinkedIn vs Twitter vs Pinterest vs Instagram vs Snapchat and other social networks.

Decision 2: Market and product development strategies

Deciding on which markets to target through digital channels to generate value is a key strategic consideration. Managers of digital business strategy have to decide whether to use new technologies to change the scope of their business to address new markets and new products. As with Decision 1, it is a balance between fear of the do-nothing option and fear of poor return on investment for strategies that fail. The model of Ansoff (1957) is still useful as a means for marketing managers to discuss market and product development using digital technologies. (This decision is considered from a digital marketing perspective in Chapter 7.) The market and product development matrix (Figure 5.21) can help identify strategies to grow sales volume through varying what is sold (the product dimension on the x-axis) and who it is sold to (the market dimension on the y-axis). Specific objectives need to be set for sales generated via these strategies, so this decision relates closely to that of objective setting.

Table 5.9

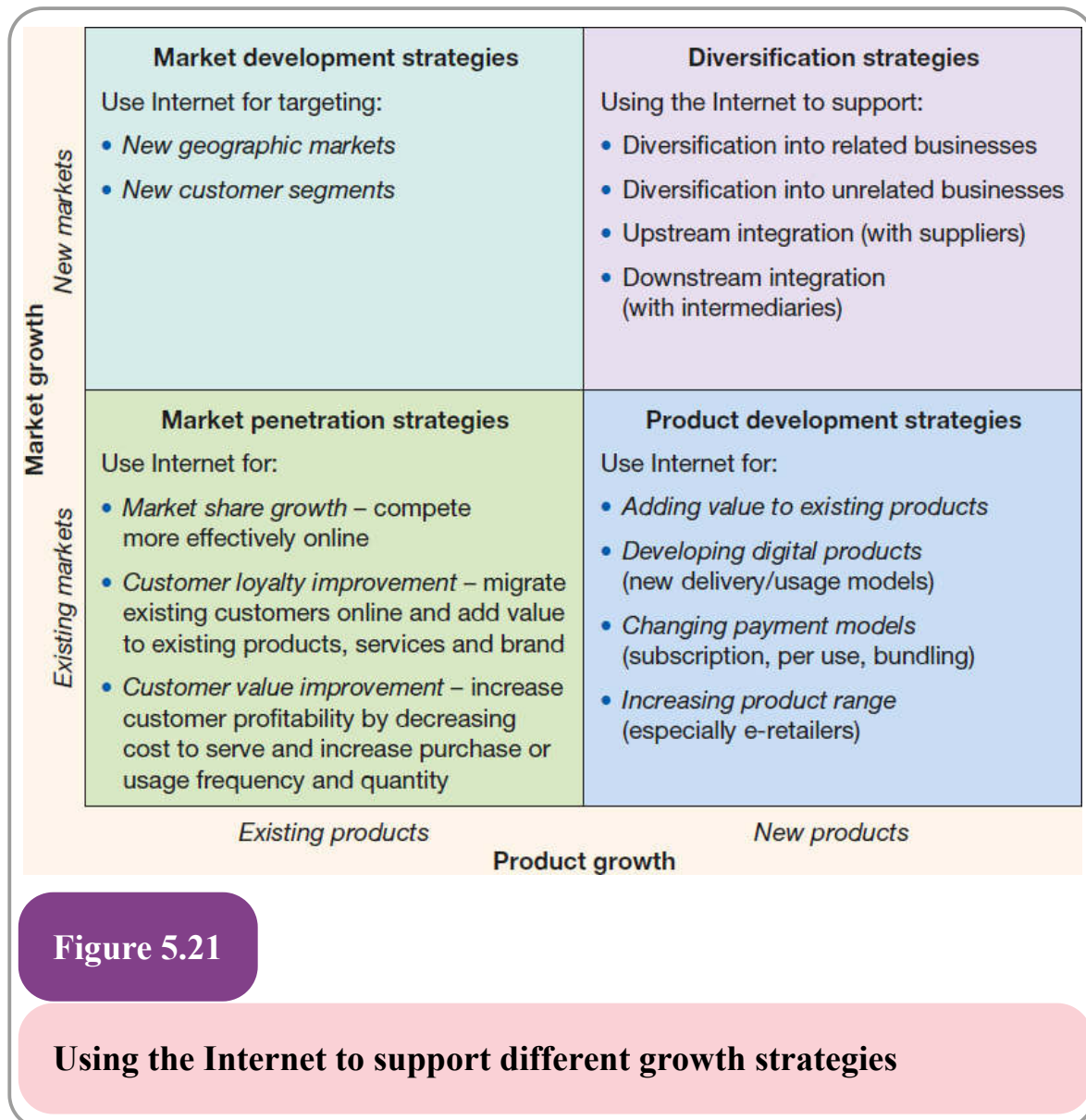
Examples of ‘right-channelling’ applications

Right-	Application and tactics to	Typical sector
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channelling strategy example	achieve channel adoption	and company examples
1 Sell to and serve SMEs through digital channels	Using the Internet for sales and service through an extranet to lower-sales-volume SME customers who cannot be serviced direct through account managers Customer channel adoption encouraged by convenience and lack of other options	B2B. Hardware: Dell, software services such as MessageLabs Antivirus; anti-spam and email management services. Commercial banks such as HSBC
2 Account-managed relationships with larger companies offline, either direct or through partner companies	The converse of strategy 1. Using face-to-face and phone meetings with large, high-sales-volume clients through account managers. Customer channel adoption encouraged by personal service and capability to negotiate service levels and buying options	B2B. Account managers at Dell for larger clients. Bank 'relationship managers' who discuss financial management with 'higher-wealth' individuals
3 Encourage consumers to buy through digital channels	Customers buying online have lower cost of sale. However, there is a risk of customers evaluating competitor offerings and lower conversion rates during the sales process. Customer channel adoption encouraged by reduced 'Internet prices' compared to offline channels and explaining proposition of more choice, more convenience	Insurance companies such as DirectLine.com and Morethan.com. Retailers such as Tesco and Currys

4 Provide offline conversion to sale options during sales process	Offer a phone call-back or live chat facility from within web sales process since strategy 3 may involve lower conversion rates than an in-store or call-centre customer interaction. Customer channel adoption encouraged by providing clear contact numbers on-site (but not on home page, when part-way through customer journey)	Insurance companies such as DirectLine.com and Morethan.com
5 Migrate customers to web self-service	Customers are encouraged to use the web to manage their accounts, which results in a lower cost-to-serve for the company. Email notification and online billing. Customer channel adoption encouraged by marketing campaigns that encourage digital channel adoption, possibly including savings on service	B2C. Service providers such as mobile phone companies, utility companies, banks and government (tax returns)
6 Selective service levels for different customer types	With integrated CRM systems (Chapter 8), companies can determine, in real time, the value of customers and then assess where they are placed in queue or which call centre they are directed to	Most companies would not publicly admit to this, but the practice is common among financial services companies, mobile phone network providers and some pureplays

1 Market penetration. This strategy involves using digital channels to sell more existing products into existing markets. The Internet has great potential for achieving sales growth or maintaining sales by the market penetration strategy. Figure 5.21 indicates some of the main ways in which the Internet can be used for market penetration:



- **Market share growth** - companies can compete more effectively online if they have websites that are efficient at converting visitors to sales.
- **Customer loyalty improvement** - companies can increase their value to customers and so increase loyalty by migrating existing

customers online by adding value to existing products, services and brand by developing their online value proposition (see Decision 6).

- **Customer value improvement** - the value delivered by customers to the company can be increased by increasing customer profitability by decreasing cost to serve (and so price to customers) and at the same time increasing purchase or usage frequency and quantity.

2 Market development. Here online channels are used to sell into new markets, taking advantage of the low cost of advertising internationally without the necessity for a supporting sales infrastructure in the customer's country.

Existing products can also be sold to new market segments or different types of customers. This may happen simply as a by-product of having a website. The Internet may offer further opportunities for selling to market sub-segments that have not been previously targeted. Many companies have found that the audience and customers of their website are quite different from their traditional audience, so this analysis should inform strategy.

3 Product development. The web can be used to add value to or extend existing products for many companies. For example, a car manufacturer can potentially provide car performance and service information via a website. But truly new products or services that can be delivered by the Internet apply only for some types of products. These are typically digital media or information products. Retailers can extend their product range and provide new bundling options online also.

4 Diversification. In this sector, new products are developed that are sold into new markets. The Internet alone cannot facilitate these high-risk business strategies, but it can facilitate them at lower costs than have previously been possible. The options include:

- **Diversification into related businesses** (for example, a low-cost airline can use the website and customer emails to promote travel-related services).
- **Diversification into unrelated businesses** - again the website can be used to promote less-related products to customers.
- **Upstream integration** - with suppliers - achieved through data exchange between a manufacturer or retailer with its suppliers to enable a company to take more control of the supply chain.
- **Downstream integration** - with intermediaries - again achieved through data exchange with distributors such as online intermediaries.

Target marketing strategy

Evaluation and selection of appropriate segments and the development of appropriate offers.

A closely related issue is the review of how a company should change its **target marketing strategy**. This starts with segmentation, or identification of groups of customers sharing similar characteristics. Targeting then involves selectively communicating with different segments. (This topic is explored further in Chapter 7.) Some examples of customer segments that are commonly targeted online include:

- *The most profitable customers* - using the Internet to provide tailored offers to the top 20% of customers by profit may result in more repeat business and cross-sales.
- *Larger companies (B2B)* - an extranet could be produced to service these customers, and increase their loyalty.
- *Smaller companies (B2B)* - large companies are traditionally serviced through sales representatives and account managers, but smaller companies may not warrant the expense of account managers. However, the Internet can be used to reach smaller companies more cost-effectively.
- *Particular members of the buying unit (B2B)* - the site should provide detailed information for different interests, which supports the buying decision - for example, technical documentation for users of products, information on savings from e-procurement purchasing managers and information to establish the credibility of the company for decision makers.
- *Customers who are difficult to reach using other media* - an insurance company looking to target younger drivers could use online communications as a vehicle for this.
- *Customers who are brand-loyal* - services to appeal to brand loyalists can be provided to support them in their role as advocates of a brand, as suggested by Aaker and Joachimsthaler (2000).
- *Customers who are not brand-loyal* - conversely, incentives, promotion and a good level of service quality could be provided by the website to try to retain such customers.

Decision 3: Positioning and differentiation strategies

Once segments to target have been identified, organisations need to define how to best position their online services relative to competitors' according to four main variables: product quality, service quality, price and fulfilment time.

Chaston (2000) argued that there are four options for strategic focus to position a company in the online marketplace that remain relevant today. He says that these should build on existing strengths, but can use the online facilities to enhance the positioning as follows:

- *Product performance excellence.* Enhance by providing online product customisation or incorporating reviews and detailed product information, as with the example of the AO website, which sells home appliances such as washing machines, fridge freezers, etc. (**www.ao.com**).
- *Price performance excellence.* Offer competitive pricing, of which Amazon is the best-known example. With its buying power and lack of store network, Amazon aims to be price competitive. However, it doesn't aim to deliver this across its whole product range, rather the best-selling products. It has greater productivity on less popular 'long-tail' products.
- *Transactional excellence.* A site such as personalised gift company Getting Personal (**www.gettingpersonal.co.uk**) offers transactional excellence through combining personalisation, customer reviews and pricing information with fast delivery on products.
- *Relationship excellence.* This is related to the creation of an exceptional brand experience (see Chapter 9). It comprises emotional, design-influenced factors and rational factors based on ease of use, content quality and performance. For example, personalisation features enable customers to review sales order history and place repeat orders such as on the B2B Eurooffice (**www.eurooffice.co.uk**) and RS Components sites (**uk.rs-online.com**). The complexity of the interplay between these factors means that it is important to use the user research and feedback techniques covered in Chapters 9 and 10 to understand the quality of the experience as perceived by customers.

Table 5.10

Example scorecard criteria for rating online retailers

Scorecard category	Scorecard criteria
1 Ease of use	• Demonstrations of functionality • Simplicity of account opening and transaction process • Consistency of design and navigation • Adherence to proper user interaction principles • Integration of data providing efficient access to information commonly accessed by consumers • Availability, depth and breadth of customer service options, including phone, email and branch locations • Ability to resolve accurately and readily a battery of telephone calls and emails sent to customer service, covering simple technical and industry-specific questions
2 Customer confidence	• Privacy policies, service guarantees, fees and explanations of fees • Each ranked website is monitored every 5 minutes, 7 days a week, 24 hours a day for speed and reliability of both public and secure (if available) areas • Financial strength, technological capabilities and independence, years in business, years online and membership of trade organisations
3 On-site resources	• Availability of specific products • Ability to transact in each product online • Ability to seek service requests online
4 Relationship services	• Online help, tutorials, glossary and frequently asked questions • Advice • Personalisation of data • Ability to customise a site • Reuse of customer data to facilitate future transactions

5 Overall
cost

- Support of business and personal needs such as tax reporting or repeated buying
- Frequent-buyer incentives
- A basket of typical services and purchases
- Added fees due to shipping and handling
- Minimum balances
- Interest rates

Online value proposition (OVP)

A statement of the benefits of online services reinforces the core proposition and differentiates from an organisation's offline offering and those of competitors.

Marketing mix

Different factors that summarise the customer propositions offered by a business. Marketing mix refers to the four core Ps of Price, Product (including branding), Place and Promotion, and the seven Ps of the extended marketing mix, which also include People, Process and Physical evidence.

These positioning options remain relevant since they share much in common with Porter's competitive strategies of cost leadership, product differentiation and innovation (Porter, 1980). Porter has been criticised, since many commentators believe that to remain competitive it is necessary to combine excellence in all of these areas. It can be suggested that the same is true for sell-side e-commerce and that the experience of the brand is particularly important. These are not mutually exclusive strategic options; rather they are prerequisites for success.

The type of criteria on which customers judge performance can be used to benchmark the proposition. Table 5.10 summarises criteria typically used for benchmarking. Significantly, the retailers with the best overall score at the time of writing, such as Tesco (grocery retail), smile (online banking) and Amazon (general retail), are also perceived as the market leaders and are strong in each of the scorecard categories. These ratings have resulted from strategies that enable the investment and restructuring to deliver customer performance.

Plant (2000) also identified four different positional digitally enabled strategic directions, which he refers to as technology leadership, service leadership, market leadership and brand leadership. The author

acknowledges that these are not exclusive. It is interesting that this author does not see price differentiation as important, rather he sees brand and service as important to success online.

In Chapter 7 we look further at how segmentation, positioning and creating differential advantage should be integral to digital marketing strategy. We also see how the differential advantage and positioning of an e-commerce service can be clarified and communicated by developing an **online value proposition (OVP)** based on the seven Ps of the **marketing mix**.

To conclude this section on digital business strategies, complete Activity 5.3 for a different perspective on digital business strategies.

Activity 5.3

Digital business strategies for a B2C company

Purpose

To evaluate the suitability of different digital business strategies.

Introduction

Many industry analysts, such as the Gartner Group, Forrester, IDC Research and the 'big four' consulting firms, are suggesting digital business strategies. Many of these will not have been trialled extensively, so a key management skill becomes evaluating suggested approaches from reports and then selecting appropriate measures.

Questions

- 1 Review the summaries of the approaches recommended by IDC Research below (Picardi, 2000). Which elements of these strategies would you suggest are most relevant to a B2C company?
- 2 Alternatively, for a company with which you are familiar, review the eight strategy decisions within this section.

Summary of IDC approach to digital business strategies

Picardi (2000) identified six strategies for sell-side e-commerce. The approaches are interesting since they also describe the timeframe in which response is required in order to remain competitive.

1 Attack online retailing. As suggested by the name, this is an aggressive competitive approach that involves frequent comparison with competitors' prices and then matching or bettering them. As customers increasingly use shopping comparison sites, it is important that companies ensure their price positioning is favourable. Shopping sites such as Rakuten.com (www.rakuten.com) and Travel Republic (www.travelrepublic.co.uk) provide the prices of all comparable items in a category but also guarantee that they will beat the lowest price. These sites have implemented real-time adjustments in prices, with small increments based on price policy algorithms that are simply not possible in traditional retailing.

2 Defend online retailing. This is a strategic approach that traditional companies can use in response to 'attack e-tailing'. It involves differentiation based on other aspects of brand beyond price. The IDC research quoted by Picardi (2000) shows that while average prices for commodity goods on the Internet are generally lower, less than half of all consumers purchase the lowest-priced item when offered more information from trusted sources, i.e. price dispersion may actually increase online. Reasons why the lowest price may not always result in the sale are:

- ease of use of site and placing orders (e.g. Amazon One-Click makes placing an order with Amazon much easier than using a new supplier);
- ancillary information (e.g. book reviews contributed by other customers enhances Amazon service);
- after-sales service (prompt, consistent fulfilment and notification of dispatch from Amazon increases trust in the site);
- trust with regard to security and customer privacy;
- next-day delivery via Amazon Prime.

These factors enable Amazon to charge more than competitors and still achieve the greatest sales volume of online booksellers. In summary, trust becomes the means of differentiation and loyalty.

3 E2E (end-to-end) integration. This is an efficiency strategy that uses the Internet to decrease costs and increase product quality

and shorten delivery times. This strategy is achieved by moving towards an automated supply chain (Chapter 6) and internal value chain.

4 Market creation. Picardi (2000) defines market creation as ‘the business of supplying market clearing and ancillary services in cyberspace, resulting in the creation of an integrated ecosystem of suppliers’. In tangible terms, this strategy involves integrating and continuously revising supply chains with market-maker sites such as business-to-business exchanges (Chapter 6).

5 Customer as designer. This strategy uses the technology to enable customers to personalise products, again as a means of differentiation. This approach is particularly suited to information products, but manufactured products such as cars can now be specified to a fine degree of detail by the customer. One online retailer that has built a business around this strategy is **www.contrado.co.uk**, which provides customers with the ability to print their own designs on custom-made clothing, fabrics and homeware.

6 Open-source value creation. The best-known example of this is the creation and commercial success of the operating system Linux by over 300,000 collaborators worldwide. Picardi (2000) suggests that organisations will continue to make more use of external resources to solve their problems.

Business model

A summary of how a company will generate revenue, identifying its product offering, value-added services, revenue sources and target customers.

Revenue models

Describe methods of generating income for an organisation.

Early (first) mover

An early entrant into the marketplace.

Decision 4: Business, service and revenue models

A further aspect of Internet strategy formulation closely related to product development options is the review of opportunities from new **business** and **revenue models** (first introduced in Chapter 2). Constantly reviewing innovation in services to improve the quality of experience offered is also important for digital businesses. For example, innovations at holiday company TUI (www.tui.co.uk) have included: travel guides to destinations, video tours of destinations and hotels, ‘build-your-own’ holidays and the use of email alerts with holiday offers. Such innovations can help differentiate from competitors and increase loyalty to a brand online.

Evaluating new models and approaches is important, since if companies do not review opportunities to innovate then competitors and new entrants certainly will. Andy Grove of Intel famously said: *‘Only the paranoid will survive’*, alluding to the need to review new revenue opportunities and competitor innovations. A willingness to test and experiment with new business models is also required. Dell is another example of a tech company that regularly reviews and modifies its business model, as shown in Mini case study 5.2. Companies at the cutting edge of technology, such as Google and Facebook, constantly innovate through acquiring other companies.

These companies also invest in internal research and development and continuously develop and trial new services.

Mini Case Study 5.2

Innovation in the Dell business model

One example of how companies can review and revise their business model is provided by Dell Computer. Dell gained **early mover** advantage in the mid-1990s when it became one of the first companies to offer PCs for sale online. Its sales of PCs and peripherals grew from the mid-1990s, with online sales of \$1 million per day to 2000 sales of \$50 million per day. Based on this success, it has looked at new business models it can use in combination with its powerful brand to provide new services to its existing customer base and also to generate revenue through new customers. In September 2000, Dell announced plans to become a supplier of IT consulting services through linking with enterprise resource planning specialists such as software suppliers, systems integrators and business consulting firms. This venture enabled Dell’s Premier B2B customer extranet to be integrated into the procurement component of ERP systems such as SAP and Baan, thus

avoiding the need for rekeying and reducing costs. Dell Business Solutions is now an important contributor to its business.

In a separate initiative, Dell launched a B2B marketplace (formerly known as Dell Marketplace) in mid-2000 aimed at discounted office goods and services procurements including PCs, peripherals, software, stationery and travel. This strategic option did not prove sustainable, but it was able to test a model and then move on - it closed the marketplace after just 4 months! This was Dell's digital business disaster. However, it does still offer Dell Outlet, a relatively low-cost purchase method for returned, refurbished PCs.

In 2007, Dell launched IdeaStorm (**www.ideastorm.com**), a co-creation platform that encourages user participation by giving everyone the ability to suggest new products and features that can be voted on. Importantly, Dell 'closes the loop' through a separate 'Ideas in Action' section, where it updates consumers on actions taken by the company. As well as improvements to customer service, it has explained how it has introduced systems with a non-Windows Linux operating system in response to suggestions on IdeaStorm. In 2008 Dell also had a raft of online options to engage with customers and other partners, including:

- a corporate blog, Direct2Dell (**www.direct2dell.com**), which is 'a blog about Dell products, services and customers';
- a brand channel on YouTube (**www.youtube.com/user/DellVlog**);
- Dell Community/Dell Conversations (**www.dell.com/community/Dell-Community/ct-p/English7profile.language=en**) 'interactive ways for you to share and learn with others and with us';
- Premier (**www.dell.com/learn/us/en/04/premier**), which is a customised procurement portal (extranet) for larger businesses.

Less radical changes to revenue models that are less far-reaching may nevertheless be worthwhile. For example:

- Transactional e-commerce sites (for example, Tesco.com and lastminute.com) can sell advertising space or run co-branded promotions on-site or through their email newsletters or lists to sell access to their audience to third parties.
- Retailers or media owners can sell-on white-labelled services through their online presence such as ISP, email services or photo-sharing services.

- Companies can gain commission through selling products that are complementary (but not competitive to their own). For example, a publisher can sell its books through an affiliate arrangement with an online retailer.
- Brands who are manufacturers can sell direct or encourage purchase through integrating a marketplace or ‘where to buy’ service. For example, consumer and B2B manufacturer 3M now offers a store for consumers, but not for its full range of products. Consumer pet-food brand Royal Canin now offers the option to buy online via its local stores in a marketplace. These systems require deep integration between manufacturer and retailer systems.

Decision 5: Marketplace restructuring

We saw in Chapter 2 that digital communications offer opportunities for new market structures to be created through *disintermediation*, *reintermediation* and *countermediation* within a marketplace. The options for these should be reviewed.

Decision 6: Supply chain management capabilities

(Supply chain management and e-procurement are discussed further in Chapter 6.) The main digital business strategy decisions that need to be reviewed are:

- How should we integrate more closely with our suppliers, for example through creating an extranet to reduce costs and decrease time to market?
- Which types of materials and interactions with suppliers should we support through online procurement?
- Can we participate in digital marketplaces to reduce costs?

Online shoe retailer Zappos is a great example of how a customer-centric strategy can provide strategic advantage, despite offering the same products as many other retailers. You can read about the company’s approach in Case study 5.3.

Case Study 5.3

Zappos innovates in the digital marketplace

Tony Hsieh became a multi-millionaire at 24 when he sold a start-up he had co-founded to Microsoft for \$265m. He initially joined online shoe retailer Zappos as an advisor and investor, later becoming its chief executive. When he became involved in 1999, the online retailer's annual gross sales were \$1.6 million. Tony had two goals for the first ten years: reach \$1 billion in annual sales and get on the list for the best companies to work for.

Generally, most consumer-orientated online businesses focus on acquisition, rather than retention.

However, Zappos focuses on the retention of both customers and staff - generating customer retention rates of 75% and staff retention rates of 85%.

These impressive retention metrics are because Hsieh took the view that company culture came first, to maintain passion and excitement. He viewed culture-building as an investment, and delivering 'wow' customer service was a core part of this. Zappos employees do not have scripts or call-time metrics; they are empowered to take action, let their true personalities shine during each call and to keep customers happy. Zappos wants its representatives to develop a personal emotional connection with each customer - which it refers to as a PEC. According to a *Harvard Business Review* article Hsieh wrote in 2010, 'As unsexy and low-tech as it may sound, the telephone is one of the best branding devices out there.'



Figure 5.22

Zappos' customised desks

Source: Ronda Churchill/Bloomberg via Getty Images

The company's culture is shaped by ten core values:

- 1** Deliver WOW through service
- 2** Embrace and drive change
- 3** Create fun and a little weirdness
- 4** Be adventurous, creative and open-minded
- 5** Pursue growth and learning
- 6** Build open and honest relationships with communication
- 7** Build a positive team and family spirit
- 8** Do more with less
- 9** Be passionate and determined
- 10** Be humble

Zappos also has a unique recruitment process - potential employees have two interviews, one to assess if they can do the job and another to assess their

cultural fit with the company. All successful candidates then attend a five-week training course, including two weeks on the phones in the call centre. To test commitment, everyone is offered \$2,000 to quit (only 3% accept the offer). The company even has its own 480-page 'Culture Book' (this can be downloaded at: www.zapposinsights.com/culture-book).

Employees enjoy free lunches, no-charge vending machines, a company library, a nap room and free healthcare. Zappos also likes to make its office environment fun for employees, allowing them to customise desks and turn their environment into a jungle (see Figure 5.22).

According to Craig Akins of Zappos (as reported by 'Econsultancy' by Charlton, 2014):

Our best customers have the highest returns rates, but they are also the ones that spend the most money with us and are our most profitable customers. Zappos' modus operandi is not to give its purchasers the cheapest footwear on the block, but to give them the best service: hence, a 365-day returns policy, and free two-way shipping.

The company also has 'Zappos Labs', which is focused on solving people's pain points and creating optimised experiences across all channels. For example, customers can take photos of items they see on the street, send the images to Zappos employees via text, email or Instagram, who will then send the relevant link back to the customer for them to purchase it online.

The company's culture meant that in 2008 (just ten years after starting), Zappos reached its goal of \$1 billion in gross sales. The company was sold to Amazon towards the end of 2009 for \$1.2 billion.

Sources:

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Decision 7: Internal knowledge management capabilities

Organisations should review their internal digital business capabilities and in particular how knowledge is shared and processes are developed. Questions to ask are:

- How can our intranet be extended to support different business processes such as new product development, customer and supply chain management?
- How can we disseminate and promote sharing of knowledge between employees to improve our competitiveness?

(We reviewed intranet management issues in Chapter 3.)

Decision 8: Organisational resourcing and capabilities

Once the digital business strategy decisions we have described have been reviewed and selected, decisions need to be made on how the organisation should change in order to achieve the priorities set for digital business.

Different aspects of organisational capability that should be reviewed and changed to improve the ability to deliver digital business strategies are shown in Table 5.11. These include:

- *Strategy process and performance improvement.* The process for selecting, implementing and reviewing digital business initiatives.
- *Structure.* Location of e-commerce and the technological capabilities through the software and hardware infrastructure used and staff skills.
- *Senior management buy-in.* Digital business strategies are transformational, so require senior management advocacy.
- *Marketing integration.* We have stressed the importance of integrated customer and partner communications by using the right channels. Staff members responsible for technology and marketing need to work together more closely to achieve this.
- *Digital marketing focus.* Strategic initiatives will focus on the three core activities of customer acquisition (attracting site visitors), conversion (generating leads and sales) and retention (encouraging continued use of digital channels).
- *Partnering with other organisations.* Some services will be best delivered through partnering with other companies.

Table 5.11

Capability maturity model of e-commerce adoption based on
'Econsultancy' (2008a) research

Level	Strategy process and performance improvement	Structure: Location of e-commerce	Senior management buy-in	Marketing integration	Online marketing focus
1 Unplanned	<i>Limited</i> Online channels not part of business planning process. Web analytics data collected, but unlikely to be reviewed or actioned	<i>Experimentation</i> No clear centralised e-commerce resources in business. Main responsibility typically within IT	<i>Limited</i> No direct involvement in planning and little necessity seen for involvement	<i>Poor integration</i> Some interested marketers may experiment with e-communications tools	<i>Content focus</i> Creation of online brochures and catalogues. Adoption of first style guidelines
2 Diffuse management	<i>Low-level</i> Online referenced in planning, but with limited channel-specific objectives. Some campaign analysis by interested staff	<i>Diffuse</i> Small central e-commerce group or single manager, possibly with steering group controlled by marketing. Many separate web-sites, separate online initiatives, e.g. tools adopted and agencies for search marketing, email marketing. E-commerce funding from brands or businesses may be limited	<i>Aware</i> Management becomes aware of expenditure and potential of online channels	<i>Separate</i> Increased adoption of e-communications tools and growth of separate sites and microsites continues. Media spend still dominantly offline	<i>Traffic focus</i> Increased emphasis on driving visitors to site through pay-per-click search marketing and affiliate marketing
3 Centralised management	<i>Specific</i> Specific channel objectives set. Web analytics capability not integrated to give unified reporting of campaign effectiveness	<i>Centralised</i> Common platform for content management and web analytics. Preferred-supplier list of digital agencies. Centralised, independent e-commerce function, but with some digital-specific responsibilities by country, product or brand	<i>Involved</i> Directly involved in annual review and ensures review structure involving senior managers from marketing, IT, operations and finance	<i>Arm's-length</i> Marketing and e-commerce mainly work together during planning process. Limited review within campaigns. Senior e-commerce team members responsible for encouraging adoption of digital marketing throughout organisation	<i>Conversion and customer experience focus</i> Initiatives for usability, accessibility and revision of content management system (including search engine optimisation) are common at this stage
4 Decentralised operations	<i>Refined</i> Close cooperation between e-commerce and marketing. Targets and performance reviewed monthly. Towards unified reporting. Project debriefs	<i>Decentralised</i> Digital marketing skills more developed in business, with integration of e-commerce into planning and execution at business or country level. Digital retailers commonly adopt direct-channel organisation, of which e-commerce is one channel. Online channel profit and loss accountability sometimes controlled by businesses or brands, but with central budget for continuous digital communications spend (search, affiliates, email marketing, etc.)	<i>Driving Performance</i> Involved in review at least monthly	<i>Partnership</i> Marketing and e-commerce work closely together through year. Digital media spend starts to reflect importance of online channels to business and consumers	<i>Retention focus</i> Initiatives on analysis of customer purchase and response behaviour and implementation of well-defined touch strategies with emphasis on email marketing. Loyalty drivers well known and managed
5 Integrated and optimised	<i>Multichannel process</i> The interactions and financial contribution of different channels are well understood and resourced and improved accordingly	<i>Integrated</i> Majority of digital skills within business and e-commerce team commonly positioned within marketing or direct sales operation. 'Front-end' systems development skills typically retained in e-commerce team	<i>Integral</i> Less frequent in-depth involvement required. Annual planning and six-monthly or quarterly review	<i>Complete</i> Marketing has full complement of digital marketing skills, but calls on specialist resources from agencies or central e-commerce resources as required. Online potential not constrained by traditional budgeting processes	<i>Optimisation focus</i> Initiatives to improve acquisition, conversion and retention according to developments in access platform and customer experience technologies. May use temporary multidisciplinary team to drive performance

Strategy implementation

Strategy implementation

Planning, actions and controls needed to achieve strategic goals.

Strategy implementation includes all tactics used to achieve strategic objectives. The main tactics and actions required are summarised in Figure 5.23. These actions are described in more detail in the remainder of Part 2 and in Part 3, as indicated in the figure.

(Chapter 10 discusses some of the approaches to managing the change associated with digital transformation and how organisations can become more agile).

Failed digital business strategies

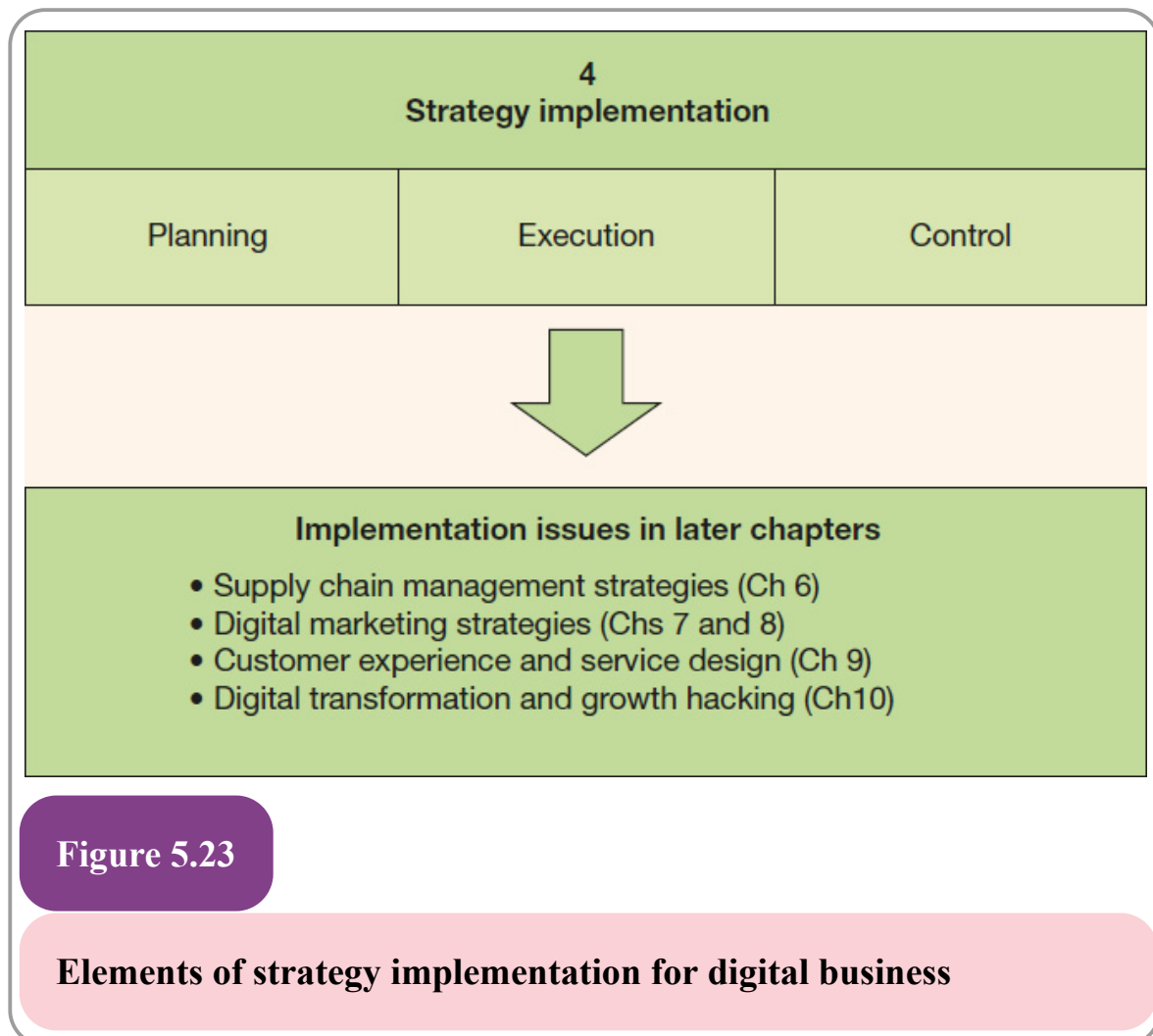
Unsurprisingly, there are few companies that want to have their mistakes detailed in public, but the names of failures are well known: Boo (clothing retail), eToys (retail), CDNow (retail), Peapod (online grocer), VerticalNet (online B2B marketplaces) and Mondus (B2B marketplaces). Many other Internet companies have failed or merged, and many existing companies invested in e-commerce without achieving a satisfactory return on investment.

What, then, can be learnt from these? There are usually more fundamental problems resulting in failure of online companies. Miller (2003) has reviewed these misjudgements from an analysis of many digital failures. He believes that the biggest mistake companies made was to ‘massively overestimate the speed at which the marketplace would adopt dot.com innovations’. Furthermore, it was assumed that new innovations would rapidly displace existing product offerings - for example, online grocery shopping would rapidly replace conventional grocery shopping. Even Tesco.com, one of the most successful online retailers, achieves a low percentage of its retail sales from the Internet - and this has taken several years to achieve. Other reasons mentioned by Miller include:

- *Timing errors*: for example, services for download of digital entertainment that were offered before high-speed broadband Internet

access was widely available. The learning is that insufficient research had been conducted about demand for online products.

- *Lack of creativity*: many services copied existing business models, or other online retail services. The learning is that insufficient research had been conducted about competitor differentiators and capabilities and whether these would be sufficient to encourage consumers to switch providers.



- *Offering free services*: many services were offered free to gain site visitors and registration, and it then became difficult to encourage payment for marginally better services. This is a difficult balance to get right.
- *Over-ambition*: to achieve investor funding among many competing companies, some entrepreneurs exaggerated the demand for their products and the growth.

Beyond these reasons, we can also point to classic mistakes that start-up and existing businesses have always made. These include:

- *Situation analysis* - insufficient rigour in researching demand for new products and competitive forces.
- *Objective setting* - setting unrealistic objectives or, worse still, not setting clear objectives.
- *Strategy definition* - poor decisions about business and revenue models, target markets, product differentiation, pricing, distribution, etc.
- *Implementation* - problems with customer service quality, infrastructure and change management.

Digital business strategy implementation success factors for SMEs

An assessment of success factors for digital business strategy implementation in SMEs has been produced by Jeffcoate *et al.* (2002). They suggest these 11 critical success factors, which can also be usefully applied to larger organisations:

- 1 Content.** The effective presentation of products or services.
- 2 Convenience.** The usability of the website.
- 3 Control.** The extent to which organisations have defined processes that they can manage.
- 4 Interaction.** The means of relationship building with individual customers.
- 5 Community.** The means of relationship building with groups of like-minded individuals or organisations (see the section on 'Platform strategy' near the start of this chapter).
- 6 Price sensitivity.** The sensitivity of a product or service to price competition online.
- 7 Brand image.** The ability to build up a credible brand name for e-commerce.
- 8 Commitment.** A strong motivation for using the Internet and the will to innovate.
- 9 Partnership.** The extent to which an e-commerce venture uses partnerships (value chain relationships) to leverage Internet presence and expand its business.

10 Process improvement. The extent to which companies can change and automate business processes.

11 Integration. The provision of links between underlying IT systems in support of partnership and process improvement.

Case study 5.4 is a good example of how one large digital business failed. It highlights some of the key mistakes made and is a useful reference to understand particular aspects that can cause a business to cease trading.

5.4

Boo hoo - learning from the largest European dot.com failure

Context

'Unless we raise \$20 million by midnight, Boo.com is dead.' So said Boo.com CEO Ernst Malmsten on 18 May 2000. Half the investment was raised, but this was too little, too late, and at midnight, less than a year after its launch, Boo.com closed. The headlines the next day focussed on Boo.com's collapse, saying it was Europe's first big internet casualty.

The Boo.com case remains a valuable case study for all types of business, since it doesn't only illustrate the challenges of managing e-commerce for a clothes retailer, but rather highlights failings in e-commerce strategy and management that can be made in any type of organisation.

Company background

Boo.com was founded in 1998 by three Swedish entrepreneurs, Ernst Malmsten, Kajsa Leander and Patrik Hedelin. Malmsten and Leander had previous business experience in publishing where they created a specialist publisher and had also created an online bookstore, bokus.com, which in 1997 became the world's third-largest book e-retailer behind Amazon and Barnes & Noble. They became millionaires when they sold the company in 1998. At Boo.com, they were joined by Patrik Hedelin who was also the financial director at bokus, and at the time they were perceived as experienced European Internet entrepreneurs by the investors who backed them in their new venture.

Company vision

The vision for Boo.com was for it to become the world's first online global sports retail site. It would be a European brand, but with a global appeal.

Think of it as a sports and fashion retail version of Amazon. At launch it would open its virtual doors in both Europe and America with a view to 'amazoning the sector'. Note, though, that Amazon did not launch simultaneously in all markets. Rather it became established in the US before providing local European distribution.

The Boo.com brand name

According to Malmsten *et al.* (2001), the boo brand name originated from film star Bo Derek, best known for her role in the movie *10*. The domain name 'bo.com' was unavailable, but adding an 'o', they managed to procure the domain 'Boo.com' for \$2,500 from a domain name dealer. According to Rob Talbot, director of marketing for Boo.com, Boo was 'looking for a name that was easy to spell across all the different countries and easy to remember ... something that didn't have a particular meaning'.

Target market

The audience targeted by Boo.com can be characterised as 'young, well-off and fashion-conscious' 18-to-24-year-olds. The concept was that, globally, the target market would be interested in sports and fashion brands stocked by Boo.com.

The market for clothing in this area was viewed as very large, so the thought was that capture of only a small part of this market was required for Boo.com to be successful. The view at this time on the scale of this market and the basis for success is indicated by *New Media Age* (1999):

The \$60b USD industry is dominated by Gen X'ers who are online and according to market research in need of knowing what is in, what is not and a way to receive such goods quickly. If Boo.com becomes known as the place to keep up with fashion and can supply the latest trends then there is no doubt that there is a market, a highly profitable one at that, for profits to grow from.

The growth in market was also supported by retail analysts, with Verdict predicting online shopping in the United Kingdom to grow from £600 million in 1999 to £12.5 billion in 2005.

However, *New Media Age* (2005) does note some reservations about this market, saying:

Clothes and trainers have a high rate of return in the mail order/home shopping world. Twenty year olds may be online and may have disposable income but they are not the main market associated

with mail order. To date there is no one else doing anything similar to Boo.com.

The Boo.com proposition

In their proposal to investors, the company stated that ‘their business idea is to become the world-leading Internet-based retailer of prestigious brand leisure and sportswear names’. They listed brands such as Polo, Ralph Lauren, Tommy Hilfiger, Nike, Fila, Lacoste and Adidas. The proposition involved sports and fashion goods alongside each other. The thinking was that sports clothing has more standardised sizes with less need for a precise fit than designer clothing.

The owners of Boo.com wanted to develop an easy-to-use experience that re-created the offline shopping experience as far as possible. As part of the branding strategy, an idea was developed of a virtual salesperson, initially named Jenny and later Miss Boo. She would guide users through the site and give helpful tips. When selecting products, users could drag them onto models, zoom in and rotate them in 3D to visualise them from different angles. The technology to achieve this was built from scratch, along with the stock control and distribution software. A large investment was required in technology, with several suppliers being replaced before launch, which was six months later than promised to investors largely due to problems with implementing the technology.

Clothing the mannequin and populating the catalogue was also an expensive challenge. For 2000, about \$6 million was spent on content concerning spring/summer fashion wear. It cost \$200 to photograph each product, representing a monthly cost of more than \$500,000.

Although the user experience of Boo.com was often criticised for its speed, it does seem to have had that wow factor that influenced investors. Analyst Nik Margolis, writing in *New Media Age* (1999), illustrates this by saying:

What I saw at Boo.com is simply the most clever web experience I have seen in quite a while. The presentation of products and content are both imaginative and offer an experience. Sure everything loads up fast in an office but I was assured by those at Boo.com that they will keep to a limit of 8 seconds for a page to download. Eight seconds is not great but the question is will it be worth waiting for?

Of course, today, the majority of European users have broadband, but in the late 1990s the majority were on dial-up and had to download the software to view products.

Communicating the Boo.com proposition

Early plans referred to extensive ‘high-impact’ marketing campaigns on TV and in newspapers. Public relations were important in leveraging the novelty of the concept and human side of the business - Leander was previously a professional model and had formerly been Malmsten’s partner. This PR was initially focused within the fashion and sportswear trade and then rolled out to publications likely to be read by the target audience. The success of this PR initiative can be judged by the 350,000 email pre-registrations who wanted to be notified of launch. For the launch, Malmsten *et al.* (2001) explains that ‘with a marketing and PR spend of only \$22.4 million we had managed to create a worldwide brand’.

To help create the values of the Boo.com brand, *Boom*, a lavish online fashion magazine, was created, which required substantial staff for different language versions. The magazine wasn’t a catalogue that directly supported sales, rather it was a publishing venture competing with established fashion titles. For existing customers, the ‘Look Book’, a 44-page print catalogue, was produced that showcased different products each month.

The challenges of building a global brand in months

The challenges of creating a global brand in months are illustrated well by Malmsten *et al.* (2001). After an initial round of funding, including investment from J.P.Morgan, LMVH Investment and the Benetton family, which generated around \$9 million, the founders planned towards launch by identifying thousands of individual tasks, many of which needed to be completed by staff yet to be recruited. These tasks were divided into 27 areas of responsibility familiar to many organisations, including office infrastructure, logistics, product information, pricing, front-end applications, call centres, packaging, suppliers, designing logos, advertising/PR, legal issues and recruitment. At its zenith, Boo.com had 350 staff, with over 100 in London and new offices in Munich, New York, Paris and Stockholm. Initially Boo. com was available in UK English, US English, German, Swedish, Danish and Finnish, with localised versions for France, Spain and Italy added after launch. The website was tailored for individual countries using the local language and currency and also local prices. Orders were fulfilled and shipped out of one of two warehouses: one in Louisville, Kentucky and the other in Cologne, Germany. This side of the business was relatively successful, with on-time delivery rates approaching 100% achieved.

Boo possessed classic channel conflicts. Initially, it was difficult getting fashion and sports brands to offer their products through Boo.com. Manufacturers already had a well-established distribution network through large high-street sports and fashion retailers and many smaller retailers. If clothing brands permitted Boo.com to sell their clothes online at discounted prices, then this would conflict with retailers' interests and would also portray the brands in a negative light if their goods were in an online 'bargain bucket'. A further pricing issue is where local or zone pricing in different markets exists; for example lower prices often exist in the US than Europe and there are variations in different European countries.

Making the business case to investors

Today, it seems incredible that investors were confident enough to invest \$130 million in the company and, at the high point, the company was valued at \$390 million. Yet much of this investment was based on the vision of the founders to be a global brand and achieve 'first-mover advantage'. Although there were naturally revenue projections, these were not always based on an accurate detailed analysis of market potential. Immediately before launch, Malmsten *et al.* (2001) explain, a meeting was held with would-be investor Pequot Capital, represented by Larry Lenihan who had made successful investments in AOL and Yahoo! The Boo.com management team were able to provide revenue forecasts, but unable to answer fundamental questions for modelling the potential of the business, such as 'How many visitors are you aiming for? What kind of conversion rate are you aiming for? How much does each customer have to spend? What's your customer acquisition cost? And what's your payback time on customer acquisition cost?', When these figures were obtained, the analyst found them to be 'far-fetched' and reputedly ended the meeting with the words: 'I'm not interested. Sorry for my bluntness, but I think you're going to be out of business by Christmas'.

When the site launched on 3 November 1999, around 50,000 unique visitors were achieved on the first day, but only 4 in 1,000 placed orders (a 0.25% conversion rate). This shows the importance of modelling conversion rates accurately. This low conversion rate was also symptomatic of problems with technology. It also gave rise to negative PR. One reviewer explained how he waited: 'Eighty-one minutes to pay too much money for a pair of shoes that I still have to wait a week to get'. These rates did improve as problems were ironed out - by the end of the week 228,848 visits had resulted in 609 orders with a value of \$64,000. In the six weeks from launch, sales of \$353,000 were made and conversion rates had more than doubled to 0.98% before Christmas. However, a re-launch was required within six months to cut download times and to introduce a 'low-bandwidth version'

for users using dial-up connections. This led to conversion rates of nearly 3% on sales promotion. Sales results were disappointing in some regions, with US sales accounting for 20% compared to the planned 40%.

The management team felt that further substantial investment was required to grow the business from a presence in 18 countries and 22 brands in November to 31 countries and 40 brands the following spring. Turnover was forecast to rise from \$100 million in 2000/01 to \$1,350 million by 2003/04, which would be driven by \$102.3 million in marketing in 2003/04. Profit was forecast to be \$51.9 million by 2003/4.

The end of Boo.com

The end of Boo.com came on 18 May 2000, when investor funds could not be raised to meet the spiralling marketing, technology and wage bills.

Source: Prepared by Dave Chaffey from original sources, including Malmsten *et al.* (2001) and *New Media Age* (1999).

Questions

- 1 Which strategic marketing assumptions and decisions arguably made Boo.com's failure inevitable? Contrast these with other dot.com-era survivors that are still in business, such as lastminute.com, Egg.com and Firebox.com.
- 2 Using the framework of the marketing mix, appraise the marketing tactics of Boo.com in the areas of Product, Pricing, Place, Promotion, Process, People and Physical evidence.
- 3 In many ways, the visions of Boo's founders were 'ideas before their time'. Give examples of e-retail techniques that Boo adopted and used to create an engaging online customer experience, which are now becoming commonplace.

Focus on **Aligning and
impacting digital business**

strategies

An essential part of any digital business strategy is consideration of how information systems strategy supports change. The importance to digital business success of utilising information systems to manage information is highlighted by Willcocks and Plant (2000), who found in a study of 58 major corporations in the US, Europe and Australasia that the leading companies were astute at *distinguishing the contributions of information and technology, and considering them separately*. They make the point that competitive advantage *comes not from technology, but from how information is collected stored, analysed and applied*.

An established aspect of information systems strategy development is the focus of IS strategy on business impact or alignment. In the **business-alignment** approach, a top-down approach is used to review how information systems can be used to directly support a defined business strategy. Referring to digital business strategy, Pant and Ravichandran (2001) say:

Alignment models focus on aligning the information system's plans and priorities with organizational strategy and business goals.

The importance of alignment is stressed in the digital channel strategic initiative business-case prioritisation investment matrix (Figure 5.8). Linking information systems to objectives and critical success factors (CSF) (Table 5.6) is one way of using the alignment approach. Another is the use of business systems planning methodology, which focuses on deriving data and applications needs by analysis of existing business processes.

Business-alignment IS strategy

The IS strategy is generated from the business strategy through techniques such as CSF analysis.

Business-impacting IS strategy

IS strategy analyses opportunities for new technologies and processes to favourably impact the business strategy.

In the **business-impacting** approach, a bottom-up approach is used to determine whether there are new opportunities from deploying information systems that may impact positively on a business strategy. New hardware and software technologies are monitored by the IS manager and other managers to evaluate whether they can achieve competitive advantage. Pant and Ravichandran (2001) say:

impact models focus on the potential impact of information technology on organizational tasks and processes and use this as a basis to identify opportunities for deploying information systems.

The impacting approach may also involve redesigning business processes to integrate with partners. Sultan and Rohm (2004), based on a study of three organisations, identify different forms of aligning Internet strategies with business goals, with their framework identifying these strategic objectives:

- *Cost reduction and value chain efficiencies.* For example, B2B supplier AB Dick used the Internet to sell printer supplies to reduce service calls.
- *Revenue generation.* Reebok uses the Internet for direct licensed sales of products such as treadmills that do not have strong distribution deals.
- *Channel partnership.* Partnering with distributors using extranets.
- *Communications and branding.* Car company Toyota developed the Toyota Owners platform (www.toyota.com/owners) to foster close relationships with customers.

Value chain analysis (Chapter 6) can be used for the impact approach. For example, this might identify the need for e-procurement, which can be used as part of an effort to reduce costs and increase efficiency as part of business strategy. This technique has merit, in that it not only considers internal use of information systems (IS), but also how they can be used to integrate with external organisations such as suppliers, perhaps through innovative methods such as marketplace exchanges.

The impact and alignment techniques need not be mutually exclusive. During initial development of a digital business strategy, a business-alignment approach can be applied to ensure that IS strategy supports digital business strategy. A business-impacting approach is also useful to see which new opportunities IS produce. For instance, managers could consider how a relatively new technology such as workflow management software can be used to improve efficiency and customer service.

Perhaps the ultimate expression of using IS to impact business performance is through business process re-engineering (considered in Chapter 9).

The application of an impacting or aligning strategy with respect to IS and business strategy is dependent on the importance attached to IS within an organisation.

Elements of information systems (IS) strategy

Ward and Griffiths (1996) suggest that an IS strategy plan contains three elements:

- 1 Business information strategy.** How information will support the business. This will include applications to manage particular types of business.
- 2 IS functionality strategy.** Which services are provided?
- 3 IS/IT strategy.** Providing a suitable technological, applications and process infrastructure (see Chapter 3).

The advent of digital business clearly increases the strategic importance of information systems resources of an organisation. However, developing an IS strategy to achieve digital business goals is complex because it can be viewed from many different perspectives (Table 5.12). This table is essentially a checklist of different aspects of IS strategy that have to be implemented by an IS manager in the digital business. Many of these aspects are solutions to business and technical problems that are described in Parts 2 and 3 of this book, as summarised in Table 5.12. We will now consider one of the most important issues facing IS managers in more detail.

Table 5.12

Different elements of IS strategy

IS strategy element	What needs to be specified	Approaches to aid selected tactics (applications)	Specification
1 Business contribution perspective (Chapter 5)	How applications achieve digital business objectives	Impact and alignment Portfolio analysis Investment types	Implementation of key systems
2 Information management strategy (Chapter 10)	Strategy for integrated information and knowledge management	Audit information management and knowledge management requirements by internal and external resources Security audit	Committee to standardise company information Enterprise resource planning, knowledge management, data warehousing, intranet and extranet projects
3 Applications perspective (Chapters 3 and 10)	Priorities for applications acquisition	Portfolio analysis investment appraisal	As above
4 Process perspective (supply chain perspective to digital business) (Chapter 6)	How do applications and infrastructure support processes and value chain activities? Are new processes required?	Process mapping and analysis Value chain analysis	Enterprise resource planning integrated with transactional e-commerce
5 Departmental (functional) perspective (Chapter 3)	Which applications support different departments?	Portfolio analysis	Standardisation of applications
6 Infrastructure perspective (Chapter 3)	Network capacity and service levels	Cost/benefit feasibility study of applications	Managing total cost of ownership Outsourcing
7 Communications perspective (Chapter 8)	Using technology to improve process efficiency and customer service quality	Audit communications volume and complexity Prioritise	Email, groupware and workflow systems Knowledge management
8 User services perspective (Chapter 8)	Helpdesk services for internal and external system users	Audit service levels, impact on business and then prioritise	Outsourcing Enquiry management systems
9 Customer and partner relationship management perspective (Chapters 6 and 8)	Investment in systems for managing customer and partner relationships	Customer relationship management and partner relationship management systems Use of standards for integration: EDI and XML	CRM facilities on website Integration
10 Resourcing perspective (Chapter 9)	How are relevant IS skills acquired and developed?	Skills audit and industry comparison End-user computing	Technology partners Outsourcing Recruitment tactics E-learning and skills transfer
11 Change management perspective (Chapter 10)	How organisational culture and structure change to achieve digital business are managed	Apply existing change management approaches	Risk management Project management
12 Internal integration perspective (Chapters 3 and 6)	Overall applications architecture across the value chain	Analyse information access constraints, rekeying	Enterprise resource planning
13 External integration perspective (Chapters 3 and 9)	How are links between internal applications and partners managed?	Analyse ease of setting up links, prioritise	Outsourcing to systems integrator Standardisation through ERP Integration of IS systems with buy- and sell-side intermediaries
14 Legal constraints approach (Chapter 4)	How do we ensure company stays within international legal and ethical constraints?	Seek specialist advice	Specialist lawyers and privacy statements

Debate 5.2

The influence of IS managers

'Board-level representation for IS managers/chief information officers (CIOs) is essential in the digital business era',

Investment appraisal

In the digital business context, investment appraisal can refer to:

- 1 Overall levels of spending on information systems to support digital business.
- 2 Decisions about which business applications to invest in (portfolio analysis).
- 3 Assessment of the cost/benefit for individual applications.

Decisions about which business applications to invest in

A portfolio analysis such as that illustrated for a B2B company in Figure 5.8 can also be used to decide priorities for application by selecting those that fall within the strategic and turnaround categories for further investment. Relative priorities and the amount of investment in different applications can also be assisted if priorities for digital business objectives have been assigned, as is the case with Table 5.4.

Traditionally, investments in information systems have been categorised according to their importance and contribution to the organisation. For example, Robson (1997) describes four types of business information systems investment:

- 1 **Operational value investment.** These investments are in systems that are key to the day-to-day running of the organisation. Such systems are often valuable in increasing efficiency or reducing costs, but they do not contribute directly to the performance of the business.
- 2 **Strategic value investment.** Strategic investments will enhance the performance of a business and should help in developing revenue. A customer relationship management system would increase customer loyalty, resulting in additional sales from existing customers.
- 3 **Threshold investment.** These are investments in BIS that a company must make to operate within a business. They may have a negative return on investment but are needed for competitive survival.

- 4 Infrastructure investment.** These can be substantial investments that result in gain in the medium-to-long term. Typically, this includes investment in internal networks, digital links and new hardware.

Companies can prioritise potential information systems investments in the above categories according to their impact on the business. A similar approach is to specify the applications portfolio described in the section on situation analysis. It is evident that priority should be given to applications that fall into the strategic and high-potential categories in Figure 5.8. Now complete Activity 5.4.

Activity 5.4

Digital business investment types

Purpose

To gain an appreciation of how to prioritise IS investments.

Questions

- 1 Referring to the four investment categories of Robson (1997), discuss in groups which category the following investments would fit into:
 - (a) E-procurement system.
 - (b) Transactional e-commerce website.
 - (c) Contract with ISP to host web server and provide Internet connectivity for staff.
 - (d) Workflow system to manage complex customer orders (e.g. processing orders).
 - (e) Upgrading a company network.
- 2 Assume you had sufficient funds to invest in only two of these options. Which two would you choose?

Productivity paradox

Research results indicating a poor correlation between organisational investment in information systems and organisational performance measured by return on equity.

The productivity paradox

All discussion of investment appraisals in information systems should acknowledge the existence of the **productivity paradox**. Studies in the late 1980s and 1990s summarised by Brynjolfsson (1993) and Strassman (1997) suggested that there is little or no correlation between a company's investment in information systems and its business performance measured in terms of profitability or stock returns. Strassman's work, based on a study of 468 major North American and European firms, showed a random relationship between IT spending per employee and return on equity.

To the present day, there has been much dispute about the reality of the productivity paradox. Carr (2003) suggested that information technology has become commoditised to such an extent that it no longer delivers a competitive advantage. Carr says:

What makes a resource truly strategic - what gives it the capacity to be the basis for a sustained competitive advantage is not ubiquity, but scarcity. You only gain an edge over rivals by having something that they can't have or can't do. By now the core functions of IT - data storage, data processing and data transport have become available and affordable to all. .. They are becoming costs of doing business that must be paid by all but provide distinction to none.

Carr's argument is consistent with the productivity paradox concept, since although IT investments may help in increasing productivity, this does not necessarily yield a competitive advantage if all competitors are active in making similar IT investments.

Today, most authors, such as Brynjolfsson and Hitt (1998) and McAfee and Brynjolfsson (2008), refute the productivity paradox and conclude that it results from mismeasurement, the lag occurring between initial investment and payback and the mismanagement of information systems projects. McAfee and Brynjolfsson (2008) suggest that to use digital technology to support competition, the mantra should be:

'Deploy, innovate, and propagate': First, deploy a consistent technology platform. Then separate yourself from the pack by coming up with better ways of working. Finally, use the platform to propagate these business innovations widely and reliably. In this regard, deploying IT serves two distinct roles - as a catalyst for innovative ideas and as an engine for delivering them.

More recent detailed studies, such as that by Sircar *et al.* (2000), confirm the findings of Brynjolfsson and Hitt (1998). They state that:

Both IT and corporate investments have a strong positive relationship with sales, assets, and equity, but not with net income. Spending on IS staff and staff training is positively correlated with firm performance, even more so than computer capital.

In conclusion they state:

The value of IS staff and staff training was also quite apparent and exceeded that of computer capital. This confirms the positions of several authors, that the effective use of IT is far more important than merely spending on IT.

The disproportionate allocation of spend to implementation was highlighted by the *Financial Times* (2003), which said:

Prof Brynjolfsson and colleagues found that of the \$20m total cost of an enterprise resource planning (ERP) system, only about \$3m goes to the software supplier and perhaps \$1m towards the acquisition of new computers. The \$16m balance is spent on business process redesign, external consultants, training and managerial time. The ratio between IT investment and this 'supporting' expenditure varies across projects and companies. But, over a range of IT projects, Prof Brynjolfsson believes that a 10:1 ratio is about right. Returns on these investments commonly take 5 years to materialise.

The 10:1 ratio between total investment in new information management practices and IT also shows that applying technology is only a relatively small part of achieving returns -developing the right approaches to process innovation, business models and change management are more important, and arguably more difficult and less easy to replicate. Some leading companies have managed to align investment in digital business with their business strategies to achieve these unique gains.

For example, Dell has used a range of IT-enabled techniques mentioned earlier in the chapter such as online ordering, the Dell Premier extranet for large purchasers, vendor-managed inventory, adaptive supply chains and build-to-order to gain competitive advantage.

Research into the productivity paradox highlights the importance of considering the information, people and technology resources together when planning for digital business strategy and implementation. It also suggests that digital business contributes to productivity gains only when combined with investments in process redesign, organisational change management and innovation.

Summary

- 1 Digital business strategy process models tend to share the following characteristics:
 - Continuous internal and external environmental scanning or analysis is required.
 - Clear statement of vision and objectives is required.
 - Strategy development can be broken down into formulation and selection, a key emphasis being assessing the differential benefits provided by digital channels for company and stakeholders and then selecting the most appropriate channels for different business activities and partners.
 - After strategy development, enactment of the strategy occurs as strategy implementation.
 - Control is required to detect problems and adjust the strategy accordingly.
 - They must be responsive to changes in the marketplace.
- 2 In this chapter, a four-stage model is used as a framework for digital business strategy development. Key digital business issues within this framework are outlined below.
- 3 Strategic analysis. Continuous scanning of the micro- and macro-environment of an organisation is required, with particular emphasis on the changing needs of customers, actions and business models of competitors, and opportunities afforded by new technologies.
- 4 Strategic objectives. Organisations must have a clear vision on whether digital channels will complement or replace other communication channels, and their capacity for change. Clear objectives must be defined and, in particular, goals for the online revenue contribution should be set.
- 5 Strategy definition. Six key elements of digital business strategy that were reviewed are:
 - Digital business priorities - significance to organisation (replace or complement) and emphasis on buy-side or sell-side.
 - Form of restructuring required.

- Business and revenue models.
- Marketplace restructuring.
- Market and product development strategies.
- Positioning and differentiation strategies.

6 Strategy implementation. Detailed in the remainder of Part 2 and in Part 3.

7 Information systems strategy should use a combination of impact and alignment techniques to govern digital business strategy. IS strategy can take a number of perspectives, of which those that focus on information or knowledge management and technological and applications infrastructure are most important.

Exercises

Self-assessment questions

- 1** What are the key characteristics of a digital business strategy model?
- 2** Select a retailer or manufacturer of your choice and describe what the main elements of its situation analysis should comprise.
- 3** For the same retailer or manufacturer, suggest different methods and metrics for defining digital business objectives.
- 4** For the same retailer or manufacturer, assess different strategic options to adopt for digital business.

Essay and discussion questions

- 1** Evaluate the range of restructuring options for an existing ‘bricks-and-mortar’ organisation to move to ‘bricks-and-clicks’ or ‘clicks-only’, contributing a higher online revenue.
- 2** Explain the main strategy definition options or decisions available to an organisation intending to become a digital business.
- 3** Between 1994 and 1999 Amazon lost more than \$500 million, but at the end of this period its valuation was still more than \$20 billion. At the start of 2000, Amazon.com underwent its first round of job cuts,

sacking 150 staff or 2% of its worldwide workforce. Later in 2000, its valuation dropped to less than half.

Write an essay on the strategy of Amazon.com, exploring its history, different criteria for success and its future. See the *Wired Magazine* archive for profiles of Amazon (www.wired.com).

- 4 Analyse the reasons for the failure of Boo.com. Research and assess the sustain-ability of the new Boohoo.com business model.
- 5 What can existing businesses learn from the business approaches of digital organisations?
- 6 What are the similarities and differences between the concepts of business process re-engineering (BPR) and digital business? Will the digital business concept face the same fate as BPR?
- 7 Discuss the benefits and issues of platform strategies, in the context of an organisation of your choice.
- 8 Compare and contrast different approaches to developing digital business strategy.

Examination questions

- 1 Define the main elements of a digital business strategy.
- 2 You are the incumbent digital business manager for a domestic airline. What process would you use to create objectives for the organisation? Suggest three typical objectives and how you would measure them.
- 3 Explain the productivity paradox and its implications for managers.
- 4 What choices do executives have for the scope and timeframe of implementing digital business?

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Web links

- Bain & Company (www.bain.com/publications/capability-insights/digital-strategy.aspx)** Articles and research that covers B2B digital strategy, digital disruption and digital commerce.
- E-commerce Times (www.ecommercetimes.com)** An online newspaper specific to e-commerce developments.
- Econsultancy (www.econsultancy.com)** Digital marketing business portal with regular news, in-depth research and case studies.
- Knowledge@Wharton (<http://knowledge.wharton.upenn.edu>)**
Knowledge@Wharton is an online resource that offers the latest business insights, information and research from a variety of sources.
- McKinseyQuarterly (www.mckinsey.com/insights)** Articles regularly cover digital business strategy.
- MIT Center for Digital Business (<http://digital.mit.edu>)** Based in the MIT Sloan School of Management. Resources and papers from leading researchers into digital business including Professor Erik Brynjolfsson (<http://digital.mit.edu/erik>).
- Mohansawney.com (www.mohansawhney.com/)** Case studies and White Papers from one of the leading US authorities on e-commerce.

Smart Insights.com (www.smartinsights.com/digital-marketing-strategy) Updates by the author about all aspects of digital business, including strategy.

6 Supply chain and demand

Chapter at a glance

Main topics

- What is supply chain management and e-procurement?
- Options for restructuring the supply chain
- Using digital business to restructure the supply chain
- Supply chain management implementation
- Goal-setting and performance management for eSCM
- What is e-procurement?
- Drivers of e-procurement
- Barriers and risks of e-procurement adoption
- Implementing e-procurement
- The future of e-procurement

Focus on...

- The value chain
- Estimating e-procurement costs
- B2B marketplaces

Case studies

- 6.1** Fast-fashion retailer Zara uses its supply chain to achieve competitive advantage
- 6.2** Shell Chemicals redefines its customers' supply chains
- 6.3** Argos uses e-supply chain management to improve customer convenience
- 6.4** RFID - keeping track starts its move to a faster track
- 6.5** Honeywell improves efficiency through SCM and e-procurement

Web support

The following additional case studies are available at
www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Identify the main elements of supply chain management and e-procurement
- Assess the potential of information systems to support supply chain management and e-procurement
- Analyse procurement methods to evaluate cost savings

Management issues

The issues raised in this chapter for managers to consider are:

- Which technologies should we deploy for supply chain management e-procurement and how should they be prioritised?
- Which elements of the supply chain should be managed within and beyond the organisation and how can technology be used to facilitate this?
- Which method(s) of e-procurement should we adopt?
- What are the practical issues with online supply chain management and e-procurement?

Links to other chapters

The main related chapters are:

- *Chapter 1* introduces the supply chain as a key element of digital business

Introduction

Supply chain management is essentially the optimisation of material flows and associated information flows involved with an organisation's operations. To manage these flows, digital business applications are today essential. Supply chain management is presented as the premier application of digital business in Part 2 of this text, since it is a unifying concept that incorporates both e-procurement and sell-side e-commerce. By applying information systems, companies can enhance or radically improve many aspects of the supply chain. In the context of Figure 1.4, which was used to introduce the concept of digital business, supply chain management can be enhanced through buy-side e-commerce, internal communications, relationships with partners and sell-side e-commerce. Digital business technologies enable information flows to be redefined to facilitate the sharing of information between partners, often at lower costs than were previously possible.

Supply chain management capabilities are best known for their importance in delivering profitability. For example, AMR (2008) reported that Nike, a company best known for its marketing, used improvements to its supply chain to increase operating margins of between 10 and 15% in each of the preceding four years. But for Nike and other companies that constantly innovate to renew products, selecting the right technology is important to 'orchestrate the constant collaboration between supply, demand and product management groups that brings profitable new products to market'. Managing distribution and returns from e-commerce sites is a further challenge. Clear Returns estimated that returns cost UK retailers £60 billion a year, of which £20bn is generated by items bought over the Internet. A recent report in the *Financial Times* (Ram, 2016) said that a culture of returning is becoming 'more established' in the UK and Germany, and online fashion retailer ASOS has found that around 70% of items ordered in Germany are returned, compared with 25% in the UK for women's fashion. This is costly for retailers; according to Iain Prince, supply chain director at KPMG, it can cost double the amount for a product to be returned into the supply chain as it does to deliver it. For example, if a customer purchases a coat online, to pick and deliver the order costs between £3 and £10 but it could cost double or treble that to be processed on the way back (Ram, 2016).

The importance of supply chain management capabilities to customer satisfaction and therefore repeat business for a digital business is highlighted by Case study 6.1.



Fashion retailer Zara uses its supply chain to achieve competitive advantage

Amancio Ortega founded Zara in Spain in 1975 and since then the fast-fashion chain has grown to 1,770 stores in 86 countries around the world. In 2012, Zara reported a sales income of \$13.6 billion. It is widely reported that the retailer's success is down to its supply chain.

The company produces around 450 million items a year and regular, small-batch deliveries happen twice a week to all of its stores around the world. The company adapts couture designs, manufactures, distributes and retails clothes within just two weeks of the original design first appearing on the catwalk. It owns its supply chain and competes on its speed to market.

The company operates a 'just in time' production process - it keeps a significant amount of its production in-house and makes sure its own factories reserve 85% of their capacity for in-season adjustments. Zara usually relies on fabric sourcing, cutting and sewing facilities near to its design headquarters in Spain - i.e. in 'proximity markets' such as Spain, Portugal, Turkey and Morocco. Although the wage costs are higher than using the facilities of developing world counterparts, the turnaround time is much faster.

Interestingly, Zara only commits 15 to 25% of a season's line six months in advance. It locks in 50-60% of its line by the start of the season, which means that up to 50% of its clothes are designed and manufactured in the middle of the season.

Therefore, if a certain style or design becomes a new 'must-have', designers can produce new styles that are fast-tracked to stores while the trend is still going strong. Internally, store managers provide customer feedback on what shoppers like, dislike and what they are looking for. This information is then funnelled back to Zara's designers who instantly begin sketching.



Figure 6.1

Zara's headquarters in Spain

Source: Xurxo Lobato/Getty Images

The company also has extra capacity to respond to demand; it typically operates 4.5 days a week at full capacity, leaving some flexibility for extra shifts and temporary labour when needed.

This means that the company provides frequent shipments and a higher number of customer sales, allowing the business to sell more items at full price. Zara sells around 85% of its clothes at full price, compared to the industry average of 60-70%. Unsold items account for less than 10% of its stock, when the industry average is 17-20%.

When it comes to supply chain management, the company operates a very lean system; there is very little excess inventory/dead stock in Zara's warehouse. Inventory optimisation models are used to determine how much should be delivered to every one of its retail stores twice a week. Rapid movement of new merchandise through the stores and knowledge that some of the items may not be replenished is another incentive for customers to buy

on the spot. This approach also ensures there is no build-up of unpopular stock.

Zara's approach of quick in-season turnaround, from production facilities close to its distribution headquarters in Spain, means that if it chases the latest trend and it does not sell well, the company loses very little (i.e. it's a failed experiment and there have time to try a different style). This agile approach is very similar to the marketing concept of 'growth hacking' (which we cover in Chapter 10).

Like the Boots example (see Mini case study 6.1, p. 255), the centralisation of Zara's logistics helps create an environment whereby decisions are made in a very coordinated manner. The retailer also sticks to a predictable and fast order-fulfilment rhythm - it sends out two orders a week on specific days and times. Clothes are also pre-labelled and priced, based on their destination. This predictability also extends to Zara customers, who know when to visit stores for fresh new garments.

Zara's strong distribution network means that the company can deliver goods to its European stores within 24 hours and to American and Asian outlets in less than 40 hours. According to Professor Nelsen Fraiman, Zara can get a product out from concept to store in just 15 days -to put this in context, the industry standard is six months!

Questions

- 1 Explain how Zara uses supply chain management to gain competitive advantage.
- 2 Zara is obviously a large global business - what key success factors from its SCM approach can cross over to smaller operations?

Sources: www.tradegecko.com/blog/zara-supply-chain-its-secret-to-retail-success
www.telegraph.co.uk/finance/newsbysector/retailandconsumer/11172502/How-Inditex-became-the-worlds-biggest-fashion-retailer.html
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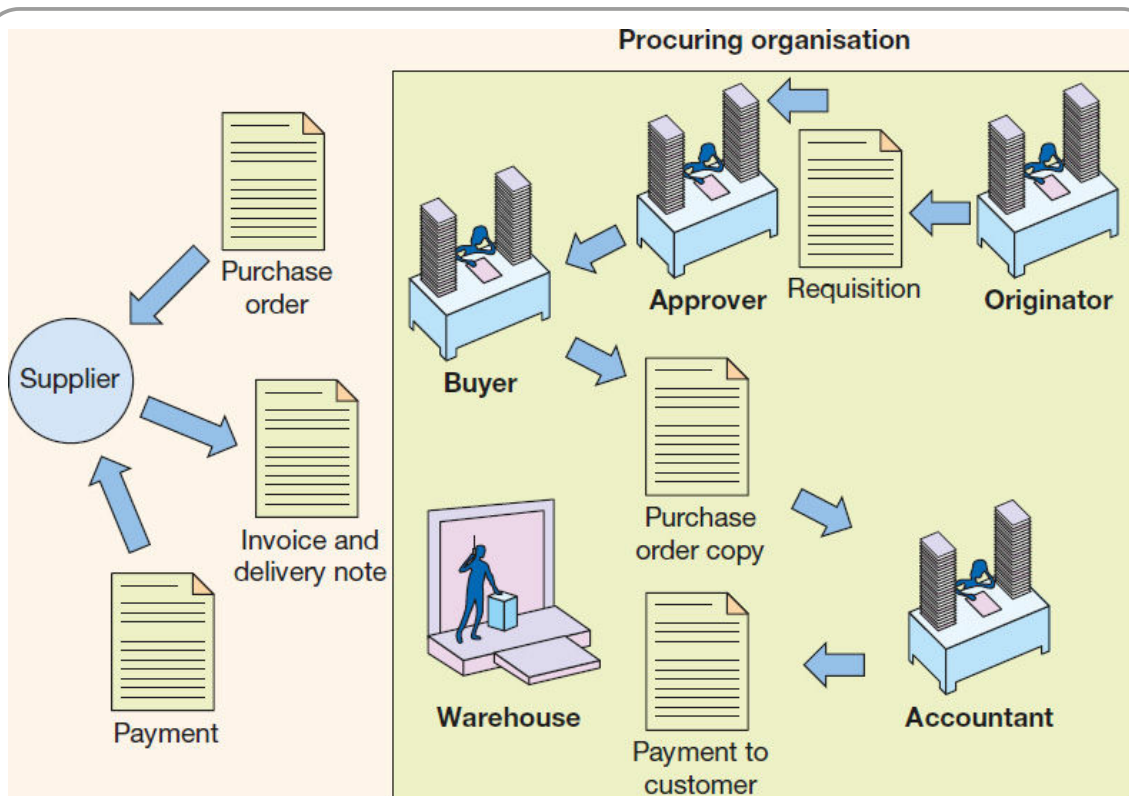


Figure 6.2

Key procurement activities within an organisation

This chapter also covers e-procurement, which has become a strategic issue for digital businesses because it can help achieve significant savings, and other benefits, that directly impact on the customer.

It is worth noting that the terms ‘purchasing’ and ‘procurement’ are sometimes used interchangeably, but as Kalakota and Robinson (2000) point out, ‘procurement’ generally has a broader meaning. ‘Procurement’ refers to all activities involved with obtaining items from a supplier; this includes purchasing, but also inbound logistics such as transportation, goods-in and warehousing before the item is used. The use of e-procurement is sometimes considered as part of ‘strategic sourcing’, where it is used to deliver commercially significant benefits to the company.

The key procurement activities and associated information flows within an organisation are shown in Figure 6.2. In this chapter we focus on these activities, which include searching for and specification of product by the end-user, purchasing by the buyer, payment by an account and receipt and distribution of goods within a warehouse.

E-procurement should be directed at improving performance for each of the ‘five rights of purchasing’ (Baily *et al.*, 1994), which means sourcing items:

- 1 at the right price
- 2 delivered at the right time
- 3 of the right quality
- 4 of the right quantity
- 5 from the right source.

Box 6.1 gives an additional perspective on e-purchasing.

E-procurement is not new; there have been many attempts to automate the process of procurement for the buyer using **electronic procurement systems (EPS)**, workflow systems and links with suppliers through EDI (Chapter 3). These involved online entry, authorisation and placing of orders using a combination of data entry forms, scanned documents and email-based workflow. It is convenient to refer to these as ‘first-generation e-procurement’.

Electronic procurement (e-procurement)

The electronic integration and management of all procurement activities, including purchase request, authorisation, ordering, delivery and payment, between a purchaser and a supplier.

Electronic procurement system (EPS)

An electronic system used to automate all or part of the procurement function.

Box 6.1

What is e-purchasing?

This is how the Chartered Institute of Procurement and Supply (CIPS, www.cips.org) explains e-purchasing to its members:

The combined use of information and communications technology through electronic means to enhance external and internal purchasing and supply management processes. These tools and solutions deliver a range of options that will facilitate improved purchasing and supply management.

The range of potential options for improving purchasing processes are indicated by these benefits, described by the CIPS:

- 1 Evaluation of end-to-end trading cycles, e.g. evaluation and possible re-engineering of trading cycles leading to reduced cycle times; improved workflow of the internal procurement process enabling end-user self-service and decentralisation with centralised control through company-specific catalogues; new functionality such as online bidding in e-auctions and e-requests for quotations (RFQs).
- 2 Use of more efficient and cheaper connectivity methods such as the Internet and XML. XML is not, however, a requirement for e-procurement.
- 3 Connectivity to external sources of information, e.g. portals, e-hubs, e-marketplaces.
- 4 Connectivity to external supply chains, e.g. extranets, EDI, e-hubs, e-marketplaces -allowing shared real-time information such as suppliers accessing real-time sales.
- 5 Sourcing, e.g. identifying new sources via the Internet, use of intelligent search engines.
- 6 Content management, e.g. private catalogues, public catalogues, internal inventory management, maintenance management.
- 7 Connectivity to internal systems and sources of information such as inventory management, maintenance management, materials resource planning (MRP) systems.
- 8 Payment systems, e.g. purchasing cards.
- 9 Multimedia (although e-procurement does not necessarily contain multimedia elements).
- 10 Improvements in localised supply chain mechanisms and consortia, etc., leading to mutual benefit.

Source: CIPS (2008).

Much of the excitement generated by the digital business concept concerns the benefits that companies can achieve through increasing the efficiency of the whole supply chain. Companies such as Argos (Case study 6.3), which have enthusiastically embraced technology to manage the supply chain, have been reaping the benefits for many years.

Problems of supply chain management

The challenge of managing inventory across the supply chain is shown by US Department of Commerce (2017) data, which regularly catalogue the ratio between inventory held in different parts of the supply chain.

Their analysis shows that in July 2017 \$1,873,868 million was held in inventory across all types of business, broken down into:

- Manufacturers: \$651,560 million
- Retailers: \$619,956 million
- Merchant wholesalers: \$602,352 million

Table 6.1

A summary of the problems of supply chain management and how digital business technology can assist

Problems of supply chain management	How digital technology can reduce problems in SCM
Pressure to reduce costs of manufacturing and distributing products in order to remain competitive	Reduction in paperwork through electronic transmission of orders, invoices and delivery notes. Reduced inventory holdings needed through better understanding of demand. Reduced time for information and component supply across the supply chain. Lower SCM system purchase and management costs through use of online services (SaaS)
Demand forecasting	Sharing of demand by customers with suppliers as part of efficient consumer response (ECR)
Failure to deliver products on time consistently or lack of	Supplier becomes responsible for item availability through vendor-managed inventory Human error reduced. 'Checks and balances can be built into system'

items on shelf
in retailer

Failure to
deliver or ship
correct
product

High
inventory
costs

Inventory reduced throughout the supply chain
through better demand forecasting and more rapid
replenishment of inventory

Time for new
product
development

Improved availability of information about potential
suppliers and components, for example through online
marketplaces

Increasing supply chain efficiency involves reducing the holding within inventory while maximising sales. This report shows that the total business inventory/sales ratio at the time was 1.38. Surprisingly, between 2004 and 2017 the inventory/sales ratio has remained relatively stable, suggesting that across business there is limited potential to reduce inventory in systems that are already optimised and that companies must avoid lost potential sales through out-of-stock items in-store.

In individual companies, **inventory turnover** is used as a measure of the number of times inventory is sold or used in a time period such as a year. It is calculated as the cost of goods sold divided by the average inventory. A low turnover rate may indicate overstocking or difficulty in selling products at an acceptable rate. A high turnover rate may suggest inadequate inventory levels, which may lead to a loss in business as the inventory is too low and sales are missed.

Using digital business technology to support SCM can help to avoid some problems that can occur in a supply chain (Table 6.1). This introduces many of the key concepts of technology-enabled supply chain management.

Inventory turnover

An indication of efficiency of inventory turn calculated by the cost of goods sold divided by the average inventory.

What is supply chain management and e-procurement?

Supply chain management (SCM) involves the coordination of all supply activities of an organisation from its suppliers and delivery of products to its customers. Figure 6.3 introduces the main players in the supply chain. In Figure 6.3(a) the main members of the supply chain are the organisations that manufacture a product and/or deliver a service.

Supply chain management (SCM)

The coordination of all supply activities of an organisation from its suppliers and partners to its customers.

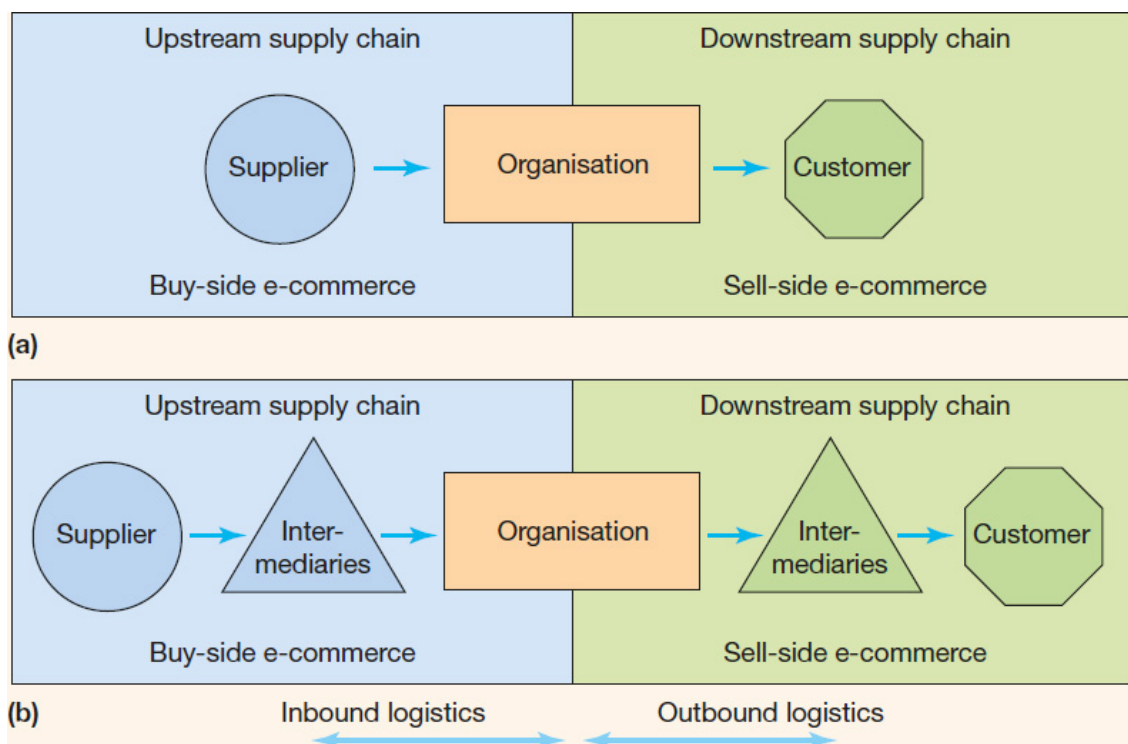


Figure 6.3

Members of the supply chain: (a) simplified view; (b) including intermediaries

For most commercial and not-for-profit organisations we can distinguish between **upstream supply chain** activities, which are equivalent to buy-side e-commerce and **downstream supply chain** activities, which correspond to sell-side e-commerce. In this chapter we focus mainly on improving the efficiency of upstream supply chain activities, while in Chapters 7 and 8 the emphasis is on the marketing aspects of improving downstream supply chain activities.

Remember that supply chain management includes not only supplier and buyer, but also the intermediaries such as the supplier's suppliers and the customer's customers (Figure 6.3(b)). Indeed, some companies may have first-tier, second-tier and even third-tier suppliers or first-, second- and higher-tier customers. Because each company effectively has many individual supply chains for different products, the use of the term 'chain' is limiting and **supply chain network** is a more accurate reflection of the links between an organisation and its partners.

According to IGD (2017), the pace of change in supply chain management, mainly due to the utilisation of technology, has noticeably increased over the last few years. This has meant that digital businesses constantly need to ask themselves 'How will we continue to respond to the changing market and increasing competition?'.

IGD has published the 'Four Pillars of Supply Chain Success'. The key elements of supply chain success (IGD, 2017) are:

- 1 Customer centric.** The supply chain exists to serve its customers and the best ones build their upstream processes to support providing an outstanding service for their end customer.
- 2 Powered by people.** The best supply chains utilise people to add value; however, there are skills shortages in some areas. This means that attracting, retaining and retraining are important elements of supply chain management.
- 3 Transformed by technology.** Technological innovation and adoption have helped transform the supply chain. Key areas include automation, synchronisation and transition to a data-driven environment. This also brings new challenges to digital businesses and online retailers.

Upstream supply chain

Transactions between an organisation and its suppliers and intermediaries, equivalent to buy-side e-commerce.

Downstream supply chain

Transactions between an organisation and its customers and intermediaries, equivalent to sell-side e-commerce.

Supply chain network

The links between an organisation and all partners involved in multiple supply chains.

- 4 Resilient and responsive.** The macro-environment (see Chapter 4), such as the adoption of technology, the impact of a political or economic landscape, etc., means that disruption and interruption are on the increase. Therefore, recognising where risks and their impacts are requires a plan and is one of the first steps to building a resilient and responsive supply chain.

Technology is vital to supply chain management since managing relationships with customers, suppliers and intermediaries is based on the flow of information and the transactions between these parties. The main strategic thrust of enhancing the supply chain is to provide a superior value proposition to the customer, of which **efficient consumer response (ECR)** (see Box 6.2), is important within the retail and packaged consumer goods market.

Improving customer value involves improving product quality, customer service quality and/or reducing price and fulfilment times (as explained in Chapter 5). Increasing efficiency in obtaining resources from a supplier organisation or distributing products to customers reduces operational costs and so increases profitability.

Efficient consumer response (ECR)

Creating and satisfying customer demand by optimising product assortment strategies, promotions and new product introductions.

A simple model of a supply chain

An organisation's supply chain can be viewed from a systems perspective as the acquisition of resources (inputs) and their transformation (process) into products and services (outputs). Such a perspective indicates that as part of moving to digital business, organisations can review the transformation process and optimise it in order to deliver products to customers with greater efficiency and lower cost. Note that the position of the systems boundary for SCM extends beyond the organisation - it involves improving not only internal processes, but also processes performed in conjunction with suppliers, distributors and customers. However, this process perspective misses the strategic importance of supply chain management - it also provides great

opportunities to improve product performance and deliver superior value to the customer, as suggested by Figure 6.3. As a result, supply chain management can dramatically have an impact on the profitability of a company.

Figure 6.5 shows the supply chain for a sample business-to-business company. Complete Activity 6.1 to consider the issues involved in modifying the supply chain in response to digital business. Note that although this example is based on a business-to-business scenario, supply chain management is also vital to the management of business-to-consumer and service companies. With service companies, the resources managed tend not to be physical but human, financial and information resources. However, the same principles can be applied.

6.1

Boots uses technology to increase supply chain efficiency by 65%

Health and beauty retailer Alliance Boots won a 2010 European Supply Chain Excellence Award for the way it developed a £70 million automated distribution centre at Nottingham in the UK. The company reorganised its entire supply chain network, by combining four national distribution centres and 17 regional warehouses into just one central distribution centre. One of the key drivers of this major investment was the retailer's rapid growth in its online operations, which meant that the company's outsourced, and largely manual, operation in Birmingham was no longer 'fit for purpose'. The consolidation led to increase in both efficiency and availability of goods in the store by a value of more than 98%.

The company's 'Stores Service Centre' (SSC) supplies 2,500 stores and more than 30,000 different products. The new system handles up to 75,000 order lines a day, with small orders being batch picked and manually packed - the changes that increased time efficiency by 65% compared to the previous manual operation. It has also helped improve order traceability.

Technology played a key part in the transformation of Boots' supply chain system, which included automated shuttle storage systems that process the majority of the company's inventory.

Sources: www.logisticshandling.com/articles/2010/09/20/1112-outstanding-awards-for-alliance-boots

Box 6.2

Efficient consumer response (ECR)

The ECR concept was developed for the food retailing business in the USA but since then it has been applied to other products and in other countries. It was originally developed by David Jenkins, then chairman of Shaw's supermarkets, to compete with other players such as Walmart. Supply chain management had traditionally focused on efficient product replenishment, whereas the focus of ECR is on demand management aimed at creating and satisfying customer demand by optimising product assortment strategies, promotions and new product introductions (Legner and Schemm, 2008). Figure 6.4 shows the complexity and lead times of a process where a new consumer product is introduced and then stocked. ECR focuses on improving this process.

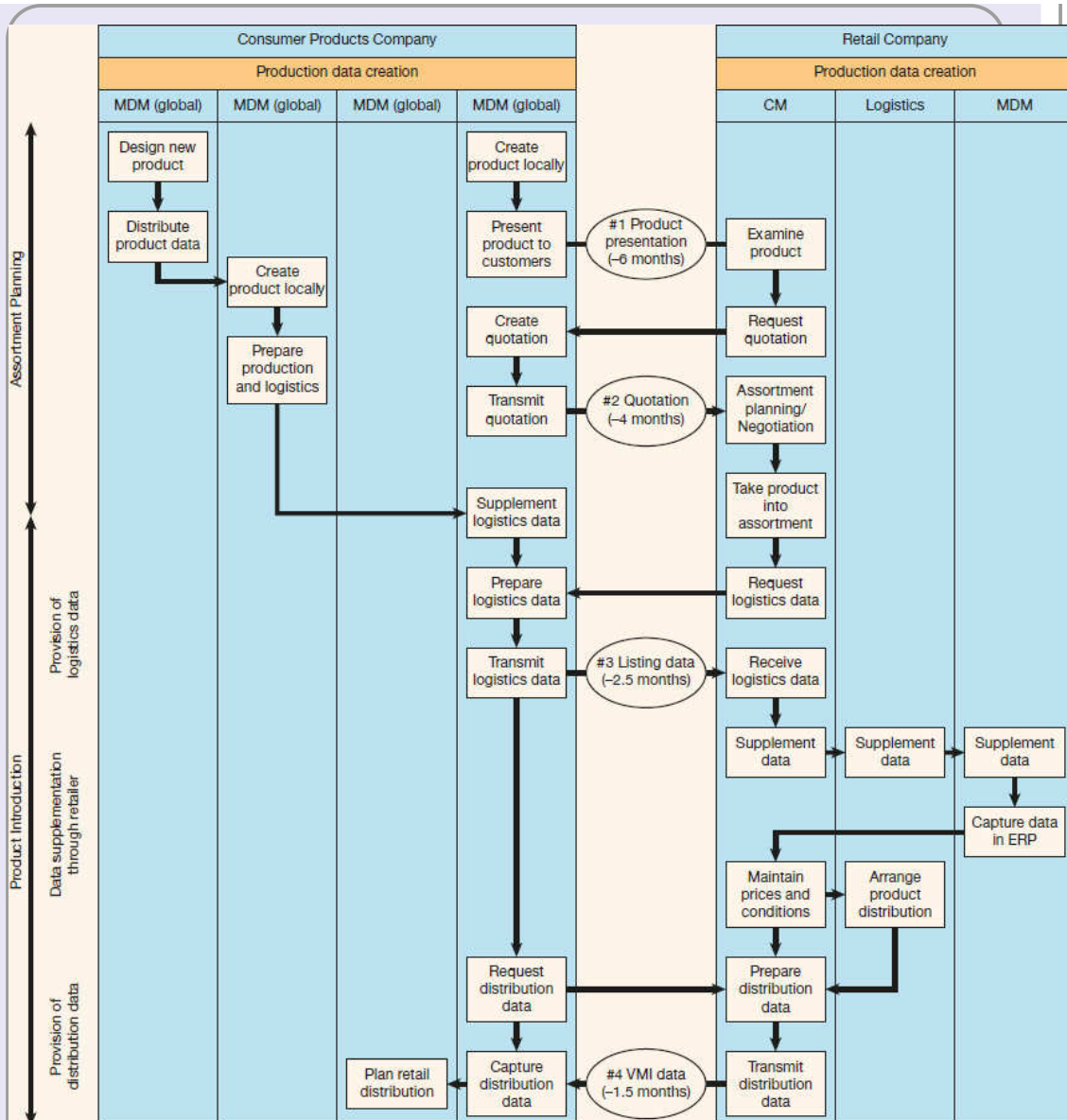


Figure 6.4

Inter-organisational process flow for introduction of a new product

Source: Excerpted from Towards the interorganisational product information supply chain: Evidence from the retail and consumer goods industry by C. Legner and J. Schemm © 2008. Used with permission from Association for Information Systems, Atlanta, Ga, 404-713-7444, www.aisnet.org. All rights reserved.

Table 6.2 shows that some of the aims and strategic approaches generated by ECR can also apply to business customers.

Table 6.2

Objectives and strategies for effective consumer response (ECR)

Objective	Strategy
Timely, accurate, paperless information flow	Revision of organisation processes supported by information systems
Smooth, continual product flow matched to variations in consumption levels	See strategies below
Optimise productivity of retail space and inventory	Efficient store assortments
Optimise for time and cost in the ordering process	Efficient replacement
Maximise efficiency of promotions	Promotions are integrated into entire supply chain planning
Maximise effectiveness of new product development (NPD)	NPD process improved and better forward planning with other partners

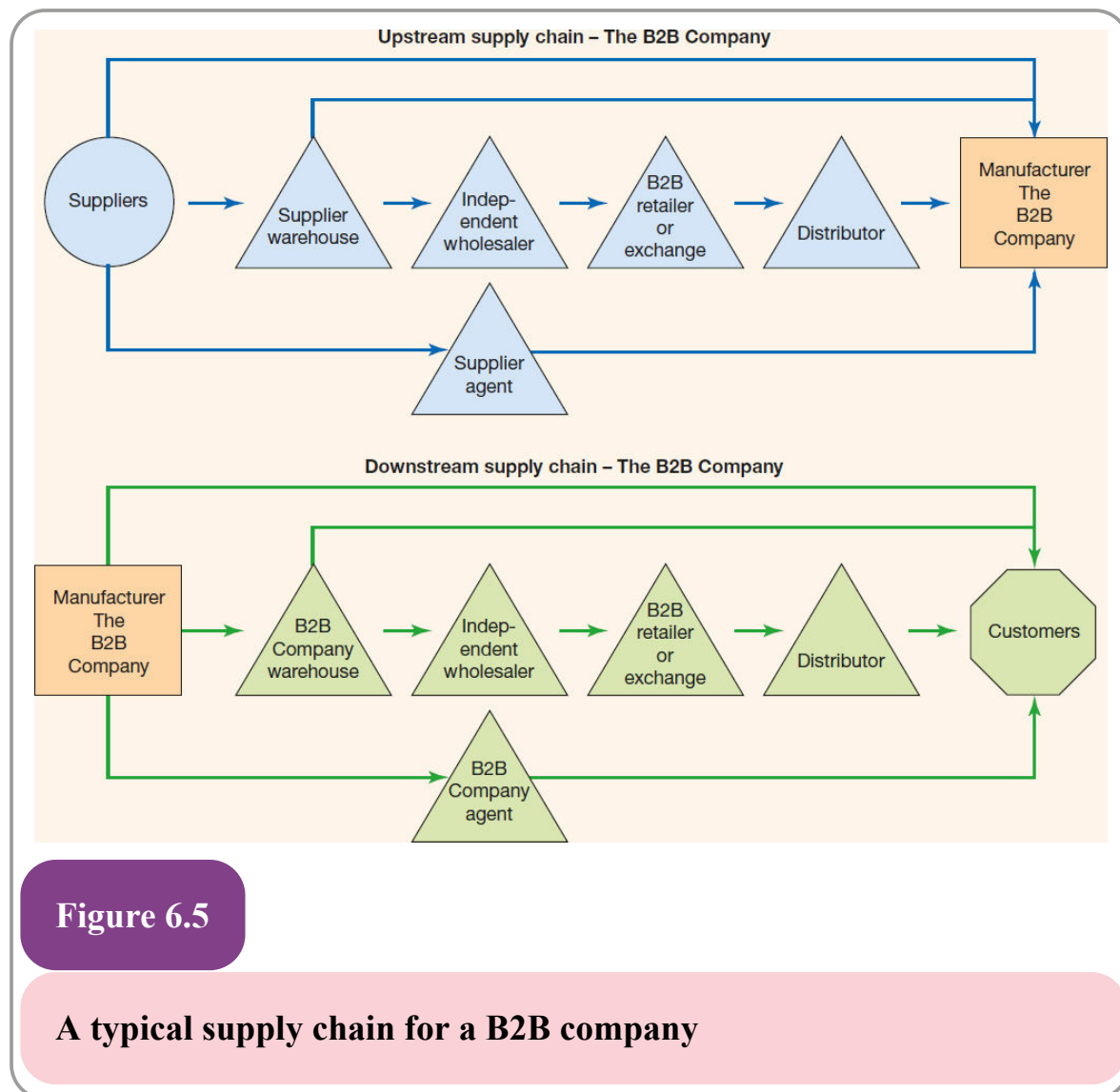


Figure 6.5

A typical supply chain for a B2B company

Vendor-managed inventory (VMI)

Supply chain partners manage the replenishment of parts or items for sale through sharing of information on variations in demand and stocking level for goods used for manufacture or sale.

Case study 6.2 shows how Shell Chemicals has developed a **vendor-managed inventory (VMI)** supply chain management system to enable delivery of supplies to be more responsive to customers' demands. VMI is a key concept in electronic supply chain and procurement management, which shifts the day-to-day tasks of stock management, purchasing and order tracking from the customer to the supplier.

Activity 6.1

A supply chain for a typical B2B company

Purpose

To examine the nature of a B2B supply chain and its potential for modification through restructuring and information systems as part of digital business development.

Questions

- 1 Referring to Chapter 2 and the section on disintermediation and reintermediation, discuss the opportunities for a B2B company to restructure its supply chain as part of the move to digital business, and the benefits this may bring.
- 2 How can information systems be used to accomplish the changes you have identified in Question 1?

Study 6.2 chains

Shell Chemicals redefines its customers' supply

This case illustrates the evolution of a typical digital business application for supply chain management within one company. Shell Chemicals originally introduced SIMON, a bespoke system to manage its customers' inventory based on data shared by its customers about their usage and forecast demand for chemicals. SIMON was then used for upstream supply chain management. Ultimately, Shell Chemicals switched to using the Elemica marketplace portal for supply chain management since this was thought to be more cost-effective than maintaining an in-house system.

The introduction of SIMON

Shell Chemicals (www.shell.com/chemicals) manufactures the chemicals used by other manufacturers of many industrial and consumer products. Shell's customers use detergents, solvents, plastics and epoxy resins to produce everything from automotive paints and aircraft structures to diapers and plastic bottles.

According to IBM (1998), who developed the SIMON system for Shell, their shared vision for creating SIMON was to:

Use customer production schedules so that we could maintain an adequate supply of on-site inventory and provide seamless product

availability at the lowest possible cost, and achieve customer-driven service levels if a customer wants product today or next week, we can fulfil that request.

Source: IBM (1998) Shell Chemical re-defines supply chain management with notes. A customer case study.

Within such an organisation, supply chain management has a dramatic impact on customer satisfaction and profitability. Shell Chemicals has invested in SIMON, which stands for ‘Shell Inventory Managed Order Network’, for managing both upstream and downstream relationships.

SIMON was originally launched in 1995 using the IBM Lotus Notes Domino application server and is one of the earliest examples of a digital business application. This represented a change from the industry-standard practice of using electronic data interchange (EDI) forms, telephone orders and paper invoices. EDI didn’t give Shell the flexibility it needed to accommodate data on exceptions and up-to-date information about dynamic processes.

The benefits of SIMON

Initially, Shell used SIMON to manage its downstream supply chain processes, which involve distribution of chemical products for use by its customers. The system enabled Shell to assume the inventory management role on behalf of its customers. Once it was successful in this role it was then applied to the upstream processes of Shell acquiring raw materials from suppliers.

For customers, the benefits of the SIMON system are that responsibility for inventory management is transferred from customer to supplier. A Shell Chemicals customer doesn’t need to place an order. Instead, SIMON manages the amount of inventory in stock at the customers’ manufacturing locations.

Before the introduction of SIMON, there were a lot of manual, time-consuming transactions, often initiated by the customer, that required a lot of phone calls and faxes. There was also the danger that Shell’s customers might run out of an essential chemical, so that plant time and then revenues would be lost. To avoid this, companies tend to maintain ‘safety stock’ levels. Reordering then occurs when inventory gets too close to these safety stock levels. The problem was that a typical resupply order can take at least two weeks from the time the order is placed. This delay occurred since chemicals must be weighed at the plant, loaded onto railcars and then sent to the customer, who then weighs the materials at the other end before moving them into inventory. Miscalculations and errors can also occur.

For SIMON to enable a supplier to manage inventory, the customer needed to supply three types of information: the levels of current inventory; forecast demand for inventory; and the shipment details such as location, timing and quantities.

In addition to analysing inventory and consumption, SIMON also generates demand forecasts, calculates stock, tracks shipment status and generates a resupply plan.

We can summarise the benefits of SIMON by considering the supply chain and logistics information about which it regularly extracts information. This includes:

- the amount of product consumed in the past 24 hours;
- the amount of new product that arrived and was unloaded in the same period;
- current and anticipated production schedules; and
- known changes to those schedules.

Web-based communications are used to synchronise information at different locations. So this information is replicated back to a customer service centre in Houston, Texas, where Shell then automatically reconciles it with its own SAP Material Requirement Planning (MRP) system. Shell Chemical customer service representatives then automatically present customers with a resupply plan. If the plan indicates that stocking levels at the customer site are low, the customer service representative completes an electronic purchase order and initiates a new shipment to the customer.

From a customer perspective, the benefits of the enhanced supply chain management system include:

- elimination of expensive excess inventory, which means an increase in working capital;
- facilitation of timely, low-cost 're-synching' of supply chain;
- ensures product is on site whenever needed;
- ensures quicker response times to changing conditions;
- reduces transaction costs (for example, invoices and data entry);
- eliminates erratic order patterns;
- reduces order processing overheads;
- streamlines financial statements and reconciliation processes.

The customer is able to access the status of orders and shipments, estimated dates of arrival, shipment weights, receipt and unloading dates and current stock and consumption levels. SIMON offers customers a 'Reconciliation' tab, which compares metered and calculated consumption,

and a 'Site level agreements' tab, which shows the mutually agreed-upon plan for the management of their inventory. Once a month (not once per rail-car load), an invoice is generated. The invoice is based on consumption figures, not shipments.

Integration with the Elemica marketplace portal

By 2005, the Elemica chemical industry portal (www.elemica.com) had become an important part of the digital business strategy for Shell Chemical. It was reported in the *Shell Chemicals Magazine* that 30% of Shell Chemical business was online, with an ambition to increase this to 50% by 2008.

Elemica was originally founded in 1999 by 22 leaders of the global chemical industry and by 2005 had a network of 1,800 industry trading partners, so it offered benefits of standardisation.

Today, Elemica processes approximately \$250 billion in annual transactions across more than 6,500 process industry trading partners. Clients include BASF, BP, Continental, The Dow Chemical Company, DuPont, The Goodyear Tire & Rubber Company, LANXESS, Michelin, Shell, Solvay, Sumitomo Chemical and Wacker. Elemica has a simple, focused vision, which is to:

Give customers total control over their global supply chains.

Their mission adds more detail to this:

As the leading Supply Chain Operating Network provider for the process industries, we enable a market driven supply chain through integrated messaging, applications, and analytics.

Elemica describes the principles of its marketplace, now described as a Supply Chain Operating Network provider, as follows

(www.elemica.com/about):

Elemica enables companies to achieve operational excellence by replacing complex approaches with automated systems and intelligent business processes. Utilizing leading-edge technology and in-depth process expertise, Elemica integrates disparate enterprise business systems and processes into one unified network across all customers, suppliers and third party service providers irrespective of company size or industry.

Elemica's innovative business process network (BPN) provides a fully connected operational framework that removes transactional and communication barriers and institutionalizes processes for integrating the information flow between global trading partners. With seamless access and visibility into the supply chain network, the enterprise can

use fewer resources to do the same work more efficiently and release people, inventory, and assets that cover for these issues in the current process.

Elemica describes the benefits of their customer management suite, used by Shell and other customers, as:

- touchless order processing;
- improved day-to-day supply chain service and reliability;
- increasing the ‘perfect order’ percentage;
- lowering the cost of errors;
- improved customer service;
- reduced invoice processing errors.

These benefits are delivered across a series of modules covering a range of business processes essential for managing industrial processes like those of Shell Chemical. In the customer management suite of applications, these include:

- Sales Order Management
- Vendor Managed Inventory (VMI)
- Terminal Managed Inventory
- Repeat Order Entry
- Rail Car Fulfillment
- Delivery Schedule
- Invoice Management.

Other applications available in the other Elemica modules are Logistics Management, Supplier Management and Sourcing Management.

Looking at Elemica in more detail, there are three key types of benefits:

1 Global reach and connectivity

Our founding member companies are among the industry leaders and represent a significant proportion of the industry’s buy and sell transactions, creating substantial initial liquidity. This foundation provides financial stability and global reach for Elemica, and the proven ability to scale quickly. This combination will continue to attract many additional buyers and sellers, resulting in an ever-growing reservoir of potential connections for new customers.

2 Neutrality

Elemica is an independent company with a dedicated management team. Our network is designed as an open network, embracing all industry buyers and sellers looking for a robust infrastructure, network and e-commerce solutions to improve core business processes. Elemica is not

an ‘aggregator’ of material purchasing, nor a ‘buyer’, ‘seller’, or ‘owner’ of products - it is a facilitator of transactions.

3 Security

Elemica has incorporated state-of-the-art security measures to safeguard the flow and accessibility of information so that participants’ individual transaction data is not shared with any other company. We have state-of-the-art security features and processes, including highly visible firewalls and strong data protection policies, a policy of confidentiality regarding handling of customer data, encryption technology to safeguard confidential data and secured information with access limited by individual user and regular independent auditing of these policies and procedures.

Integration with marketplace portals such as Elemica, which were not in existence earlier in the lifecycle of SIMON, became important to Shell.

Using an external, standardised supply chain management system meant that Shell did not have to create a bespoke approach through a systems developer and integrator such as IBM, but could use a more standardised approach at a lower cost with less specification of requirements.

Elemica could offer similar benefits to SIMON, i.e. it could:

- reduce transaction costs through reduction of human input to transactions;
- standardise business processes;
- reduce error sources;
- improve response time;
- improve cash flow through faster payment;
- increase customer satisfaction.

The article describes the following example of the practical benefits the new system could bring. A company in Europe shipped products directly from a Shell Chemical plant to their customers. Shell Chemical make the product; the company markets it and manages pick-up from the plant and delivery to the customer. Before the application of Elemica, these additional process stages or ‘handoffs’ were required while each truck waited after loading:

- paperwork was developed at the plant;
- then faxed to the partner company;
- then entered manually into their system;
- then faxed back to the Shell company - where the truck had been all along.

A further complication was that the partner’s offices closed earlier than the Shell traffic office. So, truck drivers could sit for hours waiting at the plant

until the documents were faxed through! After switching to Elemica, paperwork was automatically processed 24 hours a day. Average truck-waiting times were cut from 2 hours to 15 minutes.

In addition to the process benefits that would create better customer service, Shell Chemical switched from using SIMON to Elemica for supply chain management since SIMON would require continued investment in ongoing development and maintenance costs. Elemica, as an outsourced solution, was more favourable in terms of ongoing costs and development. Since Elemica is not company-specific it also helped exchange of data since formats could be standardised across companies.

Global positioning systems also enable details on the railcar carrying the chemicals including current location and estimated time of arrival. There are also links to road hauliers. For example, a link with Bertschi AG, one of the largest road transport logistics providers in Europe, enables thousands of transport instructions generated every month to be sent automatically, removing the need for manual faxing and reducing the potential for errors.

Bertschi transport planning manager, Stefan Bryner, explains the benefits as follows:

It has reduced our paperwork and made the whole process more transparent. The potential for errors has been reduced and issues are easier to resolve.

Questions

- 1 The SIMON system supports both ‘upstream and downstream’ business relationships. Explain how this relates to Figure 6.6 and whether you would consider it an e-commerce system or a digital business system.
- 2 Draw a table summarising the before and after implementation roles for Shell and its customers (downstream side).
- 3 This description of SIMON is explained from the Shell perspective. Using your answer to Question 2, state whether you think the customer truly benefits, or is Shell transferring some of its workload to the customer?
- 4 Visit the Shell Chemicals website (www.shell.com/chemicals). How are the benefits of these facilities explained?

What is logistics?

Logistics is a concept closely related to supply chain management. According to the Chartered Institute of Logistics and Transport (www.ciltuk.org.uk):

Logistics is defined as the time-related positioning of resource. It is also described as the 'five rights'. Essentially, it is the process of ensuring that goods or a service is:

- *In the right place*
- *At the right time*
- *In the right quantity*
- *At the right quality*
- *At the right price.*

This definition of logistics is broad, reflecting its provenance. More typically, logistics is used to refer not to all supply chain activities, but specifically to the management of logistics or **inbound** and **outbound logistics** (Figure 6.3). Logistics is essential to the efficient management of the supply chain.

Over the last few years, more online and multi-channel retailers have been piloting and operating new models of same-day and next-day delivery, offering customers more immediate product access and helping to provide competitive advantage. These operating models have needed innovative and affordable logistics solutions and the 'last mile' (i.e. the final delivery step to the customer) has become more important because of the rising share of online retail. Other growth areas include alternative pick-up and delivery options, such as Amazon lockers at train stations, universities, post offices, new-build apartment blocks, etc., and parcel collections from local convenience stores/petrol stations.

Inbound logistics

The management of material resources entering an organisation from its suppliers and other partners.

Outbound logistics

The management of resources supplied from an organisation to its customers and intermediaries.

Same-day delivery options are mainly offered in e-commerce-savvy cities, and development on the supply side is driven by three key players: parcel logistics providers, courier brokers and the retailers themselves. According to a McKinsey & Company article by Hausmann *et al.* (2014):

Same-day delivery is a big opportunity for all retailers to improve their service level, but requires a high degree of sophistication. Major challenges, such as real-time product visibility across warehouses, very short fulfilment lead-times and flexible last-mile delivery, have to be overcome while bringing cost down to a level that consumers are willing to pay for. Large retailers generating most of the B2C shipments could then institutionalize same-day delivery as a fast, capillary distribution mode in densely populated areas with a critical mass of online shoppers - but would then also need to have an extensive, accessible, and standardized distribution network that operates at an acceptable cost.

Retailers are expected to reap additional benefits from offering same-day delivery. Experience at Amazon shows that the option of same-day delivery alone actually increases purchase conversion during the checkout process by 20 to 30 percent, although only a few customers actually opt for same-day delivery. The survey results support this claim: more than half of respondents would buy online more frequently if they were offered a same-day delivery option.

Hausmann *et al.* (2014) believe that only technologically advanced retailers and logistics providers are able to offer same-day delivery. Generally, there are four supply chain and logistics prerequisites to get to this stage:

- 1 Products need to be locally available.** In most cases, multichannel retailers already have this because of a network of stores; online retailers will initially have to invest in building up a network of local urban warehouses (or utilise an existing network, such as 'Fulfilment by Amazon').
- 2 Retailers need to have a real-time overview of their inventories.** This is needed to determine whether the goods are available for same-day delivery during the check-out process. The logistics provider also needs to be informed of where and when to pick up the shipment, via a real-time interface. Many retailers still struggle with this challenge, which requires more investment in their IT infrastructures.
- 3 Picking and packing processes need to be fast.** Case studies from Amazon show that significant investment in the logistics infrastructure is needed to reduce lead time.
- 4 Flexible enough to pick up and deliver orders ad hoc or during multiple times throughout the day.** This is when technologies such as geofencing can aid dynamic rerouting and enable logistics providers to instantly respond to new shipments.

Push and pull supply chain models

A change in supply chain thinking, and also in marketing communications thinking, is the move from push models of selling to pull models, or to combined push-pull approaches. The **push** model is illustrated by a manufacturer who perhaps develops an innovative product, identifies a suitable target market and creates a distribution channel to push the product to the market - Figure 6.6(a). The typical motivation for a push approach is to optimise the production process for cost and efficiency.

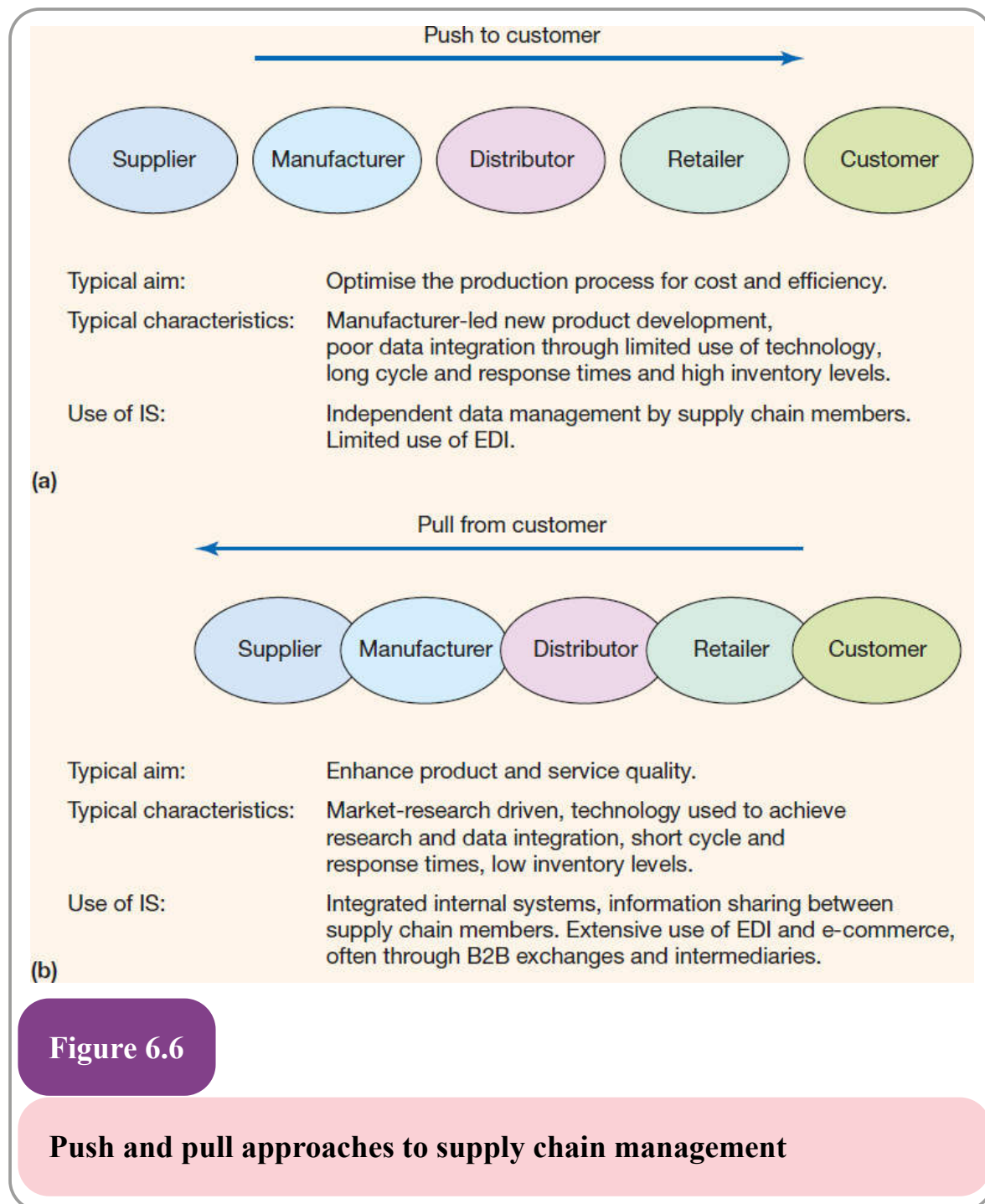
The alternative approach consistent with ECR is the **pull model**, which is focused on the customer's needs and starts with analysis of their requirements through market research and close cooperation with customers and suppliers in new product development (Figure 6.6(b)).

Push supply chain

A supply chain that emphasises distribution of a product to passive customers.

Pull supply chain

An emphasis on using the supply chain to deliver value to customers who are actively involved in product and service specification.



Here the supply chain is constructed to deliver value to the customer by reducing costs and increasing service quality. Figure 6.6(b) shows how there are much closer links between the elements of the supply chain through use of technology such as EDI to minimise document transfer and rekeying. The typical motivation for a pull approach is to optimise the production process for customer response, cost and efficiency. Such an approach is also consistent with management thinking about the similar concept of the value chain as illustrated in the 'Focus on The value chain' section.

Focus on The value chain

Michael Porter's **value chain (VC)** is a well-established concept for considering key activities that an organisation can perform or manage with the intention of adding value for the customer as products and services move from conception to delivery to the customer (Porter, 1980). The value chain is a model that describes different value-adding activities that connect a company's supply side with its demand side. We can identify an *internal* value chain within the boundaries of an organisation and an *external* value chain where activities are performed by partners. By analysing the different parts of the value chain, managers can redesign internal and external processes to improve their efficiency and effectiveness. Benefits for the customer are created by reducing cost *and* adding value:

Value chain (VC)

A model that considers how supply chain activities can add value to products and services delivered to the customer.

- *within each* element of the value chain, such as procurement, manufacture, sales and distribution;
- *at the interface between* elements of the value chain such as between sales and distribution.

In equation form this is:

$$\text{Value} = (\text{Benefit of each VC activity} - \text{Its cost}) + (\text{Benefit of each interface between VC activities} - \text{Its cost})$$

Digital communications can be used to enhance the value chain by making activities such as procurement more efficient and also enabling data integration between activities. According to IBF (2008), BT's implementation of e-procurement enabled 95% online purchasing of all its office-related supplies in the secondary value chain. This reduced the average purchasing transaction cost from £56 to £40, which is significant across hundreds of thousands of purchases. In the primary value chain, benefits can be even greater; for example, if a retailer shares information electronically with a supplier about demand for its products, this can enhance the value chain of both parties since the cycle time for ordering can be reduced, resulting in lower inventory holding and hence lower costs for both. Case study 6.2 illustrates this point.

Traditional value chain analysis (Figure 6.7(a)) distinguishes between *primary activities* that contribute directly to getting goods and services to the customer and *support activities*, which provide the inputs and infrastructure that allow the primary activities to take place. It can be argued that, with the advent of digital business, the support activities offer far more than just support; indeed, having effective information systems and management of human resources contributes critically to the primary activities. Michael Porter now acknowledges that this is the case.

Digital technologies can reduce production times and costs by increasing the flow of information as a way to *integrate* different value chain activities. Rayport and Sviokla (1996) contend that the Internet enables value to be created by gathering, organising, selecting, synthesising and distributing information. They refer to a separate parallel virtual value chain mirroring the physical value chain. The *virtual value chain* involves electronic commerce used to mediate traditional value chain activities such as market research, procurement, logistics, manufacture, marketing and distribution. The processing is machine-based or ‘virtual’ rather than paper-based. Human intervention is still required in many activities, but the ‘virtuality’ of the value chain will increase as software agents increasingly perform these activities.

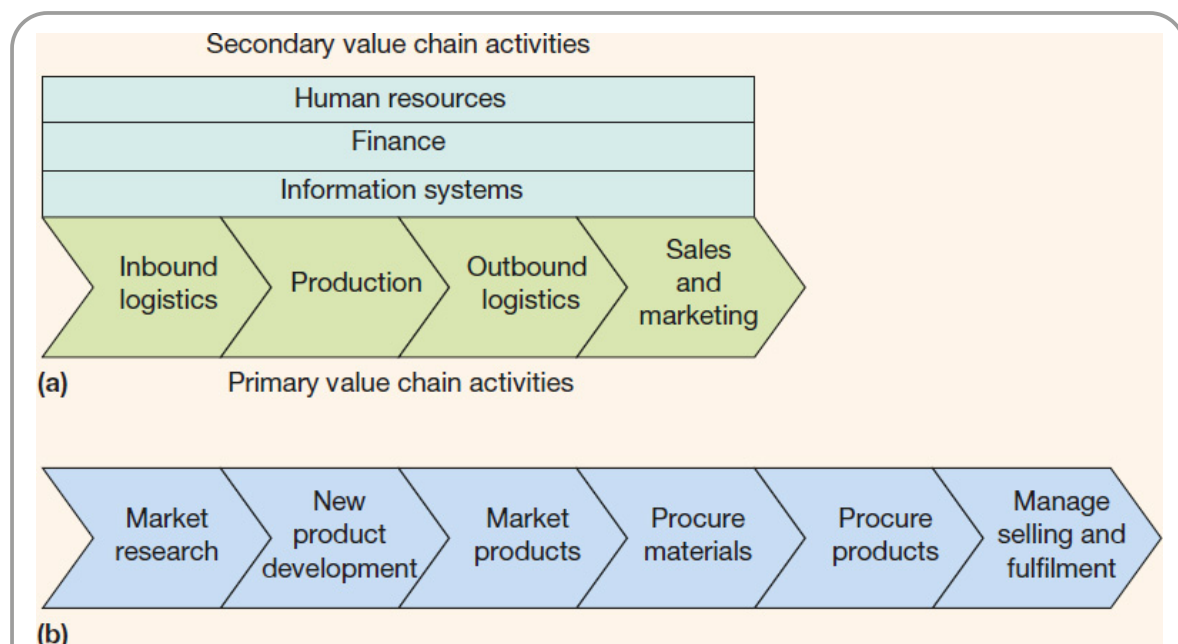


Figure 6.7

Two alternative models of the value chain: (a) traditional value chain model; (b) revised value chain model

Source: Adapted from Deise *et al.* (2000) Figure 6.4(b)

Debate 6.1

New value chain models

'The traditional value chain model of Michael Porter (Figure 6.8(a)) is no longer useful as a framework for value chain management. Instead, Figure 6.8(b) is more appropriate.'

Restructuring the internal value chain

Traditional models of the value chain (such as Figure 6.7(a)) have been re-evaluated with the advent of global electronic communications. It can be suggested that there are some key weaknesses in the traditional value chain model:

- It is most applicable to manufacturing of physical products as opposed to providing services.
- It is a one-way chain involved with pushing products to the customer; it does not highlight the importance of understanding customer needs.
- The internal value chain does not emphasise the importance of value networks (although Porter (1980) did produce a diagram that indicated network relationships).

A revised form of the value chain has been suggested by Deise *et al.* (2000); an adaptation of this model is presented in Figure 6.8(b). This value chain starts with the market research process, emphasising the importance of real-time environmental scanning made possible through digital communications links with distributors and customers. For example, leading e-commerce companies now monitor, on an hourly basis, how customers are responding to promotional offers on their website and review competitors' offers and then revise them accordingly. Similarly, manufacturers such as Cisco have feedback forms and forums on their sites that enable them to collect information from customers and channel partners that can feed through to new product development (see 'growth hacking' in Chapter 10). As new product development occurs, the marketing strategy will be refined and at the same time steps can be taken to obtain the resources and production processes necessary to create, store and distribute the new product. Through analysis of the value chain and looking at how digital communications can be used to

speed up the process, manufacturers have been able to significantly reduce time to market from conception of a new product idea through to launch on the market. At the same time, the use of technology increases value chain efficiency.

The value stream

The **value stream** is a concept closely related to the value chain. The difference is that it considers different types of tasks that are involved with adding value and looks at how the efficiency of these tasks can be improved. Womack and Jones (1998) define the value stream as:

the set of all the specific actions required to bring a specific product through the three critical management tasks of any business:

- 1** the problem-solving task [the processes of new product development and production launch];
- 2** the information management task [the processes of order taking, scheduling to delivery];
- 3** the physical transformation task [the processes of transforming raw materials to finished product delivered to customers].

Value stream

The combination of actions required to deliver value to the customer as products and services.

Tasks 2 and 3 are traditional value chain activities (Figure 6.8(a)), but task 1 is not.

Returning to the definition of customer value from Deise *et al.* (2000) shown in the equation below, we can see that the lean thinking approach proposed by Womack and Jones is aimed at adding value by cutting out waste in each of these three management tasks. By reducing new product development and production times and costs, organisations can then either increase customer value by decreasing fulfilment time or price, and/or increasing product and service quality. Clearly, e-commerce plays a key role in decreasing time to market and production times and costs.

$$\text{Customer value (brand perception)} = \frac{\text{Product quality} \times \text{Service} \times \text{quality}}{\text{Price} \times \text{Fulfilment time}}$$

Value chain analysis

This is an analytical framework for decomposing an organisation into its individual activities and determining value added at each stage. In this way the organisation can then assess how effectively resources are being used. It may be possible to use information systems to increase the efficiency of resource usage for each element in the value chain and even *between* activities.

How can an organisation positively impact on its value chain by investing in new or upgraded information systems? Porter and Millar (1985) propose the following five-step process.

- 1 Step 1** Assess the information intensity of the value chain (i.e. the level and usage of information within each value chain activity and between each level of activity). The higher the level of intensity and/or the higher the degree of reliance on good-quality information, the greater the potential impact of new information systems.
- 2 Step 2** Determine the role of IS in the industry structure. It is also important here to understand the information linkages between buyers and suppliers within the industry and how they and competitors might be affected by and react to new information technology.
- 3 Step 3** Identify and rank the ways in which IS might create competitive advantage. High-cost or critical activity areas present good targets.
- 4 Step 4** Investigate how IS might spawn new businesses.
- 5 Step 5** Develop a plan for taking advantage of IS, which is business-driven rather than technology-driven. The plan should assign priorities to the IS investments (which of course should be subjected to an appropriate cost-benefit analysis).

This process can also be applied to an organisation's external value chain. Womack and Jones (1998) refer to *value stream analysis*, which considers how the whole production and delivery process can be made more efficient. They suggest that companies should map every activity that occurs in creating new products and delivering products or services to customers and then categorise them as:

- 1** those that create value as perceived by the customer;
- 2** those that create no value, but are required by product development or production systems and so cannot immediately be eliminated;
- 3** those that don't add value, so can be immediately eliminated.

Having performed this analysis, plans can be made for removing the category 3 activities and then eliminating category 2 activities and enhancing category 1 activities. Womack and Jones give the example of the value stream for a cola can. Even a superficially simple product such as canned cola can have many activities involved in its production. There are several value streams:

that in producing the can itself, those to produce the contents from beet field to sugar and corn field to caramel and those to produce the packaging. Taking the example of the can itself, value stream analysis can be performed to identify the stages in production as follows:

- 1 Mine bauxite.
- 2 Reduction mill.
- 3 Smelter.
- 4 Hot rolling mill.
- 5 Cold rolling mill.
- 6 Can maker.
- 7 Bottler.
- 8 Regional distribution centre (RDC).
- 9 Retail unit storage.
- 10 Home storage.

In value stream analysis, efficiency for each of the stages above will be calculated. For example, at stage 7, the bottler (adding the drink to the can), Womack and Jones (1998) give times of incoming storage four days, processing time one minute, finished storage five weeks. The need for such analysis is shown by the delays in the whole process that give incoming storage of five months, finished storage of six months, but processing time of only three hours. This gives a total cycle time of nearly a year from mine to home. Clearly, if information management can be used to reduce these storage times, it can create large savings in terms of reduced storage capacities. The benefits are evident for a retailer such as Tesco that has already undertaken value stream analysis and deployed e-commerce in the Tesco Information Exchange to reduce its storage in the RDC and in-store to only two and three days respectively. It has also been able to move to a system of continuous replenishment in 24 hours. Orders made by a Tesco store on a Monday night are delivered from suppliers via the RDCs to arrive before the store opens Wednesday morning!

At a practical level, improvements in the value chain are implemented through iterative improvements planning implemented through Sales and Operations Planning (S&OP) systems. Kjellsdotter and Jonsson (2010) have identified these benefits of digital business throughout the stages of an iterative planning cycle:

- 1 **Creating a consensus forecast.** Using statistical forecast methods, demand planning tools are able to integrate different departments and companies for improved decision support.

- 2 Creating a preliminary delivery plan.** Reducing planning effort through applying the insights from the forecast.
- 3 Creating a preliminary production plan.** Possibility to integrate several entities, coordination of different functions, possibility to use optimisation models to find the most feasible solution.
- 4 Adjusting delivery and production plan.** Visibility of information, scenario analysis, for example what-if analyses of the impact in resource availability and customer demands.
- 5 Settle delivery and production plan.** Overall benefits of tangible cost savings and the intangible benefit of improved confidence in planning and scheduling.

Value networks

Reduced time to market and increased customer responsiveness are not simply the result of reviewing the efficiency of internal processes and how information systems are deployed, but also result through consideration of how partners can be involved to outsource some processes. Porter's original work considered not only the internal value chain, but also the **external value chain or value network**. As companies outsource more and more activities, management of the links between the company and its partners becomes more important. Deise *et al.* (2000) describe value network management as:

the process of effectively deciding what to outsource in a constraint-based, real-time environment based on fluctuation.

External value chain or value network

The links between an organisation and its strategic and non-strategic partners that form its external value chain.

Digital communications have enabled the transfer of information necessary to create, manage and monitor outsourcing partnerships. These links are also mediated through intermediaries known as 'value chain integrators' or directly between partners. As a result, the concept of managing a value network of partners has become commonplace.

Figure 6.8, which is adapted from the model of Deise *et al.* (2000), shows some of the partners of a value network that characterises partners as:

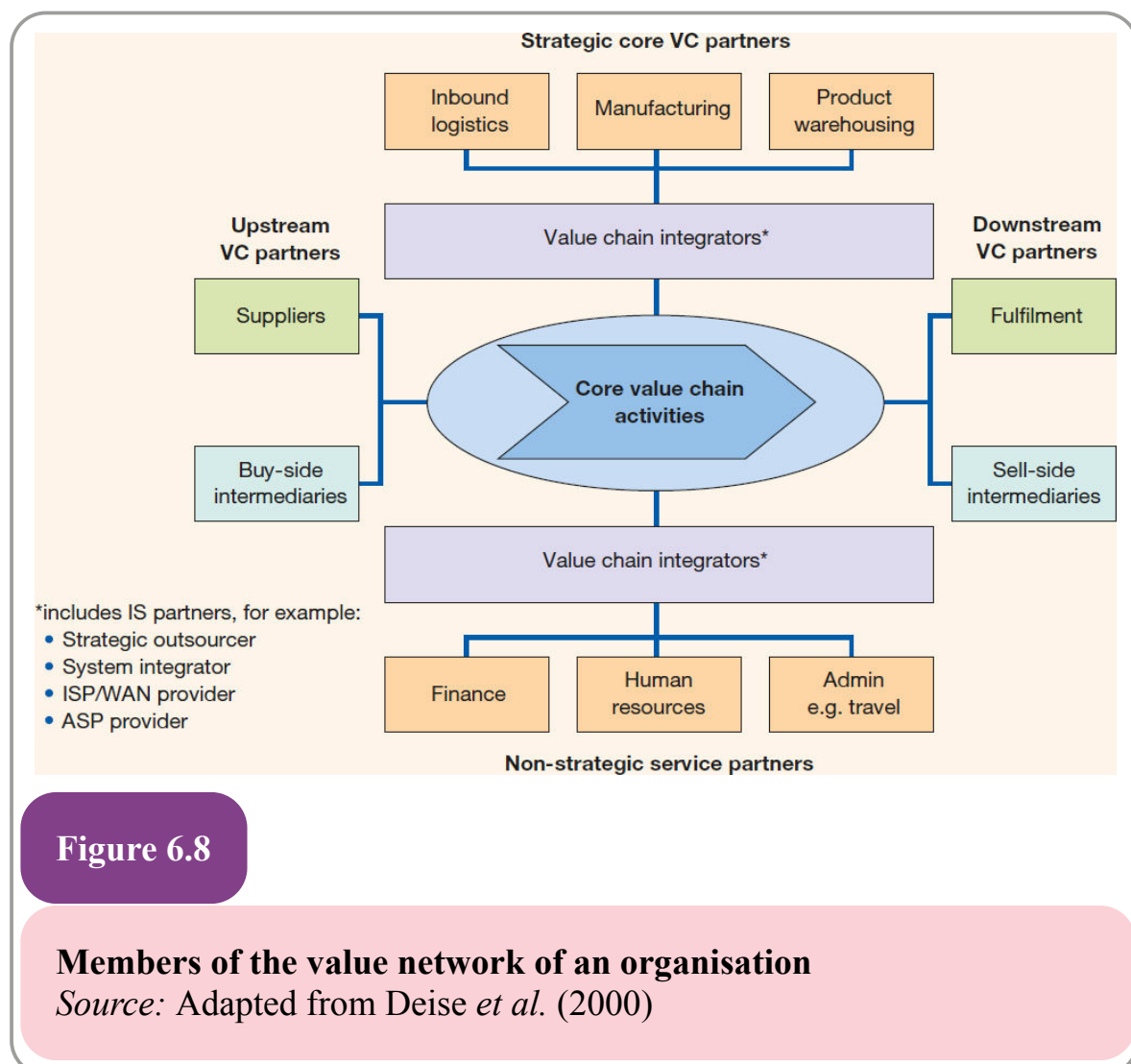
- 1 Supply-side partners** (upstream supply chain) such as suppliers, business-to-business exchanges, wholesalers and distributors.
- 2 Partners that fulfil primary or core value chain activities.** In some companies the management of inbound logistics may be outsourced, in

others different aspects of the manufacturing process. In the virtual organisation all core activities may be outsourced.

- 3 Sell-side partners (downstream supply chain) such as business-to-business exchanges, wholesalers, distributors and customers (not shown, since conceived as distinct from other partners).
- 4 Value chain integrators or partners who supply services that mediate the internal and external value chain. These companies typically provide the electronic infrastructure for a company.

The similarity between elements of the value network of Figure 6.8 and the supply chain of a typical B2B company of Figure 6.6 will be apparent. But the value network offers a different perspective that is intended to emphasise:

- The digital interconnections between partners and the organisation and directly between partners that potentially enables real-time information exchange between partners.



- The dynamic nature of the network. The network can be readily modified according to market conditions or in response to customer demands. New partners can readily be introduced into the network and others removed.
- Different types of links can be formed between different types of partners.

Wholesale outsourcing to third parties is not the only option. The different types of partnership that can be formed are described in more detail in the later section on 'Managing partnerships'. Remember also that outsourcing does imply cost reduction. Michael Dell relates that Dell does not see outsourcing as getting rid of a process that does not add value; rather it sees it as a way of 'coordinating their activity to create the most value for customers' (Magretta, 1998). Dell has improved customer service by changing the way it works with both its suppliers and distributors to build a computer to the customer's specific order and ship it within just 24 hours, under the company's 'Smart Selection' programme (this is when Dell pre-builds what they believe to be their most popular configurations).

Options for restructuring the supply chain

As part of strategy definition for digital business, managers will consider how the structure of the supply chain can be modified. These are mainly choices that have existed for many years, but Internet technology provides a more efficient enabler and lower-cost communications.

Supply chain management options can be viewed as a continuum between internal control ('**vertical integration**') and external control through outsourcing ('**virtual integration**'). The intermediate situation is sometimes referred to as 'vertical disintegration' or 'supply chain disaggregation'. This continuum is illustrated in Figure 6.9.

There was a general trend during the second half of the twentieth century from vertical integration through vertical disintegration to virtual integration. In the car manufacturing industry, traditionally car plants would be located near to a steelworks so that the input would be raw materials, with finished cars as the output. Other components of the car would also be manufactured by the company and other value chain activities such as marketing would largely be performed in-house. There has been a gradual move to sourcing more and more components such as lights, upholstery and trim, and even

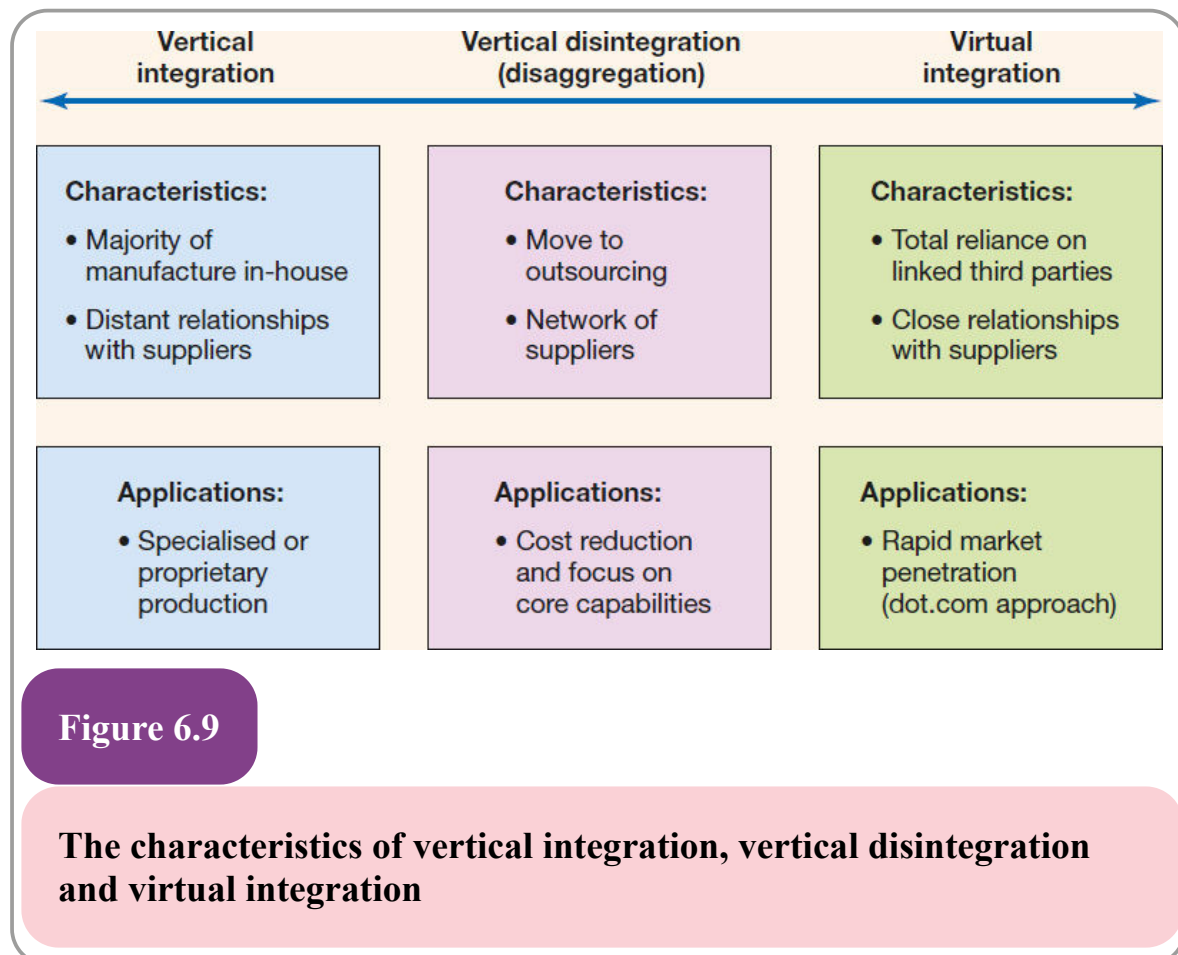
engines, to third parties. Marketing activities are now largely outsourced to marketing agencies. Another example is the purchase by pharmaceutical companies of pharmacy benefit managers (companies that manage drug distribution with private and company health schemes). By acquiring these companies, which are part of a pharmaceutical company's downstream supply chain, the aim is to 'get closer to the customer' while at the same time favourably controlling the distribution of the company's own drugs.

Vertical integration

The extent to which supply chain activities are undertaken and controlled within the organisation.

Virtual integration

The majority of supply chain activities are undertaken and controlled outside the organisation by third parties.



Hayes and Wheelwright (1994) provide a useful framework that summarises choices for an organisation's vertical integration strategy. The three main decisions are:

- 1 The direction of any expansion.** Should the company aim to direct ownership at the upstream or downstream supply chain? The pharmaceuticals companies referred to above have decided to buy into the downstream part of the supply network (downstream vertical integration). This is sometimes referred to as an offensive strategic move since it enables the company to increase its power with respect to customers. Alternatively, if the pharmaceuticals company purchased other research labs this would be upstream-directed vertical integration, which is strategically defensive.
- 2 The extent of vertical integration.** How far should the company take downstream or upstream vertical integration? Originally, car manufacturers had a high degree of vertical integration, but more recently they have moved from a wide process span to a narrow process span.
- 3 The balance among the vertically integrated stages.** To what extent does each stage of the supply chain focus on supporting the immediate supply chain? For example, if a supplier to a motor manufacturer also produced components for other industries, this would be an unbalanced situation.

manufacture

Supply chain models in personal computer

Activity

- 1** Review the approaches of the two companies illustrated below. Which tends to vertical integration and which tends to virtual integration?
- 2** Produce a table summarising the benefits and disadvantages of each approach. Which do you think is the better approach?
- 3** How can information systems facilitate each approach?

Approach 1 IBM during the 1980s and early 1990s

Manufacture of many components by IBM plants in different locations including IBM processors, IBM hard disks, IBM cases and IBM

monitors and even IBM mice. Distribution to companies by IBM logistics.

Approach 2 Dell during the 1990s and 2000s

Manufacture of all components by third parties in different locations including Intel processors, Seagate hard disks, Sony monitors and Microsoft mice. Assembly of some components in final product by third parties, e.g. adding appropriate monitor to system unit for each order.

Debate 6.2

Virtual integration and outsourcing of core processes

'The success of companies such as Dell in outsourcing core business processes and in virtual integration suggests that all companies need to adopt this model in order to be competitive.'

Combining these concepts, we can refer to a typical B2B company (Figure 6.6). If it owned the majority of the upstream and downstream elements of the supply chain and each element was focused on supporting the activities of a B2B company, its strategy would be to follow upstream and downstream directions of vertical integration with a wide process span and a high degree of balance. Alternatively, if the strategy were changed to focus on core competencies it could be said to have a narrow process span.

How, then, can electronic communications support these strategies? Through increasing the flow of information between members of the supply chain, a strategy of narrower process span can be supported by e-commerce. However, this relies on all members of the supply chain being e-enabled. Companies undertaking offensive or defensive strategies will be in a better position to stipulate adoption of e-commerce, and so increase the overall efficiency of the supply chain. As we saw in Case study 6.2, a company such as Shell helps e-enable the supply chain by sharing information in its own databases with customers to increase the efficiency of the supply chain.

Our next example, in the manufacture of personal computers, also illustrates the concept of the two different supply chain products. Complete Activity 6.2 to review the benefits of each approach.

Using digital business to restructure the supply chain

Information supply chain

An information-centric view of the supply chain, which addresses the organisational and technological challenges of achieving technology-enabled supply chain management efficiency and effectiveness.

Information asymmetry

Imperfect information sharing between members of a supply chain, which increases uncertainty about demand and pricing.

Using digital communications to improve supply chain efficiency is dependent on effective exchange and sharing of information. The challenges of achieving standardised data formats and data exchange have given rise to the study of optimisation of the **information supply chain** (ISC) as suggested by Marinos (2005) and Sun and Yen (2005). March *et al.* (2007) describe the ISC as:

an information-centric view of physical and virtual supply chains where each entity adds value to the chain by providing the right information to the right entity at the right time in a secure manner. ISCs create value for the collaborating entities by gathering, organizing, selecting, synthesizing, and distributing information. The challenges to cultivating an ISC arise from both organizational and technological perspectives. Agility and flexibility in both internal and inter-organizational business processes are required to benefit from technology investments in ISCs.

This definition shows the scope and challenges of managing the ISC. Research by Legner and Schemm (2008) suggests two different types of information sharing and coordination problems in the retail and consumer goods industries: (1) the transactional information flow that allows for coordinating the physical demand and supply chain (demand signals, forecasts, orders, shipping, notifications, or invoices); and (2) the contextual information flow that ensures that retailers and manufacturers interpret data in the same way. They explain that a well-established problem is the ‘bullwhip effect’ or **information asymmetry**, which results in amplification of the demand signal and fluctuation of inventory level along a supply chain. The ECR concept introduced earlier in this chapter is an attempt to reduce

information asymmetry. Although information asymmetry can be reduced through the use of technology, technical barriers such as the lack of standards, expertise or the cost of implementation will prevent it. Organisational issues such as the level of trust of supply chain partners and the competitive advantage that may result from keeping information are equally significant.

In this section we review efforts to optimise the ISC and describe the benefits of implementing ISC support technologies. We then consider how companies can use technologies to support the management of the upstream and downstream supply chain.

Technology options and standards for supply chain management

Some of the data transfer options and standards that enable eSCM were introduced in Chapter 3. These include:

- EDI, which is an established and relatively simple method of exchanging orders, delivery notes and invoices;
- XML- or XML-EDI-based data transfer, which enables more sophisticated one-to-many data transfers such as a request for orders being transmitted to potential suppliers;
- middleware or software, used to integrate or translate requests from external systems in real time so they are understood by internal systems and follow-up events will be triggered;
- manual email orders or online purchase through a traditional web-based e-commerce store for B2B.

These mechanisms enable data to be transferred to suppliers from clients using enterprise resource planning (ERP) systems, which include material requirements planning modules that are used to model future demand for products, create a bill of materials of the relevant components needed to manufacture the products and then order them.

Typical benefits of e-supply chain management, with respect to a B2B company, include:

- 1 Increased efficiency of individual processes.** If the B2B company adopts e-procurement this will result in a faster cycle time and lower cost per order.
Benefit: reduced cycle time and cost per order.
- 2 Reduced complexity of the supply chain.** This is the process of disintermediation referred to in Chapter 2. Here the B2B company will

offer the facility to sell direct from its e-commerce site rather than through distributors or retailers.

Benefit: reduced cost of channel distribution and sale.

3 Improved data integration between elements of the supply chain.

The B2B company can share information with its suppliers on the demand for its products to optimise the supply process. Case study 6.3 on the Argos multichannel retail strategy shows the online sales growth that can be achieved through good integration of systems and data.

Benefit: reduced cost of paper processing.

4 Reduced cost through outsourcing. The company can outsource or use virtual integration to transfer assets and costs such as inventory holding costs to third-party companies.

Benefits: lower costs through price competition and reduced spend on manufacturing capacity and holding capacity.

5 Innovation. eSCM should make it possible to be more flexible in delivering a more diverse range of products and to reduce time to market.

Benefit: better customer responsiveness.

Argos uses e-supply chain management to improve customer convenience

Retailer Argos is a leading proponent of using supply chain management to improve multichannel sales. The transactional Argos website was launched in 2000 when the company was a pioneer in implementing a reservation service. Sales have grown significantly since the launch over 17 years ago.

According to 'Econsultancy' (2010), multichannel sales for Argos reached £1.9 billion in 2009. Its 'Check & Reserve' feature, which enables visitors to check store availability and then order from a specific store for later pick-up, was responsible for 22% of the retailer's total sales in 2009, growing by 36%. Internet sales account for 32% of all sales. Some features of the system that rely on integration of the website with different logistics systems are superior to competitors'. For example, real-time stock availability information is shown and, while some retailers make customers wait several days for in-store collection, items reserved on the Argos website can be collected straightaway.

David Tarbuck is head of multichannel retail at Argos. He explains the approach Argos has used for its fulfilment:

The way Argos is built is unique in the UK market, and this has made it easier for us to implement Check & Reserve. Since customers are in

the front of the store, and the stock is held in the back, we have a clear picture of stock levels in our stores. This means we can be confident that, if we ask our systems about stock levels at any store, this information will be accurate.

Check & Reserve gained immediate adoption with customers, and this has accelerated over the last two or three years, with this channel growing by 36% for a second year in a row. People have caught on to it, and appreciate the convenience of being able to check before they leave the house and save themselves a wasted journey. While our model has been improved over the last ten years, other retailers have a more difficult and costly process for implementing this kind of service.

Since then, the multichannel retailer has also opened ‘small format’ concessions in Homebase, Sainsbury’s and some London tube stations. According to Mark Steel, digital operations director at Argos, ‘Stores are a really important part of our multichannel offer. Customers really value having that physical touchpoint. Some customers still prefer to come in to pick something up’ (Spary, 2015).

Mobile commerce offers more order choice for Argos customers. In 2010, Argos launched its first iPhone app, in response to a 600% increase in traffic to Argos.co.uk from mobile devices. In December 2014, sales via mobile increased by 28% and, in 2015, 45% of Argos’ sales came through digital channels.

The company’s iPhone app initially asks you to set your home store to make subsequent reservations smoother. The app can also find the local store via GPS, or by entering the town name or postcode. Results of local stores are shown via Google Maps, and details are provided on opening hours, as well as driving directions, and the option to set this as your store. You can then use the search icon to search for stock held at that store. The stock checker works just like the machines in the Argos stores. Each product page comes with some detailed review information, which makes the app very useful for people wishing to do some extra product research while in the store. Once a product is selected, the reservation process is straightforward.

Argos has also developed a ‘kids’ wish list’ app, aimed at five to seven year olds, which was one of the ideas generated from a 2014 [hackathon](#). The idea behind the app was to re-create some of the experiences that children historically loved about Argos - e.g. circling their Christmas catalogue to let mum and dad know what presents they wanted for Christmas. Engagement metrics for the app have been good - the average dwell time was 13 minutes in 2014.

Argos is well known for catalogues, which are also part of retail multichannel strategy since products featured can encourage purchase both in-

store and on the web. Argos releases two catalogues every year, each with a print run of 18 million. David Tarbuck explains how the catalogue fits into the multichannel strategy:

We have large numbers of people who have our catalogue in their lounges, on their coffee tables, and this gives us a presence in people's homes.

Catalogues are often the starting point for customers shopping with Argos, they will flick through the catalogue, or browse the website at the same time.

We have over 11,000 products online that aren't in the catalogue, so people will come online to check this and for latest offers, so catalogues are used in conjunction with other channels. With catalogues or any other channel, it's all about talking to customers and working with them in whichever way they want to interact with us.

Tarbuck believes that the structure and focus of the team has also been important to success. He says:

We have a multichannel team, and I head up the development team and the operation of the website, overseeing online strategy.

We have e-commerce, marketing and commercial teams who respond to the trading side of the business, and make sure the various promotional campaigns are joined up, and there is consistency across channels. We've had a self-contained Internet-focused team in place for the last ten years, and this dedicated team has been very closely related to marketing and other areas of the business.

Source: www.campaignlive.co.uk/article/argos-we-want-digital-retail-leader/1350380

Questions

- 1 Explain how Argos uses supply chain management to improve the proposition for its customers.
- 2 What do you think are the factors that have made Argos successful within its multichannel retail strategy?

IS-supported upstream supply chain management

The key activities of upstream supply chain management are procurement and upstream logistics. The way in which information systems can be used to support procurement in the digital business is of great importance and is covered in further detail later in this chapter.

Many grocery retailers have been at the forefront of using technology to manage their upstream supply chain. For example, Tesco created the Tesco Information Exchange and other UK retailers have developed services such as 'Sainsbury Information Direct'. The Tesco Information Exchange (TIE) was developed in conjunction with GE Information Services (GEIS), and is an extranet solution that allows Tesco and its suppliers to collaboratively exchange trading information. TIE is linked to Tesco's key systems to give suppliers access to relevant and up-to-date information such as electronic point of sale (EPOS) data, to track sales and access the internal telephone/mail directory, so that suppliers can quickly find the right person to talk to.

RFID and the Internet of Things

RFID tags have become a revolutionary element in supply chain management and are widely used for logistics purposes. They can be attached to individual product items in a warehouse or in a retail location. With appropriate RFID reader technology they can then be used to assess stock levels. With the possibility of the RFID reader being connected to a system to upload item location and status to the Internet, this approach is referred to as the [Internet of Things](#). Recently, more companies are integrating RFID technology into their strategic planning, since it provides significant advantages to supply chain performance. There are far more benefits gained by RFID implementation into supply chain and logistics operations than just improving identification of products, shipments and assets.

IS-supported downstream supply chain management

The key activities of downstream supply chain management are outbound logistics and fulfilment. In a B2B context the benefits for downstream

customers are, of course, similar to the benefits that the organisation receives through automating its upstream supply chain. These issues are considered from a marketing perspective in Chapter 7, but in this chapter we review the importance of fulfilment in achieving e-commerce success.

We also use the grocery retail market to illustrate the implications of e-commerce for management of the downstream supply chain. Tesco is one of the leaders in using e-commerce for downstream supply chain management. Tesco's downstream supply chain involves selling direct to customers, in other words it is operating a strategy of disintermediation (Chapter 2, p. 50) by reducing the role of its branches. Through being an early adopter, **Tesco.com** has developed as the world's largest online grocery site.

Hackathon

This is a sprint-type event, where people come together and use technology to solve problems/come up with new ideas and collaborate to make them reality.

Radio-frequency identification (RFID)

Microchip-based electronic tags are used for monitoring anything they are attached to, whether inanimate products or animate (people).

Internet of Things (IoT)

Objects are uniquely identified and tagged through technologies such as RFID and made accessible through Internet-like addresses.

Outbound logistics management

The importance of outbound logistics relates to the expectations of offering direct sales through a website. In a nutshell, logistics is crucial to delivering the service promise established on the website.

A different angle on the importance of logistics and how it relates to the bottom line is illustrated by the fortunes of Amazon. Phillips (2000) reported that the fulfilment mechanism was adding to Amazon's costs because of split shipments, where multiple deliveries of items are necessary from a single order. This is a particular problem in the USA, which is the source of 86% of Amazon's revenue. Here the distance between population centres requires a network of seven distribution centres for shipments. Phillips (2000) explains that the need to fulfil a single order by shipping items from multiple locations increases costs for postage and the labour to assemble and dispatch goods. The alternative situation of stocking all distribution centres with every product is financially prohibitive. Some analysts suggest that Amazon should

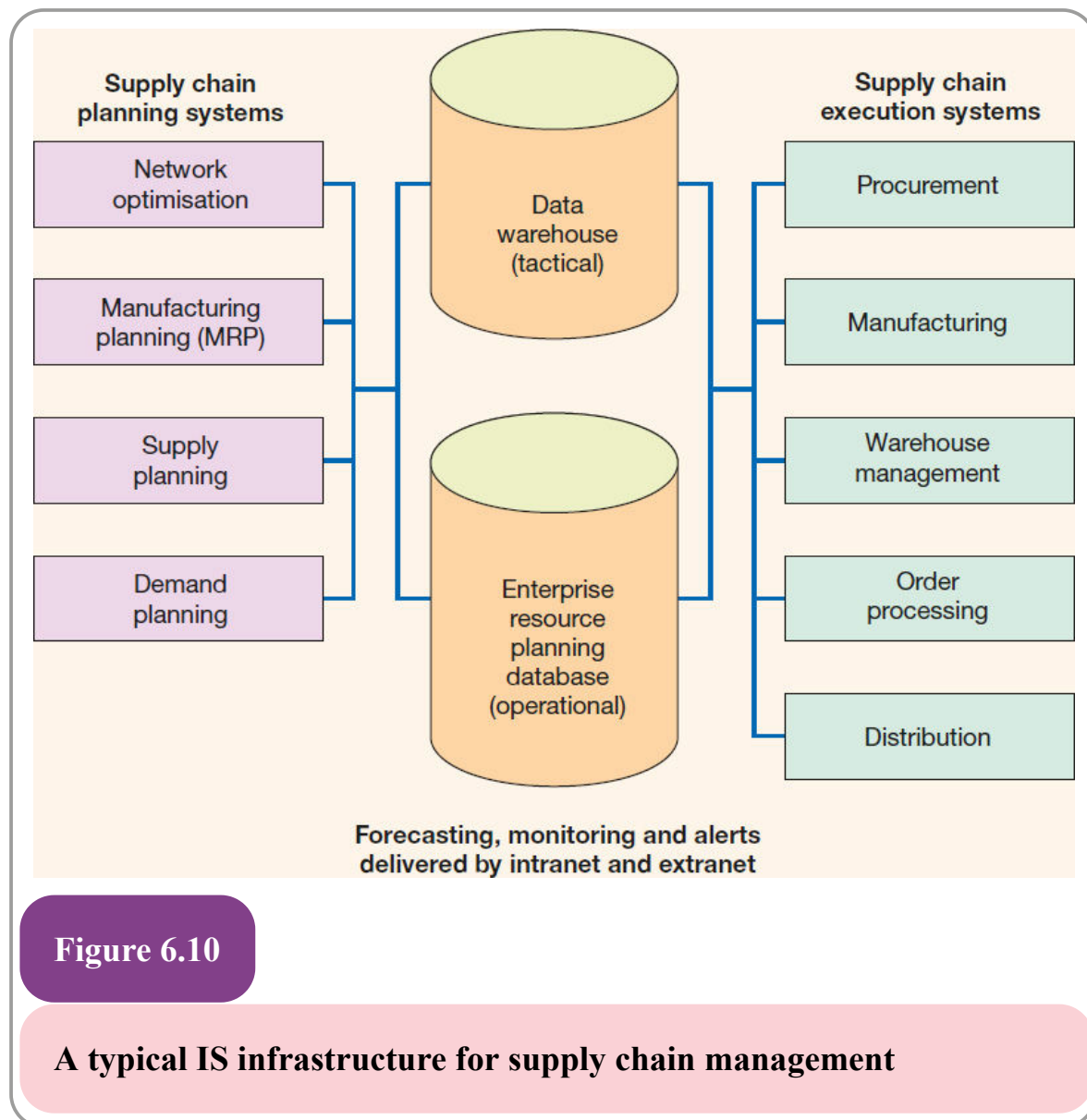
change its logistics strategy by separating out its distribution operation as a separate revenue source and outsourcing fulfilment to reduce costs.

IS infrastructure for supply chain management

Information systems need to deliver **supply chain visibility** to different parties who need to access the supply chain information of an organisation, whether they be employees, suppliers, logistics service providers or customers. Users need to be able to personalise their view of the information according to their needs - customers want to see the status of their order, suppliers want to access the organisation's database to know when their customer is next likely to place a major order. Security is also important - if a company has differential pricing, it will not want customers to see price differences.

Supply chain visibility

Access to up-to-date, accurate, relevant information about supply chain processes for different stakeholders.



These requirements for delivering supply chain information imply the need for an integrated supply chain database with different personalised views for different parties. A typical integrated information systems infrastructure for delivering supply chain management is illustrated in Figure 6.10. It can be seen that applications can be divided into those for planning the supply chain and those to execute the supply chain processes. Case study 6.3 is a good example of how new technologies are used to collect demand data and transfer data between different databases and applications. A key feature of a modern supply chain infrastructure is the use of a central operational database that enables information to be shared between supply chain processes and applications. This operational database is usually part of an enterprise resource planning system such as SAP, Baan or Prism and is usually purchased with the applications for supply chain planning and execution. Some of the planning applications such as network simulation and

optimisation are more likely to be supplied by separate software suppliers. Information needed by managers to intervene in the supply chain process when problems occur is delivered as alerts or through continuous monitoring across secure private intranets or extranets used to link to partners.

Supply chain management implementation

The supply chain is becoming increasingly complicated because of the connected consumer. According to a KPMG report (2017):

In essence, the mission for any supply chain leader remains what it always was: to get the right product in front of the right consumer at the right time and for the right price. It's just that, in a world where shoppers can buy in-store, on a website, via their smartphone or, with the advent of the connected consumer, by pressing a button at home, ensuring that they won't run out of their favorite brands, that task has become exponentially more complicated. Even the delivery options are less straightforward: the consumer may want to collect it, receive it at home, at work, or have it sent to a locker (the preferred option in Germany).

Table 6.3

A SOSTACTM approach to supply chain management

Strategy element

SCM approach of Hughes *et al.* (1998)

Situation analysis

Gather the data:

- Internal assessment of current approaches to the supply chain

	• External analysis of marketplace trends and customer opportunities
Objective setting	Set the objectives • Definition of required target returns and release of shareholder value
Strategy	Frame the strategies: • Development of supply chain strategies to achieve these goals (actions)
Tactics	Prioritisation of operational improvement strategies and quick wins
Actions	Implement the change and challenge the thinking: • Formation of a supply chain strategy forum to assess the needs • Analysis of value-added, cost and cycle time of supply chain activities • Cascade of executive-led project groups to scrutinise key processes • Allocation of business development strategies to sponsor executives
Control	Measure the outcome: • Integration of supply chain measurement in corporation-wide reviews • Baselining to maintain pressure for performance delivery

Data standardisation and exchange

The difficulties of exchanging information between incompatible systems has been a barrier limiting the adoption of SCM. Successful online marketplaces such as Elemica within the chemical industry have been based on collaboration between a limited number of partners within a vertical sector. But for markets with a more diverse range of products, standardisation is more difficult.

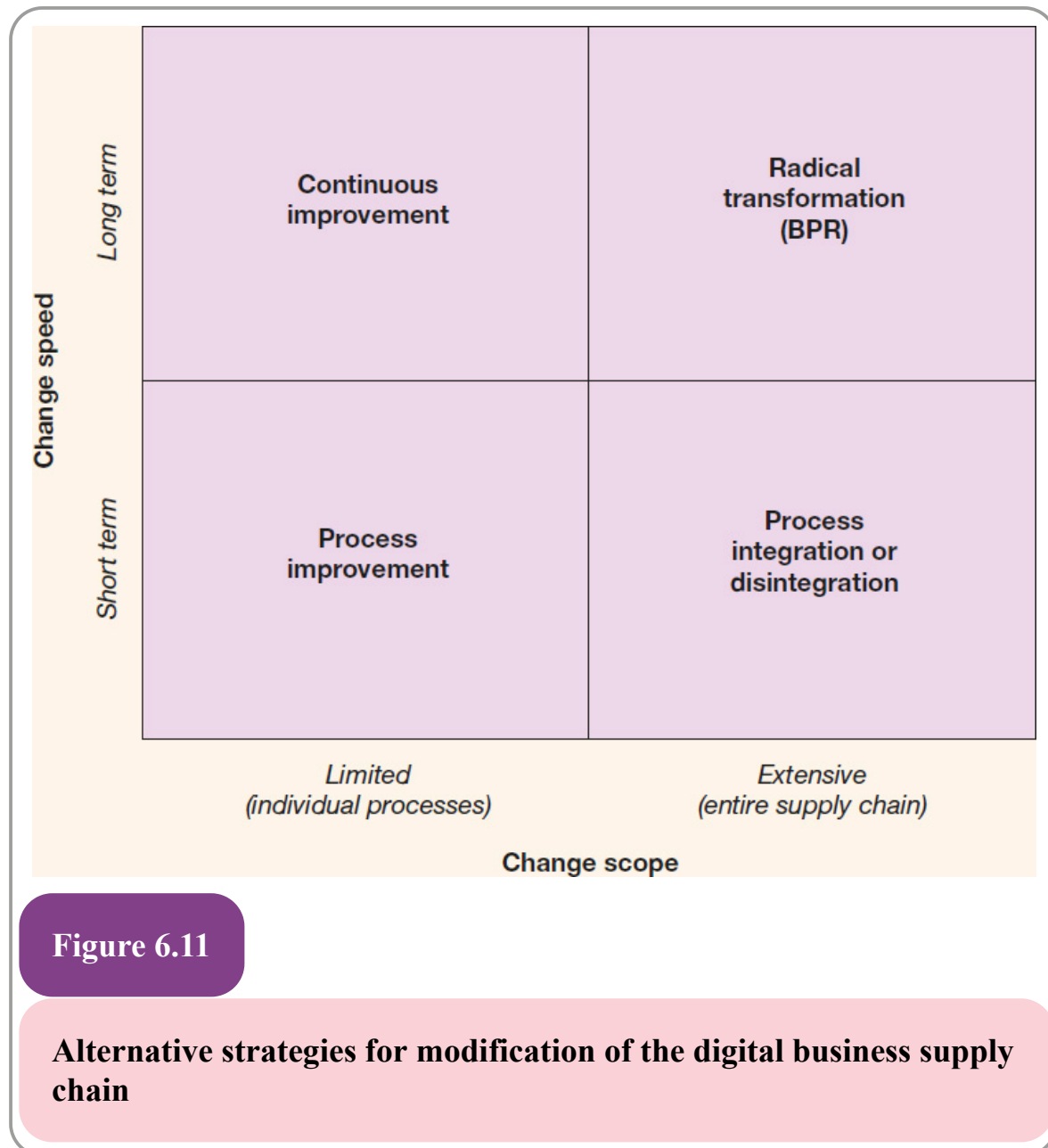
Some of the benefits of this approach for retailers identified by Schemm *et al.* (2007) include:

- order and item administration improved by 50%;
- coupon rejection at the checkout reduced by 40%;
- data management efforts reduced by 30%;
- improvement of on-shelf availability, with out-of-stock items reduced from 8% to 3%.

However, new technologies are starting to transform the supply chain (as discussed in Mini case study 6.1) - particularly robots in warehouses and artificial intelligence (AI). A network of AI systems can design the supply chain and automatically select the most effective chain.

The supply chain management strategy process

A strategic approach for supply chain management can also be defined using the SOSTACTM approach (referred to in Chapters 5 and 7). Table 6.3 summarises a SOSTACTM approach to supply chain management strategy development based on the guidance of Hughes *et al.* (1998). Table 6.3 implies a linear approach to strategic thinking, but, as was pointed out in



Chapters 4 and 5, an iterative approach is called for in which there is a joint development between the organisation, the suppliers and other third parties.

Strategies for supply chain improvement have been categorised by Hughes *et al.* (1998) according to the scope of change and the speed of change. Figure 6.11 illustrates four strategic options for the supply chain. The two strategies that are relatively limited in scope apply to individual processes such as procurement or outbound logistics and can be thought of as delivering improvement at an operational level. These may give short-term benefits while minimising the risk of more radical change. Conversely, where the scope of change is more extensive there is a greater risk, but also greater potential reward. These changes include complete re-engineering of processes or major changes to the supply chain.

Goal-setting and performance management for eSCM

In an earlier section we discussed the benefits of e-supply chain management. To manage eSCM effectively, the type of benefits such as time and cost savings and an improved service to customers should be developed into a performance management framework. Sambasivan *et al.* (2009) have consolidated performance measures described by other supply chain management researchers. In their measurement framework, they identified these categories of measures and gave examples of metrics within each:

- 1 Cost in supply chain:** Total cost, distribution cost, manufacturing cost, inventory cost.
- 2 Profitability:** ROI.
- 3 Customer responsiveness:** Time required to produce, number of orders delivered on time, number of units produced, fill rate, stockout probability, number of back orders, number of stockouts, customer response time, average lead time, shipping errors, customer complaints.
- 4 Flexibility:** Volume flexibility, delivery flexibility, mix flexibility, new product flexibility, planned order procedures, order lead time, customer order path.
- 5 Supply chain partnership:** Level and degree of information sharing, buyer-vendor cost-saving initiatives, extent of mutual cooperation leading to improved quality, extent of mutual assistance in problem-solving efforts, the entity and stage at which supplier is involved.
- 6 Production level metric:** Range of products and services, effectiveness of scheduling techniques, capacity utilisation.
- 7 Delivery performance:** Delivery-to-request data, delivery-to-commit date, order fill lead time, number of faultless notes invoiced, flexibility of delivery systems to meet customer needs, total distribution cost, delivery lead time.
- 8 Customer service and satisfaction:** Flexibility, customer query time, post-transaction measures of customer service, customer perception of service.
- 9 Supply chain finance and logistics cost:** Cost associated with assets and ROI, total inventory cost, total cash flow time.

10 Cost performance: Material cost, labour cost, machinery energy cost, machinery material consumption, inventory and WIP level, total productivity, direct labour productivity, fixed capital productivity, indirect labour productivity, working capital productivity, value-added productivity.

11 Internal and external time performance: Time to market, distribution lead time, delivery reliability, supplier lead time, supplier reliability, manufacturing lead time, standard run time, set-up time, wait time, move time, inventory turnover, order carrying-out time.

12 Quality performance: SPC measures, machine reliability, rework, quality system cost, inbound quality, vendor quality rating, customer satisfaction, technical assistance, returned goods.

13 Customer relationship management: Supplier relationship management and order fulfilment process, measures not discussed in paper.

To think about how eSCM can assist in improving performance in this area, complete Activity 6.3.

Activity 6.3

An eSCM performance management framework

Purpose

To highlight the benefits of eSCM and how improvements in performance and operational management of eSCM can be achieved.

Questions

In a large group, each pair of students should take one of the categories of measures and then discuss:

- 1 How information systems can help improve performance.
- 2 The constraints that may limit performance improvements.

Managing partnerships

A key element of restructuring of the supply chain is examining the form of relationships with partners such as suppliers and distributors. This need to review the form of partnership has been accentuated with the globalisation enabled by e-commerce. In this section we consider what forms these partnerships should take and how technology can be used to facilitate them.

Stuart and McCutcheon (2000) state that, typically, low cost is the main driver for partnership management in supply management (mainly upstream). According to these authors, the modification of supply chain partnerships usually follows what they describe as the ‘received wisdom which many practitioners are rigidly following’. This approach requires companies to:

- 1 focus on core competencies;
- 2 reduce their number of suppliers;
- 3 develop strong partnership relationships built on shared information and trust with the remaining suppliers.

Stuart and McCutcheon (2000) suggest that this approach may not suit all needs and the type of relationship required will be dependent on the ultimate objective. When reviewing partnerships, companies need to decide the options for the extent of their control of the supply chain process. Table 6.4 presents some strategic options for partnerships in order of increasing control and ownership over the process by the organisation. Option 1 is total insourcing of a particular process while 2 to 9 give varying degrees of outsourcing. There is also a continuum between collaborative partnerships where risks are shared (options 1 to 5) and competitive sourcing where market competition is used to achieve the best combination of price and value. Note that although an organisation may lose control of the *process* through outsourcing, a contractual arrangement will still enable them to exert a strong control over the *outputs* of the process.

From Table 6.4 it can be seen that as the depth of relationship between partners increases, the volume and complexity of information exchange requirements will increase. For a long-term arrangement, information exchange can include:

- short-term orders;
- medium-to-long-term capacity commitments;
- long-term financial or contractual agreement;
- product design, including specifications;
- performance monitoring, standard of product and service quality;
- logistics.

Table 6.4**Strategic options for partnerships**

Partnering arrangement	Technical infrastructure integration	Examples
1 Total ownership (more than 51% equity in company)	Technical issues in merging company systems	Purchase of Booker (distribution company) by Iceland (retailer). Since 1993 Cisco has made over 30 acquisitions (not all SCM related)
2 Investment stake (less than 49% equity)	Technical issues in merging company systems	Cisco has also made over 40 investments in hardware and software suppliers
3 Strategic alliance	Collaboration tools and groupware for new product development	Cable and Wireless, Compaq and Microsoft new digital business solution called a-Services
4 Profit-sharing partnership	As above	Arrangement sometimes used for IS outsourcing
5 Long-term contract	See above. Tools for managing service level agreements important	ISPs have performance and availability SLAs with penalty clauses
6 Preferred suppliers	Permanent EDI or Internet EDI links set up with preferred partners	Tesco Information Exchange

7 Competitive tendering	Tenders issued at intermediary or buyer's website	Buyer-arranged auctions (see Chapter 2)
8 Short-term contracts	As above	As above
9 Spot markets and auctions	Auctions at intermediary or buyer's website	Business-to-business marketplaces, e.g. http://bstock.com

For a short-term relationship, simple information on transactions only (such as the EDI purchase order example in Chapter 3) is all that is required.

Stuart and McCutcheon (2000) present a more simplified set of partnership choices. They suggest that the partnering option chosen should be dependent on the core objective. If this is cost reduction, then a relationship with competitive tension is required (equivalent to options 6 to 9 in Table 6.4). Alternatively, if the core objective is value-added benefits such as improved delivery speed, additional design features or the need for customisation, then the 'arm's-length' approach of options 6 to 9 may not be appropriate. In this case they suggest that a strategic alliance or cooperative partnership is the best option. Stuart and McCutcheon point out that the competitive advantages achieved through cost reduction are likely to be short-lived so companies will increasingly need to turn to value-added benefits. Each supplier has to be considered for whichever type of partnership is most appropriate.

Managing global distribution

Arnold (2000) suggests action that manufacturers should follow as they enter new overseas markets enabled by the Internet. The seven actions are:

- 1 Select distributors, do not let them select you.
- 2 Look for distributors capable of developing markets rather than those with new customer contacts.
- 3 Treat the local distributors as long-term partners, not temporary market-entry vehicles.
- 4 Support market entry by committing money, managers and proven marketing ideas.

- 5 From the start, maintain control over marketing strategy.
- 6 Make sure distributors provide you with detailed market and financial performance data.
- 7 Build links among national distributors at the earliest opportunity.

A Global Supply Chain Survey published by PwC (2013) gives a good summary of the current challenges and opportunities of improving competitiveness through supply chain management. The survey assesses the views of 500 supply chain experts in Europe, North America and Asia from across a range of industries. The next-generation supply chain is described as 'Efficient, Fast and Tailored, with speed and adaptability necessary to drive success'. However, only 45% of the participants agreed that supply chain is seen as a strategic asset in their company. The survey is useful since it reviews, for different industries, the geographical organisation for different supply chain functions. For example, in retail and consumer goods the pattern of global and local management of the supply chain is shown in Figure 6.12. In this sector, companies outsource about 7% of their planning, sourcing and enabling activities; only 30% of their manufacturing activities; and 10-55% of their delivery activities. This industry has the highest number of inventory turns (18.2) among 'leaders' and a better delivery performance than companies in any other industry. 'Laggards' in this industry have an average number of industry turns of 3.3.

Case study 6.4 explains how the use of RFID technology can help make supply chains more efficient.

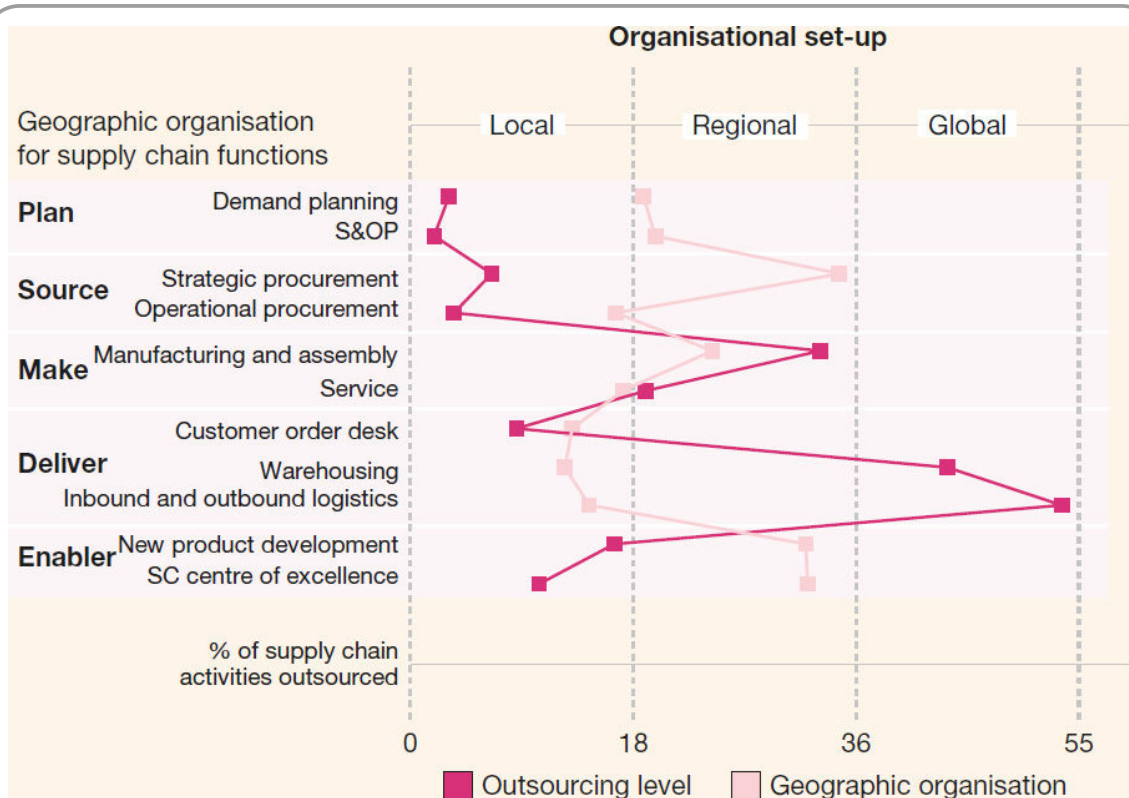


Figure 6.12

The balance between global, regional and local outsources of supply chain functions

Source: PwC (2013)

Case Study 6.4

RFID - keeping track starts its move to a faster track

Over the years, many techniques and technologies have been developed to make supply chains more efficient, but they often fail for the simple reason that it is notoriously difficult to get sufficient accurate information to be useful.

Radio frequency identification (RFID) technology tackles this problem using small radio tags to keep track of goods as they move through the supply chain.

Demand for these tags, which cost around 40 cents each, has soared because of mandates from US and European retailers - Walmart is the best known - and the US Department of Defense, which require large suppliers to put tags on pallets and cases as of 2005.

A clear sign that RFID is coming of age is that Nokia recently unveiled a kit to transform one of its phones into a mobile RFID reader. Despite the current hype, RFID is not a new technology. It was first used to identify aircraft in the Second World War and has been employed to tag cattle, collect road tolls and open doors for many years.

What is new is the application of RFID to supply chains.

The combination of RFID hardware with a unique number, called the electronic product code (EPC), enables businesses to associate a wealth of information with each tagged object. Not only is the information more detailed than a barcode, it can be read and updated using radio readers.

Early RFID technologies often delivered disappointing performance, but today's tags can be read reliably while packing cases are on a conveyor belt, or even if the case is hidden behind others.

'RFID is a barcode on steroids,' says Lyle Ginsburg, RFID specialist at Accenture, the management consultancy. 'It promises tremendous productivity gains because you do not have the human intervention and line-of-sight issues that you get with barcodes.'

Many experts believe the combination of RFID and EPC has the potential to transform supply chains: no more inventory counts, no more lost or misdirected shipments, and no more guessing how much is in the supply chain or on the store shelves.

'Just by knowing what is in the store and what is still in the back room, you can get much greater visibility on inventory', says Peter Regen, vice president of global visible commerce at Unisys, the US IT company.

Visibility is sorely lacking from real-world supply chains, which is why companies hold buffer stocks and build warehouses. This lessens the chance of running out, but the annual cost of holding all this inventory - in warehousing, opportunity cost and obsolescence - adds up to \$300 billion, just in the US.

AMR Research estimates around \$3 trillion of inventory is locked in US and European supply chains, which suffer order error rates of 20%. 'There is just too much waste in the supply chain', says Michael Witty, an analyst with Manufacturing Insights, part of the IDC research group.

Even if RFID only manages to reduce inventory levels or error rates by a few percentage points, the benefits to the economy in terms of extra working capital are substantial. In the case of an emerging economy such as China, RFID's potential is even greater.

China's supply chains have not kept pace with the country's rapid rise as a manufacturing nation and bottlenecks now threaten its export-led growth. The

Chinese government is keeping a close eye on RFID and officials recently attended a big RFID trade fair in the US.

'In China, there is a lot of interest in RFID, which has really surprised us', says Amar Singh, VP of global RFID initiatives at SAP, the German software giant. In part, this interest is driven by Chinese manufacturers' need to fall into line with the RFID mandates of western customers, most notably Walmart, which accounts for more than 10% of all US imports from China.

But the Chinese government also sees RFID as a strategic technology that will bring the country's supply chains up to the standards of developed nations. Several projects are under way to test the use of RFID in Chinese port and logistics operations.

In the past three years, ports have become more conscious about security. Shipping companies know they face delays and may be refused entry if they are carrying suspect containers. 'Before 9/11, there was not much concern about what was inside the container', says Scott Brown, general manager for cargo security at GE, the US engineering giant.

GE has developed a 'smart box' that uses RFID to track the movements of maritime containers when they enter ports and sensors to detect if the containers have been opened. The smart box technology has been tested in GE's domestic appliance business, which imports most of its products from China.

'The impetus for doing this was security, but there are also potential supply chain benefits', says Mr Brown. However, he admits that it is difficult to make a case for using RFID on these benefits alone.

This problem affects most RFID initiatives, according to Accenture's Mr Lyle. Unless forced to comply with an RFID mandate, many potential users prefer to wait. Standards are still evolving and the cost of the technology is still too high for many applications. Data security is another big issue.

Burt Kaliski, chief scientist at RSA Laboratories, a US security software firm, fears thieves could quickly discover how to destroy or change the information on RFID tags, while hackers could launch 'denial-of-service' attacks with the potential to create chaos in RFID-equipped supply chains.

But the main reason not to jump in yet is that, mandates aside, there are too many hurdles that need to be overcome before RFID can show a clear return on investment.

'The business case for RFID is very challenging', admits Mr Lyle.

Source: Geoffrey Nairn, Keeping track starts its move to a faster track, Financial Times, 20 April 2005. Reprinted with permission.

Question

Select a manufacturing sector and then evaluate the benefits and risks of applying RFID in this sector.

What is e-procurement?

Understanding the procurement process

Before the advent of e-procurement, organisational purchasing processes had remained similar for decades. Table 6.5 highlights the paper-based process. It can be seen that it involves the end-user selecting an item by conducting a search and then filling in a paper requisition form that is sent to a buyer in the purchasing department (often after authorisation by a manager, which introduces further delay). The buyer then fills in an order form that is dispatched to the supplier. After the item is delivered, the item and a delivery note are usually reconciled with the order form and an invoice and then payment occurs. Procurement also includes the transport, storage and distribution of goods received within the business - this is referred to as 'inbound logistics'.

IFO-Basware (2012) published a study of the global adoption of e-invoicing in businesses of all sizes in key markets, surveying 908 finance professionals from the US, UK, Sweden, Norway, Germany and Finland. Among the respondents, an average of around 5,000 invoices were received and sent each month.

The report showed a continuing increased adoption and use of e-invoicing and automated payment processing, with 73% of respondents using electronic invoicing to some degree in 2012, compared with 59% in 2011. Sixty-seven per cent of respondents believed that e-invoicing can help to achieve the goal of improving operational efficiencies, compared with 50% in 2011. Faster invoicing cycles and reduced invoice costs were the top two e-invoice benefits experienced by respondents.

However, the challenges of implementing e-invoicing solutions were highlighted by a continued reliance on rudimentary 'electronic documents'

and manual processes, with 58% of respondents receiving invoices as PDF attachments, with a further 13% avoiding automated processes altogether. There was a lack of focus on invoice scan-and-capture deployment; 53% of respondents still scanned and captured physical invoices in-house, with an additional 26% opting not to scan invoices at all. Overall, levels of fully automated e-invoicing were increasing but were in need of improvement. Only 15% of respondents stated that the majority of e-invoices were sent out electronically (up from 9% in 2011).

Activity 6.4 explains how the procurement process can be simplified through e-procurement.

Table 6.5

Process flow analysis for traditional procurement (typical cycle time, 5.5 days)

Task description	Chart symbols	Time
1 Search for goods	●→□D∇	1 hour
2 Fill in paper requisition	●→□D∇	10 min
3 Send to buyer	○→□D∇	1 day
4 In buyer's in-tray	○→□D∇	½ day
5 Buyer enters order number	●→□D∇	10 min
6 Buyer authorises order	●→□D∇	10 min
7 Buyer prints order	●→□D∇	10 min
8 Order copies to supplier and goods-in	○→□D∇	1 day
9 Delivery from supplier	○→□D∇	1 day
10 Order copy to accounts	○→□D∇	1 day
11 Three-way invoice match	●→□D∇	1 day
12 Cheque payment	●→□D∇	10 min

Note: See Table 6.6 on p. 285 for key to symbols

Understanding the benefits of the e-procurement process for a typical B2B company

Purpose

To highlight the tasks involved in organisational purchasing and to indicate the potential time savings from e-procurement.

Introduction

Table 6.5 illustrates a typical traditional procurement process using the flow process chart symbols. Note that this process is for relatively low-value items that do not need authorisation by senior managers. The timings are for a new item rather than a repeat buy, for which searching would not be required. Table 6.6 summarises the new e-procurement process.

Questions

- 1 Identify inefficiencies in the traditional procurement process (Table 6.5).
- 2 Identify process benefits to Table 6.5 that would be possible through the automation of a system through an email-based workflow system.
- 3 Summarise why the e-procurement process in Table 6.6 is more efficient.

Types of procurement

To understand the benefits of e-procurement, and also to highlight some of the practical considerations with introducing e-procurement, we need to briefly consider the different types of items that are obtained by procurement (what is bought) and types of ordering (how it is bought).

Table 6.6

Process flow analysis for new e-procurement (typical cycle time, 1.5 days)

	Chart symbols	Time
1 Search for goods	●⇄□D▽	20 min
2 Order on web	●⇄□D▽	10 min
3 Delivery from supplier	○→□D▽	1 day
4 Generate invoice	●⇄□D▽	10 min
5 Cheque payment	●⇄□D▽	10 min
Key to flow process chart symbols		
○ Process		
⇄ Transport		
□ Inspection		
D Delay		
▽ Inbound goods		

Let us start by reviewing what is bought by businesses. A B2B company might buy everything from steel for manufacturing products, through equipment to help machine products, to paper clips and pens for office use. There are two broad categories of procurement: those items that relate to manufacturing of products (production-related procurement) and operating or non-production-related procurement, which supports the operations of the whole business and includes office supplies, furniture, information systems, **MRO** goods and a range of services from catering to travel, and professional services such as consulting and training. Raw materials for the production of goods and MRO goods are particularly important since they are critical to the operation of a business. For the B2B company, they would include manufacturing equipment, network cables and computers to control the process.

Businesses tend to buy by one of two methods:

- *Systematic sourcing* - negotiated contracts with regular suppliers.
- *Spot sourcing* - fulfilment of an immediate need, typically of a commoditised item for which it is less important to know the credibility of the supplier.

Often items such as stationery are purchased repeatedly, either for identical items (straight rebuy) or with some changes (modified rebuy). E-procurement systems can make rebuys more straightforward.

Participants in different types of e-procurement

In Chapter 2 we showed how different types of online intermediaries, such as price comparison sites, changed the marketplace options for consumers. A similar understanding of new potential participants or actors in e-procurement is helpful. Riggins and Mitra (2007) identify eight types of intermediary that need to be reviewed to understand options for changes to procurement as part of developing an e-procurement strategy:

- *Traditional manufacturers*, which produce physical goods that are generally sold to other corporate customers.
- *Direct sales manufacturers*, similar to traditional manufacturers except that they bypass intermediaries and sell direct to end consumers via web or phone channels. These can include services companies. Direct sales manufacturers can be a cost-effective option for companies procuring business services such as flight bookings for staff.
- *Value-added procurement partners*, who act as intermediaries to sell products and services to other businesses; examples include travel agents and office solutions companies.

MRO

Maintenance, repair and operating (MRO) goods are supplies consumed in the production process that are not part of the finished product -e.g. office supplies, airline tickets, spare parts, etc.

- *Online hubs*, which are industry-specific vertical portals such as Elemica (**www.elemica.com**) that generate revenues via B2B exchanges.
- *Knowledge experts*, who produce information goods; for example, Econsultancy and Hitwise have subscription services with innovation alerts, best practice and statistics of Internet usage.
- *Online information services*, which provide unique information to end users that is either original in its development or provides a unique editorial perspective.
- *Online retailers*, which includes start-up digital businesses and more traditional multichannel retailers. Eurooffice (**www.eurooffice.co.uk**) is an Internet pureplay providing office goods at lower prices than traditional providers. Traditional providers in this space with a network of stores include Staples (**www.staples.co.uk**).
- *Portal communities*, which seek to aggregate different online information services into an integrated customer experience, such as personalised news stories, online bill presentment and payment and community discussion features. These overlap with the online information services and knowledge experts.

Knudsen (2003) and Smart (2010) have reviewed a simple classification of different types or applications of e-procurement. These are the main types:

- 1 E-sourcing.** Finding potential new suppliers using the Internet during the information-gathering step of the procurement process.
- 2 E-tendering.** The process of screening suppliers and sending suppliers requests for information (RFI) or requests for price (RFP).
- 3 E-informing.** Qualification of suppliers for suitability. It doesn't involve transactions but instead handles information about the supplier's quality, financial status or delivery capabilities.
- 4 E-reverse auctions.** Enable the purchasing company to buy goods and services that have the lowest price or combination of lowest price and other conditions via Internet technology.
- 5 eMRO and web-based ERP.** These involve the purchase and supply of products that are the core of most e-procurement applications. The software used manages the process of creating and approving purchasing requisitions, placing orders and receiving the goods or services ordered.

Drivers of e-procurement

Smart (2010) has completed a review of the business benefits of e-procurement through case studies of three companies. He identifies five key drivers or supplier selection criteria for e-procurement adoption related to improving:

- 1 Control** - improving compliance, achieving centralisation, raising standards, optimising sourcing strategy and improved auditing of data. Enhanced budgetary control is achieved through rules to limit spending and improved reporting facilities.
- 2 Cost** - improved buying leverage through increased supplier competition, monitoring savings targets and transactional cost reduction.
- 3 Process** - rationalisation and standardisation of e-procurement processes giving reduced cycle time, improved visibility of processes for management and efficient invoice settlement.
- 4 Individual performance** - knowledge sharing, value-added productivity and productivity improvements.
- 5 Supplier management** - reduced supplier numbers, improved supplier management and selection and integration.

Direct cost reductions are achieved through efficiencies in the process, as indicated by Tables 6.5 and 6.6. Process efficiencies result in less staff time spent in searching and ordering products and reconciling deliveries with invoices. Savings also occur due to automated validation of pre-approved spending budgets for individuals or departments, leading to fewer people processing each order, and in less time. It is also possible to reduce the cost of physical materials such as specially printed order forms and invoices.

There are also indirect benefits from e-procurement; Tables 6.5 and 6.6 show how the cycle time between order and use of supplies can be reduced. In addition, e-procurement may enable greater flexibility in ordering goods from different suppliers according to best value. E-procurement also tends to change the role of buyers in the purchasing department. By removing administrative tasks such as placing orders and reconciling deliveries and invoices with purchase orders, buyers can spend more time on value-adding activities. Such activities may include more time spent with key suppliers to improve product delivery and costs or analysis and control of purchasing behaviour.

A useful framework for evaluating the benefits of e-procurement and eSCM has been created by Riggins and Mitra (2007, Figure 6.13). This can also be used to review strategy since it highlights potential benefits in terms of process efficiency and effectiveness and strategic benefits to the company. Some of the main dimensions of value highlighted by the approach include:

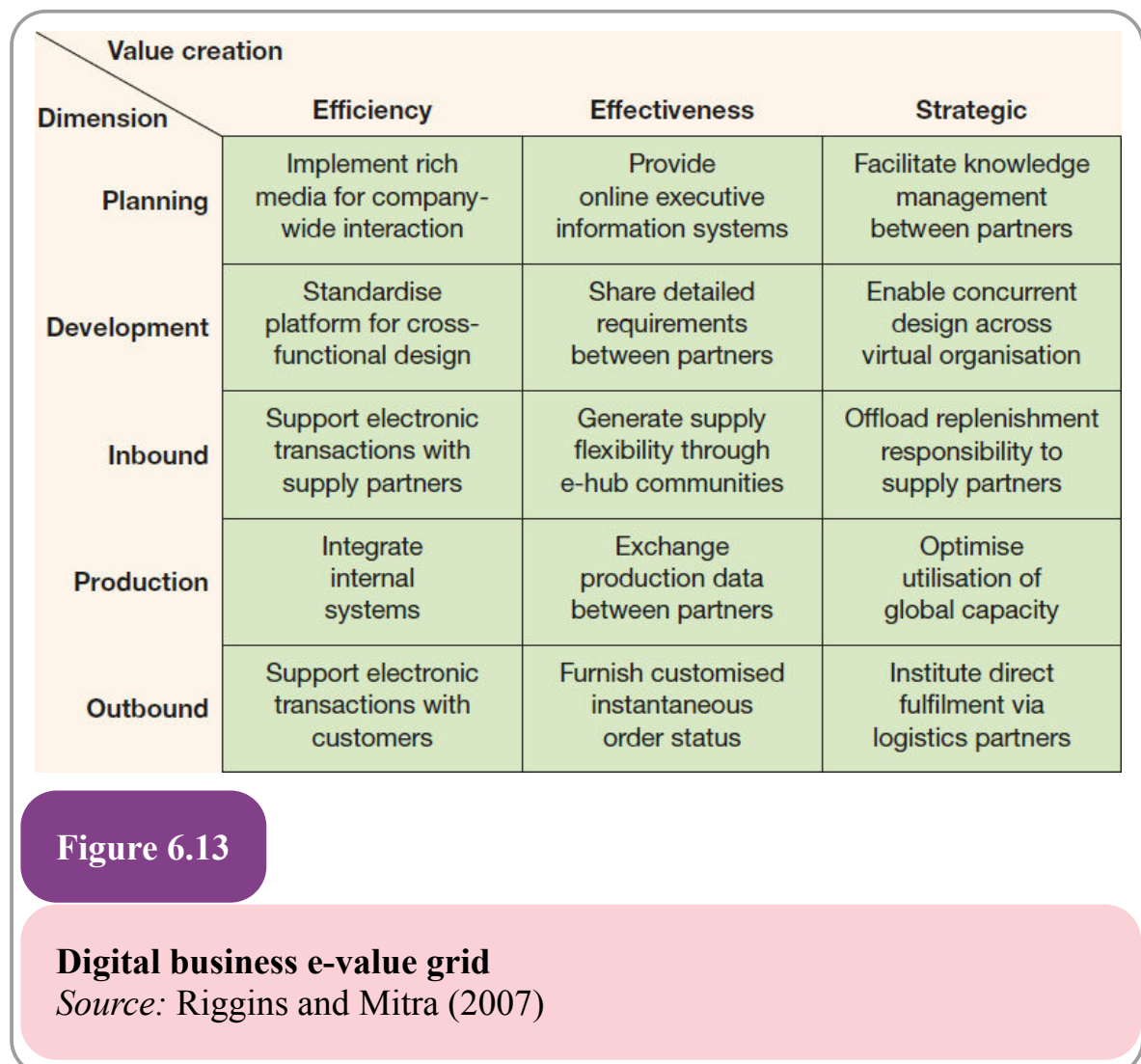
- *Planning* - this shows the potential for an e-procurement system to increase the quality and dissemination of management information about e-procurement.
- *Development* - e-procurement systems can potentially be incorporated early in new product development to identify manufacturing costs; this can help accelerate development.
- *Inbound* - this is the main focus of e-procurement, with efficiency gains from paperless transactions and more cost-effective sourcing possible through hubs or marketplaces. A strategic benefit is **vendor-managed inventory (VMI)**, where supply chain partners will manage the replenishment of parts or items for sale, as described in Case study 6.2.
- *Production* - the integration of systems managing manufacture with the procurement systems used to ensure that manufacturing is not limited by poor availability of parts.
- *Outbound* - this is management of fulfilment of products to customers. It is not usually managed by the e-procurement system, but demand must be evaluated by linking through these systems to achieve **efficient consumer response (ECR)**.

Vendor-managed inventory (VMI)

Supply chain partners manage the replenishment of parts or items for sale through sharing of information on variations in demand and stock levels for goods used for manufacture or sale.

Efficient consumer response (ECR)

ECR is focused on demand management aimed at creating and satisfying customer demand by optimising product assortment strategies, promotions and new product introductions. It creates operational efficiencies and cost savings in the supply chain through reducing inventories and deliveries.



Examples of the benefits of e-procurement

Case study 6.5 is a classic example illustrating many of the reasons why many companies are now introducing e-procurement. The primary drivers are efficiency and cost reduction. In many cases, the cost of ordering exceeds the value of the product purchased. In another example, BT's implementation of e-procurement enabled 95% of all its goods - including desktop computing, stationery, clothing, travel and agency staff - and so reduced the average purchasing transaction cost from £56 to £40 inside a year (IBF, 2008).

6.5 procurement

Honeywell improves efficiency through SCM and e-

Honeywell International is a Fortune 100 company that produces a variety of consumer products, engineering services and aerospace systems for a wide range of customers in both the consumer and B2B sector.

Honeywell's supply chain management

Improving the company's bottom-line performance requires effective supply chain management (SCM), i.e. making the right products the right way and making them available when needed. SCM and effective business optimisation requires integrated information between the supply chain execution process and the supply and distribution processes. Honeywell's enterprise resource planning (ERP) products integrate ERP systems, such as the system application programme (SAP) system, with Honeywell's Experian Process Knowledge System. This established a robust, bi-direction link to ERP systems to synchronise enterprise business systems, such as order entry and fiscal accounting, with process plant operations.

The following benefits are realised through the integration of Honeywell solutions with ERP and SCM systems:

- tighter supply chain by bringing production orders directly to plant-level scheduling systems;
- improved planning and financial analysis by reporting corrected inventories of products, such as liquid and gas products, instead of inconsistent raw measurements;
- improved product quality by distributing master recipes and product specifications for plant use;
- improved customer satisfaction by tracking product batch, along with a link to laboratory results;
- reduced unplanned maintenance by accurately reporting equipment run times to assess maintenance needs;

- increased visibility of key business goals such as on-time product shipments, excess inventory and capacity utilisation.

Honeywell uses ERP in almost each and every system, from accounts maintenance, promotional advertisements and performance appraisal to raising applications to the employee portal. Each and every stage of the supply chain is well defined and taken care of by the SAP-based ERP system. This helps with vendor/inventory management and employee knowledge management - all tracked on a real-time basis.

Honeywell e-procurement system

Honeywell has a very complicated system, particularly in the area of electronic segments, because it has items such as IC, resistors, diodes, transistors, amplifiers, filters, relays, etc., which are microscopic and need to be handled with care. The size of the inventory makes the job of housekeeping and keeping track of it far more difficult.

A team usually has to order more than 100 of these items and sometimes availability could be spread across more than seven countries. The procurement team needs to get back the orders, get the items from various locations across the globe and then send them in one complete package to the desired team. Each processing team has its own inventory management team and everyone is connected to similar teams globally via an intranet. The process includes many web transactions between various departments, where each component ordered undergoes several steps of approval, so that orders are safe, secured and authenticated.

Also, care has to be taken in the packaging and logistics system as the same items could have been ordered by several teams on the same day - sometimes delivered to the same place and departments but to different teams. Packing and delivering the right items on time, without mismatching small components with other similar orders, is important. Sometimes a package may contain hundreds of items and has to be delivered to a specific person who raised the order.

If the item ordered is out of stock, vendors need to be contacted to get the requirement fulfilled. These vendors can also access the same ERP package through extranet login IDs.

The e-procurement system deals with all aspects of purchasing electronic items - receiving, delivering, billing, invoice processing and shipping. The key benefits of using ERP in the procurement system are:

- buyers productivity increases;
- the system is organised and becomes predictable;
- accurate forecast of arrival of order beforehand;

- redundant data entry limited;
- shorter order-time cycle;
- lower inventories (lower taxes).

Questions

- 1 Why is the integration of Honeywell's SCM and e-procurement system important?
- 2 Given the scale of the purchasing operation at Honeywell, what benefits do you think the ERP has brought?
- 3 How are company efficiencies gained through e-procurement?

Focus on Estimating e-procurement costs

The general approach to estimating procurement costs is straightforward. First, we calculate the average procurement cost per item, then we multiply by the average number of requisitions. A report by Transmit (1999) provides some illustrations - typical medium-to-large companies issue between 1,000 and 5,000 requisitions a month and are spending between £600,000 and £3 million annually on the procurement process, based on the £50 median cost per item. In exceptional cases, the number of requisitions was between 30,000 and 40,000 per month. In these cases, the annual cost of procurement could be between £18 million and £43 million!

To calculate cost savings from e-procurement we perform the following calculation:

$$\text{Savings} = \text{No. of requisitions} \times (\text{Original cost} - \text{New cost})$$

The impact of cost savings on profitability

Debate 6.3

E-procurement cost savings

'The cost-saving benefits of e-procurement are theoretical rather than actual since only reduced headcount in procurement can result in savings.'

A study by Kluge (1997) suggested that cost savings achieved through e-procurement may have a significant effect on profitability. Activity 6.5 illustrates how the savings will vary between companies according to their buying characteristics. The largest savings and impact on profitability will typically be for manufacturing companies in which procurement is a major cost element and there are many requisitions for relatively low-value items. Service industries have lower potential for savings. The consequence for this is that there will be a wide variation in potential savings according to industry, as illustrated in Table 6.7.

To conclude this *Focus on* topic, a note of caution should be struck. Many of the models used to calculate savings and return on investment are, of course, only as good as the assumptions they make.

Barriers and risks of e-procurement adoption

Of course, there are also barriers to adoption of e-procurement. CIPS (2008) identifies the following issues for suppliers:

- competition issues, e.g. in exchanges using collaborative purchasing;
- possible negative perception from suppliers, e.g. their margins reduced further as a result of e-auctions;

Table 6.7

Procurement as a percentage of cost of goods sold for different industry sectors (estimates from Kluge, 1997)

Industry	Procurement costs as a percentage of cost of goods sold
Consumer electronics	60-70%
Mini and personal computers	50-70%
Consumer goods	50-70%
Automotive	50-60%
Pharmaceuticals	25-50%
Service industry	10-40%

e-procurement

Modelling cost savings and profitability arising from

Purpose

To explore the different characteristics of purchasing in organisations that will govern the scale of savings made through e-procurement.

Activity

Imagine you are a procurement manager, IS manager or consultant who needs to demonstrate the cost savings of e-procurement to a senior management team in order to obtain approval for investment in an e-procurement system. Develop a spreadsheet model for each of two hypothetical companies to demonstrate the case as follows:

- 1 Cost-saving calculations.** Using the input parameters for the two companies in Table 6.8, develop a spreadsheet model to calculate

traditional overall purchasing cost, new overall purchasing cost, percentage change in cost per order and percentage change in overall purchasing cost.

- 2 Profitability calculations.** Using input parameters of turnover, traditional purchasing costs, other costs and a 5% reduction in purchasing costs, as shown in Table 6.9, develop a model that calculates the profitability before and after introduction of e-procurement and also shows the change in profitability as an absolute (£) and as a percentage.
- 3** Analyse the sensitivity of the models to differences in volume of orders and values of purchases (Table 6.8) and the balance between traditional purchasing costs and other costs such as salaries and capital by using the input parameters (Table 6.9). Explain to the managers the typical characteristics of a company that will make significant changes to profitability from introducing e-procurement.

Table 6.8

Input parameters for cost-saving calculations for two companies

Input parameters (Company A)		Input parameters (Company B)	
Number of orders	25,000	Number of orders	2,500
Traditional cost per order (average)	£50	Traditional cost per order (average)	£50
New cost per order (average)	£10	New cost per order (average)	£10
Average value of order	£150	Average value of order	£1,500

Table 6.9

Input parameters for profitability calculations for two companies

Parameter	Company A	Company B

Turnover	£10,000,000	£10,000,000
Traditional purchasing costs	£5,000,000	£1,000,000
Other costs	£4,000,000	£8,000,000
Reduction in purchasing costs	20%	20%

- negotiated procurement benefits may be shared with other exchange users who may be competitors;
- creation of catalogues can be a long process and costly to suppliers;
- culture profile within organisations, e.g. resistance to change.

These barriers are specific to e-procurement. There are also more general limitations to digital business adoption mentioned in Chapters 1 and 4, such as the cost of implementation and managing change.

If the cost savings referred to earlier in the chapter are to be achieved, it may be necessary to redeploy staff, or in the worst case make them redundant. The threat of redundancy or redeployment is likely to lead to resistance to the introduction of the system and this needs to be managed. The purchasing manager will have to carefully explain the reasons for introducing the new system, emphasising the benefits to the company as a whole and how it should enable more variety to be introduced to the buying role.

Since the cost savings of e-procurement are achieved through empowerment of originators throughout the business to directly purchase their own items, there is a risk that some originators may take advantage of this. ‘Maverick’ or ‘off-contract purchasing’ occurs when items are ordered that are unnecessary or too expensive. Complete Activity 6.6 to review the mechanisms that can be used to reduce this risk.

Activity 6.6

Avoiding maverick purchasing

Purpose

To identify responses to problems of maverick purchasing.

Activity

To avoid maverick purchasing, businesses introducing e-procurement need to put safeguards into the e-procurement system. Think about the type of rules that could be written into an e-procurement system.

Implementing e-procurement

Implementing e-procurement has the challenges of change management associated with any information system. If the implementation can mirror existing practices, then it will be mostly straightforward, but many of the benefits will not be gained and the use of new technology often forces new processes to be considered. CIPS (2008) forcefully makes the case that some re-engineering will be required:

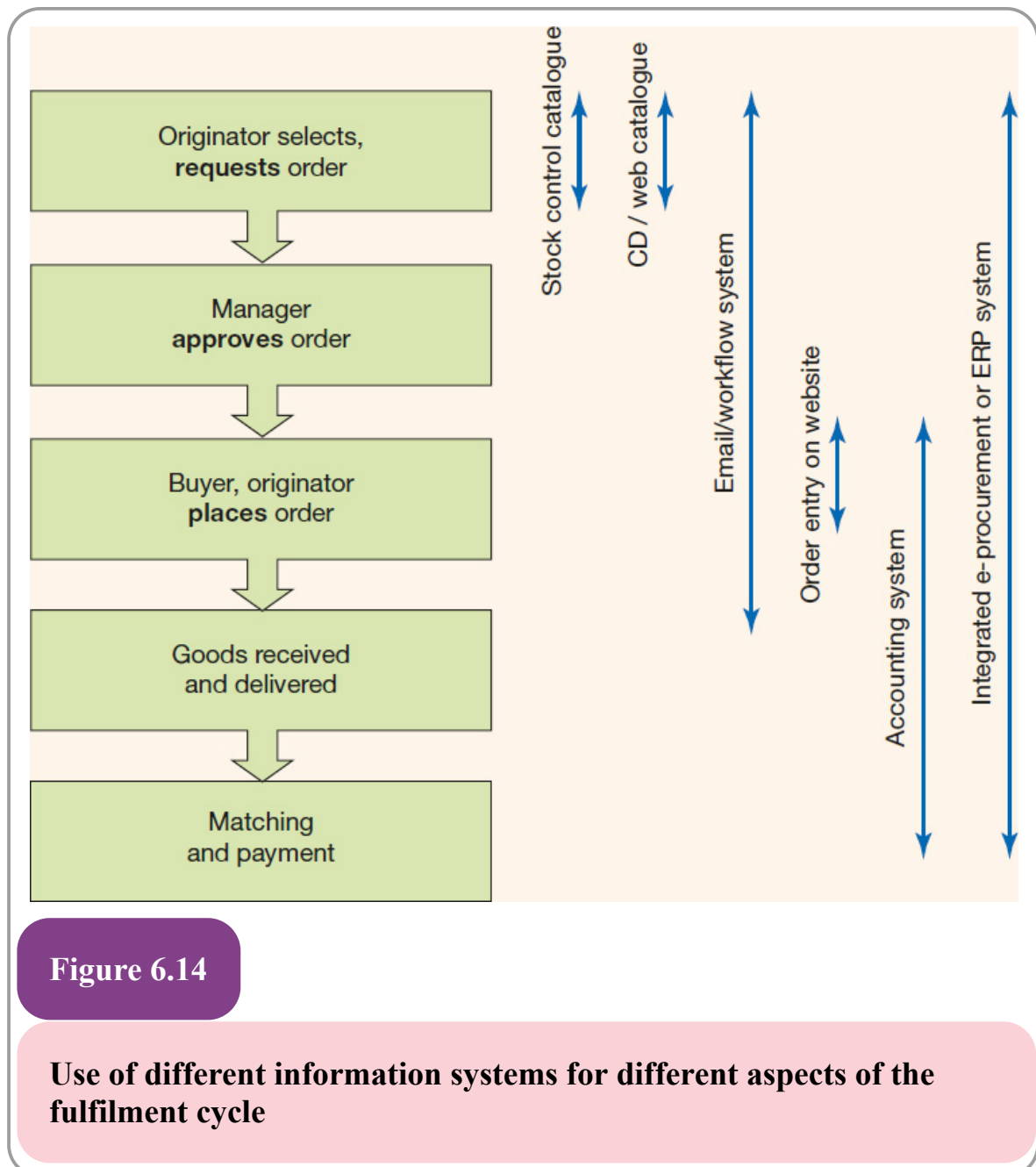
Organisations should not simply automate existing procurement processes and systems but should consider improving ways of working and re-engineering business processes prior to the implementation of eSourcing/eProcurement. Purchasing and supply management professionals should challenge established procurement practices to test whether these have evolved around a paper-based system and as such can be replaced. CIPS strongly recommends that, wherever possible, processes should be re-engineered prior to implementing ePurchasing.

To introduce e-procurement, the IS manager and procurement team must work together to find a solution that links together the different people and tasks of procurement shown in Figure 6.2. Figure 6.14 shows how different types of information system cover different parts of the procurement cycle. The different types of system are as follows.

- *Stock-control system* - this relates mainly to production-related procurement; the system highlights that reordering is required when the number in stock falls below reorder thresholds.
- *CD or web-based catalogue* - paper catalogues have been replaced by electronic forms that make it quicker to find suppliers.
- *Email- or database-based workflow systems* - these integrate the entry of the order by the originator, approval by manager and placement by buyer.

The order is routed from one person to the next and will wait in their inbox for actioning. Such systems may be extended to accounting systems.

- *Order entry on website* - the buyer often has the opportunity to order directly on the supplier's website, but this will involve rekeying and there is no integration with systems for requisitioning or accounting.



(i) *Accounting systems* - networked accounting systems enable staff in the *buying department* to enter an order, which can then be used by accounting staff to make payment when the invoice arrives. The IFO-Basware (2012)

global e-invoicing reports that automation is still limited, with around half of companies receiving email invoices with PDF attachments. Around a half receive XML e-invoices using a service provider and 14% with their own system.

(ii) *Integrated e-procurement or ERP systems* - these aim to integrate all the facilities above and will also include integration with suppliers' systems.

Companies face a difficult choice in achieving full-cycle e-procurement, since they have the option of trying to link different systems or purchasing a single new system that integrates the facilities of the previous systems. Purchasing a new system may be the simplest technical option, but it may be more expensive than trying to integrate existing systems and it also requires retraining in the system.

Integrating company systems with supplier systems

High cost and cycle-time benefits can be achieved by a company, through linking its systems with those of its suppliers. But if integrating systems within a company is difficult, then linking with other companies' systems is more so. This situation arises as suppliers will use different types of systems and different models for integration. There are three fundamental models for location of B2B e-commerce: sell-side, buy-side and marketplace-based (as explained in Chapter 2). These are summarised in Figure 6.15 and the advantages and disadvantages of each are summarised in Table 6.10.

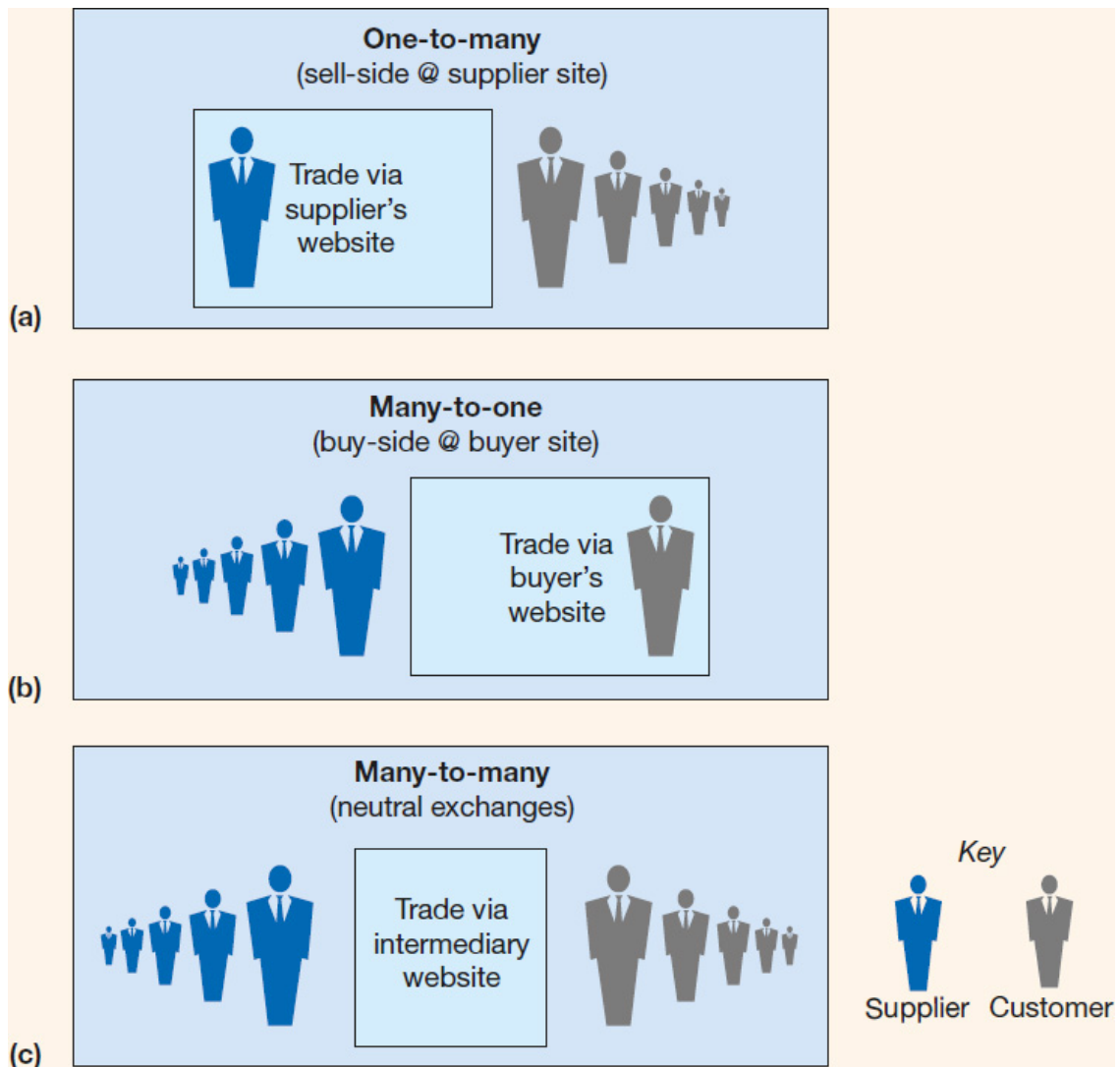


Figure 6.15

The three main e-procurement model alternatives for buyers

Table 6.10

Assessment of the procurement model alternatives for buyers

Procurement model	Advantages to	Disadvantages to
-------------------	---------------	------------------

	buyer	buyer
Sell-side e.g. many catalogue-based B2B suppliers such as www.rswww.com	• Searching • Onus of maintaining data on supplier	• Different interface on each site (catalogue and ordering) • Restricted choice • Poor integration with ERP/procurement systems • Limited purchase control • Onus of maintaining data is on buyer • Software licence costs • Retraining
Buy-side Private exchanges hosted by manufacturers and major suppliers to these manufacturers, e.g. solutions developed by www.opentext.com and ERP suppliers such as SAP and Oracle	• Simplicity - single interface • Wider choice than sell-side • Integration with ERP/procurement systems • Good purchase control • Simplicity - single interface • Potentially widest choice of suppliers, products and prices • Often unified terms and conditions and order forms	• Difficult to know which marketplace to choose (horizontal and vertical) • Poor purchase controls* • Uncertainty on service levels from unfamiliar suppliers • Interfacing with marketplace data format* • Relatively poor integration with ERP*
Independent marketplace e.g. www.ec21.com		

*Note that these disadvantages of the marketplace will disappear as marketplaces develop ERP integration.

Chapter 2 explained that companies supplying products and services had to decide which combination of these models would be used to distribute their products. From the buyer's point of view, they will be limited by the selling model their suppliers have adopted.

Figure 6.16 shows options for a buyer who is aiming to integrate an internal system such as an ERP system with external systems. Specialised e-procurement software may be necessary to interface with the ERP system. This could be a special e-procurement application or it could be middleware to interface with an e-procurement component of an ERP system. The e-procurement system can access price catalogues in two ways. Choice (a) is to house electronic catalogues from different suppliers inside the company and firewall. This traditional approach has the benefit that the data is housed inside the company and so can be readily accessed. However, electronic links beyond the firewall will be needed to update the catalogues, or this is sometimes achieved via delivery of a CD with the updated catalogue. Choice (b) is to use a **punchout catalogue** where access through the firewall is used to access catalogues either on a supplier site or at an intermediary site, ideally within a standard format. One of the benefits of linking to an intermediary site such as a B2B exchange is that this has done the work of collecting data from different suppliers and producing it in a consistent format.

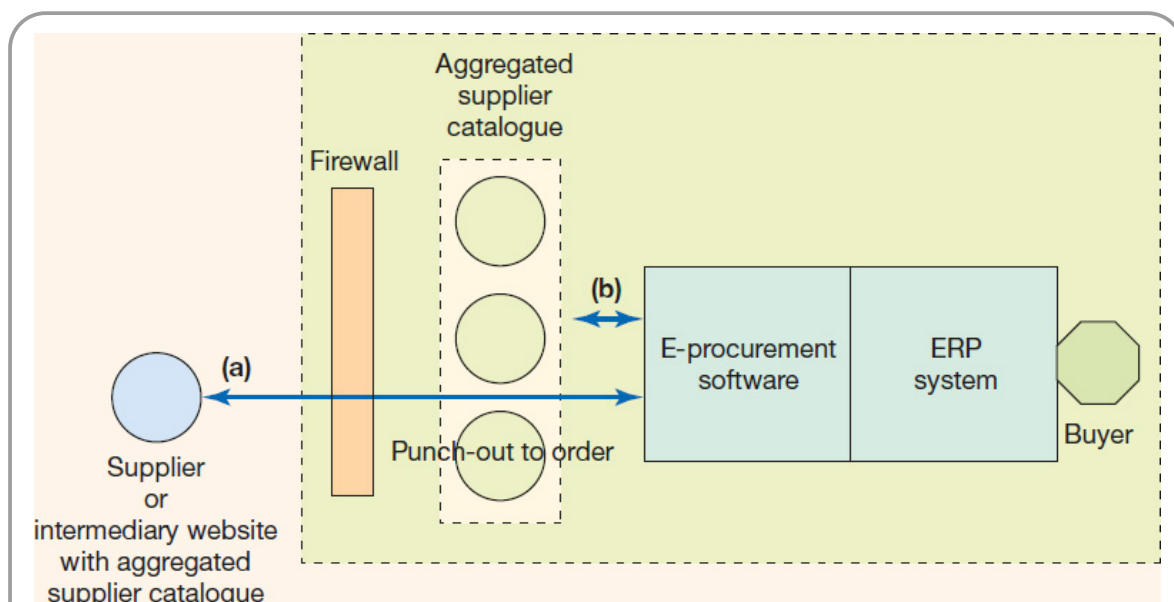


Figure 6.16

Integration between e-procurement systems and catalogue data

Punchout catalogue

A purchasing company accesses a dynamic real-time catalogue hosted by a supplier or intermediary containing detailed product information, pricing and product images.

Focus on B2B marketplaces

B2B electronic marketplaces, exchanges and hubs

Virtual locations with facilities to enable trading between buyers and sellers.

Private B2B exchanges

A manufacturer or major supplier to different manufacturers creates a portal that is used for managing all aspects of procurement.

Before 2000, B2B marketplaces were heralded as transforming B2B purchases; however, many have had difficulty in achieving sustainable business models, although we will see that there are examples of successful marketplaces in vertical industries, such as Elemica (www.elemica.com) within the chemicals industry.

Electronic B2B marketplaces are variously known as ‘marketplaces, exchanges or hubs’. Typically, they are intermediaries that are part of the *reintermediation* (Chapter 2, p. 51) phenomenon and are independent of buyers and suppliers.

Over the past few years a number of **private B2B exchanges** have developed. These are the buy-side exchanges referred to in Table 6.5. These are usually created by an individual manufacturer or supplier and include a ‘walled garden of suppliers’, i.e. everyone has to be approved as a member, although the forms to register as a supplier to bid in response to a particular request for quotation (RFQ) or to participate in a reverse auction are open to all, but with each vetted to avoid competitor involvement.

Types of marketplace

Kaplan and Sawhney (2000) developed a taxonomy of B2B marketplaces by applying existing classifications of corporate purchasing, namely *how* businesses buy (systematic purchasing or spot purchasing) and *what* businesses buy (manufacturing inputs or operating resource inputs). They identify four types of marketplace, shown in Table 6.11. Note that manufacturing-input marketplaces tend to be vertical marketplaces set up for a particular industry such as steel, construction or chemicals, while operating resources tend to be horizontal marketplaces offering a range of products to differing industries.

Table 6.11

Types of B2B marketplaces identified by Kaplan and Sawhney (2000) with examples

How businesses buy	What businesses buy	
	Operating resources	Manufacturing resources
Systematic sourcing	MRO hubs www.ariba.com	Catalogue hubs www.jaggaer.com
Spot sourcing	Yield managers www.upwork.com	Exchanges www.plasticsnet.com

Source: Adapted and reprinted by permission of *Harvard Business Review* from table on p. 99 from 'E-hubs: the new B2B marketplaces', by Kaplan, S. and Sawhney, M., in *Harvard Business Review*, May-June 2000. Copyright © 2000 by the Harvard Business School Publishing Corporation, all rights reserved.

Debate 6.4

The future for independent B2B marketplaces

'There is no future for independent B2B marketplaces, exchanges or hubs; instead those sponsored by buyers in the industry will be dominant.'

Kaplan and Sawhney introduce another variation in the way marketplaces differ. This is according to whether the marketplace is direct between buyer and seller or whether some degree of aggregation occurs. In the same way that, for consumer products, volume discounts can be achieved through combining the purchasing power of individuals, this can also occur for small and medium businesses. Kaplan and Sawhney refer to this type of aggregation as 'reverse aggregation', since aggregation is back through the supply chain from customers to suppliers. They also identify 'forward aggregation', in which the supply chain operates through distributors in a traditional way. A distributor of PCs from different manufacturers aggregates supply from the different manufacturers.

Marketplaces can also act as value chain integrators when they combine supply chain functions.

According to Sawhney (1999), companies looking to create exchanges typically specialise in one of the four sectors of Table 6.11, although some B2B marketplaces do offer both catalogue hubs and exchanges.

Some marketplaces also differ in the range of services they offer - some may go beyond procurement to offer a range of services that integrate the supply chain. Sawhney (1999) refers to these marketplaces as '[metamediaries](#)'. An example of a metamediary is Plastics Net (www.plasticsnet.com), which provides services of supplier evaluation, procurement, tracking, marketplace information, certification monitoring, auctions and catalogues.

Metamediaries

Third parties that provide a single point of contact and deliver a range of services between customers and suppliers.

The future of e-procurement

Software (intelligent) agents

Software programs that assist humans by automatically gathering information from the Internet or exchanging data with other agents based on parameters supplied by the user.

In the future, some suggest that the task of searching for suppliers and products may be taken over by **software agents** that have defined rules or some degree of intelligence that replicates intelligence in humans. On the Internet, agents can already be used for marketing research by performing searches using many search engines, and in the future they may also be used to search for products or even to purchase products. Agents work using predetermined rules or may learn rules using neural network techniques. Such rules will govern whether purchases should be made or not.

According to Gartner (Van der Meulen, 2017), basic artificial intelligence (AI) or machine learning is being used by some procurement applications to help automate the process of collecting, classifying and analysing an organisation's expenditure to help identify savings or find new ways to create better efficiency. In the next stage on from this, some procurement technology vendors are creating cognitive procurement advisors (CPAs) and virtual personal assistants (VPAs) to help increase automation and efficiency.

Magnus Bergfors, research director at Gartner, says:

A procurement VPA can improve the end-user experience of traditional procurement tools and increase spend under management by guiding people to the correct purchasing tool. A CPA can provide summaries, recommendations and advice in everything from supplier assessments and performance management, to risk management and compliance.

Tucker and Jones (2000) also review the use of intelligent agents for sourcing. They foresee agents undertaking evaluation of a wide range of possible alternative suppliers based on predefined quantitative selection criteria including price, availability and delivery. They believe the technology is already available - indeed, similar intelligent software is used for making investments in financial markets. What is not clear is how the software will assess trustworthiness of a supplier or their competence as a business partner or associate.

Summary

- 1 Supply chain management involves the coordination of all supply activities of an organisation from its suppliers and partners to its customers. Upstream supply chain activities (procurement and inbound logistics) are equivalent to buy-side e-commerce and downstream supply chain activities (sales, outbound logistics and fulfilment) correspond to sell-side e-commerce.
- 2 There has been a change in supply chain management thinking from a push-orientated supply chain that emphasises distribution of a product to passive customers to a pull-orientated supply chain that utilises the supply chain to deliver value to customers who are actively involved in product and service specification.
- 3 The value chain concept is closely allied to supply chain management. It considers how value can be added both between and within elements of the supply chain and at the interface between them.
- 4 Supply chains and value chains can be revised by disaggregation or reaggregation. Disaggregation may involve outsourcing core supply chain activities to external parties. As more activities are outsourced, a company moves towards becoming a virtual organisation.
- 5 Benefits of deploying digital technologies include:
 - more efficient, lower-cost execution of processes;
 - reduced complexity of the supply chain (disintermediation);
 - improved data integration between elements of the supply chain;
 - reduced costs through ease of dynamic outsourcing;
 - enabling innovation and customer responsiveness.
- 6 Procurement activities involved with purchasing items from a supplier include purchasing, but also transportation, goods-in and warehousing before the item is used. E-procurement involves the electronic integration of all procurement activities.
- 7 E-procurement is intended to achieve reduced purchasing cycle time and cost savings, principally through reduced staff time spent in procurement and lower inventory.
- 8 Options for introducing e-procurement include:
 - Sell-side e-procurement - purchase direct from a seller's website that is typically not integrated with the buyer's procurement system.

- Buy-side e-procurement - integration of sellers' catalogues with the buyer's procurement system.
 - Marketplace procurement - trading through an intermediary with many suppliers (may or may not be integrated with buyer's procurement system).
- 9** Organisational hurdles involved with the introduction of e-procurement include redeployment or redundancy of staff and overcoming distrust in suppliers.

Exercises

Self-assessment questions

- 1 Define supply chain management; how does it relate to:
 - logistics;
 - the value chain concept;
 - value networks?
- 2 What is the difference between a push orientation to the value chain and pull orientation?
- 3 How can information systems support the supply chain?
- 4 What are the key strategic options in supply chain management?
- 5 Outline the two main methods by which companies purchase supplies and the two broad divisions of supplies needed.
- 6 Outline the main reasons for e-procurement.
- 7 Explain the differences between the buy-side, sell-side and marketplace options for e-procurement.
- 8 What are the organisational implications of introducing e-procurement?

Essay and discussion questions

- 1 How does electronic communications enable restructuring of the value chain network?

- 2 'The concept of a linear value chain is no longer tenable with the advent of electronic commerce.' Discuss.
- 3 Select an industry of your choice and analyse how business-to-business exchanges will change the supply chain.
- 4 'In the end business all comes down to supply chain vs supply chain.' Discuss.
- 5 Select a retailer of your choice and analyse their strategy for management of the upstream and downstream supply chain.
- 6 For an industry sector of your choice, review the current alternative options for, and business adoption of B2B marketplaces available to, purchasing and IS professionals and attempt to forecast the situation in five years.
- 7 Critically assess the claims made for cost savings and increased profitability available from e-procurement.
- 8 'Fully automated end-to-end procurement is not practical.' Discuss.

Examination questions

- 1 Explain how the concepts of disintermediation, reintermediation and countermediation apply to the supply chain.
- 2 You have recently been appointed as supply chain manager for a pharmaceutical company. Summarise the main digital applications you would consider for communicating with your suppliers.
- 3 How has the increase in electronic communications contributed to the development of value networks?
- 4 Explain how information technologies can be employed for different elements of a purchaser-supplier relationship.
- 5 Using industry examples, summarise three benefits of using e-commerce to streamline the supply chain.
- 6 What are the differences and similarities of using information technology to support:
 - (a) the upstream supply chain;
 - (b) the downstream supply chain?
- 7 Describe the different elements of an e-procurement system.
- 8 Draw a diagram that summarises the main differences in processes within an organisation for traditional procurement and e-procurement.

- 9 Outline the main benefits of e-procurement.
- 10 Explain the differences between buy-side and sell-side e-procurement. Give an advantage for each type for the purchasing company.
- 11 Explain how cost savings may arise from e-procurement.

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Web links

Ariba.com (www.ariba.com) Guidelines on B2B e-commerce procurement from this 'spend management provider', which is now part of SAP.

Chartered Institute of Logistics and Transport (www.ciltuk.org.uk) News, policy and guidance from the UK's membership organisation for professionals involved in the movement of goods and people and their associated supply chains.

Manhattan Associates (www.manh.com/resources) White papers and thought leadership from specialist SCM consultants.

Oracle SCM introduction (www.oracle.com/applications/scm/) Oracle is one of the biggest providers of SCM applications; here they introduce the benefits of their approach.

Supply Chain Digital (www.supplychaindigital.com) A portal dedicated to supply chain enhancement.

The Chartered Institute of Procurement and Supply (CIPS) (www.cips.org) Industry body in UK. Has research and best-practice advice on e-procurement, including a 2006 survey on SME attitudes to e-commerce.

The Logistics web guide on About.com (<http://logistics.about.com>) Also has collection of links on the benefits and disadvantages of e-procurement.

Toolbox for IT (<http://erp.ittoolbox.com>) Specialist portal containing news and articles about ERP (enterprise resource planning systems), one application of which is supply chain management.

7

Digital marketing

Chapter at a glance

Main topics

- What is digital marketing?
- Digital marketing planning
- Situation analysis
- Objective setting
- Strategy
- Tactics
- Actions
- Control

Focus on...

- Characteristics of digital media communications
- Digital branding

Case studies

- 7.1 The evolution of easyJet's online revenue contribution
- 7.2 Dell gets closer to its customers online

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Assess the need for separate digital business and digital marketing strategies
- Create an outline digital marketing plan intended to implement the digital marketing strategy
- Distinguish between marketing communication characteristics of traditional and new media

Management issues

The issues for managers raised in this chapter include:

- How do we integrate traditional marketing approaches with digital marketing?
- How can we use digital communications to differentiate our products and services?

- How do we redefine our marketing and communications mixes to incorporate new media?

Links to other chapters

The main related chapters are:

- *Chapter 4* provides underpinning on the macro-economic factors that support digital marketing planning
- *Chapter 5* has a section on eight strategic decisions that is relevant to this chapter
- *Chapter 8* details practical implementation of digital marketing plans through promotional techniques and customer relationship management
- *Chapter 10* discusses how ‘traditional’ marketing planning and implementation models are being disrupted by agile approaches and what companies can do to convert more visitors to customers

Introduction

In Chapter 5 we explored approaches to developing digital business strategies. In this chapter we examine digital marketing strategy and planning separately since, in many organisations, a distinct digital marketing plan integrated with other marketing plans will often be developed by the marketing or e-commerce team. The digital marketing plan will help define specific digital marketing objectives and develop strategies to ensure that resources are deployed to take advantage of the marketing opportunities provided by the Internet, and to counter its threats. Digital marketing is focused on how a company and its brands use its website, together with other digital platforms and media such as mobile sites and apps, search and social media and email marketing to interact with its audiences in order to add value to its brand and so meet its marketing goals. The Real-world case study on Country Attire shows the range of activities that need to be managed in marketing for an e-commerce site offering consumer retail.

Figure 7.1 shows that there are three main operational processes involved in digital marketing. These are:

- **Customer acquisition.** Attracting visitors to a website or promoting a brand by reaching customers via search engines or advertising on other sites.

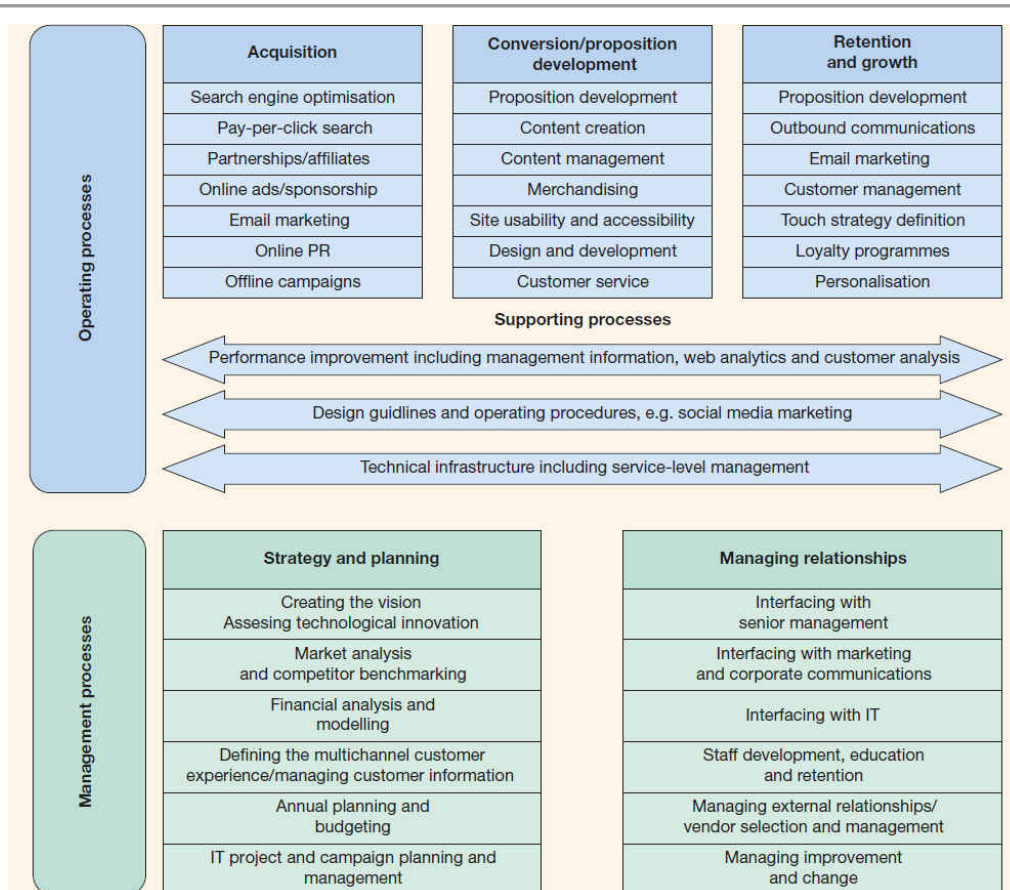


Figure 7.1

The operational and management processes of digital marketing

Source: 'Econsultancy' (2008)

- **Customer conversion.** Engaging site visitors to achieve the outcomes the site owner seeks, such as leads, sales or browsing of other content.
- **Customer retention and growth.** Encouraging repeat usage of digital channels and, for transactional sites, repeat sales.

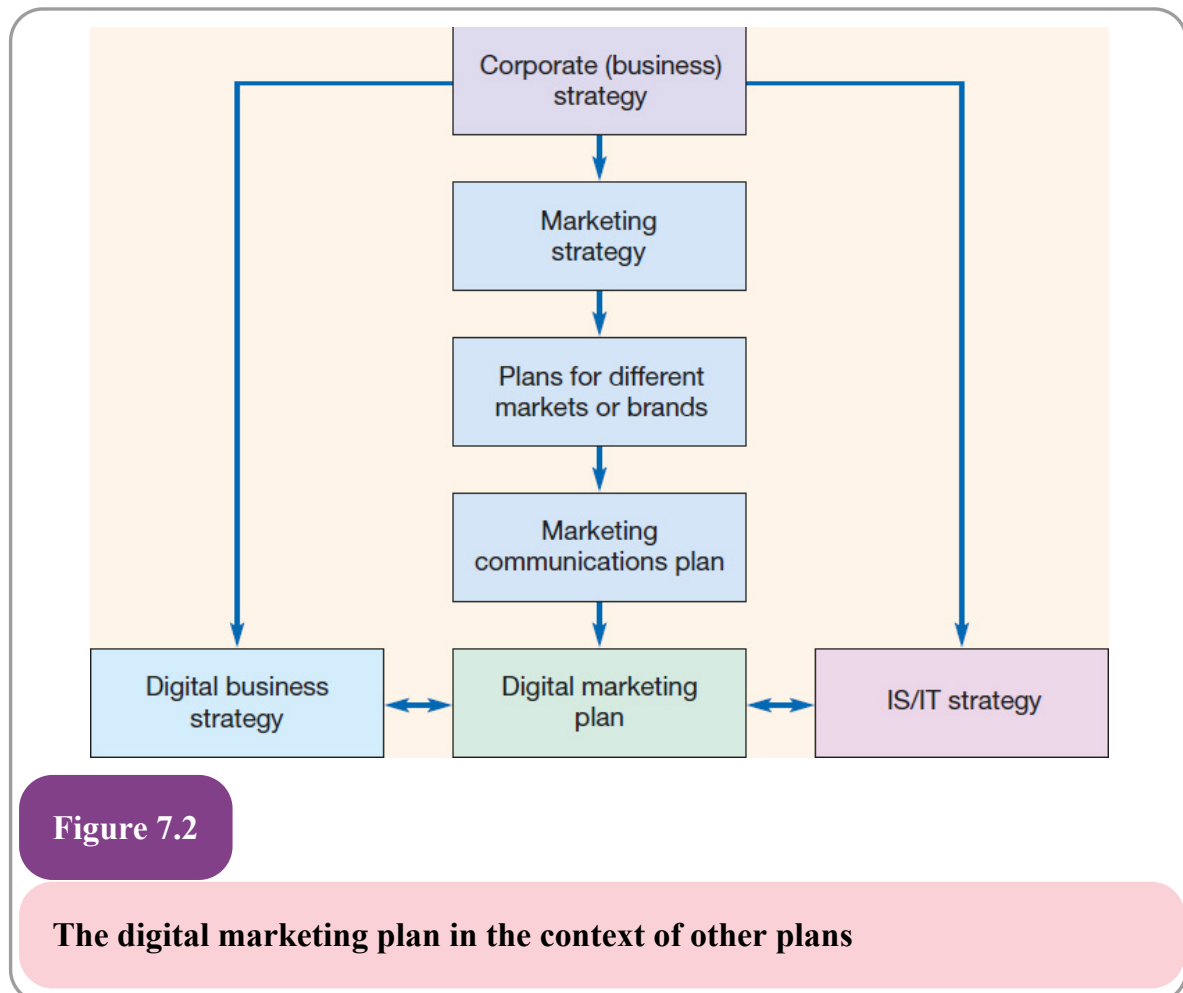
RACE (Figure 8.6, p. 378) is a similar framework that has been developed at SmartInsights.com to help marketers manage and improve the commercial value that their organisations gain from digital marketing. In this chapter we focus on the management issues involved in developing a strategy for digital marketing. The digital marketing strategy will naturally be informed by the wider business and marketing objectives and digital business strategy to ensure it supports the goals of the organisation. Figure 7.2 shows that typically there is a hierarchy of plans in an organisation, with the corporate or business plan informing the marketing plan and this then informing specific marketing plans for different products or geographical markets. There is usually a separate communications plan that details the marketing campaigns that need to be executed to achieve the marketing objectives from the marketing plan.

Chapter structure

This chapter assumes limited previous knowledge of marketing, so we start with an introduction to the marketing and digital marketing concept and explain its relationship to digital business. A structured approach to developing a digital marketing plan is then described (which is based on a similar strategy process model to that introduced in Chapter 5). The chapter also reviews how marketing concepts such as target marketing, the marketing mix and branding may require different treatment when we are using digital media.

Examples of typical ways in which organisations align their digital marketing strategy with business strategy are provided by Sultan and Rohm (2004) who, based on a study of three organisations, identify these strategic objectives:

- *Cost reduction and value chain efficiencies.* For example, B2B supplier AB Dick used the Internet to sell printer supplies to reduce service calls.



- *Revenue generation.* Reebok uses the Internet for direct licensed sales of products such as treadmills, which do not have strong distribution deals.
- *Channel partnership.* Partnering with distributors using extranets.

- *Communications and branding*. Book publisher Penguin Random House provides an online community called Underlined (www.getunderlined.com) for aspiring writers.

Real-world Digital Business

The Country Attire interview

Digital strategy development at Country Attire

Country Attire (www.countryattire.com) is an independent online retailer that offers timeless British heritage and contemporary fashion brands such as Joules, Barbour, Hackett, Woolrich, Hunter, Clarks and Ted Baker. The company was founded in 2006 by husband-and-wife team, Richard and Jenny Parker and has steadily grown to win various Etail awards and has been listed on the Sunday Times Fast Track 100 several times. The company currently operates out of its 36,000-square-foot UK premises in Bredbury, Stockport.

In this interview, Jenny Parker, co-founder & marketing director, explains her approach to digital marketing.

The interview

Q. What is your process for creating a digital marketing strategy?

Jenny Parker, Country Attire: One of our challenges is that we're a 'multi-brand, multi-gender and multi-category' online business; this means that we're quite often dictated by the brands we stock around our activity, campaigns and collections. Over the years, our business has evolved to provide a premium end-to-end service, whilst focusing on margin growth. Our strategy is established by firstly looking at the level of investment by brand, which is then split out by collection and gender. We then look at the historical performance of these brands by marketing channel and analyse what proportion of our budget can be spent.

Our next stage is to segment the data by brand and see if any offline engagement can be utilised. Finally, we look at how the brands are going to appeal to different customers and their digital behaviour, to try and align ourselves with their creative and messaging. We continually assess performance and work to a tight return on investment (ROI), which varies according to marketing channel.

Q. How do you define your e-commerce strategy?

Jenny Parker, Country Attire: Customer research and profiling plays a key role in our approach. We are continuously personalising the customer journey, tailoring their experience to expectations. For example, we have identified four main UK consumer types, the Dapper Fashionista, Urban Country-ites, Canny Conformist and Core Active Customer.

One of our core competencies is to provide an exceptional and personal customer service; we are delighted to say that we have an overall Trustpilot score of 9.7 out of 10, based on over 32,000 reviews. Some of the other service elements we offer our customers are: exclusive items or collections from key brand partners, free UK returns, same-day dispatch up to 4 p.m., and live stock availability.

We take a multichannel, i.e. online and offline, approach to marketing. The digital channels we utilise are: PPC and Remarketing, SEO, content generation, social media, social advertising, influencer outreach and email - including basket and browsing abandonment. We don't utilise many offline channels, these tend to be panel inserts, direct mail and door drops.

Q. How do you manage conversion rate improvements and the implementation of new features on the site?

Jenny Parker, Country Attire: As I mentioned before, we continually assess the performance of the marketing channels we use to make sure our budget is working effectively. Some of the key tools we use to do this are A/B and Multivariate testing (MVT), using experimentation roadmaps for agile marketing and recording user behaviour by undertaking user journey analysis.

Q. What is your process for getting the right investment in marketing channels?

Jenny Parker, Country Attire: Our approach is very ROI focused and we always look at the cost per acquisition (CPA) per channel. We also measure the customer lifetime value (CLV) and attribution per channel to conversion,* as we have a high average order value (AOV) and an elongated customer buying cycle for certain brands. We're currently trialling new technology to help us accurately calculate these metrics and use them to benchmark future improvements. Country Attire is a seasonal business, so an agile marketing approach is paramount. We also have strict control of our overall marketing spend, to circa 9% of gross turnover - capped.

**Note: CLV is covered in more detail in Chapter 8 and agile marketing and conversion-rate optimisation are covered in more detail in Chapter 10, under 'growth hacking. _)*

What is digital marketing?

Digital marketing has been described simply as 'achieving marketing objectives through applying digital technologies and media' (Chaffey and Ellis-Chadwick, 2016). This succinct definition helps remind us that it is the results delivered by technology that should determine investment in digital marketing, not the adoption of the technology!

Marketing defined

We need to return to an original definition of the topic to more fully understand what digital marketing involves. The definition of marketing by the UK's Chartered Institute of Marketing is as follows:

Marketing is the management process responsible for identifying, anticipating and satisfying customer requirements profitably.

This definition emphasises the focus of marketing on the customer, while at the same time implying a need to link to other business operations to achieve this profitability. In this chapter, and in Chapter 8, we will focus on how digital channels can be used to achieve the processes implied by this statement:

- *Identifying* - how can the Internet be used for marketing research to find out customers' needs and wants?
- *Anticipating* - we have seen that anticipating the demand for digital services (the online revenue contribution) is key to governing the resource allocation to digital business (Chapter 5).
- *Satisfying* - a key issue for digital marketing is how to achieve customer satisfaction through the digital channel. This raises issues such as is the site easy to use, does it perform adequately, what is the standard of associated customer service and how are physical products dispatched?

Mini case study 7.1 gives a great example of how companies can use digital techniques to fulfil marketing aims. We introduced crowdsourcing in Chapter 4, where we defined it as 'utilising a network of customers or other partners to gain insights for new product or process innovations and to potentially help promote a brand'.

One type of crowdsourcing is 'crowdfunding', which is generally used for financing a project or venture by raising small amounts of money from lots of different people. However, some brands are using crowdsourcing beyond just raising money - they are using these platforms to drive innovation and tap into the feedback and ideas of an engaged community (i.e. conducting market research and identifying audiences).

Mini case study 7.1 ready-made distribution network

Firebox uses crowdfunding platform to tap into a ready-

Innovative and design-led e-commerce company Firebox used crowdfunding platform Kickstarter to sell a pair of giant pufferfish slippers. The company offered a 'retail package' of 30 pairs of discounted slippers -one pair to each of the first people who pledged £20 to back the campaign. This approach provided Firebox with a platform to test response to its new product idea and provided a ready-made distribution network.

Firebox also managed to get Its company message across to a new group of potential customers. Its Kickstarter campaign included the following copy:

*We are **Firebox.com**, Shop for the Unusual.*

We're an innovative, design led, independent online retailer based in the heart of London. We create, source and sell an eclectic mix of exclusive, original and unusual products. This is why we love Kickstarter. Over the past few years we have followed and backed dozens of Kickstarter projects, many of which even ended up being sold on our site.

We also develop our own products in house, and inspired by the Kickstarter community we've decided to launch our next big idea here! We'd love like-minded people to come on the journey with us.

The company had a fundraising target of £7,000; consumers who took part in the campaign were entitled to early-bird discounts, multi-buy discounts and bundles with other best-selling Firebox products, such as its Mystery Box.

The campaign ended up exceeding its £7,000 target and had 601 backers who pledged a total of £20,482 to help bring the project to fruition.

Smart Insights (2010) identifies six different classes of interactive online feedback tools at <http://bit.ly/smartfeedback>, which digital businesses can use to understand and identify customer needs and perceptions as part of marketing:

- 1 Website feedback tools.** These provide a permanent facility for customers to feed back via prompts on every page. They are run continuously to enable continuous feedback, including ratings on page content, but also products and services. SmartInsights.com use Kampyle (www.kampyle.com).
- 2 Site user intent-satisfaction surveys.** These tools measure the gap between what the user had hoped to do on the site and what they actually achieved. An example of this can be found at iPerceptions (iPerceptions.com).
- 3 Crowdsourcing product opinion software.** This is broader than web feedback, enabling customers to comment about potential new services. This is the approach used by Dell in IdeaStorm (www.ideastorm.com), and similar forums are available through UserVoice (www.uservoice.com). Some customers will also feed back on the website experience or customer experience off-site in a forum, of which GetSatisfaction (www.getsatisfaction.com) is the best known.
- 4 Simple page or concept feedback tools.** Again a form of crowdsourcing, these tools give feedback from an online panel about page layout, messaging or services. Tools such as Qualaroo (www.qualaroo.com) can be used to ask specific questions on what visitors are looking for from a company's services.
- 5 General online survey tools.** These tools, such as Zoomerang (www.zoomerang.com) and SurveyMonkey (www.surveymonkey.com), enable companies to survey their audience at a low cost.
- 6 Site exit-intent survey tools.** These services rate 'intent' (i.e., reasons for visiting a site) against satisfaction. Tools such as 4Q from Iperceptions (www.iperceptions.com/en/4q) and Dynamic Yield's Exit Intent Survey

(www.dynamicyield.com/template/exit-intent-survey/) provide invaluable insight on the gap between desired and actual experiences on a website or in a mobile app.

The term ‘Internet marketing’ was widely used to refer to an external perspective of how the Internet can be used in conjunction with traditional media to acquire and deliver services to customers. Nowadays, **digital marketing** is the most common term used, which refers to any use of technology to achieve marketing objectives and has an external and an internal perspective. This is more consistent with the concept of digital business, which involves managing both internal and external digital communications.

Inbound marketing

Marketing professionals commonly refer to this new approach to marketing based on digital media as **inbound marketing** (introduced in Chapter 1). Inbound marketing is considered powerful because advertising wastage is reduced. Content and search marketing can be used to target prospects with a clearly defined need - they are proactive and self-selecting. But this is a weakness since marketers may have less control than in traditional communications where the message is pushed out to a defined audience and can help generate awareness and demand. Advocates of inbound marketing such as Dharmesh Shah and Brian Halligan argue that content, social media and search marketing do have a role to play in generating demand.

Content marketing

Success in inbound marketing requires exceptional, compelling content to attract visitors to a site and then engage them. Different content types such as videos and buyers’ guides on e-commerce sites can help attract visitors through search engines and, since engaging content is more likely to be shared within social media, encourage visitors to a site. To emphasise the importance of content marketing to gaining permission to communicate through email, encouraging sharing and ongoing engagement through websites and social media, the concepts of content marketing and content strategy have developed to describe best-practice approaches. Today, by ‘content’ we refer to the combination of static content forming web pages, but also dynamic rich-media content that encourages interaction. Videos, podcasts, user-generated content and interactive product selectors should also be considered as content that should be refined to engage issues.

You can see the challenge that content strategy presents, since today there are so many different types of content delivered in different forms to different places on different access platforms, yet it is increasingly important to engage customers in social media.

The definition suggests these elements of content management that need to be planned and managed:

- 1 **Content engagement value.** Which types of content will engage the audience - is it simple product or services information, a guide to buying product, or a game

to engage your audience? Examples of content to engage, helping to lead to an enquiry and then sale, are shown in the resources section of management consulting company Bain & Company (Figure 7.3).

Digital marketing

Achieving marketing objectives through use of electronic communications technology.

Inbound marketing

The consumer is proactive in actively seeking out information for their needs and interactions with brands are attracted through content, search and social media marketing.

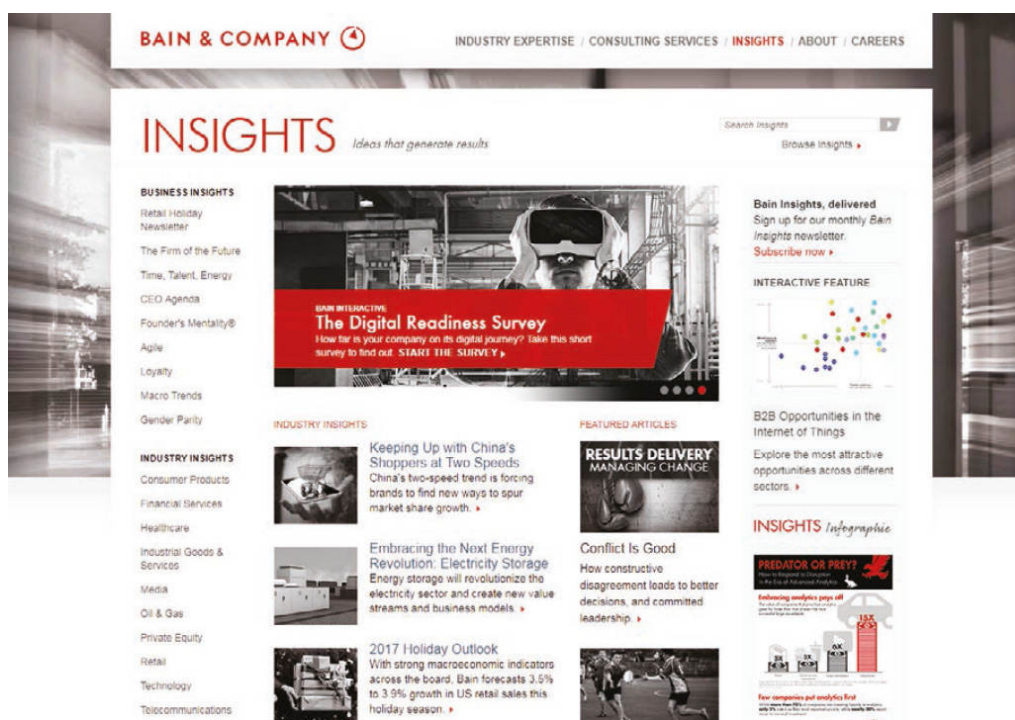


Figure 7.3

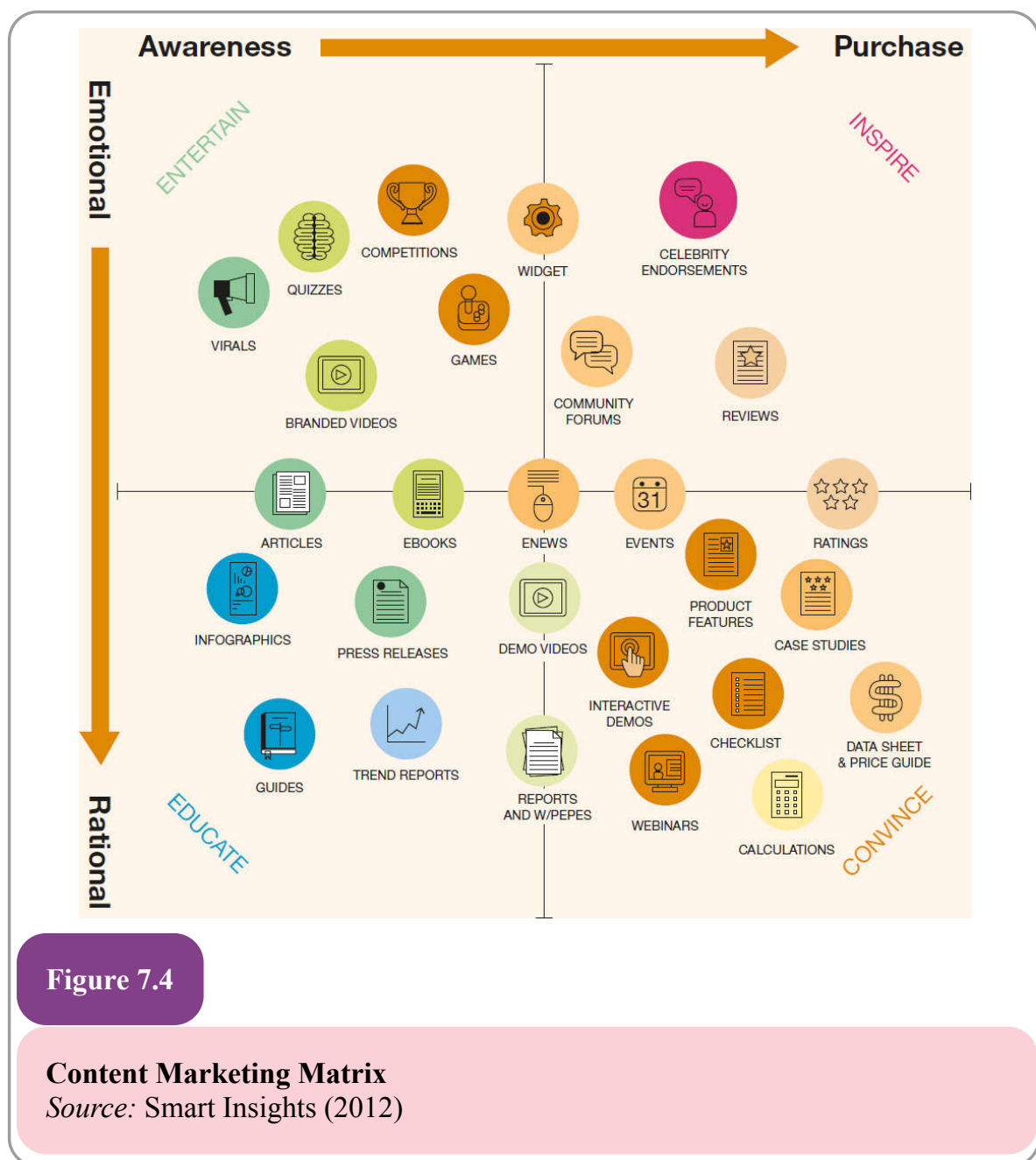
Bain & Co. (www.bain.com) resources section demonstrates B2B content marketing

- 2 Content media.** Plain text, rich media such as Flash or rich Internet applications or mobile apps (see Chapter 3), audio (podcasts) and hosted and streamed video. Even plain text offers different format options, from HTML text to ebook formats and PDFs.
- 3 Content syndication.** Content can be syndicated to different type of sites through feeds, APIs, microformats or direct submission by email. Content can be embedded in sites through widgets displaying information delivered by a feed.

4 Content participation. Effective content today is not simply delivered for static consumption, it should enable commenting, ratings and reviews. These also need to be monitored and managed, both in the original location and where they are discussed elsewhere.

5 Content access platform. The different digital access platforms such as desktops and laptops of different screen resolution and mobile devices. Paper is also a content access platform for print media.

To review how content can best support digital marketing, one of the authors of this book, Dave Chaffey, developed the Content Marketing Matrix with Dan Bosomworth of Smart Insights (Figure 7.4). Activity 7.1 explains how this can be used to identify the right content types.



Using the Content Marketing Matrix to audit and improve content effectiveness

We recommend the Content Marketing Matrix as a key technique to review current use of content marketing and to identify new types of content.

Purpose

The matrix is structured to help you think through the dimensions of different content based on how an audience could find content valuable and what you're trying to achieve as a business.

Activity

Complete this process to review a company's use of different types of content to support marketing:

- 1 Review current use of content within the company through plotting different content types on the grid.
- 2 Repeat this review for two to three competitors (direct or indirect), again plotting on the grid.
- 3 Brainstorm future content types possible.
- 4 Define criteria for investing in content (e.g. generating reach, helping conversion, existing customers).
- 5 Use your criteria from Step 4 to prioritise the two or three types of content needed to trial in content campaigns.

No answer provided in accompanying web materials.

Digital marketing planning

Digital marketing plan

A plan to achieve the marketing objectives of the digital business strategy.

A **digital marketing plan** is needed, in addition to a broader digital business strategy, to detail how sell-side objectives of the digital business strategy will be achieved through marketing activities such as research and communications. Since a digital marketing plan is based on the objectives of the marketing strategy, there is overlap between the elements of each approach, particularly for environment analysis, objective setting and strategic analysis. Figure 7.2 shows how digital marketing

activities will inform the digital business strategy which, in turn, will inform the digital marketing plan.

We will use a strategy process model for digital marketing planning (similar to that introduced in Chapter 5). In this chapter we use the SOSTAC™ framework developed by Paul Smith (1999), which summarises the different stages that should be involved in a marketing strategy, from strategy development to implementation (Figure 7.5):

- Situation - where are we now?
- Objectives - where do we want to be?
- Strategy - how do we get there?
- Tactics - how exactly do we get there?
- Action - what is our plan?
- Control - did we get there?

Measurement of the effectiveness of digital marketing is an integral part of the strategy process in order to assess whether objectives have been achieved. The loop is closed by using the analysis of web analytics data (Chapter 10) metrics collected as part of the control stage to continuously improve digital marketing through making enhancements to the website and associated marketing communications.

We will now review the six elements of the SOSTAC™ approach to digital marketing planning. (The overlap between this coverage and that in Chapter 5 is minimised by cross-referencing between these chapters.)

Is a separate digital marketing plan required?

If there is a specific resource for digital marketing activities such as a digital marketing or e-commerce manager, then he or she will be responsible for the digital marketing plan.

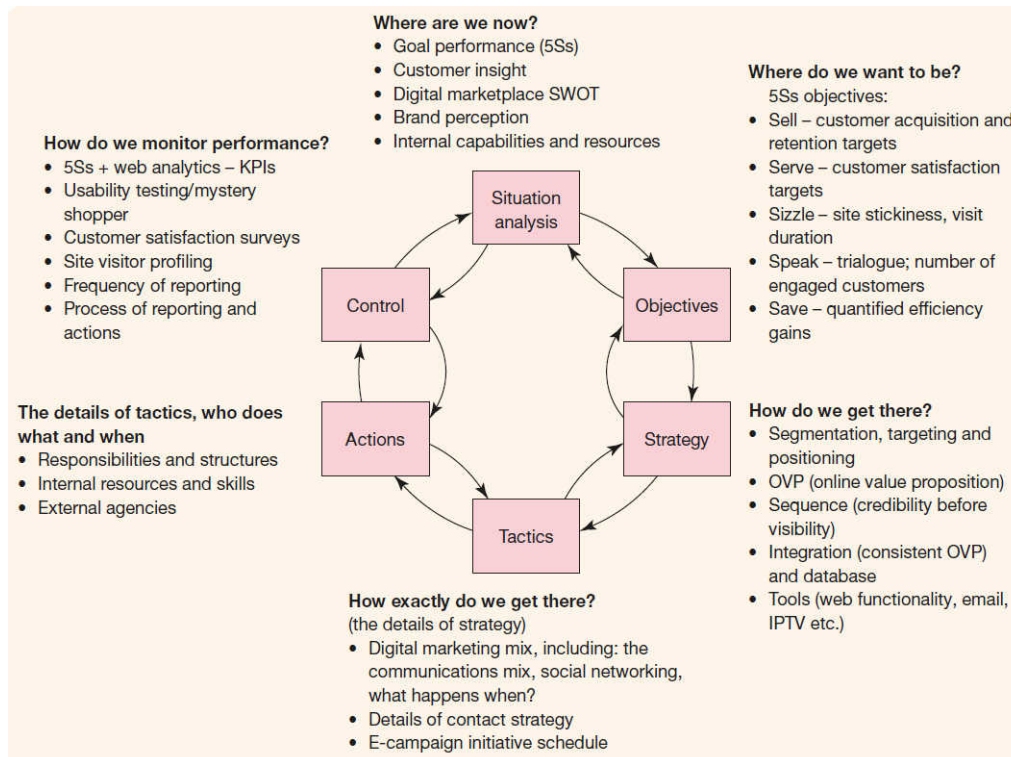


Figure 7.5

PR Smith's SOSTAC® Planning Framework www.SOSTAC.org

Source: Smith, P.R. (2018) SOSTAC® Guide to your Perfect Digital Marketing Plan, published by PR Smith Marketing Ltd. www.PRSmith.org. More information on PR Smith's SOSTAC® visit www.SOSTAC.org

However, where there is no identified responsibility for digital marketing, which is still the case in many small and medium organisations, there is likely to be no digital marketing plan. This often occurs when marketing managers have limited resources or other priorities and a lack of recognition that a separate digital marketing plan is valuable.

The following problems are typical and commonplace when there is no clear planning or control for digital marketing:

- 1 Customer demand for online services will be underestimated if this has not been researched and it is under-resourced and no (or unrealistic) objectives are set to achieve online marketing share.
- 2 Existing and start-up competitors will gain market share if insufficient resources are devoted to digital marketing and no clear strategies are defined.
- 3 Duplication of resources will occur- for example, different parts of the marketing organisation purchasing different tools or using different agencies for performing similar online marketing tasks.

- 4 Insufficient resource will be devoted to planning and executing digital marketing and there is likely to be a lack of specific specialist digital marketing skills, which will make it difficult to respond to competitive threats effectively.
- 5 Insufficient customer data are collected online as part of relationship-building and these data are not integrated well with existing systems.
- 6 Efficiencies available through online marketing will be missed- for example, lower communications costs and enhanced conversion rates in customer acquisition and retention campaigns.
- 7 Opportunities for applying online marketing tools such as search marketing or email marketing will be missed or the execution may be inefficient if the wrong resources are used or marketers don't have the right tools.
- 8 Changes required to internal IT systems by different groups will not be prioritised accordingly.
- 9 The results of online marketing are not tracked adequately on a detailed or high-level basis.
- 10 Senior management support of digital marketing is inadequate to drive what often needs to be a major strategic initiative.

Debate 7.1

Is a distinct digital marketing plan necessary?

'A separate digital marketing plan is not necessary as part of the marketing planning process - digital marketing can and should be integrated into existing marketing plans.'

However, managers responsible for a substantial investment in a website and associated digital marketing communications will naturally want to ensure that the correct amount of money is invested and that it is used effectively. For these reasons and to avoid the ten problems noted above, many leading adopters of e-commerce do have a distinct or integrated digital marketing plan.

For smaller organisations, the digital plan need not be exhaustive - a two-page summary aligning objectives and outlining strategies may be sufficient. The important thing is to set clear objectives and strategies showing how the digital presence should contribute to the sales and marketing process. Specific initiatives that are required, such as search marketing, email marketing or features of a website redesign, can be specified.

In the longer term, once an organisation has successfully defined its approaches to digital marketing, it is likely that a separate digital marketing plan *will not* need to be developed each year since digital channels can be considered as any other communications medium and integrated into existing communications plans.

Situation analysis

The aim of **situation analysis** is to understand the current and future environment in which the company operates, so that strategic objectives are realistic in light of what is happening in the marketplace. Figure 7.6 shows the inputs from situation analysis that inform the digital marketing plan. These mainly refer to a company's external environment.

The study of an organisation's online environment was introduced in Figure 2.2, where it was noted that there was the immediate (micro-)environment of customers, competitors, suppliers and intermediaries and a broader (macro-)environment of social, legal, political, economic and technological characteristics. Situation analysis will involve consideration of all of these factors and will form the basis for defining objectives, strategies and tactics. Consideration of the SLEPT or macro-environment factors is a major topic (covered in Chapter 4). In this chapter we will concentrate on what needs to be analysed about the more immediate marketplace in terms of customers, competitors, intermediaries and market structure. An internal audit of the capability of the resources of the company such as its people, processes and technology also needs to take place.

SWOT analysis (introduced in Chapter 5 for an organisation's digital channels) can be used to summarise the range of analyses covered in this section. Figure 7.7 gives an example of a SWOT analysis, which has been taken one step further to include various strategic alternatives (SO/WO/ST & WT strategies). This type of matrix is called a TOWS analysis.

Customer demand analysis

A key factor driving digital marketing and digital business strategy objectives is the current level and future projections of customer demand for e-commerce services in different market segments (see 'Strategic analysis', Chapter 5, p. 196). This will influence the demand for products online and this, in turn, should govern the resources devoted to different online channels. **Demand analysis** examines current and projected customer use of each digital channel and different services within different target markets. It can be determined by asking for each market:

Situation analysis

Environment analysis and review of internal processes and resources to inform strategy.

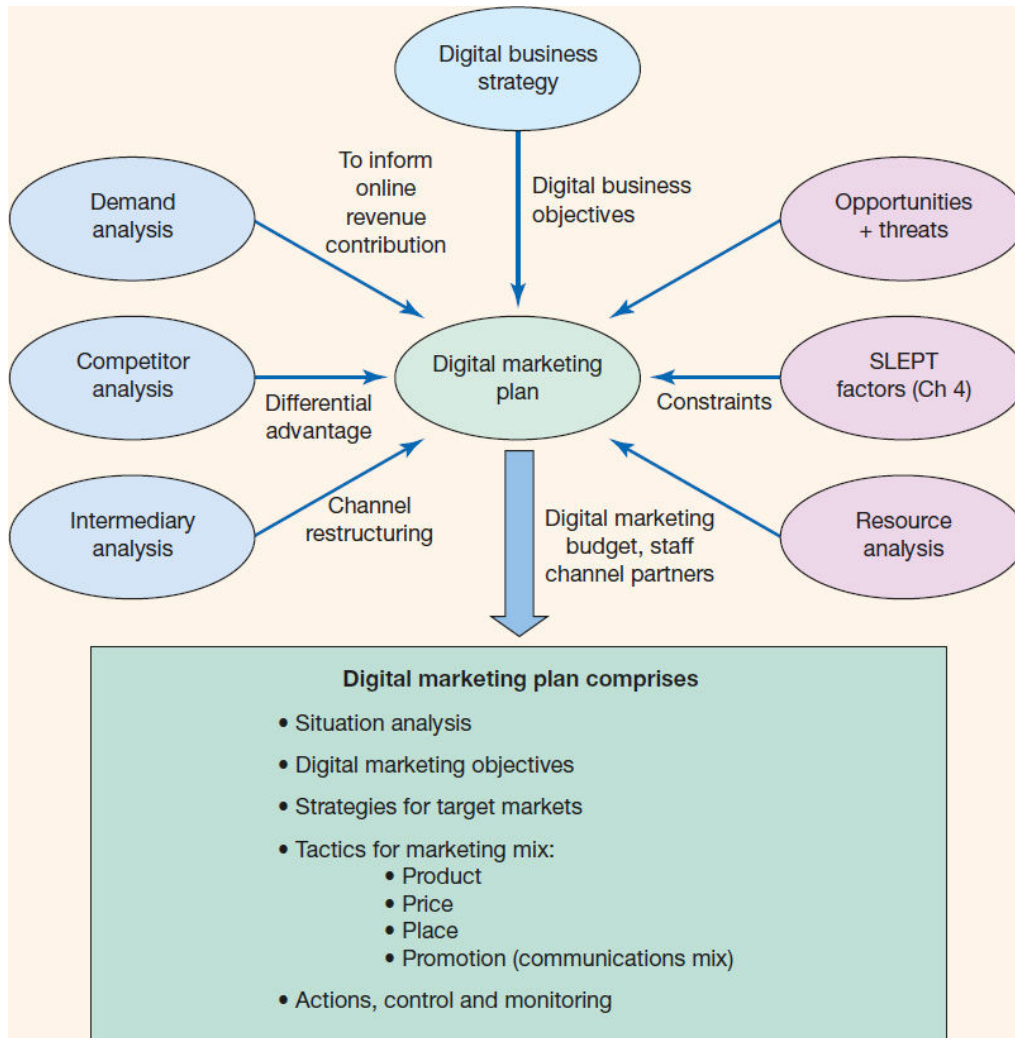


Figure 7.6

Inputs to the digital marketing plan from situation analysis

- What percentage of customer businesses have access to the Internet?
- What percentage of members of the buying unit in these businesses have access to the Internet?
- What percentage of customers are prepared to purchase your particular product online?
- What percentage of customers with access to the Internet are not prepared to purchase online, but are influenced by digital information to buy products offline?
- What is the popularity of different online customer engagement devices such as Web 2.0 features, blogs, online communities and video?
- What are the barriers to adoption among customers of different channels and how can we encourage adoption?

Savvy digital marketers use tools provided by search engine services such as Google to evaluate the demand for their products or services based on the volume of different search terms typed in by search engine users. Table 7.1 shows the volume of searches for these generic, broad keywords. Most users also narrow their searches using qualifiers like ‘free’, ‘cheap’ or ‘compare’, which gives opportunities for comparison sites to attract visitors and to gain commission through affiliate marketing. Online retailers can target their messages to consumers looking for these products through advertising services such as Google AdWords and Bing.

Demand analysis for digital business

Assessment of the demand for e-commerce services among existing and potential customer segments.

The organisation	Strengths – S 1 Existing brand 2 Existing customer base 3 Existing distribution	Weaknesses – W 1 Brand perception 2 Intermediary use 3 Technology/skills (poor web experience) 4 Cross-channel support 5 Churn rate
Opportunities – O 1 Cross-selling 2 New markets 3 New services 4 Alliances/co-branding	SO strategies Leverage strengths to maximise opportunities = attacking strategy Examples: 1 Migrate customers to web strategy 2 Refine customer contact strategy across customer life cycle or commitment segmentation (email, web) 3 Partnership strategy (co-branding, linking) 4 Launch new web-based products or value-adding experiences, e.g. video streaming	WO strategies Counter weaknesses through exploiting opportunities = build strengths for attacking strategy Examples: 1 Countermediation strategy (create or acquire) 2 Search marketing acquisition strategy 3 Affiliate-based acquisition strategy 4 Refine customer contact strategy (email, web)
Threats – T 1 Customer choice (price) 2 New entrants 3 New competitive products 4 Channel conflicts 5 Social network	ST strategies Leverage strengths to minimise threat = defensive strategy Examples: 1 Introduce new Internet-only products 2 Add value to web services – refine OVP 3 Partner with complementary brand 4 Create own social network/customer reviews	WT strategies Counter weaknesses and threats: = build strengths for defensive strategy Examples: 1 Differential online pricing strategy 2 Acquire/create pure-play company with lower cost-base 3 Customer engagement strategy to increase conversion, average order value and lifetime value 4 Online reputation management strategy/E-PR

Figure 7.7

Example of TOWS analysis

Through evaluating the volume of phrases used to search for products in a given market it is possible to calculate the total potential opportunity and the current share of search terms for a company. ‘Share of search’ can be determined from web analytics reports from the company site, which indicate the precise key phrases used by visitors to actually reach a site from different search engines.

Therefore, the situation analysis as part of digital marketing planning must determine levels of access to the Internet in the marketplace and propensity to be influenced by the Internet to buy either offline or online. In a marketing context, the propensity to buy is an aspect of buyer behaviour (see ‘The online buying process’, Chapter 8).

Figure 7.8 summarises the type of picture the digital marketing planner needs to build up. For each geographic market the company intends to serve, research needs to establish:

- 1 percentage of customers with Internet (or mobile) access;
- 2 percentage of customers who access the website (and choose to use different types of services and channels such as mobile or social media options such as Facebook or Twitter);
- 3 percentage of customers who will be favourably influenced;
- 4 percentage of customers who buy online.

Table 7.1

Volume of searches for single keywords in a single month

Keyword	Total global searches	Total estimated UK searches on Google	Cost-per-click
[samsung tv]	201,000	22,200	£0.58
[television]	246,000	14,800	£0.65
[led tv]	165,000	12,100	£0.77
[lg tv]	90,500	9,900	£0.53
[panasonic tv]	40,500	8,100	£0.58
[flat screen tv]	49,500	6,600	£0.50
[lcd tv]	90,500	6,600	£0.67
[samsung led tv]	90,500	4,400	£0.68
[lcd]	135,000	4,400	£0.65
[plasma tv]	33,100	3,600	£0.73
[hd tv]	33,100	3,600	£0.67
[samsung televisions]	8,100	2,400	£0.57
[samsung tvs]	9,900	2,400	£0.79
[buy tv]	6,600	2,400	£0.75
[cheap lcd tv]	4,400	1,900	£0.55
[sharp tv]	40,500	1,900	£0.55
[led tvs]	6,600	1,600	£0.81
[blu ray players]	6,600	1,600	£0.40
[compare tv prices]	2,400	1,600	£0.46
[led tv reviews]	9,900	1,600	£0.54

Note: Estimates are based on the Google keyword tool in June 2013, based on LCD-related exact-match search phrases.

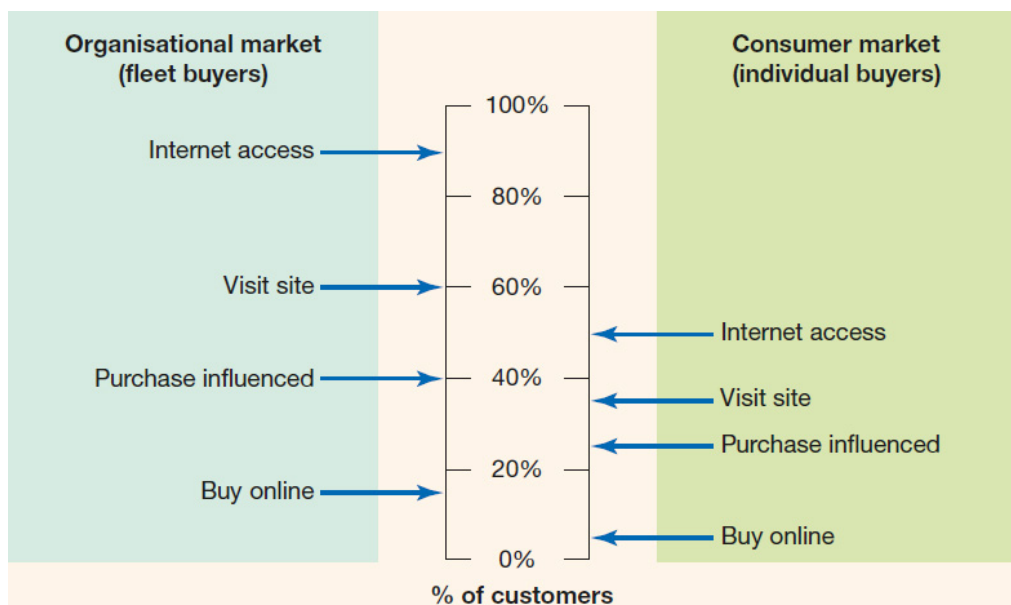


Figure 7.8

Customer demand analysis for the car market

Now refer to Activity 7.2, where this analysis is performed for the car market. This picture will vary according to different target markets, so the analysis will need to be

performed for each of these. For example, customers wishing to buy ‘luxury cars’ may have web access and a higher propensity to buy than those looking for small cars.

Activity 7.2

Customer activity in the car market in your country

Purpose

To illustrate the type of marketing research needed to inform demand analysis for digital marketing planning and approaches to finding this information.

Activity

For your country, update Figure 7.10 to reflect current and future projections:

A For corporate buyers (known as the ‘fleet market’), where a specialist manager coordinates the purchase and management of company cars for efficiency purposes:

- 1 Percentage of customers with Internet access.
- 2 Percentage of customers who access the website.
- 3 Percentage of customers who will be favourably influenced (may be difficult to determine).
- 4 Percentage of customers who buy online.

If possible, try to gauge how these figures vary according to companies of different sizes and different members of the buying unit.

B For individual buyers (consumers):

- 1 Percentage of customers with Internet access.
- 2 Percentage of customers who access the website or social media services via web or mobile channels.
- 3 Percentage of customers who will be favourably influenced.
- 4 Percentage of customers who buy online or use other services such as brochure download, book a test drive or service.

If possible, try to gauge how these figures vary according to age, sex and social class.

Government sources and trade associations for car purchasing can be used to research the data.

No answers provided in accompanying web materials.

Persona

A summary of the characteristics, needs, motivations and environment of typical website users.

Customer scenario

Alternative tasks or outcomes required by a visitor to a website. Typically accomplished in a series of stages of different tasks involving different information needs or experiences.

Qualitative customer research

It is important that customer analysis not be restricted to quantitative demand analysis. Variani and Vaturi (2000) point out that qualitative research provides insights that can be used to inform strategy. They suggest using graphic profiling, which is an attempt to capture the core characteristics of target customers- not only demographics, but also their needs and attitudes and how comfortable they are with the Internet. (In Chapter 9 we will review how customer **personas** and **scenarios** are developed to help inform understanding of online buyer behaviour.)

A summary of the categories of different sources of customer insight that an organisation can tap into and their applications is shown in Table 7.2. The challenge within organisations seems to be selecting which paid-for and free services to select and then ensuring sufficient time is spent reviewing and actioning the data to create value-adding insights. The experiences of the authors show that often data are used only by the digital team and are under-utilised more widely across an organisation. Generally, in large organisations, staff are either unaware of the existence of the data, or service provider supplying them, or there's just too much to know what to do with (known as 'Big Data'). There is also the significant issue of privacy; organisations need to be transparent about how they collect and use these data and give customers choice (as discussed in Chapter 4).

As well as external sources, many online businesses are now harnessing customer viewpoints or innovation through their own programmes. Well-known examples from business and consumer fields include:

- Dell IdeaStorm (www.ideastorm.com)
- Starbucks Idea (<http://ideas.starbucks.com>)
- Proctor & Gamble's close partnership with Innocentive (www.innocentive.com)
- Oracle Communities (www.oracle.com/communities/index.html)

You can see how digitally savvy companies use online platforms for marketing research, as a listening channel. They use the Internet and email channels as means of soliciting feedback and suggestions, which contribute to shaping future services.

Big Data

Large and complex amounts of data. Often referred to as 'the three V's': volume, velocity and variety.

Table 7.2

Categories of suppliers of digital customer insight and sample suppliers

Insight type	Description	Sample suppliers
Voice of customer	Customer perceptions of online and multichannel experience including advocacy and Net Promoter Score. Online reputation (buzz) management tools	www.iperceptions.com www.opinionlab.com www.foresee.com www.bazaarvoice.com
Customer profile data	Characteristics of customers in line with segments	Internal databases
Purchase behaviour	Transaction history including product category, recency, frequency and monetary value	Internal databases
Visitor behaviour from web analytics	Customer journeys on-site and referral sources. Popularity of landing pages, content and products	www.google.com/analytics www.adobe.com/solutions/digitalanalytics.html www.getclicky.com www.Mixpanel.com
Audience panel data	Audience volume/reach and profile on	www.experian.com/marketing-services/marketing-services.html www.comscore.com

	third-party sites	www.nielsen-online.com
Competitive benchmarking	Independent review of website functionality and features from independent review team or customers (mystery shoppers)	www.globalreviews.com www.psyma.com www.emysteryshopper.com
Campaign response	Combination of digital media touchpoints leading to website visits and conversion. Ad network behavioural targeting	www.conversantmedia.com www.doubleclickbygoogle.com www.lynchpin.com
Experimentation	AB and multivariate testing. On-site behavioural targeting. On-site merchandising solutions	www.maxymiser.com www.optimizely.com www.hotjar.com

Competitor analysis for digital business

Review of digital business services offered by existing and new competitors and adoption by their customers.

Competitor analysis

Competitor analysis, or the monitoring of competitor use of e-commerce to acquire, convert and retain customers, is especially important in the digital marketplace due to the dynamic nature of online media. This enables new services to be launched, and promotions changed, far more rapidly than through print communications. The implications of this dynamism are that competitor benchmarking is not a one-off activity while developing a strategy but rather it needs to be continuous.

Benchmarking of competitors' online services and strategy is a key part of planning activity and should also occur on an ongoing basis in order to respond to new marketing approaches such as price or promotions. According to Chaffey *et al.* (2009), competitor benchmarking has different perspectives that serve different purposes:

- 1 Review of internal capabilities:** such as resourcing, structure and processes vs external customer-facing features of the sites.
- 2 From core proposition through branding to online value proposition (OVP):** the core proposition will be based on the range of products offered, price and promotion. The OVP describes the type of web services offered, which add to a brand's value. We cover proposition more in the sections on OVP and the marketing mix later in this chapter.
- 3 Different aspects of the customer lifecycle:** from customer acquisition through conversion to retention. Competitor capabilities should be benchmarked for all the digital marketing activities of each competitor, as shown in Figure 7.1. These should be assessed from the viewpoint of different customer segments or personas, possibly through usability sessions. Performance in search engines (using the tools mentioned in Chapter 2) should be reviewed as a key aspect of customer acquisition and brand strength. In addition to usability, customer views should be sought on different aspects of the marketing mix, such as pricing and promotions mentioned later in the chapter.
- 4 Qualitative to quantitative:** from qualitative assessments by customers using surveys and focus groups through to quantitative analysis by independent auditors of data across customer acquisition (e.g. number of site visitors or reach within market, cost of acquisition, number of customers, sales volumes and revenues and market share); conversion (average conversion rates) and retention such as repeat conversion and number of active customers.
- 5 In-sector and out-of-sector:** benchmarking against similar sites within sector and reviewing sectors that tend to be more advanced, e.g. digital publishers, social networks and brand sites. Benchmarking services are available from analysts such as Bowen Craggs & Co (www.bowencraggs.com). An example of one of their benchmark reports is shown in Figure 7.9. You can see that this is based on the expert evaluation of the suitability of the site for different audiences, as well as measures under the overall construction (which includes usability and accessibility), message (which covers key brand messages and suitability for international audiences) and contact (which shows integration between different audiences). The methodology states: 'it is not a "tick box": every metric is judged by its existence, its quality and its utility to the client, rather than "Is it there or is it not?"'.
- 6 Financial to non-financial measures.** Through reviewing competitive intelligence sources such as company reports or tax submissions, additional

information may be available on turnover and profit generated by digital channels. However, other forward-looking aspects of the company's capability, which are incorporated on the balanced scorecard measurement framework (see Chapter 5), should also be considered, including resourcing, innovation and learning.

7 From user experience to expert evaluation. Benchmarking research should take two alternative perspectives, from actual customer reviews of usability to independent expert evaluations.

Pos	Company	Construction	Message	Contact	Serving society	Serving investors	Serving the media	Serving job seekers	Serving customers	Total	URL	Country
	maximum score	60	48	12	32	32	32	32	32	280		
1	Siemens	47	40	10	27	21	28	24	24	221	www.siemens.com	Germany
2	Royal Dutch Shell	46	41	7	26	22	21	24	22	209	www.shell.com	Netherlands
3	BP	41	39	10	28	27	18	19	25	207	www.bp.com	UK
4	Nokia	44	36	8	26	24	24	16	25	203	www.nokia.com	Finland
5	AstraZeneca	48	33	9	20	20	27	16	27	200	www.astrazeneca.com	France
	Total	44	39	11	25	27	12	22	21	200	www.total.com	UK/Sweden
7	IBM	41	36	11	23	26	26	12	24	199	www.ibm.com	US
8	ING	43	40	8	22	25	21	16	22	197	www.ing.com	Netherlands
9	UBS	37	36	6	20	27	22	26	20	194	www.ubs.com	Switzerland
10	General Electric	42	37	10	25	17	19	17	24	191	www.ge.com	US

Figure 7.9

Benchmark comparison of corporate websites

Source: Bowen Craggs & Co (www.bowencraggs.com)

Now complete Activity 7.3 to gain an appreciation of how benchmarking competitor digital business services can be approached.

Activity 7.3

Competitor benchmarking

Purpose

To understand the services of a competitor website it is useful to benchmark and to assess the value of benchmarking.

Activity

You have been commissioned by a major company to evaluate the *marketing effectiveness* of its online services in comparison with its competitors'. You have to present your findings on its services and how they can be improved in a ten-minute PowerPoint presentation.

Choose a B2C industry sector such as airlines, book retailers, book publishers, CDs or clothing, or for B2B a sector such as oil companies, chemical companies

or construction industry companies.

Work individually or in groups to identify the type of information that should be available from the website (and which parts of the site you will access it from) that will be useful in terms of competitor benchmarking. Once your criteria have been developed, you should then benchmark companies and summarise which you feel is making best use of the Internet medium.

Table 5.10 (p. 226) may also prove useful.

Intermediary or influencer analysis

Chapter 2 highlighted the importance of web-based intermediaries such as publisher or media sites in driving traffic to an organisation's website or influencing visitors while they consume content. Situation analysis will also involve identifying relevant intermediaries for a particular marketplace. These will be different types of publisher such as horizontal and vertical portals, which will be assessed for suitability for advertising, PR or partnership. This activity can be used to identify strategic partners or will be performed by a media planner or buyer when executing an online advertising campaign.

For example, an online electronics retailer needs to assess which comparison or aggregator services, such as PriceRunner (www.pricerunner.co.uk) and Idealo (www.idealo.co.uk), it and its competitors are represented on. Questions that are answered by analysis of intermediaries are: do competitors have any special sponsorship arrangements and are microsites created with intermediaries? The other main aspect of situation analysis for intermediaries is to consider the way in which the marketplace is operating. To what extent are competitors using disintermediation or reintermediation? How are existing channel arrangements being changed?

Internal marketing audit

An internal audit will assess the capability of the resources of the company, such as its people, processes and technology, to deliver digital marketing compared with its competitors. The internal audit will also review the way in which a current website (or e-commerce service) performs. The audit is likely to review the following elements of an e-commerce site:

- 1 Business effectiveness.** This will include the contribution of the site to revenue, profitability and any indications of the corporate mission for the site. The costs of producing and updating the site will also be reviewed, i.e. cost-benefit analysis.
- 2 Marketing effectiveness.** These measures may include:
 - leads
 - sales

- cost of acquiring new customers (i.e. ‘cost per acquisition’ or CPA)
- retention
- market share
- brand engagement and loyalty
- customer service.

These measures will be assessed for each of the different product lines delivered through the website. The way in which the elements of the marketing mix are utilised will also be reviewed.

3 Internet effectiveness. These are specific measures that are used to assess the way in which the website is used, and the characteristics of the audience. Such measures include specialist measures such as unique visitors and page impressions that are collected through web analytics, and also traditional research techniques such as focus groups and questionnaires to existing customers. From a marketing point of view, the effectiveness of the value proposition of the site for the customer should also be assessed.

Objective setting

Effective digital marketing plans are based on clearly defined objectives, since these will inform the strategies and tactics and help in communicating the strategic aims to the workforce and investors.

Strategies are agreed to be most effective when they support specific business objectives. A useful technique to help align strategies and objectives is to present them together in a table together with the insight developed from situation analysis, which may have informed the strategy. Table 7.3 gives an example that also shows the links between strategies of customer acquisition, conversion and retention and the tactics used to fulfil them, such as email marketing and search engine marketing, which we discuss in Chapter 8.

We also discussed the importance of SMART digital business objectives in Chapter 5. We noted the value of using metrics that combined efficiency and effectiveness and could be applied in the context of the balanced scorecard. Table 7.4 presents detailed digital marketing metrics in this way.

Table 7.3

The relationship objectives, strategies and performance indicators for a B2B company (in order of priority)

Objectives	Substantiation (informed by situation analysis or insight, example)	Strategies to achieve goals	Key performance indicators (critical success factors)
1 <i>Acquisition objective.</i> Acquire 50,000 new online customers this financial year at an average cost per acquisition (CPA) of £30 with an average profitability of 5%	Based on growth forecast based on current sales of 40,000 sales per year, but with incremental sales arising from new affiliate programme and SEO development	Start affiliate marketing programme and improve SEO. Existing media mix based on pay-per-click and display advertising supported by offline media	Overall CPA for online sales. Incremental number and % of sales from affiliate marketing programme Number of strategic keywords ranked in top positions in natural search results page
2 <i>Acquisition (or conversion) objective.</i> Migrate 40% of existing customers to using online 'paperless' bill payment services and email communications within three years	Extrapolation of current natural migration coupled with increased adoption from offline direct marketing campaign	Direct marketing campaign using direct mail, phone prompts and online persuasion to encourage adoption. Use of incentive to encourage change	Number and percentage of existing customers registering to use online services. Number and percentage of customers actively using online services at different points after initially registering
3 <i>Conversion objective.</i> Increase the average order value of online sales to £42 per customer	Growth estimated based on current AOV of £35 plus model suggesting 20% increase in AOV	Use of new merchandising system to show users related 'next-best product' for different product categories	% of site visitors responding to merchandising/cross-selling messages
4 <i>Conversion objective.</i> Increase site conversion rate to 3.2%	Model showing separate increase in conversion for new and existing customers based on strategies shown on the right	Combination of strategies: • Incentivised email follow-up on checkout abandonments for new customers • Introduction of more competitive pricing strategy on best sellers • AB and multivariate messaging improvement of landing pages • Refinement to quality of traffic purchased through pay-per-click programme	Variations in conversion rates for new and existing customers in different product categories
5 <i>Retention objective.</i> Increase annual repeat new customer conversion rate by 20%.	Business case based on limited personalisation of offers to encourage repeat purchases via email	• Delivery of personalised product offers by email • 5% second-purchase discount voucher	• Increased conversion rate of retention email contact programme • Conversion to sale for second-purchase discount campaigns
6 <i>Growth objective.</i> Increase new prospects recommended by friends (viral marketing or 'member get member') by 10,000 per annum	Model based on encouraging 2% of customers to recommend friends annually (based on trial scheme)	Supported by direct mail and email recommendation programme	• Response rate to direct mail campaign

Table 7.4

Example of Internet marketing objectives within the balanced scorecard framework for a transactional e-commerce site

Balanced scorecard sector	Efficiency	Effectiveness
---------------------------	------------	---------------

Financial results (business value)	• Channel costs • Channel profitability	• Online contribution (direct) • Online contribution (indirect) • Profit contributed • Sales and sales per customer
Customer value	• Online reach (unique visitors as % of potential visitors) • Cost of acquisition or cost per sale (CPA or CPS) • Customer satisfaction ratings	• New customers • Online market share • Customer propensity to defect • Customer loyalty index
Operational processes	• Conversion rates • Average order value • List size and quality • Email-active %	• Fulfilment times • Support response times
Innovation and learning (people and knowledge)	• Novel approaches tested • Internal digital marketing education • Internal satisfaction ratings	• Novel approaches deployed • Performance appraisal review

Online revenue contribution

An assessment of the direct contribution of the Internet or other digital media to sales, usually expressed as a percentage of overall sales revenue.

In Chapter 5, we also mentioned the importance of defining the **online revenue contribution** as a target to improve performance. Figure 7.10 gives an example combining the online revenue contribution and the online promotion contribution as a forecast based on marketing research of demand analysis and competitor analysis. Read Case study 7.1 to review how easyJet increased its online revenue contribution.

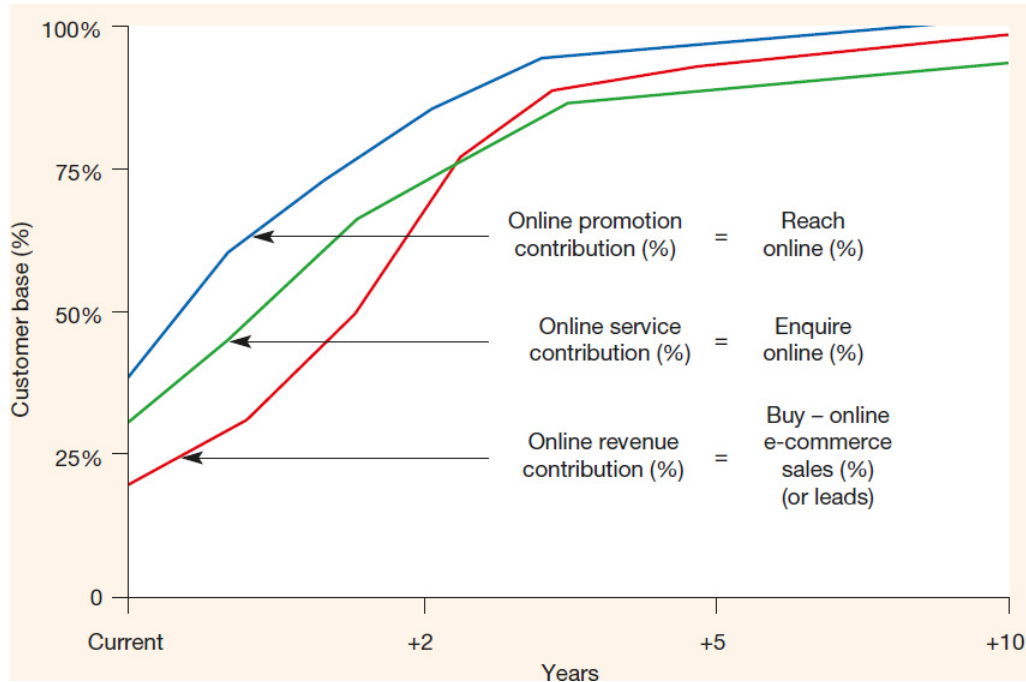


Figure 7.10

Assessment of the future online promotion contribution and online revenue for a B2B company, for Product A, Europe

Case Study 7.1

The evolution of easyJet's online revenue contribution

This historical case shows how the easyJet website (Figure 7.11) became the main sales channel for easyJet from its launch in the 1990s. How the Internet was used for service delivery and marketing communications is also described. This case study has been retained since it is a popular case illustrating the benefits of management commitment to a planned, well-resourced strategy to help grow digital channels and to trial new online products. By 2013, over 98% of seats were sold online and easyJet still incentivises people to book their cheap flights online through a £7.50 discount for each leg of a journey.

easyJet was founded by Stelios Haji-Ioannou, the son of a Greek shipping tycoon who reputedly used to 'hate the Internet'. In the mid-1990s Haji-Ioannou reportedly denounced the Internet as something 'for nerds', and swore that it wouldn't do anything for his business. This is no longer the case, since by August 1999 the site accounted for 38% of ticket sales or over 135,000 seats. This was past the company's original Internet contribution target at launch of 30% of sales, by 2000. In the period from launch, the site had taken more than 800,000 bookings since it was set up in April 1998 after a shaky start of two sales in the first week and one thousand within the first month. In March 2000 easyJet increased its online discount to £2.50 for a

single trip - a higher level of permanent discount than any other airline. By September 2000, Internet sales reached 85% of total sales. Since this time, the growth in proportion of online sales has decreased. By 2003, over 90% of all sales were online.

The company was originally set up in 1994. As a low-cost airline, looking to undercut traditional carriers such as British Airways, it needed to create a lean operation. To achieve this, Haji-Ioannou decided on a single sales channel in order to survive. He chose the phone.

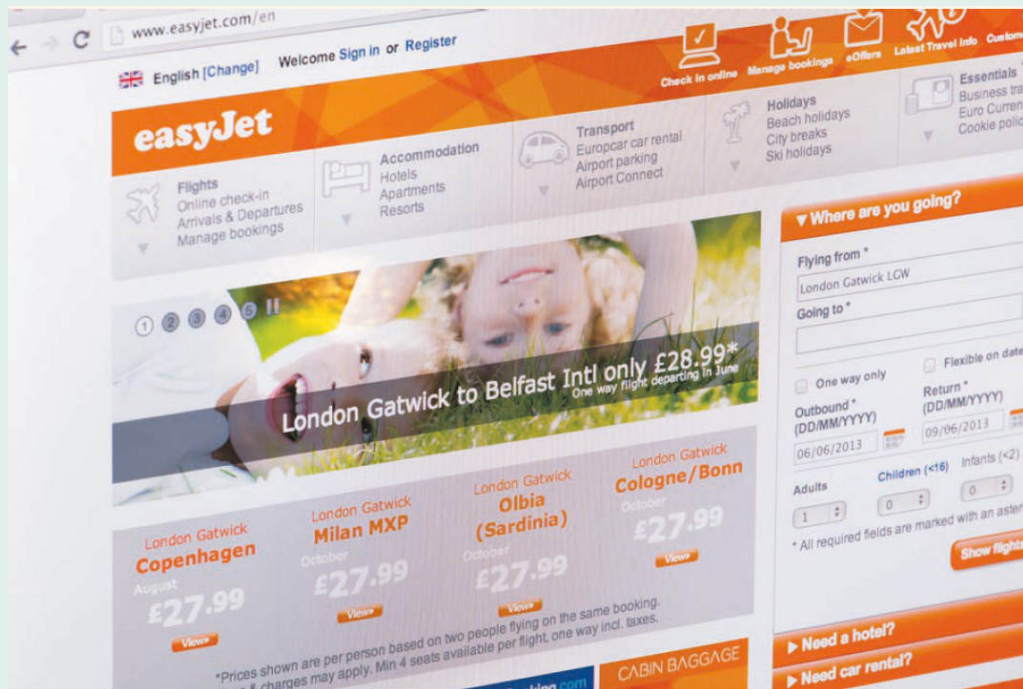


Figure 7.11

easyJet website

Source: Chris Ridley - Internet Stock/Alamy Stock Photo

At the time this was ground-breaking, but the owner was encouraged by companies such as Direct Line insurance, and the savings that direct selling would bring.

Although Haji-Ioannou thought at the time that there was no time to worry about the Internet and that one risk was enough, he was adaptable enough to change. When a basic trial site was launched, he kept a close eye on how popular the dedicated information and booking phone line was (having a web-specific phone number advertised on the site can be used to trace the volume of users on the site). A steady rise in the number of calls occurred every week. This early success coincided with the company running out of space at its call centre due to easyJet's growth. Haji-Ioannou related, 'We either had to start selling over the Internet or build a new call centre. So our transactional site became a £10 million decision.'

Although the success of easyJet could be put down solely to the founder's adaptability and vision, the company was helped by the market it operated in and its chosen business model - it was already a 100% direct phone sales operation. This meant it was relatively easy to integrate the web into the central booking system. There were also no potential channel conflicts with intermediaries such as travel agents. The web also fitted in with the low-cost easyJet proposition of no tickets, no travel agents, no network tie-ups and no in-flight meals. Customers are given a PIN number for each order on the website, which they give when they get to the airport.

Sales over the Internet began in April 1998, and although easyJet's new-media operations were then handled by Tableau, a few months later easyJet took them in-house.

The Internet is important to easyJet since it helps it to reduce running costs, important for a company where each passenger generates a profit of only £1.50. Savings to easyJet made through customers booking online enable it to offer at least £1 off to passengers who book online - this is part of the online proposition.

The owner says that 'the savings on the Internet might seem small compared to not serving a meal on a plane, which saves between £5 and £10, but when you think how much it would cost to build a new call centre, pay every easyJet reservation agent 80 pence for each seat sold - not to mention all the middlemen - you're talking much more than the £1 off we give online buyers'.

What about the risks of alienating customers who don't want to book online? This doesn't worry the owner. He says 'I'm sure there are people who live in the middle of nowhere who say they can't use the Internet and will fly Ryanair instead. But I'm more worried about keeping my cost base down, and finding enough people to fill my aeroplanes. I only need 6 million people a year, not all 56 million.'

Promotion

The Internet marketing gurus say 'put the company URL everywhere'; easyJet has taken this literally with its web address along the side of its Boeing 737s.

easyJet frequently varies the mix by running Internet-only promotions in newspapers. easyJet ran its first Internet-only promotion in a newspaper in *The Times* in February 1999, with impressive results. Some 50,000 seats were offered to readers and 20,000 of them were sold on the first day, rising to 40,000 within three days. And, according to the marketing director, Tony Anderson, most of these were seats that otherwise would have been flying along at 600 mph - empty. The scalability of the Internet helped deal with demand since everyone was directed to the website rather than the company needing to employ an extra 250 telephone operators. However, risk management did occur, with a micro-site built for *Times* readers (www.times.easyjet.com) to avoid putting a strain on easyJet's main site.

Anderson says, 'The airline promotions are basically designed to get rid of empty seats.' He adds, 'If we have a flight going to Nice that's leaving in 20 minutes' time, it costs us very little to put some extra people on board, and we can get, say, £15 a head for it.' Flight promotions are intended to avoid attracting people who would fly with easyJet, so advanced booking schemes are intended to achieve that.

A later five-week promotion within *The Times* and *The Sunday Times* newspapers offered cheap flights to a choice of all easyJet destinations when 18 tokens were collected. In total, 100,000 seats were sold during the promotion, which was worth more than £2 million to the airline. Thirty per cent of the seats were sold online, with the rest of the transactions being completed by phone; 13,000 orders were taken over the Internet in the first day alone, with over 15,000 people on the site at one point.

The website also acts as a PR tool. Haji-Ioannou uses its immediacy to keep newspapers informed about new promotions and offers.

The website is also used as an aggressive tool in what is a very competitive marketplace. Haji-Ioannou says, 'Once we had all these people coming to our site, I asked myself: Why pay a PR company to publicise what we think when we have a captive audience on the site?' For example, easyJet ran a competition in which people had to guess what BA's losses would be on 'Go', its budget rival to easyJet (the figure turned out to be £20 million). Within minutes of the BA results being announced on 7 September, the easyJet site had the 50 flight-ticket winners from an incredible 65,000 people who had entered. In a similar vein, a section of the site was entitled 'Battle with Swissair', giving easyJet's view that Swissair's head had persuaded the Swiss government to stop easyJet being granted a commercial scheduled licence on the Geneva-Barcelona route. easyJet also called itself 'The web's favourite airline' in 1999, a direct counterpoint to British Airways' slogan of 'The world's favourite airline', for which it enjoyed a court battle.

The creation of a mobile site

In an interview with Peter Duffy, the easyJet marketing director, the potential of mobile marketing was emphasised (*Marketer*, 2013):

Mobile was clearly a huge growth area. In some Mediterranean countries mobile is often leapfrogging broadband as a way to get online. So we set about making a mobile website where you could do all the things you can do on easyJet.com: buy from a website, cancel a flight, shift a flight, and do all those things in six languages. We have seen tremendous demand for it. The app has been downloaded 4.3m times. Today 5 per cent of revenue comes through mobile - that's not insignificant for a £4bn company.

Peter Duffy has also introduced a conversion rate optimisation program. He says:

When I arrived, my first observation was that we had 400 million people going to the website; 90 per cent of sales come through it. If we could improve conversion by just a small amount it was probably the most effective thing we could do commercially.

At any point in time a dozen to 20 tests can be running based on a series of ideas for how the company can do things better, inspired either by watching our customers or looking at where customers are dropping out of the process, or where there is a new feature like allocated seating.

easyEverything

easyJet has used the 'easy' prefix to trial additional services as part of the easyGroup. Trials include:

- easyHotel - budget hotels from just £9.99 per night;
- easyCar - a network of global rental companies that use economies of scale to keep prices low.

Today, most non-flight services such as holidays, car rental and insurance are directly related to travel, often provided by partners.

Implementation

The articles report that Russell Sheffield, head of new-media agency Tableau, which initially worked with easyJet, had an initial problem with colour! 'He says there was a battle to stop him putting his favourite colour all over the site.' The site was intended to be highly functional, simply designed and without any excess baggage. He says, 'The home page (orange) only had four options - buy online, news, info, and a topic of the moment such as BA "GO" losses - and the site's booking system is simpler to use than some of its competitors'. He adds: 'Great effort was put into making the navigation intuitive - for example, users can move directly from the timetables to the booking area, without having to go via the home page.'

The site was designed to be well integrated into easyJet's existing business processes and systems. For example, press releases are fed through an electronic feed into the site, and new destinations appear automatically once they are fed into the company's information system.

Measurement of the effectiveness of the site occurred through the dedicated phone number on the site, which showed exactly how many calls the site generated, and the six-month target was met within six weeks. Website log file analysis showed that people were spending an average of eight minutes a time on the site and, better still, almost everyone who called bought a ticket, whereas with the normal phone line, only about one in six callers buys. Instead of having to answer questions, phone operators were doing nothing but sell tickets.

Source: Based on *Revolution* articles: EasyJet site a success in first month, 1 August 1998; EasyJet promotion sells 30,000 seats, 1 November 1998; Say hello to Mr e-Everything, 13 October 1999. *Marketer* (2013).

Questions

- 1 To what extent was the Internet revenue contribution of around 90% achieved 'more by luck than judgement'?
- 2 Explain the proposition of using the Internet for the customer and define the benefits for the company.
- 3 Explain how easyJet uses the website to vary the different elements of the marketing mix and as a marketing communications tool.

4 Use a news source such as www.ft.com or review its investors' relations site to find out how easyJet has extended its Internet applications.

Strategy

The strategy element of a digital marketing plan defines how digital marketing objectives will be achieved. Strategy definition has to be tightly integrated into the digital marketing planning process since digital marketing planning is an iterative process from situation analysis to objective setting to strategy definition (Figure 7.7). (Key decisions in strategy definition for digital business were described in Chapter 5.) To avoid significant overlap here, the reader is referred to that section. Another perspective on digital marketing strategy is provided by Dave Chaffey, one of the authors of this text, in the 'Econsultancy' (2008) report, which explains that the output from the digital strategy will often be a series of strategic e-commerce initiatives in the key areas of customer acquisition, conversion or retention, such as those shown in Table 7.5. These e-commerce initiatives will typically be prioritised and placed as part of a long-term e-commerce 'roadmap', defining required developments over a longer period of 18 months to 3 years.

The amount invested on the Internet should be based on the anticipated contribution the Internet will make to a business, as explained in the sections on objectives. The Electronic Shopping Test (Box 7.1), for reviewing the likely strategic importance of the Internet to a company as developed by de Kare-Silver (2000), is still relevant today since the drivers for online against offline services remain similar.

Table 7.5

Summary of typical focus for main types of e-commerce-related strategic initiatives

Type of digital marketing strategy initiative	Commentary	Examples of strategy implementation
1 New customer	These are new site features or other online communications that are	• Bank - introduce new product

proposition (Product, Place and Pricing)	directly related to offering new products or services, potentially from new locations that will generate revenue	requiring different quotes • Portal - introduce comparison service • Service company - introduce new functionality acquired through takeover of company • Magazine or music service offering new pricing options • See also channel integration initiatives
2 Customer acquisition strategic initiatives	These are strategic projects to enhance a site's capability to deliver new prospects on a continuous basis through different online marketing techniques. They may involve investment in the site itself (e.g. SEO) or the back-end, integrating with affiliates	• SEO • PPC • Affiliate marketing • Aggregators • Enhance page type (to help increase conversion rate), e.g. category or product landing pages
3 Customer conversion and customer experience strategic initiatives	Investments in new customer features on the site. These will be based on a business case of increased conversion rate and average order value. May include major new functionality such as that for a new online store or more specific functionality integrated into existing site functionality. Many strategic initiatives are aimed at improving the customers' experience of a brand	• Implement online shop/secure payment • Introduce customer reviews and ratings • Merchandising capability to offer tailored promotions • Interactive tools to help product selection • Refine on-site search engine

4 Customer development and growth strategic initiatives	Investments to improve the experience and delivery of offers to existing customers	• Buyers' guides consisting of in-depth content about products or rich media (e.g. videos showcasing products) • Personalised recommendations for existing customers • Development of email welcome strategy for new online customers as part of development of an integrated contact or eCRM strategy delivered through personalised web and email messages and traditional direct communications • Introduce blogs or RSS feeds to encourage return visitors • Introduce more participation through customer communities • Offline retailer launches 'click and reserve' service
5 Channel integration initiatives	These may reference any of the strategies above	• Digital facilities introduced in-store • Integration of mobile marketing into direct mail or email campaigns
6 Enhance marketing	These typically involve 'back-end or back-office features', which won't be	• CRM or personalisation

capabilities through site infrastructure improvements

evident to users of the site but will help in the management or administration of the site. Will often involve improving customer insight capabilities

- Content management system
- Performance improvement - improve management information, web analytics systems including systems for multivariate and AB testing
- Improve customer feedback or other customer survey facilities
- Update development approach for introducing new functionality

Box 7.1

The Electronic Shopping or ES Test

This test was developed by Michael de Kare-Silver to assess the extent to which consumers are likely to purchase a retail product using the Internet. De Kare-Silver suggests factors that should be considered in the ES Test:

- 1 Product characteristics.** Does the product need to be physically tried or touched before it is bought?
- 2 Familiarity and confidence.** Considers the degree the consumer recognises and trusts the product and brand.
- 3 Consumer attributes.** These shape the buyer's behaviour - are they amenable to online purchases in terms of access to the technology skills available and do they no longer wish to shop for a product in a traditional retail environment?

In his book, de Kare-Silver describes a method for ranking products. Product characteristics, familiarity and confidence are each marked out of 10, and consumer attributes are marked out of 30. Using this method, he scores products as shown in Table 7.6.

De Kare-Silver states that any product scoring over 20 has good potential, since the score for consumer attributes is likely to increase through time. Given this, he suggests companies will regularly need to review the score for their products.

Table 7.6

Product scores in de Kare-Silver (2000), Electronic Shopping Potential Test

Product	1 Product characteristics (10)	2 Familiarity and confidence (10)	3 Consumer attributes (30)	Total
Groceries	4	8	15	27
Mortgages	10	1	4	15
Travel	10	6	15	31
Books	8	7	23	38

Market and product positioning

The Internet offers new opportunities for selling new products into new markets. These present strategic alternatives that can be evaluated using the options first stated by Ansoff (1957). The risks involved with the four options of market penetration, market development, product development and both market and product development (diversification) vary (as shown in Figure 5.23 and explained in the commentary).

There may also be options for new digital products that could include information products that can be delivered over the web. Such products may not be charged for, but will add value to existing products. Ghosh (1998) suggested developing new products or adding ‘digital value’ to customers. Still relevant today for consideration as part of digital marketing strategy, he says companies should ask the following questions:

- 1 Can I offer additional information or transaction services to my existing customer base?
- 2 Can I address the needs of new customer segments by repackaging my current information assets or by creating new business propositions using the Internet?
- 3 Can I use my ability to attract customers to generate new sources of revenue such as advertising or sales of complementary products?

- 4 Will my current business be significantly harmed by other companies providing some of the value I currently offer?

In addition, Ghosh (1998) suggested that companies should provide free digital value to help build an audience. He refers to this process as building a ‘customer magnet’; today this would be known as a ‘portal’ or ‘community’. There is good potential for customer magnets in specialised vertical markets served by business-to-business companies. For example, a customer magnet could be developed for the construction industry, agrochemicals, biotechnology or independent financial advisers. Today, this would be labelled as content marketing or inbound marketing.

Target market strategies

We have seen that we need to review the options for using the digital media to reach new markets or develop existing markets. Within both of these markets we need to analyse the target market in more detail to understand their needs and potential and then develop a strategy to satisfy these markets to maximise revenue. This is **target marketing strategy** and involves the four stages shown in Figure 7.12.

The first stage in Figure 7.12 is **segmentation**. Segmentation involves understanding the groupings of customers in the target market to understand their needs and potential as a revenue source in order to develop a strategy to satisfy these segments while maximising revenue. Dibb *et al.* (2000) say that:

Market segmentation is the key of robust marketing strategy development. . . it involves more than simply grouping customers into segments . . . identifying segments, targeting, positioning and developing a differential advantage over rivals is the foundation of marketing strategy.

In a digital marketing planning context, market segments will be analysed to assess:

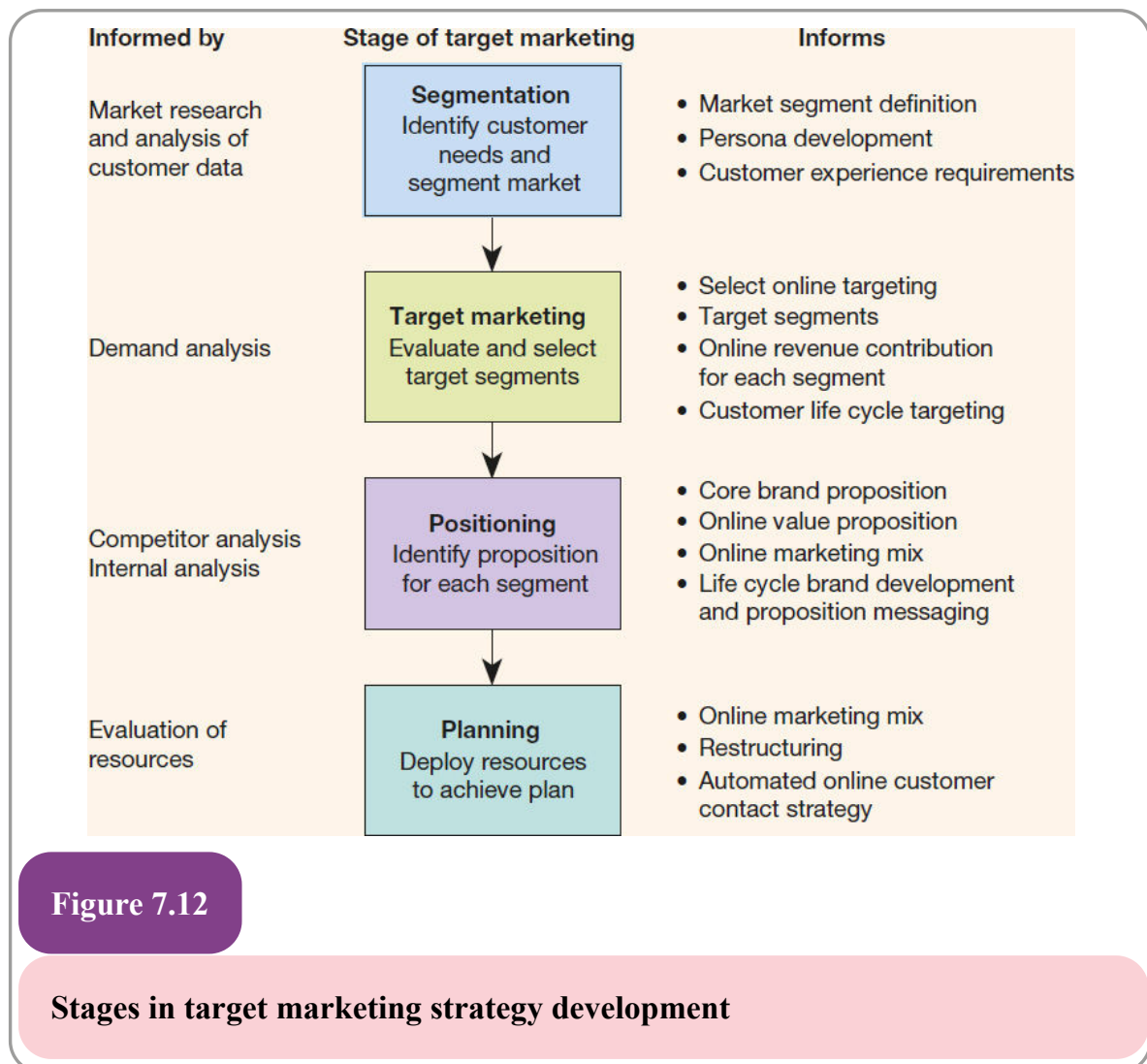
- 1 their current market size or value, future projections of size and the organisation’s current and future market share within the segment;
- 2 competitor market shares within the segment;
- 3 needs of each segment, in particular unmet needs;
- 4 organisation and competitor offers and proposition for each segment across all aspects of the buying process.

Target marketing strategy

Evaluation and selection of appropriate segments and the development of appropriate offers.

Segmentation

Identification of different groups within a target market in order to develop different product offerings and communications for those groups.



The targeting approaches used for online acquisition and retention campaigns will naturally depend on established segmentation. Table 7.7 summarises options for targeting customers online. The power of digital technology is that it makes it easier and more cost-effective to deliver targeted messages on a web page or in an email compared to traditional media.

Let's look at each targeting variable in a little more depth.

1 Relationship with company. Campaigns will often be intended to target new contacts or existing contacts. But remember, some communications will reach both. Marketers have to consider whether it will be cost-effective to have separate communications for new, existing and lapsed contacts - or to target each of these groups in the same communications but using different content aimed at each.

When visitors click through to your website from online and offline campaigns, copy should be presented that recognises the relationship or, again, provides a range of content to recognise each different relationship.

2 Demographic segmentation. This is typically based on age, sex or social group. Online demographics are often used as the basis for sites to purchase display

advertising or for renting email lists. Demographics can also be used to limit or focus who pay-per-click search ads are displayed to.

- 3 Psychographic or attitudinal segmentation.** This includes attitudes to risk and value when buying. It is less straightforward to target these attributes of a consumer since it is easier to buy media based on demographic breakdown. However, certain sites may be more suitable for reaching a particular psychographic audience. The psychographic characteristics of the audience are still an important part of the brief, to help develop particular messages.

Table 7.7

A range of targeting and segmentation approaches for a digital campaign

Targeting variable	Examples of segments and potential online targeting attributes
1 Relationship with company	New contacts (prospects), existing customers, lapsed customers
2 Demographic segmentation	B2C: Age, sex, social group, geographic location B2B: Company size, industry served, individual members of decision-making unit
3 Psychographic or attitudinal segmentation	Attitudes to risk and value when buying, e.g. early adopter, brand loyal or price conscious
4 Value	Assessment of current or historical value and future value. Valuable customers can be targeted and given special promotions as part of a VIP or customer club
5 Lifecycle stage	Position in lifecycle, related to value and behaviour, i.e. time since initial registration, number of products purchased, categories purchased in
6 Behaviour	(a) Search terms entered into search engine (Table 7.1) (b) Interests shown through content shared or liked on social networks. Companies can target users of Facebook, LinkedIn and Twitter with ads using this method (c) Responsiveness to different types of offers (promotion or product type)

- (d) Responsiveness to campaigns in different channels (channel preference)
- (e) Purchase history in product categories including recency, frequency and monetary value (Chapter 8)

It is possible to collect attitudinal information on a site and add it to the customer profile.

4 Value. The higher-value customers (indicated by higher average order value and higher modelled customer lifetime values) will often warrant separate communications with different offers. Sometimes digital channels are not the best approach for these customers -relationship managers will want direct contact with their most valuable customers, while digital channels are used to communicate more cost-effectively with lower-value customers. It is also worth considering reducing the frequency of emails to this audience.

5 Lifecycle stage. This is very useful where customers follow a particular sequence in buying or using a service, such as online grocery shopping or online banking. Automated event-triggered email marketing can be developed for this audience (as explained in Chapter 8). For example, bank First Direct uses a six-month welcome strategy based on email and direct mail communications. For other campaigns, the status of a customer can be used for targeting-for example, not purchased or used service, purchased once, purchased more than five times and active, purchased more than five times and inactive, etc.

6 Behavioural. Behavioural targeting is one of the big opportunities provided by digital marketing. It involves assessing customers' past actions in following links, reading content, using online services or buying products, and then follows up on these with a more relevant message based on the propensity to act based on the previous action.

Online options for behavioural targeting can be illustrated by a travel company such as lastminute.com:

- Pay-per-click search engine marketing such as Google AdWords makes targeting possible according to the type of keyphrase typed when a potential customer searches for information. A relevant ad specific to a holiday destination the prospect is looking for, e.g. 'Hotel New York' can then be shown.
- Display advertising makes behavioural targeting possible since cookies can be used to track visitors across a site or between sites and display relevant ads. If a site user visits the travel section of a newspaper site, then the ad about lastminute.com can be served as they visit other content on this site, or potentially on other sites.
- Email marketing can be targeted based on customer preferences indicated by links they have clicked on. For example, if a user has clicked a link about a holiday in North America, then a targeted email can be delivered relevant to this product or promotion. More sophisticated analysis based on RFM analysis (Chapter 8) can also be used.

When reviewing the options for which variables to use to target, the campaign planner must keep in mind that the variables selected for targeting should be those that are most likely to influence the level of response for the campaign. Figure 7.15 indicates the general improvement in campaign response dependent on the type of targeting variables used. This approach is used by travel company Travelocity in its email marketing. Speaking at the 2006 Internet Retailing Forum, the company described how it concentrates its efforts on behaviour suggesting purchase intent, i.e. when a visitor to its site clicks on a particular type of holiday, emails sent to the customer should be updated to reflect that.

Seybold (1999) identified five questions to help develop a customer-centric strategy for digital marketing (which are still relevant today; the questions apply equally to marketing). The questions are:

1 Who are our customers?

This involves identifying target segments that share certain characteristics and needs. Different criteria for identifying segments include demographics and geographical location for the B2C market and organisational characteristics and members of the buying unit for the B2B market (as seen in Chapter 4).

2 How are their needs changing?

Understanding the needs of different segments when they venture online is important to the next stages of delivering value to the customer. Some segments may have originally been motivated by price, but customer service may become more important. This is closely related to buyer behaviour (Chapter 8).

3 Which do we target?

This is an important strategic decision in digital marketing (which we discussed in Chapter 5 under the strategic decision Decision 2: Market and product development strategies’).

4 How can we add value?

We have seen (in Chapters 5 and 6) that customer value is mainly dependent on the combination of product quality, customer service quality, fulfilment time and price. Companies need to decide for each segment which of these is most important and then seek to adjust these elements accordingly as part of the marketing mix, described in the next section.

5 How do we become first choice?

To decide on this it is necessary to know how to position within the marketplace relative to competitor offerings. **Positioning** is related to how a consumer perceives a product in terms of the elements of value described above. It is related to the ‘positioning’ stage of target marketing shown in Figure 7.13. A positioning statement is often developed to encapsulate this. Companies then need to decide how to highlight the benefits as a **differential advantage** over rivals’ products.

Having a clear, powerful positioning is crucial online, since it is so easy for customers to compare service providers when initially selecting a product. It is also

important to customer retention, since the first experience of a brand will determine whether the customer naturally returns to the supplier as first choice or initiates another search to find alternatives.

In a digital marketing context (as mentioned in Chapter 5), the differential advantage and positioning can be clarified and communicated by developing an **online value proposition (OVP)**. This is similar to a unique selling proposition, but is developed for e-commerce services. It *builds on the core proposition* for the company's services. In developing a proposition, managers should identify:

- A clear differentiation of the proposition from competitors', based on product features or service quality.
- Target market segment(s) that the proposition will appeal to.

Positioning

Influencing the customer's perception of a product within a marketplace.

Differential advantage

A desirable attribute of a product offering that is not currently matched by competitor offerings.

Online value proposition (OVP)

A statement of the benefits of e-commerce services that ideally should not be available in competitor offerings or offline offerings.

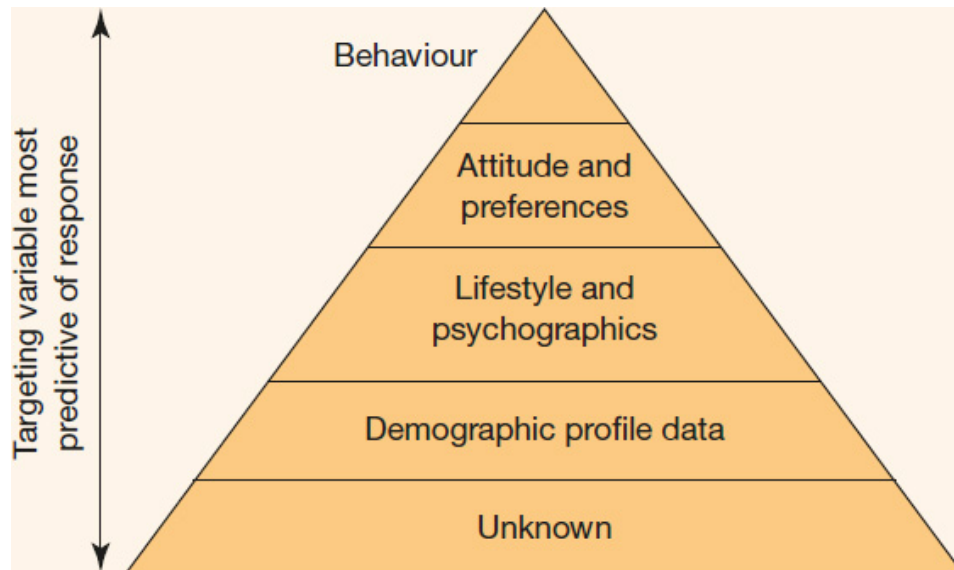


Figure 7.13

The extent to which different types of segmentation variables tend to be predictive of response

- How the proposition will be communicated to site visitors and in all marketing communications. Developing a tagline can help this.
- How the proposition is delivered across different parts of the buying process.
- How the proposition will be delivered and supported by resources.

Ideally, the e-commerce site should have an additional value proposition to further differentiate the company's products or services. The site design will also need to communicate the core proposition of the brand or products.

Having a clear online value proposition has several benefits:

- it helps distinguish an e-commerce site from its competitors' (this should be a website design objective);
- it helps provide a focus to marketing efforts and enables company staff to be clear about the purpose of the site;
- if the proposition is clear it can be used for PR and word-of-mouth recommendations;
- it can be linked to the normal product propositions of a company or its product.

Many strategic digital marketing planning decisions are based around the OVP and the quality of online customer experience delivered by a company. Interactive features can be particularly important for transactional sites in that they may enhance the user's experience and so encourage conversion and repeat sales. Examples of how companies have developed their OVP through interactive features include customer reviews and ratings, podcast product reviews, a blog with customer comments enabled, buyers' guides and video reviews.

Content strategy

It is evident that a compelling OVP demands exceptional, compelling content and a compelling experience provided for customers through the website and other online presence on blogs, social networking sites and through mobile platforms. Today, by content we not only refer to the combination of static content forming web pages, but also dynamic rich media content that encourages interaction. Videos, podcasts, user-generated content and interactive product selectors should also be considered as content, which should be refined to engage issues.

You can see the challenge [content strategy](#) presents, since today there are so many different types of content delivered in different forms to different places on different access platforms, yet it is increasingly important to engage customers in social media.

It can be seen that managing the creation of quality content is part of a broader customer engagement strategy that looks at delivering effective content across the whole customer lifecycle. As such, it is an integral part of the CRM strategy development, which we cover in more detail in the next chapter.

To help deliver a compelling OVP requires a change of mindset for many companies. They need to think more like a publisher and so invest in quality content that is superior to that of their competitors. This requires:

- Quality, compelling content - content is still king!

- Quality writers to create quality content, who may be internal staff or external freelance writers.
- An editorial calendar and appropriate process to schedule and deliver the content.
- Investment in software tools to facilitate the process.
- Investment in customer research to determine the content their different audiences will engage with.
- Careful tracking of which content engages and which does not.

Content strategy

The management of text, rich media, audio and video content aimed at engaging customers and prospects to meet business goals published through print and digital media including web and mobile platforms, which is repurposed and syndicated to different forms of web presence such as publisher sites, blogs, social media and comparison sites.

Focus on Characteristics of digital media communications

In this section, we explore the main differences between marketing communications in the traditional media such as TV, print and radio and in new digital media such as websites, interactive TV and mobile commerce. This section is based on the summary presented in Chaffey (2000). Recognising the differences between the Internet and other media is important to achieving success in channel promotion and channel satisfaction, and will lead in turn to positive channel outcomes and profitability.

A useful summary of the differences between the new media and traditional media has been developed by McDonald and Wilson (1999) as the '6 Is' of digital marketing. These highlight factors that apply to practical aspects of Internet marketing such as personalisation, direct response and marketing research, but also strategic issues of industry restructuring and integrated channel communications. By considering each of these facets of the new media, marketing managers can develop marketing plans that accommodate the characteristics of the new media. This presentation of the '6 Is' is a new interpretation of these factors using new examples and diagrams to illustrate these concepts.

1 Interactivity

Deighton (1996) was one of the first authors to explain that interactivity is a key characteristic of the Internet that enables companies to communicate with customers in a new way. Figure 7.14(a) shows how traditional media are predominantly *push media*, where the marketing message is broadcast from company *to* customer and

other stakeholders. During this process, there is limited interaction with the customer. On the Internet, it is usually a customer who initiates contact and is *seeking* information on a website. In other words, it is a **pull marketing communications** technique (but email can be considered as a **push marketing communications** technique).

Push marketing communications

Communications are broadcast from an advertiser to consumers of the message, who are passive recipients.

Pull marketing communications

The consumer is proactive in interacting with companies through actively seeking information or entertainment on company websites or social media sites through search engines, comparison intermediaries or direct navigation.

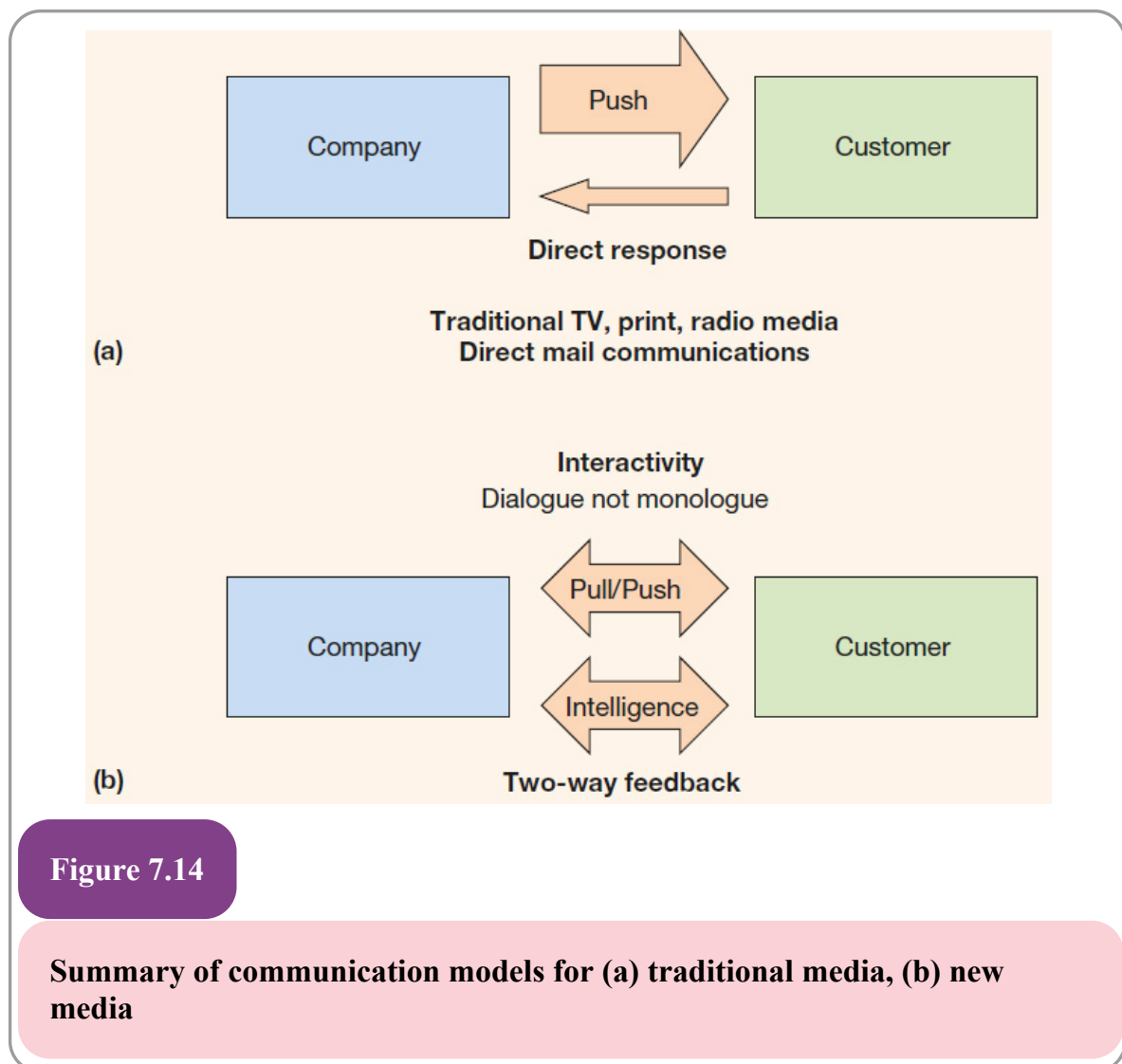


Figure 7.14

Summary of communication models for (a) traditional media, (b) new media

Figure 7.16(b) shows how the Internet should be used to encourage two-way communication; this may be an extension of the direct-response approach. For example, FMCG (fast-moving consumer goods) suppliers such as Nescafé

(www.nescafe.co.uk) use their website and social media presence as a method of generating interaction by providing incentives such as competitions and sales promotions to encourage the customer to respond with their names, addresses and profile information such as age and sex.

Hoffman and Novak (1997) realised early in the development of the web that interactivity was significant enough to represent a new model for marketing or a new marketing paradigm. They suggest that the facilities of the Internet represent a computer-mediated environment in which the interactions are not between the sender and receiver of information, but with the medium itself.

The user-generated content customers can provide may be directly commercial, such as auctioning of their possessions via eBay (www.ebay.com), or can include comments on products or suppliers on a neutral site (e.g. www.trustpilot.com) or a destination site (www.firebox.com). (The *Focus on* Social media and social CRM strategy section in Chapter 8 covers techniques for harnessing the interactivity of the web in more detail.)

2 Intelligence

The Internet can be used as a relatively low-cost method of collecting marketing research, particularly about customer perceptions of products and services. In the competitions referred to above, Nestlé is able to profile its customers on the basis of the information received in questionnaires. The Internet can be used to create two-way feedback, which does not usually occur in other media.

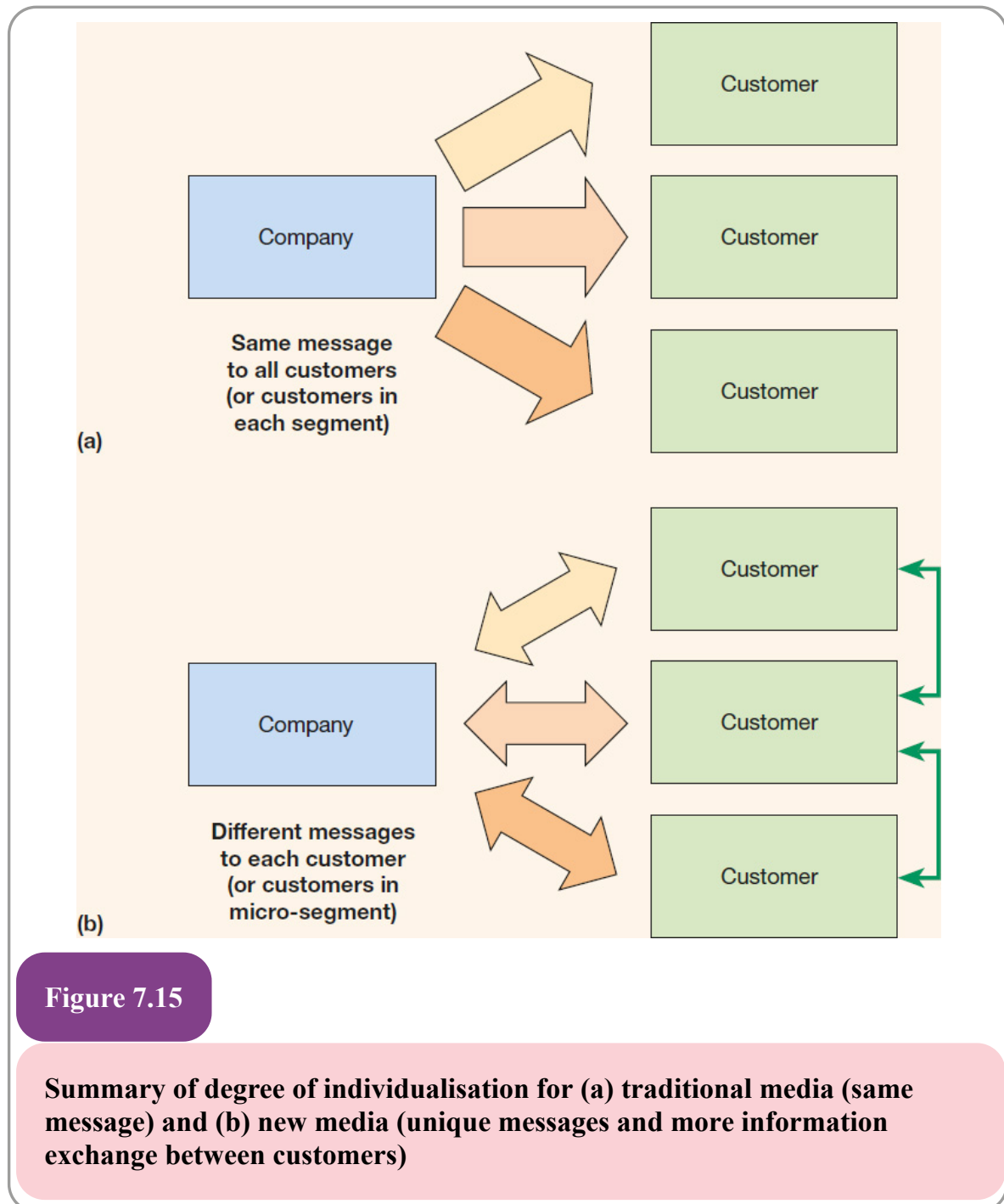
A wealth of marketing research information is also available from the website itself, since every time a user clicks on a link this is recorded and can be analysed with web analytics tools (described in Chapter 10). Potentially, companies can respond in real time to buyer behaviour. For example, banks such as HSBC (www.hsbc.co.uk) and Lloyds (www.lloydsbank.com) use a service from Adobe Marketing Cloud (www.adobe.com/solutions/digital-marketing.html) to serve messages according to an evaluation of which offers they are most likely to respond to.

3 Individualisation

Another important feature of interactive marketing communications is that they can be tailored to the individual (Figure 7.15(b)), unlike traditional media where the same message tends to be broadcast to everyone (Figure 7.15(a)). The process of tailoring is also referred to as *personalisation* and is an important aspect of achieving customer relationship management online. Personalisation is often achieved through extranets, which are set up with key accounts to manage the buying and after-sales processes. Dell (www.dell.com/premier) set up 'Dell Premier' for key accounts such as the Abbey, where special offers and bespoke customer support are delivered.

Another example of personalisation is that achieved by business-to-business online retailer RS Components (<http://uk.rs-online.com/web>). Every customer who accesses its system is profiled according to their area of product interest and information

describing their role in the buying unit. When they next visit the site, information will be displayed relevant to their product interest. This is an example of what is known as *mass customisation*, where generic customer information is supplied for particular segments, i.e. the information is not unique to individuals, but to those with a common interest. Amazon (www.amazon.com) is well known for using a *collaborative filtering* approach or Amazon's 'Customers who bought X ... also bought... Y'. Amazon also has two other personalisation features, 'Customers who shopped for X also SHOPPED for. . . ' and 'Customers who searched for X also BOUGHT. . . '.



4 Integration

The Internet provides further scope for integrated marketing communications. Figure 7.16 shows how it is just one of many different media channels (these channels are also offered by intermediaries). When assessing the success of a website, the role of the Internet in communicating with customers and other partners can best be considered from two perspectives. First, organisation-to-customer direction: how does digital complement other channels in communication of proposition for the company's products and services to new and existing customers with a view to generating new leads and retaining existing customers? Second, customer-to-organisation: how can digital media complement other channels to deliver customer service to these customers? Many companies are now considering how they integrate email response and website call-back into their existing call-centre or customer service operation. This may require a substantial investment in training and new software. Ruler Analytics (www.ruleranalytics.com) provides a service that integrates call tracking and live chat with CRM platforms and Google Analytics, so that companies can track a visitor across multiple channels across their purchase journey.

Some practical examples of how the Internet can be used as an integrated communications tool are as shown by Figure 7.17 and Activity 7.4.

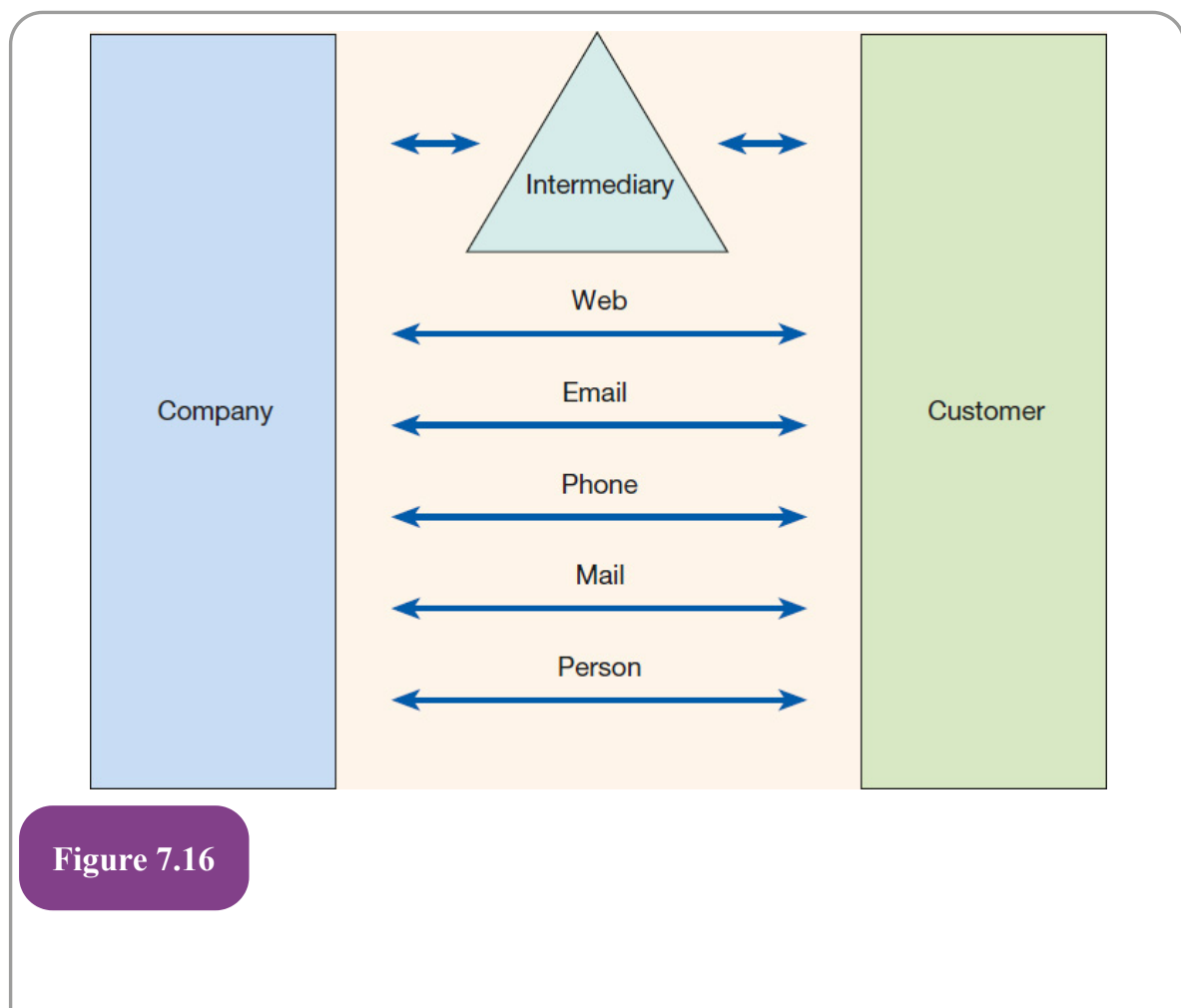


Figure 7.16

Channels requiring integration as part of integrated digital marketing strategy

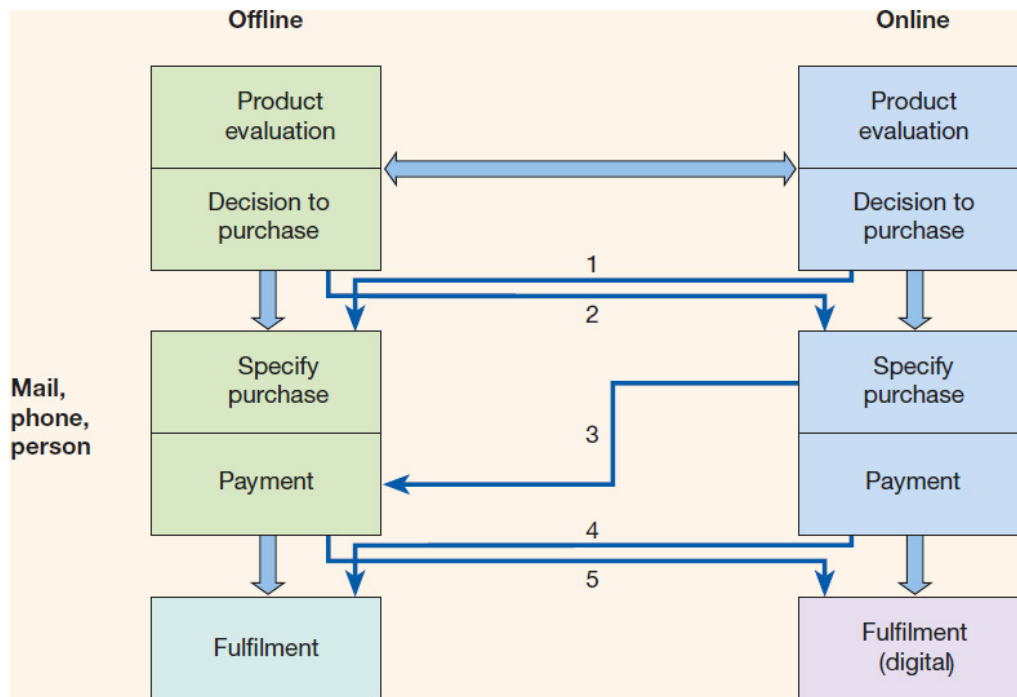


Figure 7.17

Channel integration required for digital marketing and mixed-mode buying

Activity 7.4

Integrating online and offline communications

Purpose

To highlight differences in marketing communications introduced through the use of the Internet as a channel and the need to integrate these communications with existing channels.

Activity

List communications between a mobile phone vendor and a customer over the lifetime of a product such as a smartphone. Include communications using both

the Internet and traditional media. Refer to channel swapping alternatives in the buying decision shown in Figure 7.19 to develop your answer.

- The Internet can be used as a direct-response tool enabling customers to respond to offers and promotions publicised in other media. Dell uses ‘e-value codes’, which it publishes in magazines and offline material to direct people to specific pages (via a search) when they visit the website. These codes include a media code to assess which offline communications were most effective in driving sales on the website.
- The website can have a direct-response or call-back facility built into it. The AA has a feature where a customer service representative will contact a customer by phone when the customer fills in their name, phone number and a suitable time to ring. In recent years, there has been high growth in the use of ‘live chat’ facilities - which enables site visitors to communicate with customer service representatives, via the written word, in real time.
- The Internet can be used to support the buying decision even if the purchase does not occur via the website. This is alternative 3 in Figure 7.17. Changing from one channel to another during the buying process is referred to as **channel switching**. It is a key aspect of devising online marketing communications, since the customer should be supported in changing from one channel to another. Bazett *et al.* (2005) give the example of a high-street chain that estimated (through credit card tracking) that for every £1 of revenue it takes on the web, £3 are spent in-store after browsing online - so it has objectives for this and works equally hard to help these customers through facilities such as store locators and information on stock availability for that store.
- Customer information delivered on the website must be integrated with other databases of customer and order information such as those accessed via staff in the call centre to provide what Seybold (1999) calls a ‘360 degree view of the customer’.
- The Internet can be used to support customer service. For example, easyJet (www.easyjet.com) encourages users to check a list of frequently asked questions (FAQs) compiled from previous customer enquiries before contacting customer support via phone.

Channel switching

The process by which a customer changes between online and offline channels during the buying process.

5 Industry restructuring

Disintermediation, reintermediation and countermediation are key concepts of industry restructuring that should be considered by any company developing a digital marketing strategy (see Chapters 2 and 4). For the marketer defining their company’s communications strategy it becomes very important to consider the company’s

representation on these intermediary sites by answering questions such as ‘Which intermediaries should we be represented on?’ and ‘How do our offerings compare to those of competitors in terms of features, benefits and price?’.

6 Independence of location

Digital media can also help increase the reach of company communications to a global market. This gives opportunities to sell into international markets that may not have been previously accessible. Scott Bader (www.scottbader.com), a business-to-business supplier of polymers and chemicals for the paints and coatings industry, can now target countries beyond the 40 or so it has traditionally sold to via a network of local agents and franchises. The Internet makes it possible to sell to a country without a local sales or customer service force. Strategists also need to carefully consider channel conflicts that may arise. If a customer is buying direct from a company in another country rather than via the agent, this will marginalise the business of the local agent who may want some recompense for sales efforts or may look to partner with competitors.

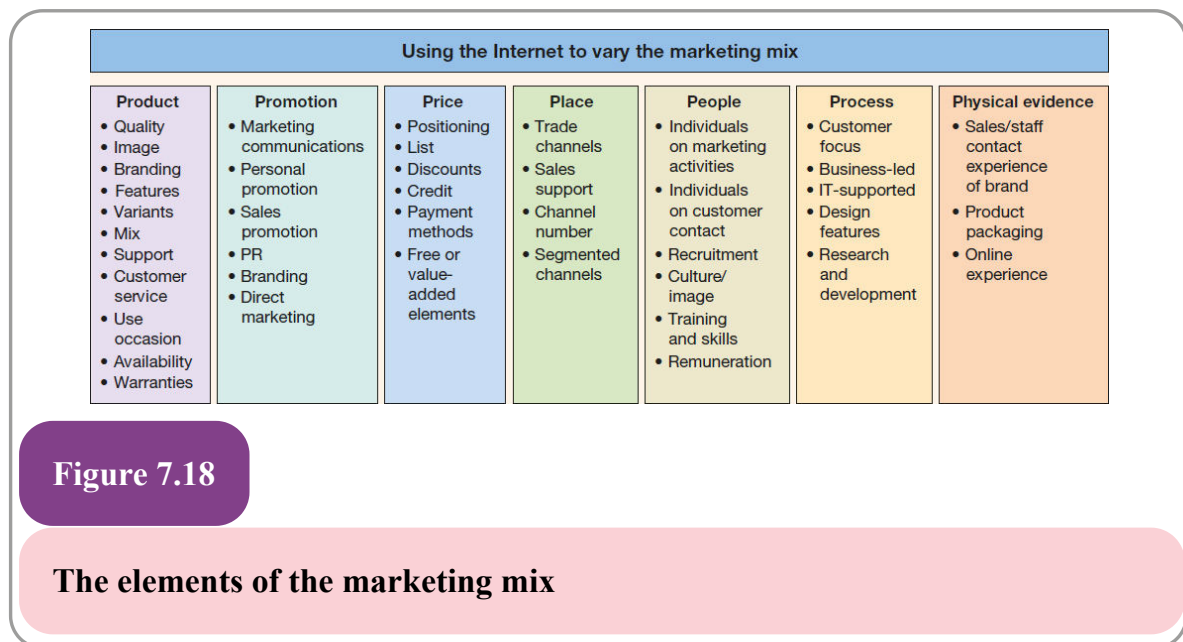
(A further appraisal of using the characteristics of new media for effective communications is presented in Chapter 8.)

Tactics

Marketing tactics to implement strategies and objectives are traditionally based around the elements of the marketing mix and models of how to engage customers throughout their lifecycle as part of customer relationship management. In this chapter we focus on the marketing mix. (In Chapter 8, we will review the lifecycle-based approach.)

The marketing mix - the Four Ps of Product, Price, Place and Promotion originally proposed by Jerome McCarthy (1960) - is still used as an essential part of implementing marketing strategy by many practitioners. The Four Ps have been extended to the Seven Ps by including three further elements that better reflect service delivery: People, Processes and Physical evidence (Booms and Bitner, 1981), although others argue that these are subsumed within the four Ps. The marketing mix is applied frequently when developing marketing strategies since it provides a simple framework, like that shown in Figure 7.18, for varying different elements of the offering to influence the demand for products within target markets. For example, to increase sales of a product the price can be decreased or the amount or type of promotion changed, or there can be some combination of these elements.

E-commerce provides new opportunities for the marketer to vary the marketing mix, which have been summarised well by Allen and Fjermestad (2001).



There are some well-known criticisms of applying the marketing mix as a solitary tool for marketing strategy. First, the marketing mix is symptomatic of a push approach to marketing and does not explicitly acknowledge the needs of customers. As a consequence, the marketing mix tends to lead to a product rather than a customer orientation. To mitigate this effect, Lautenborn (1990) suggested the Four Cs framework, which considers the Four Ps from a customer perspective. In an e-commerce context, the Four Cs can be interpreted as follows:

- Customer needs and wants (from the product) - the website is a mechanism for explaining how the product proposition meets these needs and wants.
- Cost to the customer (price) - online, the customer is likely to be comparing prices to other websites and traditional purchasing sources.
- Convenience (relative to place) - online this is the quality of customer experience in terms of the ordering process and fulfilment.
- Communication (promotion) - the website itself coupled with the methods of driving traffic to the site, such as search engine marketing and email marketing (as described in Chapter 8).

It follows that the selection of the marketing mix is based on detailed knowledge of buyer behaviour collected through market research. Furthermore, it should be remembered that the mix is often adjusted according to different target markets or segments. An increased focus on 'one-to-one marketing', which means tailoring of the offer for specific customers, also sits uncomfortably within the Seven Ps framework.

The **long-tail concept** is useful for considering the role of Product, Place, Price and Promotion online, as explained in Box 7.2.

The long-tail concept

A frequency distribution suggesting the relative variation in popularity of items selected by consumers.

Box 7.2**Applying the long-tail concept**

The phenomenon now referred to as the ‘long tail’, following an article by Anderson (2004), was arguably first applied to human behaviour by George Kingsley Zipf, professor of linguistics at Harvard, who observed the phenomenon in word usage (see http://en.wikipedia.org/wiki/Zipf%27s_law). He found that if the variation in popularity of different words in a language is considered, there is a systematic pattern in the frequency of usage or popularity. Zipf’s ‘law’ suggests that if a collection of items is ordered or ranked by popularity, the second item will have around half the popularity of the first one and the third item will have about a third of the popularity of the first one and so on. In general:

The k th item is $1/k$ the popularity of the first.

Look at Figure 7.19, which shows how the ‘relative popularity’ of items is predicted to decline according to Zipf’s law from a maximum count of 1,000 for the most popular item to 20 for the 50th item.

In an online context, application of this ‘law’ is now known as ‘the long tail’ thanks to Anderson (2004). It can be applied to the relative popularity of a group of websites or web pages or products on an individual site, since they tend to show a similar pattern of popularity. There are a small number of sites (or pages within sites) that are very popular (the head, which may account for 80% of the volume) and a much larger number of sites or pages that are less popular individually, but still collectively important. Returning to the product context, Anderson (2004) argued that for a company such as Amazon, the long tail or Zipf’s law can be applied to describe the variation in preferences for selecting or purchasing from a choice for products as varied as books, CDs, electronic items, travel or financial services. This pattern has also been identified by Brynjolfsson *et al.* (2003), who present a framework that quantifies the economic impact of increased product variety made available through electronic markets.

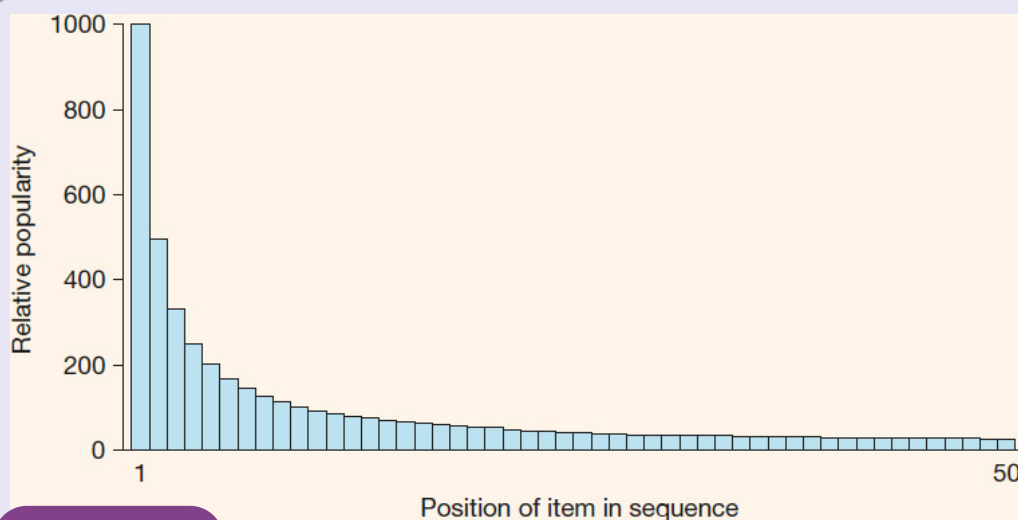


Figure 7.19

Zipf's law, showing decrease in popularity of items within an ordered sequence

Looking at the issue from another perspective, they estimate that 40% of sales are from relatively obscure books with a sales rank of more than 100,000 (if you visit Amazon, you will see that every book has a sales rank from 1 for the most popular to over 1 million for the least popular). This indicates the importance of the long tail for online retailers such as Amazon, since 40% of sales are from these less popular books that cannot be stocked in a conventional bookstore (a large, real-world bookstore would typically hold 100,000 books). In a pricing context, another benefit for online retailers is that less popular products cannot be readily obtained in the real world, so Amazon can justify higher prices for these books. Brynjolfsson *et al.* (2003) estimated that average Amazon prices for an item in the top 100,000 is \$29.26 and in less popular titles \$41.60.

Product

There are many alternatives for varying the **product** when a company is developing its online strategy. Internet-related product decisions can be usefully divided into decisions affecting the **core product** and the **extended product**. For some companies, there may be options for new digital products, which will typically be information products that can be delivered over the web. In some cases, the core product offering has been replaced by information about the product - for example, a company that provides oil-drilling equipment focusing instead on analysis and dissemination of information about drilling. In some cases, an online version of the product may be more valuable to customers in that it can be updated more regularly. The advertising directory BRAD (<http://bradinsight.com>) has been changed from a large paper-based document to an online version with searching facilities that were not available in the paper-based version.

The Internet also introduces options for **mass customisation** of products. Levi's provided a truly personal service that dates back to 1994, when Levi Strauss initiated its 'Personal Pair' programme. Women who were prepared to pay up to \$15 more than the standard price and wait for delivery could go to Levi's stores and have themselves measured.

Product variable

The element of the marketing mix that involves researching customers' needs and developing appropriate products.

Core product

The fundamental features of the product that meet the user's needs.

Extended product

Additional features and benefits beyond the core product.

Mass customisation

The creation of tailored marketing messages or products for individual customers or groups of customers typically using technology to retain the economies of scale and the capacity of mass marketing or production.

Co-creation

The process where brands and consumers work together to create better ideas, products and/or services.

Bundling

Offering complementary services.

More recently, online product **co-creation** has grown in popularity. Online furniture company Made.com lets its buyers decide what designs go from the drawing board into production via its 'TalentLab' concept (www.made.com/talentlab).

Companies can also consider how the Internet can be used to change the range or combination of products offered. **Bundling** is a further alternative. For example, easyJet has developed a range of complementary travel-related services including flights, packages and car hire.

For many companies, using the Internet to vary the extended product is most practical. Chaffey and Smith (2008) suggest these examples of how the Internet can be used to vary the extended product:

- Endorsements
- Awards
- Testimonies
- Customer lists
- Customer comments
- Warranties
- Guarantees
- Money-back offers
- Customer service (see People, Process and Physical evidence)
- Incorporating tools to help users during their use of the product. Options for digital products.

Companies such as publishers, TV companies and other media owners who can offer digital products such as published content, music or videos now have great flexibility to offer a range of product purchase options at different price points, including:

- *Subscription*. This is a traditional publisher revenue model, but subscription can potentially be offered for different periods at different price points, e.g. 3 months, 12 months or 2 years.

- *Pay-per-view*. A fee for a single download or viewing session at a higher relative price than the subscription service. Music service Napster offers vouchers for download in a similar way to a mobile company 'pay-as-you-go' model. Travel publisher Lonely Planet enables visitors to a destination to download an introductory guide for a fraction of the price of a full printed guide.
- *Bundling*. Different channels or content can be offered as individual products or grouped at a reduced price compared to pay-per-view.
- *Ad-supported content*. The publisher's main revenue source is through adverts on the site (CPM display advertising using banner ads and skyscrapers, a fixed sponsorship arrangement or CPC, which stands for 'cost-per-click'). Other options include affiliate revenue from sales on third-party sites or offering access to subscriber lists. The UK's most popular newspaper site, the *Guardian* (www.guardian.co.uk), once trialled an ad-free subscription service, but it, like many online publishers, has reverted to ad-supported content.

Also related to the product element of the mix is how the Internet can be used to assist in new product development by assessing product needs from website logs, testing new concepts, online surveys and focus groups (see 'Growth hacking' in Chapter 10).

Quelch and Klein (1996) also noted that the implication of the Internet and globalisation is that to remain competitive, organisations will have to roll out new products more rapidly to international markets. More recently, Malcolm Gladwell, in his book

The Tipping Point (2000), has shown how word-of-mouth communication has a tremendous impact on the rate of adoption of new products and we can suggest this effect is often enhanced or facilitated through the Internet. The implications of the tipping point are discussed in Box 7.3.

Tipping point

Using the science of social epidemics to explain the principles that underpin the rapid spread of ideas, products and behaviours through a population.

Box 7.3

How does the tipping point apply to digital marketing?

Marsden (2004) provides a good summary of the implications of the tipping point for marketers. He says that 'using the science of social epidemics, the *tipping point* explains the three simple principles that underpin the rapid spread of ideas, products and behaviours through a population'. He advises how marketers should help create a 'tipping point' for a new product or service, the moment when a domino effect is triggered and an epidemic of demand sweeps through a population like a highly contagious virus.

There are three main laws that are relevant to the **tipping point**:

- 1 **The law of the few.** This suggests that the spread of any new product or service is dependent on the initial adoption by 'connectors' who are socially connected and who encourage adoption through word-of-mouth

and copycat behaviour. In an online context, these connectors may use personal blogs, email newsletters and podcasts to propagate their opinions.

2 The stickiness factor. Typically, this refers to how ‘glued’ we are to a medium such as a TV channel or a website, but in this context it refers to attachment to the characteristics and attributes of a product or a brand. Gladwell stresses the importance of testing and market research to make the product effective. Marsden suggests that there are key cross-category attributes that are key drivers for product success and he commends the work of Morris and Martin (2000), which summarises these attributes as:

- *Excellence*: perceived as best of breed
- *Uniqueness*: clear one-of-a-kind differentiation
- *Aesthetics*: perceived aesthetic appeal
- *Association*: generates positive associations
- *Engagement*: fosters emotional involvement
- *Expressive value*: visible sign of user values
- *Functional value*: addresses functional needs
- *Nostalgic value*: evokes sentimental linkages
- *Personification*: has character, personality
- *Cost*: perceived value for money.

You can see that this list is also a useful prompt for the ideal characteristics of a website or online service.

3 The power of context. Gladwell suggests that, like infectious diseases, products and behaviours spread far and wide only when they fit the physical, social and mental context into which they are launched. He gives the example of a wave of crime in the New York subway that came to an abrupt halt by simply removing the graffiti from trains and clamping down on fare-dodging. It can be suggested that products should be devised and tested to fit their context, situation or occasion of use.

Case study 7.2 shows how Dell has revised its marketing mix through deep customer understanding.

Case Study 7.2

Dell gets closer to its customers online

Dell is a technology company offering a broad range of product categories, including desktop computer systems, storage, servers and networking products, mobility products, software and peripherals and services to manage IT infrastructure for large organisations. Dell is the number one supplier of personal computer systems in the United States, and the number two supplier worldwide.

Dell proposition

The main Dell product offerings are:

- 1 Desktop PCs.** Five lines of desktop computer systems are produced for different markets. For example, the OptiPlex line is designed to help business, government and institutional customers manage their total cost of ownership by offering stability, security and managed product transitions. The Dimension line is designed for small businesses and home users requiring the latest features for their productivity and entertainment needs. The XPS™ and Alienware lines are targeted at customers who require the highest performance gaming or entertainment experience available. And in July 2007, Dell introduced the Vostro™ line, which is designed to provide technology and services to suit the specific needs of small businesses.
- 2 Servers and networking.** The PowerEdge™ line of servers is designed to offer customers affordable performance, reliability and scalability. Again, different options are available for different markets, including high-performance rack, blade and tower servers for enterprise customers and lower-priced tower servers for small organisations, networks and remote offices.
- 3 Storage.** For example, storage area networks, network-attached storage, direct-attached storage, disk and tape back-up systems and removable disk back-up.
- 4 Mobility.** Notebook computers are targeted at customers who require the highest-performance gaming or entertainment experience available.
- 5 Software and peripherals.** Office software and hardware including printers, televisions, notebook accessories, networking and wireless products, digital cameras, power adapters, scanners and other products.
- 6 Enhanced services.** Tailored solutions that help customers lower the cost of their services environment and maximise system performance, efficiency and return on investment. These include: infrastructure consulting services; deployment services to install and integrate new systems; asset recovery and recycling services; training services; enterprise support services and managed lifecycle services (outsourced IT management).
- 7 Financial services.** For business and consumer customers in the US through a joint venture between Dell and CIT Group, Inc.

Dell business strategy

Dell's vision is to:

strive to provide the best possible customer experience by offering superior value; high-quality, relevant technology; customized systems; superior service and support; and differentiated products and services that are easy to buy and use.

The core elements of the strategy, which are evident in Dell's marketing communications, are:

- *'We simplify information technology for customers.* Making quality personal computers, servers, storage, and services affordable is Dell's legacy. We are

focused on making information technology affordable for millions of customers around the world. As a result of our direct relationships with customers, or "customer intimacy", we are best positioned to simplify how customers implement and maintain information technology and deliver hardware, services, and software solutions tailored for their businesses and homes.

- *We offer customers choice.* Customers can purchase systems and services from Dell via telephone, kiosks, and our website, www.dell.com, where they may review, configure, and price systems within our entire product line; order systems online; and track orders from manufacturing through shipping. We have recently launched a retail initiative and plan to expand that initiative by adding new distribution channels to reach additional consumers and small businesses through retail partners and value-added resellers globally.
- *Customers can purchase custom-built products and custom-tailored services.* Historically our flexible, build-to-order manufacturing process enabled us to turn over inventory every five days on average, thereby reducing inventory levels, and rapidly bring the latest technology to our customers. The market and our competition has evolved, and we are now exploring the utilisation of original design manufacturers and new distribution strategies to better meet customer needs and reduce product cycle times. Our goal is to introduce the latest relevant technology more quickly and to rapidly pass on component cost savings to a broader set of our customers worldwide.
- *We are committed to being environmentally responsible in all areas of our business.* We have built environmental consideration into every stage of the Dell product lifecycle - from developing and designing energy-efficient products, to reducing the footprint of our manufacturing and operations, to customer use and product recovery.'

Dell's sales and marketing

Dell sells products and services directly to customers through dedicated sales representatives, telephone-based sales and online at www.dell.com.

Customer segments include large corporate, government, healthcare and education accounts, as well as small-to-medium businesses and individual consumers.

Dell stresses the importance of its direct business model in providing direct and continuous feedback from customers, thereby allowing the company to develop and refine its products and marketing programs for specific customer groups.

In its SEC filing, Dell emphasises how it listens to customers to develop relevant innovative technology and services they trust and value. Evidence for using the participative nature of Web 2.0 is that customers can offer suggestions for current and future Dell products, services and operations on an interactive portion of the Dell website called Dell IdeaStorm. It says: 'This constant flow of communication, which is unique to our direct business model, also *allows us to rapidly gauge customer satisfaction and target new or existing products.* '

For large business and institutional customers, Dell maintains a field sales force throughout the world. Dedicated account teams, which include field-based system engineers and consultants, form long-term relationships to provide their largest

customers with a single source of assistance and develop specific tailored solutions for these customers. Dell also maintains specific sales and marketing programmes targeted at federal, state, and local governmental agencies, as well as specific healthcare and educational markets.

Dell Premier

For its large organisational customers, Dell offers Premier (<http://premier.dell.com>), which is a secure, customisable procurement and support site or extranet designed to save organisations time and money through all phases of IT product ownership. The main benefits of Dell Premier are described as:

- *Easy ordering* - A custom online store ensures access to your products at your price.
- *Easy tracking* - View real-time order status, online invoices and purchase history details.
- *Easy control* - Custom access groups define what users can see and do within Premier.

Marketing communications

Dell markets its products and services to small-to-medium businesses and consumers primarily by advertising on television and the Internet, advertising in a variety of print media, and by mailing a broad range of direct marketing publications, such as promotional pieces, catalogues and customer newsletters. In certain locations, it also operates Dell stores or kiosks, typically located within shopping centres, that allow customers to view their products in person and purchase online with the assistance of a Dell expert.

Dell online communications

The management of the consumer site was presented to Econsultancy (2008). Dell has a three-stage order funnel:

- marketing communications execution measured by site visits;
- site merchandising measured by *consideration* % (site visits to e-store visits);
- store merchandising measured by *conversion* % (e-store visits to e-receipts).

The presenter explained how Dell aims to understand and act on customer behaviour based on identification of a series of consideration drivers: the quality of online advertising; path quality through site; merchandising/offers and conversion drivers, for example, configurator 'ease of use'; accessibility of decision support tools; and consistency of message through entire path.

Dell will invest in strategic improvements to the site to improve these levers; examples mentioned included new merchandising approaches such as customer ratings and reviews, videos and major 'path' or customer journey changes created through decision support tools to 'help me choose'. There are also more tactical initiatives to help deliver the right message to each customer including customisation/personalisation, real estate optimisation and message balancing.

More tactical persuasion of site visitors is based on price moves/optimised price position to market and the mix of product features. A wide range of different offers need to be managed. Tactical promotions are driven by promotional 'end dates', which are weekly or bi-weekly and include varying combinations of:

- free shipping
- money-of discounts
- free upgrades (e.g. memory)
- free accessories
- finance offers
- service upgrades.

The presenter also noted how across Europe, the promotional mix has to vary to reflect the differences in buying psychology. He summarises the main differences between customers as follows:

- UK - all about price
- CH - add value over price
- DE - all about high-end products in mix
- IT - design is important (!)
- DK - cheap is good
- NO - added value is key
- FR - tailored for France.

Dell's use of digital media channels

The main digital media channels used by Dell.com in Europe are:

- Paid search through programmes such as Google AdWords is used to promote value through time-limited offers related to the phrase searched upon.
- Display advertising - for example, advertising on technology websites is particularly important for the corporate market.
- Affiliate marketing - used to protect the Dell brand by enabling affiliates to bid on terms such as 'Dell laptops' and to target niche audiences such as owners of gaming machines.
- Email marketing - an e-newsletter is used to keep in touch with existing customers and deliver targeted offers when their hardware may be renewed.

Dell and indirect channels

Although the focus of Dell's business strategy has been selling directly to its customers, it also uses some indirect sales channels when there is a business need. In the US it sells products indirectly through third-party solution providers, system integrators and third-party resellers. During financial year 2008, Dell began offering Dimension desktop computers and Inspiron notebook computers in retail stores in the Americas and announced partnerships with retailers in the UK, Japan, and China. Dell says: *'These actions represent the first steps in our retail strategy, which will allow us*

to extend our business model and reach customers that we have not been able to reach directly.'

Question

Describe approaches used by Dell within its site design and promotion to deliver relevant offers for different types of online customers.

Source: Security Exchange Commission filing 10-K for Dell, 2007.

Price

The **price variable** of the marketing mix refers to an organisation's pricing policies, which are used to define **pricing models** and, of course, to set prices for products and services. The Internet has dramatic implications for pricing in many sectors and there is a lot of literature in this area. Baker *et al.* (2001), and more recently Xing *et al.* (2006), have noted two approaches that have been commonly adopted for pricing on the Internet. Start-up companies have tended to use low prices to gain a customer base, while many existing companies have transferred their existing prices to the web. However, Case study 7.1 showed how easyJet discounted online prices in an effort to meet its objectives of online revenue contribution. In this case, price reduction was possible because of the lower overhead of processing a customer transaction online in comparison with on the phone. Similarly, to acquire customers online booksellers may decide to offer a discount of 50% on the top 25 best-selling books in each category, for which no profit is made, but offer a relatively small discount on the less popular books of the long tail to give a profit margin.

The main implications of the Internet for the price aspect of the mix are as follows.

Price variable

The element of the marketing mix that involves defining product prices and pricing models.

Pricing models

Describe the form of payment, such as outright purchase, auction, rental, volume purchase and credit terms.

1 Increased price transparency and its implications on differential pricing

Quelch and Klein (1996) describe two contradictory effects of the Internet on price that are related to price transparency. First, a supplier can use the technology for differential pricing, for example customers in different countries. However, if precautions are not taken about price, the customers may be able to quickly find out about the price discrimination and they will object to it. So, customer knowledge of pricing is enhanced through the Internet. This is particularly the case for standardised

goods sold through online retailers. Not only can customers visit sites of rival suppliers, they can visit sites of price-comparison engines. It is difficult to retain price differentials if all customers are aware of these differences. Currently, this is probably not the case. However, research quoted by Baker *et al.* (2001) suggests that only around 8% of active online consumers are 'aggressive price shoppers'. Furthermore, they note that Internet price brands have remained quite broad. Online booksellers' prices varied by an average of 33% and CD sellers' by 25%.

There appear to be two main reasons for this: first, pricing is only one variable - consumers also decide on suppliers according to other aspects about the brand such as familiarity, trust and perceived service levels. Secondly, consumers often display **satisficing behaviour**. The term 'satisfice' was coined by Herbert Simon in 1957 when he said that people are only 'rational enough' and that they suspend or relax their rationality if they feel it is no longer required. This is called 'bounded rationality' by cognitive psychologists. In other words, although consumers may seek to minimise some variable (such as price) when making a product or supplier selection, most may not try too hard. Online, this is supported by research by Johnson *et al.* (2004), who showed that by analysing panel data from over 10,000 Internet households and three commodity-like products (books, CDs and air travel services) the amount of online search is actually quite limited. On average, households visit only 1.2 book sites, 1.3 CD sites and 1.8 travel sites during a typical active month in each category. Of course, these averages will reflect a range of behaviour.

A compromise approach used by many companies is to use differential pricing with lower prices or Internet offers for some of their products online. This has been the approach followed by online electrical retailers such as Currys (www.currys.co.uk), travel companies such as TUI (www.tui.co.uk) and companies with online savings products.

Pricing online has to take into account the concept of **price elasticity of demand**. This is a measure of consumer behaviour based on economic theory that indicates the change in demand for a product or service in response to changes in price. Price elasticity of demand is determined by the price of the product, availability of alternative goods from alternative suppliers (which tends to increase online) and consumer income. A product is said to be 'elastic' (or responsive to price changes) if a small change in price increases or reduces the demand substantially. A product is 'inelastic' if a large change in price is accompanied by a small amount of change in demand. More details on price elasticity of demand are given in Box 7.4.

2 Downward pressure on price (including commoditisation)

For business commodities, auctions on business-to-business exchanges (e.g. Emiliani, 2001) can also have a similar effect of driving down price. The purchase of some products that have not traditionally been thought of as commodities may become more price-sensitive. This process is known as '**commoditisation**'. Goods that are becoming commoditised include electrical goods and cars.

3 New pricing approaches (including dynamic pricing and auctions)

Technological developments have recently driven an increase in online companies implementing **dynamic pricing**. *Business Insider* (D'Onfro, 2015) reported that

Amazon's algorithms will tweak the prices of its products many times per hour (which equals millions of individual pricing changes per day). This means that it offers its largest discounts on most-popular products and makes profits on less-popular items - taking advantage of the psychology of price perception. However, care must be taken with differential pricing, since established customers will be unhappy if significant discounts are given to new customers. Websites such as www.camelcamelcamel.com allow potential buyers to monitor Amazon's best-buy prices on its site, which fluctuate hour by hour. Hotel companies and airlines all reportedly use dynamic or surge pricing strategies.

Satisficing behaviour

Consumers do not behave entirely rationally in product or supplier selection. They will compare alternatives, but then may make their choice given imperfect information.

Price elasticity of demand

Measure of consumer behaviour that indicates the change in demand for a product or service in response to changes in price.

Commoditisation

The process whereby product selection becomes more dependent on price than on differentiating features, benefits and value-added services.

Dynamic pricing

Also known as 'surge pricing', this is a pricing strategy in which businesses set flexible prices for products or services based on current market demands.

Box 7.4

Price elasticity of demand

Price elasticity of demand assesses the extent to which a change in price will influence the demand for a product. It is calculated as the change in quantity demanded (expressed as a percentage divided by the change in price as a percentage). Different products will naturally have different coefficients of price elasticity of demand depending on where they lie on the continuum of consumer tastes, from relatively undifferentiated commodities to luxury, highly differentiated products where the brand perception is important.

The formula for the price elasticity of demand is:

$$\text{Price Elasticity of Demand coefficient} = \frac{\% \text{ Change in Quantity Demanded}}{\% \text{ Change in Price}}$$

Price elasticity for products is generally described as:

- Elastic (*coefficient of price elasticity* > 1). Here, the percentage change in quantity demanded is greater than the percentage change in price. In elastic demand, the demand curve is relatively shallow and a small percentage increase in price leads to a reduction in revenue. On balance

overall, when the price is raised, the total revenue of producers or retailers falls since the rise in revenue does not compensate for the fall in demand, and when the price is decreased total revenue rises because the income from additional customers compensates for the decrease in revenue from reduced prices. Figure 7.20 shows the demand curve for a relatively elastic product (price elasticity = 1.67).

- Inelastic demand (*coefficient of price elasticity* < 1). Here, the percentage change in quantity demanded is smaller than the percentage change in price. In inelastic demand, the demand curve is relatively steep and a small percentage increase in price causes a small decrease in demand. On balance, overall revenue increases as the price increases, and falls as the price falls. Figure 7.21 shows the demand curve for a relatively inelastic product (price elasticity = 0.3125).

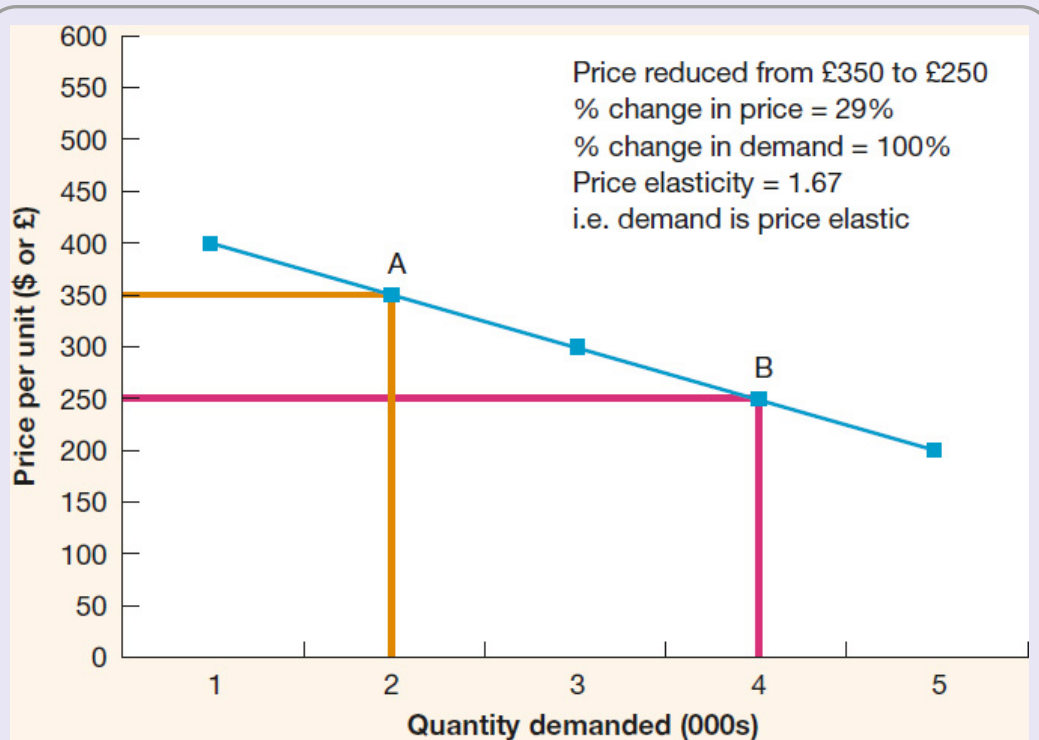


Figure 7.20

Price elasticity of demand for a relatively elastic product



Figure 7.21

Price elasticity of demand for a relatively inelastic product

Companies such as IBM Dynamic Pricing (www.ibm.com/us-en/marketplace/dynamic-pricing)

Boomerang Commerce (www.boomerangcommerce.com) offers online retailers price-performance management services.

A further approach is **aggregated buying**. This approach was promoted by LetsBuyit. com, but the business model did not prove viable - the cost of creating awareness for the brand and explaining the concept was not offset by the revenue from each transaction.

Baye *et al.* (2007) reported that European electronics online retailer Pixmania (www.pix-mania.com) used price experimentation to learn about its customers' price sensitivity. They noted that for a PDA, Pixmania adjusted its product price 11 times in a 14-week period, from a low of £268 to a high of £283, as part of a series of small experiments that enabled it to learn about the price sensitivities of its customers. This pricing strategy also provides an additional strategic benefit - unpredictability.

Baye *et al.* (2007) recommend that online retailers should ask the following questions when reviewing pricing online:

- 1 **How many competitors are there at a point in time?** They suggest a product's mark-up should be increased when the number of rivals falls and decreased when

the number of rivals increases. They also recommend that since the identity of competitors online will differ from traditional offline rivals, it is important to include key online competitors.

2 What is the position in the product lifecycle? A product's mark-up should be decreased over its lifecycle or when new versions are introduced.

3 What is the price sensitivity or elasticity of a product? They suggest continuously experimenting to learn changes in the price sensitivity of a product.

Aggregated buying

A form of customer union where buyers collectively purchase a number of items at the same price and receive a volume discount.

4 At what level is pricing set? The optimal mark-up factor should be applied at the product rather than category or firm level, based on price testing at the product level. They also note the variation of conversion rates and clickthrough fees from paid search engines and aggregators at the category or product level, which makes it important to have micro-management of pricing.

5 Are rivals monitoring my price? Be unpredictable if rivals are watching. Exploit 'blind spots' if rivals are not watching.

6 Are we stuck in the middle? A middle pricing point is sub-optimal, particularly if prices can be set to target the lowest point in the market.

4 Alternative pricing structure or policies

Different types of pricing may be possible on the Internet, particularly for digital, downloadable products. Software and music have traditionally been sold for a continuous right to use. The Internet offers new options such as payment per use, rental at a fixed cost per month or a lease arrangement. Bundling options may also be more possible. The use of Software as a Service (SaaS) (Chapter 3) providers to deliver services such as website traffic monitoring also gives new methods of volume pricing.

Further pricing options that could be varied online include:

- basic price
- discounts
- add-ons and extra products and services
- guarantees and warranties
- refund policies
- order cancellation terms.

Place

Allen and Fjermestad (2001) argue that the Internet has the greatest implications for **place** in the marketing mix since the Internet has a global reach. However, due to cost and time of international fulfilment, together with issues of trust in the local country and the availability of phone support, most products are still sourced locally. The

exception to this is digital products, where there is no physical limitation on fulfilment; Apple iTunes has proved successful in offering this service worldwide. The main implications of the Internet for the place aspect of the mix, which we will review in this section, are:

1 Place of purchase

In a B2B context, e-commerce is conducted on the manufacturer's own site, at an intermediary or is procured on a customer's site.

2 New channel structures

New channel structures such as changes introduced by disintermediation, reintermediation and countermediation (referred to in Chapter 2).

3 Channel conflicts

A significant threat arising from the introduction of a digital channel is that while disintermediation gives a company the opportunity to sell direct and increase profitability on products, it can also threaten distribution arrangements with existing partners. Such channel conflicts are described by Frazier (1999), and need to be carefully managed. Frazier (1999) identifies some situations when the Internet should only be used as a communications channel. This is particularly the case where manufacturers offer an exclusive, or highly selective, distribution approach. To take an example, a company manufacturing expensive watches costing thousands of pounds will not in the past have sold direct, but will have used a wholesaler to distribute watches via retailers. If this wholesaler is a major player in watch distribution, then it is powerful, and will react against the watch manufacturer selling direct.

Place

The element of the marketing mix that involves distributing products to customers in line with demand and minimising cost of inventory, transport and storage.

The wholesaler may even refuse to act as distributor and may threaten to distribute only a competitor's watches, which are not available over the Internet.

Further channel conflicts involve other stakeholders, including sales representatives and customers. Sales representatives may see the Internet as a direct threat to their livelihood. In some cases, such as Avon cosmetics and *Encyclopaedia Britannica*, this has proved to be the case, with these sales models being partly or completely replaced by the Internet. For many B2B purchases, sales representatives remain an essential method of reaching the customer to support them in the purchase decision. Here, the Internet can be used as a sales support and customer education tool. Customers who do not use the online channels may also respond negatively if lower prices are available to their online counterparts. This is less serious than other types of channel conflict.

Digital channels can take these forms:

- a communication channel only;
- a distribution channel to intermediaries;
- a direct sales channel to customers;
- any combination of the above.

To avoid channel conflicts, the appropriate combination of channels must be arrived at.

Digital channel strategy will, of course, depend on the existing arrangements for the market. If a geographical market is new and there are no existing agents or distributors, there is unlikely to be channel conflict, in that there is a choice of distribution through the Internet only or appointments of new agents to support Internet sales, or a combination of the two. Often, SMEs will attempt to use the Internet to sell products without appointing agents, but this strategy will only be possible for retail products that need limited pre-sales and after-sales support. For higher-value products, such as engineering equipment, which will require skilled sales staff to support the sale and after-sales servicing, agents will have to be appointed.

For existing geographical markets in which a company already has a mechanism for distribution in the form of agents and distributors, the situation is more complex, and there is the threat of channel conflict.

Promotion

Specification of the **promotion** is usually part of a communications strategy. This will include selection of target markets, positioning and integration of different communications tools. The Internet offers a new marketing communications channel to inform customers of the benefits of a product and assist in the buying decision. The main elements of the promotional or communications mix and their online equivalents summarised by Chaffey and Smith (2008) are shown in Table 7.8.

One approach for developing promotion tactics is to specify the communications techniques required for different stages of the buying. Another approach is to look at how the Internet can supplement the range of promotional activities such as advertising, sales promotions, PR and direct marketing. (These approaches are discussed in Chapter 8, where we also look at how customers can be persuaded to return to a site for future purchases.)

The promotion element of the marketing plan also requires three important decisions about investment:

- 1 Investment in promotion compared to site creation and maintenance.** Since there is often a fixed budget for site creation, maintenance and promotion, the digital marketing plan should specify the budget for each to ensure there is a sensible balance.
- 2 Investment in online promotion techniques in comparison to offline promotion.** A balance must be struck between these techniques. Figure 7.22 summarises the tactical options that companies have. Which do you think would be the best option for an established company as compared to a purely online company?

Promotion

The element of the marketing mix that involves communication with customers and other stakeholders to inform them about the product and the organisation.

Table 7.8

The main elements of the promotional mix

Communications tool	Online implementation
1 Advertising	Interactive display ads, pay-per-click search advertising
2 Selling	Virtual sales staff, site merchandising, chat and affiliate marketing
3 Sales promotion	Incentives such as coupons, rewards, online loyalty schemes
4 Public relations	Online editorial, blogs, feeds, e-newsletters, newsletters, social networks, links and viral campaigns
5 Sponsorship	Sponsoring an online event, site or service
6 Direct mail	Opt-in email using e-newsletters and e-blasts (stand-alone emails)
7 Exhibitions	Virtual exhibitions and white paper distribution
8 Merchandising	Promotional ad serving on retail sites, personalised recommendations and digital alerts
9 Packaging	Virtual tours, real packaging displayed online
10 Word-of-mouth	Viral, affiliate marketing, email a friend, links

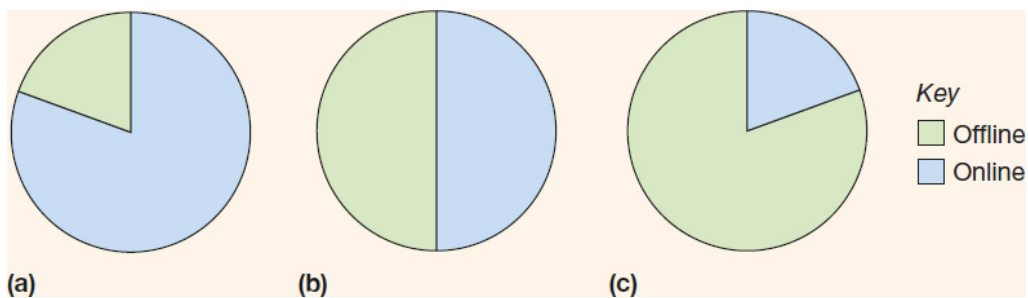


Figure 7.22

Options for the online vs offline communications mix: (a) online > offline; (b) similar online and offline; and (c) offline > online

There will naturally be a variation in spend on online marketing tools depending upon level of adoption of e-commerce by a company and its customers. Factors that will affect the proportion of online media spend in any organisation include:

- proportion of customers in a segment that can be reached through traditional or digital media;
- proportion of customers in target market in researching and purchasing products online;
- propensity of customers to purchase products using traditional channels;
- the relative cost-effectiveness of different online media (see Chapter 8) in comparison with traditional media such as TV and print.

There is a delicate balance to be struck between driving visitors to a website where they may be less likely to convert, but the cost of sale will be lower. With any medium there is a point of diminishing returns where more spend on that medium will not result in improved results. It seems that many companies are following a strategy of gradually increasing their digital spend, since they want to find this inflexion point without overstepping it too far.

3 Investment in different online promotion techniques. For example, how much to pay for banner advertising as against online PR; how much to pay for search engine registration. (These and other traffic-building techniques are described in Chapters 8 and 10.)

People, process and physical evidence

People, **process** and **physical evidence** are particularly important variables for service delivery. Since service delivery is an important aspect of e-commerce sites, this is referred to in the '*Focus on* Excelling in e-commerce service quality' in Chapter 8 and the one on user-centred design in Chapter 9. Enhancing service is also an important element of online branding, which is described in the next *Focus on* section in this chapter. Physical evidence could be applied to site design or the accompanying packaging when products are delivered. Alternatively, these could be interpreted as part of the extended product.

Smith and Chaffey (2001) suggest that, online, part of the consideration for the people element of the mix is the consideration of the tactics by which people can be replaced or their work automated. These are some of the options:

- *Autoresponders*. These automatically generate a response when a company or customer emails an organisation, or submits an online form.
- *Email notification*. Automatically generated by a company's systems to update customers on the status of their order, for example, order received, item now in

stock, order dispatched.

- *Call-back facility*. Customers fill in their phone number on a form and specify a convenient time to be contacted.
- *Frequently asked questions* (FAQs). For these, the art is in compiling and categorising the questions so customers can easily find (a) the question and (b) a helpful answer.
- *On-site search engines*. These help customers find what they are looking for quickly and are popular when available. Site maps are a related feature.
- *Virtual assistants/chat bots*. These come in varying degrees of sophistication and usually help to guide the customer through a maze of choices.

People variable

The element of the marketing mix that involves the delivery of service to customers during interactions with customers.

Process variable

The element of the marketing mix that involves the methods and procedures companies use to achieve all marketing functions.

Physical evidence variable

The element of the marketing mix that involves the tangible expression of a product and how it is purchased and used.

Focus on Digital branding

What comprises a successful online brand? Is it an e-commerce site with high levels of traffic? Is it a brand with good name recognition? Is it a profitable brand? Or is it a site with more modest sales levels, but one that customers perceive as providing good service? Although sites meeting only some of these criteria are often described as successful brands, we will see that a successful brand is dependent on a wide range of factors.

Erdem *et al.* (2002) noted, in their study into the impact of brand credibility on consumer price sensitivity, that a credible brand signal helps to generate customer value by: (i) reducing perceived risk; (ii) reducing information search costs; and (iii) creating a favourable, trustworthy perception of the organisation. This shows the importance of online branding, since websites must give the impression of trust and deliver a favourable experience to encourage first-time and repeat sales.

Many think of **branding** only in terms of aspects of the brand identity, such as the name or logo associated with a company or products, but branding gurus seem agreed that it is much more than that - it is dependent on a customer's psychological affinity for a product. A **brand** is described by Leslie de Chernatony and Malcolm McDonald in their classic 1992 book *Creating Powerful Brands* as:

an identifiable product or service augmented in such a way that the buyer or user perceives relevant unique added values which match their needs most closely. Furthermore, its success results from being able to sustain these added values in the face of competition.

This definition highlights three essential characteristics of a successful brand that we need to relate to the online environment:

- brand is dependent on customer perception;
- perception is influenced by the added-value characteristics of the product;
- the added-value characteristics need to be sustainable.

Branding

The process of creating and evolving successful brands.

Brand

The sum of the characteristics of a product or service perceived by a user.

De Chernatony (2001) has evaluated the relevance of the brand concept on the Internet. He also believes that the main elements of brand values and brand strategy are the same in the Internet environment. However, he suggests that consumers on the Internet become active co-producers of value where they can contribute feedback through discussion groups to add value to a brand. De Chernatony argues for a looser form of brand control where the company facilitates rather than controls customer discussion.

A further method by which the Internet can change branding that was suggested by Jevons and Gabbot (2000) is that, online, 'the first-hand experience of the brand is a more powerful token of trust than the perception of the brand'. In the online environment, the customer can experience or interact with the brand more frequently and to a greater depth. As Dayal *et al.* (2000) say, 'on the world wide web, the brand is the experience and the experience is the brand'. They suggest that to build successful online brands, organisations should consider how their proposition can build on these possible brand promises:

- *the promise of convenience* - making a purchase experience more convenient than the real-world one, or than with rivals;
- *the promise of achievement* - to assist consumers in achieving their goals, for example supporting online investors in their decisions or supporting business people in their day-to-day work;
- *the promise of fun and adventure* - this is clearly more relevant for B2C services;
- *the promise of self-expression and recognition* - provided by personalisation services such as Wix (www.wix.com), where consumers can build their own website;
- *the promise of belonging* - provided by online communities.

De Chernatony (2001) suggests successful online branding requires delivering three aspects of a brand: rational values, emotional values and promised experience (based on rational and emotional values).

An alternative perspective on branding is provided by Aaker and Joachimsthaler (2000), who refer to ‘**brand equity**’, which they define as:

a set of brand assets and liabilities linked to a brand, its name and symbol, that add to or subtract from the value provided by a product or service to a firm and/or to that firm’s customers.

So, brand equity indicates the value provided to a company, or its customers, through a brand. Assessing brand equity on the web needs to address the unique characteristics of computer-mediated environments, as Christodoulides and de Chernatony (2004) have pointed out. These researchers set out to explore whether additional measures of brand equity were required online. Based on expert interviews, they have identified the additional measures of brand equity that are important online, as summarised in Table 7.9. As we would expect, this includes attributes of the digital medium such as interactivity and customisation, which combine to form relevance and a great online **brand experience**. Content is not stressed separately, which is surprising, although they do mention its importance under site design and it is also a key aspect of other attributes such as customisation, relevance and the overall experience. (Their work on the need for rational, emotional appeal together with the promised experience of the website is presented in Figure 9.12.)

Brand identity

Aaker and Joachimsthaler (2000) also emphasise the importance of developing a plan to communicate the key features of the **brand identity** and increase brand awareness. Brand identity is again more than just the name. These authors refer to it as a set of brand associations that imply a promise to customers from an organisation. See Mini case study 7.2 to see the different elements of brand identity, which are effectively a checklist of what many online retailers are looking to achieve.

Brand equity

The assets (or liabilities) linked to a brand’s name and symbol that add to (or subtract from) a service.

Brand experience

The frequency and depth of interactions with a brand can be enhanced through the Internet.

Brand identity

The totality of brand associations, including name and symbols, that must be communicated.

Table 7.9

Traditional measures of brand equity and online measures of brand equity

Traditional measures of brand equity (Aaker and Joachimsthaler, 2000)	Online measures of brand equity (from Christodoulides and de Chernatony, 2004)
Price premium	Online brand experience
Satisfaction/loyalty	Interactivity
Perceived quality	Customisation
Leadership popularity	Relevance
Perceived value	Site design
Brand personality	Customer service
Organisational associations	Order fulfilment
Brand awareness	Quality of brand relationships
Market share	Communities
Market price and distribution coverage	Website logs (see Chapter 8)

Mini case study 7.2 Hotel Chocolat brand identity

Aaker and Joachimsthaler (2000) suggest that the following characteristics of identity need to be defined at the start of a brand-building campaign. Marketing communications can then be developed that create and reinforce this identity. Here, we will apply them to Hotel Chocolat (www.hotelchocolat.com).

- **Brand essence (a summary of what the brand represents)**
 - This is not necessarily a tagline, but Hotel Chocolat is a premium, cocoa-rich chocolate supplier, with the aim of making chocolate exciting.
- **Core identity (its key features)**
 - Originality - striving to be fresh, creative and innovative, including a hotel in the Caribbean, restaurant in London, cafes and 'schools of chocolate'.
 - Authenticity - a British brand; products are based on high-quality cacao grown on their own estate in Saint Lucia; products are made with 'more cocoa, less sugar'.

- Ethics - fairly supporting cocoa-growers, including setting up and running an 'engaged ethics' programme.
- **Extended identity**
 - Personality - luxurious and caring; they offer a 100% happiness guarantee for customers; they also have a strong corporate responsibility statement regarding the environment.
 - Personalisation - 'gift creator', website visitors can pick their gift box/bag, add the products they've selected and change the size/quantity (i.e. one-off personal gifts and fully customised hampers).
 - Community - a tasting club monthly subscription box.
 - Symbols - simple and refined black and white; 'Chocolat' written in calligraphy-style text.
- **Value proposition**
 - Functional benefits - high cocoa content (less sugar), personalisation, discovering new tastes.
 - Emotional benefits - feel good and take pleasure from eating.
 - Self-expressive benefit - tailor chocolate to your tastes, discover new types of chocolate.
- **Relationship**
 - Customers value and will be loyal to a company that has high ethics, a quality product and wants to make eating chocolate exciting and fun.

Ries and Ries (2000) suggest two rules for naming brands. The first is The Law of the Common Name - 'The kiss of death for an Internet brand is a common name'. This argues that common names such as Art.com or Advertising.com are poor since they are not sufficiently distinctive. The second rule is The Law of the Proper Name - 'Your name stands alone on the Internet, so you'd better have a good one'. This suggests that proper names are to be preferred to generic names, e.g. Handbag.com against Woman.com or Moreover.com against Business.com. The authors suggest that the best names will follow most of these eight principles: (1) short, (2) simple, (3) suggestive of the category, (4) unique, (5) alliterative, (6) speakable, (7) shocking and (8) personalised. Although these are cast as 'immutable laws', there will of course be exceptions!

The importance of brand online

The Internet presents a 'double-edged sword' to existing brands. A consumer who already has knowledge of a brand is more likely to trust it, but loyalty can be decreased because the Internet encourages consumers to trial other brands.

This illustrates the importance of building brand awareness for an e-commerce service in a cost-effective manner at the same time as achieving good levels of service

quality. (Success factors for building a brand online are described further in Chapter 8.) Key aspects of creating a positive customer experience are:

- Content quality - can the customer easily find relevant, up-to-date content and are there errors?
- Adequate performance of website infrastructure in terms of availability and download speed.
- Ease of contacting a company for support.
- Quality of response to email enquiries and fulfilment quality.
- Acknowledgement of customer privacy.
- Reflecting and supporting the characteristics of the offline brand.

Managing the technology and customer database necessary to deliver service is a key aspect of digital marketing and requires close interaction between marketers and the IT department or external consultants.

Actions

The actions component of digital marketing planning refers to activities conducted by managers to execute the plan. Questions that need to be resolved when specifying actions include:

- What level of investment in the digital channel is sufficient to deliver these services? What will be the payback?
- What training of staff is required?
- What new responsibilities are required for effective digital marketing?
- Are changes in organisational structure required to deliver Internet-based services?
- What activities are involved in creating and maintaining the website?

At this stage a digital marketing plan will be finalised to summarise actions that need to occur. An example of what appears in a typical digital marketing plan is presented in Box 7.5. This also acts as a summary for the chapter.

Box 7.5

A typical digital marketing plan framework

1 Situation analysis

Internal audits

- Current Internet marketing audit (business, marketing and Internet marketing effectiveness)
- Audience composition and characteristics
- Reach of website, contribution to sales and profitability
- Suitability of resources to deliver online services in face of competition

External audits

- Macro-economic environment (Chapter 4)
- Micro-environment - new marketplace structures, predicted customer activity
- Competition - threats from existing rivals, new services, new companies and intermediaries

Assess opportunities and threats (SWOT analysis)

- Market and product positioning
- Methods of creation of digital value and detailed statement of customer value proposition
- Marketplace positioning (buyer, seller and neutral marketplaces)
- Scope of marketing functions

2 Objectives statement

- Corporate objectives of online marketing (mission statement)
- Detailed objectives: tangible and intangible benefits, specific critical success factors
- Contribution of online marketing to promotional and sales activities
- Online value proposition

3 Strategy definition

- Investment and commitment to online channels (mixture of bricks and clicks)
- Market and product positioning - aims for increasing reach, new digital products and new business and revenue models
- Target market strategies - statement of prioritised segments, new segments, online value proposition and differential advantage; significance of non-customer audiences?
- Change management strategy - which new processes, structures and responsibilities will be required?

4 Tactics

- *Product*. Creating new core and extended value for customers, options for migrating brand online
- *Promotion*. Specify balance of online and offline promotion methods; role of CRM (see Chapter 8)
- *Price*. Discounting online sales, options for setting pricing, new pricing options, e.g. auctions
- *Place*. Disintermediation and reintermediation, seller, buyer or neutral sales
- *People, process and physical evidence*. Online service delivery through support and characteristics of website

5 Actions

Specify:

- Tasks
- Resources
- Partnering and outsourcing
- Budget, including costs for development, promotion and maintenance
- Timescale
- Staff

Implementation

- Key development tasks (Chapter 9): analysis of business and audience needs, scenario-based design, development of content, integration of databases, migration of data, testing and changeover
- Project and change management
- Team organisation and responsibilities
- Risk assessment (identify risks, measures to counter risks)
- Legal issues
- Development and maintenance process

6 Control

Identify a measurement process and metrics (Chapter 10) covering:

- Business contribution (channel profitability - revenue, costs, return on investment)
- Marketing effectiveness (channel outcomes - leads, sales, conversion rate, channel satisfaction)
- Online marketing effectiveness (channel behaviour - page impressions, visitors, repeat visits, conversion rates)

Control

The control element of the digital marketing plan can be achieved through a combination of traditional techniques such as marketing research to obtain customer views and opinions and novel techniques such as analysis of web-server log files that use technology to monitor whether objectives are achieved. (These techniques are reviewed in detail in Chapter 10.) Intranets can be used to share information among marketers and consultants within an organisation.

Summary

- 1 Digital marketing is the application of technology to achieve marketing objectives, defined by the Chartered Institute of Marketing as: ‘the management process responsible for identifying, anticipating and satisfying customer requirements profitably’.
- 2 Digital marketing can be considered a subset of digital business and is equivalent to sell-side e-commerce.
- 3 A digital marketing plan is often developed separately from a digital business strategy. The SOSTAC™ framework is used to introduce the elements of a digital marketing plan.
- 4 Situation analysis - involves a consideration of the external environment with the emphasis on levels of customer access to the Internet, benchmarking of competitors and new entrants.
- 5 Objective setting - a key objective is setting the online revenue contribution or the percentage of sales that will be achieved online. For companies where direct sales are not practical because of the nature of the product, companies may set objectives for how the web will affect marketing communications, customer service and cost reductions.
- 6 Strategies - through evaluating the suitability of product for direct sale, a company may define a replacement (product suitable for direct sale, e.g. airline tickets) or complementary strategy (product unsuitable for direct sale, e.g. FMCG or consultancy services). Replacement strategies may involve changing distribution networks. Complementary strategies will involve using the Internet as an additional marketing communications channel.
- 7 Tactics - digital marketing tactics can be reviewed through varying the elements of the marketing mix: Price, Place, Product, Promotion, People, Processes and Physical evidence.

- 8 Actions - the planning of digital marketing strategy by identifying resources and timescales.
- 9 Control - control can be achieved through monitoring customer satisfaction and channel performance via the website and traditional channels.

Exercises

Self-assessment questions

- 1 Explain the link between digital marketing and digital business and why they may be considered separately.
- 2 Outline the stages in a strategic digital marketing planning process, for each stage noting two aspects that are of particular importance for digital marketing.
- 3 What is the Internet contribution and what is its relevance to digital marketing strategy?
- 4 What factors will govern the Internet contribution that is set for a given organisation?
- 5 Why and how should a company approach benchmarking of online competitors?
- 6 Describe what is meant by a complementary and replacement Internet channel strategy and give examples of products for which companies follow each particular approach.
- 7 Summarise new opportunities to vary the marketing mix that arise through deploying the Internet.
- 8 How can online and offline techniques be used in the control stage of strategy?

Essay and discussion questions

- 1 Select a particular market sector and assess the past, current and future customer use of the Internet as a medium to select and buy products.
- 2 Develop an outline strategic digital marketing plan for an organisation with which you are familiar.
- 3 'Traditional strategic planning has no relevance for the start-up company given the dynamism of the marketplace.' Discuss.
- 4 Assess the value and importance of the Internet contribution in setting digital marketing objectives in relation to other possible objectives.

- 5 Explain how the digital business can make use of technology to monitor and control its operations.

Examination questions

- 1 Outline the stages involved in developing a strategic digital marketing plan.
- 2 Explain what is meant by the Internet contribution and outline how companies will decide on a realistic objective.
- 3 What opportunities may there be to vary the Price and Place components of the marketing mix when delivering services through the Internet?
- 4 What is a complementary Internet channel strategy and for which companies will this be most appropriate?
- 5 What different aspects of digital marketing should be monitored as part of controlling digital marketing? Name three examples of how technology can be used to assist monitoring.
- 6 Explain the strategic options available for product and marketplace positioning for a company currently selling the majority of its products in a single country.
- 7 What do the concepts of reintermediation and disintermediation imply for the tactics a company employs for the Promotion and Place elements of the marketing mix?
- 8 Outline how the electronic medium requires different tactics for effective marketing communications.

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Web links

- ClickZ (www.clickz.com)** US site of statistics and advice about all aspects of digital marketing.
- Content Marketing Institute (contentmarketinginstitute.com)** A publisher advising on content marketing.
- Digital Marketing Magazine (digitalmarketingmagazine.co.uk)** Articles about digital marketing communications, particularly search, social media, mobile, content and customer experience.
- Econsultancy (econsultancy.com)** A membership organisation that aims to help a global community of marketers and e-commerce professionals with research, articles, data, events and training. Blog articles are available without membership.
- MarketingSherpa (www.marketingsherpa.com)** Articles and links on Internet marketing communications including email and online advertising.
- SmartInsights.com (www.smartinsights.com)** A blog of links and articles about developments in digital marketing and digital communications, managed by Dave Chaffey.

8 Customer relationship management

Chapter at a glance

Main topics

- What is eCRM?
- Conversion marketing
- The online buying process
- Customer acquisition management
- Customer retention management
- Customer extension
- Technology solutions for CRM

Focus on...

- Marketing communications for customer acquisition, including search engine marketing, digital PR, online partnerships, interactive advertising, email marketing and social media marketing
- Social media and social CRM strategy
- Excelling in e-commerce service quality

Case studies

8.1 How Warby Parker disrupted the eyewear industry

8.2 Tesco.com increases product range and uses triggered communications to support CRM

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter, the reader should be able to:

- Outline different methods of reaching and acquiring new customers via digital media

- Evaluate different buyer behaviour among online customers
- Describe techniques for retaining customers and cross- and up-selling using digital media communications

Management issues

Customer relationship management involves these management issues:

- Which digital media should we invest in to reach new audiences?
- What are the practical success factors for using digital media to make customer acquisition more effective?
- What technologies can be used to build and maintain the online relationship?
- How do we deliver superior service quality to build and maintain relationships?

Links to other chapters

The main related chapters are:

- *Chapter 4* covers CRM techniques that are constrained by social, legal and ethical factors
- *Chapter 5* discusses how CRM supports digital business strategy
- *Chapter 7* includes CRM as one of the tactics aimed at fulfilling the objectives defined in the digital marketing plan

Introduction

Customer relationship management (CRM)

An approach to building and sustaining long-term business with customers.

According to *CIO* magazine (Wailgum, 2017), a **customer relationship management (CRM)** system will:

... help you better understand your customers' needs and how to meet those needs whilst enhancing your bottom line. CRM systems link up information about customers from a variety of sources, including email, websites, physical stores, call centers, mobile sales and marketing and advertising efforts. CRM data flows between operational systems (like sales and inventory systems) and analytical systems that sort through CRM data for patterns.

An effective CRM strategy can help an organisation increase revenues by:

- providing products and services that are exactly what customers want;
- offering better customer service;
- cross-selling products more effectively;
- helping sales staff close deals faster;
- retaining existing customers and discovering new ones.

The application of technology to support customer relationship management (CRM) is a key element of digital business. Building long-term relationships with customers is essential for any sustainable business. Failure to build relationships largely caused the failures of many online businesses following huge expenditure on customer acquisition (as explained in Chapters 2 and 5). The importance of customer retention to long-term profitability is well known from modelling of the type referred to in Chapter 4. But research summarised by Reichheld and Schefter (2000) showed that acquiring online customers in the retail sector is so expensive (20-30% higher than for traditional businesses) that such start-up companies may remain unprofitable for at least two to three years. The research also shows that by retaining just 5% more customers, online companies can boost their profits by 25% to 95%. These authors say:

but if you can keep customers loyal, their profitability accelerates much faster than in traditional businesses. It costs you less and less to service them.

Note that the relationship between customer loyalty and profitability has been questioned, notably by Reinartz and Kumar (2002), who discovered through analysis of four company databases that:

there was little or no evidence to suggest that customers who purchase steadily from a company over time are necessarily cheaper to serve,

less price sensitive, or particularly effective at bringing in new business.

They have suggested that companies that base their marketing focus on the simple assumption that loyal customers are the most profitable will miss opportunities in targeting other potentially profitable customers.

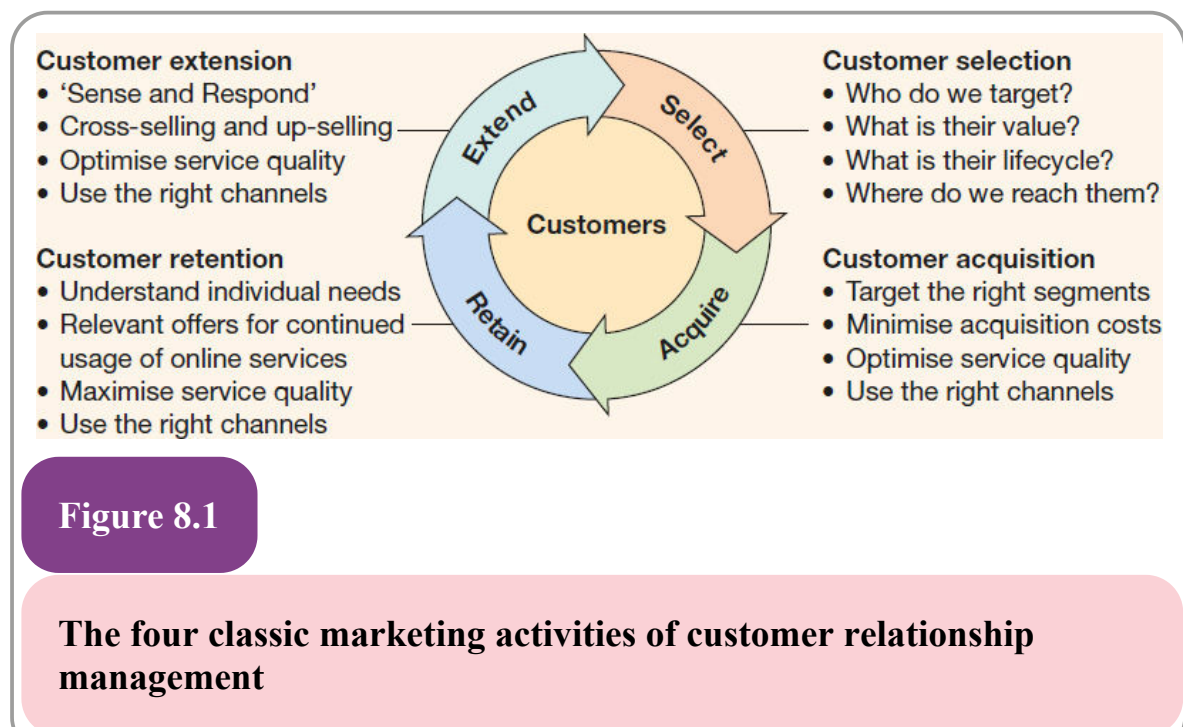
This chapter evaluates different digital communications techniques, such as search and social media marketing, to reach new audiences and then initiate and build relationships with them as customers. The chapter is structured around the different stages of the classic **customer lifecycle** of Select, Acquire, Retain, Extend, as shown in Figure 8.1. The figure emphasises the importance of integrating customer relationship management activities across the appropriate channels.

The four marketing activities that comprise CRM involve the following:

- 1 Customer selection** means defining the types of customers that a company will market to. It means identifying different groups of customers for whom to develop offerings and to target during acquisition, retention and extension. Different ways of segmenting customers by value and by their detailed lifecycle are reviewed. From a digital business perspective (as we saw in Chapter 5), we may want to selectively target customer types who have adopted digital channels.

Customer lifecycle

The stages each customer will pass through in a long-term relationship, through acquisition, retention and extension.



-
- 2 Customer acquisition** refers to marketing activities intended to form relationships with new customers while minimising acquisition costs and targeting high-value customers. Service quality and selecting the right channels for different customers are important.
 - 3 Customer retention** refers to the marketing activities undertaken by an organisation to keep its existing customers. Identifying relevant offerings based on their individual needs and detailed position in the customer lifecycle (e.g. number or value of purchases) is key
 - 4 Customer extension** refers to increasing the depth or range of products that a customer purchases from a company. This is often referred to as ‘customer development’.

There are a range of customer extension techniques for CRM that are particularly important to online retailers:

- (a) **Re-sell.** Selling similar products to existing customers - particularly important in some B2B contexts as re-buys or modified re-buys.
- (b) **Cross-sell.** Sell additional products that may be closely related to the original purchase.
- (c) **Up-sell.** A subset of cross-selling, but in this case selling more expensive products.
- (d) **Reactivation.** Customers who have not purchased for some time, or have lapsed, can be encouraged to purchase again.
- (e) **Referrals.** Generating sales from recommendations from existing customers.

Note that although the concept of CRM is prevalent in current marketing thinking and provides a valuable framework for tactics to increase loyalty and profitability, it may not accurately reflect the way the customer views their dealings with a company. Consumers may simply see their dealings with an organisation as an exchange relationship and will not believe that they are tied to any company, i.e. they may say ‘I don’t want a relationship’. O’Malley and Tynan (2001) note that the concept of a long-term relationship or partnership may be more readily applied to B2B marketing than consumer marketing.

Marketing applications of CRM

A CRM system to support the four activities is made up of different marketing applications:

- 1 Salesforce automation (SFA).** Sales representatives are supported in their account management and phone-based sales through tools to arrange and record customer enquiries and visits.
- 2 Customer service management.** Representatives in contact centres respond to customer requests for information by using an intranet to access databases containing information on the customer, products and previous queries.
- 3 Managing the sales process.** This can be achieved through e-commerce sites, or in a B2B context by supporting sales representatives by recording the sales process (SFA).
- 4 Campaign management.** Managing advertising, direct mail, email and other campaigns.
- 5 Analysis.** Through technologies such as data warehouses and approaches such as data mining, which are explained later in the chapter, customers' characteristics, their purchase behaviour and campaigns can be analysed in order to optimise the marketing mix.

Case Study 8.1

How Warby Parker disrupted the eyewear industry



Figure 8.2

Warby Parker - a new way of buying designer eyewear.

Source: Carolyn Cole/Los Angeles Times via Getty Images

Warby Parker was founded in 2010 by four friends - Neil Blumenthal, Dave Gilboa, Andy Hunt and Jeff Raider - who met while studying for an MBA at Wharton Business School. The idea behind the eyewear company (which is estimated to be valued over \$1 billion) started with a problem - Dave Gilboa had been travelling before starting business school and had lost his \$700 pair of glasses. Their question was: 'Why are glasses so expensive?'. It just so happened that Neil Blumenthal had spent five years running a non-profit organisation called VisionSpring, which trains women in the developing world to give eye exams and sell glasses. His experience in the eyewear market meant that there was nothing in the cost of materials that justified the high prices.

They then found out that one company dominated the eyewear industry, Luxottica. The Italian company was generating \$20 billion a year in revenues and controlled 80% of the major brands in the industry, including Ray-ban, Oakley, Sunglasses Hut, Prada and Chanel, to name just a few. This industry monopoly meant that the prices of designer glasses were over-inflated.

The Warby Parker team decided to disrupt the eye-wear industry by creating a 'vertically integrated company' that bypassed retailers and the middlemen that marked up lenses by 3.5 times, by going directly to the consumer, who would benefit from the savings. They decided to do this by selling their glasses online.

However, their classmates were less enthusiastic about the idea and felt that people would not buy eyewear over the internet. Initial feedback also indicated that consumers might be sceptical about the quality of the product, as their prices were so much lower than the market average. This feedback inspired the team to create a service whereby customers could try on five pairs of frames at home, for free, before buying a pair.

They were meticulous when designing their first collection, culling the product line down to 27 shapes in 3 colours. They launched with acetate frames with single vision lenses, introducing sunwear and prescription sunwear a year later. They then introduced titanium and mixed-material frames the following year.

Launch day: A problem turns into an opportunity

Two years after the idea for Warby Parker was conceived, *GQ* magazine contacted Neil Blumenthal wanting to run a story about the business. At this stage the website was not live, but the founders assumed that the March issue of the magazine would be published in March. When they learned that the magazine would hit the newsstands on 15 February, they had to bring the launch date forward to that date. *GQ* had called Warby Parker ‘the Netflix of eyewear’ and within just 48 hours of the magazine being published the website had so many orders for their \$95 glasses (a deliberate price point of under \$100) that they had to temporarily suspend their ‘Home Try-On’ programme.

The quick launch of the website meant that it did not have a ‘sold out’ function, so customers had placed orders long after all their products had sold out. By this stage, their customer waiting list was 20,000 people long. Warby Parker had hit its first-year sales targets in just three weeks!

Although the issue had caused panic, the founders also saw it as an opportunity to provide a great customer service - they wrote personalised emails to every person on their waiting list to apologise and explain the problem. This open and honest approach is the way they continue to run their customer service.

The company uses a CRM system to help track and fulfil orders for its ‘Home Try-On’ Programme.

Brand building

Blumenthal has always believed that brand building is important - it helps really define who you are and what you stand for; it helps make your company more ‘defensible’.

Ben Lerer, of Lerer Hippeau Ventures, said, ‘What was immediately clear was how thoughtful they were about the consumer. [. . .] They listen to the customer like no brand I’ve ever seen.’

The founders of Warby Parker were methodical and meticulous about their purchase funnel, from customer awareness to post-purchase communications. They also made sure they satisfied customers’ needs by going back to basics. How do customers shop for glasses? They want a pair that look good on their face. . . so the company positioned itself as a fashion brand.

Warby Parker is also a socially conscious brand - they have disrupted an industry that was monopolised by one main multinational company, with extremely high prices. They also work with non-profit organisations, such as VisionSpring, to ensure that for every pair of glasses sold, a pair is distributed to someone in need. The company’s ‘Buy a Pair, Give a Pair’ programme has helped distribute over 3 million pairs of glasses.

Online to offline retail

Customers started emailing Warby Parker to ask where their offices were, so that they could come in and try on glasses. At the time, the company did not have an office, so one of the co-founders invited customers to his apartment in Philadelphia, where glasses were laid out on his kitchen table. Customers enjoyed meeting the people behind the brand and they sold a pair of glasses to everyone who visited.

The level of demand gave the company the confidence to open shops within boutique retailers. They also launched the 'Warby Parker Class Trip' - a store built into a school bus that travelled around 15 cities. The bus also provided market intelligence on where to open stores; their first one was in New York's SoHo. The store's interior is part of the customer experience, which is designed to look like a library. Part of designing the customer experience was the implementation of a point of sale (POS) system. This allows customers to enter their eye prescription online, charges them when the product arrives (not when it's purchased) and gives customer service representatives a complete history of each in-store shopper's relationship with the brand (both online and offline). In future, the system will send each in-store customer who didn't buy a pair of glasses a picture of themselves trying on different pairs to help them place orders at a later stage.

Personalised responses

Warby Parker likes to provide customers with a personalised experience across all channels. The company found that it was difficult to answer some customer service questions (such as those about prescriptions) over Twitter because of the platform's character limit. Therefore, the company's social media team would make short videos of themselves answering the questions, upload them into YouTube, and respond to tweets with a link to the video. They found that customer service tweets with a video were retweeted 65 times more than other tweets from the company.



Figure 8.3

Warby Parker on the road

Source: RosaIreneBetancourt 10/Alamy Stock Photo

The company also has an automated email campaign to help customers throughout their buying process. Every email is matched to each step in the buying process, which includes:

- Confirmation of the customer's Home Try-On order and a summary of the frames chosen.

- When the Home Try-On order has been shipped and a tracking number.
- In between waiting for their frames, customers are kept engaged with a fun email, such as the Warby Parker team's favourite frames.
- Confirmation that the Home Try-On box has arrived.
- The day after receiving the order, a call-to-action message to help customers with choosing and ordering a pair of glasses, including how to get an eye prescription.
- Three days after the frames have arrived, a message about getting help picking frames and instructions on how to get feedback from Warby Parker representatives via social media (Facebook, Twitter, Instagram and email). This is a good way of trying to create a 'store experience' by getting feedback from staff.
- Five days after the frames have arrived, an email to remind customers to send back the frames, along with clear instructions.
- Eight days after receiving the frames, an email to say that customers can call or email with any questions.
- An email after sending the frames back, to thank the customer for posting them back and to ask which frames they would like to buy.

The company also provides its email subscribers with additional content, such as creating a summer jams playlist that links directly to Spotify. This helps them connect to customers in a new way and keeps their brand 'top of mind' on a new digital channel.

Warby Parker is excellent at utilising technology to engage with customers and provide a better customer experience. For example, when the new iPhone X had only been available for a few days, the company had released an app for people to take advantage of the phone's new face-mapping technology. The app uses face-mapping to data to recommend glasses that will best suit the shape of a face.

Question

- 1 Explain how Warby Parker builds effective relationships with its customers. Use Figure 8.1 as a framework to help illustrate your answer.

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What is eCRM?

The interactive nature of the web combined with email communications provides an ideal environment in which to develop customer relationships, and databases provide a foundation for storing information about the relationship and providing information to strengthen it with improved, personalised services. This digital approach to CRM is often known as ‘eCRM’, and it is on this we focus in this chapter. Although Figure 8.1 refers to the whole customer lifecycle, typically eCRM is used to refer to customer retention and extension activities.

It is difficult to state where CRM ends and eCRM starts, since today they both make extensive use of digital technology and media. The ‘e’ prefix was used from the early 2000s to highlight the ‘electronic’ element against a more traditional, offline customer relationship management model. However, now that digital channels (primarily the Internet and email) have become mainstream, eCRM can be seen as an optional term to use - nowadays it’s all CRM!

According to Payne (2008), eCRM can be defined as:

a business approach that seeks to create, develop and enhance relationships with carefully targeted customers in order to improve customer value and corporate profitability and thereby maximise shareholder value.

Digital marketing activities that are within the scope of eCRM, and which we will cover in this chapter, include:

- Using the *website and online social presences for customer development*, from generating leads through to conversion to an online or offline sale using email and web-based content to encourage purchase.
- *Managing customer profile information and email list quality* (coverage of email addresses and integration of customer profile information from other databases to enable targeting).
- Managing customer contact options through mobile, *email and social networks* to support up-sell and cross-sell.
- *Data mining* to improve targeting.
- Providing online **personalisation** or mass customisation facilities to automatically recommend the ‘next-best product’.
- Providing *online customer service facilities* (such as frequently asked questions, call-back and chat support).

Electronic customer relationship management (eCRM)

Using digital communications technologies to maximise sales to existing customers and encourage continued usage of online services.

Personalisation

Delivering customised content for the individual through web pages, email or push technology.

- Managing *online service quality* to ensure that first-time buyers have a great customer experience that encourages them to buy again.
- Managing the *multichannel customer experience* as they use different media as part of the buying process and customer lifecycle.

To help understand the scope of eCRM, you may also find Figure 8.1 useful. This summarises different marketing activities that need to be completed by a digital retailer, structured according to customer acquisition, conversion and retention activities.

From eCRM to social CRM

In previous chapters, we have seen the growing popularity of social media with consumers and as a marketing technique. It's natural that a new marketing approach, **social CRM**, has developed to determine how social media can be applied to develop customer relationships and customer value.

According to an 'Econsultancy Best Practice Guide' written by Campbell (2013):

Social CRM involves a brand leveraging social media to build stronger relationships with customers, delivering consistent and relevant brand experiences across all touch points, and more effectively engaging and connecting employees and partners. These efforts will be complemented by the brand's eCRM capabilities which enable it to manage, broadcast and direct (one-to-one) interactions with consumers across all channels. The big payback for brands will come from seamlessly integrating these two types of customer interaction and exploiting the synergies across them to create exceptional customer experiences.

Areas that overlap with eCRM are customer research, identifying new customers through social media and managing customer service through social media.

Sharma and Sheth (2004) have stressed the importance of a trend away from mass marketing towards what is now widely known as 'one-to-one' or '[customer-centric marketing](#)'. They note that e-channels can have advantages in terms of delivering relevant messages and offers to customers at relatively low cost. They can also be used to support customisation of products. These authors give the example of the Dell model, where each PC is manufactured and distributed 'on demand' according to the need of a specific customer. Another aspect of this transformation is that, online, web marketers can track the past and current behaviours of customers in order to customise communications to encourage future purchases. This approach, which is another aspect of reverse marketing and also a key concept with eCRM, can be characterised as '[sense and respond communications](#)'. The classic example of this is the personalisation facilities provided by Amazon. Companies can also arrange triggered or follow-up email activity after a customer event such as a quote (as used by insurer MORE THAN, www.morethan.com) or an abandoned shopping basket (as used by Tesco.com) to encourage purchase.

eCRM and social CRM programmes should be part of an overall business strategy that is customer-centric. Therefore, the two approaches are complementary. However, it is important to understand the differences between the two - Figure 8.4 outlines the main characteristics of eCRM compared to social CRM.

Benefits of eCRM

Using the Internet for relationship marketing involves integrating the customer database with websites to make the relationship targeted and personalised. Through doing this, marketing can be improved as follows:

Social CRM

The process of managing customer-to-customer conversations to engage existing customers, prospects and other stakeholders with a brand and so enhance customer relationship management.

Customer-centric marketing

This is based on customer behaviour within the target audience and seeks to fulfil the needs and wants of each individual customer.

Sense and respond communications

Delivering timely, relevant communications to customers as part of a contact strategy based on assessment of their position in the customer lifecycle and monitoring specific interactions with a company's website, emails and staff.

- *Targeting more cost-effectively.* Traditional targeting, for direct mail for instance, is often based on mailing lists compiled according to criteria that mean that not everyone contacted is in the target market. For example, a company wishing to acquire new affluent consumers may use postcodes to target areas with appropriate demographics, but within the postal district the population may be heterogeneous. The result of poor targeting will be low response rates, perhaps less than 1%. The Internet has the benefit that the list of contacts is *self-selecting* or pre-qualified. A company will only aim to build relationships with those who have visited a website and expressed an interest in its products by registering their name and address. The act of visiting the website and browsing indicates a target customer. Thus, the approach to acquiring new customers with whom to build relationships is fundamentally different, as it involves attracting the customers to the website, where the company provides an offer to make them register.

eCRM characteristics	Social CRM characteristics
Company-defined process and control of dialogue	Customer-defined process and control of dialogue
Business focus on products and services that meet customer needs	Business focus on environments and experiences that engage and empower the customer
Process-centric, i.e. separate event/transaction-based interactions	Conversation-centric, i.e. on-going engagement
Company-defined business hours	Customer-defined business hours (24*7)
Personalisation driven by central, marketing database and transactional event	Personalisation extends to social profiles, behaviours and events
Sales/transaction focus	Interaction/conversation focus
Marketing focused on highly targeted, specific, personalised ('push') communications	Marketing focused on facilitating ongoing conversations with and between customers and the company/brand; redirecting to 'pull' communications to meet customer needs
Business-constrained, inside-out design process	Genuinely customer-centric, outside-in design process
Contact management focus	Community management focus
Well defined and stable	Dynamic and evolving
Simple transactional outcomes	Complex relationship outcomes
Primarily 'push' communications	Primarily 'pull' communications
Technology focused on operational/delivery dimensions of sales, marketing and service	Technology focused on operational/delivery <u>and</u> social dimensions of sales, marketing and service
Technology automates brand-to-consumer (B2C) interactions	Technology enables customer-to-customer (C2C) interactions, content sharing, peer communities and conversations
Data rich	Content rich
Private, closed-loop interaction	Mix of public and private interaction
Resides in a customer-focused business ecosystem	Resides in a customer ecosystem

Source: Campbell, A. (February 2013), Econsultancy Best Practice Report 'Customer Relationship Management in the Social Age' (Econsultancy.com)

Figure 8.4

Social CRM versus eCRM

- *Achieve mass customisation of the marketing messages* (and possibly the product). This tailoring process is described in a subsequent section. Technology makes it possible to send tailored emails at much lower costs than is possible with direct mail and also to provide tailored web pages to smaller groups of customers (micro-segments).
- *Increase depth, breadth and nature of relationship*. The nature of the Internet medium enables more information to be supplied to customers as required. The nature of the relationship can be changed, in that contact with a customer can be made more frequently. The frequency of contact with the customer can be determined by customers -whenever they have

the need to visit their personalised pages - or they can be contacted by email by the company according to their communications preferences.

- *A learning relationship can be achieved using different tools throughout the customer lifecycle.* For example, tools on Amazon and other retailers summarise products purchased on-site and the searching behaviour that occurred before these products were bought; online feedback forms about the site or products are completed when a customer requests free information; questions asked through forms or emails to the online customer service facilities; online questionnaires asking about product category interests and opinions on competitors; new product development evaluation - commenting on prototypes of new products.
- *Lower cost.* Contacting customers by email or through their viewing web pages costs less than using physical mail, but perhaps more importantly, information only needs to be sent to those customers who have expressed a preference for it, resulting in fewer mail-outs. Once personalisation technology has been purchased, much of the targeting and communications can be implemented automatically.

Customer engagement strategy

The difficulty in finding opportunities to achieve attention online on all types of sites has led to the emergence of the concept of **customer engagement** as a key challenge with which digital marketers are increasingly concerned.

cScape (2008) describe customer engagement as:

repeated interactions that strengthen the emotional, psychological or physical investment a customer has in a brand.

while for Haven (2007), customer engagement is:

the level of involvement, interaction, intimacy, and influence an individual has with a brand over time.

Arguably, the biggest difference in communications introduced by the growth of digital media and the web is that customers' conversations are an integral part of communications (as we noted earlier in this chapter). Today, proactively managing consumer participation through social media is seen as essential.

Permission marketing

Permission marketing is an established approach that should form a practical foundation for CRM and online customer engagement. ‘Permission marketing’ is a term coined by Seth Godin. Godin (1999) noted that while research used to show we were bombarded by 500 marketing messages a day, with the advent of the web and digital TV this has now increased to over 3,000 a day! From an organisation’s viewpoint, this leads to a dilution in the effectiveness of the messages - how can the communications of any one company stand out? From the customer’s viewpoint, time is seemingly in ever-shorter supply, customers are losing patience and expect reward for their attention, time and information. Godin refers to the traditional approach as ‘**interruption marketing**’. Despite the growth in social media marketing, permission marketing is still a core concept within digital media today that works well when integrated with social media. Companies from consumer brands, to retailers, to travel companies and business-to-business start-ups all want visitors to their site to sign-up to email and then deepen the relationship with them through eCRM. Today, it’s more likely to be known as inbound marketing (which we introduced in Chapter 7); this describes how permission marketing fits in with digital marketing techniques such as search engine optimisation and social media. It’s about seeking the customer’s permission before engaging them in a relationship and providing something in exchange. The classic exchange is based on information or entertainment - a B2B site can offer a free report in exchange for a customer sharing their email address, while a B2C site can offer a newsletter with valuable content and offers.

Customer engagement

Repeated interactions that strengthen the emotional, psychological or physical investment a customer has in a brand.

Permission marketing

Customers agree (opt-in) to be involved in an organisation’s marketing activities, usually as the result of an incentive.

Interruption marketing

Marketing communications that disrupt customers’ activities.

From an e-commerce perspective, a customer agrees to engage in a relationship when they check a box on a web form to indicate that they agree to receiving further communications from a company. This is referred to as ‘**opt-in**’. This is preferable to **opt-out**, the situation where a customer has to consciously agree *not* to receive further information. You may recall (from Chapter 4) that in many countries, data protection laws requiring opt-in before customers receive communications and mandatory inclusion of opt-out have now been introduced in an attempt to stop spamming. Effectively, the law is mandating permission marketing as best practice!

The importance of incentivisation in permission marketing has been emphasised by Seth Godin, who likens the process of acquisition and retention to dating someone. Godin (1999) suggests that ‘dating’ the customer involves:

- 1 offering the prospect an incentive to volunteer;
- 2 using the attention offered by the prospect to offer a curriculum over time, teaching the consumer about your product or service;
- 3 reinforcing the incentive to guarantee that the prospect maintains the permission;
- 4 offering additional incentives to get even more permission from the consumer;
- 5 over time, using the permission to change consumer behaviour towards profits.

Notice the importance of incentives at each stage. The use of incentives at the start of the relationship and throughout it is key to successful relationships. As we shall see in a later section, email is very important in permission marketing to maintain the dialogue between company and customer.

Opt-in

A customer proactively agrees to receive further information.

Opt-out

A customer declines the offer to receive further information.

Debate 8.1

Is permission marketing the future?

‘In the future, all marketing communications, regardless of medium, will be permission-based.’

Figure 8.5 summarises the process of permission marketing in an online context. It shows how different methods are used to drive visitors to a website (1) and incentives are then used to profile the customer (2). Subsequent email or social network communications (3) and direct mail (4) are used to encourage repeat visits to the website for future purchases or to learn more about the customer and increase the information in their profile (5).

Customer profiling

To engage a customer in an online relationship, the minimum information that needs to be collected in an online form such as in Figure 8.5 is an email address. What we really need, particularly for B2B sites, is a **qualified lead** that provides us with more information about the customer to help us decide whether that customer is a good prospect who should be targeted with further communications. For B2B this could mean a visit by field sales staff or a follow-up email to arrange this. HubSpot.com, for example, are very good at getting additional details in return for resources, such as free guides, ebooks, templates and webinars.

To continue the relationship it is essential to build a **customer profile** that details each customer's product interest, demographics or role in the buying decision. This will affect the type of information and services delivered at the retention stage. For the customer to give this information a company will have to offer an incentive, establish trust and demonstrate credibility. Data protection and privacy law sets constraints on what can be collected from the customer (as described in Chapter 4. p. 141).

Peppers and Rogers (1999) were among the first commentators to explain how to use technology to build a *one-to-one* relationship. They suggested the IDIC approach as a framework for using the web effectively to form and build relationships:

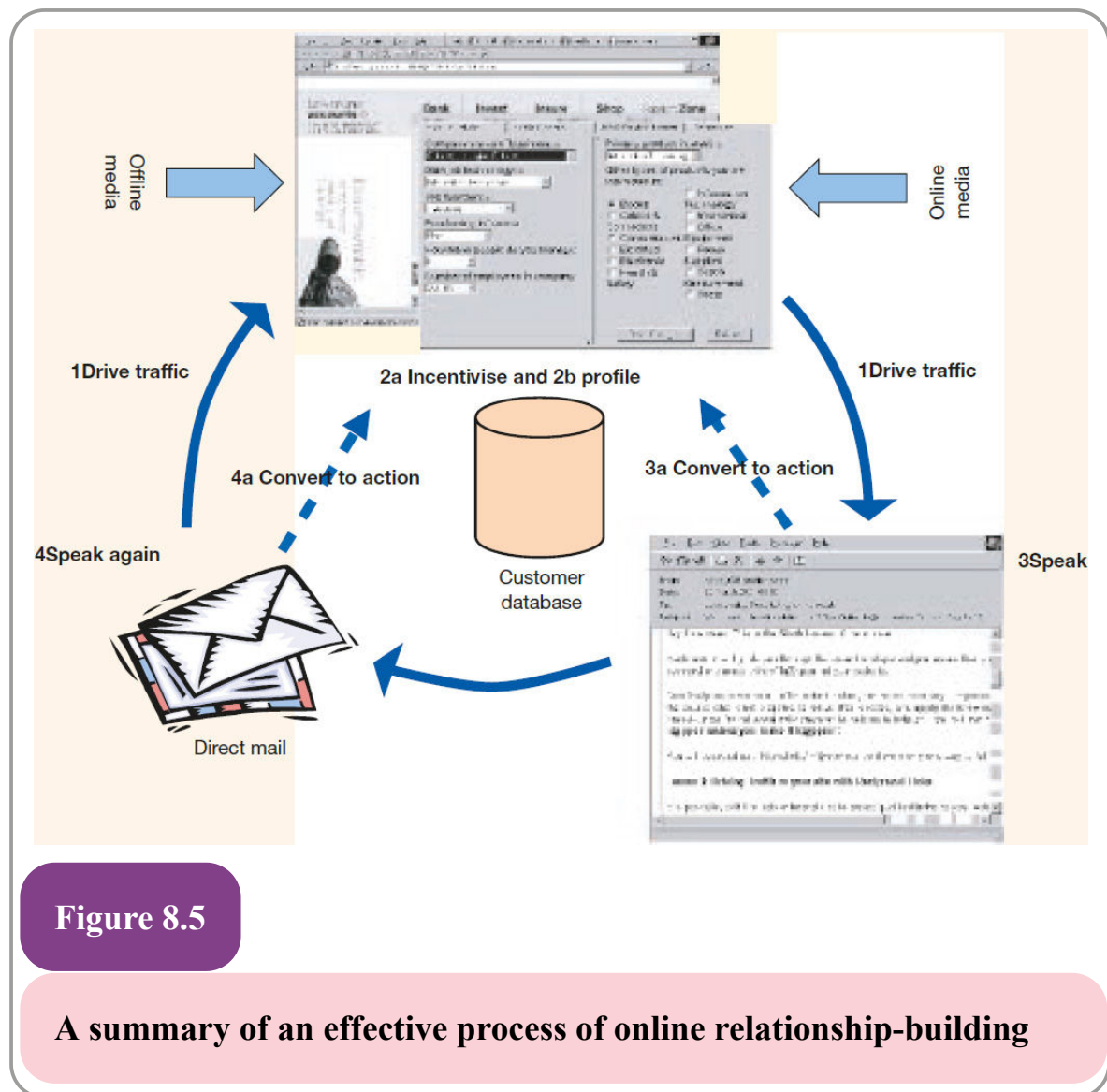
- 1 Customer identification.** This stresses the need to identify each customer on their first visit and subsequent visits. Common methods for identification are use of cookies or asking the customer to log on to a site.
- 2 Customer differentiation.** This refers to building a profile to help segment customers. (Characteristics for differentiating customers are described in Chapter 4).

Qualified lead

Contact information for a customer and an indication of his or her propensity to purchase different products.

Customer profile

Information that can be used to segment a customer.



- 3 Customer interactions.** These are interactions provided on-site, such as customer service questions or creating a tailored product.
- 4 Customisation.** This refers to personalisation or mass customisation of content or emails according to the segmentation achieved at the acquisition stage. Approaches for personalisation are explained in the section on customer retention management.

It is worth noting that although we are suggesting it is vital to capture the registration information, this should not be too 'up-front', since studies reported by Nielsen (2000) show that having to register acts as a barrier to entering sites. So the advice is to delay customer registration as late as possible.

Conversion marketing

Conversion marketing

Using marketing communications to maximise conversion of potential customers to actual customers and existing customers to repeat customers.

For managers to assess and improve the effectiveness of their CRM implementation, evaluation using the **conversion marketing** concept is useful. In an online context, this assesses how effective marketing communications are in converting:

- web browsers or offline audiences to site visitors;
- site visitors to engaged site visitors who stay on the site and progress beyond the home page;
- engaged site visitors to prospects (who are profiled for their characteristics and needs);
- prospects into customers;
- customers into repeat customers.

We referenced a high-level model based on this approach, which can be used for planning purposes, in Figure 5.17. This shows the acquisition part of the process and gives an indication of how the different channels can support each other. At each conversion step, some visitors will switch from one channel to the other, dependent on preferences and marketing messages. The dilemma for marketers is that the online channels are cheapest to service, but tend to have a lower conversion rate than traditional channels because of the human element. It follows that it is important to offer phone, live chat or email contact in online channels to help convert customers who need further information or persuading to purchase. Box 8.1 shows how a framework covering all marketing activities to develop relationships online can be used to manage online customer relationships.

RACE is a development of the work by Agrawal *et al.* (2001), who created a scorecard for effective conversion marketing, assessed using a longitudinal study analysing hundreds of e-commerce sites in the USA and Europe. The scorecard is based on the **performance drivers** or critical success factors for e-commerce, such as the costs for acquisition and retention, conversion rates of visitors to buyers to repeat buyers, together with churn rates. Note that to

maximise retention and minimise churn, service-quality-based drivers need to be evaluated.

There are three main parts to this scorecard:

- 1 Attraction.** Size of visitor's base, visitor acquisition cost and visitor advertising revenue (e.g. media sites).
- 2 Conversion.** Customer base, customer acquisition costs, customer conversion rate, number of transactions per customer, revenue per transaction, revenue per customer, customer gross income, customer maintenance cost, customer operating income, customer churn rate, customer operating income before marketing spending.

Performance drivers

Critical success factors that govern whether objectives are achieved.

8.1 sales Using the RACE marketing value framework to increase sales

RACE (Figure 8.6) is a practical framework designed to help marketers manage and improve the commercial value that their organisations gain from digital marketing. RACE is an evolution of the REAN (Reach Engage Activate Nurture) framework originally developed by Xavier Blanc and popularised by Steve Jackson in his book *Cult of Analytics* (Jackson, 2009). It is intended to help create a simplified approach to reviewing the performance of online marketing and taking actions to improve its effectiveness.

RACE consists of four steps designed to help engage prospects, customers and fans with brands throughout the customer lifecycle:

- *Step 1 Reach* - Build awareness of a brand, its products and services on other sites and in offline media and build traffic by driving visits to web presences.
- *Step 2 Act* - Engage audience with brand on its website or other online presence to encourage them to act or interact with the company or other customers.
- *Step 3 Convert* - Achieve conversion to marketing goals such as new fans, leads or sales on web presences and offline.
- *Step 4 Engage* - Build customer relationships through time to achieve retention goals.

Integrating RACE

Digital channels always work best when they are integrated with other channels, so where appropriate digital channels should be combined with the traditional offline media and channels. The most important aspects of integration are, first, using traditional media to raise awareness of the value of the online presences at the Reach and Act stages. Second, at the Convert and Engage steps, customers may prefer to interact with customer representatives.

Digital marketing - it's not just about the website

Today, the popularity of participation in social media means that how to reach, interact, convert and maintain ongoing engagement of customers through social networks is vital to the success of a brand. At each step in RACE you need to think how social media can help achieve your goals and how you can measure the effectiveness.

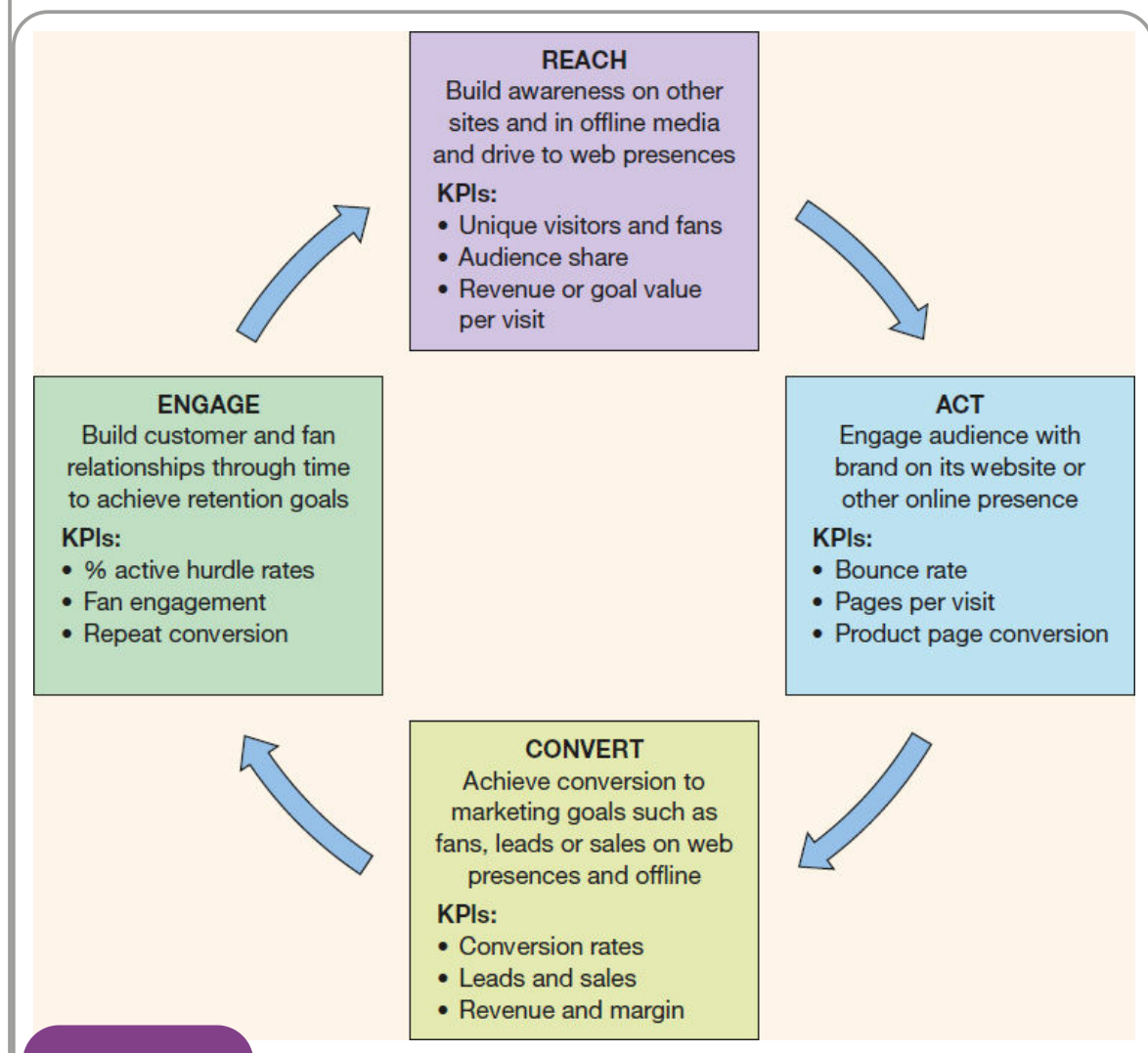


Figure 8.6

Reach-Act-Convert-Engage model

Source: Smart Insights (2010) Introducing RACE: A practical framework to improve your digital marketing. Dave Chaffey, 15 July. www.smartinsights.com/blog/digital-marketing-strategy/race-a-practical-framework-to-improve-your-digital-marketing

3 Retention. This uses similar measures to those for conversion customers.

The survey performed by Agrawal *et al.* (2001) shows that:

companies were successful at luring visitors to their sites, but not at getting these visitors to buy or at turning occasional buyers into frequent ones.

Agrawal *et al.* (2001) performed a further analysis where they modelled the theoretical change in net present value contributed by an e-commerce site in response to a 10% change in these performance drivers. This shows the relative importance of these drivers, or ‘levers’ as they refer to them:

Attraction

- Visitor acquisition cost: 0.74% change in net present value (NPV)
- Visitor growth: 3.09% change in NPV.

Conversion

- Customer conversion rate: 0.84% change in NPV
- Revenue per customer: 2.32% change in NPV.

Retention

- Cost of repeat customer: 0.69% change in NPV
- Revenue per repeat customer: 5.78% change in NPV
- Repeat-customer churn rate: 6.65% change in NPV
- Repeat-customer conversion rate: 9.49% change in NPV.

This modelling highlights the importance of on-site marketing communications and the quality of service delivery in converting browsers to buyers and buyers into repeat buyers. It also highlights the need to balance investment between customer acquisition and retention. Many start-up companies invest primarily in customer acquisition.

The online buying process

Companies that understand how customers use new media in their purchase decision-making can develop integrated communications strategies that support their customers at each stage of the buying process. Considering mixed-mode buying is a key aspect of devising digital marketing communications since the customer should be supported in changing from one channel to another.

The simple model of the buying process shown in Figure 8.7 is valuable in developing the right online marketing tactics to support each stage of the process for each business.

Individual preferences for using the web will also differ. Lewis and Lewis (1997) identified five different types of web users who exhibit different **searching behaviours** according to the purpose of using the internet:

- *Directed information-seekers*. Will be looking for product, market or leisure information. This type of user tends to be experienced in using the web and is proficient in using search engines and directories.

Searching behaviours

Approaches to finding information vary from directed to undirected.

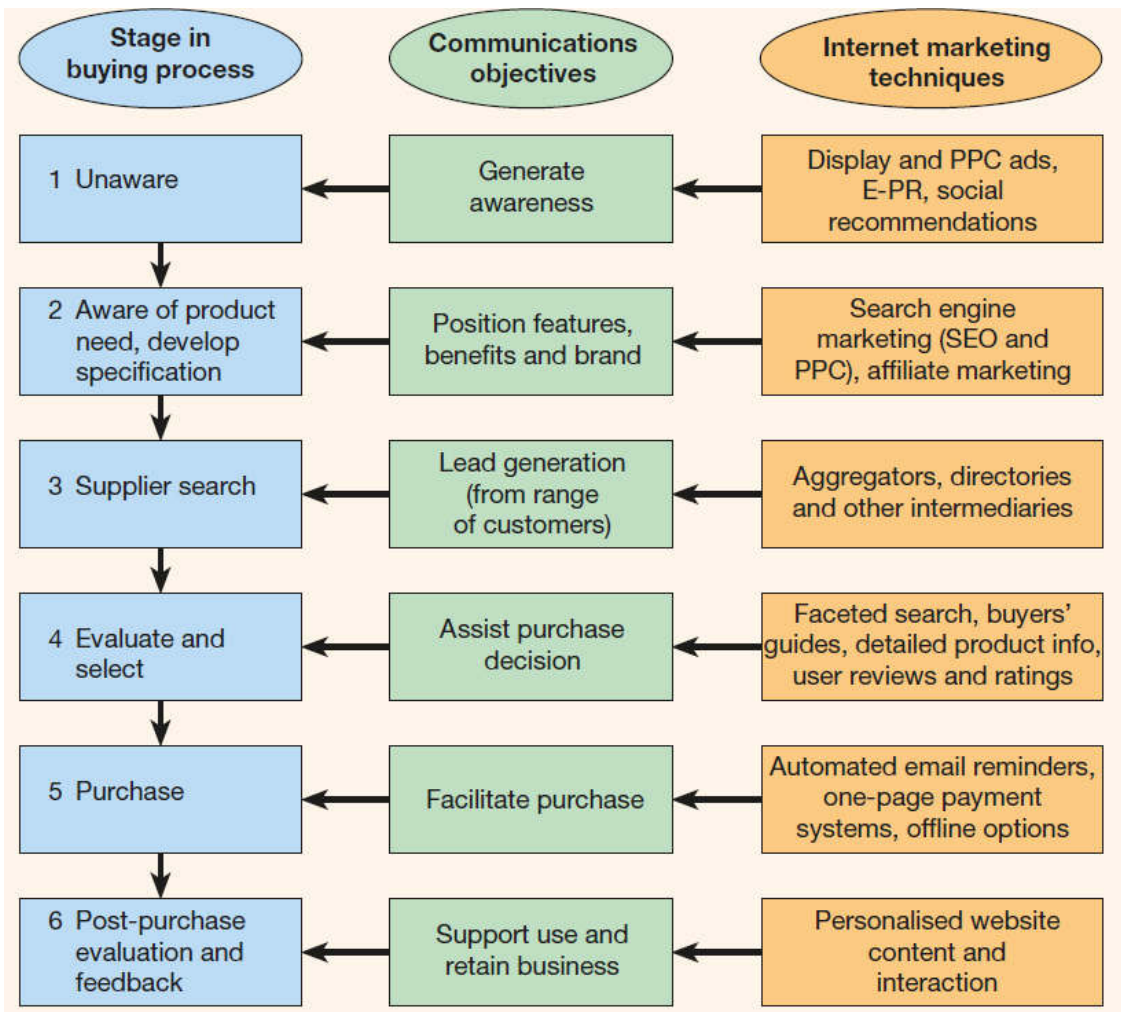


Figure 8.7

A summary of how the Internet can impact on the buying process for a new purchaser

- *Undirected information-seekers.* These are the users usually referred to as 'surfers', who like to browse and change sites by following hyperlinks. This group tends to be novice users (but not exclusively so) and they may be more likely to click on banner advertisements. The research in Figure 8.9 suggests that this behaviour is now less common.
- *Directed buyers.* These buyers are online to purchase specific products. For such users, brokers or intermediaries who compare product features and prices will be important locations to visit.
- *Bargain hunters.* These users want to use the offers available from sales promotions such as free samples or prizes.

- *Entertainment seekers.* Users looking to interact with the web for enjoyment through entering contests such as quizzes.

These different types of behaviour could be exhibited by the same person in different sessions online, or, less likely, in the same session.

Differences in buyer behaviour in target markets

There is great variation in the proportion of user access in different countries (as explained in Chapter 4, in the section ‘Understanding users’ access requirements’). This gives rise to differences in buyer behaviour between different countries or between different segments according to how sophisticated customers are in their use of the Internet.

Differences between B2C and B2B buyer behaviour

Major differences in buyer behaviour exist between the B2B and B2C markets, and these must be accommodated in digital marketing communications. The main differences are:

- 1 Market structure
- 2 Nature of the buying unit
- 3 Type of purchase
- 4 Type of buying decision
- 5 Communication differences.

One of the main differences between business-to-business and business-to-consumer is the number of buyers. As Kotler (1997) points out, in B2B there tend to be *far fewer but larger buyers*. This means that the existence of suppliers tends to be well known, so efforts to promote the website using methods such as banner advertising or listing in search engines are less important than for consumer brands.

Influences on purchase

In the digital environment, purchasers lack the physical reassurance we have when purchasing from a store or talking to someone over the phone. This is compounded because of stories of fraud and security problems. It follows that consumers are looking for cues of trust when they are on a site, which can include brand familiarity, site design, the type of content, accreditation and recommendations by other customers.

Bart *et al.* (2005) have developed a useful, widely referenced conceptual model that links website and consumer characteristics, online trust and behaviour based on 6,831 consumers across 25 sites from 8 website categories including retail, travel, financial services, portals and community sites. We have summarised the eight main drivers of trust from the study in Figure 8.8 and have added some details about how these elements of trust can be substantiated or proven on the website.

The model of Bart *et al.* (2005) and similar models are centred on a site, but perceptions of trust are also built from external sources including the role of social media and friends, in particular, which can have a significant influence on purchase as research from Statista (2017) shows in Figure 8.9.

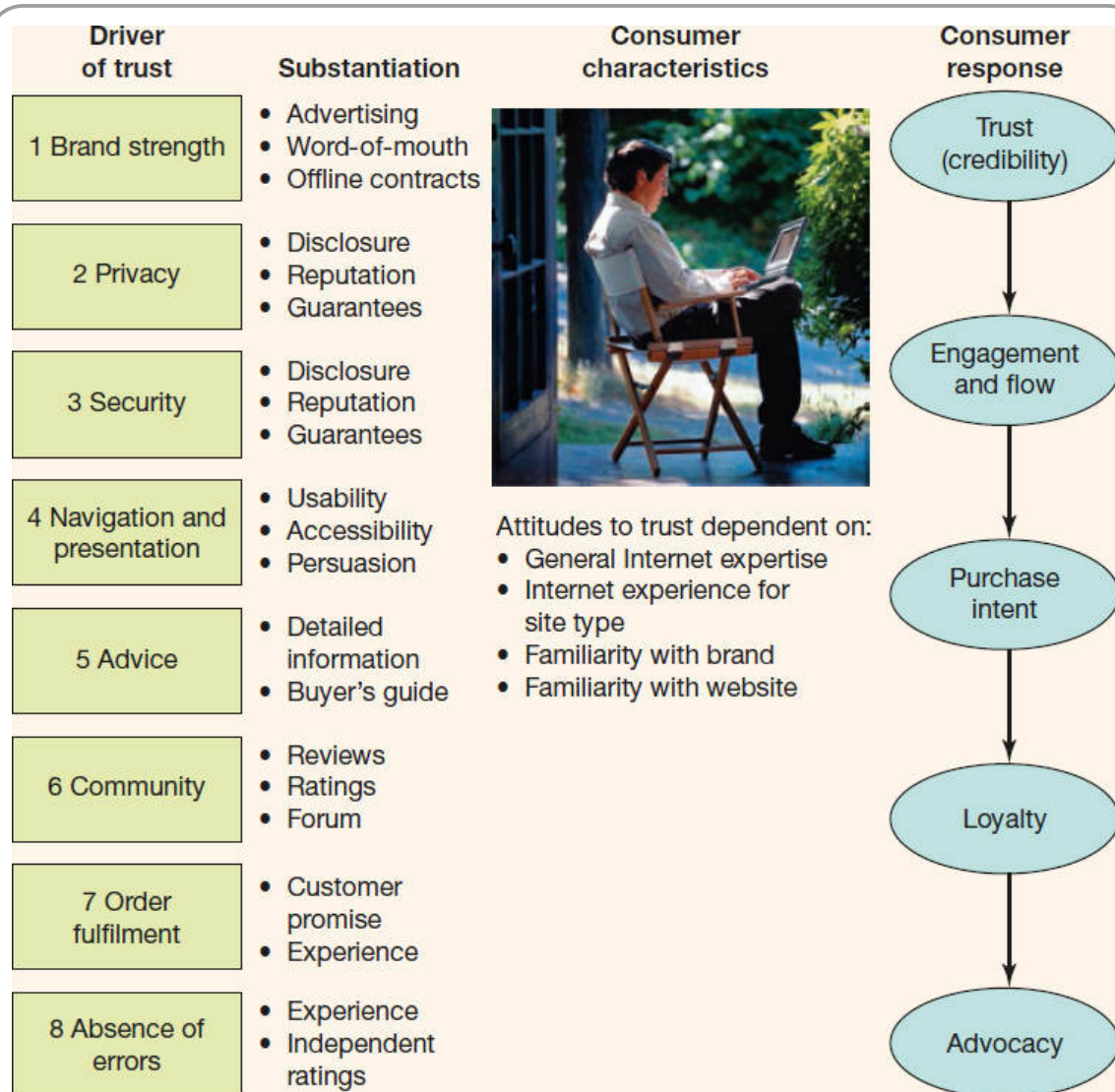


Figure 8.8

A model of the relationship between different aspects of trust and Figure 8.8 consumer response based on Bart *et al.*'s eight website categories

Source: Bart et al. (2005)

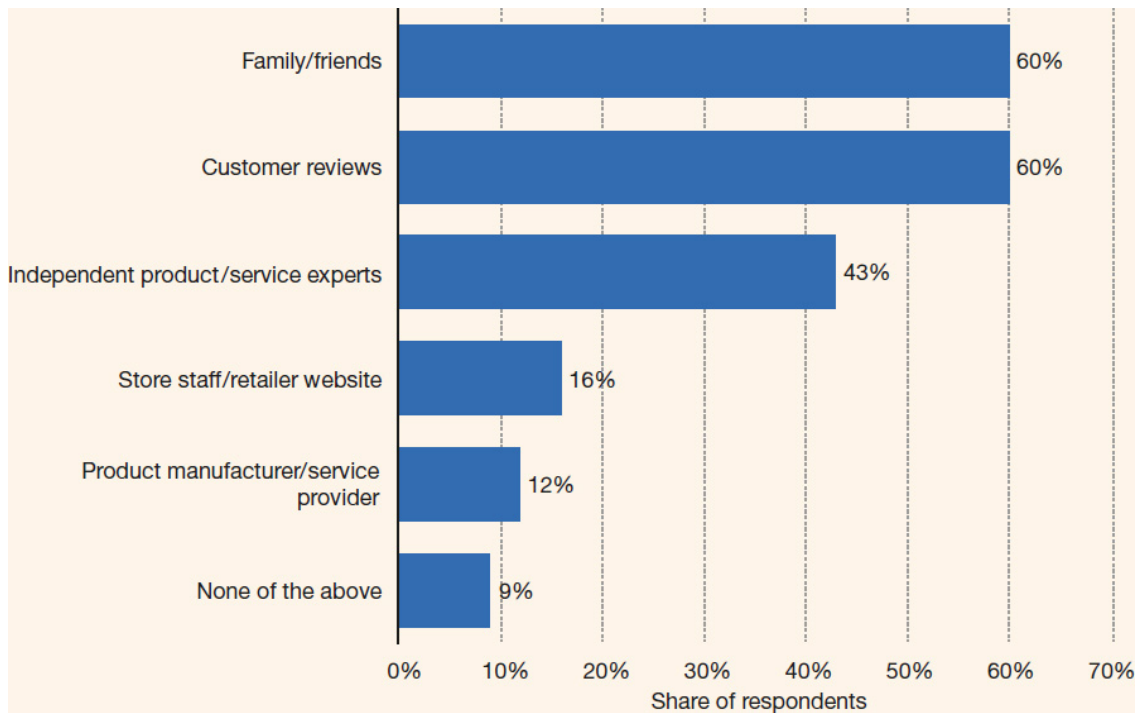


Figure 8.9

Most-trusted sources of information for consumers on products and services in the UK in 2014

Source: www.statista.com/statistics/324550/most-trusted-source-of-information-on-products-services-in-the-united-kingdom-uk

Net promoter score (NPS)

A measure of the number of advocates a company (or website) has who would recommend it compared to the number of detractors.

The net promoter score

Net promoter score (NPS) is a measure of customer advocacy originally popularised by Reichheld (2006) in his book *The Ultimate Question*, which is essentially 'would you recommend us?'. It is highly relevant to CRM since recommendations are important to acquiring customers, but it is also the ultimate measure of customer satisfaction, which is needed to drive retention.

Reichheld explains the main process for NPS as follows:

- 1 Systematically categorising customers into promoters, passives, or detractors. If you prefer, you can call them loyal advocates, fair-weather friends and adversaries.
- 2 Creating closed-loop processes so that the right employees will directly investigate the root causes that drive customers into these categories.
- 3 Making the creation of more promoters and fewer detractors a top priority so employees up and down the organisation take actions based on their findings from these root-cause investigations.

In practice, consumers are asked 'Would you recommend [Brand/Company X] to a friend or colleague?', answered on a scale between '0 (not at all likely)' and '10 (extremely likely)'. The actual score is calculated by subtracting the percentage of detractors (those giving 0-6 answers) from promoters (9-10s). The middle section, between 7 and 8, is the so-called passives.

The concept of NPS is based on economic analysis of the customer base of a company. For Dell, Reichheld estimates that the average consumer is worth \$210 (based on a lifetime-value calculation of future value over a five-year period calculated as net present value (NPV)), whereas a detractor costs the company \$57 and a promoter generates \$328. Online, Dell uses software from OpinionLab (www.opinionlab.com) to both gather feedback and follow up on negative experiences and so reduce the number of detractors with major negative sentiment.

So, the idea is that after surveying as many customers as possible (to make it representative) and show you are listening, you then work backwards to determine which aspects of the experience of interacting with a brand creates 'promoters' or 'detractors'. Some specific approaches that can be used to help manage NPS in the online environment are:

Facilitating online advocacy:

- Page template contains 'forward/recommend to a friend' options.
- Email templates contain 'forward to a friend' option.
- Facilitate customer feedback through a structured programme of emailing customers for their opinions and NPS evaluations and by making it easy for site owners to comment.
- Showcase positive experiences, for example, e-retail sites often contain options for rating and commenting on products.
- Involve customers more in shaping your web services and core product offerings.

Managing online detractors:

- Use online reputation management tools for notification of negative (and positive) comments.
- Develop a process and identify resource for rapidly responding to negative comments using a natural and open approach.
- Assess and manage the influence of negative comments within the natural listings of search engines.
- Practise fundamental marketing principles of listening to customer comments about products and services and aiming to rectify them to win back the situation!

Kirby and Samson (2008) have critiqued the use of the NPS in practice. For example, they ask: ‘Is an NPS of 40, consisting of 70% promoters and 30% detractors, the same as the same NPS consisting of 40% promoters and 0% detractors?’ They also quote research by Kumar *et al.* (2007) that shows that while about three-quarters of US telecoms and financial service customers may intend to recommend when asked, only about one-third actually follow through and only about 13% of those referrals actually generate new customers.

Keiningham *et al.* (2007) have assessed the value of recommendation metrics as determinants of customer lifetime value and also believe that the use of NPS could be misleading. They say the consequences of a simple focus on NPS are:

the potential misallocation of customer satisfaction and loyalty resources due to flawed strategies that are guided by a myopic focus on customers’ recommend intentions.

Customer acquisition management

Customer acquisition

Techniques used to gain new prospects and customers.

In a digital context, ‘customer acquisition’ can have two meanings. First, it may mean the use of the website to acquire new customers for a company as qualified leads that can hopefully be converted into sales. Second, it may mean encouraging existing customers to *migrate* to using online for purchase or service. Many organisations concentrate on the former, but where

acquisition is well managed, campaigns will be used to achieve online conversion. For example, American Express developed a 'Go Paperless' campaign to persuade customers to receive and review their statements online rather than by post. Phone bank First Direct used call centre representatives to persuade customers of the benefits of bypassing them by reviewing their statements online. It also encourages 'e-advocacy' among employees, i.e. encourages them to use the online services so they can better empathise with customer needs.

Before an organisation can acquire customers through the content on its site, it must, of course, develop marketing communications strategies to attract visitors to the website.

Focus on Marketing communications for customer acquisition, including search engine marketing, digital PR, online partnerships, interactive advertising, email marketing and social media marketing

Offline marketing communications

Traditional techniques such as print and TV advertising used to generate website traffic.

Digital marketing communications

Online techniques used to generate website traffic.

Digital media channels

Digital communications techniques used to achieve goals of brand awareness, familiarity, favourability and to influence purchase intent.

Push media

Communications are broadcast from an advertiser to consumers of the message who are passive recipients.

Pull media

The consumer is proactive in selection of the message through actively seeking out a website responding to inbound marketing cues.

E-commerce managers constantly strive to deliver the most effective mix of communications to drive traffic to their e-commerce sites. The different techniques can be characterised as traditional **offline marketing communications** or rapidly evolving **digital marketing communications**, which are also referred to as **digital media channels**. The objective of employing these techniques is often to acquire new visitors or 'build traffic' using the diverse marketing communications techniques summarised in Figure 1.8. Some additional techniques to promote repeat visits are considered in the section on 'Customer retention management'.

The characteristics of interactive marketing communications

To best exploit the characteristics of digital media, it is important to understand the different communications characteristics of traditional and new media. In this section, we look at eight key differences.

1 From push to pull

Traditional media such as print, TV and radio are **push media**, a one-way street where information is mainly unidirectional, from company to customer. In contrast, the web is an example of **pull media**, more widely known today as inbound marketing. It means that as prospects and customers only visit a website when it enters their head to do so - when they have a defined need - they are proactive and self-selecting. But online pull means marketers have less control than in traditional communications where the message is pushed out to a defined audience. What are the digital marketing implications of the pull medium?

Interactivity

The digital medium of the Internet enables a dialogue between company and customer.

First, we need to provide the physical stimuli to encourage visits to websites. This may mean traditional ads, direct mail or physical reminders. Second, we need to ensure our site is optimised for search engines. Third, email is an online push medium, so it should be a priority objective of website design to capture customers' email addresses in order that opt-in email can be used to push relevant and timely messages to customers.

2 From monologue to dialogue

Creating a dialogue through **interactivity** is important. Since the Internet is a digital medium and communications are mediated by software on the web server that hosts the web content, this provides the opportunity for two-way interaction with the customer. This is a distinguishing feature of the medium (Peters, 1998). For example, if a registered customer requests information, or orders a particular product, it will be possible for the supplier to contact them in future via email with details of new offers related to their specific interest.

Websites, interactive digital TV and mobile phones all enable marketers to enter a dialogue with customers. But digital dialogues also have a less obvious benefit - intelligence. Interactive tools for customer self-help can help collect intelligence - clickstream analysis recorded in web analytics can help us build up valuable pictures of customer preferences and help marketers 'sense and respond'.

3 From one-to-many to one-to-some and one-to-one

Traditional push communications such as TV and print are one-to-many: from one company to many customers, often the same message to different segments and often poorly targeted. With new media 'one-to-some', reaching a niche or micro-segment becomes more practical - e-marketers can afford to tailor and target their message to different segments. They can even move to one-to-one communications, where personalised messages can be delivered.

4 From one-to-many to many-to-many communications

New media also enable many-to-many communications. Hoffman and Novak (1996) noted that new media are many-to-many media. Here customers can interact with other customers via a website or in independent communities.

The success of online auctions such as eBay also shows the power of many-to-many communications.

5 From 'lean-back' to 'lean-forward'

New media are also intense media - they are lean-forward media in which the website usually has the visitor's undivided attention. This intensity means that the customer wants to be in control and wants to experience flow and responsiveness to their needs. First impressions are important.

6 The medium changes the nature of standard marketing communications tools such as advertising

In addition to offering the opportunity for one-to-one marketing, the Internet can be, and still is, widely used for one-to-many advertising. On the Internet, the overall message from the advertiser becomes less important, and typically it is detailed information the user is seeking. The website itself can be considered as similar in function to an advertisement (since it can inform, persuade and remind customers about the offering, although it is not paid for in the same way as a traditional advertisement). Berthon *et al.* (1996) consider a website as a mix between advertising and direct selling since it can also be used to engage the visitor in a dialogue. Constraints on advertising in traditional mass media, such as paying for time or space, become less important.

Peters (1998) suggested that communication via the new media is differentiated from communication using traditional media in four different ways. First, *communication style* is changed, with *immediate* or synchronous transfer of information through online customer service being possible. Asynchronous communication, where there is a time delay between sending and receiving information, as through email, also occurs. Second, *social presence* or the feeling that a communications exchange is sociable, warm, personal and active may be lower if a standard web page is delivered, but can be enhanced, perhaps by personalisation. Third, the consumer has more *control of contact*. And finally, the user has control of *content*, through selection or through personalisation facilities.

7 Increase in communications intermediaries

If we consider advertising and PR, with traditional media this occurs through a potentially large number of media owners for TV, radio and print publications. In the digital era there is a vastly increased range of media owners or publishers through which marketers can promote their services and specifically gain links to their website. Publishers also include individual influencers such as celebrities, industry commentators, bloggers and anyone actively using social media! Traditional radio channels, newspapers and print titles have migrated online, but in addition there are a vast number of online-only publishers including horizontal portals (Chapter 2) such as search engines and specialist sites such as industry-specific sites. The online marketer needs to select the most appropriate of this plethora of sites to drive traffic to their website.

8 Integration remains important

Although new media have distinct characteristics compared to traditional media, this does not mean we should necessarily concentrate our communications solely on new media. Rather, we should combine and integrate new and traditional media according to their strengths. We can then achieve synergy - the sum is greater than its parts. Most of us still spend most of our time in the real world rather than the virtual world, so offline promotion of the proposition of a website is important. It is also important to support mixed-mode buying.

Similarly, inbound communications to a company need to be managed. Consider what happens if the customer needs support for an error with their system. They may start by using the on-site diagnostics but these do not solve the problem. They then ring customer support. This process will be far more effective if support staff can access the details of the problem as previously typed in by the customer to the diagnostics package.

Assessing marketing communications effectiveness

A campaign will not be successful if it meets its objectives of acquiring site visitors and customers but the cost of achieving this is too high. This constraint is usually imposed simply by having a campaign budget. However, it is also essential to have specific objectives for the cost of getting the visitor to the site using different **referrers** combined with the cost of achieving the outcomes during their visit. This is stated as the **cost per acquisition (CPA)**

(sometimes cost per action). Depending on context and market of a site, CPA may refer to different outcomes - the acquisition of a visitor, a lead or a sale.

To control costs, it is important for managers to define a target **allowable cost per acquisition**, such as £30 for generating a business lead or £50 for achieving sign-up to a credit card.

Figure 8.10 shows the full range of measures used by digital marketers to control communications expenditure, from least sophisticated to most sophisticated. To help remember, the key measures use the VQVC mnemonic which stands for Volume, Quality, Value and Cost of interactions such as website visits or social media interactions. Common measures used to assess digital media include:

Step 0 Volume or number of visitors. This is usually measured as thousands of unique visitors. It is preferable to using page views or visits as a measure of effectiveness, since it is opportunities to communicate with individuals. A more sophisticated measure is reach (%) or online audience share. This is only possible using panel data or audience data tools such as www.netratings.com or www.hitwise.com.

Referrer

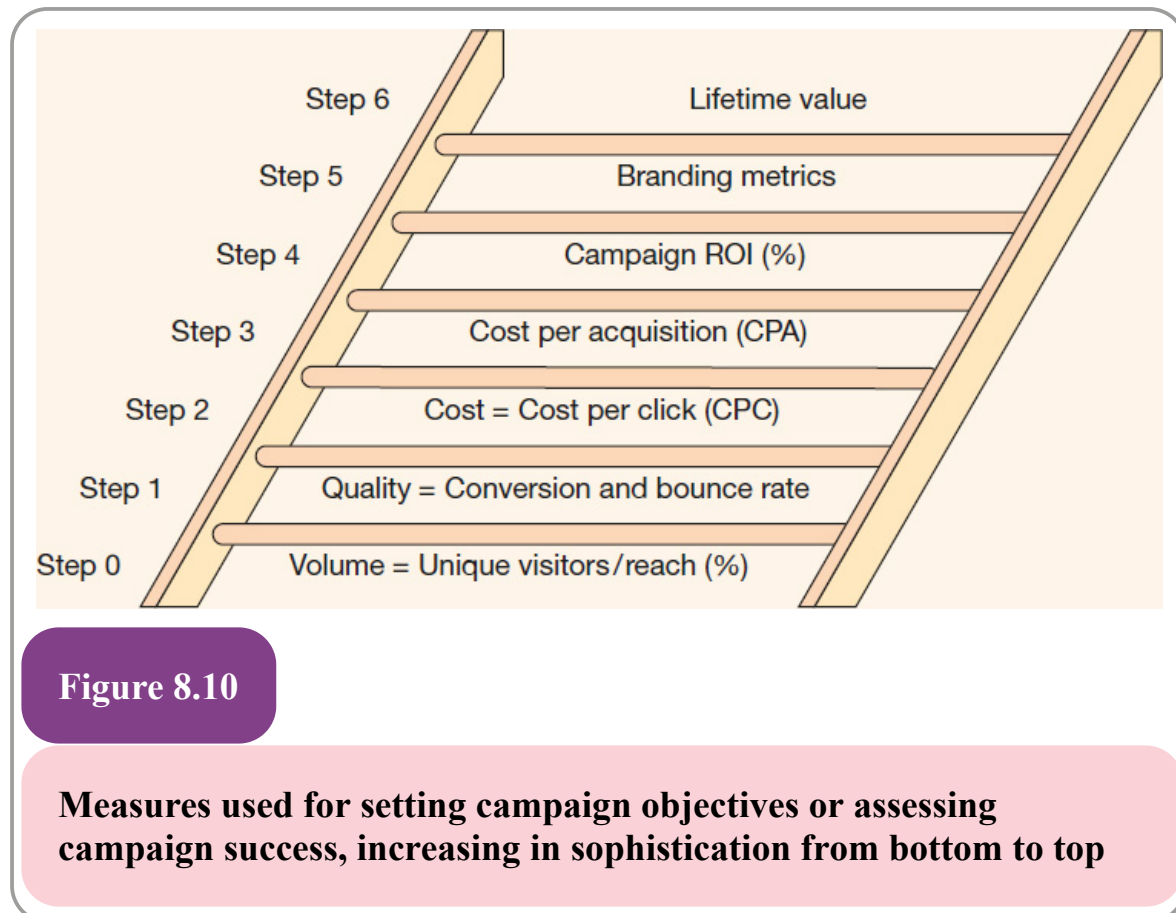
The source of a website visit, e.g. paid search, affiliate marketing, online advertising or recorded as 'no referrer', i.e. when a URL is typed in directly.

Cost per acquisition (CPA)

The cost of acquiring a new customer. Typically limited to the communications cost and refers to cost per sale for new customers.

Allowable cost per acquisition

A target maximum cost for generating leads or new customers profitably.



Example: An online bank has 1 million unique visitors per month.

Step 1 Quality or conversion rates to action. This shows what proportion of visitors from different sources take specific marketing outcomes on the web such as lead, sale or subscription. **Bounce rate** can also be used to assess the relevance and appeal of the page that the visitor arrives on.

Example: Of these visitors to the online bank, 10% convert to an outcome such as logging in to their account or asking for a quote for a product.

Step 2 Cost (cost per click). The cost of visitor acquisition is usually measured specific to a particular online marketing tool such as paid search-engine marketing, since it is difficult to estimate for an entire site with many visitors referred from different sources.

Example: £2 CPC.

Step 3 Cost (cost per action or acquisition). When cost of visitor acquisition is combined with conversion to outcomes this is the cost of (customer) acquisition.

Example: £20 CPA (since only one in ten visitors takes an action).

Step 4 Return on investment (ROI). Return on investment is used to assess the profitability of any marketing activity, or indeed any investment.

There are different forms of ROI, depending on how profitability is calculated. Here we will assume it is just based on sales value or profitability based on the cost per click and conversion rate.

Bounce rate

Percentage of visitors entering a site who leave immediately after viewing one page only (known as ‘single-page visits’).

$$ROI = \frac{\text{Profit generated from referrer}}{\text{Amount spent on advertising with referrer}}$$

A related measure, which does not take profitability into account, is return on advertising spend (ROAS), which is calculated as follows:

$$ROAS = \frac{\text{Total sales revenue generated from referrer}}{\text{Amount spent on advertising with referrer}}$$

Step 5 Branding metrics. These tend to be only relevant to interactive advertising or sponsorship. They are the equivalent of offline advertising metrics, i.e. brand awareness (aided and unaided), ad recall, brand favourability and purchase intent. Recorded using tools such as Brand Analytics Engine (www.millwardbrowndigital.com).

Step 6 Lifetime-value-based ROI. Here the value of gaining the customer is not just based on the initial purchase, but the lifetime value (and costs) associated with the customer. This requires more sophisticated models, which can be most readily developed for online retailers and online financial services providers.

Example: A bank uses a net present value model for insurance products that looks at the value over 10 years, but the main focus is on a 5-year result that takes into account:

- acquisition cost
- retention rates
- claims
- expenses.

This is valuable since it helps give them a realistic ‘allowable cost per sale’ from different communications tools, which is needed to get return over five years.

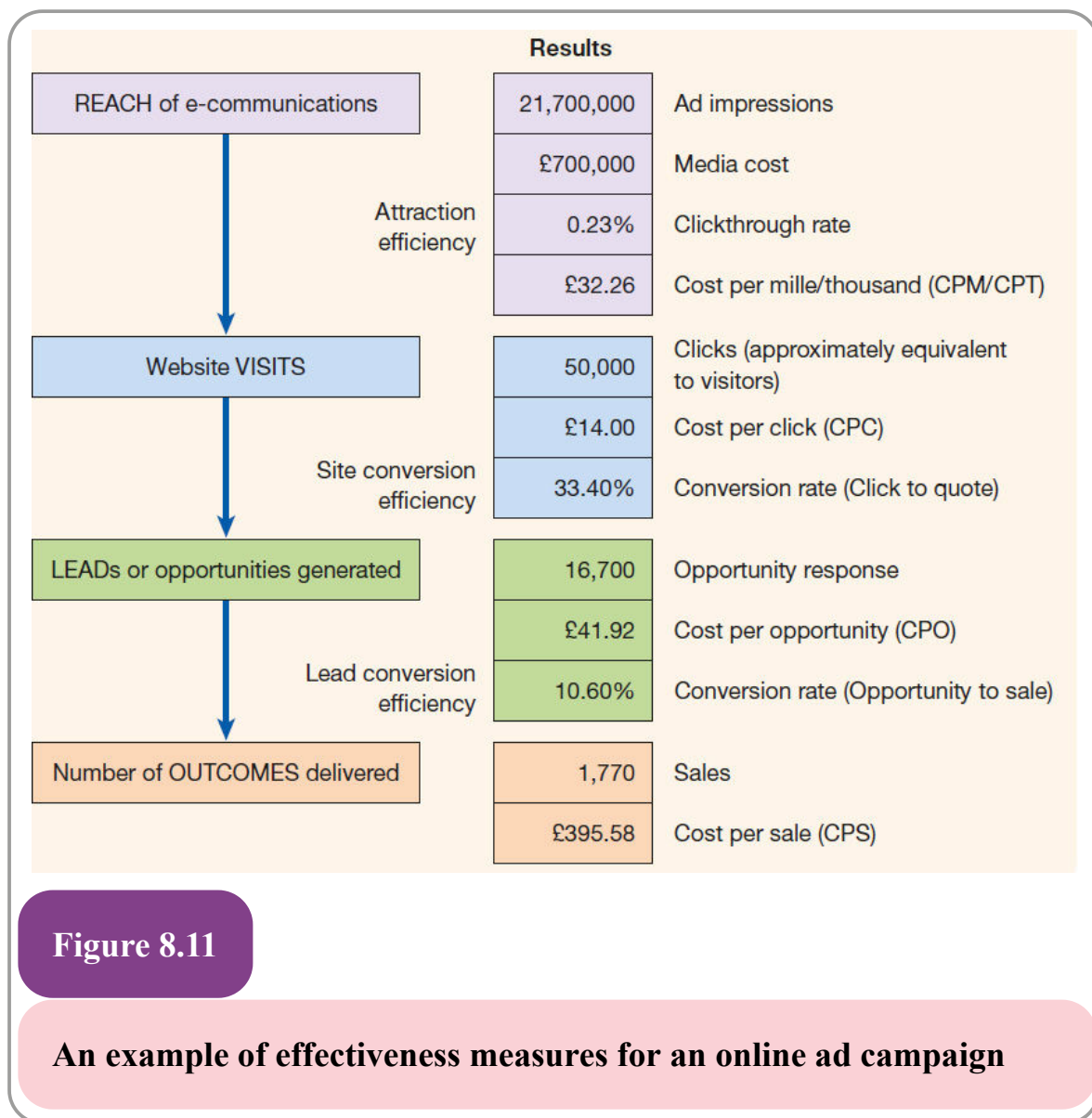
Figure 8.11 shows an example of effectiveness measures for an online ad campaign for an insurance product. Here an opportunity or lead is when a quote is requested. Note that the cost of acquisition is high, but this does not take into account the synergies of online advertising with offline campaigns, i.e. those who are influenced by the ad, but do not clickthrough immediately.

Digital marketing communications

In this section we will review approaches to online promotion using the different tools of Figure 1.8, from 1 to 6. These techniques are often combined in what is known as a **‘traffic-building campaign’**; this is a method of increasing the audience of a site using different online (and offline) techniques.

Traffic-building campaign

The use of online and offline promotion techniques to increase the audience of a site (both new and existing customers).



Search engines

Provide an index of content on registered sites that can be searched by keyword.

Spiders or robots

Spiders are software processes, technically known as robots, employed by search engines to index web pages of registered sites on a regular basis.

Link anchor text

The text used to form the blue underlined hyperlink viewed in a web browser defined in the HTML source.

A company's investment in the techniques in Figure 1.8 for customer acquisition should be based on the metrics discussed in the previous section. Most important is minimising the cost of acquisition against volume required.

1 Search engine marketing (SEM)

Search engines are a primary way of finding information about a company and its products (as explained in Chapter 2). We all now naturally turn to a search engine when we are seeking a new product, service or entertainment. The main options include Google, Bing or a regional search engine popular in one country such as Baidu in China, Naver in South Korea or Yandex in Russia. It follows that if an organisation is not prominent in the search engines, then many potential sales could be lost since, otherwise, a company is dependent on the strength of its brand and offline communications to drive visitors to the website.

Consequently, Chaffey and Smith (2012) stress the importance of timing for traffic-building. They say:

Some e-marketers may consider traffic building to be a continuous process, but others may view it as a specific campaign, perhaps to launch a site or a major enhancement. Some methods tend to work best continuously; others are short term. Short-term campaigns will be for a site launch or an event such as an online trade show.

How does Google work?

It can help managers of search marketing campaigns to understand the technology behind Google, which it discloses in many patents and in its Webmaster guidelines (www.google.com/webmasters). Figure 8.12 shows that search technology involves these main processes:

1 Crawling. The purpose of the crawl is to identify relevant pages for indexing and assess whether they have changed. Crawling is performed by **robots** (bots), which are also known as **spiders**. These access web pages and retrieve a reference URL of the page for later analysis and indexing.

Although the terms ‘bot’ and ‘spider’ give the impression of something physical visiting a site, the bots are simply software processes running on a search engine’s server that request pages, follow the links contained on that page and so create a series of page references with associated URLs. This is a recursive process, so each link followed will find additional links that then need to be crawled.

2 Indexing. An index is created to enable the search engine to rapidly find the most relevant pages containing the query typed by the searcher. Rather than searching each page for a query phrase, a search engine ‘inverts’ the index to produce a look-up table of documents containing particular words.

The index information consists of phrases stored within a document and also other information characterising a page, such as the document’s title, meta description, page rank, trust or authority, and spam rating. For the keywords in the document additional attributes will be stored such as semantic markup (<h1>, <h2> headings denoted within HTML), occurrence in **Link anchor text** proximity, frequency or density and position in document.

3 Ranking or scoring. The indexing process has produced a lookup of all the pages that contain particular words in a query, but they are not sorted in terms of relevance. Ranking of the document to assess the most relevant set of documents to return in the SERPs (search engine results pages), occurs in real time for the search query entered. First, relevant documents will be retrieved from a run-time version of the index at a particular data centre, then a rank in the SERPs for each document will be computed based on many ranking factors, of which we highlight the main ones in later sections.

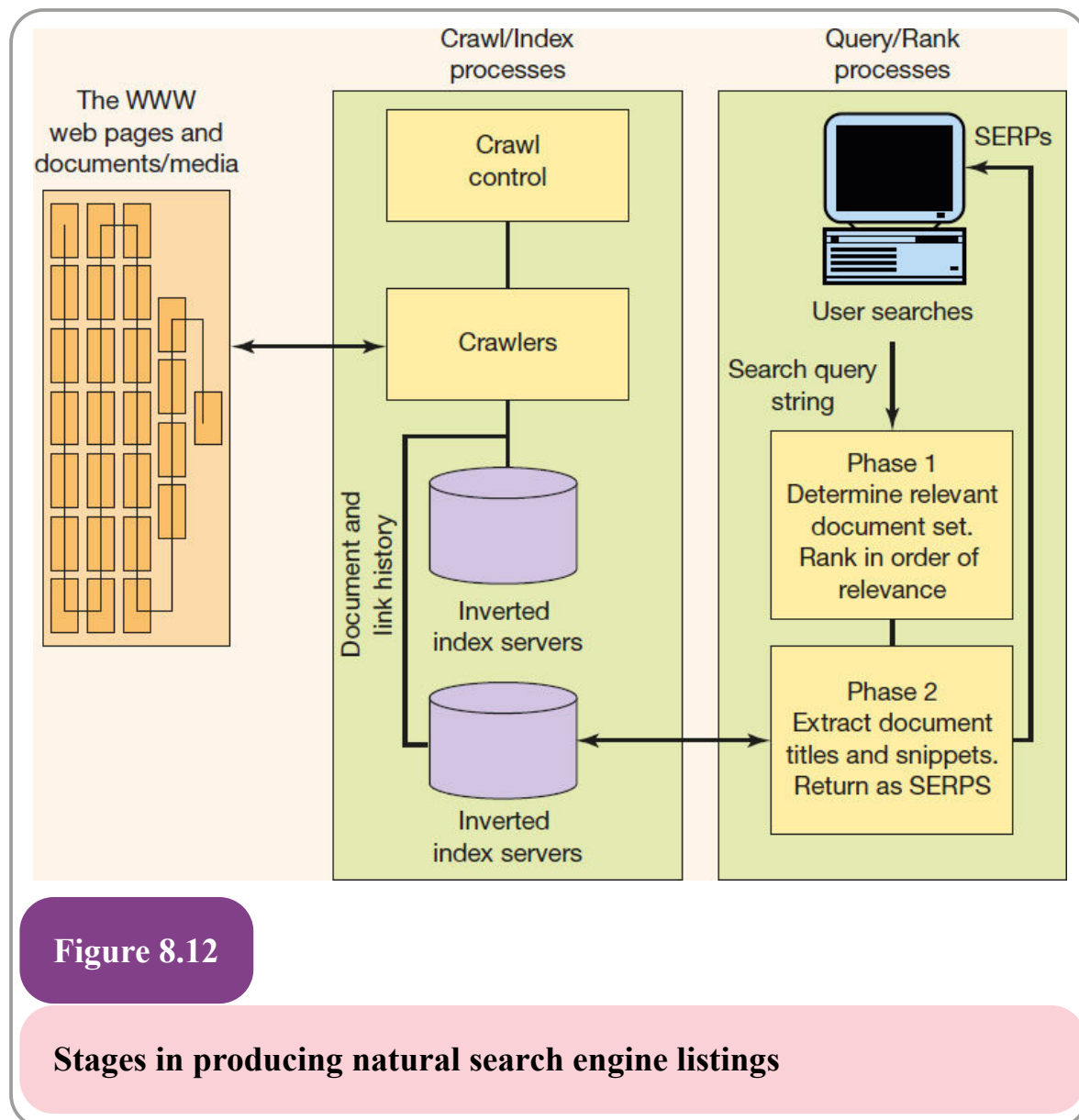


Figure 8.12

Stages in producing natural search engine listings

4 Query request and results serving. The familiar search engine interface accepts the searcher's query. The user's location is assessed through their IP address and the query is then passed to a relevant data centre for processing. Ranking then occurs in real time for a particular query to return a sorted list of relevant documents and these are then displayed on the search results page.

Google has stated that it uses more than 200 factors or signals within its search ranking algorithms. These include positive ranking factors that help boost position and negative factors or filters that are used to remove search engine spam from the index. Searchengine-land.com, semrush.com and Moz.com are all useful sites to keep updated on Google's ranking factors and changes to its algorithms.

Keyphrase analysis

The starting point to successful search engine marketing is to target the right keyphrases. Notice that I say ‘**keyphrase**’ (short for ‘keyword phrase’) rather than ‘keyword’, since search engines such as Google attribute more relevance when there is a phrase match between the keywords that the user types and a phrase on a page. Companies should complete a ‘gap analysis’, which will identify keyphrases to target by showing, for each phrase, the number of visitors they could potentially attract compared to the actual positions or number of visitors they are receiving.

Key sources for identifying the keyphrases customers are likely to type when searching for products include your market knowledge, competitors’ sites, keyphrases from visitors who arrive at the site (from web analytics), the internal site search tool and the Google Keyword analysis tool. It is also useful to understand customer searching behaviour (Box8.2).

Keyphrase (keyword phrase)

The combination of words users of search engines type into a search box, which form a search query.

Box 8.2

How do we search?

How do consumers respond when they search and are presented with a search results page containing natural and paid links? Research by GroupeM of 28 million people searching across 1.4 billion terms reported by Smart Insights showed that the behaviour depends upon whether the search term contains a brand term. For these terms, 94% clicked on natural rather than paid results, which accounted for just 6%. Note, though, that many of these search terms would be non-commercial and there may not be a choice of paid results for a search term.

As you would expect, if users are looking for a specific brand then more people will click on the top few results.

Overall:

- **Result 1:** 48%
- **Result 2:** 12%
- **Result 3:** 8%
- **Remainder:** 32%

Branded:

- **Result 1:** 80%
- **Result 2:** 6%
- **Result 3:** 4%
- **Remainder:** 10%

Non-branded:

- **Result 1:** 35%
- **Result 2:** 15%
- **Result 3:** 11%
- **Remainder:** 39%

Source: Smart Insights (2012)

Search engine optimisation (SEO)

A structured approach used to improve the position of a company or its products in search engine natural or organic results listings for selected keyphrases.

Search engine optimisation (SEO)

Search engine optimisation (SEO) involves a structured approach used to increase the position of a company or its products in search engine natural or organic results listings for selected keyphrases. It also involves controlling index inclusion or ensuring that as many pages of a site as possible are included within the search engine. There may be technical difficulties with this with some content management or e-commerce systems that need to be corrected.

Although each search engine has its own evolving algorithm with hundreds of weighting factors only known to the search engineers they employ, fortunately there are common factors that influence search engine rankings. These are, in approximate order of importance:

- 1 Content.** According to Andrey Lipattsev, a search quality senior strategist at Google, content is one of the most important Google ranking factors. In recent years there has been a move away from keyword-focused content, towards relevant content written in natural language. Recent Google algorithm updates such as Hummingbird (September 2013) and RankBrain (October 2015) place a huge amount of value on semantic relevance and optimisation. This means that an in-depth discussion on one topic in plain English will gain a much higher ranking than keyword-dense content that isn't relevant or interesting to

read. Relevance can also be increased by adding the keyphrase in headings (<H1>, <H2>), linking anchor text in hyperlinks and using a higher density towards the start of the document.

Page rank

A scale of 0 to 10 used by Google to assess the importance of websites according to the number of inbound links (link popularity).

2 Number of inbound links (page rank). The more links you have from good-quality sites, the better your ranking will be. Evaluation of inbound links or backlinks to determine ranking is one of the key reasons Google became popular. Google uses an assessment called ‘**page rank**’ to deliver relevant results since it counts each link from another site as a vote. However, not all votes are equal - Google gives greater weight to links from pages that themselves have high page rank and that have the same context or topical content as the page they link to. Weighting is also given where hyperlink anchor text or adjacent text contains text relevant to the keyphrase, i.e. the linking page must have context.

Google’s webmaster guidelines
(support.google.com/webmasters/answer/66356) says:

The best way to get other sites to create high-quality, relevant links to yours is to create unique, relevant content that can naturally gain popularity in the Internet community. Creating good content pays off: links are usually editorial votes given by choice, and the more useful content you have, the greater the chances someone else will find that content valuable to their readers and link to it.

Another key aspect of linking is the architecture of internal links within the site. Key-phrases that occur within the hypertext of different forms of navigation are important to Google in indicating the context of a page.

3 Mobile-first user experience. In 2016 Google moved towards mobile-first indexing, which means that it will primarily crawl the mobile version of websites, instead of the desktop version. This means that mobile optimisation is a very important ranking factor. According to Moz (moz.com/learn/seo/mobile-optimization), mobile SEO best practices include:

- don’t block CSS, JavaScript or images;
- site design for mobile - don’t use Flash or pop-ups and design ‘for the fat finger’ (i.e. touchscreen navigation can lead to accidental clicks if buttons are too big, too small or in the way of the ‘scroll path’);
- optimise titles and meta descriptions (working with less screen space);

- use schema.org structured data;
- optimise for local search;
- think about your mobile site configuration (Google prefers responsive design).

Another factor is page-loading speed, which is connected to the user experience. A general rule of thumb is that desktop sites should load in three seconds or less and mobile sites should load in two seconds or less.

4 Title HTML tag. The keywords in the title tag of a web page that appears at the top of a browser window are indicated in the HTML code by the <Title> keyword. For example, for my site (<title>E-business and Internet marketing articles - DaveChaffey.com </title>). This is significant in search engine listings since if a keyphrase appears in a title it is more likely to be listed high than if it is only in the body text of a page. It follows that each page on a site should have a specific title giving the name of a company and the product, service or offer featured on that page. Greater weighting is given to keyphrases at the left of the title tag and those with a higher keyphrase density. The Title HTML tag is also vital in search marketing since this is typically the text underlined within the search results page, which forms a hyperlink through to your website. If the Title tag appearing on the search results page is a relevant call to action that demonstrates relevance, you will receive more clicks, which equals more visits (incidentally, Google will monitor click-throughs to a site and will determine that your content is relevant too and boost position accordingly).

5 Meta-tags. **Meta-tags** are part of the HTML source file, typed in by web page creators, which is read by the search engine spider or robot. They are effectively hidden from users, but are used by some search engines when robots or spiders compile their index. In the past, search engines assigned more relevance to a site containing keyphrases in its metatags than one that didn't. Nowadays they are not seen as so important, but industry experts still believe that optimising your content with relevant and useful tags will improve the user experience and help boost rankings. There are two important meta-tags that are specified at the top of an HTML page using the <meta name="content=" > HTML keyword:

Meta-tags

Keywords that are part of an HTML page that result in a higher search listing if they match the typed keyword.

(i) The 'keywords' meta-tag highlights the key topics covered on a web page.

Example: <meta name="keywords" content="E-business, E-commerce, E-

marketing">

(ii) The 'description' meta-tag denotes the information that will be displayed in the search results page so is very important to describe what the website offers to encourage searchers to clickthrough to the site.

Example: <meta name="description" content="Your guide to E-business and Internet marketing - DaveChaffey.com">.

6 Alternative graphic text. A site that uses a lot of graphical material and/or plug-ins is less likely to be listed highly. The only text on which the page will be indexed will be the <Title> keyword. To improve on this, graphical images can have hidden text associated with them that is not seen by the user (unless graphical images are turned off), but will be seen and indexed by the search engine. For example, text about a company name and products can be assigned to a company logo using the 'ALT' tag as follows: .

Again, due to search engine spamming, this factor is assigned less relevance than previously (unless the image is also a link), but it is best practice to use this since it is also required by accessibility law (screen-readers used by the blind and visually impaired read out the text assigned through ALT tags).

Paid search marketing

Paid search marketing or paid listings are similar to conventional advertising; here a relevant text ad with a link to a company page is displayed when the user of a search engine types in a specific phrase. A series of text ads usually labelled as 'sponsored links' are displayed on the right and/or above and below the natural search engine listings. Unlike conventional advertising, the advertiser doesn't pay when the ad is displayed, but only when the ad is clicked on, which then leads to a visit to the advertiser's website - hence this is often known as 'pay-per-click marketing'. The relative ranking of these 'paid performance placements' is typically based on the highest bid cost-per-click value for each keyphrase. The variation in bid amounts for clients of one search bid management tool are shown in Figure 8.13.

But it is not a simple case that the company that is prepared to pay the most per click gets top spot, as many think. The search engines also take into account the relative clickthrough rates of the ads dependent on their position (lower positions naturally have lower click-through rates) when ranking the sponsored links, so ads that do not appear relevant, because fewer people are clicking on them, will drop down or may even disappear off the listing. The analysis of CTR to determine position is part of the **quality score**, a concept

originally developed by Google, but now integrated as part of the Yahoo!/Bing search networks.

As well as paid search ads within the search engines, text ads are also displayed on third-party sites (for example, the ads on www.wired.co.uk), which form a contextual 'display network' such as Google AdSense (<http://adsense.google.com>) or the Bing Network where 'contextual ads' are displayed automatically according to the type of content. These are typically paid for on a cost-per-click (CPC) basis but ads can also be paid for on a CPM basis. The search networks and publishers share the fees. They account for around 30% of Google's revenue. They enable marketers to reach a wider audience on selectable third-party sites, but they need to decide how to use these to deliver different messages.

Facebook pay-per-click advertising

Facebook has adopted the successful pay-per-click model from Google in an effort to monetise its audience. Mini case study 8.1, summarises the benefits. The case study shows how you can target effectively in Facebook and increase awareness of a service beyond Google, while limiting your exposure through a CPC investment. Interestingly, this was for business-to-business (B2B) software, which shows that Facebook isn't just a consumer marketing channel!

Quality score

An assessment in paid search by Google AdWords (and now other search engines) of an individual ad triggered by a keyword which, in combination with the bid amount, determines the ranking of the ad relative to competitors.

Contextual 'display network'

Contextual ads are automatically displayed by the search engine, according to the type of content, on partner publisher sites.

Cost per thousand (CPM)

Cost per 1,000 ad impressions for a banner advert.

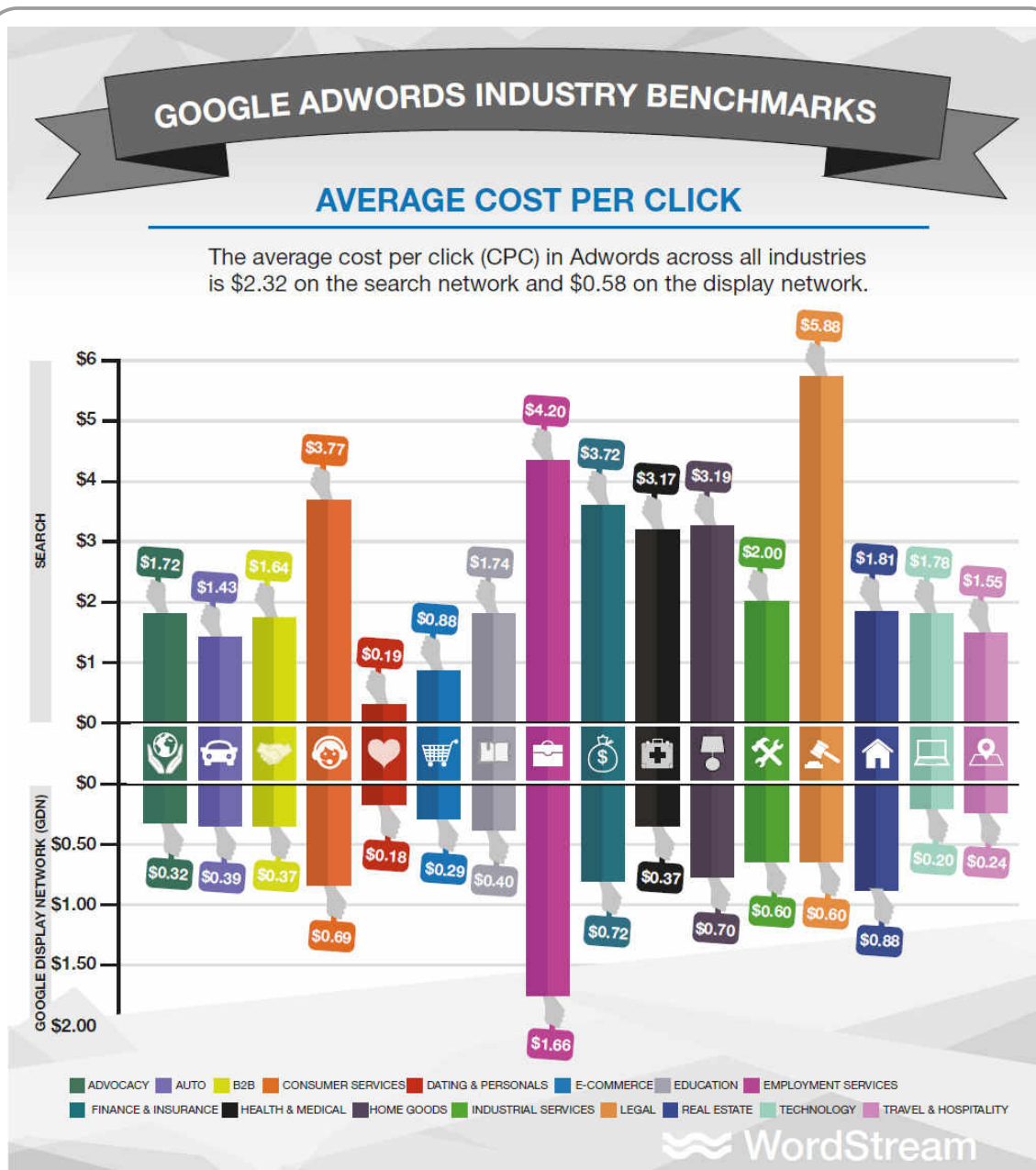


Figure 8.13

Google AdWords Industry Benchmarks (average cost per click)

Source: www.wordstream.com/cost-per-click

Beware of fake clicks, ad fraud and measurement errors!

Whenever the principle of PPC marketing is described to marketers, very soon a light bulb comes on and they ask, ‘So we can click on competitors and bankrupt them?’. Well, actually no. The PPC ad networks detect multiple

clicks from the same computer (IP address) and say they filter them out. However, there are techniques to mimic multiple clicks from different locations such as software tools to fake clicks and even services where you can pay a team of people across the world to click on these links. It is estimated that in competitive markets, one in five of the clicks may be fake. While fake clicks can be monitored for and refunds obtained if proven, ultimately this could damage the digital media sector.

Case Study 8.1 campaign

HubSpot increases sales by 71% with Facebook

HubSpot ran a three-month Facebook campaign that included posting daily videos and holding regular live chats, resulting in a 71% sales increase from the social media platform during the three-month campaign.

Summary

Inbound marketing specialist HubSpot's all-in-one marketing software is designed to help businesses attract visitors, convert leads and close customers, and is used by more than 10,000 companies all over the world. The company wanted to promote its brand as a thought leader in the business-to-business field on Facebook, driving customer engagement and generating more leads. It developed a branded page that included a 'Try HubSpot' tab, allowing people to use HubSpot for a free 30-day trial, posted daily videos and tips, and held regular live chats. This was supported by Facebook ads with strong calls to action. The campaign saw a 71% sales increase from Facebook over the three-month period.

Objectives and aims

HubSpot is an inbound marketing specialist whose all-in-one marketing software is used by more than 10,000 companies all over the world. The software is designed to help businesses attract visitors, convert leads and close customers. HubSpot's premise is that 'traditional marketing is broken', citing the fact that interruptive marketing no longer works, with 200 million numbers on the Do Not Call list, 44% of direct mail never opened and 86% of people skipping TV adverts. Its own approach to

marketing is about attracting customers, an approach that includes creating website content that is shared on social media.

HubSpot wanted to promote its brand as a thought leader in the business-to-business field on Facebook in order to lead fans to its branded page and ultimately engage them with other content, as well as driving customer engagement and generating more leads.

Implementation, execution and tactics

To create general awareness around its brand, HubSpot first created a Facebook page. This included:

- choosing its logo as its profile picture and a cover photo featuring a vibrant city landscape and the company name;
- developing a tab called ‘Try HubSpot!’ in its main page view, allowing people to use HubSpot for free for a 30-day trial or request a demo to see how it could work for their business.

The company also ran Facebook ads to drive sales. This involved:

- using a strong call to action in its ads to encourage people to like its page, saying ‘Like HubSpot for exclusive webinar invites, blog updates, free new ebooks & more!’;
- testing ads by targeting different age segments, including 24-34, 35-44 and 45-54, along with Likes and Interests such as ‘marketing director’, ‘marketing manager’ and ‘marketing manager’;
- including eye-catching images to grab people’s attention, such as the word ‘Attend!’ along with information in the ad text about HubSpot’s marketing conferences.

HubSpot increased engagement on its page in several ways:

- posting updates every day about marketing conferences and ecommerce tips, as well as links to demos and videos;
- frequently asking questions such as ‘Is mobile marketing a part of your strategy?’ to spark conversation among fans;
- offering links to live chats with marketing experts from HubSpot on specific topics, such as closed-loop marketing;
- to reach a broader set of people, HubSpot also ran sponsored stories to get the word out about its brand and used these to let people know when one of their friends had liked the HubSpot page.

Results

The campaign achieved:

- 71% sales increase from Facebook over the course of the three-month campaign;
- 15% ROI increase from Facebook over the course of the campaign;
- 39% increase in traffic coming from Facebook over the course of the campaign.

Dan Slagen, head of Paid Lead Generation, HubSpot, commented:

We've found that actively participating on Facebook has engendered a valuable, open line of dialogue between HubSpot and its interest base. We're able to announce product updates, new eBooks/webinars, get feedback directly from customers and gain inspiration for new ideas around inbound marketing all while generating new leads and customers.

Source: Econsultancy.com case study (2009), <https://econsultancy.com/case-studies/hubspot-increases-sales-by-71-with-facebook-campaign>

Another issue in the digital marketing industry is ad fraud - according to a recent report by the Association of National Advertisers (2017), more than \$7 billion in advertising investment is wasted because of non-human (or bot) digital traffic. Unfortunately, this type of fraud has evolved over the last few years and areas that it's penetrated include the highend (and high-cost) digital video space. The two main fraud bot networks that have been uncovered in recent years are 'Methbot' and 'Hyphbot' - the latter was so sophisticated that it generated 1.5 billion fake ad requests a day, mimicking the behaviour of human traffic. There is also an industry concern around mobile - there is now a host of new fraud models from apps, which claim to do one thing but their real purpose is to monetise via ad fraud. One of the main reasons behind the rise in mobile advertising bot fraud is the existing issue of tracking/verification challenges. Advertisers need to try and overcome this problem with meticulous planning and inventory selection, along with third-party verification.

Also, at the time of writing this text update, Facebook has come under fire after a number of measurement errors (ten errors have been uncovered between 2016 and 2017). For example, in September 2016 the social media platform revealed it had overstated how long users watch timeline videos by up to 80%. Then, in May 2017, it admitted a measurement error connected with its video carousel ads was costing advertisers money. This has resulted in a call for independent, third-party verification, so that advertisers can be assured that the metrics Facebook is using are reliable and it is spending their money as efficiently and effectively as possible.

According to the World Federation of Advertisers (2016), ad fraud will cost the advertising ecosystem as much as \$50 billion per year by 2025. At present, eliminating ad fraud is very difficult, so it is important to be aware of these issues when planning and running digital advertising campaigns.

Mini case study 8.2 provides insight into how holiday company First Choice ran a content and social sharing campaign to increase blog traffic.

How First Choice increased social interactions and blog traffic

The holiday company's campaign concept was to create an interactive HTML5 infographic space, where people can vote for the world's most beautiful country. First Choice tasked its SEO and content marketing agency, Caliber, to produce a simple visual design on a newsworthy subject to help gain media (PR) coverage. The voting was conducted via Pinterest and user-generated content was parsed into country-specific feeds on the infographic itself. Twitter was also used as a voting channel.

Votes were updated in real time to an interactive heat map and users could click on a specific country to explore votes and pinboards of the countries' landscapes, people and culture, in support of that nation's bid to be the world's most beautiful country. This conversational element sparked good-natured debate from all over the world about peoples' love for particular places. Voters were also entered into competitions for prizes provided by First Choice. Campaign execution included:

- Developing the infographic with the editorial preferences of Mashable.com in mind (with the aim of helping the campaign go viral).
- Engaging competitions to encourage people to vote via the infographic.
- Pre-launch conversations with journalists at traditional outlets (these provided insights that the microsite was less appealing to general/offline audiences, so the campaign was focused on social outreach).
- Launching with an exclusive feature on Mashable.com, with immediate social sharing across Twitter and Facebook. To complement the initial boost of shares, paid social media campaigns

ran across Twitter, StumbleUpon and Facebook to drive more interactions

- Continued momentum building to a viral stage, triggered by the use of digital PR. This included contacting tourist boards and key influencers, to encourage them to galvanise their followers into voting for their specific country. This resulted in the infographic going viral among online communities in Latvia, Mexico and Turkey - where people voted in large numbers.

The campaign resulted in the following:

- The infographic was published on over 300 websites, with media coverage achieved in: *Travel Trade Gazette* (online and in print), Mashable, *Daily Mail*, *Huffington Post* and Gadling.
- Over 72,109 social interactions (7 × KPI).
- 16,680 likes and shares on Facebook.
- 11,439 tweets of the infographic.
- 3541,497 interactions via StumbleUpon.
- 831 pins on Pinterest.
- 654 shares on LinkedIn.
- 311 shares on Google+.
- 114,002 unique page views.
- Outreach and viral spread generated 300+ links and five keywords jumped to the front page of Google's results. During the month of April, traffic to First Choice's blog jumped 500%.

Adriano Comegna, SEO manager, TUI UK, commented:

We chose to undertake this campaign because we think it's important we innovate within the UK travel industry. It allowed us to not only experiment with new and emerging web technologies such as HTML5/CSS3, but also place our customers in the driving seat of our campaigns by empowering them to decide on the end result. Marketing is shifting very quickly to more customer-centric and consumer-engaging models and we believe content and social sharing is the next real battleground for brands.

Source: Case study posting, 5 January 2013,
www.thedrum.com/news/2013/01/04/conflict-pinterest-how-first-choice-used-content-and-social-sharing-increase-blog

2 Digital PR

The UK Chartered Institute of Public Relations (CIPR, 2018) defines PR as:

Public Relations is about reputation - the result of what you do, what you say and what others say about you.

Public Relations is the discipline which looks after reputation, with the aim of earning understanding and support and influencing opinion and behaviour. It is the planned and sustained effort to establish and maintain goodwill and mutual understanding between an organisation and its publics.

Digital PR leverages the network effect of the Internet. Remember, Internet is a contraction of ‘interconnected networks’! Mentions of a brand/site on other websites are powerful in shaping opinions and driving visitors to yours. The main element of digital PR is maximising favourable mentions of an organisation, its brands, products or websites on third-party websites that are likely to be visited by its target audience. Furthermore, as we noted in the topic on search engine optimisation, the more links there are from other sites to your site, the higher your site will be ranked in the natural or organic listings of the search engines. Minimising unfavourable mentions through online reputation management is also an aspect of digital PR.

Activities that can be considered to be digital PR include the following:

(a) Communicating with media (journalists) online

This uses the Internet as a new conduit to disseminate press releases (SEO-optimised) through email and on-site, and on third-party sites. Options include: setting up a pressrelease area on the website; creating email alerts about news that journalists and other third parties can sign up to; submitting your news stories or releases to online news feeds.

(b) Link-building

Link-building is a key activity for search engine optimisation. It can be considered to be an element of online PR since it is about getting your brand visible on third-party sites. Linkbuilding needs to be a structured effort to achieve as many links into a website as possible from referring websites (these commonly include **reciprocal links**), which will also improve your position in the search engine results pages.

McGaffin (2004) provides a great introduction to implementing a structured link-building programme. He says: ‘Create great content, link to great content and great content will link to you’. He describes how you should review existing links to your site and links to competitors’, set targets and then proactively enquire to suitable site owners for links.

You can use the syntax 'link:site' in Google to see a sample of quality links into a page on your site as judged by Google, e.g. 'link:**Error! Hyperlink reference not valid.**'.

Note that this also includes internal links. To gain a more comprehensive view of links, search marketing specialists use tools that are listed at <http://bit.ly/smartlinkcheck>.

(c) Blogs and podcasts

'**Blogs**' (introduced in Chapter 2) provide an easy method of regularly publishing web pages that are best described as online journals, diaries or news or events listings. They may include feedback (traceback) comments from other sites or contributors to the site. Frequency can be hourly, daily, weekly or less frequently, but daily updates are typical.

Podcasts are related to blogs since they can potentially be generated by individuals or organisations to voice an opinion either as audio (typically MP3) or video. They have been successfully used by media organisations such as the BBC, which has used them for popular programmes such as film reviews or discussions and for live recordings. They are also recognised as a good channel for generating 'thought leadership' content and becoming a B2B influencer, e.g. Scott Stratten has a weekly business podcast called 'Unpodcast: The Business Podcast for the Fed-Up', which reaches over 200,000 social media followers. A big challenge for achieving visibility for podcasts is that contents can only currently be recognised by tags and it is difficult to assess quality without listening to the start of a podcast. Podcasts have decreased in popularity with the growth of streamed media services from media publishers, such as the BBC iPlayer.

Digital PR

Maximising favourable mentions of your company, brands, products or websites on third-party websites that are likely to be visited by your target audience.

Link-building

A structured activity to include good-quality hyperlinks to your site from relevant sites with a good page rank.

Reciprocal links

Links that are agreed between your and another's organisation.

Blog

An online diary or news source prepared by an individual or a group of people.

Podcasts

Individuals and organisations post online media (audio and video) that can be accessed in the appropriate players including the iPod, which first sparked the growth of this technique.

(d) Online communities and social networks

The power of the Internet to facilitate peer-to-peer interactions was evident from the mid-1990s. However, it is only relatively recently that this power to transform the way companies and customers interact has been apparent. The human need to socialise and share experiences is the real reason behind the popularity of online communities and social networks. In most countries, social networks are among the most popular sites due to this need. It follows that marketers will want to 'swim with the fish' or try to communicate with customers in this environment. Certainly, there are opportunities to advertise on social networks, as shown in the HubSpot Mini case study. But if marketers perceive social media simply as an opportunity to push messages from a brand to passive recipients, then the opportunity to engage with customers to develop a deeper relationship is missing. Facebook aims to facilitate this through its ads, which typically lead through to a brand page or company page within Facebook where brands can collect feedback.

Focus on Social media and social CRM strategy

Social media marketing

Monitoring and facilitating customer-customer interaction, participation and sharing through digital media to encourage positive engagement with a company and its brands, leading to commercial value. Interactions may occur on a company site, social networks and other third-party sites.

Social media marketing is an important category of digital marketing that involves encouraging customer communications on a company's own site, or social presences such as Facebook or Twitter, or in specialist publisher sites, blogs and forums. It can be applied as a traditional broadcast medium - for example, companies can use Facebook or Twitter to send messages to customers or partners who have opted in. However, to take advantage of the

benefits of social media it is important to start and participate in customer conversations. These can be related to products, promotions or customer service and are aimed at learning more about customers and providing support, thus improving the way a company is perceived.

The growth of social networks has been documented by Boyd and Ellison (2007), who describe social networking sites (SNS) as:

Web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

The interactive capabilities to post comments or other content and rate content are surprisingly missing from this definition.

We've seen throughout this book that the opportunities of communicating with customers through social network sites, online communities and interactions on company sites are so great today that a social media strategy has become a core element of digital business strategy. Yet creating a social media or customer engagement strategy is challenging since it requires a change in mindset for the company since they may have to give up some control on their messaging to enable them to communicate with customers effectively. The change in approach required is clear from a movement that originated in the USA in 1999, known as the Cluetrain manifesto (www.cluetrain.com). The authors, Levine *et al.* (2000), say:

Conversations among human beings sound human. They are conducted in a human voice. Most corporations, on the other hand, only know how to talk in the soothing, humorless monotone of the mission statement, marketing brochure, and your-call-is-important-to-us busy signal. Same old tone, same old lies. No wonder networked markets have no respect for companies unable or unwilling to speak as they do. Corporate firewalls have kept smart employees in and smart markets out. It's going to cause real pain to tear those walls down. But the result will be a new kind of conversation. And it will be the most exciting conversation business has ever engaged in.

Of course, more than a change in mindset is required - to achieve change on this scale requires senior management sponsorship, investment and changes to processes and tools.

You can see that the Cluetrain manifesto is a call to action, encouraging managers to change their culture and provide processes and tools to enable employees of an organisation to interact with and listen to customer needs in a responsible way.

Developing a social media strategy

When developing a social media strategy, there seems to be a tendency for managers to turn straight to the tools they'll be using - should we start with Twitter or Facebook, or should we create a blog? This is the worst possible way to develop strategy; indeed, it's not strategy, it's tactics! Strategy development for social media should be informed by demand analysis of customer channel adoption and the commercial potential of the approach.

Customer adoption of social media tools will vary according to customer segments and markets. So it's important to start by completing a marketplace analysis (as described in Chapter 2), to see which social tools and engagement techniques are most effective for the target audience.

Next, the commercial benefits of social media need to be reviewed and goals defined. Some marketers will see social media primarily as a way of gaining new customers through the viral effect of social media as existing customers or contacts discuss or recommend their content or products. For others, the benefits may be centred more on how recommendations, reviews and ratings can increase conversion rate. Public relations specialists will want to listen to the conversations for positive and negative sentiment about brand and then seek to manage this by increasing the positives and managing the negatives. Finally, social media can be viewed as a customer engagement and retention tool. Here, social media are used to deliver customer service or are used as alternative channels to email marketing to inform customers about new product launches or promotions.

However, companies should make sure they try to provide excellent and measurable customer service contact across every channel their customers use. This is discussed further in Box 8.3.

good customer service and don't like being passed between channels

On average, customers interact with four different channels when seeking customer service-related enquiries from a business. The types of channels they use, or expect to be able to use, when contacting a business are changing too. Word-of-mouth and online reviews are some of the most critical channels for any business, and customer service is key to getting good results. Delivering good customer service now requires a presence across a range of channels - in a way that allows them to be mutually supportive and helpful, rather than

working at cross purposes. According to a study by Microsoft (2016), which asked 4,000 people across the US, UK, Brazil and Japan, 97% of people said that customer service is important to their choice of brand.

What are the most popular customer service channels?

As you can see in Figure 8.14, consumers are using a range of channels and it varies considerably between nations - although email does come out top in all but the US.

It's interesting to note that all five of the different channels analysed are relatively popular. Online portals are used by over half of users on average, while search engines are used for customer service-related enquiries by half the people in the US and only slightly less than half in the UK and Brazil.

Where do the interactions start?

Although the telephone is a popular channel in all countries, the journey generally tends to start online. The UK leads the trend here, with 64% starting their customer service interactions online.

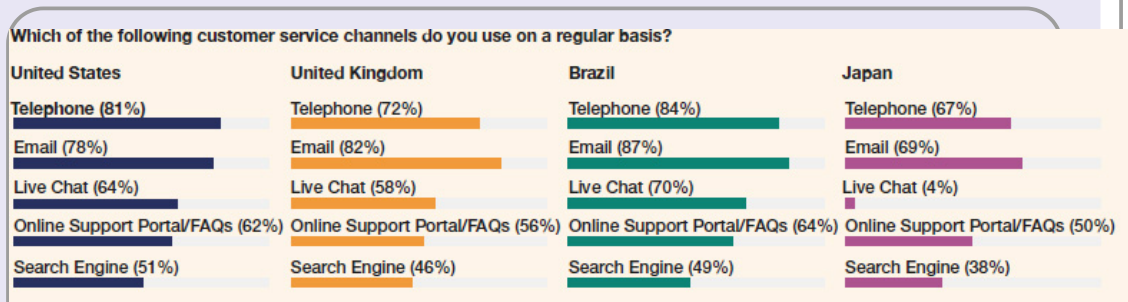


Figure 8.14

Customer service channels used on a regular basis

Source: www.smartinsights.com/customer-relationship-management/customer-service-and-support/new-study-highlights-need-omnichannel-customer-service-strategy



Figure 8.15

Where interaction with customer service typically starts

Source: www.smartinsights.com/customer-relationship-management/customer-service-and-support/new-study-highlights-need-omnichannel-customer-service-strategy

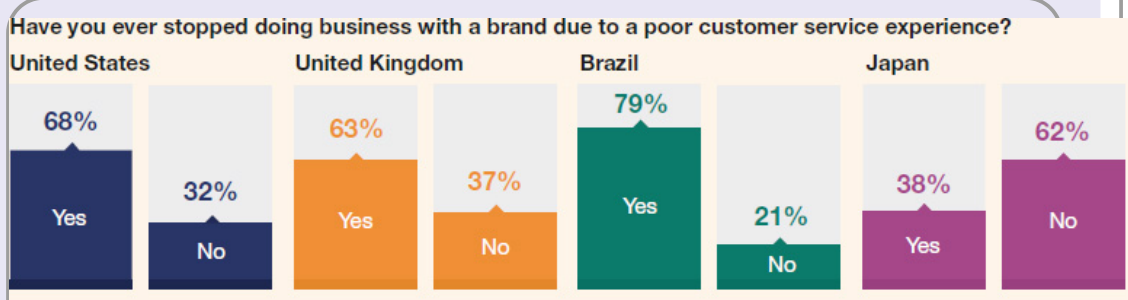


Figure 8.16

Poor customer service affecting business decisions

Source: www.smartinsights.com/customer-relationship-management/customer-service-and-support/new-study-highlights-need-omnichannel-customer-service-strategy

Why it's critical to deliver omnichannel customer service

In all the countries surveyed bar Japan, a considerable majority of people report switching brands because of a poor customer service experience, so leaving customers unsatisfied can lose you huge chunks of revenue.

The report clearly shows that customers expect good customer service across a range of channels, and are willing to take their business elsewhere if they don't get it. Customers across different countries consistently rate 'being passed between agents' as the most frustrating aspect of customer service, so you shouldn't be basing one channel's customer service approach around passing people on to another channel.

Sources: Smart Insights blog. www.smartinsights.com/customer-relationship-management/customer-service-and-support/new-study-highlights-need-omnichannel-customer-service-strategy

<https://info.microsoft.com/rs/157-GQE-382/images/dynamics365-en-global-state-customer-service.pdf>

POST is a useful framework for businesses to apply to help them develop a social media strategy, as summarised by Forrester (2007). POST is a simplified version of the SOSTAC framework introduced in Chapter 7:

- *People.* Understanding the adoption of social media within an audience is an essential starting-point.
- *Objectives.* Set different goals for different options to engage customers across different aspects of the customer lifecycle, from customer acquisition to conversion to retention. Josh Bernoff of Forrester recommends: 'decide on your objective before you decide on a technology. Then figure out how you will measure it.'
- *Strategy.* How to achieve your goals. Bernoff suggests that because social media are a disruptive approach, you should imagine how social media will support change. He says: 'Imagine you succeed. How will things be different afterwards? Imagine the endpoint and you'll know where to begin.'
- *Technology.* Finally, decide on the best social media platforms to achieve your goals; we'll review these in a moment.

Live chat

One of the main issues with online shopping is that many customers are disconnected from someone who can answer their questions in real time. In recent years, this issue has helped drive an increase in digital businesses providing live chat support. According to a report by eDigital Research (2014), live chat has the highest satisfaction levels for any customer service channel (73%), compared with 61% for email and 44% for phone. Forrester (2010) found that:

Many online consumers want help from a live person while they are shopping online; in fact, 44% of online consumers say that having questions answered by a live person while in the middle of an online purchase is one of the most important features a web site can offer.

An online chat system provides customers with immediate access to help, and waiting times are often much shorter than with a call centre. From a business perspective, live chat software can lead to cost savings, notably:

- the reduction of contact centre costs by lowering average interaction costs;
- an increase of efficiency by allowing live chat representatives to handle multiple chats simultaneously, reducing the need to hire more people.

Figure 8.17 shows how some retailers have tried to mimic the personal service a shopper would get in store, by using sound and video in their live chat solution.

However, it is still important to keep in mind the importance of the telephone as a customer service tool (as seen in the Zappos case study in Chapter 5, page 229).

Facebook's instant messaging service, Messenger, now allows PayPal sellers to invoice buyers directly through private messaging via its new chat extension, which includes an image of the product and its price. This is expected to have an impact on how business is done on Facebook; its 'Buy and Sell' groups were visited by around 450 million people monthly and Messenger has 1.3 billion monthly users. This provides a great opportunity for e-commerce companies to sell their products via one of the most used social media channels in the UK.

Social CRM strategy

We have seen that there are a diverse range of goals when applying social media within an organisation, which poses a significant challenge, particularly in larger organisations, since success will require collaboration across different roles and functions. **Social CRM** is a term used to help define the broad scope of social media across the customer lifecycle and value chain.

Conversations can occur across a range of site types, including 'social networks' such as Facebook and Twitter, but also in a company's own blog, third-party blogs, reviewsand-ratings sites or in neutral web self-service forums such as Get Satisfaction.

Social CRM

The process of managing customer-to-customer conversations to engage existing customers, prospects and other stakeholders with a brand and so enhance customer relationship management.



Figure 8.17

Live chat with sound and video to mimic an 'in-store' experience

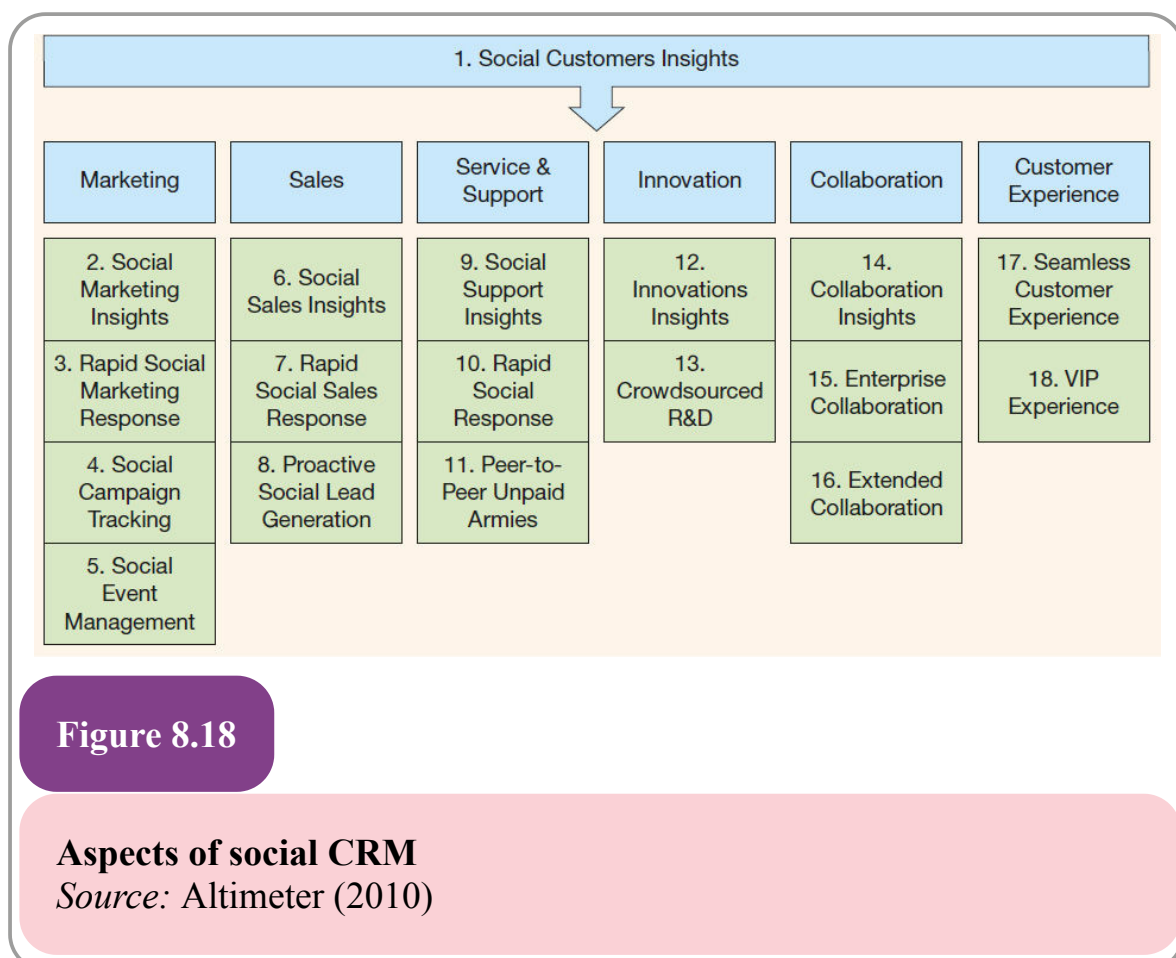
Source: Jochen Tack/Alamy Stock Photo

Many organisations have developed a social media governance policy to ensure that conversations are listened to and responded to accordingly. You can read examples at <http://socialmediagovernance.com/policies/>.

The scope of social CRM is well illustrated by the six business application areas in Figure 8.18, which are presented by Altimeter (2010). The scope of each area is:

- 1 Marketing.** Monitoring, analysis and response of customer conversations through social listening tools. I think the report misses a discussion on integration of social marketing into other campaign tactics such as email marketing.

- 2 Sales.** Understanding where prospects are discussing selection of products and services offered by you and competitors and determining the best way to get involved in the conversation to influence sales and generate leads. Within B2B, LinkedIn is an obvious location that should be monitored.
- 3 Service and support.** Customer self-help through forums provided by you and neutral sites.
- 4 Innovation.** Using conversations to foster new product development or enhance online offerings is one of the most exciting forms of social CRM.
- 5 Collaboration.** This is digital business collaboration within an organisation through an intranet and other software tools to encourage all forms of collaboration that support business processes.
- 6 Customer experience.** This references the use of social CRM to enhance the customer experience and add value to a brand, which is implied by many of the other aspects above. It gives the examples of using VIP programmes and offering collaboration between customers with shared characteristics to add value and create advocacy.



A social CRM strategy can be developed by reviewing and prioritising options in each of the six business applications in Figure 8.18.

The Five Ms provide another useful framework within the Altimeter (2010) report that can be used for reviewing strategy implementation. The Five Ms are:

- 1 Monitoring.** Reviewing the method of social listening and deriving insights from this.
- 2 Mapping.** Finding relationships between individual customers or grouped segments using different social platforms, e.g. Facebook and Twitter or email marketing.
- 3 Management.** Processes for implementing and reviewing strategy. More report detail on campaign management would be helpful here.
- 4 Middleware.** The software tools and APIs used to monitor and gather insight.
- 5 Measurement.** The measures used to assess social marketing effectiveness and ROI.

Categories of social media

There are many, many sites and tools that provide an environment for social media; to gain an idea of just how many, complete Activity 8.1, which lists hundreds of tools in 25 categories.

8.1

platforms

Understanding the range of social media marketing

Purpose

To explore the range of social media sites and tools, to categorise them and assess their business applications.

Activity

Visit the Conversation Prism (www.conversationprism.com) or the Smart Insights Digital Marketing Radar (<http://bit.ly/smartradar>) and identify the types of social media sites you and your colleagues use. How do you think the popularity of tools would differ for different types

of B2B and B2C sites? Discuss how businesses should decide on the most important tools to invest in to achieve their goals.

A social media site is far more than simply a website. From a technology viewpoint most of these sites can be considered as software applications or web services, which give access to users at different levels of permission and then enable management and storage of different forms of user-generated content. Messaging is also an important feature of many of these sites, particularly the main social networks, which will alert users when new content related to their content or connections is published. APIs for exchanging data with other web services interfaces are also a key feature of social networks, which enable them and their members to extend their reach and influence by being incorporated into other sites.

Since there are so many types of social presence, it is helpful to simplify the options to manage (as we introduced in Chapter 1).

The popularity of **communities** implemented on company sites or within social networks means that it is important for companies to manage these effectively. But why is community important and how can companies best manage it? Hagel and Armstrong (1997) say:

The rise of virtual communities in online networks has set in motion an unprecedented shift from vendors of goods and services to the customers who buy them. Vendors who understand this transfer of power and choose to capitalize on it by organizing virtual communities will be richly rewarded with both peerless customer loyalty and impressive economic returns.

Depending on market sector, an organisation has a choice of developing different types of community for B2C, and communities of purpose, position, interest and profession for B2B.

- 1 Purpose.** People who are going through the same process or trying to achieve a particular objective. Examples include those researching cars, such as Auto Trader (www.autotrader.co.uk), or stocks online, such as The Motley Fool (www.fool.co.uk). Price or product comparison services such as MySimon and Kelkoo serve this community
- 2 Position.** Communities set up specifically for people who are in a certain circumstance, such as having a health disorder or being at a certain stage of life. Examples include the parenting website Mumsnet (www.mumsnet.com), www.babycenter.com, UK Run Chat (www.ukrunchat.co.uk) for runners and Pet Forums (www.petforums.co.uk) for animal owners.

3 Interest. This community is for people who share an interest or passion such as sport (www.football365.com), music (www.musicbanter.com), leisure (www.walkingworld.com) or any other interest (www.deja.com).

4 Profession. These are important for companies promoting B2B services.

Many B2B vertical portals have been created by publishers of trade papers, for example Emap Business Communications has created *Construction News* for the construction industry. Of course, construction trade publications such as *Building* are responding by creating their own portals.

Today, social networks provide a low-cost method for companies to create a community. You will notice that most of these examples of community are intermediary sites that are independent of a particular manufacturer or retailer. A key question to ask before embarking on a community-building programme is: ‘Can customer interests be best served through a company-independent community?’.

If the answer to this question is ‘yes’, then it may be best to form (or buy) a community that is a brand variant, differentiated from its parent. For example, Random House bought Figment (now known as Underlined, www.getunderlined.com) in 2013, which is a community for aspiring writers of young adult fiction (a type of social network for 13-18 year olds interested in this subject). Another and less costly alternative is to promote products through sponsorship or co-branding on an independent community site or portal, or to get involved in the community discussions.

Alternatively, companies can create their own forums, although successful examples are relatively rare since there is a fear that a brand may be damaged if customers criticise products, so some moderation is required. Sony has a PlayStation forum (<http://community.eu.playstation.com/t5/English-Forums/ct-p/55>), which is a good example of a community created by the brand away from its main website. It has ‘house rules’ and discussions based on systems, games and genres. Conversation topics include issues with devices (i.e. sound not working, device overheating, etc.), which are answered by other gamers.

Community

A customer-to-customer interaction delivered via email groups, web-based discussion forums or chat.

A potential problem with a company-hosted forum is that it may be unable to get sufficient people to contribute to a company-hosted community. But initial recruitment of contributors and moderation has been used to grow the forum by software services company SAP, which has successfully created several niche communities to support its business, with over 1 million

software engineers, partners and business people involved (www.sap.com/community). Contributions are rewarded through donations to international aid charities.

What tactics can organisations use to foster community? Parker (2000) suggests eight questions organisations should ask when considering how to create a customer community:

- 1 What interests, needs or passions do many of our customers have in common?
- 2 What topics or concerns might our customers like to share with each other?
- 3 What information is likely to appeal to our customers' friends or colleagues?
- 4 What other types of business in our area appeal to buyers of our products and services?
- 5 How can I create packages or offers based on combining offers from two or more affinity partners?
- 6 What price, delivery, financing or incentives can I afford to offer to friends (or colleagues) that our current customers recommend?
- 7 What types of incentives or rewards can I afford to provide customers who recommend friends (or colleagues) who go on to make a purchase?
- 8 How can I best track purchases resulting from word-of-mouth recommendations from friends?

A good approach to avoiding problems is to think about the difficulties the organisation may have with its community-building efforts. Typical problems are:

- 1 **Empty communities.** A community without any people is not a community. The traffic-building techniques mentioned earlier need to be used to communicate the proposition of the community.
- 2 **Silent communities.** A community may have many registered members, but a community is not a community if the conversation flags. How do you get people to participate? Here are some ideas:
 - **Seed the community.** Use a moderator to ask questions or have a weekly or monthly question written by the moderator or sourced from customers. Have a resident independent expert to answer questions.
 - **Make it select.** Limit it to key account customers or set it up as an extranet service that is only offered to valued customers as a value-add. Members may be more likely to get involved.
- 3 **Critical communities.** Many communities on manufacturer or retailer sites can be critical of the brand; some communities have been closed

due to negative comments.

Finally, remember the *lurkers* - those who read the messages but do not actively contribute. There may be ten lurkers for every active participant. The community can also positively influence these people and build brand.

Social media platforms are a good way to build communities. Interestingly, people's motivations for using these platforms have changed over the last few years - Box 8.4 explains this in more detail.

Members of a community or social network will differ in the extent to which they are connected with others. The most influential network members will be highly connected and will discuss issues of interest with a wider range of contacts than those who are less connected.

marketing

Social networks - success factors for social network

Research by GlobalWebIndex (2016) found that the way people are using social media is changing. It has become more professional - globally, the largest increase in motivations to use social is to 'network for work' (up to 27%), followed by 'to promote my work' (up to 17%). People cited the following reasons for using social media (the percentage changes are since 2014):

Largest increases globally

- +27% to network for work
- +17% to promote my work
- +12% to make sure I don't miss out on anything
- +10% because a lot of my friends are on them
- +7% to research/find products to buy

Largest increases in the UK

- +43% to make sure I don't miss out on anything
- +43% because a lot of my friends are on them
- +32% to research/find products to buy
- +25% general network with other people
- +22% to fill up spare time

In another report, Microsoft (2007), which part-owns Facebook, has developed these approaches for taking advantage of social networking either through buying ad space, or creating a brand space or brand channels that enable consumers to interact with or promote a brand:

- 1 Understand consumers' motivations for using social networks.** Ads will be most effective if they are consistent with the typical life stage of networkers or the topics that are being discussed.
- 2 Express yourself as a brand.** Use the web to show the unique essence of your brand, but think about how to express a side of the brand that is not normally seen.
- 3 Create and maintain good conversations.** Advertisers who engage in discussions are more likely to resonate with the audience, but once conversations are started they must be followed through.
- 4 Empower participants.** Social network users use their space and blogs to express themselves. Providing content or widgets to associate themselves with a brand may be appealing.
- 5 Identify online brand advocates.** Use reputation management tools to identify influential social network members who are already brand advocates. Approach the most significant ones directly. Consider using contextual advertising, such as Microsoft content ads or Google AdSense, to display brand messages within their spaces when brands are discussed.
- 6 The golden rule.** Behave like a social networker. This means:
 - being creative
 - being honest and courteous (ask permission)
 - being individual
 - being conscious of the audience
 - updating regularly.

It is generally believed by PR professionals seeking to influence marketplace perceptions that it is important to target the highly connected individuals since they are typically trusted individuals whom other members of the community may turn to for advice. But there is much discussion about the influence of the influencers online. Researchers of community interactions believe that it is the collective interactions between typical network members (known as the 'moderately connected majority') that are equally important.

For example, Watts and Dodds (2007) argue that the ‘influential hypothesis’ is based on untested assumptions and in most cases does not match how diffusion operates in the real world. They comment that ‘most social change is driven not by influentials, but by easily influenced individuals influencing other easily influenced individuals’. Box 8.5 explains more about the growth of micro-influencer marketing.

Although there is a clear wish to socialise online, site owners need to remember that it is not straightforward to engage an online audience as they move between different sites. Only a relatively small proportion will engage. Mini case study 8.3 shows that only a relatively small number of site visitors will actively participate.

Box 8.5

Micro-influencer marketing

In 2017, there was a rise in companies running ‘micro-influencer’ campaigns. Micro-influencers are generally considered to be individuals who have social channels that have grown organically, with a modest but genuine following and a highly engaged audience. They will have high-quality and niche content that resonates with their audience - i.e. niche communities and a higher proportion of fans who know them personally or have followed them on their digital journey.

The rise in the use of ‘micro-influencers’ is mainly down to the fact that as an influencer grows, their power dilutes. This means that those people with a smaller following tend to drive conversation in a more unique and personalised way. For example, a survey of 2 million social media influencers by Markerly (2017) showed that for unpaid posts, Instagram influencers with fewer than 1,000 followers have a like rate of about 8%, compared to those with a 1,000-10,000 followers who have a like rate of 4%. As the follower base increases, the like rate continues to decrease - i.e. 10,000-100,000 followers see a 2.4% like rate and 1 million-10 million followers a 1.7% like rate. Industry professionals generally consider micro-influencers to have a following of 100,000 or fewer. In terms of paid partnerships, the average spend for one Instagram post is £800.

According to Smart Insights (2017), scaling an influencer marketing campaign requires good planning, great communication and using the right tools. It provides the following advice:

Set your marketing goals

Determine what outcome you would like to achieve from your influencer campaign, i.e.:

- Build awareness Drive sales
- Gather leads
- Email sign-ups
- Increase your social media followers
- Get reviews
- Unboxing videos
- SEO links
- Stunning imagery

Pick your platforms and formats

Based on your goals, you can then determine which platforms and formats you'd like to target for your campaign. Keep in mind that the end goal of any influencer marketing campaign is the creation of some form of content. This could be a YouTube video, an Instagram post, a pin on Pinterest, a Tweet or a blog post.

Who is your target influencer?

Once you have an idea of the content you'd like to create, and which platforms are a best fit for your brand, you can then begin to define the right influencer for your campaign:

- How many followers?
- What do they talk about?
- On which platform(s) do they drive engagement?
- Audience characteristics: age, gender, location of their followers should match your target customers.

Once you have defined your goals and your target influencer, the next stage (and the most difficult one) is actually finding these influencers and convincing them to promote your brand. Generally, there are three main options for doing this: 1) tap into an influencer marketplace; 2) build your own database (DIY approach); and 3) partner with a full-service influencer marketing service. There are advantages and disadvantages to each, and a wide range of influencer marketing tools to help.

Tap into an influencer marketplace

The main advantages of using a marketplace are speed and efficiency. Some of the main ones available are:

- Famebit.com for YouTube influencers
- Octoly.com for YouTube influencers
- Inflenster.com a shopping community site for product reviewers
- Takumi.com for Instagram influencers
- Webfluential.com for influencers across multiple platforms
- Traackr.com a CRM platform focused on influencer marketing
- Tapinfluence.com for influencers across multiple platforms.

Find influencers

If you want to build up your own database of influencers, there are several useful tools available:

- Buzzsumo.com - one of the most popular tools for searching influencers/content;
- BuzzStream.com - find and research influencers and bloggers;
- Ahrefs.com - although this is primarily an SEO-focused service, it has a useful content-discovery tool called 'Content Explorer'.

inequality: encouraging more users to contribute

To encourage online community participation is a challenge since the majority of visitors to a community lurk or don't participate. Usability expert Jakob Nielsen gives examples of participation on Wikipedia (just 0.2% of visitors are active) and Amazon (fewer than 1% post reviews). He explains:

- 90% of users are lurkers (i.e. read or observe, but don't contribute).
- 9% of users contribute from time to time, but other priorities dominate their time.
- 1% of users participate a lot and account for most contributions: it can seem as if they don't have lives because they often post just

minutes after whatever event they're commenting on occurs.

(e) Managing how your brand is presented on third-party sites

As part of a digital PR strategy it is useful to set up monitoring services. It is also necessary to have the resources to deal with negative PR as part of online reputation management. Microsoft's PR agency reputedly has a 'rapid response unit' that can respond to online PR. Examples of alerting services include Google Alerts (www.google.co.uk/alerts) and the other tools listed at www.smartinsights.com/online-pr/reputation-management-online-pr/understanding-online-reputation-monitoring-management.

(f) Creating a buzz - online viral marketing

From a functional point of view, online viral marketing often involves generating word-of-mouth and links through to a website (as outlined in Chapter 4), so it can be considered part of digital PR.

To summarise the section on digital PR, see Figure 8.19. This highlights the importance of activities involving participation and how all digital PR activities feed back into SEO through the links generated.

Affiliate marketing

A commission-based arrangement where an e-retailer pays sites that link to it for sales leads (CPA-based) or, less commonly, visitors (CPC-based).

3 Online partnerships

Partnerships are an important part of today's marketing mix. Smith and Chaffey (2005) say that they are the eighth 'P' (Chapter 7). The same is true online. There are three key types of online partnership: link-building (covered in the previous section, this can also be considered to be part of online PR), affiliate marketing and online sponsorship. All should involve a structured approach to managing links through to a site. The important types of partner arrangement are as follows.

(a) Affiliate marketing

Affiliate marketing has become very popular with e-commerce companies, since many achieve over 20% of their online sales through affiliates (also

known as ‘aggregators’ since they aggregate offers from different providers). The great thing about affiliate marketing for the online retailer is that they, the advertiser, do not pay until the product has been purchased or a lead generated. It is sometimes referred to as ‘zero-risk advertising’ (Figure 8.20).

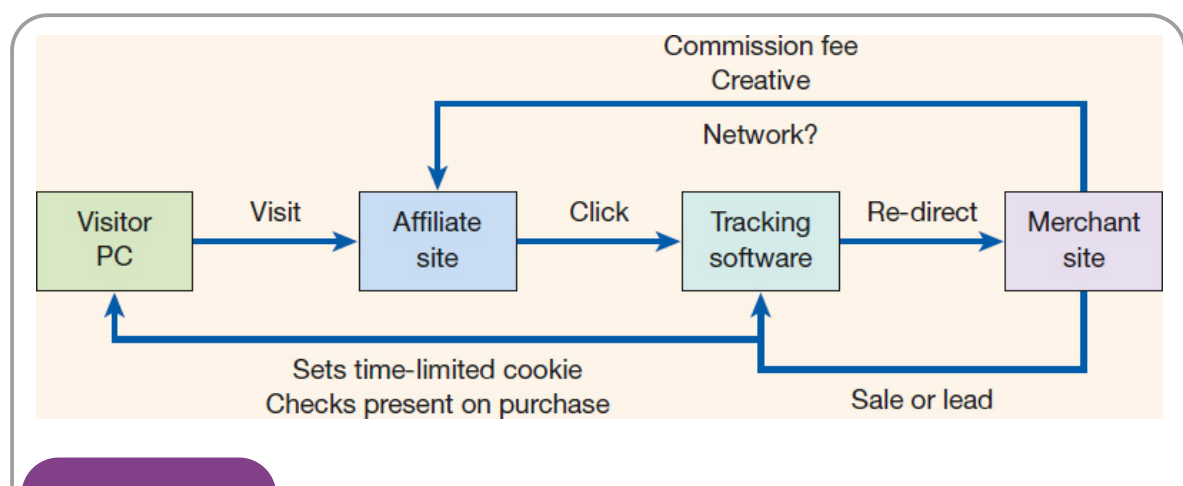
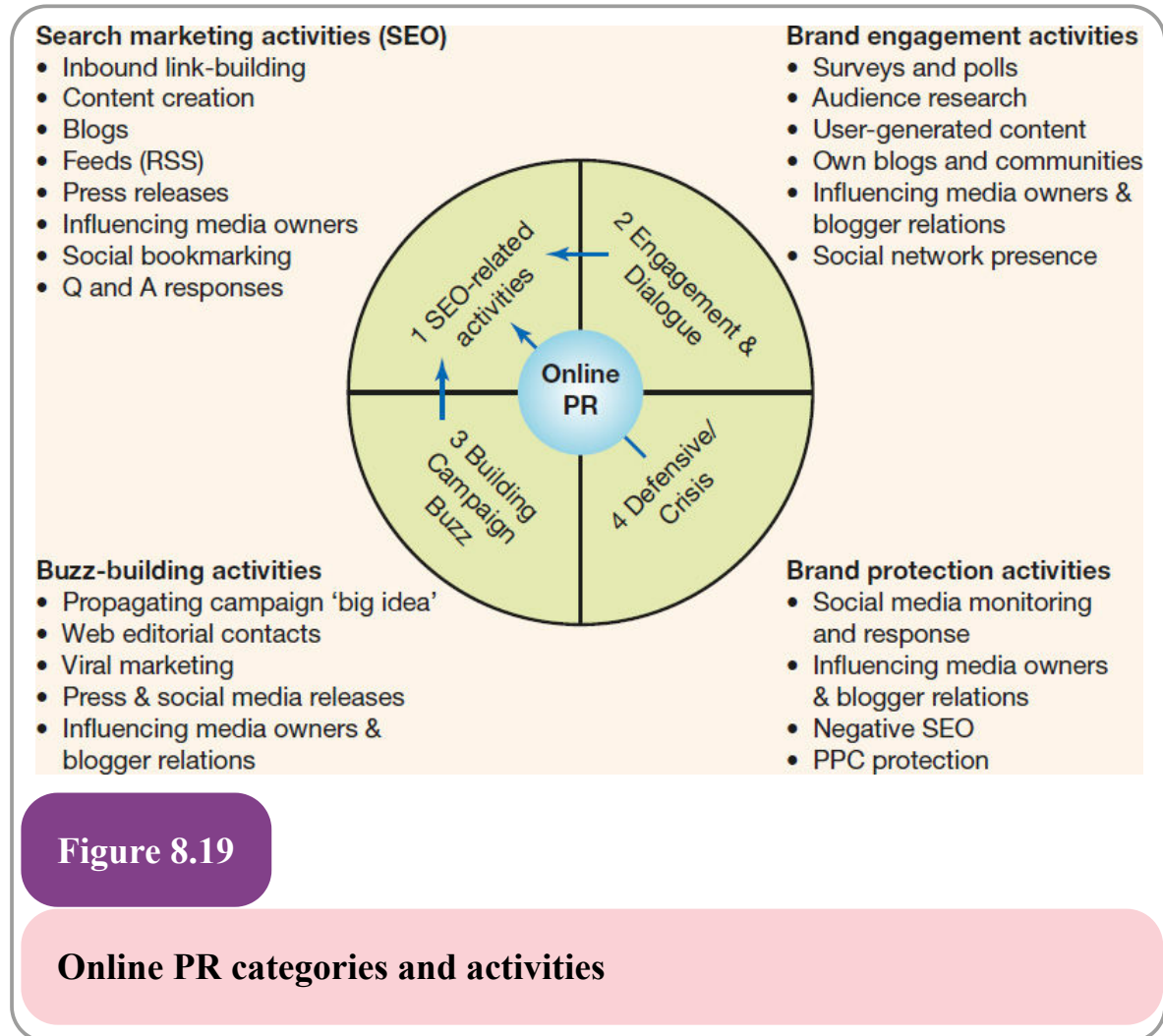


Figure 8.20

The affiliate marketing model (note that the tracking software and fee payment may be managed through an independent affiliate network manager)

Amazon was one of the earliest adopters of affiliate marketing and it now has hundreds of thousands of affiliates that drive visitors to Amazon through links in return for commission on products sold. Internet legend records that Jeff Bezos, the creator of Amazon, was chatting at a cocktail party to someone who wanted to sell books about divorce via her website. Subsequently, Amazon.com launched its Associates Program in July 1996 and it is still going strong. To manage the process of finding affiliates, updating product information, tracking clicks and making payments, many companies use an affiliate network or affiliate manager such as Affiliate by Conversant (www.uk.cj.com), Double Click by Google (www.doubleclickbygoogle.com) or Trade Doubler (www.tradedoubler.com).

(b) Online sponsorship

Online sponsorship is not straightforward. It's not just a case of mirroring existing 'real-world' sponsorship arrangements in the 'virtual world', although this is a valid option. There are many additional opportunities for sponsorship online that can be sought out, even if you don't have a big budget at your disposal.

Ryan and Whiteman (2000) define online sponsorship as:

the linking of a brand with related content or context for the purpose of creating brand awareness and strengthening brand appeal in a form that is clearly distinguishable from a banner, button, or other standardized ad unit.

For the advertiser, online sponsorship has the benefit that their name is associated with an online brand that the site visitor is already familiar with. Sponsorship builds on this existing relationship and trust. Closely related is online 'co-branding', where there is an association between two brands.

Media multiplier or halo effect

The role of one media channel on influencing sale or uplift in brand metrics. Commonly applied to online display advertising, where exposure to display ads may increase clickthrough rates when the consumer is later exposed to a brand through other media.

4 Digital advertising

According to *Marketing Week* (2017), UK ad spend reached a record high of £21.4 billion in 2016, after seven consecutive years of growth. Digital format continues to dominate the growth, with Internet ad spend up 13.4% (mobile accounting for 99% of that growth).

Online ads also seem to provide a **media multiplier or halo effect**, which can help increase the response rates from other online media. For example, if a web user has been exposed to banner ads, this may increase their response to paid search ads and may also increase their likelihood of converting on a site since brand awareness and trust may be higher.

This effect is suggested by research reported by MAD (2007) in the travel market, which involved asking respondents what their response to an online ad that appealed to them would be. Surely it would be a click? In fact, the results broke down as follows:

- search for a general term relating to the advertisement (31%);
- go straight to the advertiser's site (29%);
- search for the advertiser's name (26%);
- click on the banner to respond (26%);
- Visit a retail store (4%).

Of course, this methodology shows us reported behaviour rather than actual behaviour, but it is still significant that more than twice as many people are being driven to a search engine by banner advertising than by clicking directly on the banner! The research concludes that paid-search marketing needs to be optimised to work with banner advertising, by anticipating searches that are likely to be prompted by the banner and ensuring a higher rank for search results. For example, a brand featuring a Cyprus holiday offer will generate generic search terms such as 'package holiday Cyprus' rather than brand searches.

Abraham (2008) has also shown that online ads can stimulate offline sales. For one retailer with a turnover of \$15 billion, their research showed that over a three-month period sales increased (compared to a control group) by 40% online and by 50% offline among people exposed to an online search marketing and display-ad campaign promoting the entire company. Because its baseline sales volumes are greater in physical stores than on the Internet, this retailer derived a great deal more revenue benefit offline than the percentages suggest.

Ad serving

The term for displaying an advertisement on a website. Often the advertisement will be served from a web server different from the site on which it is placed.

Destination site

The site reached on clickthrough.

Microsite

A small-scale destination site reached on clickthrough that is part of the media owner's site.

Fundamentals of online advertising

Advertising on the web takes place when an advertiser pays to place advertising content on another website. The process usually involves **ad serving** from a different server from that on which the page is hosted (ads can be served on destination sites in a similar way).

Advertising is possible on a range of sites in order to drive traffic to an organisation's **destination site** or, alternatively, a **microsite** or nested ad-content on the media owner's site or on the destination site.

The purpose of digital advertising

Robinson *et al.* (2007) have noted that the two primary goals of online display advertising are, first, using display adverts as a form of marketing communication to raise brand awareness and, second, as a direct-response medium focused on generating a response. Cartellieri *et al.* (1997) identify the following objectives:

- *Delivering content.* This is the typical case, where a clickthrough on a banner advertisement leads through to a destination site giving more detailed information on an offer. This is where a direct response is sought.
- *Enabling transaction.* If a clickthrough leads through to a merchant such as a travel site or an online bookstore this may lead directly to a sale. A direct response is also sought here.
- *Shaping attitudes.* An advertisement that is consistent with a company brand can help build brand awareness. Building awareness is a key aspect of online advertising.
- *Soliciting response.* An advertisement may be intended to identify new leads or as a start for two-way communication. In these cases an interactive advertisement may encourage a user to type in an email address or other information.

- *Encouraging retention.* The advertisement may be placed as a reminder about the company and its service and may link through to on-site sales promotions such as a prize draw.

Digital ad targeting options

Online ads can be targeted by placing them:

- 1 On a particular type of site (or part of site)** that has a specific visitor profile or type of content. So, a car manufacturer can place ads on the home page of mumsnet.com to appeal to new mums. A financial services provider can place an ad in the money section of the site to target those interested in these products. To reach large mass-market audiences, place an ad on a large portal home page such as MSN, which has millions of visitors each day (sometimes known as a ‘road-block’ or ‘takeover’ if they take all ad inventory).
- 2 To target a registered user’s profile.** A business software provider could advertise on FT. com to target finance directors or IT managers.
- 3 At a particular time of day or week.**
- 4 Where there is relevant online behaviour.** Behavioural ad targeting is all about relevance -dynamically serving relevant content, messaging or an ad that matches the interests of a site visitor according to inferences about their characteristics. These inferences are made by anonymously tracking the different types of pages visited by a site user during a single visit to a site or across multiple sessions. Other aspects of the environment used by the visitor can also be determined, such as their location, browser and operating system.

Interstitial ads

Ads that appear between one page and the next.

Overlay

Typically an animated ad that moves around the page and is superimposed on the website content.

Digital ad formats

As well as the classic 468 by 60 pixel rotating GIF banner ad, which is decreasing in popularity, media owners now provide a choice of larger, richer formats that web users are more likely to notice. Research has shown that message association and awareness building are much higher for flash-based ads, rich-media ads and larger-format rectangles (multipurpose units, MPUs) and skyscrapers. Specific ad formats are available within the social networks,

for example Facebook Engagement Ads, Twitter Promoted Tweets and YouTube Promoted videos.

Other online ad terms you will hear include ‘**interstitials**’ (intermediate adverts before another page appears); the more common ‘**overlays**’, which appear above content; and of course pop-up windows that are now less widely used because of their intrusion. Online advertisers face a constant battle with users who deploy pop-up blockers or, less commonly, ad-blocking software, but they will persist in using rich-media formats where they generate the largest response.

Robinson *et al.* (2007) conducted research on the factors that increased clickthrough response to banner ads. The main variables they (and previous studies they reference) include are:

- banner size;
- message length;
- promotional incentive;
- animation;
- action phrase (commonly referred to as a call to action);
- company brand/logo.

Cross-media optimisation studies (XMOS)

Studies to determine the optimum spend across different media to produce the best results.

Media planning - deciding on the online/offline mix for advertising

This decision is typically taken by the media planner. The mix between online and offline spend should reflect consumers’ media consumption and the cost-response effectiveness of each medium. But, depending on the agency used, they may play it safe by putting the ad spend into what they are familiar with and what may be most rewarding in terms of commission - offline media. Many **cross-media optimisation studies (XMOS)** have shown that the optimal online spend for low-involvement products is surprisingly high at 10-15% of total spend. Although this is not a large amount, it compares to previous spend levels below 1% for many organisations.

XMOS research is designed to help marketers and their agencies answer the (rather involved) question, ‘What is the optimal mix of advertising vehicles across different media, in terms of frequency, reach and budget allocation, for a given campaign to achieve its marketing goals?’.

The mix between online and offline spend is varied to maximise campaign metrics such as reach, brand awareness and purchase intent. For example, Dove found that increasing the level of digital advertising to 15% would have resulted in an increase in overall branding metrics of 8%. The proportion of online is small, but remember that many companies are spending less than 1% of their ad budgets online, meaning that offline frequency is too high and they may not be reaching many consumers.

The reasons for using and increasing the significance of online in the media mix are similar to those for using any media mix, as described by Sissors and Baron (2002):

- To extend reach (adding prospects not exposed by a single medium or other media).
- To flatten frequency distribution (if audience viewing TV ads is exposed too many times, there is a law of diminishing returns and it may be better to reallocate that budget to other media).
- To reach different kinds of audiences.
- To provide unique advantages in stressing different benefits based on the different characteristics of each medium.
- To allow different creative executions to be implemented.
- To add gross impressions if the other media are cost-efficient.
- To reinforce message by using different creative stimuli.

All of these factors, and the first three in particular, provide the explanation of why XMOS shows it is worthwhile to put double-digit percentages into online media.

Recently, there has been a large growth in programmatic advertising, which accounts for nearly 80% of US display spending; predictions are that programmatic ad spend will reach over \$45 billion by 2019 (Adweek, 2017). Programmatic advertising is defined by the Display Trading Council as:

the use of automation in buying and selling of media, programmatic can apply to anything from display to digital-out-of-home and television.

Basically, brands or agencies can use a demand-side platform (DSP) to decide which impressions to buy and how much to pay for them, while publishers can use a supply-side platform (SSP) to sell ad space to brands. These two platforms are then matched up in realtime. The main benefit of programmatic advertising is efficiency - before automating this process, digital ads were bought and sold by human advertising buyers and salespeople, who can be expensive and unreliable. Also, the more data companies have, the more personalised the ads can become, which brings

brands closer to the holy grail of ‘targeting the right person, at the right time, with the right message’.

However, there is still a transparency issue with programmatic - for example, a *Times* newspaper investigation in February 2017 found that brands including Waitrose, Marie Curie and Mercedes-Benz were unknowingly appearing on hate sites next to YouTube videos created by supporters of terrorist groups, including so-called Islamic State. However, it is worth noting that brand reputation management has always been a part of advertising. Even in traditional media, there have been issues of ads appearing next to content that might not be in keeping with a brand’s positioning or may not work contextually (i.e. an airline advert next to a story about a plane crash). The other main issue with programmatic has already been discussed earlier in this chapter - the problem of ad fraud.

Outbound email marketing

Emails are sent to customers and prospects from an organisation.

Inbound email marketing

Management of emails from customers by an organisation.

5 Email marketing

When devising plans for email marketing communications, marketers need to plan for:

- **outbound email marketing**, where email campaigns are used as a form of direct marketing to encourage trial and purchases and as part of a CRM dialogue;
- **inbound email marketing**, where emails from customers such as support enquiries are managed. These are often managed today in conjunction with chat and co-browsing sessions.

Despite the increase in spam such that the vast majority of emails are spam or viruses (most estimates exceed 80%), email can still drive good response levels; this is particularly the case with in-house lists, so email communications to customers through e-newsletters or periodic email blasts are today a vital communications technique for companies. The main measures for evaluating email marketing are:

- *Delivery rate* - this excludes email ‘bounces’ - emails will bounce if the email address is no longer valid or a spam filter blocks the email. So, online marketers check their ‘deliv-erability’ to make sure their messages are not identified as ‘false positives’ by spam prevention software. Web-based email providers such as Hotmail and Yahoo! Mail have introduced

standard authentication techniques known as Sender ID and Domain Keys, which make sure the email broadcaster is who they say they are and doesn't spoof their address as many spammers do.

- *Open rate* - this is measured for HTML messages through downloaded images. It is an indication of how many customers open an email, but is not accurate since some users have preview panes in their email readers that load the message even if it is deleted without reading, and some email readers such as Outlook Express now block images by default (this has resulted in a decline in open rates through time).
- *Clickthrough rate* - this is the number of people who click through on the email of those delivered (strictly unique clicks rather than total clicks).
You can see that response rates are quite high at around 10%.

Mini case study 8.4 shows the importance of using personalised email targeting to build a database by acquiring new subscribers and to help turn event visitors into brand advocates and year-round loyalists.

Malibutique event

8.4

Malibu's targeted eCRM strategy for its

Drinks brand Malibu wanted to build a large, active eCRM database with customer preferences built around its experiential pop-up event, the Malibutique. The objective was to turn visitors to the boutique into brand advocates and year-round loyalists. Via personalised email targeting, based on real-time data, Malibu was able to grow its database by 31,000 new subscribers over a five-month period. Its email open rates rocketed and, specifically, personalised post-event emails generated a 68% open rate, far exceeding the industry average.

Objectives and aims

Malibu needed a digital strategy to support and promote its four-day pop-up boutique event, the Malibutique, via email and social channels. It wanted to build a large, active CRM database with customer preferences, while turning visitors to the boutique into brand advocates and year-round loyalists. Success was measured against five core objectives:

- 1 increase the size of the Malibu email database from 9,000 subscribers to 20,000 engaged subscribers;

- 2 create an owned database to future-proof the brand against potential legislation to stop above-the-line (ATL) advertising;
- 3 build a captive audience for new Malibu products, and have the capability to gather audience insights to help inform overall media strategies;
- 4 amplify the promotion of the event across its four locations and strengthen the content to ensure that continuing partnerships were developed after the event;
- 5 ensure each consumer had a personalised journey from start to finish, ensuring the highest levels of engagement possible.

Implementation, execution and tactics

Malibu developed a bespoke, eCRM system that included APIs and personalised email coding within Smart-Focus' email HTML templates.

Prior to the event, Malibu used existing data to send invites and amplify awareness of Malibutique's return. It turned the Malibutique app into a recruitment system by making it the ticket for entry. It would also act as a barcode scanner that would provide each member of the audience with freebies.



Figure 8.21

Jessica Wright launches Malibutique

Source: Tony Woolliscroft/WireImage/Getty Images

By logging each attendee's experience against an email address, Malibu was able to assign them to a unique database and record their preferences. Attendees were encouraged to log each stage of their journey through the app and this information was fed directly into Malibu's email database, in real-time, and appended to the addresses. An email was instantly sent to those who completed each step, rewarding them with a voucher.

Malibu boosted open rates throughout the campaign by testing and refining subject lines and delivery times.

Results

- As a result of the Malibutique and eCRM activity, there has been a 416% growth in the Malibu email database with engagement levels above industry average for this sector.
- Beginning at only 9,000 subscribers, the Malibu database grew to just under 40,000 (over a five-month period).
- Ongoing monthly newsletters now achieve consistent open rates of at least 30% (8.5% above benchmarks) and clickthrough rates of 35% (21% above benchmarks) and above. The unsubscribe rate average is 0.2% (2.1% below industry benchmarks).
- Personalised post-event emails generated a 68% open rate (46.5% above industry benchmarks).
- Event partners, including ASOS, Toni&Guy and Nails inc pedicure, reported between 5% and 10% redemption rates from those that had received the post-event emails.
- The email promoting a cocktail voucher had an overall open rate of 71% with high redemption levels.

Source: Econsultancy Case Study <https://econsultancy.com/case-studies/malibu-s-targeted-ecrm-strategy-for-its-malibutique-event-generates-31-000-new-email-subscribers>

House list

A list of prospect and customer names, email addresses and profile information owned by an organisation.

Social media marketing

Monitoring and facilitating customer-customer interaction and participation throughout the web to encourage positive engagement with a company and its brands. Interactions may occur on a company site, social networks and other third-party sites.

Opt-in email options for customer acquisition

For acquiring new visitors and customers to a site, there are three main options for email marketing. From the point of view of the recipient, these are:

- 1 Cold email campaign.** In this case, the recipient receives an opt-in email from an organisation that has rented an email list from a consumer or a business email list provider. Although they have agreed to receive offers by email, the email is effectively cold.
- 2 Co-branded email.** Here, the recipient receives an email with an offer from a company they have a reasonably strong affinity with. For example, a credit card company could partner with a mobile service provider such as Vodafone and send out the offer to their customer (who has opted-in to receive emails from third parties). Although this can be considered a form of cold email, it is warmer since there is a stronger relationship with one of the brands and the subject line and creative will refer to both brands.
- 3 Third-party e-newsletter.** In this visitor acquisition option, a company publicises itself in a third-party e-newsletter. This could be in the form of an ad, sponsorship or PR (editorial) that links through to a destination site. These placements may be set up as part of an interactive advertising ad buy, since many e-newsletters also have permanent versions on the website. Since e-newsletter recipients tend to engage with them by scanning the headlines or reading them if they have time, e-newsletter placements can be relatively cost-effective.

Viral marketing, which is discussed in the next section, also uses email as the mechanism for transferring messages. Email is most widely used as a prospect conversion and customer retention tool using an opt-in or **house list** of prospects and customers who have given permission to an organisation to contact them. For example, Lastminute.com has built a house list of over 10 million prospects and customers across Europe. Successful email marketers adopt a strategic approach to email and develop a contact or touch strategy that plans the frequency and content of email communications (as explained in Chapters 4 and 6). For customer retention, a house list is built where email is used to communicate to existing customers.

6 Social media marketing

Social media marketing, covered in the ‘Focus on’ section earlier in this chapter, can often be assisted through viral marketing approaches that harness the network effect of the Internet and can be effective in reaching a large number of people rapidly in the same way as a natural virus or a computer virus. It is effectively an online form of word-of-mouth communications. Smith and Chaffey (2005) say, ideally, viral marketing is a clever idea, a game, a shocking idea, or a highly informative idea that makes compulsive viewing. It can be a video clip, TV ad, cartoon, funny picture, poem, song,

political message, or news item. It is so amazing, it makes people want to pass it on. This is a challenge for commercial companies since, to be successful, it will need to challenge convention and this may not fit well with the brand.

There are generally three types of product virality, of which word-of-mouth is one type (these are covered further in the ‘growth hacking’ section of Chapter 10).

To make a viral campaign effective, Justin Kirby of viral marketing specialists DMC (www.dmc.co.uk) suggests that three things are needed (Kirby, 2003):

- 1 Creative material - the ‘viral agent’.** This includes the creative message or offer and how it is spread (text, image, video).
- 2 Seeding.** Identifying websites, blogs or people to send the email to start the virus spreading.
- 3 Tracking.** To monitor the effect and assess the return from the cost of developing the viral agent and seeding.

With the widespread adoption of high-speed broadband in many countries, rich media experiences are increasingly used to engage customers with the hope they will have a ‘viral effect’, i.e. they will be discussed online or offline and more people will become aware of or interact with the brand campaign.

Offline marketing communications

Offline communications will never disappear - they are effective at reaching an audience to encourage them to visit a site, but are also useful as a way of having an impact or explaining a complex proposition, as Mini case study 8.5 shows.

Table 8.1 gives a summary of the strengths and weaknesses of the digital media channels discussed in this chapter (numbers reference the different boxes in Figure 1.8).

Herper Collins integrated online and offline activity for greater impact



Figure 8.22

Hercule Poirot has a new case

Source: Everett Collection Inc./Alamy Stock Photo

The Monogram Murders was the first Poirot novel to be published in 39 years, so Harper Collins teamed up with an integrated communications agency to make sure the launch got the necessary amount of attention.

The campaign involved bringing to life the fictional hotel from the book via a combination of digital and immersive theatre, including developing a hotel brand, creating a dedicated website, social media channels, digital partnerships and e-newsletters.

The Bloxham Hotel from the novel was recreated and opened as a popup event on the night before the launch date. Brand partners such as Secret Escapes and Trivago promoted the fictional hotel on their sites, along with a number of other key influencers across social media.

The results:

- The hashtag #MonogramMurders had a reach of over 569,000.

- Brand tweets in the month of the announcement had over 49,900 impressions.
- The Bloxham Hotel Facebook page had a peak of engagement in the run up to the Poirot reveal of 138,200 total organic reach.
- There were 1086 Subscribers in total to the e-newsletter gathered through the Bloxham website.

Source: <https://econsultancy.com/six-case-studies-proving-the-effectiveness-of-multichannel-marketing/>

Table 8.1

Summary of the strengths and weaknesses of different communications channels for promoting an online presence

Promotion technique	Main strengths	Main weaknesses
1a Search engine optimisation (SEO)	Highly targeted, relatively low cost of PPC. High traffic volumes if effective. Considered credible by searchers	Intense competition, may compromise look of site. Complexity of changes to ranking algorithm
1b Pay-per-click (PPC) marketing	Highly targeted with controlled cost of acquisition. Extend reach through content network	Relatively costly in competitive sectors and low volume compared with SEO
1c Trusted feed	Update readily to reflect changes in product lines and prices	Relatively costly, mainly relevant for e-retailers
2 Digital PR	Relatively low cost and good targeting. Can assist with SEO through creation of backlinks	Identifying online influencers and setting up partnerships can be time-consuming. Need to

		monitor comments on third-party sites
3a Affiliate marketing	Payment is by results (e.g. 10% of sale or leads goes to referring site)	Costs of payments to affiliate networks for set-up and management fees. Changes to ranking algorithm may affect volume from affiliates
3b Online sponsorship	Most effective if low-cost, long-term co-branding arrangement with synergistic site	May increase awareness, but does not necessarily lead directly to sales
4 Interactive advertising	Main intention to achieve visit, i.e. direct-response model. But also role in branding through media multiplier effect	Response rates have declined historically because of banner blindness
5 Email marketing	Push medium - can't be ignored in user's inbox. Can be used for direct-response link to website. Integrates as a response mechanism with direct mail	Requires opt-in for effectiveness. Better for customer retention than for acquisition? Inbox cut-through - message diluted among other emails. Limits on deliverability
6 Social media and viral marketing	With effective viral agent possible to reach a large number at relatively low cost. Influencers in social networks significant	Difficult to create powerful viral concepts and control targeting. Risks damaging brand since unsolicited messages may be received
Traditional offline advertising (TV, print, etc.)	Larger reach than most online techniques. Greater creativity possible, leading to greater impact	Targeting arguably less easy than online. Typically high cost of acquisition

Customer retention management

For an e-commerce site, customer retention has two distinct goals:

- 1 to retain customers of the organisation (repeat customers);
- 2 to keep customers using the online channel (repeat visits).

These are similar to the two aims of customer acquisition as described in a previous section. Ideally, marketing communications should address both aims.

Maintaining online customer relationships is difficult. Laurie Windham (2001) says:

That's what's so scary about customer retention in the online space. We've created this empowered, impatient customer who has a short attention span, a lot of choices, and a low barrier to switching.

To create long-term online customer relationships that build on acquisition, to retain and extend, we need to analyse the drivers of satisfaction among these online customers, since satisfaction drives loyalty and loyalty drives profitability. The relationship is shown in Figure 8.23. The objective of marketers is to drive customers up the curve towards the zone of affection. However, it is worth remembering that the majority are not in that zone, and to achieve retention marketers must understand why customers defect or are indifferent.

It follows from Figure 8.23 that we need to understand different factors that affect loyalty. The type of approach that can be taken is highlighted by Reichheld and Schefter (2000). They reported that Dell Computer has created a customer experience council that has researched key loyalty drivers, identified measures to track these and put in place an action plan to improve loyalty (Table 8.2).

Since quality of service is so crucial in determining satisfaction and loyalty, see the 'Focus on Excelling in e-commerce service quality' section later in this chapter.

Now let us consider key digital marketing tools that help retain customers. Repeat visits can be generated by a variety of means and brainstorming sessions can help generate these. Often it may simply be the expedient of regularly updated market and product or technical information that helps customers perform their day-to-day work. Such information can be delivered through extranets such as Dell Premier or through personalisation services

such as that described for RS Components. Information to help people perform their work is the proposition of the vertical portals such as industry-specific sites. Online communities are popular for both consumer and business markets since users can discuss topical issues or ask for answers to their queries. For example, the UK Net Marketing Group at www.chinwag.com discusses the benefits of new technologies such as mobile commerce and recommends suppliers of Internet services. Many such communities work because they are independent of suppliers, so it may be difficult to introduce these types of facilities on to a corporate site. Finally, traditional sales promotion techniques translate well to the Internet. RS Components uses 'Spotlights' to highlight particular items and offer competitions and prize draws to encourage repeat visits. These are often publicised in offline mail-outs to encourage repeat visits.

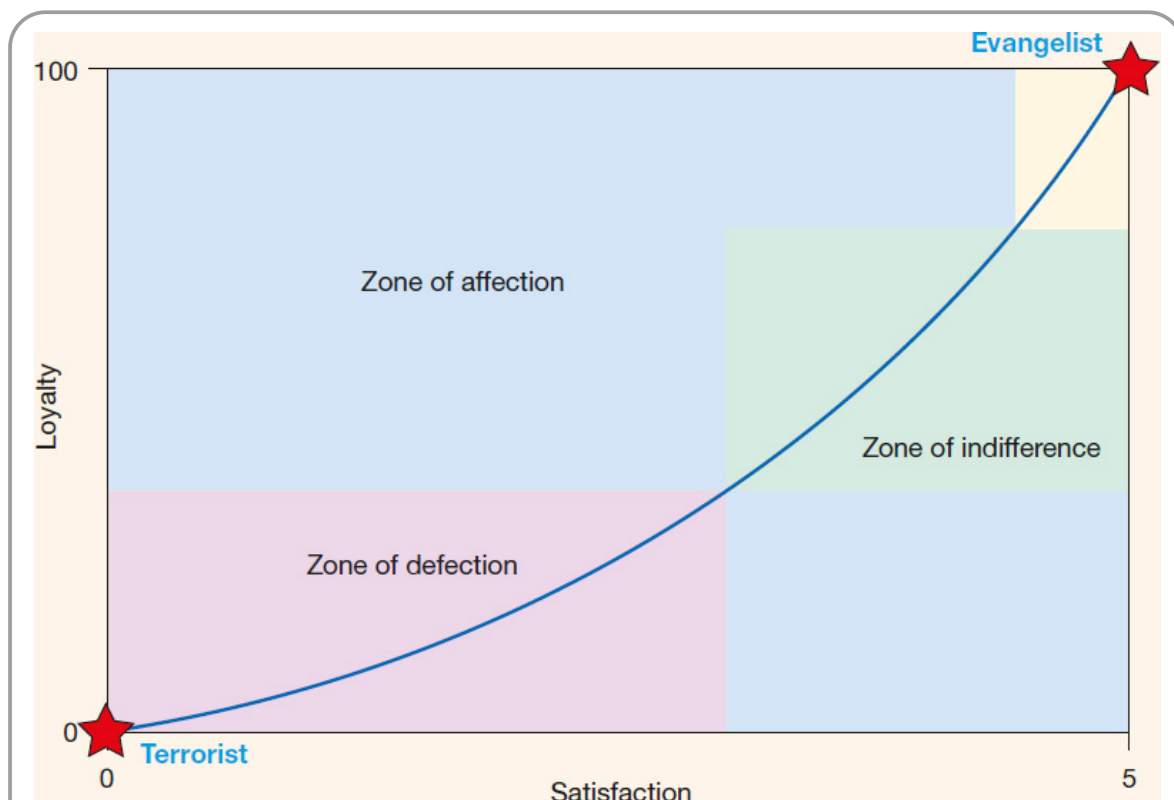


Figure 8.23

Schematic of the relationship between satisfaction and loyalty

Source: Adapted and reprinted by permission of *Harvard Business Review*, from graph on p. 167 from 'Putting the service-profit chain to work,' by Heskett, J., Jones, T., Loveman, G., Sasser, W. and Schlesinger, E., in *Harvard Business Review*, March-April 1994.

Table 8.2

Relationship between loyalty drivers and measures to assess their success at Dell Computer

Loyalty drivers	Summary metric
1 Order fulfilment	Ship to target. Percentage that ship on time exactly as the customer specified
2 Product performance	Initial field incident rate - the frequency of problems experienced by customers
3 Post-sale service and support	On-time, first-time fix - the percentage of problems fixed on the first visit by a service rep who arrives at the time promised

Source: Adapted and reprinted by permission of *Harvard Business Review* from information on pp. 105-13 from 'Your secret weapon on the web', by Reichheld, F. and Schefter, P., in *Harvard Business Review*, July-August 2000. Copyright © 2000 by the Harvard Business School Publishing Corporation, all rights reserved.

Personalisation and mass customisation

Personalisation

Delivering individualised content through web pages or email.

Mass customisation

Delivering customised content to groups of users through web pages or email.

Collaborative filtering

Profiling of customer interest coupled with delivery of specific information and offers, often based on the interests of similar customers.

The potential power of personalisation is suggested by these quotes from Evans *et al.* (2000) that show the negative effects of lack of targeting of traditional direct mail:

Don't like unsolicited mail... haven't asked for it and I'm not interested.

(Female, 25-34)

Most isn't wanted, it's not relevant and just clutters up the table... you have to sort through it to get to the 'real mail'.

(Male, 45-54)

It's annoying to be sent things that you are not interested in. Even more annoying when they phone you up... If you wanted something you would go and find out about it.

(Female, 45-54)

Personalisation and mass customisation can be used to tailor information and opt-in email can be used to deliver it to add value and at the same time remind the customer about a product. 'Personalisation' and 'mass customisation' are terms that are often used interchangeably. In the strict sense, personalisation refers to customisation of information requested by a site customer at an *individual* level. **Mass customisation** involves providing tailored content to a *group* with similar interests. This approach is sometimes also referred to as '**collaborative filtering**'.

All these personalisation techniques take advantage of the dynamic possibilities of web content. Users' preferences are stored in databases and content is taken from a database. Personalisation can be achieved through several dynamic variables including:

- the customers' preferences;
- the date or time;
- particular events;
- the location.

Personalisation can also be used to offer innovative services. Online book-making service The Book of Everyone (www.thebookofeveryone.com) allows customers to customise a 50-page book with personalised facts and curiosities about the world on the day they were born - e.g. how much a garden gnome cost back in their day.

A more typical personalisation service is that provided by portals such as Google and MSN. These enable users to configure their home page so that it

delivers the information they are most interested in: perhaps their regional weather, the results from their soccer team and the prices of shares they have purchased.

Turning to negative aspects of personalisation, there are two chief difficulties. First, cost, for the reasons explained in the next section and, second, it may act as a barrier to users. For example, some personalisation requires the user to log in. This may be a problem if a customer has mislaid a password. Equally, for a new visitor to the site the need to apply a password can be offputting and a customer may disappear, never to return. Effective personalisation will still enable a new visitor to view a good deal of content even if they do not give a password. Use of *cookies* can avoid the need for the customer to actively log in, with this occurring automatically.

Creating personalisation

Generally, there are four categories of personalisation services:

1 Personalisation integration with web analytics

Automated personalisation via analytics data enables companies to deliver personalised content to website visitors based on past, current and changing interests. There are three main services available for this:

- **Adobe Target** (www.adobe.com/uk/marketing-cloud/target/automated-personalization.html) - one of the most established personalisation engines, which is integrated into the Omniture analytics suite as Test and Target.
- **IBM product recommendations** (www-03.ibm.com/software/products/en/personalized-product-recommendations) - Coremetrics Intelligent Offer was widely used by retailers for analytics, but since acquisition by IBM has been offered as a separate product.
- **Google Optimize 360** (www.google.com/analytics/optimize) - Optimize is available free as AB Testing to all Google Analytics users, with some personalisation features, but the full version of this personalisation option is only available to enterprise subscribers currently.

2 Personalisation software as a service (SaaS) for e-commerce

The second category is specifically for e-commerce merchandising, giving automated product placements using aggregated behavioural data ('those that viewed this, also viewed that') and personal recommendations ('you previously bought this and might like that'). Options include:

- Apptus (www.apptus.com)
- Barilliance (www.barilliance.com/website-personalization)
- Bunting (<http://bunting.com>)
- Dynamic Yield (www.dynamicyield.com)
- Emarsys (www.emarsys.com/en-uk/products/true-personalization)
- Monetate Intelligent Personalisation Engine (www.monetate.com/products/1-to-1-personalization)
- Omniconvert (www.omniconvert.com)
- Personyze (www.personyze.com)
- Optimizely personalisation (www.optimizely.com/products/personalization)
- Pure360 (www.pure360.com/ecommerce-solution)
- Pureclarity (www.pureclarity.com)
- Rich Relevance (www.richrelevance.com)
- Qubit (www.qubit.com)
- Yusp (www.yusp.com)

3 Personalisation features available as part of CMS or commerce management systems

Some content management systems (CMS) have in-built tools to personalise content based on various rules, such as geo-location, search terms, referrers, lead scores and personalisation based on user behaviour and profiles. These include platforms such as Episerver (www.episerver.com), Sitecore (www.sitecore.net) and Kentico (www.kentico.com).

Open-source e-commerce solution Magento also offers personalisation extensions such as 'product personalisation' and 'commerce stack'.

4 B2B, marketing automation and publisher website personalisation tools

There is a wide range of options for serving personalisation for content marketing in different placements on a site. Other alternatives for B2B personalisation or non-retail consumer personalisation are:

- Evergage (www.evergage.com) - recommended as a tool that fits best in this category;
- BrightInfo (www.brightinfo.com) a cost-effective option;
- Idio (www.idioplatform.com/solutions-overview) - an enterprise solution;
- Ion Interactive (www.ioninteractive.com/interactive-content-capabilities) - another enterprise solution;
- Sitespect (www.sitespect.com/personalization-targeting) - an intermediate-level platform.

Mini case study 8.6 shows how implementation of personalisation can result in more relevant messages and improved response rates.

Extranets

Extranets were introduced in Chapter 3. Since they require a user to log in, they signify differential services through premium content and services. Many options are possible. A dynamic example of using an extranet is the use of the web to host online events that mirror traditional events such as seminars, trade shows and user group conferences, virtual seminars with a guest speaker by webcast and virtual trade shows where exhibitors, seminar speakers and delegates are linked by the web. Dell Computer has a special brand variant known as Dell Premier that can be used to provide value-added services for key accounts. Other traditional retention methods such as loyalty schemes and sales promotions translate well to the digital environment.

The use of extranets presents a barrier to entry, particularly if users lose their passwords. To limit this effect, RS Components sends out password reminders to help retention. A Dutch insurer combined online and offline techniques to use an extranet to deliver mass customisation. Existing customers were divided into six segments and then contacted through a direct mail campaign. Members of each segment were given one of six passwords, so that when they accessed the extranet there were six different versions of content for the website giving product suggestions and offers consistent with the segment. Extranets provide good traceability of marketing outcomes and tagging of visitors. In this case, the effectiveness of the campaign in terms of response rate from the email and conversion to sales could also be monitored for different segments.

Study 8.6

propositions

HSBC uses personalisation to deliver tailored

When HSBC Bank International (HBIB) refined its website it wanted to use personalisation with the goal of delivering specific offers and servicing to different customer segments and encouraging customers to move into more valuable segments. This would enable it to capitalise on sales opportunities that would otherwise be missed. *New Media Age* (2007) reported that this was a challenge, since ‘60% of total weekly visitors to offshore.hsbc.com log on to the internet banking service, HSBC wanted to market to them effectively while they were engaged in this task, disrupting their banking experience without infuriating them’. Business rules were created to serve promotions dependent on the type of content accessed and the level of balance in the customer’s account.

HSBC was successful in meeting its goals and the results show the benefit of personalised, targeted banners. On average, *New Media Age* (2007) reported that the new banners had an 87.5% higher clickthrough rate than non-personalised banners (6.88% versus 3.67%). The number of savings accounts opened via Internet banking increased by 30% (based on six months pre- and post-launch). And the number of non-Premier customers upgrading to Premier accounts (requiring a balance of £60,000 or more) increased by 86% (based on four weeks pre- and post-launch of the targeted banners).

Spam

Unsolicited email (usually bulk-mailed and untargeted).

Opt-in email

Opt-in email is vital in communicating the retention offers either through regular email communications such as a newsletter or higher-impact irregular email communications such as details of a product launch. Remember that email has the power of traditional push communication. It enables a targeted message to be pushed out to a customer to inform and remind and they are certain to view it within their email inbox; even if it is only deleted, it cannot be ignored.

Despite its potential, use of email for marketing has negative connotations due to **spam** and privacy concerns (as discussed in Chapter 3), so it’s essential that email marketing is permission-based.

Once an email address has been collected, managers must plan the frequency of email communications. Options include:

- *Regular newsletter type.* For example, once a day, once a week, once a month. It is best if customers are given choice about the frequency.
- *Event-related.* These tend to be less regular and are sent out perhaps every three or six months when there is news of a new product launch or an exceptional offer.
- *Email sequence.* Software can be purchased to send out a series of emails. For example, after subscription to a trial version of an online magazine, emails will be sent out at 3, 10, 25 and 28 days to encourage a subscription before the trial lapses.

Techniques for managing customer activity and value

Within the online customer base of an organisation, there will be customers who have different levels of activity in usage of online services or in sales. A good example is a bank -some customers may use the online account once a week, others far less frequently and some not at all. Figure 8.24 illustrates the different levels of activity.

To improve the adoption of ‘digital self-service’, which helps reduce costs, it is important to define measures that indicate activity levels and then develop tactics to increase activity levels through more frequent use. Objectives and corresponding tactics can be set for:

- Increasing number of *new users* per month and annually (separate objectives will be set for existing bank customers and new bank customers) through promoting online services to drive visitors to the website.
- Increasing % of *active users* (an appropriate threshold can be used - for some other organisations it could be set at 7, 30 or 90 days). Using direct communications such as email, personalised website messages, direct mail and phone communications to new, dormant and inactive users increases the percentage of active users.
- Decreasing % of *dormant users* (were once new or active, could be sub-categories), but have not used within a time period to be classified as active.
- Decreasing % of *inactive users* (or non-activated) users. These are those who signed up for a service such as online banking and username was issued, but they have not used the service.

You can see that corresponding strategies can be developed for each of these strategies. Interestingly, at the time of updating this chapter, Royal Bank of Scotland (RBS) and Nat-West announced the closure of 259 branches because many customers have embraced electronic payments and digital/mobile banking!

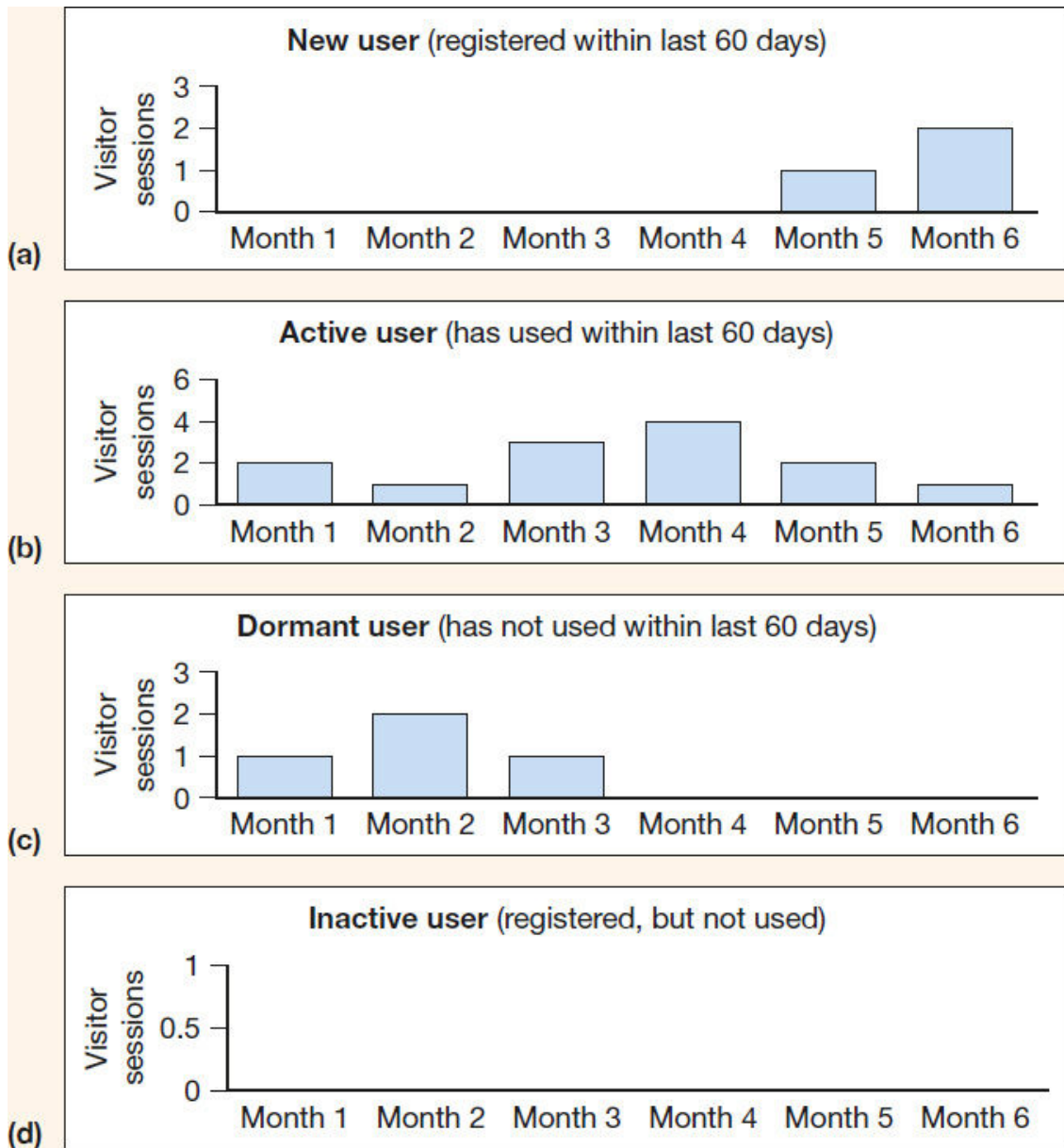


Figure 8.24

Activity segmentation of a site requiring registration

Another key metric, in fact the key retention metric for e-commerce sites, refers to repeat business. The importance of retention rate metrics was highlighted by Agrawal *et al.* (2001). The main retention metrics they mention and show the impact on profitability are:

- *Repeat-customer conversion rate* - how many first-time customers purchase a second product?
- *Repeat-customer base* - the proportion of the customer base who have made repeat purchases.
- *Number of transactions per repeat customer* - this indicates the stage of development of the customer in the relationship (another similar measure is number of product categories purchased).
- *Revenue per transaction of repeat customer* - this is a proxy for lifetime value since it gives average order value.

Lifetime value (LTV)

Lifetime value is the total net benefit that a customer or group of customers will provide a company over their total relationship with the company.

Lifetime-value modelling

An appreciation of **lifetime value (LTV)** is also key to the theory and practice of customer relationship management. However, while the term is often used, calculation of LTV is not straightforward, so many organisations do not calculate it. Lifetime value is defined as the total net benefit that a customer or group of customers will provide a company over their total relationship with that company. Modelling is based on estimating the income and costs associated with each customer over a period of time and then calculating the net present value in current monetary terms using a discount rate value applied over the period.

There are different degrees of sophistication in calculating LTV. These are indicated in Figure 8.25. Option 1 is a practical way or approximate proxy for future LTV, but the true LTV is the future value of the customer at an individual level. Lifetime-value modelling at a segment level (4) is vital within marketing since it answers the question:

How much can I afford to invest in acquiring a new customer?

Lifetime-value analysis enables marketers to:

- plan and measure investment in customer acquisition programmes;
- identify and compare critical target segments;

- measure the effectiveness of alternative customer retention strategies;
- establish the true value of a company's customer base;
- make decisions about products and offers;
- make decisions about the value of introducing new eCRM technologies.

Figure 8.26 gives an example of how LTV can be used to develop a CRM strategy for different customer groups. Four main types of customers are indicated by their current and future value as bronze, silver, gold and platinum. Distinct customer groupings (circles) are identified according to their current value (as indicated by current profitability) and future value as indicated by lifetime-value calculations. Each of these groups will have a customer profile signature based on their demographics, so this can be used for customer selection. Different strategies are developed for different customer groups within the four main value groupings. Some bronze customers such as Groups A and B realistically do not have development potential and are typically unprofitable, so the aim is to reduce costs in communications and if they do not remain as customers, this is acceptable. Some bronze customers such as Group C may have potential for growth, so for these the strategy is to extend their purchases. Silver customers are targeted with customer extension offers and gold customers are extended where possible, although these have relatively little growth potential. Platinum customers are the best customers, so it is important to understand the communication preferences of these customers and not to over-communicate, unless there is evidence that they may defect.

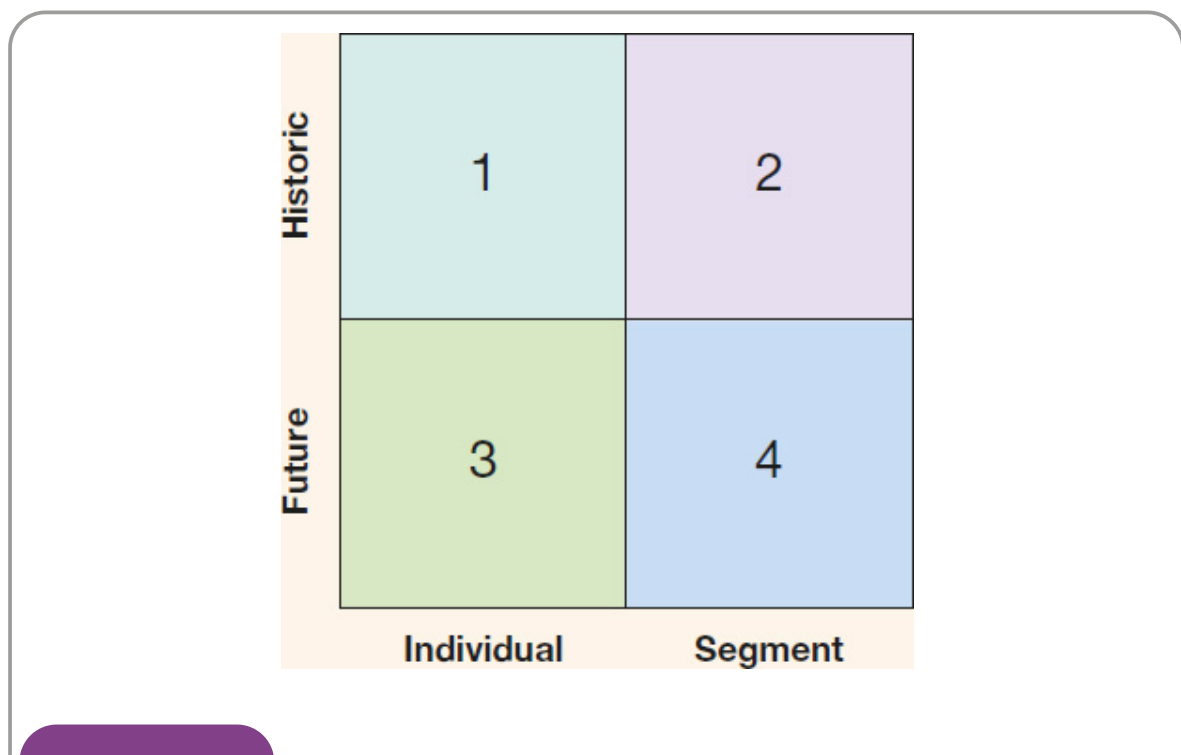


Figure 8.25

Different representations of lifetime-value calculation

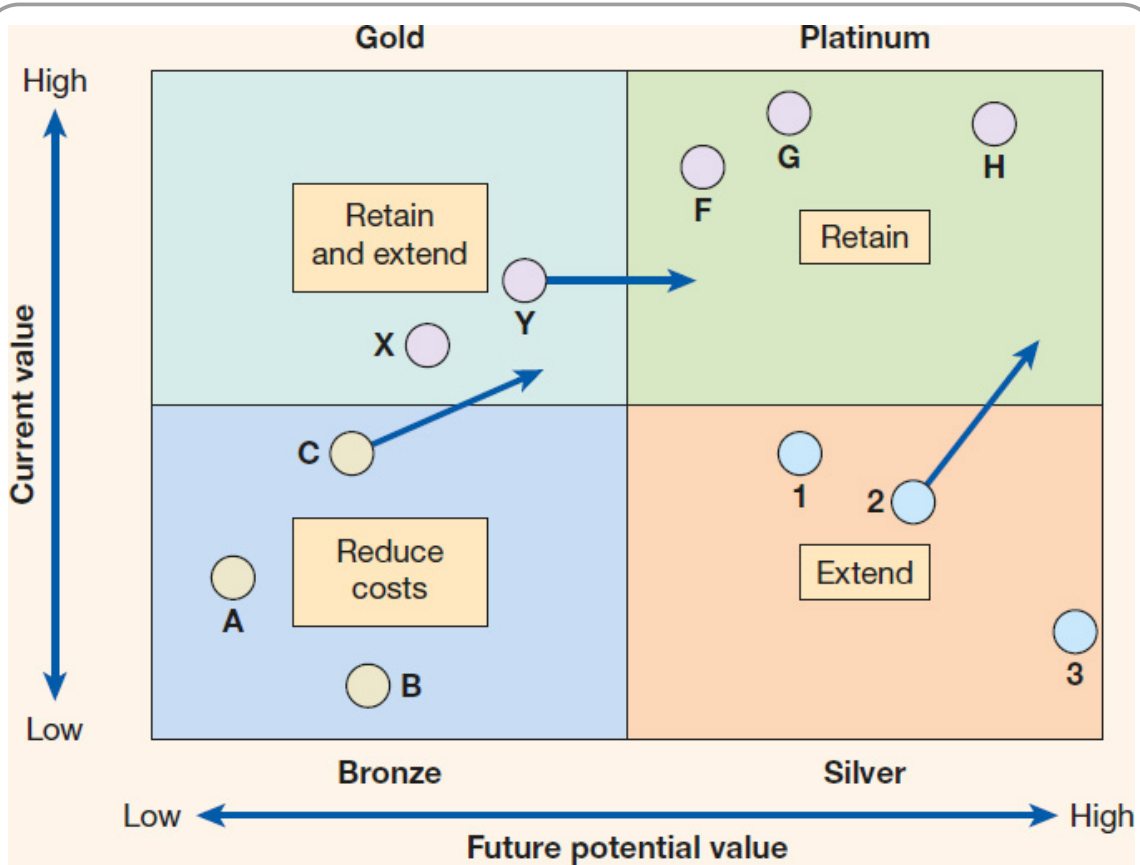


Figure 8.26

An example of an LTV-based segmentation plan

Focus on Excelling in e-commerce service quality

In the virtual world customer service is a key difference between brands. Jevons and Gabbot (2000) explain: ‘the first-hand experience of the brand is a more powerful token of trust than the perception of the brand’.

Research across industry sectors suggests that the quality of service is a key determinant of loyalty. Feinberg *et al.* (2000) report that if reasons why customers leave a company are considered, over 68% leave because of ‘poor service experience’, with other factors such as price (10%) and product issues (17%) less significant.

As we saw in Chapter 5, Zappos has built a billion-dollar business around excellent customer service (see Case study 5.3).

Improving online service quality

Delivering service quality in e-commerce can be assessed through reviewing existing frameworks for determining levels of service quality. Those most frequently used are based on the concept of a ‘service-quality gap’ that exists between the customers’ *expected* level of service (from previous experience and word-of-mouth communication) and their perception of the *actual* level of service delivery.

Parasuraman *et al.* (1985) suggested that these dimensions of service quality on which consumers judge expected and delivered service-quality levels are:

- tangibles - the physical appearance and visual appeal of facilities;
- reliability - the ability to perform the service consistently and accurately;
- responsiveness - a willingness to help customers and provide prompt service;
- assurance - the knowledge and courtesy of employees and their ability to convey trust and confidence;
- empathy - providing caring, individualised attention.

Note that there has been heated dispute about the validity of this SERVQUAL instrument framework (Parasuraman *et al.*, 1985) in determining service quality; see for example Cronin and Taylor (1992). Despite this, it is still instructive to apply these dimensions of service quality to customer service on the web. We will now review each dimension of SERVQUAL.

Tangibles

It can be suggested that the tangibles dimension is influenced by ease of use and visual appeal based on the structural and graphic design of the site. The importance of these factors to consumers is indicated by a 1999 study by Forrester Research of 8,600 US consumers that found that the main reasons for returning to a site were high-quality content (75%), ease of use (66%), speed to download (58%) and frequency of update (54%); these were the most important aspects of website quality mentioned.

Reliability

The reliability dimension is dependent on the availability of the website or, in other words, how easy it is to connect to the website as a user.

Reliability of email response is also a key issue; Chaffey and Edgar (2000) report on a survey of 361 UK websites across different sectors. Of those in the sample, 331 (or 92%) were accessible at the time of the survey and, of these, 299 provided an email contact point. Email enquiries were sent to all of these 299 websites; of these, 9 undeliverable mail messages were received. It can be seen that at the time of the survey, service availability was certainly not universal.

Responsiveness

The same survey showed that responsiveness was poor overall: of the 290 successfully delivered emails, a 62% response rate occurred within a 28-day period. For over a third of companies there was zero response!

Of the companies that did respond, there was a difference in response time (excluding immediately delivered automated responses) from 8 minutes to over 19 working days! While the mean overall was 2 working days, 5 hours and 11 minutes, the median across all sectors (on the basis of the fastest 50% of responses received) was 1 working day and 34 minutes. The median result suggests that response within one working day represents best practice and could form the basis for consumer expectations.

Responsiveness is also indicated by the performance of the website - the time it takes for a page request to be delivered to the user's browser as a page impression. Since there is a wide variability in the delivery of information and hence service quality from web servers hosted at ISPs, companies should be careful to monitor this and specify levels of quality with suppliers in service level agreements (SLAs). Zona Research (1999) conducted an analysis that suggests that \$4.35 billion may be lost in e-commerce revenues due to customer 'bailout', when customers are unwilling to wait for information to

download. The report notes that many customers may not be prepared to wait longer than eight seconds!

Effective fulfilment is also an essential part of responsiveness (as explained in Chapter 7).

Assurance

In an email context, assurance can best be considered as the quality of response. In the survey reported by Chaffey and Edgar (2000), of 180 responses received, 91% delivered a personalised human response with 9% delivering an automated response that did not address the individual enquiry; 40% of responses answered or referred to all three questions, with 10% answering two questions and 22% one. Overall, 38% did not answer any of the specific questions posed!

A further assurance concern of e-commerce websites is the privacy and security of customer information. A company that subscribes to the TrustArc (www.trustarc.com) accreditation (displaying a TRUSTe seal) will provide better assurance than one that does not. The following actions can be suggested to achieve assurance in an e-commerce site:

- 1 provide clear and effective privacy statements;
- 2 follow privacy and consumer protection guidelines in all local markets;
- 3 make security of customer data a priority;
- 4 use independent certification bodies;
- 5 emphasise the excellence of service quality in all communications.

Empathy

Although it might be considered that empathy requires personal human contact, it can still be achieved, to an extent, through email. Chaffey and Edgar (2000) report that of the responses received, 91% delivered a personalised human response, with 29% (53) passing on the enquiry within their organisation. Of these 53, 23 further responses were received within the 28-day period and 30 (or 57%) of passed-on queries were not responded to further.

Provision of personalisation facilities is also an indication of the empathy provided by the website, but more research is needed as to customers' perception of the value of web pages that are dynamically created to meet a customer's information needs.

An alternative approach for considering how service quality can be delivered through e-commerce is to consider how the site provides customer service at the different stages of the buying decision shown in Figure 8.7. Thus quality service is not only dependent on how well the purchase itself is facilitated, but also on how easy it is for customers to select products and on aftersales service, including fulfilment quality. The Epson UK site (www.epson.co.uk) illustrates how the site can be used to help in all stages of the buying process. Interactive tools are available to help users select a particular printer, diagnose and solve faults, and technical brochures can be downloaded. Feedback is solicited on how well these services meet customers' needs.

These SERVQUAL elements have been applied to online banking by Jun and Cai (2001) in a detailed study. This supports the importance of the original SERVQUAL elements in an online setting. For example, it highlights the importance of a timely, accurate response to customer queries. It also uncovers a particular feature of online service - that customers expect to see a continuous improvement to site services - and suggests their satisfaction will be reduced if positive changes are not made.

In summary, it can be suggested that for managers wishing to apply a framework such as SERVQUAL in an e-commerce context, there are three stages appropriate to managing the process:

- 1 Understanding expectations.** The SERVQUAL framework can be used, with market research and benchmarking of other sites, to understand customer requirements such as responsiveness and empathy. Scenarios can also be used to identify the customer expectations of using services on a site.
- 2 Setting and communicating the service promise.** Once expectations are understood, marketing communications can be used to inform the customers of the level of service. This can be achieved through customer service guarantees or promises. It is better to under-promise than over-promise. A book retailer that delivers the book in two days when three days were promised will earn the customer's loyalty better than the retailer that promises one day, but delivers in two! The enlightened company may also explain what it will do if it does not meet its promises - will the customer be recompensed? The service promise must also be communicated internally and combined with training to ensure that the service is delivered.
- 3 Delivering the service promise.** Finally, commitments must be delivered through on-site service, support from employees and physical fulfilment. If not, online credibility is destroyed and a customer may never return.

As a conclusion to this section, review Mini case study 8.7, which shows how one company delivers service quality online.

Debate 8.2

Will software replace ‘humanware’?

‘Some remote customer service contacts will always require personal, human interaction rather than automated electronic responses.’

Mini Case Study 8.7

Online customer service at Barclays

In 2005, Barclays deployed web self-service to answer customers’ questions online and reduce the 100,000 monthly calls to its helpdesk. Accessible on every page, via ‘Ask a question’, the Barclays solution allows customers to ask questions and receive meaningful, accurate answers on any subject from credit card offers to information about how the company credit scores.

In the first 12 months, ‘Ask a question’ was used by 350,000 customers and answered more than half a million questions. Only 8% of customers escalated through to the call centre, pointing to high levels of customer satisfaction and resulting in improvements to call-centre efficiency and quality of service. In 2007, more than 2 million customers used ‘Ask a question’ to find answers to their questions.

‘Ask a question’ is providing invaluable insight at the critical decision-making process about what concerns customers have and what products are of interest. For example, it identified a higher demand from personal banking customers for making foreign currency payments than was previously known to Barclays. This information is being used to inform the bank about customer trends and requirements, and for creating customer-driven website content.

It was apparent that website visitors who ask questions through web self-service were more than casual browsers but customers with genuine buying requirements. There was potential to increase sales conversion by putting the right information and product offer in front of these

customers based on what they were asking about. 'Ask a question' was enhanced to incorporate ad-serving, which serves up targeted advertising and sales promotions in response to questions asked by customers via the bank's website. The adverts change automatically depending on their relevance to customer questions, or to products and services Barclays wants to promote. For example, when customers ask questions about foreign currency accounts, 'Ask a question' will provide a specific answer and display adverts for travel insurance, the use of debit cards abroad and foreign mortgages. As well as promoting products directly relevant to the customers' search, ad serving is used to cross-promote related products and services. These ads provide customers with an appealing call to action that speeds sales completion and increases response rates.

Advertising products alongside search results is producing high conversion rates, with 12% of customers responding to a product advertisement. 'Ask a question' is also improving usability, allowing customers to access all of the content relevant to them from a single click or question. By integrating ad serving with 'Ask a question', Barclays has been able to achieve high levels of behavioural targeting that have previously only been available through expensive and complicated website analytic tools. Because advertisements and promotions are served in response to customer enquiries, there is no need for the system to log or track vast amounts of historical customer data to analyse and predict customer behaviour in order to deliver targeted information. This cuts the complexity of delivering targeted information and increases sales.

Source: Transversal (2008) UK companies fail the multichannel customer service test. Research report, March.

Customer extension

Customer extension

Deepening the relationship with the customer through increased interaction and product transactions.

Customer extension has the aim of increasing the lifetime value of the customer to the company by encouraging cross-sales - for example, a

FirstDirect credit card customer may be offered the option of a loan or a deposit account. When a customer returns to a website this is an opportunity for cross-selling and such offers can be communicated. Direct email is also an excellent way of informing a customer about other company products and it is also useful in encouraging repeat visits by publicising new content or promotions. Email is vitally important to achieving online CRM as it is a push medium where the customer can be reminded why they should visit the website.

Many companies are now only proactively marketing to favoured customers. Seth Godin (1999) says, 'Focus on share of customer, not market share - fire 70% of your customers and watch your profits go up!'. One UK financial services provider has analysed characteristics of high-churn-rate customers, and when a new prospect fitting this profile contacts the call centre they are actively discouraged. Using these techniques it is possible to increase **share of customer**.

Advanced online segmentation and targeting techniques

The most sophisticated segmentation and targeting schemes for extension (see Chapter 7 for an introduction) are often used by e-retailers, who have detailed customer profiling information and purchase-history data, as they seek to increase customer lifetime value through encouraging increased use of online services over time. However, the general principles of this approach can also be used by other types of companies online. The segmentation and targeting approach used by e-retailers is based on five main elements, which in effect are layered on top of each other. The number of options used, and thus the sophistication of the approach, will depend on resources available, technology capabilities and opportunities afforded by the list:

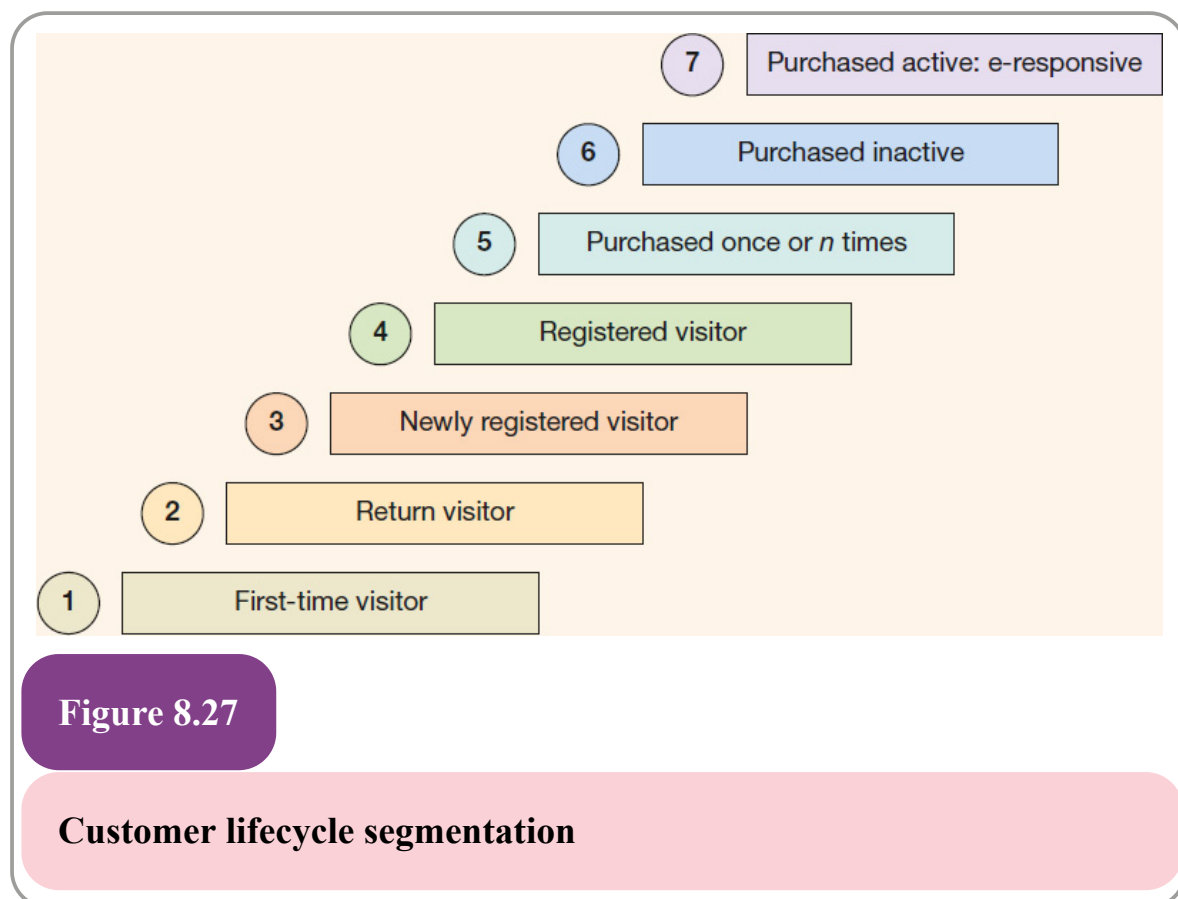
- 1 Identify customer lifecycle groups.** Figure 8.27 illustrates this approach. As visitors use online services they can potentially pass through seven or more stages. Once companies have defined these groups and set up the customer relationship management infrastructure to categorise customers in this way, they can then deliver targeted messages, either by personalised on-site messaging or through emails that are triggered automatically due to different rules.
- 2 Identify customer-profile characteristics.** This is a traditional segmentation based on the type of customer. For B2C e-retailers it will

include age, sex and geography. For B2B companies, it will include size of company and the industry sector or application they operate in.

3 Identify behaviour in response and purchase. As customers progress through the lifecycle shown in Figure 8.27, through analysis of the database the company will be able to build up a detailed response and purchase history that considers the details of recency, frequency, monetary value and category of products purchased. This approach, which is known as ‘RFM or FRAC analysis’, is reviewed below. See Case study 8.2 for how Tesco targets its online customers.

Share of customer

The proportion of customer expenditure in a particular category that belongs to a single customer.



4 Identify multichannel behaviour (channel preference). Regardless of the enthusiasm of the company for online channels, some customers will prefer using online channels and others will prefer traditional channels. This will, to an extent, be indicated by RFM and response analysis, since customers with a preference for online channels will be more responsive and will make more purchases online. Customers that prefer online channels can be targeted mainly by online communications such

as email, while customers who prefer traditional channels can be targeted by traditional communications such as direct mail or phone. This is ‘right-channelling’ (introduced in Chapter 5).

5 Tone and style preference. In a similar manner to channel preference, customers will respond differently to different types of message. Some may like a more rational appeal, in which case a detailed email explaining the benefits of the offer may work best. Others will prefer an emotional appeal based on images and with warmer, less formal copy. Sophisticated companies will test for this in customers or infer it using profile characteristics and response behaviour and then develop different creative treatments accordingly. Companies that use polls can potentially use this information to infer style preferences.

To summarise this section, read Mini case study 8.8, which illustrates the combination of these different forms of communication.

Government office supplies purchasers
using ‘touch marketing funnel’ approach

Eurooffice (www.eurooffice.co.uk) targets small and mid-sized companies. According to George Karibian, CEO, ‘getting the message across effectively required segmentation’ to engage different people in different ways. The office sector is fiercely competitive, with relatively little loyalty since company purchasers will often simply buy on price. However, targeted incentives can be used to reward or encourage buyers’ loyalty. Rather than manually developing campaigns for each segment, which is time-consuming, Eurooffice mainly uses an automated event-based targeting approach based on the system identifying the stage at which a consumer is in the lifecycle, i.e. how many products they have purchased and the types of product within their purchase history. Karibian calls this a ‘touch marketing funnel approach’, i.e. the touch strategy is determined by customer segmentation and response. Three main groups of customers are identified in the lifecycle and these are broken down further according to purchase category. Also layered on this segmentation is breakdown into buyer type - are they a small home-user, an operations manager at a mid-size company or a purchasing manager at a larger company? Each will respond to different promotions.

The first group, at the top of the funnel and the largest, are ‘Group 1: Trial customers’ who have made one or two purchases. For this first

group, Eurooffice believes that creating impulse-buying through price promotions is most important. These will be based on categories purchased in the past. The second group, 'Group 2: The nursery', have made three to eight purchases. A particular issue, as with many e-retailers, is encouraging customers from the third to fourth purchase; there is a more significant drop-out at this point that the company uses marketing to control. Karibian says: *'When they get to group two, it's about creating frequency of purchase to ensure they don't forget you'*. Eurooffice sends a printed catalogue to Group 2 separately from their merchandise as a reminder about the company. The final group, 'Group 3: Key accounts or Crown Jewels', have made nine or more orders. They also tend to have a higher basket value. These people are the Crown Jewels and will spend an average of £135 per order compared to an average of £55 for trial customers. They have a 90% probability of re-ordering within a six-month period. For this group, tools have been developed on the site to make it easier for them to shop. The intention is that these customers find these tools help them in making their orders and they become reliant on them, thus achieving 'soft lock-in'.

Source: Adapted from the company website press releases and Revolution (2005).

Sense, Respond, Adjust - delivering relevant e-communications through monitoring customer behaviour

To be able to identify customers in the categories of value, growth, responsiveness or defection risk we need to characterise them using information that indicates their purchase and campaign-response *behaviour*. Past and current actual behaviour is often the best predictor of future behaviour so we can then seek to influence this future behaviour. Digital marketing enables marketers to create a cycle of:

- monitoring customer actions or behaviours and then . . .
- reacting with appropriate messages and offers to encourage desired behaviours before . . .
- monitoring response to these messages and continuing with additional communications and monitoring.

Or, if you prefer, simply:

Sense → Respond → Adjust

The sensing is done through using technology to monitor visits to particular content on a website or clicking on particular links in an email. Purchase history can also be monitored, but since purchase information is often stored in a legacy sales system it is important to integrate this with systems used for communicating with customers. The response can be done through messages on-site, or in email, and then adjustment occurs through further sensing and responding.

This 'Sense and Respond' technique has traditionally been completed by catalogue retailers such as Argos or Littlewoods Index using a technique known as 'RFM analysis'. This technique tends to be little known outside retail circles, but eCRM gives great potential to applying it in a range of techniques since we can use it not only to analyse purchase history, but also visit or log-in frequency to a site or online service and response rates to email communications.

Recency, Frequency, Monetary value (RFM) analysis

RFM is sometimes known as 'FRAC', which stands for: Frequency, Recency, Amount (obviously equivalent to monetary value), Category (types of product purchased - not included within RFM). We will now give an overview of how RFM approaches can be applied, with special reference to online marketing. We will also look at the related concepts of latency and hurdle rates.

Recency

This is the recency of customer action, e.g. purchase, site visit, account access, email response, e.g. three months ago. Novo (2004) stresses the importance of recency when he says:

Recency, or the number of days that have gone by since a customer completed an action (purchase, log-in, download, etc.) is the most powerful predictor of the customer repeating an action... Recency is why you receive another catalogue from the company shortly after you make your first purchase from them.

Online applications of analysis of recency include monitoring through time to identify vulnerable customers and scoring customers to preferentially target more responsive customers for cost savings.

Frequency

Frequency is the number of times an action is completed in the period of a customer action, e.g. purchase, visit, email response, e.g. five purchases per year, five visits per month, five log-ins per week, five email opens per month, five email clicks per year. Online applications of this analysis include combining with recency for RF targeting.

Monetary value

The monetary value of purchase(s) can be measured in different ways, e.g. average order value of £50, total annual purchase value of £5,000. Generally, customers with higher monetary values tend to have a higher loyalty and potential future value since they have purchased more items historically. One example application would be to exclude these customers from special promotions if their RF scores suggested they were actively purchasing. Frequency is often a proxy for monetary value per year since the more products purchased, the higher the overall monetary value. It is possible, then, to simplify analysis by just using recency and frequency. Monetary value can also skew the analysis for high-value initial purchases.

Latency

Latency is related to frequency, being the average time between customer events in the customer lifecycle. Examples include the average time between website visits, second and third purchase and email clickthroughs. Online applications of latency include putting in place triggers that alert companies to customer behaviour outside the norm, for example increased interest or disinterest, then managing this behaviour using e-communications or traditional communications. For example, a B2B or B2C organisation with a long interval between purchases would find that if the average latency decreased for a particular customer, then they may be investigating an additional purchase (their recency and frequency would likely increase also). Emails, phone calls or direct mail could then be used to target this person with relevant offers according to what they were searching for.

Hurdle rate

According to Novo (2004), hurdle rate refers to the percentage of customers in a group (such as in a segment or on a list) who have completed an action. It is a useful concept, although the terminology doesn't really describe its application. Its value is that it can be used to compare the engagement of different groups or to set targets to increase engagement with online channels, as the examples below show:

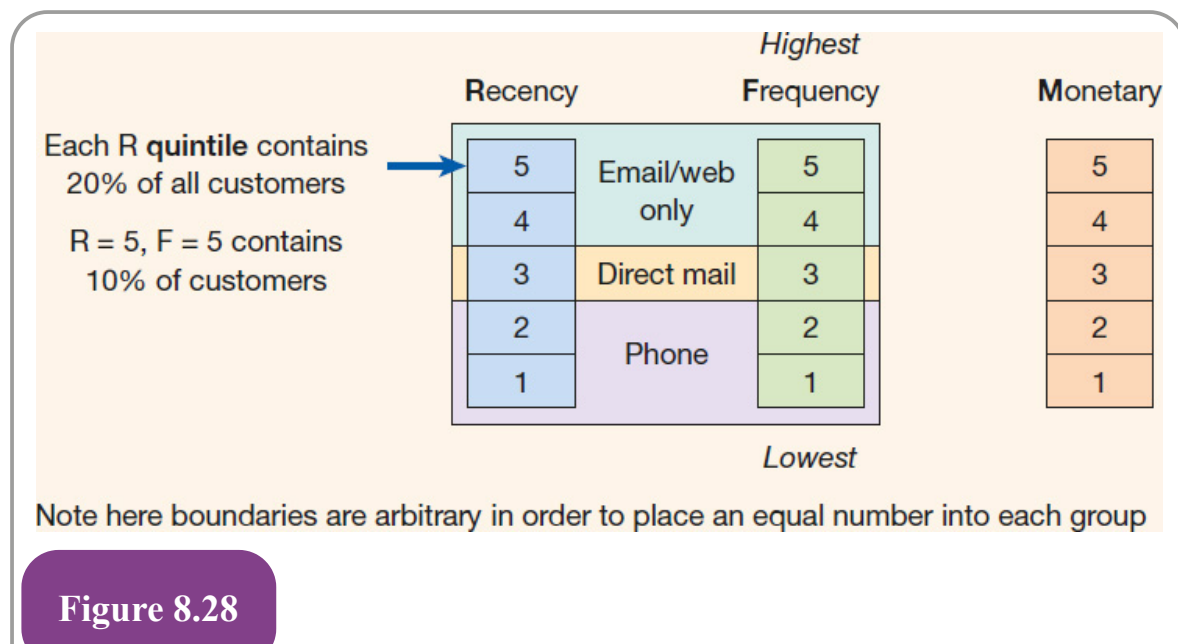
- 20% of customers have visited in the past 6 months;
- 5% of customers have made three or more purchases in the year;
- 60% of registrants have logged on to the system in the year;
- 30% have clicked through on email in the year.

Grouping customers into different RFM categories

In the examples above, each division for recency, frequency and monetary value is placed in an arbitrary position to place a roughly equal number of customers in each group. This approach is also useful since the marketer can set thresholds of value relevant to their understanding of their customers.

RFM analysis involves two techniques for grouping customers:

- 1 Statistical RFM analysis.** This involves placing an equal number of customers in each RFM category using quintiles of 20% (10 deciles can also be used for larger databases), as shown in Figure 8.28. The figure also shows one application of RFM with a view to using communications channels more effectively. Lower-cost e-communications can be used to communicate with customers who use online services more frequently since they prefer these channels, and more expensive communications can be used for customers who seem to prefer traditional channels. This process is sometimes known as ‘right-channelling’ or ‘right-touching’.
- 2 Arbitrary divisions of customer database.** This approach is also useful since the marketer can set thresholds of value relevant to their understanding of their customers.



RFM analysis

For example, RFM analysis can be applied for targeting using email according to how a customer interacts with an e-commerce site. Values could be assigned to each customer as follows:

Recency:

- 1 - Over 12 months
- 2 - Within last 12 months
- 3 - Within last 6 months
- 4 - Within last 3 months
- 5 - Within last 1 month

Frequency:

- 1 - Less than once every 6 months
- 2 - Every 6 months
- 3 - Every 3 months
- 4 - Every 2 months
- 5 - Monthly

Monetary value:

- 1 - Less than £10
- 2 - £10-£50
- 3 - £50-£100
- 4 - £100-£200
- 5 - More than £200

Simplified versions of this analysis can be created to make it more manageable - for example, a theatre group uses these nine categories for its direct marketing:

Oncers (attended theatre once)

- Recent oncers attended <12 months
- Rusty oncers attended >12, <36 months
- Very rusty oncers attended 36+ months

Twicers:

- Recent twicer attended <12 months
- Rusty twicer attended >12, <36 months
- Very rusty twicer attended in 36+ months

2+ *subscribers*:

- Current subscribers booked 2+ events in current season
 - Recent booked 2+ last season
 - Very rusty booked 2+ more than a season ago
-

Propensity modelling

A name given to the approach of evaluating customer characteristics and behaviour and then making recommendations for future products.

Product recommendations and propensity modelling

Propensity modelling is one name given to the approach of evaluating customer characteristics and behaviour, in particular previous products or services purchased, and then making recommendations for the next suitable product. However, it is best known as ‘recommending the "next-best product" to existing customers’.

A related acquisition approach is to target potential customers with similar characteristics through renting direct mail or email lists or advertising online in similar locations.

The following recommendations are based on those in van Duyne *et al.* (2002):

- 1 Create automatic product relationships (i.e. next-best product). A low-tech approach to this is, for each product, to group together products previously purchased together. Then for each product, rank product by number of times purchased together to find relationships.
- 2 Cordon off and minimise the ‘real estate’ devoted to related products. An area of screen should be reserved for ‘next-best product prompts’ for up-selling and cross-selling. However, if these can be made part of the current product they may be more effective.
- 3 Use familiar ‘trigger words’. This is familiar from using other sites such as Amazon. Such phrases include:
‘Related products’, ‘Your recommendations’, ‘Similar’, ‘Customers who bought...’ ‘Top 3 related products’.

- 4 Editorialise about related products, i.e. within copy about a product.
- 5 Allow quick purchase of related products.
- 6 Sell related products during checkout. And also on post-transaction pages, i.e. after one item has been added to basket or purchased.

Note that techniques do not necessarily require an expensive recommendations engine except for very large sites.

Technology solutions for CRM

Database technology is at the heart of delivering CRM applications. Often the database is accessible through an intranet website accessed by employees, or an extranet accessed by customers or partners provides an interface with the entire customer relationship management system. Today, on-demand web services such as Oracle CRM On Demand (www.oracle.com/us/products/applications/crmondemand/index.html) and Salesforce.com (www.salesforce.com) are becoming increasingly popular.

Email is used to manage many of the inbound, outbound and internal communications managed by the eCRM system. Using email for communications is a service provided by eCRM systems such as Salesforce (www.salesforce.com) or Oracle (www.oracle.com), or smaller businesses can use an email marketing ASP service such as MailChimp (www.mailchimp.com).

A workflow system is often used for automating CRM processes. For example, a workflow system can remind sales representatives about customer contacts or can be used to manage service delivery such as the many stages of arranging a mortgage. The three main types of customer data held as tables in customer databases for CRM are typically:

- 1 **Personal and profile data.** These include contact details and characteristics for profiling customers such as age and sex (B2C) and business size, industry sector and individual's role in the buying decision (B2B).
- 2 **Transaction data.** A record of each purchase transaction including specific product purchased, quantities, category, location, date and time and channel where purchased.
- 3 **Communications data.** A record of which customers have been targeted by campaigns, and their response to them (outbound

communications). Also includes a record of inbound enquiries and sales representative visits and reports (B2B).

Marketing automation

Software to automate receptive marketing tasks across multiple digital channels, such as email, social media and website actions.

The behavioural data available through types 2 and 3 are very important for targeting customers to more closely meet their needs.

Over the past few years, there has been a growth in **marketing automation** within CRM systems. This is when relative tasks such as emails, social media and other website actions are automated to happen against certain triggers - i.e. an email automatically gets sent to customers who are about to run out of a product (based on average usage patterns), or an insurance policy is about to expire. It enables companies to connect with their various customer segments or personas (see Chapter 9) at designated times, based on set parameters that respond to a customer's relationship or previous interactions with a brand.

The basic idea behind this type of technology is to automate and optimise leads as the move from the top of the funnel down to the bottom (where sales are made). As marketing teams are required to establish more frequent and bespoke conversations with customers and other potential clients, marketing automation software has fast become a staple of most digital marketing teams.

According to Ratcliff (2015), some of the main reasons why a company will adopt marketing automation are:

- **Save time** - multiple campaigns can be scheduled way ahead of time and released as per your own settings, therefore working hours can be utilised for other activities.
- **Efficiency** - it provides a streamlined automatic alternative to traditionally manual processes. Time and labour can be reduced, therefore costs can be reduced too.
- **CRM integration** - it can help to make sure that leads don't disappear off the radar after a couple of unsuccessful contacts.
- **Data collection** - automatic marketing offers a touch-point to clients or customers that isn't necessarily sales-driven. It can help provide better insight and be used to collect specific data to improve future campaigns or communications.
- **Multichannel management** - whereas it was possibly easy enough to manage a single email channel, now thanks to the multiple channels that consumers can be found on, it's getting harder and harder to keep track of them all. Marketing automation can help you keep tabs on any channel.

- **Consistency** - Incorporating all your marketing efforts in one process can help keep a unified brand tone-of-voice.
- **Personalisation** - automation helps tailor the experience to the user, creating a unique and more inviting experience that's entirely relevant and will more likely lead to conversion.

Some of the main marketing automation systems for small businesses are Infusionsoft (www.infusionsoft.com) and HubSpot (www.hubspot.com/products/marketing/marketing-automation), and those for enterprise solutions include Marketo (<http://uk.marketo.com>), Pardot owned by Salesforce (www.pardot.com) and Oracle Eloqua (www.oracle.com/marketingcloud/products/marketing-automation/index.html).

Research completed by Stone *et al.* (2001) found that the data within CRM systems reportedly used for marketing applications were as follows:

Targeted marketing	80%
Segmentation	65%
Keeping the right customers	47.5%
Trend analysis	45%
Increased loyalty	42.5%
Customised offers	32.5%
Increase share of customer	27.5%

The Hewson Consulting Group (www.hewson.co.uk) identifies the following benefits of CRM systems to customers:

Customer self-service

Customers perform information requests and transactions through a web interface rather than contact with customer support staff.

- improved response times to customer requests for information;
- delivered product meets customer requirements;
- reduced costs of buying and using a product or service;
- immediate access to order status and more responsive technical support.

It is apparent that while many of these benefits could be achieved by phoning customer support staff who then access a CRM system, it may

increase customer convenience, and reduce costs to the company, if they can access this information through a web interface. This approach is referred to as ‘**customer self-service**’.

Despite the benefits of CRM described in this chapter, it must be stressed that failure rates are high. Research conducted independently in 2000 by analysts Gartner and the Butler Group suggested that around 60 to 70% of CRM projects fail (Mello, 2001). This is not necessarily indicative of weaknesses in the CRM concept, rather it indicates the difficulty of implementing a complex information system that requires substantial changes to organisations’ processes and has major impacts on the staff. Such failure rates occur in many other information systems projects. In addition to the change management issues (discussed in Chapter 10), key technical issues for managers selecting eCRM systems are:

- 1 type of applications;
- 2 integration with back-office systems;
- 3 the choice of single-vendor solutions or a more fragmented choice;
- 4 data quality

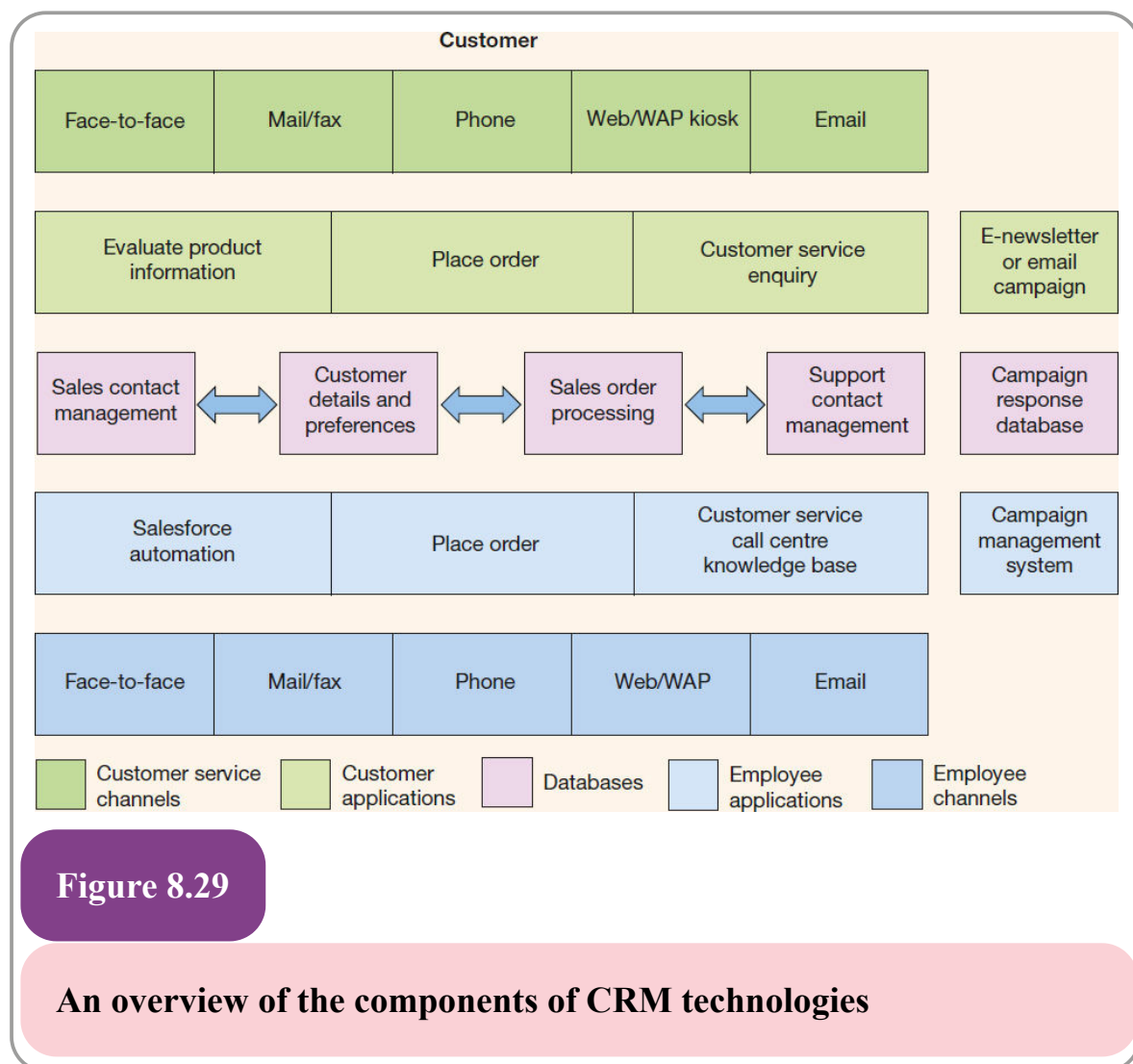
Types of CRM applications

Figure 8.29 is intended to convey the complexity of providing CRM solutions. The aim of CRM technology is to provide an interface between the customer and the employee that replaces or facilitates direct interaction. From both customer and employee perspectives, the ultimate aim of CRM systems is to enable contact regardless of the communications channel that the customer wants to use, whether this is traditional methods such as phone or fax or newer digital technologies. Thus the ideal CRM system will support multichannel communication or the customer-preferred channel. Regardless of channel, the customer will have different needs depending on their stage in the buying process (see section on ‘Differences in buyer behaviour in target markets’, p. 380). In Figure 8.29, we identify three core needs for the customer - to find out more information about a product, to place an order and to receive post-sales support. Applications must be provided to support each of these needs. Likewise, the employee will have applications requirements to support the customer and the sales and marketing objectives of the organisation; in the figure these are sales force automation, to place an order received by phone, by fax or in person and to answer customers’ questions via a support system and knowledge base. At the heart of the system is the database storage needed to support these applications. The IT infrastructure

(described in Chapter 3) such as servers, middleware and networking is not shown in the figure.

Integration with back-office systems

When introducing a CRM system to an organisation, a company will have previously invested in systems for other key business functions such as sales order processing or customer support. These existing, legacy systems appear at both the applications and database levels in Figure 8.29. It will not be financially viable to discard these applications, but integration with them is vital to give visibility of the customer information to everyone in the organisation and provide excellent customer support. Thus integration of legacy systems is a vital part of deciding on and implementing CRM systems.



The choice of single-vendor solutions or a more fragmented choice

Figure 8.29 highlights the key issues in deciding on and designing a system to support CRM. Think about the ideal situation; it might be:

- a single customer-facing and employee-facing application that supports all the communications channels;
- a single integrated database such that any employee has total visibility about a customer -they can access all visit, sales and support histories;
- from a single vendor for ease of implementation and support.

Now think about the reality in organisations you are familiar with: in all probability the system will have different applications for different communications channels, separate databases in different functional areas and multiple vendors. E-commerce systems are often separate from traditional systems. Such fragmentation makes implementation and maintenance of such systems a headache for managers and will often result in poor levels of service for the customer. The solution that many companies are looking to move to is close to the situation above. This need has been the reason for the growth in importance of enterprise resource planning systems from companies such as SAP and Oracle. However, the difficulty is that no single company can provide best-of-breed applications in all areas. To gain competitive edge, companies may need to turn to solutions from innovators who, for example, support new channels such as WAP, and provide knowledge management solutions or sales management solutions. Thus managers are faced with a precarious balancing act between selecting standardised products or integrating more leading systems for each CRM capability.

Data quality

All CRM systems are critically dependent on the currency, completeness and accuracy of their databases. One of the biggest challenges after installation is maintaining data quality. The importance of this was recognised in a survey of CRM and marketing managers in 120 medium-large UK B2C organisations (QAS, 2002). Of these, 86% rated accurate data as 'crucial' to their CRM system. However, the majority rated their data quality as falling short of their objectives. It can be suggested that for data quality to be managed successfully, the following are important:

- 1 Establish a business owner.** This issue is too important to be managed solely by technologists and it requires management at customer contact points, which are part of the responsibility of marketing. All staff involved with managing customer data should be made clear about their responsibilities.
- 2 Optimise quality on capture.** Validation checks can be built in at data entry to check that fields such as postcode are complete and accurate.
- 3 Continuously improve quality.** Customer contact details constantly change. Changes of email address are even more difficult to manage than changes of physical address. As a consequence, all contact points should be used to help maintain data quality.
- 4 Work towards a single view of customer.** Many errors result because different data are stored in different databases, so unifying the data in a single database is the aim for many organisations.
- 5 Adopt a data quality policy.** Of the sample in the QAS (2002) survey, 40% had no data quality policy, but this is essential to help achieve the four steps above.

As a conclusion to this chapter, read Case study 8.2 as an example of how Tesco has used CRM technology to improve its customers' 'share of wallet'. It is estimated that for every £8 spent on groceries in the UK, £1 is spent at Tesco, which is now seeking its share of all retail category sales.

increases product range and uses triggered communications to support CRM

Context

Tesco, well known as Britain's leading food retail group with a presence in Europe and Asia, has also been a pioneer online.

Product ranges

The Tesco.com site acts as a portal to most of Tesco's products, including various non-food ranges, Tesco Personal Finance and the telecoms businesses, as well as services offered in partnership with specialist companies, such as clothing, dieting clubs, flights and holidays, music downloads, gas, electricity and DVD rentals.

Competitors

Tesco currently leads the UK's other grocery retailers in terms of market share. This pattern is repeated online. The compilation below is from Hitwise (2005) and the figures in brackets show market share for traditional offline retail formats from the Taylor Nelson Sofres Super Panel (see www.tnsglobal.com).

- 1 Tesco Superstore, 27.28% (29% of retail trade)
- 2 ASDA, 13.36%
- 3 ASDA at Home, 10.13% (17.1%)
- 4 Sainsbury's, 8.42%
- 5 Tesco Wine Warehouse, 8.19%
- 6 Sainsbury's to You, 5.86% (15.9%)
- 7 Waitrose.com, 3.42% (3.6%)
- 8 Ocado, 3.32% (owned by Waitrose, 3.6%)
- 9 Lidl, 2.49% (1.8%)
- 10 ALDI-UK, 2.10% (2.3%).

Some companies are repeated since their main site and the online shopping site are reported on separately. Asda.com now seems to be performing in a consistent manner online to its offline presence. However, Sainsbury's online performance seems to be significantly lower compared to its offline performance. Some providers such as Ocado, which originally just operated within the London area, have a strong local performance.

Notably, some of Tesco.com's competitors are absent from the Hitwise listing since their strategy has been to focus on retail formats. These are Morrisons (12.5% retail share), Somerfield (5.5%) and Co-op (5.0%).

Promotion of service

As with other online retailers, Tesco.com relies on instore advertising and marketing to the supermarket's Clubcard loyalty scheme's customer base to persuade customers to shop online. *New Media Age* (2005) quotes Nigel Dodd, marketing director at Tesco.com, as saying: 'These are invaluable sources as we have such a strong customer base'. However, for non-food goods the supermarket does advertise online using keyword targeted ads.

For existing customers, email marketing and direct mail marketing to provide special offers and promotions to customers are important.

According to Humby and Hunt (2003), e-retailer Tesco.com uses what they describe as a 'commitment-based segmentation' or 'loyalty ladder', which is based on recency of purchase, frequency of purchase and value, which is used

to identify six lifecycle categories that are then further divided to target communications:

- ‘Logged-on’
- ‘Cautionary’
- ‘Developing’
- ‘Established’
- ‘Dedicated’
- ‘Logged-off’ (the aim here is to win back).

Tesco then uses automated event-triggered messaging to encourage continued purchase. For example, Tesco. com has a touch strategy that includes a sequence of follow-up communications triggered after different events in the customer lifecycle. In the example given below, communications after event 1 are intended to achieve the objective of converting a website visitor to action; communications after event 2 are intended to move the customer from a first-time purchaser to a regular purchaser and for event 3 to reactivate lapsed purchasers.

- *Trigger event 1: Customer first registers on site (but does not buy)*

Auto-response (AR) 1: 2 days after registration, email sent offering phone assistance and £5 discount off first purchase to encourage trial.

- *Trigger event 2: Customer first purchases online*

AR1: Immediate order confirmation.

AR2: Five days after purchase, email sent with link to online customer satisfaction survey asking about quality of service from driver and picker (e.g. item quality and substitutions).

AR3: Two weeks after first purchase - direct mail offering tips on how to use service and £5 discount on next purchases intended to encourage reuse of online services.

AR4: Generic monthly e-newsletter with online exclusive offers encouraging cross-selling.

AR5: Bi-weekly alert with personalised offers for customer.

AR6: After two months - £5 discount for next shop.

AR7: Quarterly mailing of coupons encouraging repeat sales and cross-sales.

- *Trigger event 3: Customer does not purchase for an extended period*

AR1: Dormancy detected - reactivation email with survey of how the customer is finding the service (to identify any problems) and a £5 incentive.

AR2: A further discount incentive is used in order to encourage continued usage to shop after the first shop after a break.

Tesco's online product strategy

New Media Age (2005) ran a profile of Laura Wade-Gery, CEO of Tesco.com since January 2004, which provides an interesting insight into how the business has run. In her first year, total sales were increased 24% to £719 million. Laura is 40 years old, a keen athlete and has followed a varied career developing through an MA in History at Magdalen College, Oxford, and an MBA from Insead; manager and partner in Kleinwort Benson; manager and senior consultant, Gemini Consulting; targeted marketing director (Tesco Clubcard); and group strategy director, Tesco Stores.

The growth overseen by Wade-Gery has been achieved through a combination of initiatives. Product range development is one key area. In early 2005, Tesco.com fulfilled 150,000 grocery orders a week but now also offers more intangible offerings, such as e-diets and music downloads.

Wade-Gery has also focused on improving the customer experience online - the time it takes for a new customer to complete their first order has been decreased from over an hour to 35 minutes through usability work culminating in a major site revision.

To support the business as it diversifies into new areas, Wade-Gery's strategy was 'to make home delivery part of the DNA of Tesco', according to *New Media Age* (2005). She continues: 'What we offer is delivery to your home of a Tesco service - it's an obvious extension of the home-delivered groceries concept'. By May 2005, Tesco.com had 30,000 customers signed up for DVD rental, through partner Video Island (which runs the rival Screenshot service). Over the next year, Wade-Gery's target is to treble this total, while also extending home-delivery services to the likes of bulk wine and white goods.

Wade-Gery looks to achieve synergy between the range of services offered. For example, its partnership with eDiets can be promoted through the Tesco Clubcard loyalty scheme, with mailings to 10 million customers a year. In July 2004, Tesco.com Limited paid £2 million for the exclusive licence to eDiets.com in the UK and Ireland under the URLs www.eDietsUK.com and www.eDiets.ie. By promoting the services through the URLs, Tesco can use the dieting business to grow use of the Tesco.com service and in-store sales.

To help keep focus on home retail delivery, Wade-Gery sold women's portal iVillage back to its US owners for an undisclosed sum in March 2004. She explained to *New Media Age*:

It's a very different sort of product to the other services that we're embarking on. In my mind, we stand for providing services and products that you buy, which is slightly different to the world of providing information.

The implication is that there was insufficient revenue from ad sales on iVillage and insufficient opportunities to promote Tesco.com sales. However, iVillage was a useful learning experience in that there are some parallels with iVillage, such as message boards and community advisers.

Wade-Gery is also director of Tesco Mobile, the joint 'pay-as-you-go' venture with O₂ that is mainly serviced online, although promoted in-store and via direct mail. Tesco also offers broadband and dial-up ISP services, but believes the market for Internet telephony (provided through Skype and Vonage, for example) is not sufficiently developed. Tesco.com has concentrated on more traditional services that have the demand - for example, Tesco Telecom fixed-line services attracted over a million customers in their first year.

However, this is not to say that Tesco.com will not invest in relatively new services. In November 2004, Tesco introduced a music download service, and just six months later Wade-Gery estimates they have around 10% market share - one of the benefits of launching relatively early. Again, there is synergy, this time with hardware sales. *New Media Age* (2005) reported that as MP3 players were unwrapped, sales went up - even on Christmas Day! She says:

The exciting thing about digital is where can you take it in the future. As the technology grows, we'll be able to turn Tesco.com into a digital download store of all sorts, rather than just music. Clearly, film [through video on demand] would be next.

But it has to be based firmly on analysis of customer demand. Wade-Gery says: 'The number one thing for us is whether the product is something that customers are saying they want; has it reached a point where massmarket customers are interested?'. There also has to be scope for simplification. *New Media Age* (2005) notes that Tesco is built on a core premise of convenience and value, and Wade-Gery believes what it's already done with mobile tariffs, broadband packages and music downloads are good examples of the retailer's knack for streamlining propositions. She says: 'We've actually managed to get people joining broadband who have never even had a dial-up service'.

Source: Humby and Hunt (2003), New Media Age (2005), Hitwise (2005), Wikipedia (2005).

Question

Based on the case study and your own research on competitors, summarise the strategic approaches that have helped Tesco.com achieve success online.

Summary

- 1 The objective of customer relationship management (CRM) is to increase customer loyalty in order to increase profitability. CRM is aimed at improving all aspects of the level of customer service.
- 2 CRM tactics can be based around the acquisition-retention-extension model of the ideal relationship between company and customer.
- 3 In an e-commerce context, acquisition refers to gaining new customers to a company and converting existing customers to online services. To enable an online relationship it is important to profile customers to find out their needs and expectations and obtain an opt-in email agreement to continue the dialogue.
- 4 Marketing communications techniques to achieve acquisition, retention and extension include traditional online mass-media techniques and specialised online techniques such as search engine registration, link-building, email marketing and banner advertising.
- 5 Techniques for customer retention include the use of extranets, online communities, online sales promotions and email marketing.
- 6 Customer extension involves better understanding of the customer through feedback on new product development and encouraging customers to increase the depth of their relationship by offering complementary products for purchase or increasing purchase frequency.
- 7 Knowledge of online buyer behaviour, and in particular the differing needs of the customer through the different stages of the buying decision, can be used to improve CRM management.

- 8 Customer service quality is important in achieving loyalty and the SERVQUAL framework can be employed to consider how to use the Internet to achieve this.
- 9 Technology solutions for CRM are aimed at providing interaction between employees and customers across multiple communications channels with all customer information stored in a single database to provide complete visibility of the customer by employees. Managers look to minimise the number of solutions partners they work with to achieve these goals.
- 10 Specific technology application requirements for CRM are salesforce automation (contact management) and call-centre applications that integrate workflow to manage queries and a knowledge base from which queries can be reviewed.

Exercises

Self-assessment questions

- 1 What are the goals of acquisition and retention in an online context?
- 2 Outline the differences between permission marketing and interruption marketing including reference to the terms 'opt-in' and 'opt-out'.
- 3 Summarise the main types of online marketing communications for traffic-building.
- 4 Explain why mixed-mode buying needs to be understood by those managing an e-commerce site.
- 5 Explain a range of techniques for attracting repeat visits to a website.
- 6 What is the difference between personalisation and mass customisation?
- 7 How can an e-commerce site be used to achieve extension in CRM?
- 8 What are the management issues in managing data and applications integration in CRM?

Essay and discussion questions

- 1 On what basis should marketing managers decide on the communications mix for an e-commerce site?
- 2 Evaluate the current communications mix for an online e-tailer and make recommendations for future communications to achieve customer acquisition and retention.
- 3 Show how an understanding of the online buying process can be used to revise marketing communications.
- 4 Explain, using examples, typical differences between a traffic-building campaign for a B2B company and one for a B2C company.
- 5 Examine the relationship between customer satisfaction, loyalty and sales in relation to a pureplay e-commerce site.
- 6 Examine the benefits and disadvantages of personalisation, community-building and direct email. For an organisation of your choice recommend a suitable balance between these e-marketing tools.
- 7 Assess whether a multi-vendor or single (limited-number) vendor strategy is best for the implementation of eCRM systems.
- 8 Recommend a social CRM data and application architecture for a B2C company that provides integration with related legacy systems.

Examination questions

- 1 Explain the concept of mixed-mode buying with reference to a pureplay e-commerce bookseller.
- 2 You are the e-commerce manager for a B2C site. Write an explanation to be included in a report to the managing director of why a permission-marketing approach is required.
- 3 What different types of searching behaviour are exhibited by online users and what are the implications for someone responsible for traffic-building on a site?
- 4 With reference to customer acquisition and retention, explain two goals for each required by an e-commerce site manager.
- 5 Outline four different methods of building website traffic.
- 6 Explain three factors that will influence the balance of online and offline website promotion for an organisation.

- 7 How can an e-commerce site use marketing automation to communicate with its customers?
- 8 What is a legacy system and what is its relevance to CRM?

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Web links

- Direct Marketing Association (www.dma.org.uk)** Best-practice guidelines and benchmarks of response rates.
- DoubleClick (www.doubleclickbygoogle.com)** An email broadcaster and advertising network worldwide, owned by Google. Its site provides research of ad and email marketing response rates across its clients.

Internet-advertising-related links

- ClickZ (www.clickz.com/news/)** An excellent collection of articles on online marketing communications. US-focused. Relevant sections for this chapter include: affiliate marketing, advertising technology, email marketing, media buying.
- eMarketer (www.emarketer.com)** Includes reports on media spend based on compilations of other analysts.
- iMediaConnection (www.imediaconnection.com)** Media site reporting on best practice in online advertising.

Internet Advertising Bureau (www.iab.com) The widest range of studies about Internet advertising effectiveness. In UK: **www.iabuk.net**. The Internet Advertising Bureau.

Search-engine-related links

ClickZ (www.clickz.com/) An excellent collection of articles on online marketing communications. US-focused. Relevant sections for this chapter include: affiliate marketing, advertising technology, email marketing, media buying.

Search Engine Watch (www.searchenginewatch.com) A complete resource on SEO and PPC marketing.

WebmasterWorld (www.webmasterworld.com) A forum where search practitioners discuss best practice.

CRM and database marketing

Direct Marketing Association UK (www.dma.org.uk) Source of up-to-date data protection advice and how-to guides about online direct marketing.

Enterprise Apps Today (www.enterpriseappstoday.com/crm) A portal with articles about the practical aspects of deploying CRM technology.

Jim Novo (www.jimnovo.com) A site by a US consultant that has a lot of detail on techniques to profile customers online.

MyCustomer.com (www.mycustomer.com) A media site focusing on customer relationship marketing techniques and tools.

1to1 Media (www.1to1.com) A site containing a lot of information on the techniques and tools of relationship marketing.

Seth Godin's Blog (<http://seths.blog/2008/01/permission-mark>) A site supporting the author of the book *Permission Marketing* by Seth Godin. Godin has written more than 18 best-selling books and this blog has a wealth of information on customer relationship management topics.

Part 3

Implementation

Introduction

Management of digital business implementation is described in Part 3 of the text, in which we examine practice management issues involved with creating and maintaining digital business solutions.

9

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- Analysis for digital technology projects
- Process modelling
- Data modelling
- Design for digital technology projects

Focus on...

- User-centred site design and customer experience management
- Security design for digital business

growth hacking p. 522

igital business transformation and

- The emergence of digital transformation as a discipline
- Understanding the reasons for digital transformation
- The framework of digital transformation
- What is growth hacking?
- Defining goals and KPIs

Focus on...

- Web analytics: Measuring and improving performance of digital business services
- Measuring social media marketing

9 Customer experience and service design

Chapter at a glance

Main topics

- Analysis for digital technology projects
- Process modelling
- Data modelling
- Design for digital technology projects

Focus on...

- User-centred site design and customer experience management
- Security design for digital business

Case studies

9.1 Providing a better online user experience in a B2B market

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Summarise approaches for analysing requirements for digital business systems
- Assess an online business' customer experience (CX)
- Identify key elements of approaches to improve the interface design and security design of e-commerce systems

Management issues

Analysis and design of digital business systems raises these issues for management:

- How can organisations improve their customer experience across all touchpoints in the customer journey?
- What are the critical success factors for analysis and design of digital business systems?
- What is the balance between requirements for usable and secure systems and the costs of designing them in this manner?

Links to other chapters

The main related chapters are:

- *Chapter 4* places the issues around cyber security in the context of the digital environment, particularly data protection laws
- *Chapter 10* has a section on growth hacking and conversion rate optimisation that links to the customer experience (CX), personas and mobile site design

Introduction

Analysis and design

Analysis of system requirements and design for creation of a system.

This chapter reviews new approaches to **analysis and design** required for digital business systems. It does not aim to explain how to follow well-established techniques for analysis and design such as data flow diagramming, information flow diagrams and entity relationship diagramming. These have been described many times before, for example in Bocij *et al.* (2008).

The chapter is intended to provide managers with an appreciation of some analysis and design techniques for digital business, in particular customer experience management through the six pillars of experience and user interface design for desktop and mobile platforms. This familiarity should aid collaboration when the managers are involved in discussing the requirements of the system with technical staff. It is in two main parts. In the first part we review analysis techniques, and in particular process analysis for re-engineering,

which is important in many digital business implementations. We also touch on data modelling and how to manage 'Big Data'.

The second part looks at the design of digital business systems. The techniques described are aimed at improving the information quality of end-users of digital business systems -ensuring information is timely and secure, has the correct content in terms of accuracy, relevance and completeness and is in a form that is easy to interpret. The section on architectural design looks at how systems are integrated to improve flow of information and also to achieve timely delivery of information. 'Focus on User-centred site design and customer experience management' demonstrates how using use-case analysis and interface design guidelines can be applied to produce usable sell-side or buy-side e-commerce systems with good information quality. 'Focus on Security design for digital business' reviews security requirements for the digital business, reviews generic approaches to security and finally looks at the current usage of e-commerce security techniques.

The importance of analysis and design is such that even if an effective strategy has been developed, its execution can be destroyed by ineffectual analysis and design. Complete Activity 9.1 to review some of the consequences of poor analysis and design.

Analysis for digital technology projects

Analysis for digital systems

Using analytical techniques to capture and summarise business and user requirements.

Analysis for digital systems is concerned with understanding the business and user requirements for a new system. Typical analysis activity can be broken down into understanding the current process and then reviewing possible alternatives for implementing the digital business solution. In the following sections we will review different techniques. In this section we focus on using diagrams to demonstrate the business processes.

Activity 9.1

The consequences of poor analysis and design

Purpose

To highlight the impact of poor analysis and design on customer satisfaction and business performance.

Activity

Form a focus group and discuss your own experiences of online purchasing. What have been your problems and frustrations? Refer to a particular example such as purchasing a book - what are your expectations? Alternatively, visit GetSatisfaction.com to see the types of complaints about different brands.

view with Nick Dutch, head of digital at Domino's Pizza UK, on how they create digital experiences

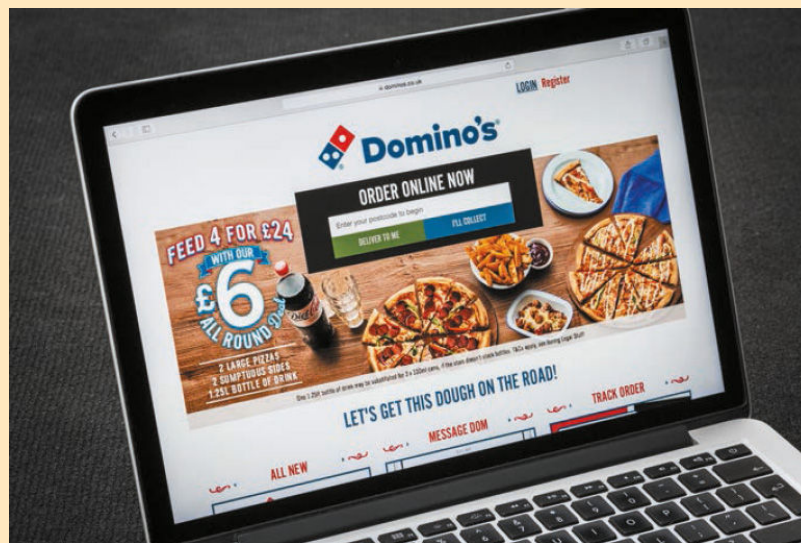


Figure 9.1

Domino's Pizza

Source: True Images/Alamy Stock Photo

Q. Please outline your role and how your team is structured.

My role combines all aspects of the online customer experience from media to conversion, both on the desktop site and in mobile. So, I'm responsible for all online marketing activity that drives people to the site and in determining the customer journey, whether on our desktop site, mobile sites and apps or our communities on social media sites, which are also part of how the Domino's brand is presented in the digital space. From a strategic point of view, I'm responsible for developing the long-term strategic roadmap for digital and ensuring it contributes to and complements the overall business strategy.

We have six in our digital team in total, with three other manager roles for the three key activities: an e-commerce marketing manager, digital campaigns manager and CRM executive. The e-commerce Marketing manager's remit is performance-based, with a focus on generating value through search, affiliate and display marketing and also maximising conversion on site. They work closely with the digital campaigns manager - imagine the intersecting ying and yang of digital marketing. The digital campaigns manager ensures integration with broader brand-marketing initiatives and is tasked with bringing the brand to life online, so they're responsible for branded digital content on- and off-site.

The CRM executive predominately manages automated emails and in the future their role will include more one-to-one communications, including push notifications via mobile, digital displays and the website. They're also supported by a database marketing analyst. We also have in the team a business analyst and head of e-commerce responsible for interpreting our business and customer priorities and translating them into IT workstreams, as well as reporting and insight for CRO.

Our team is relatively small since we're supported on the technical side by the commercial systems team responsible for the development and maintenance of all our e-commerce platforms (in IT services); we're their client. We work with them closely on new features and applications, conversion rate optimisation and they manage on-site product content updates.

Q. How do you set the vision for the long-term contribution of desktop and mobile channels for Domino's?

Our vision for digital is centred on how we can provide convenience to the customer across different channels - convenience has to be platform agnostic. The rate of consumer adoption of digital technologies informs this vision, so we went into mobile first, because we were already seeing mobile platforms were popular for customers. We will be tracking take-up of newer technologies like NFC

payment options and will add them to a longer-term 3-year roadmap based on when we see them entering the mainstream. Then there is a hard roadmap for the next 12 months. What we identify 2 years out may fall by the wayside if there isn't a clear customer imperative.

We prioritise new developments based on a combination of how it will impact customer convenience and commercial returns through increased conversion rate or average order value. It doesn't have to always be a scientific prioritisation; decisions can also be more brand-orientated - for example, games consoles may provide the opportunity to partner with a TV manufacturer. Innovation is a key element of our brand DNA, so we will always consider things that may not be 100% commercially viable or pay back immediately.

Q. What is your process for making investment decisions in media?

The starting point is based on integrating with business priorities, which are based on a classic campaign marketing planning process based on new product introductions for example, so online campaign activities are aligned with these. At a top level, we make an investment-split decision for search marketing, affiliates and display based on previous performance trends, comparing the previous year to different quarters and, of course, our current business targets and forecasts.

We need to use the best mix of media to attract customers who are exhibiting different behaviours in their buying decision. So some customers will be in the process of getting pizza in tonight and are looking for the best deals right now. Affiliates are significant in driving that decision. But others may be considering eating in a few days; display can be important here and we do see a halo-effect of display ads prompting searches for Domino's, so it's important to balance performance and brand investments.

At a practical level, like all e-commerce sites, we look at our year-on-year performance carefully - all decisions are based on beating year-on-year performance mentality. Detailed decisions are involved here; for example, around search, we may have a search budget where we have to balance investment in paid and natural search to get the best efficiency. Likewise, depending on the market factors we will change the balance of targeting different terms in AdWords; some terms are demand creation such as generics, whereas others mop-up demand such as brand or local search terms. Adjusting the media mix month-by-month is always an ongoing activity because of four factors:

First, competitor action such as a promotion or competing on a brand term or other media activity. **Second, new marketing options** we may want to test to gain advantages, for example, the current targeting options in Gmail or custom audiences in Facebook. Then **there are changes to business needs** such as weather affecting demand - we have to generate more demand, which can mean upweighting generic or local search targeting for new customers.

Finally, our analysis techniques or tools of which media are effective will improve, for example, we have been looking more recently at purchase attribution and this has given emphasis on display budget against more 'mopping-up channels'.

I haven't mentioned social media yet since it's not so important from a direct sales point of view. That said, we do use **content marketing** where bespoke content is developed around our audience's passion, for example to associate us with football. But it's critical for other aspects such as community management on the social networks where we create and share content continuously around this. We do offer social sign-in through Facebook Connect for example, but that isn't used to a significant degree. Of course, social media is also important for customer service where we have to manage this pro-actively. We use some outsourced services for different social media activities.

Q How do you manage conversion rate improvements and the implementation of new features on your sites?

We now continually optimise. There has been a change in mindset as sales from the online channels have increased. It was more of a static site originally, but we are now able to review more regularly, for example on a fortnightly or monthly review process. We use Google Analytics as a performance management tool, for reviewing how our site is performing. We are particularly interested in multi-device attribution, but can use journey analysis, e.g. through ad serving, to give us something similar.

Source: www.smartinsights.com/user-experience/customer-experience-management-cxm/dominos-pizza-case-study

User requirements capture techniques that help determine the function required by a system and these are described in the 'Focus on User-centred site design' section.

Analysts recognise that delivering quality information to employees and partners, or exchanging it between processes, is the key to building information systems that improve efficiency and customer service. Pant and Ravichandran (2001) say:

Information is an agent of coordination and control and serves as a glue that holds together organisations, franchises, supply chains and distribution channels. Along with material and other resource flows, information flows must also be handled effectively in any organisation.

We retain this quote since we like the analogy of information as ‘glue’. This shows that in the era of digital business, analysis should be used as a tool to optimise the flow of information both inside and outside organisations. In this chapter we start by looking at how workflow management is key to managing time-based information flows. We then review how process modelling is used to analyse information flows to optimise business processes and look at information storage analysis through a brief review of data modelling.

Process modelling

Traditional approaches to process analysis use established systems analysis and design methods that are part of methodologies such as structured systems analysis and design methodology (SSADM), like the data flow diagram technique outlined in Bocij *et al.* (2008). Such approaches often use a hierarchical method of establishing:

- the processes and their constituent sub-processes;
- the dependencies between processes;
- the inputs (resources) needed by the processes and the outputs.

The processes and sub-processes are essentially the activities or tasks that need to be performed by the business information system, so these are sometimes referred to as **activity-based process definition methods**. A **process** can be defined at the business level in terms of the main activities of a business. Each process can be broken down further, as explained in the section on ‘Task analysis and task decomposition’. Significant business processes are elements of the value chain; they include inbound logistics (including procurement), manufacture, outbound logistics or distribution and customer relationship management or sales and marketing activity. Davenport (1993) notes that even for large multinational organisations, the number of main processes will rarely exceed ten.

Activity-based process definition methods

Analysis tools used to identify the relationship between tasks within a business process.

Process

Part of a system that has a clearly defined purpose or objective and clearly defined inputs and outputs.

Note that in addition to the approaches shown here, use-case analysis to assist in defining interface requirements is described in the ‘Focus on User-centred site design’ section.

Process mapping

Process mapping

Identification of location and responsibilities for processes within an organisation.

Existing business processes often overlap different functional areas of a business. So, before detailed activities are identified, the analyst needs to identify where in the organisation processes occur and who is responsible for them. This procedure is often known as **process mapping**. Such process mapping is clearly important for identifying potential users of a digital business system. Table 9.1 shows an outline process map that might be used for a B2B company to prepare a proposal for a new major account.

Task analysis

Identification of different tasks, their sequence and how they are broken down.

Task analysis and task decomposition

Before a process such as a 'prepare proposal' can be designed and implemented, a more detailed breakdown is required. This is usually referred to as **task analysis**.

Noyes and Baber (1999) point out that a difficulty with this type of process or task decomposition is that there are no set rules for what to call the different levels of decomposition or how far to decompose the process. The number of levels and the terminology used for the different levels will vary according to the application you are using and the consultant you may be working with. Georgakoupoulos *et al.* (1995) talk about 'task nesting' of tasks broken down into sub-tasks as part of the activity-based method for describing workflows. They give the example of a workflow process for procurement where the task 'procure materials' is broken down further into the sub-tasks of 'verify status', 'get bids' and 'place order'. Curtis *et al.* (1992) provide a useful framework, referring to *process units* or *elements* at each process level as follows:

Level 1 *business processes* are decomposed into:

Level 2 *activities* which are further divided to:

Level 3 *tasks* and finally:

Level 4 *sub-tasks*.

Table 9.1

Process map for activities within the process 'prepare proposal'

Process activity	Marketing	Engineering	Finance	Senior management
1 Cost estimation		M		
2 Assess financial risk		m	M	
3 Publicity presentation	M	m		
4 Review	M	M	M	m
5 Authorisation			M	M
M = major role in function, m = minor role in function				

An example of a four-level task decomposition is presented in Figure 9.2. According to e-workflow.org (a workflow standards and research organisation), workflow can be defined as:

The automation of a business process, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules.*

**participant = resource (human or machine)*

The key benefits of workflow are:

- Improved efficiency - automation of many business processes results in the elimination of many unnecessary steps.
- Better process control - improved management of business processes is achieved through standardising working methods and the availability of audit trails.
- Improved customer service - consistency in the processes leads to greater predictability in levels of response to customers.
- Flexibility - software control over processes enables their redesign in line with changing business needs.
- Business process improvement - focus on business processes leads to their streamlining and simplification.

Level 1. Business process:

Obtain listings

Level 2. Activities

-  1. Register vendor
-  2. Inspection preparation
-  3. Inspection appointment
-  4a. Follow up inspection – IF listing instructions obtained
-  4b. Follow up inspection – IF listing instructions NOT obtained (exception)
-  5. Ensure listing obtained

Level 3. Tasks for 'ensure listing obtained'

-  1. Prepare initial property particulars (48hours)
-  2. Remind negotiator to handle sale to contact vendor
-  3. Send property particulars
-  4. Instruction to sell with draft PMA
(Property Misdescriptions Act 1991) details
-   5. Contact vendor to obtain PMA on particulars

Level 4. Subtasks

-  1. PMA chase
-  2. Tenure details
-  3. Amended details

Key

-  Reminder required for negotiator
-  Record information (data input)
-  Retrieve information (data output)
-  IT system used to perform activity
-  Letter or form produced

Figure 9.2

An example of task decomposition for an estate agency

Source: Adapted from Chaffey (1998)

Process dependencies

Process dependencies summarise the order that activities occur, according to the business rules that govern the processes. Normally, activities occur in a sequence and are serial; sometimes activities can occur simultaneously, when they are known as parallel. Data flow diagrams and flow charts are widely used as diagramming techniques to show process dependencies. In this section we will review three techniques for showing dependencies that are more commonly applied in digital business analysis. These are flow process charts and network diagrams, including the EPC (event-driven process chain) standard used by the SAP product.

Workflow management (WFM)

The automation of information flows; provides tools for processing the information according to a set of procedural rules.

Workflow management

Process dependencies are a core part of analysing and revising an organisation's workflow as part of **workflow management (WFM)** - a concept that is integral to many digital business applications. So, before we look at process analysis techniques, let us look at why workflow is integral to digital business.

WFM was defined by the Workflow Management Coalition (WfMC, 1996) as:

the automation of a business process, in whole or part, during which documents, information or tasks are passed from one participant to another for action, according to a set of procedural rules.

Workflow systems automate digital business processes by providing a *structured* framework to support a process. Applications of workflow in digital business include actioning queries from external customers or handling internal support queries. Email enquiries can be analysed and routed to the right person depending on their subject. Letters may need to be scanned before being added to the workflow queue. Workflow helps manage business processes by ensuring that tasks are prioritised to be performed:

- *as soon as possible*
- *by the right people*
- *in the right order.*

The workflow approach gives a consistent, uniform approach for improved efficiency and better customer service. Workflow software provides functions to:

- assign tasks to people;
- remind people about their tasks, which are part of a workflow queue;
- allow collaboration between people sharing tasks;
- retrieve information needed to complete the task, such as a customer's personal details;
- provide an overview for managers of the status of each task and the team's performance.

What type of workflow applications will exist in a company? For a B2B company, digital business applications of workflow might include:

- 1 Administrative workflow.** Internal administrative tasks such as managing purchase orders for procurement and booking holidays and training.
- 2 Production workflow.** Customer-facing or supplier-facing workflow such as an intranet-or extranet-based customer support database and stock management system integrated with a supplier's system.

Flow process charts

A simple flow chart is a good starting point for describing the sequence of activities of a workflow. Despite their simplicity, flow charts are effective in that they are easy to understand by non-technical staff and also they highlight bottlenecks and inefficiencies.

Flow process charts are used commonly when solving digital business problems, whether in the front office or the back office. Each symbol in the chart refers to a particular operation within the overall process. An explanation of the symbols used in flow process chart analysis is shown in Figure 9.3. Box 9.1 and Figure 9.4 show one way of laying out flow process charts. Another example of how flow process charts are applied in practice using a tabular arrangement is presented in Activity 9.2. An example of how tabular flow process charts can be applied to e-procurement analysis is given in Chapter 6 (p. 285).

Box 9.1

Use of flow process charts for design of workflow systems

In this example, mortgage (loan) applications are received by post. It is then necessary to identify *new applications* and supporting documentation for applications already received. (This is a decision point indicated by a diamond-shaped decision box.) New applications are keyed into the workflow system as a new case and the original form is scanned in for reference (these are processes shown as circles on the chart). Supporting material such as ID (driving licences) and letters from employers are also scanned in. A team member will then assign or associate all scanned images of material that has been scanned in to a particular case. Assigning new documents (*assignment tasks*) is always the most important task, so these need to be automatically placed by the software at the head of the workflow queue. Once assigned, the documents will need to be actioned (*action tasks*) by the operator, so according to the type of document and when it needs to be chased the workflow system will assign a priority to the task and place it in the workflow queue. Team members will then have to action tasks from the workflow queue, which are prioritised according to date. Processing an action task will usually involve phoning the customer for clarification or writing a letter to request additional

information. After this has been achieved, the operator will mark the item as complete and a new workflow task will be created if necessary- for example, to follow up if a letter is not received within ten days.

This diagram is also useful for summarising system design since it can identify different modules of a system and the hardware and software necessary to support these modules. In this case some of the modules are:

- scan document (scanner and scanning software);
- associate document to customer case (link to customer database);
- prioritise document (specialised workflow module);
- review document (link to customer database);
- contact customer (link to phone system and letter printer).

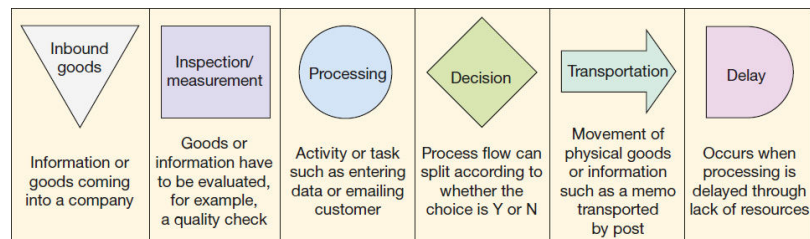


Figure 9.3

Symbols used for flow process charts

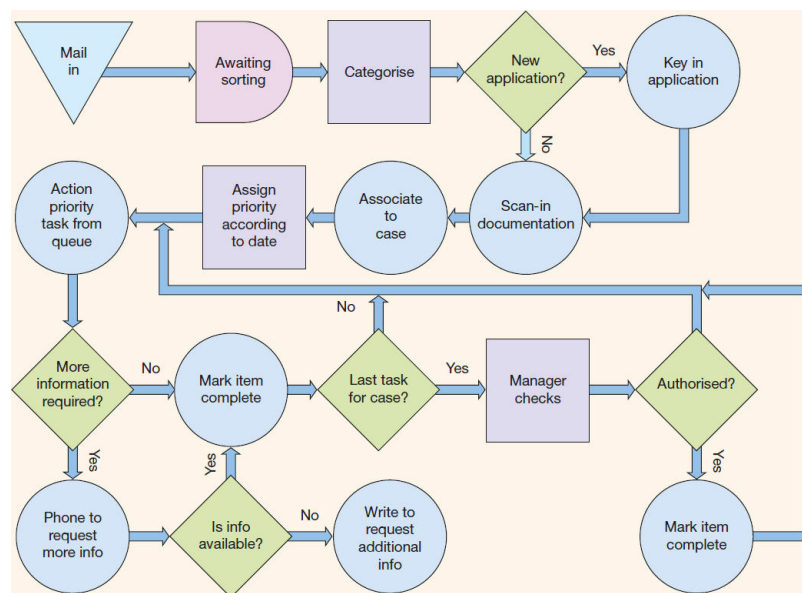


Figure 9.4

Flow process chart showing the main operations performed by users when working using workflow software

Effort duration analysis

Effort duration analysis is an analytical tool that can be used to calculate the overall efficiency of a process when we have performed a detailed analysis such as that in Activity 9.2. To do this, we sum the average time it takes workers to complete every activity making up the overall process, then divide this by the total length of time the whole process takes to occur. The total process time is often much longer since this includes time when the task is not being worked on. In this case this is during transport of the forms, and when they are waiting in out-trays and in-trays. The efficiency relationship can be given as:

$$\text{Efficiency} = \frac{\sum(T(\text{effort on tasks}))}{T(\text{total process time})}$$

If we apply effort duration analysis to the first scenario in Activity 9.2, with delays and transport not contributing to the overall process, we can see that the efficiency is barely 2%! This measure can be extended by noting the activities that add value to the customer rather than simply being administrative.

Network diagrams

While data flow diagrams and flow process charts may give a good indication of the sequence in which activities and tasks occur, they often do not give a sufficiently tight, formal definition of the process sequence necessary for input into a digital business, workflow or ERP system. To do this we can use a network diagram known as a GAN (generalised activity network). Here, nodes are added between the boxes representing the tasks, to define precisely the alternatives that exist following completion of a task. The most common situation is that one activity must follow another - for example, a check on customer identity must be followed by a credit check. Where alternatives exist, the logic is defined at the node as follows: where a single pathway is taken from two or more alternatives, the node is defined as an OR node, and when several pathways may be followed this is an AND node. Join nodes combine previous activities, and splits determine which activities occur next. Where there are alternatives, business rules are defined as pre-conditions or postconditions. A summary of the alternative dependencies is given in Table 9.4.

Activity 9.2

Transforming invoice processing at a B2B company

Purpose

To illustrate how the flow process chart can be used to simplify a business process.

Background

Table 9.2 has been drawn up following observation of tasks performed during a systems analysis project at a B2B company. The main problem is the delay currently occurring when the MD has to authorise an invoice of £10,000. The company can obtain a discount of 10% if payment is made in 10 days. This is not achievable currently and the MD wants to use IT to make this possible. As part of this re-engineering, restructuring may be required also - the MD believes that fewer staff are needed for invoice payment.

Activity

As a business analyst you have to produce a more efficient way of working. You should restructure the workflow by filling in a blank table. You should also write down assumptions about changed roles and give details of new software needed to support the new workflow. You can assume each member of staff has access to a networked PC and the MD has access to a notebook with fax/modem that they use twice daily. See Table 9.3.

Table 9.2

Flow process chart for invoice processing - original situation

No.	Task description	Chart symbols	Distance (m)	Average time (hours)
1	Receive invoice, stamp date	○⇄□D▽	–	–
2	To first payable clerk	○→□D□▽	50	5
3	On first payable clerk's desk	○→□D▽	–	1
4	Write and attach purchase order	●⇄□D▽	–	0.1
5	To cost accountant	○→□D▽	20	5
6	On cost accountant's desk	○→□D▽	–	5
7	Code to appropriate job number	●⇄□D▽	–	0.1
8	Return to first payable clerk	○→□D▽	20	5
9	On first payable clerk's desk	○→□D▽	–	1
10	Make copies	●⇄□D▽	–	0.1
11	To managing director	○→□D▽	200	5
12	On managing director's desk	○→□D▽	–	48
13	Reviewed and approved by MD	●⇄□D▽	–	0.1
14	To second payable clerk	○→□D▽	200	5
15	On second payable clerk's desk	○→□D▽	–	1
16	Add vendor number and due date	●⇄□D▽	–	0.1
17	Write to accounts payable ledger in accounting systems	●⇄□D▽	–	0.5
18	Pay invoice – write cheque	●⇄□D▽	–	0.1
19	To file clerk	○→□D▽	20	5
20	On file clerk's desk	○⇄□D▽	–	1
21	File invoice	●⇄□D▽	–	0.1

Table 9.3

Flow process chart for invoice processing - re-engineered process

No.	Task description	Chart symbols	Distance (m)	Average time (hours)
1	Receive invoice, stamp and scan	●→□D▼	–	0.1
2	Email to first payable clerk	○→□D▼	–	0.1
3	In worklist of first payable clerk	○→□D▼	–	5
4	Fill in purchase order, code job number	●→□D▼	–	0.5
5	Email to MD	○→□D▼	–	0.1
6	In MD's worklist	○→□D▼	–	12
7	Review and approval by MD	●→□D▼	–	0.1
8	Email to second payable clerk	○→□D▼	–	0.1
9	In worklist of second payable clerk	○→□D▼	–	5
10	Add vendor number and due date	●→□D▼	–	0.1
11	Key into accounting system	●→□D▼	–	0.1
12	Pay invoice and mark task as complete	●→□D▼	–	0.1

Event-driven process chain (EPC) model

One of the most widely used methods for describing business events and processes is the event-driven process chain method (EPC). This has been popularised by its application to re-engineering of enterprises performed using the SAP R/3 ERP product, which accounts for worldwide sales of several billion dollars. Over 800 standard business EPCs are defined to support the SAP R/3 system; they are intended to illustrate business rules clearly for interpretation by business users before enactment in the software. The different elements of the EPC model are shown in Table 9.5; these include the different types of dependencies previously reviewed in Table 9.4. Figure 9.5 is an EPC meta-model illustrating how the different elements relate to one another. This figure shows how business functions are triggered through transactions on *business objects*, which also lead to a *business event*. *Control flows* link the activities, events and logical operators. Entities or information objects are items such as sales orders or invoices.

Validating a new process model

Whichever method has been used to arrive at the process definition, we need to check that the process definition is realistic. When developing a wish list of process capabilities and corresponding business rules, the stages described by David Taylor in his book on concurrent engineering (Taylor, 1995) may be useful. He suggests that once new processes have been established they are sanity checked by performing a 'talk-through, walk-through and run-through'. Here, the design team will describe the proposed business process as a model in which different business objects interact. Once the model has been adjusted, the walkthrough stage involves more detail in the scenario and the design team will role-play the services the objects provide. The final run-through stage is a quality check in which no on-the-spot debugging occurs - just the interactions between the objects are described.

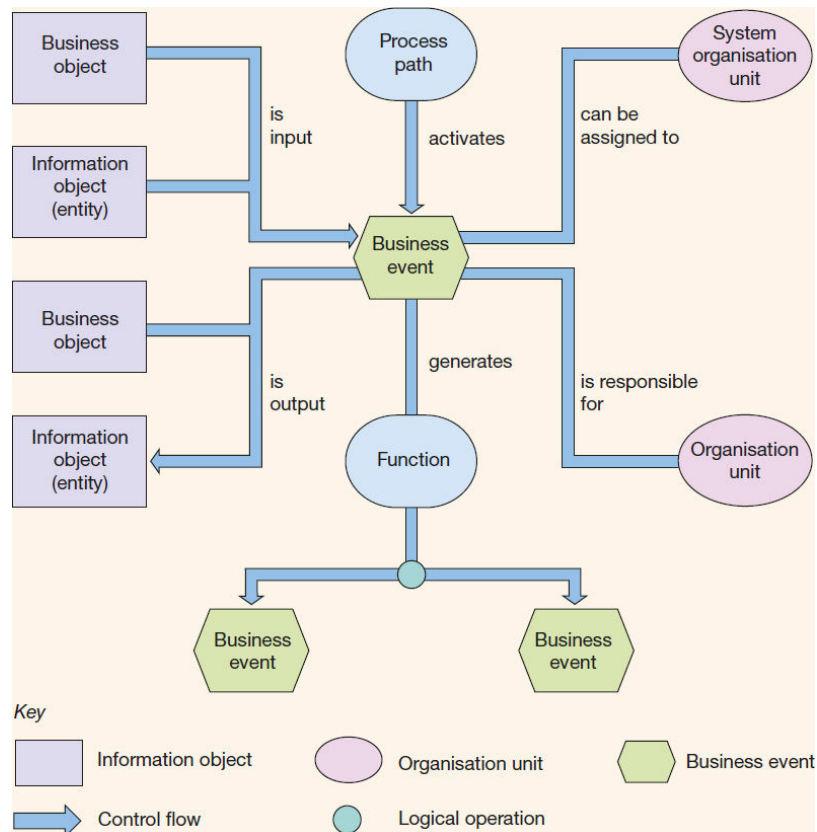


Figure 9.5

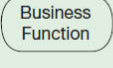
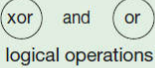
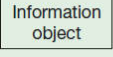
General model for the EPC process definition model

Table 9.4

Workflow dependencies at a node on a network diagram

Node type	Description	Summary
AND-SPLIT	Workflow splits into two or more parallel activities that all execute	
OR-SPLIT	Workflow splits into multiple branches of which only one is followed	
AND-JOIN	Multiple executing activities join into a single thread of control	
OR-JOIN	An exclusive alternative activity joins into a single thread of execution	
Iteration	Repetition of one or more workflow activities until a condition is met	
Must follow	No alternative paths exist	

Table 9.5**Elements of the event-driven process chain (EPC) model**

EPC symbol	Description of EPC element
 Business Event	An event occurs when there is a change in the status of a process. It occurs in response to completion of a function
 Business Function	A function is an activity or task that is usually completed by a person in the organisational unit responsible for the function. Alternatively it can be completed automatically through the workflow system
 xor and or logical operations	Control flow logic between processes is denoted by joins/splits as follows: xor – a single activity follows the completed process(es) and – an and-split gives rise to multiple subsequent functions or – an or-split gives a multiple-choice split
	Control flow forming the process network used to link other elements
 Information object	Data needed for completion of a function and acting as input to subsequent functions (workflow relevant data in the WfMC definition). Also known as entity
 Organisational unit	The unit responsible for the execution of a function

Data modelling

Data modelling of digital business and e-commerce systems uses well-established techniques such as normalisation that are used for relational database analysis and design. As a consequence, this section is brief in comparison with that on process modelling, which introduces some novel techniques. Some basic definitions are given in this section as a reminder of key terms. Before we start it is worth mentioning that the advent of data mining and object-orientated approaches has meant increasing use of non-relational database design. These are outlined further in Chapters 6 and 11 of Bocij *et al.* (2008). The approach we use to explore data modelling for e-commerce is to use examples that identify typical elements of data modelling for a sell-side e-commerce system. We will use ER (entity relationship) modelling to review typical structures for these databases. In simple ER modelling there are three main stages.

Entity

A grouping of related data, such as customer entity, implemented as a table.

Database table

Each database comprises several tables.

Attribute

A property or characteristic of an entity, implemented as a field.

Field

Attributes of products, such as date of birth.

Record

A collection of fields for one instance of an entity, such as Customer Smith.

Social sign-in

Users or members of sites can sign-in with their social network accounts such as Google+, Facebook or LinkedIn through use of APIs exchanging data between different web services.

Relationship

Describes how different tables are linked.

Primary key

The field that uniquely identifies each record in a table.

Secondary key

A field that is used to link tables, by linking to a primary key in another table.

1 Identify entities

Entities define the broad groupings of information such as information about different people, transactions or products. Examples include customer, employee, sales orders, purchase orders. When the design is implemented, each design will form a **database table**.

2 Identify attributes for entities

Attributes describe the characteristics of any single instance of an entity. For example, the customer entity has attributes such as name, phone number and email address. When the design is implemented, each attribute will form a **field**, and the collection of fields for one instance of the entity such as a particular customer will form a **record**.

With the growth in use of social media services, there is a need for businesses to link customer data from different sources. The development of APIs from social networks to enable **social sign-in** has helped with this (Box 9.2).

3 Identify relationships between entities

The **relationships** between entities require identification of which fields are used to link the tables. For example, for each order a customer places we need to know which customer has placed the order and which product they have ordered. As is evident from Figure 9.6, the fields 'customer ID' and 'product ID' are used to relate the order information between the three tables. The fields that are used to relate tables are referred to as 'key fields'. A **primary key** is used to uniquely identify each instance of an entity and a **secondary key** is used to link to a primary key in another table. In Figure 9.6 the primary key of the customer table is customer ID, but the field customer ID in the order table is here a secondary key that links back to the customer table. This relationship is an example of a one-to-many relationship, since each customer may place many orders over the lifetime of the relationship.

Normalisation is an additional stage, not covered here, used to optimise the database to minimise redundancy or duplication of information. If you have previous experience in analysis and design for databases, complete Activity 9.3 to develop an ER diagram for a typical B2C company. If you do not have this experience then refer to the generic answers to gain an appreciation of how databases are structured.

Big Data and data warehouses

Digital business systems manage a vast number of transactions with data recorded for each. In 2012/2013 it became commonplace for businesses managing this issue to reference this issue as 'Big Data' rather than 'Data warehouse', a term that dates back to the 1990s. We introduce this concept in Box 9.3, showing how it reflects the opportunities to gain value from the increased volumes of data collected in today's digital business.

Box 9.2

The growth in social sign-in

Smart Insights (2013) explains that this is an approach that was first seen mainly on publishers' sites, but is being used more widely on other types of site such as retailer sites ao.com and Sears'

Shopyourway.com. You've almost certainly seen this on technology publisher sites such as Mashable, Stackoverflow or TechCrunch, which enable commenting through logging in/authentication through Facebook, Twitter, LinkedIn or OpenID.

The approach has the benefit that it can reduce the barriers to sign-in, which can reduce the effectiveness of permission marketing (Chapter 8). It has the disadvantage that if simple social sign-in is used, then no data will be collected about the user for profiling. This can, however, be used. Smart Insights (2013) reports on research that says that although 87% have seen social sign-in, only 25% use it regularly. According to research by Gigya (2015), the share of social sign-in in the third quarter of 2015 was:

- Facebook 64%
- Google 22%
- Twitter 6%
- Yahoo! 4%
- LinkedIn 2%
- Other 2%

The growth in social sign-in shows how it should be considered by all businesses that need to provide log-in to their services.

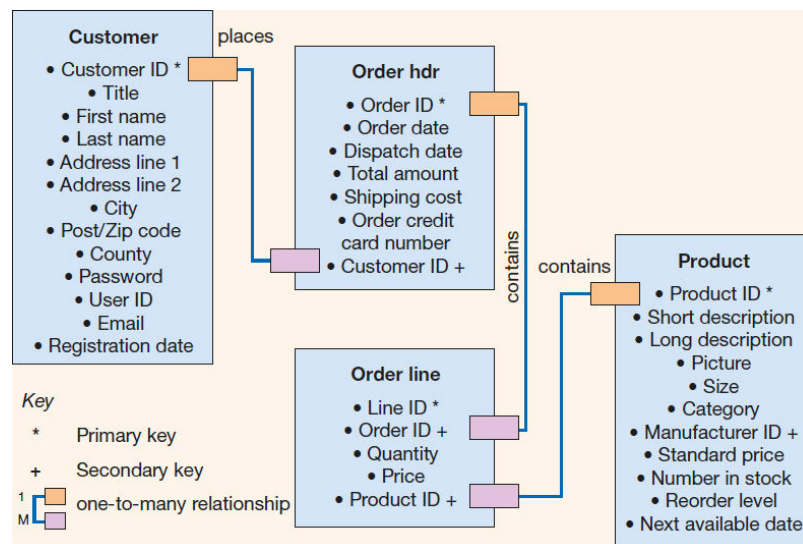


Figure 9.6

Generic B2C ER diagram

Activity 9.3

ER modelling for a B2C company

Purpose

To gain an understanding of the generic structure for transactional e-commerce databases.

Activity

Create a normalised ER diagram for the B2C company, or a B2C consumer transactional site.

For answers see Figure 9.6.

Comments

- Customer: may also have a separate delivery address.
- Order: many items may be required on each order, so each order header can have many line items.
- Product: includes catalogue information, such as description and a picture.
- Product: informs the customer of the number in stock and when they will be available.
- There will be a separate manufacturer table, not shown here.

Box 9.3

Analysis of the business applications of Big Data

What is Big Data?

Big Data has developed as a concept describing a business issue that needs to be managed to make the most of the opportunities available from the increasing volumes of data collected by business today. Managing Big Data also provides challenges of securing data and protecting customer privacy. IBM (2013), which has been one of the leaders in defining the scope and application of Big Data and has developed services for this, has defined the 4Vs characterising Big Data. The 4Vs show that the challenges of managing Big Data relate not only to volume:

- 1 Volume.** IBM estimated in 2013 that every day we create 2.5 quintillion bytes of data. This rate of growth means that 90% of the data in the world today has been created in the past two years alone! By comparison, all of Earth's oceans contain 352 quintillion gallons of water; if bytes were buckets, it would only take about 20 weeks of information-gathering to fill the seas.
- 2 Variety.** That's variety in formats of data from structured and unstructured data such as text, sensor data, audio, video, click streams, log files and more. New insights are found when analysing these data types together.
- 3 Velocity.** Velocity refers to exploiting data in real time. For example, catching online fraud requires that data must be reviewed rapidly to detect problems. For timesensitive processes such as catching fraud, Big Data must be used as it streams into your enterprise in order to maximise its value.
- 4 Veracity.** Companies need to be able to trust the information used to make decisions in terms of source, accuracy and relevance. With Big Data involving data from different sources, often presented as models, there is a danger that it may not be believed and so not be in the right format to support decisions.

The growth in volume of data enabled by Big Data has become possible through more forms of *instrumentation* that capture 'events' through time, according to Eaton *et al.* (2012), which can then be integrated into systems. This instrumentation can be simply data collection, where the events are a sequence of customer interactions with a business through its desktop or mobile site or social media - for example, through web analytics or social analytics. From an e-commerce and online marketing perspective, understanding the sequence of events is important to understand whether investments in media investments or building multichannel experiences is important. Machine-to-machine *interconnection* is also commonly involved in data collection; for example, sensors on cars or GPS tracking of items in supply chain systems are collated centrally. Eaton *et al.* (2012) note that Big Data systems such as Hadoop tend to be more likely to process unstructured data that doesn't need to be cleansed in comparison with traditional data warehouses, which are highly structured with data integrity enforced.

What, then, is the scope of Big Data applications? Andy Mendelsohn, Senior VP of Database Server Technologies at Oracle, explains it this way:

Today, we have our information systems for business intelligence, and people call them data marts and data warehouses, and they're loaded with all this transactional information from our transaction processing systems like E-Business Suite and other application vendors. And that

information is really valuable, the crown jewels of the company, that transactional data. It's not going away. So what's really important about Big Data is to understand there's a lot of this data, most of it's completely worthless to the business, but there are these gems, these nuggets of information, like the fact that a customer just had a baby. You want to take that information, you want to integrate it to your existing transactional data that you've got in your data warehouse and really use that to make better business decisions and make more money for your company.

Example applications of Big Data

IBM gives these simple examples of transformation of different types of real-time data that can be harnessed in digital business:

- Turn 12 terabytes of Tweets created each day into improved product sentiment analysis.
- Convert 350 billion annual meter readings to better predict power consumption.
- For time-sensitive processes such as catching fraud, Big Data must be used as it streams into your enterprise in order to maximise its value.
- Analyse 500 million daily call detail records in real time to predict customer churn faster.

Mendelsohn, quoted in Smart Insights (2013), gives three more detailed examples of Big Data applications. These show that Big Data applications often build on existing data about customer purchase transactions stored in data warehouses, but introduce additional types of data.

1. Car insurance sector example

This business already has an Exadata data warehouse, and it's already capturing all its transactional insurance information about its customers, their accidents, their policy information, etc., says Mendelsohn.

What they would like to do is enhance that data with a new kind of data that you can get from cars. Cars are now loaded with sensors that are capturing your every movement of what's going on out there and it's called car telematics data. What they would like to do is use that information to actually study the actual driving behaviour of their customers and use that to better understand maybe what their insurance rates should be, what their driving habits are and maybe even help customers be better drivers. This is actually a very classic-use case. So they're interested in augmenting their Exadata system with a BDA, Big Data Appliance.

2. Travel insurance sector example

This company is an online business comparing and providing holidays of different types. It's already capturing all the transactional data about its customers, what are the trips they're buying.

What they would like to do is augment that information with what's going on in their websites. They want to capture the web logs, they want to get social media data to better understand what their customers are up to, what are the trips they're anticipating maybe going on and combine that information with their existing information about their customers' previous transactions and use that to help make better promotional offers to the customers and grow their business.

3. Gaming sector example

This company is in the business of selling game consoles of various sorts and Internet games, and it also has a big Exadata data warehouse that's analysing that information. It is looking to augment its Exadata data warehouse with business decision analysis, and wants to use it for what you might expect: better understand what the customers are doing out in the games. 'They want to understand relationships between customers. One of the really interesting things in games is that people play games with each other. And you want to understand the social networks of people who are playing with each other because it's likely that if one person in that network wants to do something, the others

will want to do the same thing. So they can use that information to better upsell information in this game space.’ According to the company, integrating data alone does not generate value. Analytic modelling and tools to interpret the output is needed. They say ‘Advanced analytic models are needed to enable data-driven optimisation (for example, of employee schedules or shipping networks) or predictions (for instance, about flight delays or what customers will want or do given their buying histories or website behaviour)’. A plan is also needed to identify where models will create additional business value, who will need to use them, and how to avoid inconsistencies and unnecessary proliferation as models are scaled up across the enterprise. They also note the importance of decision support tools. They say:

The output of modeling may be strikingly rich, but it's valuable only if managers and, in many cases, frontline employees understand and use it. Output that's too complex can be overwhelming or even mistrusted. What's needed are intuitive tools that integrate data into day-to-day processes and translate modeling outputs into tangible business actions: for instance, a clear interface for scheduling employees, finegrained cross-selling suggestions for call-center agents, or a way for marketing managers to make real-time decisions on discounts.

A key design issue is how the information about these transactions can usefully be applied to improve the effectiveness and business contribution of these systems. In Chapter 10 we describe how web analytics systems are used to analyse and improve the effectiveness of sell-side e-commerce systems.

While independent analytics systems are available, larger companies are increasingly finding that to apply the insights available they have to integrate web analytics information with internal sales and ordering systems to form data warehouses.

Design for digital technology projects

The **design** element of creating a digital business system involves specifying how the system should be structured and how the end-user functionality and ‘back-end’ integration with other projects will be implemented.

System design

Defines how an information system will operate.

In the two *Focus on* sections in this chapter we look at two aspects of design that are of great importance to how digital business systems are perceived by customers - security and interface design. Before that, we consider the overall architectural design of digital business systems.

Architectural design of digital business systems

The starting point for design of digital business systems is to ensure that a common architecture exists across the company in terms of hardware and software technology, applications and business processes. This goal is summarised in Figure 3.4(b).

Digital business systems follow the same **client-server model** architecture of many business information systems created in the 1990s. For the digital business, the clients were traditionally employees, suppliers or customers’ desktop PCs which gave the ‘front-end’ access point to digital business applications. Today, increasingly, they are mobile devices such as smartphones and tablets, as shown by the trends in increasing mobile usage described in Chapters 3 and 4. These client devices are connected to a ‘back-end’ server computer via an intranet, extranet or Internet. In Chapters 3 and 6 we have discussed the management issues involved with selecting ‘Software as a Service’ (SaaS) digital business systems, which are client-server systems where the client is a web browser on a computer or mobile device, the server is located outside the organisation and the application process is commonly shared with many other companies in a ‘multi-tenancy’ model.

A key design decision in client-server systems is how different tasks involved in delivering a working application to the users are distributed between client and server. The typical situation for these tasks in a digital business system is:

- *Data storage.* Predominantly on server. Client storage is ideally limited to cookies, which are then related to the data for the user that are stored on database servers. SaaS systems often use a cloud of multiple servers in different locations to deliver these services more efficiently, as again described in Chapter 3.
- *Query processing.* Predominantly on the server, although some validation can be performed on the client.
- *Display.* Traditionally this is largely a client function, but with the increasing importance of mobile usage, responsive and adaptive mobile approaches are used, as described later in this chapter.
- *Application logic.* Traditionally, in early PC applications this has been a client function, but for digital business systems the design aim is to maximise the application logic processing, including the business rules on the server.

Client-server model

A system architecture in which end-user machines such as PCs, known as ‘clients’, run applications while accessing data and possibly programs from a server.

Debate 9.1

Digital business vs ERP architectures

‘Designing an appropriate architecture for digital business is effectively the same as the architecture for enterprise resource planning systems.’

A typical digital business architecture uses a **three-tier client-server** model where the client is mainly used for display with application logic and the business rules partitioned on a server, which is the second tier, and the database server is the third tier. Since most of the processing is executed on the servers rather than the client, this architecture is sometimes referred to as a ‘**thin client**’, because the size of the executable program is smaller. The application server provider (ASP) described in Chapter 3 is typically based upon the three-tier model. This is shown in Figure 9.7.

Although the three-tier model of a digital business system suggests a relatively simple architectural design, the reality is more complex. Different servers are needed, which combine applications logic and database storage for different requirements. These may be physically separate servers or may be combined. Figure 9.8 shows a typical digital business architecture. The purpose of each of the servers is as follows:

- *Web server.* Manages http requests from client and acts as a passive broker to other servers. Returns or serves web pages.
- *Merchant server.* This is the main location of the application logic and integrates the entire application by making requests to the other server components.

Three-tier client-server

The first tier is the client that handles display, second is application logic and business rules, third is database storage.

Thin client

An end-user access device (terminal) where computing requirements such as processing and storage (and therefore cost), are minimised.

- *Personalisation server.* Provides tailored content - may be part of commerce server functionality.
- *Payment commerce server.* Manages payment systems and secure transactions.
- *Catalogue server.* A document management server used to display detailed product information and technical specifications.
- *CRM server.* Stores information on all customer contacts.
- *ERP server.* Required for information on stock availability and pricing from the customer. Will need to be accessed for sales order processing and histories, and logistics for distribution.

It is evident that designing the method of integration between different components is not straightforward - creating a fully integrated digital business is not straightforward! As was discussed in Chapter 8, the best approach to simplifying the design is to reduce the number of suppliers of components to improve the ease of data and applications integration.

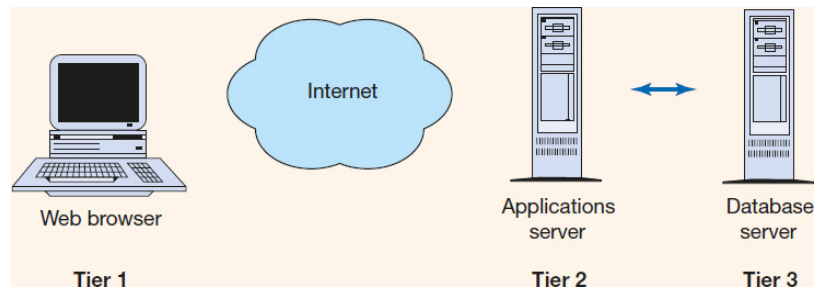


Figure 9.7

Three-tier client-server in a digital business environment

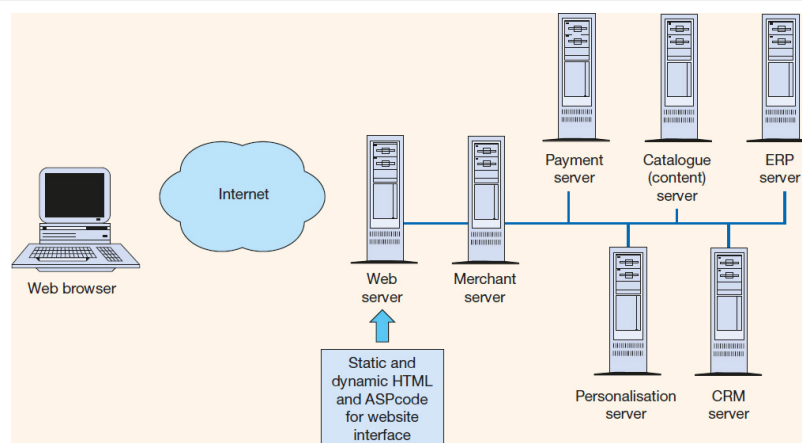


Figure 9.8

Digital business architecture for a B2C company

Focus on User-centred site design and customer experience management

User-centred design (UX)

Design based on optimising the user experience according to all factors, including the user interface, that affect this.

Customer experience management (CXM)

User experience improvements are broadened to consider the context of use to different physical locations or customer touchpoints across different digital platforms including desktop, mobile sites, apps, social networks and email marketing. Context of use includes device type, location and interactions with customer service.

Conversion rate optimisation (CRO)

Improving the commercial returns from a transactional site through increasing conversion to key goals such as sales, quotes, bookings or leads. CRO combines customer and competitor research with evaluation of customer behaviour using web analytics and AB and multivariate testing. (See Chapter 10 for details.)

Since digital business systems are often customer- or employee-facing systems, the importance of human-computer interaction in the design of web applications is high. Referring to website design, Nigel Bevan (1999a) says:

Unless a web site meets the needs of the intended users it will not meet the needs of the organization providing the web site. Web site development should be user-centred, evaluating the evolving design against user requirements.

Noyes and Baber (1999) explain that **user-centred design** (now commonly abbreviated to UX) involves more than user interface design. It can be conceived of as centring on the human, but surrounded concentrically by factors that affect usability such as user interface, computers, workplace and the environment. Here we will be specifically looking at the user interface.

As digital platforms have evolved, there are an increasing number of online brand presences, from company websites accessed over desktop computers to mobile sites and apps accessed via tablets and mobile phones to social presences on the major social networks such as Facebook, Instagram, LinkedIn and Twitter. Consequently, improvements to the UX of systems have been extended to consider the context of access of systems within the location of the user. This is known as **customer experience management (CXM)**. The development of UX to CXM has been prompted by:

- the use of smartphone and mobile devices;
- dual or multiscreening where a smartphone or tablet may be used alongside other devices, including TVs;
- multichannel shopping behaviour where mobile devices may be used in-store as part of the purchase decision, or the decision to purchase offline is prompted by online experiences and vice versa;
- the website experience being closely integrated to other online company platforms, including company social network pages and email communications;
- the integration of offline customer service with online customer service through services such as livechat and call-back integrated into websites.

The range of platforms that must be controlled as part of CXM is shown in Figure 9.11.

CXM is particularly important to multichannel or omnichannel transactional sites such as those for travel, retail and financial services. Forrester (2011) describes CXM in terms of different systems that can be used to deliver customer experience. These include web content management, personalisation, marketing automation, commerce platforms, customer service interaction management, on-site search, merchandising and combining analytics with test and optimisation. This description suggests the design challenge of creating an effective customer experience based on integration of different systems or services that form the overall experience. It also shows that CXM is not a one-off activity during creation of a new site, but an ongoing process of improvement using analytics and structured testing as part of a **conversion rate optimisation (CRO)** programme. CRO is increasingly being used by companies to improve the commercial contribution of online presence to a business, as the Smart Insights interview introducing this chapter shows. So, design for digital business should not be considered as a one-off investment when a new site or service is created, but as a continuous investment. This is further emphasised by the information in Box 9.4, which shows a decline in customer experience (CX).

User-centred design starts with understanding the nature of and variation within the user groups. According to Bevan (1999a), issues to consider include:

- Who are the important users?
- What is their purpose in accessing the site?
- How frequently will they visit the site?

Box 9.4

UK decline in customer experience (CX) scores

Recent research from KPMG Nunwood ('The Connected Experience Imperative', 2017) found that only a small number of UK firms are succeeding in making CX a source of value in their business. In fact, there was an overall decline in the average customer experience score and the gap between the US and UK has widened. UK consumers in 2017 are three times more likely to have a poor experience compared to 2016.

Improving the customer journey can lead to revenue increases

At the heart of CX is the customer journey, which is also a core building block of organisational design and a unit of economical measurement. Research suggests that brands that improve their customer journeys see revenues increase as much as 10-15%; they also lower their 'cost to serve' by 15-20%. Journey mapping makes these cost savings possible because there are generally significant inefficiencies over a typical customer journey, which often cover multiple touchpoints managed by many different parts of an organisation (website, sales, call centre, operations and logistics). For example, a call centre may respond to a customer complaint but not identify its root cause, so other customers will continue to complain about the same issue. In many cases, procedures are duplicated, and poor design slows down the overall process.

The KPMG Nunwood research has shown a clear correlation between the quality of the customer experience and the financial performance of a company. Consumers are increasingly migrating their custom to companies that create compelling experiences -for example, revenue and profit growth of the top ten brands was four times larger than the bottom ten. Also, the top 100 brands achieved year-on-year average profit growth that was double that of the bottom 100 brands.

The six pillars of experience excellence

Eight years of research and more than 1.85 million evaluations across multiple markets has identified six fundamental components of every great customer experience.

Personalisation is a defining pillar when it comes to advocacy and loyalty. Technological advances have meant that expectations have been reset - e.g. Uber has reset expectations around how taxis are used and Airbnb about staying away overnight. World-class organisations have to pay attention to two things: how expectations are formed and then how an organisation will meet those expectations. For example, Amazon strives to ensure that it will deliver within a three-day free delivery window. It sets the expectation and then uses a range of delivery methods to exceed it - the worst case is that it will meet the expectations it has set.

The golden rules of expectations

- 1 Set expectations accurately.** Think about carefully orchestrating an approach to expectation management, including setting and meeting the logistical expectations of the customer.
- 2 Agree timings.** Be clear on the plan and what the customer needs to do.
- 3 Respond more quickly than anticipated.** A rapid response to queries, issues or complaints is what customers expect. It's a hygiene factor, rather than a delight factor.
- 4 Use plain English - no jargon.** Vague promises lead to frustration; establish the ground rules from the outset.
- 5 Fulfil or exceed promises.** Failing to meet an overt promise is worse than not making a promise at all.
- 6 Guide carefully through the process.** Guiding the customer carefully through the process means that expectations can be accurately set and then delivered against.

Connective thinking

The heart of a customer-centered business is a connected enterprise - i.e. where the front, middle and back office processes are aligned and interconnected. It is also where partners and intermediaries

start with the customer and work backwards through the value chain. KPMG research has shown that enterprises are getting connected by making investments across eight major capabilities.

Finally, it is important to highlight that CX transformation takes time; a transformational plan of three to five years (minimum) is generally needed.

- What experience and expertise do they have?
- What nationality are they? Can they read English?
- What type of information are they looking for?
- How will they want to use the information: read it on the screen, print it or download it?
- What type of browsers will they use? How fast will their communication links be?
- How large a screen/window will they use, with how many colours?

Online customer experience

The combination of rational and emotional factors of using a company's online services that influences customers' perceptions of a brand online.

Box 9.5 gives a modern perspective on mistakes companies continue to make with their websites and suggests how companies can be persuaded to invest in usability initiatives.

Before we study best practice in user-centred design, it should be noted that usability and accessibility are only one part of the overall package that determines a visitor's experience (see Figure 9.9). In Chapter 5, in the section on competitor analysis, we explained how it is important to provide a promise of what the online representation of the brand will deliver to customers. The concept of online brand promise is closely related to that of delivering **online customer experience**. In this chapter, we will explore different practical actions that companies can take to create and maintain satisfactory online experiences. An indication of the effort required to produce a customer-centric online presence is given by Alison Lancaster, at the time the head of marketing and catalogues at John Lewis Direct and currently marketing director at Charles Tyrwhitt (www.ctshirts.co.uk), who says:

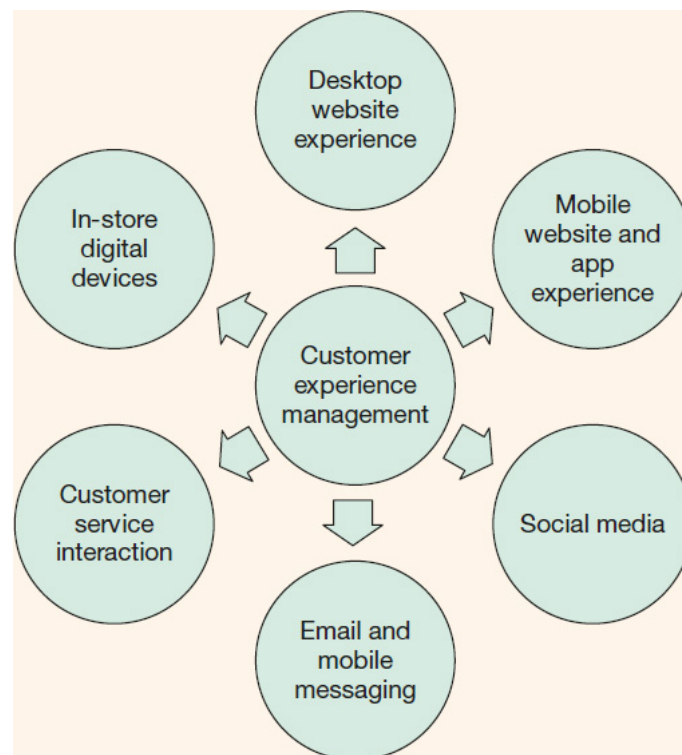


Figure 9.9

Elements of customer experience management (CXM)

A good site should always begin with the user. Understand who the customer is, how they use the channel to shop, and understand how the marketplace works in that category. This includes understanding who your competitors are and how they operate online. You need continuous research, feedback and usability testing to continue to monitor and evolve the customer experience online. Customers want convenience and ease of ordering. They want a site that is quick to download, well-structured and easy to navigate.

Box 9.5

Fourteen reasons businesses are failing at user-centred (UX) design

The importance of design is growing as we demand more digital services. However, despite all the rhetoric, organisations seem to be neutering their user experience (UX) and design teams through a lack of understanding and sponsorship. The following 14 elements are the most common challenges for UX and design:

1 No head of design

Design should be equal partner with technology and business, and to do this it needs to have a body at the top table. Without a head of design reporting into the CEO, unless a company has a culture of defacto user advocacy, it is that much harder to organise in a way that promotes user-centred design.

Even for companies that are not bringing a product to market, building effective services necessitates design thinking - or the question of 'What do our customers need and desire?'. GE's chief experience officer, Greg Petroff, summed up this triangle of design, tech and business in 2013 in the chart in Figure 9.10.

2 No understanding of UX across the business or of what roles are needed

The debate about UX and design is similar to the broader debate about digital transformation. There is still a lack of understanding across many businesses, often at **C-suite** level, about what good UX entails.

How many CEOs and CFOs understand what service design is, and what resources proper user research requires? How many CEOs and CFOs understand the disadvantages of waterfall project management, the complexity of multichannel customer journeys and the desire of consumers for transparency and control?

C-suite

This refers to top-level executives, who tend to have job titles beginning with 'C' - i.e. chief executive officer (CEO), chief financial officer (CFO), chief operating officer (COO), and chief information officer (CIO).

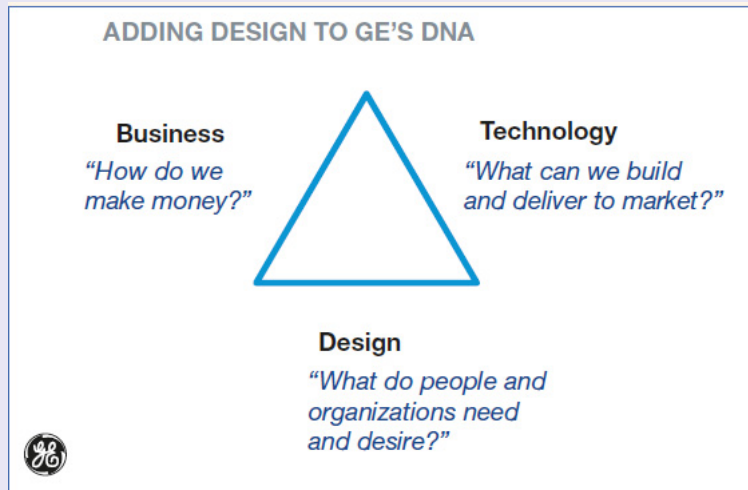


Figure 9.10

General Electric's Design DNA

Source: <https://econsultancy.com/blog/69118-14-reasons-businesses-are-failing-at-user-centred-design>

3 No involvement of UX or design professionals at project conception

This is a familiar refrain from many UX specialists and designers. The brief is passed down to them after being created by someone perhaps outside of the digital team and is consequently not fit for purpose. The job of UX specialists is then to make the best of a fudge.

Getting UX and design involved at the project brief stage, whether it be a marketing campaign or new product creation, will help to mitigate for ill-thought-out user needs.

4 UX and design teams are trying to work in an agile manner, when the rest of the business is working waterfall

Another problem of no sponsorship for design rears its head in the differences in ways of working between design teams and the rest of the organisation. When UX and design teams are trying to adopt agile methodology in order to prototype, test and iterate, this puts them at odds with development teams working with heavily detailed briefs and waterfall methodology. Design teams are therefore forced to compromise on their principles.

5 Too much focus on delivery, which means UX teams do not have the proper time to do their jobs

A consequence of waterfall perhaps, or simply misunderstanding of the UX function -businesses are often focused on delivery to the detriment of user-centred design.

6 A siloed digital team, which sits separately and often downstream from marketing

A common challenge of digital transformation is the siloed digital team, sitting separately from marketing, and this is a familiar refrain among UX and design teams. The effect of a siloed team is disjointed processes and digital services seen as an afterthought or follow-on, rather than an integral part of the whole.

7 Design is seen as a service

Far too often the extent of UX and design in a digital context is two to five specialists employed within the digital team. Effectively, these specialists represent UX and design as a service.

When design is seen as a service, it is used ad-hoc and off the shelf, in a way that is antithetical to the concept of user-centred design.

The Design Council is clear in its description of three levels of design within the organisation. The most immature is 'design as a service', next is service design teams that are equal with marketing and contribute from the beginning of product or service design, and the holy grail is strategic design, where design shapes business strategy.

8 Old design guidelines, made for print, with little or no consistency

How often have you seen this? Design guidelines, originally shaped for print, not updated properly, not adopted properly and with colleagues wondering how design consistency can be achieved.

It is no coincidence that many organisations with designers at the top table also have public design guidelines. Aviva and Co-op are cases in point. If you look at the Co-op design manual you'll find design principles, content guidelines, assets, prototyping kits, pattern libraries, accessibility standards, supported devices, examples and archived versions of the manual.

9 Broken user journeys that are well known but not fixed

A consequence more than a reason, but something worth mentioning. Broken user experiences and customer journeys are fairly common and serve as an indictment of the understanding of UX within business. Where they exist they may do so for some time, as waterfall processes preclude teams from iterating.

10 Agencies kowtow to unknowledgeable clients

More agencies need to stand up to clients and resist taking on briefs that fail to meet user needs.

11 Stakeholders only trust stats or first-hand experience

Marketers and UX professionals often bemoan the difficulty of convincing stakeholders of the validity of their arguments. This struggle shows a lack of trust in user design, which comes from a lack of education, but also a focus on numbers rather than a focus on first-hand insight. Where managers may be used to looking at analytics and reports, they need to see user research first-hand and understand the impact of design decisions on the user journey.

12 A lack of workforce diversity

Design works best with a diverse team in terms of age, ethnicity, background and gender. Where organisations are failing to recruit a diverse workforce, insight into user needs is reduced.

13 UX teams are not working together across the business

Again, a product of having no design leadership. UX professionals may work separately in separate parts of the business, but with no central purpose. This means they are not particularly consistent or efficient. The next step for these organisations should perhaps be some consolidated centre of design (the internal consultancy).

14 Managers want shiny new things

We've all been there when a manager decides they want a chatbot, or an Alexa skill, or animation on the website when it is either not desired by users, not needed, or not a business priority. This is a yet another symptom of lack of education or understanding of the process of human-centred design.

And even in seemingly more innovative sectors, the challenges for incumbents keep coming. FinTech sets new standards for banking, pureplays do so for multichannel retailers, and online-only

services have already massively changed travel and real estate. User-centred design has been the catalyst for these changes, as consumers demand transparency, control, ease, security, and even fun. As digital becomes less of a relevant word over the next decade, design will still stand proud as a differentiator.

Source: Econsultancy (2017a)

You can see that creating effective online experiences is a challenge since there are many practical issues to consider, which we present in Figure 9.11. This is based on a diagram by de Chernatony (2001), who suggested that delivering the online experience promised by a brand requires delivering rational values, emotional values and promised experience (based on rational and emotional values). The factors that influence the online customer experience can be presented in a pyramid form of success factors, as is shown in Figure 9.11 (the different success factors reflect current best practice and differ from those of de Chernatony). The diagram also highlights the importance of delivering service quality online, as has been indicated by Trocchia and Janda (2003). Research by Christodoulides *et al.* (2006) has tested the importance of a range of indicators of online brand equity for online retail and service companies. This analysis was performed across these five dimensions of brand equity, assessed by asking the following questions:

1 Emotional connection

Q1: I feel related to the type of people who are [X]’s customers **Q2:** I feel like [X] actually cares about me

Q3: I feel as though [X] really understands me

2 Online experience

Q4: [X]’s website provides easy-to-follow search paths

Q5: I never feel lost when navigating through [X]’s website

Q6: I was able to obtain the information I wanted without any delay

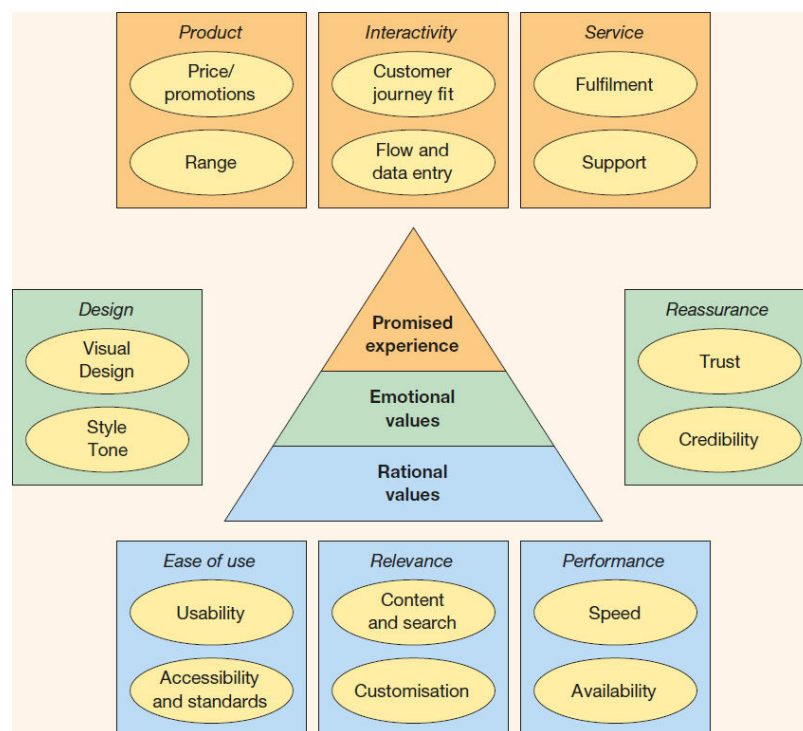


Figure 9.11

Different factors impacting the online customer experience

3 Responsive service nature

Q7: [X] is willing and ready to respond to customer needs

Q8: [X]'s website gives visitors the opportunity to 'talk back' to [X]

4 Trust

Q9: I trust [X] to keep my personal information safe

Q10: I feel safe in my transactions with [X]

5 Fulfilment

Q11: I got what I ordered from [X]'s website

Q12: The product was delivered by the time promised by [X]

Customer experience management framework

CX specialist Customer Input (www.customerinput.com) has designed a comprehensive management framework, which has been built on years of experience in research, consulting and customer experience optimisation.

The first step in implementing a CX strategy involves research and audit activities aimed at gaining a holistic view of the customer experience. This includes:

- **Customer experience lifecycle audit:** understanding the current breadth of channels and touch points and identifying new interaction channel opportunities.
- **Customer research:** understanding what constitutes customer value, and aligning the value provided per channel. It also entails customer segmentation.
- **Organisational alignment:** Understanding current processes and policies and aligning different departments towards customer insights.

Customers, as well as the company's products, services and policies, change over time so these exercises should be conducted periodically to re-evaluate the customer experience and realign the framework.

Customer experience design

Findings from the framework alignment phase are translated into effective solutions to enhance the delivery of great customer experiences. This is where science and creativity merge. Existing knowledge of a company and its customers can help seamlessly integrate the experience design within the overall research and design process. With an understanding of customer needs and value per channel and company processes, solutions can be designed to fix critical/negative experiences and create new customer value through innovation.

Implementation

An Econsultancy guide to 'Implementing a Customer Experience (CX) strategy' (2017b) provides the following ten tips to implementing CX best practice:

1 Define what great CX looks like

Price is no longer a significant driver of customer choice. Customers' changing lifestyles and mobile use dominate their expectations of CX. To meet those needs, brands should be focusing on seamless interactions - being present wherever the customer is and ready to transact. Despite knowing that mobile is defining how customers want to interact with companies, very few organisations are in any way ready to embrace that (more about this later in this chapter). Discover what your customer considers to be great CX but implement it in parallel with what CX looks like in general and be alive to trends that might make customer preferences shift in future.

2 Break down the channel focus

Organisations with a channel focus struggle to deliver great CX. Executives still seem to prefer measuring and designing CX on a channel-by-channel basis and then wonder why they find the landscape too complex when it comes to understanding the customer journey or meeting expectations. Channel focus makes companies

ignore how a campaign in one channel impacts another; it can't account for changes in consumer behaviour. Instead, focus on the CX goal and manipulate channel activity accordingly. This improves agility, particularly if you need to pivot to meet challenging conditions (this is covered in more detail in Chapter 10, under 'growth hacking').

3 It's all about the customer journey

Channel focus also fails when you're trying to build a view of the customer journey. Gathering data channel by channel results in incompatible outcomes. This is made worse still if strategy depends on first-party, identifiable data and the majority of customer interactions are on mobile where customers plunge into a cookieless black hole. Step back and aim for an overview of customer behaviours. Some granular data is useful but don't drown in it.

4 Take charge

Marketing may seem like the default owner of CX but many companies have no single person or department driving the strategy. It's easy to think of CX on a conceptual level, rather than as a defined strategy. As a result, organisations tend to believe it's alright to leave it somewhat rudderless while they get on with the very concrete business of building ad campaigns or customer service centres.

By defining a goal for CX, it will become clear which person/people have the skills to deliver it. Even if there isn't yet a full acceptance of the value of CX across an organisation, creating a working party with a clearly defined leader at its helm will help anchor CX in business reality.

5 Brand building is fundamental to differentiation

The subject of data has dominated the customer conversation for at least a decade and, as a result, the importance of building a brand has been muted. Today, companies can differentiate based on their varying ability to deliver on the practical elements of CX.

Eventually, the playing field will level. Brand will become even more fundamental to customer consideration. Adding values such as sense and emotion will become critical to differentiation. Brands that will win will begin tying brand values to experience today.

6 Create your own framework

The business environment is a rolling, evolving one. No one other than the youngest start-up is getting on board today on the ground floor. There are already legacy systems and behaviours to deal with, on top of trying to stay current by adapting to innovation. Building a framework that sets out the behaviours and goals the organisation needs to adopt to succeed at CX demonstrates strengths and weaknesses. It shows where organisations need to go back and clean up their act.

There is no such thing as a universal framework, but setting out a SWOT analysis (see Chapter 5) according to the major components of good CX delivery creates a plan of attack. It will also help identify if current goals are genuinely driving the company towards CX implementation or if, ultimately, the business has still failed to leave its comfort zone.

7 Technology is a tool, not a solution

Technology is seductive. Most companies' disillusionment with technology comes from having failed to put adequate foundations in place to help it deliver on its promises. For too many it turns out to be a very expensive plaster: initially solving a problem but inevitably failing and possibly causing more difficulties.

Organisations should be encouraged to bootstrap - how much of the challenge you're facing can be fixed by subtle changes in operating practices, better staff training and new perspectives - before parachuting in new technology? If new systems really are the solution, make sure the rest of the business is properly aligned to serve it - staff, data and integrated systems. If this is going to be difficult, explore the growing availability of managed services or outsourcing until the internal capacity increases.

8 Make room for innovation but choose wisely

In the same way that technology in general seems like the answer to CX challenges, marketers are keenly aware that their companies need to be seen to be innovative. Using new payment methods chatbots and AI support this but, again, foundations need to be in place to keep CX consistent. When exploring innovation adoption, make sure the experience it delivers will be consistent, be in keeping with the brand and can be maintained.

9 Leadership is key

To secure investment or even organisational alignment with CX, responsibility lies with the CEO. Some organisations are lucky enough to already have an agile customer focus baked into the culture. For others, it's a process of adaptation and evolution.

CX may be a movement with a great deal of evidence to support it but the leadership team has to examine and justify reacting to any number of pressures. Gaining support for CX implementations, even if it's iterative and has small beginnings, needs a strong proof of concept. Set goals, a clear path towards achieving them, and measure and communicate success.

10 Start now

The price of inaction is high. Customers demand better experience and there is no sector that is immune. Even in the notoriously price-sensitive utility sector, there is a recognition that implementing CX is essential to drive consideration and loyalty in the future. We have also seen in Box 9.5 that CX/UX takes a long time to get right. . . but when organisations do, there is a positive impact on the bottom line.

Usability

An approach to website design intended to enable the completion of user tasks.

Expert review

An analysis of an existing site or prototype, by an experienced usability expert who will identify deficiencies and improvements to a site based on their knowledge of web design principles and best practice.

Usability/user-testing

Representative users are observed performing representative tasks using a system.

Bruce Himelstein, consultant and former CMO at Ritz Carlton, has said (Econsultancy, 2017b):

Make a commitment to senior leadership that you are going to listen to the customer and do something about CX. Nothing happens overnight but the customers know when you're trying. They will give you a hall pass.

Usability

Usability is a key concept within user-centred design that is applied to the analysis and design for a range of products to define how easy they are to use. The British Standards Institute ISO Standard, Human-centred Design Processes for Interactive Systems (1999), defined usability as the:

extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.

You can see how the concept can be readily applied to website design - web visitors often have defined *goals* such as finding particular information or completing a particular action. In Jakob Nielsen's classic book, *Designing Web Usability* (Nielsen, 2000a), he describes usability as follows:

An engineering approach to website design to ensure the user interface of the site is learn-able, memorable, error free, efficient and gives user satisfaction. It incorporates testing and evaluation to ensure the best use of navigation and links to access information in the shortest possible time. A companion process to information architecture.

In practice, usability involves two key project activities. **Expert reviews** are often performed at the beginning of a redesign project as a way of identifying problems with a previous design and **usability testing** involves:

- 1 identifying representative users of the site and typical tasks;
- 2 asking them to perform specific tasks such as finding a product or completing an order;

3 observing what they do and how they succeed.

For a site to be successful, the user tasks or actions need to be completed:

- effectively - web usability specialists measure task completion; for example, only three out of ten visitors to a website may be able to find a telephone number or other piece of information;
- efficiently - web usability specialists also measure how long it takes to complete a task on-site, or the number of clicks it takes.

Jakob Nielsen best explains the imperative for usability in his 'Usability 101' (www.nngroup.com/articles/usability-101-introduction-to-usability). He says:

On the Web, usability is a necessary condition for survival. If a website is difficult to use, people leave. If the homepage fails to clearly state what a company offers and what users can do on the site, people leave. If users get lost on a website, they leave. If a website's information is hard to read or doesn't answer users' key questions, they leave. Note a pattern here? There's no such thing as a user reading a website manual or otherwise spending much time trying to figure out an interface. There are plenty of other websites available; leaving is the first line of defense when users encounter a difficulty.

For these reasons, Nielsen suggests that around 10% of a design project budget should be spent on usability, but often actual spend is significantly less.

Evaluating designs

A test of effective design for usability is, according to Bevan (1999b), dependent on three areas:

- 1 Effectiveness - can users complete their tasks correctly and completely?
- 2 Productivity (efficiency) - are tasks completed in an acceptable length of time?
- 3 Satisfaction - are users satisfied with the interaction?

User involvement is vital to assess the effectiveness of design, and focus groups have traditionally been used as part of a website prototyping approach and for conversion rate optimisation (CRO) (described in Chapter 10).

'Econsultancy' (2009) describes how insurance company Hiscox (www.hiscox.co.uk) approached a site redesign using three different models of user interaction that were prototyped:

- a distribution model in which visitors pick the type of customer they are, then choose their product;
- a retail model, where customers pick the product they want, then choose how to buy it;
- a needs-based model to help customers choose products.

Eyetracking is an effective technique for assessing design effectiveness. Eyetracking of prospects is offered by many usability agencies as part of a focus group (see, for example, eyetracking examples at www.youtube.com/user/SimpleUsability), or through remote testing through services such as www.whatusersdo.com.

Traditionally, usability tests have been completed during analysis and design, but many businesses now gain feedback continuously via tools. Smart Insights (2010) identifies five types of tools:

- 1 **Website feedback tools.** Sometimes described as 'Voice of Customer', these provide a permanent facility for customers to feed back by prompts on every page.
- 2 **Crowdsourcing product opinion software.** Feedback on new features or service delivery.
- 3 **Simple page or concept feedback tools.** These give basic feedback from other site users.
- 4 **Site exit survey tools.** These tools rate intent (reason to visit site) against satisfaction. Some companies use them for redesign, others for permanent tracking of site effectiveness.
- 5 **General online survey tools.** Many companies use generic low-cost or free survey tools to research audience opinions.

Eyetracking

A usability testing technique that provides a visual overlay of where visitors most commonly look at on the screen (heatmaps) and individual or common paths (gaze trails).

Use-case analysis

Use-case modelling

A user-centred approach to modelling system requirements.

Unified Modelling Language (UML)

A language used to specify, visualise and document the artefacts of an object-orientated system.

Web design personas

A summary of the characteristics, needs, motivations and environment of typical website users.

The **use-case method** of process analysis and modelling was developed in the early 1990s as part of the development of object-orientated techniques. It is part of a methodology known as **Unified Modelling Language (UML)** that attempts to unify the approaches that preceded it such as the Booch, OMT and Objectory notations. Jacobsen *et al.* (1994) give an accessible introduction and describe how object modelling can be applied to workflow analysis.

Persona and scenario analysis

Website designers and marketers use a similar model, but using different terminology. Marketers create **web design personas** for typical site visitors; this is a powerful technique for influencing the planning of online campaigns and the usability and customer-centricity of a website. Forrester (2005) researched the use of personas and found that ethnographic researchers averaged 21 interviews with typical users per project to create with an average of between four and eight personas and this cost between \$47,000 and \$500,000! Ford uses three buyer personas at Ford.com, Staples.com has seven personas for shoppers and Microsoft had seven for Windows XP.

Personas are essentially a ‘thumbnail’ description of a type of person. They have been used for a long time in research for segmentation and advertising, but in recent years have also proved effective for improving website design by companies that have applied this technique.

Customer scenarios are developed for different personas. Patricia Seybold in the book *The Customer Revolution* (Seybold and Marshak, 2001) explains them as follows:

A customer scenario is a set of tasks that a particular customer wants or needs to do in order to accomplish his or her desired outcome.

You will see that scenarios can be developed for each persona. Each scenario is split up into a series of steps or tasks, which can be best thought of as a series of questions a visitor asks. By identifying these questions, website designers identify the information needs of different customer types at different stages in the buying process.

The use of scenarios is a simple but very powerful web design technique that is still relatively rare in website design. Scenarios can also be used when benchmarking competitor sites as part of situation analysis. The following are some guidelines and ideas on what can be included when developing a persona. The start or end point is to give each persona a name. The detailed stages are:

- 1 Build personal attributes into personas
 - Demographic: age, sex, education, occupation and, for B2B, company size and position in buying unit
 - Psychographic: goals, tasks, motivation
 - Webographics: web experience (months), usage location (home or work), usage platform (dial-up, broadband), usage frequency, favourite sites.
- 2 Remember that personas are only models of characteristics and environment
 - Design targets
 - Stereotypes
 - Three or four usually suffice to improve general usability, but more are needed for specific behaviours
 - Choose one primary persona that, if satisfied, means others are likely to be satisfied.
- 3 Different scenarios can be developed for each persona, as explained further below. Write three or four, for example:
 - Information-seeking scenario (leads to site registration)
 - Purchase scenario - new customer (leads to sale)
 - Purchase scenario - existing customer (leads to sale).

Primary persona

A representation of the typical site user, who is strategically important to the effectiveness of the site, but one whose needs are challenging to fulfil.

Once different personas have been developed that are representative of key site-visitor types or customer types, a **primary persona** is sometimes identified. Wodtke (2002) says:

Your primary persona needs to be a common user type who is both important to the business success of the product and needy from a design point of view - in other words, a beginner user or a technologically challenged one.

She says that secondary personas can also be developed, such as super-users or complete novices. Complementary personas are those that don't fit into the main categories and that display unusual behaviour. Such complementary personas help 'out-of-box thinking' and offer choices or content that may appeal to all users. More information about personas can be found at: www.usability.gov/how-to-and-tools/methods/personas.html.

For another example of the development and application of personas, see Mini case study 9.1 about high-quality appliance manufacturer Miele.

Mini case study 9.1 How Miele Professional used personas for lead generation

Campaign aims

Miele is a leading manufacturer of high-quality appliances. Its commercial arm produces professional laundry, dishwashing and sterilising equipment. Miele Professional uses a national network of approved dealers to sell its appliances to businesses. The company was looking for a new way to effectively connect with, and nurture, their customer and prospect base that would run alongside its traditional advertising and PR activity. The campaign's key objectives were to:

- increase value of sales-ready leads;
- increase engagement with the Miele Professional brand.

The strategy

Miele Professional's prospect audience was analysed by comprehensive data mining and research. Available databases were divided by industry and decision-maker and a sample group was contacted by telephone and asked approximately ten pre-written questions regarding their pain points, solutions, objections and goals. The same groups were also sent an email, which included a link to an online version of the survey, therefore, increasing the changes of gathering larger amounts of information.

In addition to this, researchers were given the task of carrying out similar industry/decision-maker research via relevant forums, social media platforms and existing content. Once all of this information was gathered, results were analysed to identify key trends and patterns affecting the prospects. Any trends that emerged within a data segment were used to formulate individual persona documents for each decision-maker.

The outcome of the research was persona documents that clearly defined the target audience. These were owners and managers of small- and medium-sized enterprise care homes and hotels, most of whom were time-poor, dealing with tight budgets and trying to keep their occupancy rates high.

A segmented messaging hierarchy was produced and thought leadership content themes/topics planned around each of the decision-maker's burning issues. These documents played a central role throughout the campaign and in every decision - from content planning to creative conceptualising.

Communication channels

The content that was chosen for this campaign included:

- White papers
- Ebooks
- Infographics

The campaign made content accessibility a priority. For this reason, the documents were created in printable formats so they could be printed and read at the decision-maker's convenience. A series of short videos were also produced so that each decision-maker could use their preferred medium to digest the content.

To notify prospects of the relevant content, emails were sent to the databases that then drove contacts to the newly created, bespoke landing pages. Follow-up emails were sent in plain text format on behalf of relevant dealers. The pre-campaign research meant that audiences could be segmented, enabling marketers to send highly targeted direct mail to each decision-maker. Finally, telemarketers were used to follow-up prospects and leads, guiding them towards the next piece of relevant content and directing them through the sales funnel.

Results

The results from the Miele Professional multichannel campaign speak for themselves. Not only did the use of content help to generate a target-exceeding ROI for the overall campaign, but it also helped introduce the contact database to a new form of marketing. Having been provided with relevant content, the decision-makers now understand its value and the benefits of working with industry experts. This new desire for more in-depth information means that 19% of sales revenue for Miele Professional is now delivered from content. Other results from the campaign included:

- 566 content downloads - 4.3% of the database;
- 276 inbound sales-ready leads driven purely by content;
- 1,206 leads generated from inbound and outbound follow-up (email and telemarketing);
- 23% uplift in general web leads compared with 2013 (785 leads in total);
- 19% of sales revenue now delivered from content, compared with 100% from outbound telemarketing before 2013;
- 202% increase in value per lead when generated from inbound content;
- 321% ROI;
- 2,260 total leads generated across the campaign.

Sources: http://cdn2.hubspot.net/hubfs/196544/Really_B2B_Case_Study_with_Miele_Professional.pdf?t=1512989436275

www.slideshare.net/ReallyB2B/b2b-marketing-with-success-kirsty-dawe-speaks-at-shoretel

<http://link.springer.com/article/10.1057/dddmp.2015.25>

Stages in use-case analysis

Actors

People, software or other devices that interface with a system.

Use-case

The sequence of transactions between an actor and a system that supports the activities of the actor.

The following stages are identified by Schneider and Winters (1998) for analysis using the use-case method.

1 Identify actors

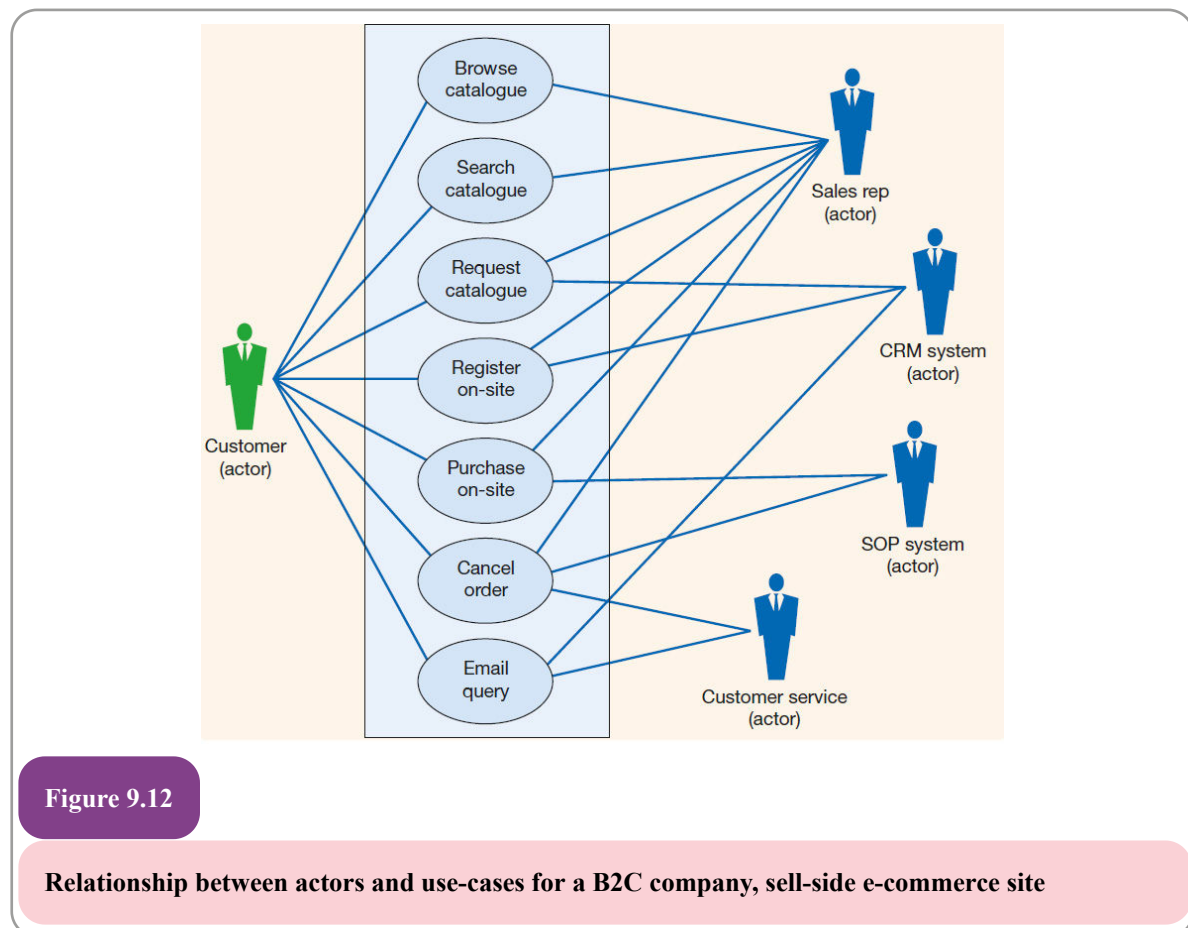
Actors are those people or objects that are involved in using or interacting with a system. They are not part of the system. The obvious actors are the users of a system. In a customer service application the actors may be a customer and the customer service person at the company. When performing process analysis to define use-cases we ask questions such as 'Who are the actors for this process?', 'What services do these actors provide?', 'What are the actors' tasks?' and 'What changes do they make to the status of the overall process?'. Actors may add information to the system or receive it through reporting facilities. Note that an employee who has several roles would be represented by two different actors.

Schneider and Winters (1998) point out that other actors include software and hardware control devices that change the state of the process and external systems that interface with the system under consideration. These

are effectively human actors who have been automated. Actors are denoted using the straightforward approach shown in Figure 9.12.

2 Identify use-cases

Use-cases are the different things users of a system want it to perform. These can be described as activities or tasks that are part of a dialogue between an actor and the system. They summarise the requirements of a system from each actor since they describe the functionality that will be provided by the system. Common use-cases are:



Talk-through

A user verbally describes their required actions.

Walk-through

A user executes their actions through using a system or mock-up.

Scenario

A particular path or flow of events or activities within a use-case.

- Starting up, shutting down or amending a system.
- Adding or amending information on a system. Examples include placing an e-commerce order or recording a complaint via email.
- Using a system for reporting or decision support.

Some use-cases for a B2C company are shown in Figure 9.12.

Bevan (1999b) also notes the importance of defining key scenarios of use. This stage, often known as 'knowledge elicitation', involves interviewing users and asking them to talk through their current or preferred way of working. Once the scenarios have been established, card-sorting techniques, as described by Noyes and Baber (1999), can be used. They describe how after interviewing users, typical tasks or actions were written

down on cards. These were then used to identify the sequence of actions users required from a menu system. They explain that the menu system devised was quite different from that envisaged by the software engineers. Card-sorting techniques can also be used to check that no stages have been missed during the **talk-through** - a **walk-through** of the cards is performed.

3 Relate actors to use-cases

Figure 9.12 also shows how actors relate to use-cases. It can be used to identify responsibilities and check for missing activities. For example, 'Check order status' is a use-case that is missing and the company would have to discuss whether it was acceptable for a customer service rep to place an order for a customer who was complaining about a particular product.

4 Develop use-case scenarios

A detailed **scenario** is then developed to detail the different paths of events and activities for each use-case. The primary scenario describes the typical case where nothing goes wrong. The use-case includes detail of activities or functions, what happens when there is an alternative or decision, or if there is an error. Pre-conditions for entering and postconditions for exiting the use-case are also specified.

Figure 9.13 shows a primary scenario for the complete e-commerce purchase cycle. A more detailed primary scenario for the particular use-case 'Register', written from the point of view of the customer actor from Figure 9.14, is as follows:

Pre-condition: A user is active on the website.

Scenario: Register.

Basic path:

- 1 Use-case starts when customer presses 'register'.
- 2 Customer enters name, postal address and email.
- 3 The post/postcode and email address (@ symbol) will be checked for validity after entry and the user prompted if there is an error.
- 4 The customer will select 'submit'.
- 5 The system will check all fields are present and the customer information will be passed to the CRM system.
- 6 A redirect page will be displayed to thank the customer for registering and provide an option to return to the home page, and the use-case ends.

Post-condition: The customer details have been saved.

Alternative paths: The customer can cancel at stages 2 to 4 before pressing 'submit' and the use-case ends.

It can be seen that by stating the use-case in this way, different issues can be clarified. After the primary scenario is complete, second or alternative scenarios can be developed and added to the primary scenarios as alternatives. For the register scenario, cancel is a secondary scenario; others could include error conditions such as when the postcode is invalid. Figure 9.15 illustrates a site with clear menu options that is consistent with use-case analysis.

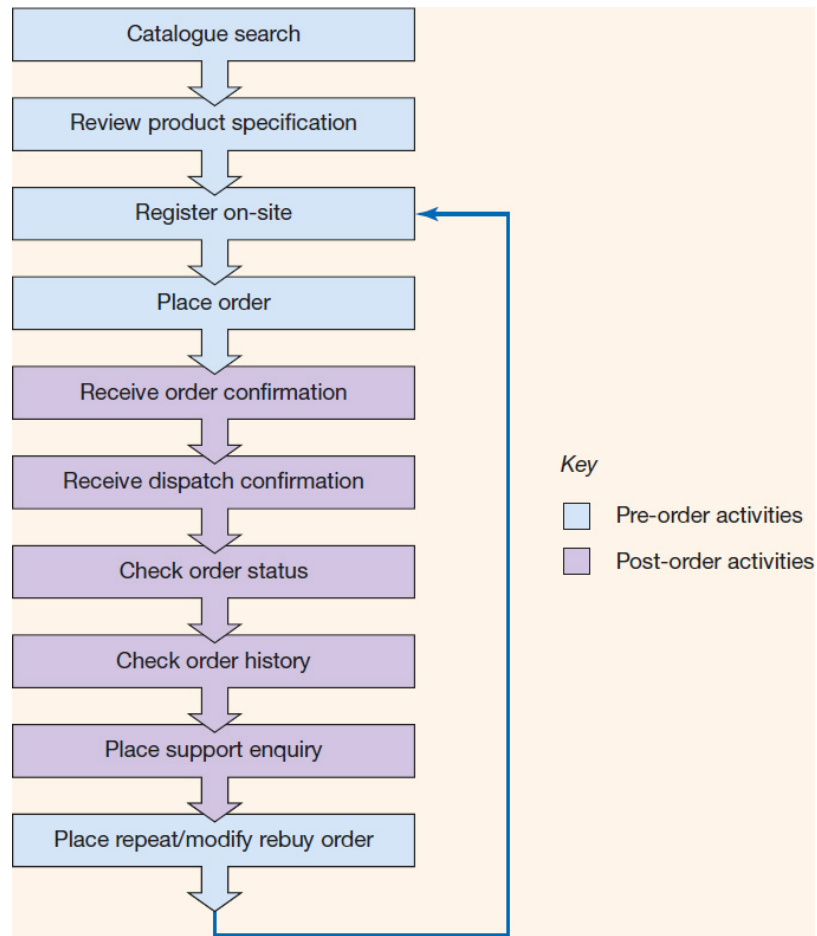


Figure 9.13

Primary use-case scenario for an entire e-commerce purchase cycle

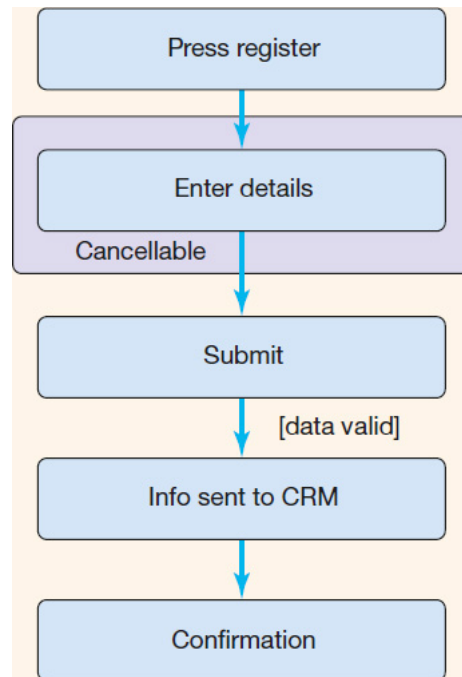


Figure 9.14

Primary scenario for the ‘register’ use-case for a B2C company



Figure 9.15

Clear user scenario options at the Aviva site

Source: www.aviva.co.uk/

Designing the information architecture

Information architecture

The combination of organisation, labelling and navigation schemes composing an information system.

Site map

A graphical or text depiction of the relationship between different groups of content on a website.

Rosenfeld and Morville (2002) emphasise the importance of **information architecture** to an effective website design. In their book, they give alternative definitions of information architecture.

- 1 *The combination of organisation, labelling and navigation schemes within an information system.*
- 2 *The structural design of an information space to facilitate task completion and intuitive access to content.*
- 3 *The art and science of structuring and classifying websites and intranets to help people find and manage information.*
- 4 *An emerging discipline and community of practice focused on bringing principles of design and architecture to the digital landscape.*

Essentially, in practice, creation of information architecture involves creating a plan to group information logically - it involves creating a site structure that is often represented as a **site map**. Note, though, that whole books have been written on information architecture, so this is necessarily a simplification! Well-developed information architecture is very important to usability since it determines navigation options. It is also important to search engine optimisation (Chapter 8), since it determines how different types of content that users may search for are labelled and grouped.

Planned information architecture is essential to large-scale websites that include a large volume of product or support documentation. Information architecture is less important to small-scale websites and brand sites, but even here, the principles can be readily applied and can help make the site more visible to search engines and usable. The benefits of creating information architecture include:

- A defined structure and categorisation of information will support user and organisation goals, i.e. it is a vital aspect of usability.
- It helps increase 'flow' on the site - a user's mental model of where to find content should mirror that of the content on the website.

Card sorting or web classification

The process of organising objects on the website in a consistent manner.

- Search engine optimisation - a higher listing in the search rankings can often be used through structuring and labelling information in a structured way.
- Applicable for integrating offline communications - ads or direct mail can link to a product or campaign landing page to help achieve direct response. A sound URL strategy, as explained in Chapter 8, can help this.
- Related content can be grouped to measure the effectiveness of a website as part of design for analysis, which is also explained below.

Card sorting

Websites are frequently designed from the perspective of the designer rather than the information user, leading to labels, subject grouping and categories that are not intuitive to the user. **Card sorting or web classification** should categorise web objects (e.g. documents) in order to facilitate information task completion or information goals the user has set.

Robertson (2003) identifies the following questions when using card sorting to aid the process of modelling web classification systems:

- Do the users want to see the information grouped by: subject, task, business or customer groupings, or type of information?
- What are the most important items to put on the main menu?
- How many menu items should there be, and how deep should it go?
- How similar or different are the needs of the users throughout the organisation?

Selected groups of users or representatives will be given index cards with the following written on them, depending on the aim of the card-sorting process:

- types of document;
- organisational key words and concepts;

- document titles;
- descriptions of documents;
- navigation labels.

The user groups may then be asked to:

- group together cards that they feel relate to each other;
- select cards that accurately reflect a given topic or area;
- organise cards in terms of hierarchy - high-level terms (broad) to low-level terms.

At the end of the session the analyst must take the cards away and map the results into a spreadsheet to find out the most popular terms, descriptions and relationships. If two or more different groups are used, the results should be compared and reasons for differences should be analysed.

Blueprints

Show the relationships between pages and other content components.

Blueprints

According to Rosenfeld and Morville (2002), **blueprints**:

show the relationships between pages and other content components, and can be used to portray organization, navigation and labelling systems.

They are often thought of, and referred to, as site maps or site structure diagrams and have much in common with these, except that they are used as a design device clearly showing grouping of information and linkages between pages, rather than a page on the website to assist navigation.

Refer to Figure 9.16 for an example of a site structure diagram for a toy manufacturer website, which shows the groupings of content and an indication of the process of task completion also.

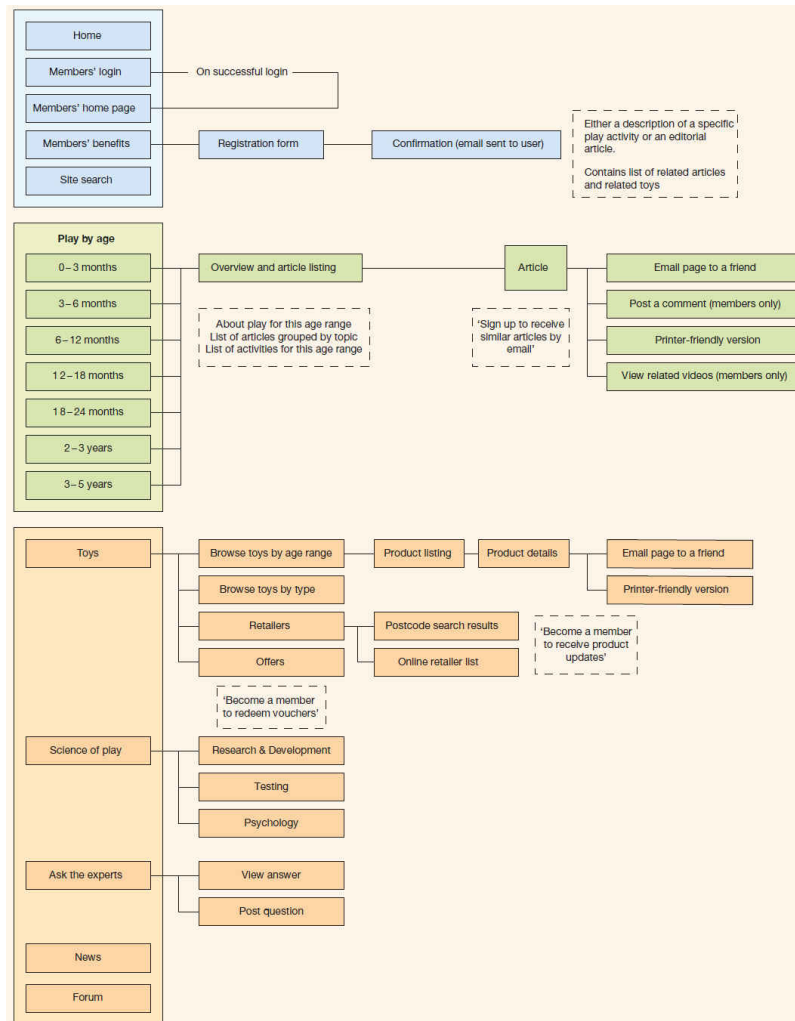


Figure 9.16

Site structure diagram (blueprint) showing layout and relationship between pages

Wireframes

Also known as ‘schematics’, a way of illustrating the layout of an individual web page.

Storyboarding

The use of static drawings or screenshots of the different parts of a website to review the design concept with user groups.

Wireframes

A related technique to blueprints is **wireframes**, which are used by web designers to indicate the eventual layout of a web page. Figure 9.17 shows that the wireframe is so called because it just consists of an outline of the page with the ‘wires’ of content separating different areas of content or navigation shown by white space.

Wodtke (2002) describes a wireframe (sometimes known as a ‘schematic’) as:

a basic outline of an individual page, drawn to indicate the elements of a page, their relationships, and their relative importance.

A wireframe will be created for all types of similar page groups, identified at the blueprint (site map) stage of creating the information architecture. A wireframe focuses on individual pages; the navigation focus

becomes where it will be placed on the website.

The process of reviewing wireframes is sometimes referred to as ‘**storyboarding**’, although the term is often applied to reviewing creative ideas rather than formal design alternatives. Early designs are drawn on large pieces of paper, or mock-ups are produced using a drawing or paint program.

At the wireframe stage, emphasis is not placed on use of colour or graphics, which will be developed in conjunction with branding or marketing teams and graphic designers and integrated into the site towards the end of the wireframe process. According to Chaffey and Wood (2005), the aim of a wireframe will be to:

- integrate consistently available components on the web page (e.g. navigation, search boxes);
- order and group key types of components together;

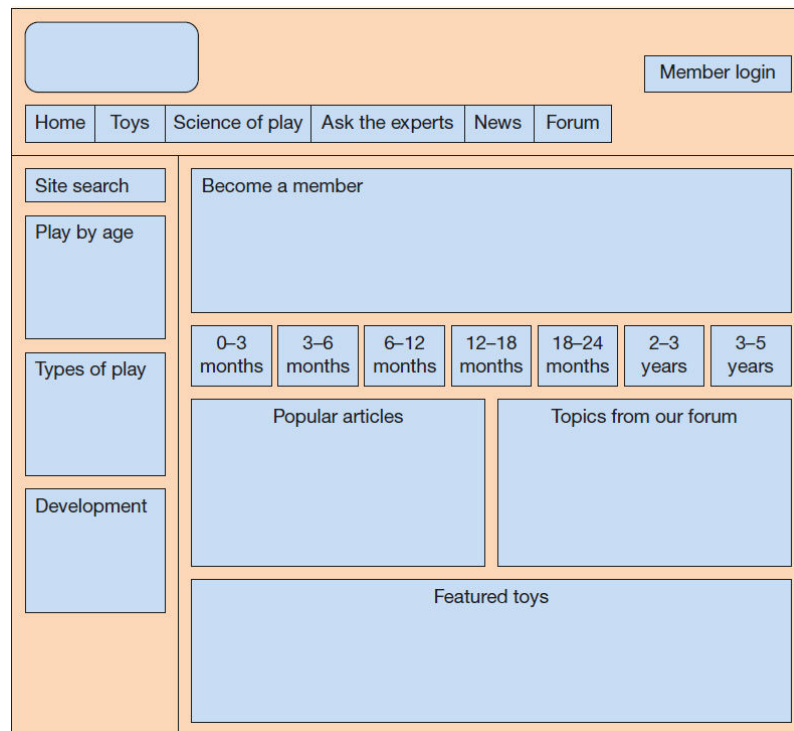


Figure 9.17

Example wireframe for a children's toy site

Page template

A standard page-layout format that is applied to each page of a website. Typically defined for different page categories (e.g. category page, product page, search page).

Cascading Style Sheets (CSS)

A simple mechanism for adding style (e.g. fonts, colours, spacing) to web documents. CSS enables different style elements to be controlled across an entire site or section of site.

Customer orientation

Developing site content and services to appeal to different customer segments or other members of the audience.

- develop a design that will focus the user on the core messages and content;
- make correct use of white space to structure the page;
- develop a page structure that can be easily reused by other web designers.

Common wireframe or template features you may come across are:

- navigation in columns on left or right and at top or bottom;

- header areas and footer areas;
- ‘slots’ or ‘portlets’ - these are areas of content such as an article or list of articles placed in boxes on the screen; often slots will be dynamically populated from a content management system.

Slots on the home page may be used to:

- summarise the online value proposition;
- show promotions;
- recommend related products;
- feature news, etc;
- contain ads.

Wireframes are then transformed into physical site design **page templates**, which are now created using standardised **Cascading Style Sheets (CSS)** that enable a standard look and feel to be enforced across different sections of the site.

The standards body W3C (www.w3.org) defines Cascading Style Sheets (CSS) as *a simple mechanism for adding style (e.g. fonts, colors, spacing) to Web documents*.

CSS enables different style elements to be controlled across an entire site or section of site. Style elements that are commonly controlled include:

- typography;
- background colour and images;
- borders and margins.

A style sheet consists of a series of rules that control the way selected elements should be displayed. For example:

```
body {font-family: Verdana, Arial, Helvetica, Sans Serif, Sans; font-size: 0.7em; text-align: left;}
```

In this example, the HTML ‘body’ tag is the *selector* and the required style for text defined between the curly brackets is the *declaration*. The benefits of CSS are:

- *Bandwidth* - pages download faster after initial page load since style definitions only need to be downloaded once as a separate file, not for each page.
- *More efficient development* - through agreeing site style and implementing in CSS as part of page templates, it is more efficient to design a site.
- *Reduces updating and maintenance time* - presentational mark-up is stored in one place separate from the content, making it quicker to update the site globally.
- *Increased interoperability* - adhering to W3C recommendations helps with support of multiple browsers.
- *Increased accessibility* - users can more readily configure the way a site looks or sounds using browsers and other accessibility support tools. The site is more likely to render on a range of access platforms such as PDAs and smartphones and appear well formatted on printers.

Customer orientation

A well-designed site will have been developed to achieve **customer orientation** or customer-centricity. This involves the difficult task of trying to provide content and services to appeal to a wide range of audiences. For a B2B company, the three main types of audience are customers, other companies and organisations, and staff. The detailed breakdown of these audiences is illustrated in Figure 9.18. Visit the Dell website (www.dell.com) to see how Dell segments its customer base on the home page into:

Marketing-led or commercial-led site design

Site design elements are developed to achieve customer acquisition and retention and communication of marketing messages.

Persuasion marketing

Using design elements such as layout, copy and typography, together with promotional messages, to encourage site users to follow particular paths and specific actions rather than giving them complete choice in their navigation.

- small office and home users;

- small businesses;
- medium businesses;
- large businesses;
- corporates;
- government organisations.

Think about how well this approach works. What would be your reaction to being classified as a mere small business or home owner? Do you think this is a valid approach? A similar approach, by Microsoft, is to offer specialised content for IS managers to help them in their investment decisions. Is a more straightforward, product-centric structure to the website appropriate?

Marketing-led or commercial-led site design is informed by marketing objectives and customer needs rather than a restricted view of information architecture or structuring a site simply around products, services or offers.

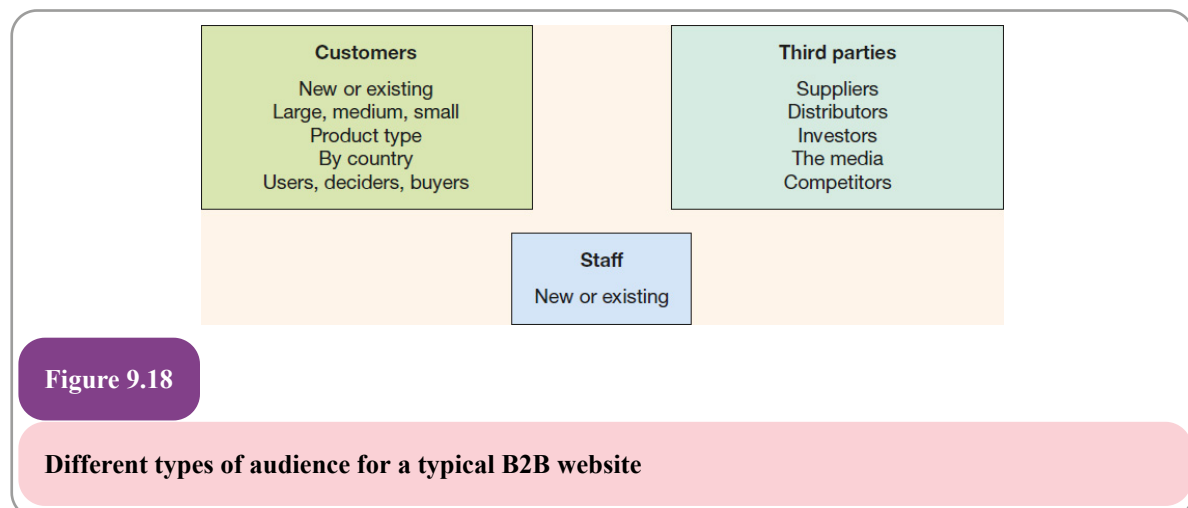
Some key business requirements from a site design based on this commercial approach are:

- *Customer acquisition* - the online value proposition must be clear. Appropriate incentives for customer acquisition and permission marketing such as those described in Chapter 8 must be devised.
- *Customer conversion* - the site must engage first-time visitors. Call to action for customer acquisition and retention offers must be prominent, with benefits clearly explained. The fulfilment of the offer or purchase must be as simple as possible to avoid attrition during this process.
- *Customer retention* - appropriate incentives, content and customer service information to encourage repeat visits and business must be available.
- *Branding* - the brand offer must be clearly explained and interaction with the brand must be possible.

Marketing-led site design is also known as **persuasion marketing**.

Consultant Bryan Eisenberg of Future Now (www.bryaneisenberg.com) is an advocate of persuasion marketing alongside other design principles such as usability and accessibility. He says:

during the wireframe and storyboard phase we ask three critical questions of every page a visitor will see:



- 1 What action needs to be taken?
- 2 Who needs to take that action?
- 3 How do we persuade that person to take the action we desire?

BJ Fogg (Fogg, 2009) has developed a model to inform persuasive design. The FBM asserts that for a person to perform a target behaviour, he or she must (1) be sufficiently motivated, (2) have the ability to perform the behaviour and (3) be triggered to perform the behaviour. These three factors must occur at the same moment, else the behaviour will not happen.

Elements of site design

Once the requirements of the user are established, we can turn our attention to the design of the human-computer interface. Nielsen (2000a) structures his book on web usability according to three main areas, which can be interpreted as follows:

- site design and structure;
- page design;
- content design.

Debate 9.2

Whither website design?

'Website design is too complex, and too important, to be left to marketers and IT staff untrained in its principles. Specialist usability professionals and psychologists should be present in every large e-commerce team.'

Today, the increasing importance of mobile design means that designing for mobile devices is a key consideration, so we have added a separate section on design for mobile platforms.

Site design and structure

The structures created by designers for websites will vary greatly according to their audience and the site's purpose, but we can make some general observations about design and structure. We will review the factors designers consider in designing the style, organisation and navigation schemes for the site.

Site style

An effective website design will have a style that is communicated through use of colour, images, typography and layout. This should support the way a product is positioned or its brand.

Site personality

The style elements can be combined to develop a personality for a site. We could describe site personalities in the same way we can describe people, such as 'formal' or 'fun'. This personality has to be consistent with the needs of the target audience. A business audience often requires detailed information and prefers an information-intensive style such as that of the Cisco site (www.cisco.com). A consumer site is usually more graphically intensive. Designers need to consider the constraints on the user experience, such as screen resolution and colour depth, the browser used and download speed. Rosen and Purinton (2004) have assessed the relative importance of design factors that influence a consumer (based on questionnaires of a group of students). They believe there are some basic factors that determine the effectiveness of an e-commerce site:

- (i) Coherence - simplicity of design, easy to read, use of categories (for browsing products or topics), absence of information overload, adequate font size, uncrowded presentation.
- (ii) Complexity - different categories of text.
- (iii) Legibility - use of 'mini home page' on every subsequent page, same menu on every page, site map.

You can see that these authors suggest that simplicity in design is important. Another example of research into website design factors supports the importance of design. Fogg *et al.* (2003) asked students to review sites to assess the credibility of different suppliers based on the website design. They considered these factors most important:

Design look	46.1%
Information design/structure	28.5%
Information focus	25.1%

Company motive	15.5%
Usefulness of information	14.8%
Accuracy of information	14.3%
Name recognition and reputation	14.1%
Advertising	13.8%
Bias of information	11.6%
Tone of the writing	9.0%
Identity of site sponsor	8.8%
Functionality of site	8.6%
Customer service	6.4%
Past experience with site	4.6%
Information clarity	3.7%
Performance on a test	3.6%
Readability	3.6%
Affiliations	3.4%

Information organisation schemes

The structures chosen to group and categorise information.

Site navigation scheme

Tools provided to the user to move between different information on a website.

Flow

Flow describes how easy it is for users of a site to move between the different pages of content of the site.

However, it should be borne in mind that such generalisations can be misleading based on the methodology used. Reported behaviour may be quite different from actual observed behaviour.

Site organisation

In their book on information architecture for the web, Rosenfeld and Morville (2002) identify several different **information organisation schemes**. These can be applied for different aspects of e-commerce sites, from the whole site through to different parts of the site.

Rosenfeld and Morville (2002) identify the following information organisation schemes:

- 1 Exact.** Here information can be naturally indexed. If we take the example of books, these can be: alphabetical - by author or title; chronological - by date; or for travel books, for example, geographical - by place. Information on an e-commerce site may be presented alphabetically, but this is not suitable for browsing.
- 2 Ambiguous.** Here the information requires classification. Again, taking the examples of books, the Dewey decimal system is an ambiguous classification scheme since the librarians classify books into arbitrary categories. Such an approach is common on an e-commerce site since products and services can be classified in different ways. Content can also be broken down by topic, by task or by audience. The use of metaphors is also common, where the website corresponds to a familiar real-world situation. The Microsoft Windows Explorer, where information is grouped according to Folders, Files and Trash, is an example of a real-world metaphor. The use of the shopping basket metaphor is widespread within e-commerce sites. It should be noted, however, that Nielsen (2000a) believes that metaphors can be confusing if the metaphor is not understood immediately or is misinterpreted.
- 3 Hybrid.** Here there will be a mixture of organisation schemes, both exact and ambiguous. Rosenfeld and Morville (2002) point out that using different approaches is common on websites but this can lead to

confusion, because the user is not clear what mental model is being followed. It is probably best to minimise the number of information organisation schemes.

Site navigation schemes

Devising a site that is easy to use is critically dependent on the design of the **site navigation scheme**. Hoffman and Novak (1997) stress the importance of the concept of **flow**, which essentially describes how easy it is for the users to find the information they need as they move from one page of the site to the next, but also includes other interactions such as filling in on-screen forms. Rettie (2001) summarises the meaning of flow and gives guidelines on how this concept can be used to enhance the visitor experience. These statements describing flow were used originally by Csikszentmihalyi (1990) and more recently by Rettie's research to test for a flow experience on a website:

Narrow and deep navigation

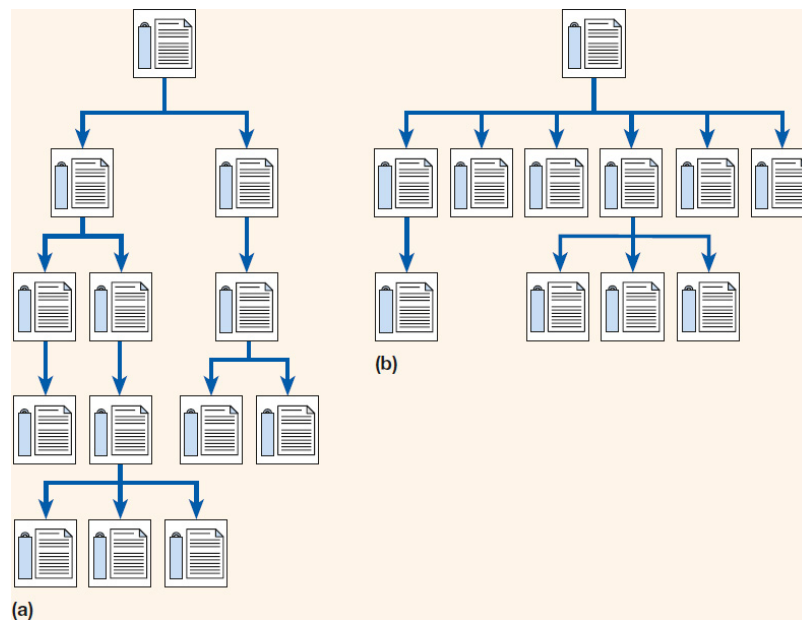
Fewer choices, more clicks to reach required content.

Broad and shallow navigation

More choices, fewer clicks to reach required content.

- 1 *My mind isn't wandering. I am not thinking of something else. I am totally involved in what I am doing. My body feels good. I don't seem to hear anything. The world seems to be cut off from me. I am less aware of myself and my problems.*
- 2 *My concentration is like breathing. I never think of it. I am really oblivious to my surroundings after I really get going. I think that the phone could ring, and the doorbell could ring, or the house burn down or something like that. When I start, I really do shut out the whole world. Once I stop, I can let it back in again.*
- 3 *I am so involved in what I am doing, I don't see myself as separate from what I am doing.*

Rettie (2001) suggests that the following factors limit flow: long download times, delays to download plug-ins, long registration forms, limited stimulation, boring sites, slow responses, sites that are not intuitive, navigation links that fail, challenge greater than skill, irrelevant advertising. Conversely, reversing these factors can improve flow: quick download times, alternative versions (e.g. text and graphics), automatic completion of forms, opportunities for interaction, rapid responses, navigation that creates choices, predictable navigation for control, segmentation by Internet experience. Most navigation systems are based upon a hierarchical site structure. When creating the structure, designers have to compromise between the two approaches shown in Figure 9.19. The **narrow and deep** approach has the benefit of fewer choices on each page, making it easier for the user to make their selection, but more clicks are required to reach a particular piece of information (see Figure 9.19(a)). The **broad and shallow** approach requires fewer clicks to reach the same piece of information, but the design of the screen potentially becomes cluttered (Figure 9.19(b)). These approaches are appropriate for the non-technical and technical audiences respectively. A rule of thumb is that site designers should ensure it only takes three clicks to reach any piece of information on a site. This implies the use of a broad and shallow approach on most large sites. This may also be beneficial for SEO purposes. Lynch and Horton (1999) recommend a broad and shallow approach and note that designers should not conceive of a single home page where customers arrive on the site, but of different home pages according to different audience types. Each of the pages in the second row of Figure 9.19(b) could be thought of as an example of a home page that the visitors can bookmark. Nielsen (2000a) points out that many users will not arrive on the home page, but may be referred from another site or advert to a particular page. He calls this process **deep linking**, and site designers should ensure that navigation and context are appropriate for users arriving on these pages.



Deep linking

Jakob Nielsen's term for a user arriving at a site deep within its structure.

As well as compromises on depth of links within a site, it is also necessary to compromise on the amount of space devoted to menus. Nielsen (2000b) points out that some sites devote so much space to navigation bars that the space available for content is limited. He suggests that the designer of navigation systems should consider the following information that a site user wants to know:

- *Where am I?* The user needs to know where they are on the site and this can be indicated by highlighting the current location and clear titling of pages. Chaffey *et al.* (2009) refer to this as *context*. Consistency of menu locations on different pages is also required to aid cognition. Users also need to know where they are on the web. This can be indicated by a logo, which by convention is at the top or top left of a site.
- *Where have I been?* This is difficult to indicate on a site, but for task-orientated activities such as purchasing a product, the display can show the user that they are at the *n*th stage of an operation, such as making a purchase.
- *Where do I want to go?* This is the main navigation system, which gives options for future operations.

To answer these questions, clear succinct labelling is required. Widely used standards such as Home, Main page, Search, Find, Browse, FAQ, Help and About Us are preferable. But for other particular labels it is useful to have what Rosenfeld and Morville (2002) call 'scope notes' - an additional explanation. These authors also argue against the use of iconic labels or pictures without corresponding text since they are open to misinterpretation and take longer to process. Since using the navigation system may not enable the user to find the information they want rapidly, alternatives have to be provided by the site designers. These alternatives include search, advanced search, browse and site map facilities.

Page design

The page design involves creating an appropriate layout for each page. The main elements of a particular page layout are the title, navigation and content. Standard content such as copyright may be added to every page as a footer. Issues in page design include:

- *Page elements.* The proportion of page devoted to content compared to all other content such as headers, footers and navigation elements. The location of these elements also needs to be considered. It is

conventional for the main menu to be at the top or on the left. The use of a menu system at the top of the browser window enables more space for content below.

- *The use of frames.* This is generally discouraged.
- *Resizing.* A good page layout design should allow for the user to change the size of text or work with different monitor resolutions.
- *Consistency.* Page layout should be similar for all areas of the site unless more space is required, for example for a discussion forum or product demonstration.
- *Printing.* Layout should allow for printing or provide an alternative printing format.

Content design

Copywriting for the web is an evolving art form, but many of the rules for good copywriting are as for any medium. Common errors we see on websites are:

- too much knowledge assumed of the visitor about the company, its products and services;
- using internal jargon about products, services or departments - using undecipherable acronyms.

Web copywriters also need to take account of the user reading the content on-screen. Approaches to deal with the limitations imposed by the customer using a monitor include:

- writing more concisely than in brochures;
- chunking or breaking text into units of 5-6 lines at most; this allows users to scan rather than read information on web pages;
- using lists with headline text in larger font;
- never including too much on a single page, except when presenting lengthy information such as a report, which may be easier to read on a single page;
- using hyperlinks to decrease page sizes or help achieve flow within copy, either by linking to sections further down a page or linking to another page.

Hofacker (2001) describes five stages of human information processing when a website is being used. These can be applied to both page design and content design to improve usability. Each of the five stages summarised in Table 9.6 acts as a hurdle, since if the site design or content is too difficult to process, the customer cannot progress to the next stage.

Using these layers we can map content across different access levels to produce a site that is integrated across the needs of its audiences. This also relates to the section on security, since different access levels may be given for different information.

Table 9.6

A summary of information web stages described by Hofacker (2001)

Stage	Description	Applications
1 Exposure	Content must be present for long enough to be processed	Content on banner ads may not be on-screen long enough for processing and cognition
2 Attention	User's eyes will be drawn towards headings and content, not graphics and moving items on a web page (Nielsen, 2000a)	Emphasis and accurate labelling of headings is vital to gain a user's attention. Evidence suggests that users do not notice banner adverts, suffering from 'banner blindness'
3 Comprehension and perception	The user's interpretation of content	Designs that use common standards and metaphors and are kept simple will be more readily comprehended
4 Yielding and acceptance	Is the information (copy) presented accepted by	Copy should reference credible sources and present counter-arguments as necessary

	customers?	
5 Retention	As for traditional advertising, this describes the extent to which the information is remembered	An unusual style or high degree of interaction leading to flow and user satisfaction is more likely to be recalled

Source: Adapted from Hofacker (2001)

Mobile design

In Chapter 3 we explained the increasing adoption of mobile sites. The challenge of the many options for mobile site design has been nicely summarised by ex-eBay designer Luke Wroblewski (Wroblewski, 2011), who when lead designer at start-up BagCheck said:

As use of mobile devices continues to skyrocket across the globe, we're seeing more ways to tackle the challenge of creating great web experiences across multiple devices. But which approach is right for any given project?

For us site performance and speed of development were crucial. So many of the decisions we made were designed to make both of these as fast as possible. As part of our focus on performance, we also had a philosophy of 'just what's necessary'. This meant sending things to devices (and people) that didn't actually need them made us squeamish. We liked to optimize. With a dual template system we felt we had more optimization of: source order, media, URL structure, and application design.

We will now review four common options for mobile site development identified by Thurner (2016):

- A** Responsive design (same content and domain, common styling downloaded for different devices).
- B** Adaptive design (same content and domain, different styling set by rules on server).
- C** HTML5 web app (independent of different app platform).
- D** Separate mobile domain (same content).

Mobile site design option A. Responsive design

Media queries

A styling approach within Cascading Style Sheets (CSS3) enabling the layout to change based on type of device at its scale.

Responsive design

Layout and formatting of website content is modified at the point of rendering to suit different screen resolutions and capabilities to produce a better experience to users of a range of desktop, tablet and smartphone devices using web development methods such as CSS and image scaling.

Adaptive design

Different layouts are applied to a site depending on the device and/or resolution. This can be achieved through rules implemented on the client device or on the server.

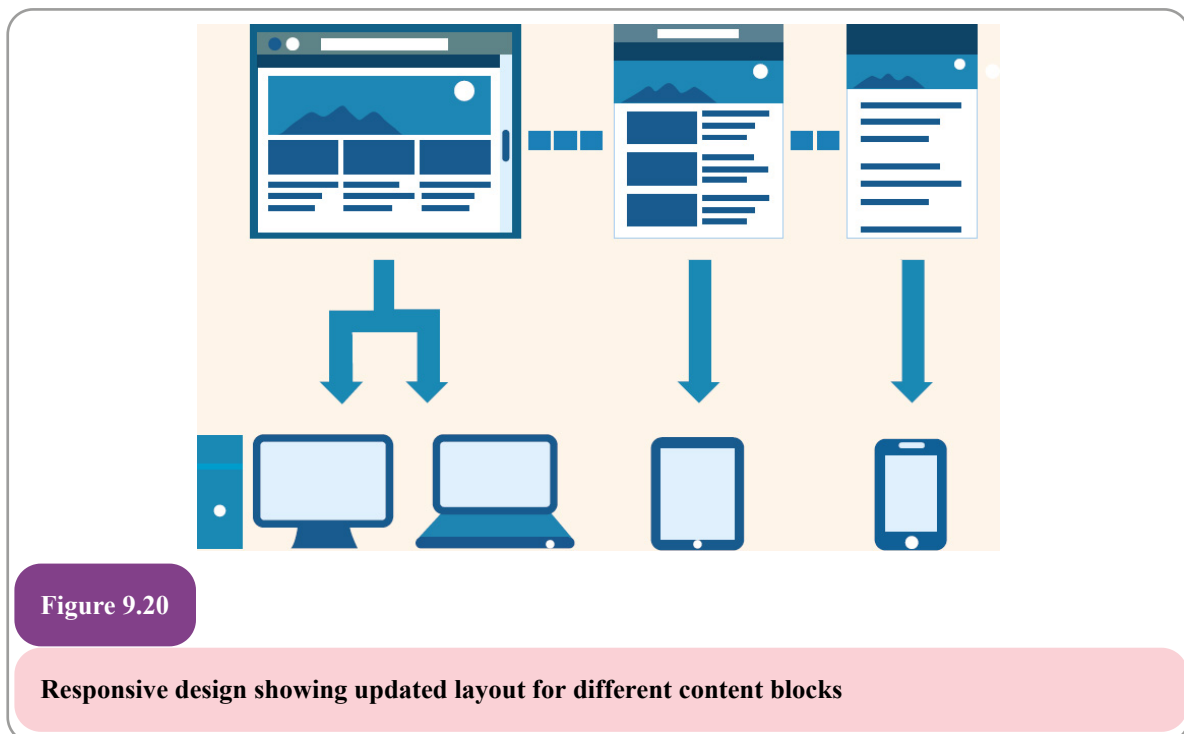
Today's multiple-device-using consumers expect to find content dynamically optimised for the screen they choose to use. This presents challenges, as screen resolutions and operating systems vary greatly. First introduced circa 2010, RWD is a popular method for creating mobile-optimised websites that work across smartphone, tablet and desktop. It enables a single version of the site and content. RWD has emerged as the default option for organisations to optimise their sites for mobile and tablet. Many web front-end developers champion RWD as it removes the need for separate sites. However, this alone doesn't mean it is the best option for all companies. Larger organisations may find adaptive web design (AWD) more suited to their requirements.

Technically speaking, RWD uses Cascading Style Sheets and a styling feature available from CSS3 known as **media queries**, which specifies how the page is laid out. Think of it as a flexible grid with fewer columns and more rows as the size of the browser viewport decreases. Blocks of content are moved and rescaled based on screen resolution, as shown in Figure 9.20.

While Google's high-profile support for RWD will boost its adoption by brands, it's not without its limitations. Critics claim it forces designers to compromise in order to deliver user designs that render across all devices, rather than design sites that maximise the functionality of different operating systems. The ongoing trade-off remains the same: any website should be as responsive as possible without sacrificing user experience for desktop, tablet and mobile screens. Remember: user experience must be based on the browsers' intent and context.

Mobile site design option B. Adaptive design

AWD can overcome the limitations of RWD by defining rules that minimise the need for styling and refine device-specific design. **Responsive design** and **adaptive design** are sometimes used interchangeably by those not 'in-the-know', but there are significant differences.



Technically speaking, adaptive design can be accomplished in two ways:

1 Server-based - a code on the server decides which design to deliver. This has the advantage that the code doesn't have to be downloaded. It is also more straightforward to change functionality.

2 Client-based - Javascript code running in the browser determines the design used. This may be technically easier to accomplish, but more code has to be downloaded resulting in slower load times.

AWD uses a series of static layouts based on 'breakpoints'. For example, a page may be designed with three different sizes: 320 for mobile phones, 760 pixels for tablets and 960 for desktop browsers. Unlike responsive (where the design responds continuously while you adjust a browser window), adaptive files don't respond once they are loaded. Instead, they detect the device size and call up the relevant-sized layout to view.

Using an AWD approach, the client or server can choose the layout to render pages. An important distinction from responsive is that it can also enhance or remove functionality based on the capabilities detected. So, potentially, a differentiated experience can be built for the specific intent of the mobile customer. If your customers are accessing your site on their smartphones while out shopping, their intent will be seeking store locations, product ranges, price comparisons and offers. When browsing at home on their PCs, laptops and tablets, they are more likely to seek more detailed product information, ratings and reviews. We believe the primary goal of the site must be to deliver content optimised for the context and intent of each customer's browsing experience.

Mobile site design option C. HTML5

The major game changer for brands creating a mobile web presence is HTML5, the browser technology that comes pre-installed on every smartphone. Leading companies in the sectors that have led the way in adopting mobile - namely retail, packaged goods, travel, financial services, publishing - have turned to HTML5 'web apps' in order to build once and target all mobile platforms in a single hit. This is more cost-effective and less labour-intensive than building different native apps for iOS, Android or Windows.

HTML5 browsers provide clear benefits for brands and users alike, including better provision of rich media - which could not be supported by legacy Wireless Application Protocol ('WAP') technology - the ability to access and use data submitted in previous browsing sessions, and accessibility regardless of signal strength.

HTML5 supporters include the IAB Mobile Marketing Center for Excellence. In an open letter to publishers and advertisers, the independent unit called upon industry insiders to embrace the mark-up language as its primary authoring technology for digital advertising, to enable better mobile advertising today and cross-platform advertising in the near future.

The IAB's open letter reads (IAB, 2015):

To guarantee the ads you pay for actually appear and look great on all screens, you should insist to your ad agencies that your advertising creative be developed in a mobile-compatible format. And the one open, industry-standard, universal format for building mobile-ready creative is HTML5.

HTML5 blurs the line between sites and apps and challenges the prominence and cashflow of app store hosts. As Mini case study 9.2 shows, HTML5 web apps allow developers and publishers to circumnavigate the 30% commission charged by Apple and Google on app download costs and a further 30% on products and subscriptions sold 'in-app'. Both costs can be eliminated with HTML5-based sites.

Mini case study 9.2

FT.com adopts HTML5 for its iOS web app

FT.com proves that HTML5 web apps are now providing clear benefits over OS-specific apps.

The success of the FT.com HTML5 web app shows that developing mobile platform-specific apps isn't the only option. In future, the dependence on app stores for each mobile native OS may seem quaint. The figures on digital publishing released by FT.com after the HTML5 app was launched show the importance of mobile:

- FT's total circulation grew 10% year-on-year in 2014, to nearly 720,000 across print and online.
- FT.com subscriptions grew 21% to almost 504,000.
- Digital now represents 70% of FT's total paying audience.
- Mobile is FT's fastest-growing channel, driving almost half of total traffic.

The FT does a great job in explaining the benefits of non-OS apps:

- They build a direct relationship with the user.
- Web apps' associated cost of processing payments is much lower than app store operator's revenue share.
- Search, sharing and bookmarking is better on the web.
- Web apps are not subject to app stores' approval processes, giving greater flexibility to release instantly and perform A/B testing.
- Not being reliant on an app store also removes the possibility that any regulation changes will have a negative business impact.
- Because a single web app supports multiple operating systems, the cost of development and testing can be significantly reduced.

Financial Times Group CEO, John Ridding, said:

Behind the strong commercial performance, we enhanced our product offering with reader-focused innovations such as the new FT Weekend APP, First FT, and author alerts. Importantly our audience is not just growing - people are spending more time with the FT and consuming more content. Overall engagement is up by double digits year on year.



Figure 9.21

FT.com mobile app proposition

Source: CJG - Technology/Alamy Stock Photo

Mobile site design option D. Separate mobile domain (screen scrape)

Although this is not a recommended option, it's worth noting that a number of high-profile brands previously opted for a temporary 'screen-scrape' approach, which involves dropping existing web content into a basic mobile site template without back-end integration. The advantage of the screen-scrape approach is that it presents a quick route to market.

There are widespread disadvantages to screen scraping when compared to the fully integrated approach, which provides the better long-term solution. The screen-scrape option incurs additional time and cost to manage the site, as changes to the back-end content management system (CMS) need to be updated manually on the mobile site. Generally, screen-scrape sites have a large degree of standardisation; i.e. they lack the differentiation brands demand across their desktop websites.

Consider personalisation options

Q. Have mobile personalisation options been considered?

Mobile sites featuring personalisation are still relatively unusual. This is surprising if you consider that one phone has one user. Ask a group of strangers to pass their phones round the room and you'll detect a potent sense of anxiety. We don't share our phones, with anyone. We don't want others seeing the texts we send and receive, the photos we've taken, our social media pages, the sites we've browsed or the apps we've downloaded.

This means that we can develop highly personalised and customised sites. Back-end integration, with application programming interfaces (APIs) exposing individual customer records, can be used to build bespoke sites that match the profile of each user. Look no further than Amazon to see how brands can use purchase history data and apply intelligence to develop sites with highly targeted product offers. Of course, Amazon also now does this for its mobile site. A personalised mobile-optimised site has the benefit that specific features can be developed for mobile users. This is not the case with a basic responsive design approach. To make your sites highly relevant to users, you can apply behavioural targeting, with time- and location-sensitive messaging.

Web accessibility

Web **accessibility** is another core requirement for websites. It is about allowing all users of a website to interact with it regardless of disabilities they may have or the web browser or platform they are using to access

the site. The visually impaired are the main audience that designing an accessible website can help. However, increased usage of mobile or wireless access devices makes consideration of accessibility important.

The quote below shows the importance of accessibility to a visually impaired user of a website who uses a screen-reader that reads out the navigation options and content.

For me being online is everything. It's my hi-fi, it's my source of income, it's my supermarket, it's my telephone. It's my way in.

(Lynn Holdsworth, screen-reader user, web developer and programmer, RNIB, www.rnib.org.uk)

Remember that many countries now have specific accessibility legislation to which website owners are subject. This is often contained within disability and discrimination Acts. In the UK, the relevant Act is the Disability and Discrimination Act (DDA) 1995. Recent amendments to the DDA makes it unlawful to discriminate against disabled people in the way in which a company recruits and employs people, provides services or provides education. Providing accessible websites is a requirement of Part II of the Disability and Discrimination Act published in 1999 and required by law from 2002. This is most important for sites that provide a service; the 2002 code of practice gives this example:

An airline company provides a flight reservation and booking service to the public on its website. This is a provision of a service and is subject to the Act.

Although there is a moral imperative for accessibility, there is also a business imperative. The main arguments in favour of accessibility are:

- 1 Number of visually impaired people.** In many countries there are millions of visually impaired people, varying from 'colour blind' to partially sighted to blind.
- 2 Number of users of less popular browsers or variation in screen display resolution.** Microsoft Internet Explorer is now the dominant browser, but other browsers have a loyal following among the visually impaired (for example, screen-readers and Lynx, a text-only browser) and early adopters (for example, Mozilla Firefox, Safari and Opera). If a website does not display well in these browsers, then you may lose these audiences. Complete Activity 9.4 to review variation in access rate.
- 3 More visitors from natural listings of search engines.** Many of the techniques used to make sites more usable also assist in search engine optimisation. Clearer navigation and text alternatives for images and site maps can all help improve a site's position in the search engine rankings.
- 4 Legal requirements.** In many countries it is a legal requirement to make websites accessible.

Accessibility

An approach to site design intended to accommodate site usage using different browsers and settings, particularly required by the visually impaired.

Guidelines for creating accessible websites are produced by the governments of different countries and non-government organisations such as charities. Internet standards organisations such as the World Wide Web Consortium have been active in promoting guidelines for web accessibility, for instance through its Website Accessibility Initiative (WAI), see www.w3.org/WAI.

There are three different priority levels that it describes, as follows:

- **Priority 1 (Level A).** A web content developer must satisfy this checkpoint. Otherwise, one or more groups will find it impossible to access information in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use web documents.
- **Priority 2 (Level AA).** A web content developer should satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document. Satisfying this checkpoint will remove significant barriers to accessing web documents.
- **Priority 3 (Level AAA).** A web content developer may address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access information in the document. Satisfying this checkpoint will improve access to web documents.

Activity 9.4

Allowing for the range in access devices

One of the benefits of accessibility requirements is that it helps website owners and web agencies consider the variation in platforms used to access websites.

Questions

- 1 Update the compilation in Table 9.7 to the latest values using Onestat.com or other data from web analytics providers.
- 2 Explain the variations. Which browsers and screen resolutions do you think should be supported?

Table 9.7

Summary of the range in browsers and screen resolutions used at the time of writing

Web browser popularity			Screen resolution popularity		
1	Chrome	48.9%	1	1366 × 768	22.5%
2	Firefox	14.9%	2	1920 × 1080	11.1%
3	Safari	12.1%	3	1280 × 800	9.8%
4	Internet Explorer	10.9%	4	1440 × 900	9.1%
5	Android Browser	1.0%	5	1280 × 1024	5.3%

Source: Visitors to SmartInsights.com, September 2008, used by students and professionals worldwide. Note that the formerly standard resolution of 800 by 600 is now less than 3%

ALT tags

Alt tags (alternative tags) appear after an image tag and contain a phrase associated with that image.

So, for many companies the standard is to meet Priority 1, and Priority 2 or 3 where practical. Some of the most important Priority 1 elements are indicated by these ‘Quick Tips’ from the WAI:

- *Images and animations.* Use **ALT tags** to describe the function of each visual.
- *Image maps.* Use the client-side map and text for hotspots.
- *Multimedia.* Provide captioning and transcripts of audio, and descriptions of video.
- *Hypertext links.* Use text that makes sense when read out of context. Avoid ‘click here’.
- *Page organisation.* Use headings, lists and consistent structure. Use CSS for layout and style where possible.
- *Graphs and charts.* Summarise or use the longdesc attribute.
- *Scripts, applet and plug-ins.* Provide alternative content in case active features are inaccessible or unsupported.
- *Frames.* Use the noframes element and meaningful titles.
- *Tables.* Make line-by-line reading sensible. Summarise.
- *Check your work.* Validate. Use the tools, checklist and guidelines at www.w3.org/TR/WCAG.

Case Study 9.1

Providing a better online user experience in a B2B market

This case study is about the specialist B2B distributor of electronic components, RS Components (<http://uk.rs-online.com/web/>). Its site has millions of visits per month, and a customer-centric transformation using some of the principles of accessibility, usability and persuasion mentioned in this chapter had a direct impact on its e-commerce sales growth.

RS Components background

RS Components started in a lock-up garage in NorthWest London in 1937. Founded by J.H. Waring and P.M. Sebestyen, the company was initially established as Radiospares Limited, which supplied radio repair shops with spare parts. The business began selling electronics components in 1954 and rebranded as RS Components

in 1971. Having celebrated its 75th anniversary in 2012, RS continues to be a market-leading business with a global presence.

Nowadays, RS is the number one high-service distributor of electronics and maintenance products across Europe and Asia Pacific. Sourced from 2,500 suppliers, the broad product range includes electronics, automation and control, test and measurement, electrical and mechanical components.

The company has grown to have operating companies in 30 countries, including France, Italy and Germany, with operations as far afield as Chile, New Zealand and China. RS supplies around 500,000 products from 2,500 suppliers to over one million engineers worldwide (end-users and purchasing managers), shipping more than 46,000 parcels on the same day the orders are received.

RS Components is a multichannel business serving customers through the web, phone, fax, catalogues and 23 trade counters. Sales, once dominated by catalogues, have gone from 15% online in 2004 to 70% of EU sales in 2015.

Key milestones

RS has celebrated a number of significant milestones over the last 75 years:

- First electronics and maintenance company to have an own-label range (1937).
- First distributor to offer free next-day delivery (1937).
- Corby distribution centre opened in 1984.
- First catalogue distributor to introduce a CD Rom version (1995).
- Nuneaton distribution centre opened in 1997, adding half-a-million square feet of warehouse space in the UK.
- First transactional website in the industry, launched in 1998.
- First free-to-access PCB schematic tool, DesignSpark PCB, in the industry (2010).
- iPad version of customer magazine, eTech, launched in 2011.
- First to launch a specialist app, MyLocalRS, for its branch network (2012).

The problem (abandoning customers)

Despite shifting its model to e-commerce (including next-day delivery), RS Components knew that user experience (UX) was a hindrance to sales. Millions of customers were leaving the RS site; the top customer frustration was site search and product information.

UX strategy and objectives

To increase conversion, the e-commerce team needed to make buying easier, quicker and stress-free. This had the additional challenge of involving 60 websites in local languages.

Two guiding principles determined RS's approach:

- 1 Customer centricity: Implementing a robust, UX-led process and delivery, driven by customer data to ensure better commercial decisions.
- 2 Pace: increasing the pace of delivery through greater collaboration and the adoption of agile, plus commercial accountability to fuel better and faster decisions.

The objective was to make incremental improvements to drive a 0.5% increase in overall conversion for RS's 110m visits in the 2015 financial year.

User research

Beginning in early 2014, RS concentrated on customer feedback and user analytics, examining quantitative and qualitative data from all regions, including:

- 6,000 lines of customer feedback;
- online surveys;
- real-time customer lab testing;
- internal forums.

Five main areas were consistently flagged:

- 1 Search

- 2 Filtering
- 3 Usability
- 4 Content
- 5 Adopting agile

RS launched a whole raft of changes from February 2014 to August 2015, delivered by one team on a modest budget. By introducing an agile methodology, RS claims to have developed and applied improvements to the purchase journey four times faster than previously. A user-centred design approach allowed RS to constantly amend according to real performance and customer data. Features were designed both to make the customer's life easier and also to include elements to delight RS customers.

Improvements to search relevancy

- RS assembled a team of engineers from around the world.
- Initially the team worked on search relevance, addressing millions of on-site searches per month -from manufacturer part numbers to more generic search terms.

Site headers

- Site headers were redesigned to allow easier navigation from the outset.
- The new header used 'click-to-expand' and then 'hover-to-expand' categories; this compared to the old header, which was always on show and featured unwieldy click-to-expand category menus.

Image-supported predictive search

- The team implemented predictive search including images.
- An autocomplete functionality was based on positive customer response. Data feeds back into the system, determining the best images to display in 'top products' and categories to suggest.
- Predictive search has seen a good uptake, with more and more customers interacting with the new feature and those customers spending more when they do.

Boosting popular categories in search

- RS shows seven categories at the top of the results page (from mallets to air hammers), with a call to action to 'go to products', or the ability to scroll down to view by brand, or a list of all products.
- By using data to understand the most popular categories for each product search, these categories were made more visible. As an example, LEDs have 47 product categories and RS needs to present an appropriate selection of these for searches.
- Category images also enable faster category and product identification.
- This popular category search (moving categories at the top of search) has increased clickthrough rate.
- RS Components predictive search.

Improving search filtering (speed)

- One of the main complaints from users was the speed of faceted search.
- Undertaking 100 hours of customer research, RS made its results-filtering facility 70% faster, allowing customers to select several filtering options at once.
- Time to select four filters dropped from an average of 10 seconds to 3.2 seconds. RS saw a 40% increase in conversion from search filtering (an 18-month high).

Improving search filtering (compare function)

- Users can now easily compare attributes, view datasheets and check stock on one page.
- Products can be added to basket directly from the compare page.
- Many customers used the compare functionality in month one, with a conversion rate higher than the site average.

Transforming the user experience

The priority was to improve ease of use, with customers voicing frustration at having to log in and input information for every purchase (which, for SMEs that use RS Components like a warehouse, could be up to seven times per day).

The following elements were updated:

- **Express checkout:** The journey from shopping basket to order confirmation was reduced from two clicks (including addition of delivery and payment information) to one click for existing customers.
- **Remember me:** Customers can remain logged in and can view bespoke discounts. Consequently, RS has seen thousands of customers select this option per month, with an associated increase in conversion.
- **Pricing and stock availability:** Product pages were updated to show clearer pricing and stock availability.
- **Parts lists (favourites):** This was added so that customers could save their favourite products or create a list with a 'save to parts list' button. This helped make re-ordering easier.

Improving content and design

The product page was the chief domain for layout improvement, following extensive research on how customers use the RS website. RS redesigned over 50,000 product pages, looking at the following areas:

Larger and more dynamic product images

- RS constructed two high-quality, professional photo studios, creating premium-quality product images at a rate of more than 2,000 products a week.
- Development kit images were changed from generic pictures of product boxes to detailed photos of contents.

Increased product detail

- RS provided easier access to datasheets and product details, including enhanced technical content.

Embedded videos

- Product tutorials and 3D models were included to further educate the customer.

The results of product page improvement

Products with the new layout experienced growth compared to untouched product pages. This included:

- increased conversion;
- reduced page departure (i.e. bounce rates);
- increased satisfaction with product pages;
- video content has helped increased conversion.

Overall success of the project

This project, combined with an increase in web traffic, has seen RS Components hit a 41-month high for ecommerce sales. The company exceeded revenue targets for the 2015 financial year by 42% and beat their target for the first four months of Financial Year-end 2016 by 100%. Conversion growth (year on year) is at a 4.5 year high, up 10%.

When customers were asked what they like most about the RS website, responses echoed what the company was aiming to achieve. These included things like: fast, navigation, easy-to-use, quick-order, simplicity, price visibility, product detail, etc.

Questions

- 1 Have a look at the website www.mouser.co.uk. Define a persona based on their job and product needs and then identify the main customer journeys for this persona. What do you think their on-site search behaviour would be to find a product? What journey will they follow to get to the checkout page?

- 2 Review the user experience of the Mouser.co.uk website by thinking about best practice from this RS Components case study.
- 3 Identify key areas for user experience improvement for Mouser.co.uk, based on testing and reviewing the website.

The RS Components team believe their agile approach has led to much stronger internal collaboration between the e-commerce team, front line agents, content teams and IT.

The company is now investing in a new front-end platform that will increase the pace of change yet further.

Sources: <https://uk.rs-online.com/web/generalDisplay.html?id=aboutRS/history>

<https://econsultancy.com/blog/67239-the-ultimate-ecommerce-cro-ux-case-study-rs-components/>

Focus on Security design for digital business

Security is a prime concern of digital business managers. The principal concern is the security of information: both about customers and internal company data about finance, logistics, marketing and employees. Indeed, we saw in Chapter 4 that securing customer information is a legal requirement under data protection laws in many countries. These risks apply to all companies, but larger companies tend to be more at risk from targeted attacks. Information used within digital business systems must be safeguarded from a range of hazards. The range of risks faced by organisations is summarised in Box 9.6.

Box 9.6 Common security threats and solutions for the digital business

The BIS (2015) Information Security Breaches Survey highlights the extent of the security problem for digital businesses. Companies that had a security incident are shown in Table 9.8.

Figure 9.22 shows the most common security incidents. You can see that internal security problems are an increasing issue.

Table 9.8

Security incidents

	Small < 50 staff	Large > 250 staff
Any security incident	74%	90%
Staff-related incident	31%	75%
Malicious incident	38%	69%

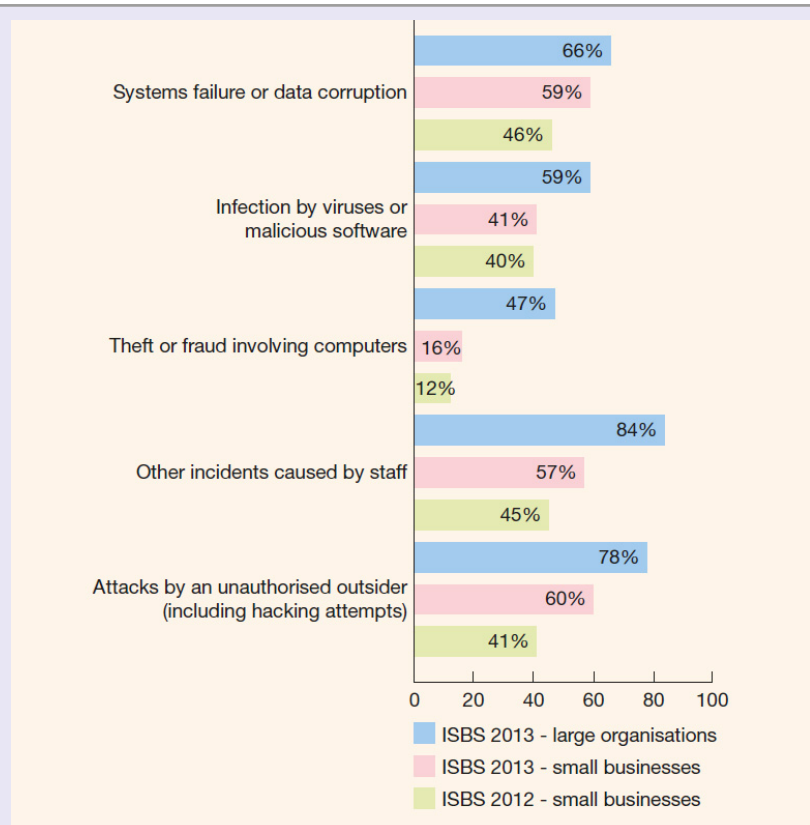


Figure 9.22

UK information security breaches

Source: BERR (2015)

The National Cyber Security Centre (2016) has recommended nine steps to help companies of all sizes improve security in business. We have included some simple, extra ideas reflecting use of personal devices, cloud services, social media, etc., which are becoming more common in small businesses. The nine steps are:

1 Protect your network (network security)

- Find out if your device that connects the organisation to the Internet - most commonly a router supplied by the Internet Service Provider (ISP) - has a firewall built in. If not, then install a proprietary firewall (for example, from mainstream suppliers such as Symantec, Sophos, Kaspersky, etc., which is often included in a suite of software) on your PC or laptop. Follow the instructions to keep it properly configured and updated.
- Take note of any warning messages and follow the guidance offered.
- Consult an expert if you think your network has been compromised - you might know this has happened if you notice unusual activity, such as unusually high activity or no activity.

2 Teach good practice (user education and awareness)

- Make knowledge of your security policy part of your induction process for new staff and make compliance with the policy part of staff contracts.
- Remind staff regularly about good security practices, especially when the risk or the policy changes. Make sure they know not to click on links in emails from unknown sources.
- If you use social media for business purposes, you should ensure that all staff know that no sensitive material, intellectual property (IP) or similar material should be disclosed and that users behave responsibly while using social media for business or personal use, bearing in mind that they directly or indirectly represent the business.

3 Manage IT access (managing user privileges)

- Employ usernames and good passwords to control log-in.
- Good passwords contain upper and lower case characters, numbers and symbols.
- Don't write passwords down or share them between users. Limit admin privileges to those who need them.
- Ensure staff have access only to the folders they need to see. Keep sensitive data separate.

4 Keep your own IT up to date (secure configuration)

- Document your IT assets so you know what you've got. IT assets will include hardware, software and even key IT staff.
- Install current software and operating system patches, firmware updates etc. immediately they are issued. You usually get this option when you install the software, or you should find it in the configuration menu. Ensure all software is licensed.
- Check for technical weaknesses regularly (e.g. vulnerability or penetration testing). 'Regularly' would mean when you update the risk assessment-perhaps annually or after major change of hardware or software.

5 Removable media (removable media controls)

If you transfer data using CD, DVD, USB, SD or any type of flash memory drive:

- Only permit devices issued and controlled by your business in your business systems.
- Issue, retrieve and track the devices - know where they all are, who has them and, ideally, what software is on each.
- Ensure they are encrypted (some removable media devices already have encryption software on them) and scanned for **malware** on each use. Many commercial anti-malware packages (anti-virus) have the ability to scan removable media.

Malware

Malicious software or toolbars, typically downloaded via the Internet, which act as a 'Trojan horse' by executing unwanted activities such as keylogging of user passwords or viruses that may collect email addresses.

Firewall

A specialised software application mounted on a server at the point where the company is connected to the Internet to prevent unauthorised access.

Information security management system

An organisational process to protect information assets.

Information security policy

A definition of the organisational approaches to information security and the responsibilities of employees in protecting information.

6 Mobile working (home and mobile working)

- Use of mobile devices for business purposes (privately or business owned) should require board-level approval. Such devices must at a minimum have:
 - anti-malware software installed and updated daily (this can be set to happen automatically);
 - PIN, password or other authentication installed;
 - be encrypted wherever possible; and
 - be capable of being remotely tracked and wiped.
- All of the above can usually be done at little or no cost, without technical expertise. Many of the mobile devices, particularly the newer models, can do this and you can set it up through the options or set-up screens.
- Staff should inform the board-level risk owner immediately if the device is lost or stolen, and the device must be remotely wiped.

7 Use anti-malware defences (malware protection)

- Use a proprietary anti-malware or security package (one you can buy from a mainstream supplier such as Symantic, Sophos, Kaspersky, etc.). Use this across the whole business.

- Use all the facilities of the anti-malware package, even if you have to modify your business practices a little. Ensure ‘sweeping’ is done automatically
- Update the protection as often as possible. Providers usually offer automatic free updates - ensure updates occur at least daily.

8 Monitoring (monitoring)

- Monitoring can detect potential hardware faults and unusual activity on your network or Internet-connected devices. Modern laptops often come with hardware monitoring installed and some anti-malware packages also include monitoring of devices.
- If your business has a large network you should use network management tools to detect unusual activity. This includes monitoring traffic flow, IP usage, etc.
- Ensure that your staff report unusual activity to a central point and that you have sufficient plans and expertise on hand to react quickly.

9 Incident management and business continuity (incident management)

- Spotting an incident - an attack should be flagged by the **firewall** or security package. Anything that interferes with the business is an incident.
- Decide what to do (and who does it) if you have an incident such as a malware attack, loss or corruption of data, laptop theft, etc. and document it with the approval of the board.
- Get in-house or outsourced expertise ready to deal with your incidents. Just knowing of a company with the relevant skills so you can call them quickly is important.
- Document any incident and decide what caused it, how much it cost to fix and whether there is anything you could do better in future.
- You should ensure that you know what to do (and document the actions to be taken) on the catastrophic failure of anything critical to your business, such as information, applications, systems or network. Don’t wait for an incident to try out the plan.

Given the extent of the security risks described in Figure 9.22, many organisations now implement a formal **information security management system**.

The information management strategy will mandate that there is an **information security policy**. This may be a policy developed in-house, or adoption of a security standard such as British Standard BS 7799, which has now been upgraded and ratified as international standard ISO/IEC 17799.

Information asset register (IAR)

A repository for the types, value and ownership of all information within an organisation.

Business continuity management or disaster recovery

Measures taken to ensure that information can be restored and accessed if the original information and access method are destroyed.

ISO 17799 has comprehensive coverage of different risks and approaches to management of security. It recommends the following processes:

- 1 Plan - perform business risk analysis;
- 2 Do - internal controls to manage the applicable risks;
- 3 Check - a management review to verify effectiveness;
- 4 Act - action changes required as part of the review as necessary.

ISO 17799/BS 7799 help give a framework by which to manage the risks to information evident from Figure 9.22. These standards require the following areas of information security management to be defined:

- *Section 1: Security policy.* Describes the organisation’s requirements and scope of security for different business areas and sites. It also should demonstrate the support of senior management in controlling and owning security.
- *Section 2: Organisational security.* Describes how the company manages security, including different staff responsibilities for security and how security incidents are reported, actioned and reviewed as a standard business activity to improve security.
- *Section 3: Asset classification and control.* BS 7799 recommends that an **information asset register (IAR)** be created, detailing every information asset within the organisation such as databases, personnel records, contracts, software licences, publicity material. For each asset, responsibility is defined. The value of each asset can then be determined to ensure appropriate security is in place.

- *Section 4: Personnel security.* This ensures there is clarity within job definitions and employment contracts, to reduce the risk of human error leading to information loss and to ensure that staff understand what their rights and responsibilities are concerning information security. Staff training is also important to achieve this.
- *Section 5: Physical and environmental security.* This defines physical access to buildings. It also considers how information can be protected from threats such as fire and flood.
- *Section 6: Communications and operations management.* Guidelines on the day-to-day operation of information systems is the largest section of BS 7799. It covers acceptance criteria for new or updated systems, virus defence software, email and website usage, network access and back-up and restore systems.
- *Section 7: Access control.* This defines how to protect access to information systems through access control mechanisms (username and password procedures with different security clearance for different applications and types of information).
- *Section 8: System development and maintenance.* This specifies how new systems must be designed and procured with security in mind.
- *Section 9: Business continuity management.* **Business continuity management or disaster recovery** specifies how the organisation will be able to continue to function in the event of a major event such as a fire or flood or other damage to information systems. Use of off-site back-ups and alternative systems is key to this.
- *Section 10: Compliance.* This specifies how an organisation will comply with the relevant UK and EU law related to information security management. Implementing IS 7799 is a good way of helping ensure that a business does comply with these requirements. Regular audits and reviews need to occur to ensure the organisation remains compliant.

It is increasingly important to think about security design because there has been a growing increase in cyber attacks every year, including several high-profile cases (see Box 9.7).

Box 9.7

Massive security breaches at TalkTalk and Uber

According to the UK government's Department for Digital, Culture, Media & Sport, nearly half (46%) of British businesses have discovered at last one cyber security attack in the past year (BBC, 2017). Google and McAfee estimate there are 2,000 cyber-attacks every day around the world, costing the global economy about £300 billion a year, while the Institute of Directors (IoD) said only 'serious breaches' made the headlines, but attacks on British businesses 'happen constantly'.

Over the last few years, there have been a number of high-profile cyber security attacks.

TalkTalk

In October 2015, the phone and broadband provider TalkTalk, which has over 4 million UK customers, was attacked by cybercriminals. The cyber-attack saw the personal details of 156,959 customers accessed, including their names, addresses, dates of birth, phone numbers and email addresses. In addition, 15,656 customers had their bank account details and sort codes stolen.

The company experienced a 'Distributed Denial of Service' (DDOS) attack, when hackers flooded the company's website with Internet traffic in an effort to overload its digital systems and take them offline. Security analysts believed that a second attack was occurring at the same time, with intruders going after TalkTalk's customer base. The big question is 'Why wasn't the data encrypted?'.

A year after the attack, the Information Commissioner's Office (ICO) said that Talk-Talk had failed to adhere to the basic principles of cyber security and was in breach of the Data Protection Act (which is covered in more detail in Chapter 4). They were fined £400,000, which was minor compared to the estimated £60 million cost of the hack and the loss of more than 100,000 customers in the months following it. The TalkTalk sentiment graph below shows that data breaches negatively affect a company's reputation, which is a key customer experience factor.

Deloitte's 2014 global survey on reputation risk found that security (physical or cyber) was one of the three key drivers of reputational risk among the 300+ executives it sampled. While this is an

interesting indicator of what this group of executives is concerned about, it reflects very much an ‘inside-out’ view of reputation.

Uber

Uber concealed a hack that affected 57 million customers and drivers worldwide and 2.7 million users in the UK. The security breach took place in 2016; the company hid details of the hack until a year later. In November 2017 it confirmed that it had paid hackers \$100,000 (£80,000) to delete the data.

Uber confirmed that names, email addresses and mobile phone numbers of customers were exposed and, of the 57 million impacted, 600,000 drivers had their names and licence details compromised. While drivers have been offered free credit-monitoring protection, the firm is yet to offer anything to affected customers.

In a written statement, Uber CEO Dara Khosrowshahi said:

While we have not seen evidence of fraud or misuse tied to the incident, we are monitoring the affected accounts and have flagged them for additional fraud protection. None of this should have happened, and I will not make excuses for it.

Uber confirmed to the Information Commissioner that 2.7 million - over half - of Uber’s UK users had been affected. The National Cyber Security Centre suggested ‘vigilance’ against email phishing or scam phone calls in light of the hack.

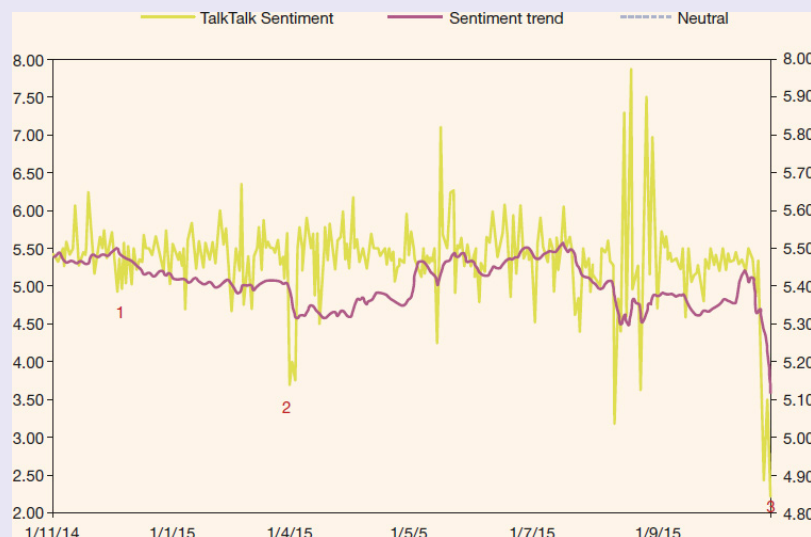


Figure 9.23

TalkTalk’s sentiment score over time - data breach issues highlighted

Source: www.alva-group.com/en/the-reputational-risk-of-cyber-attacks-talktalk-case-study/

James Dipple-Johnstone, deputy commissioner of the ICO (the UK’s information watchdog), said:

Uber’s announcement about a concealed data breach last October raises huge concerns around its data protection policies and ethics. If UK citizens were affected then we should have been notified so that we could assess and verify the impact on people whose data was exposed.

Sources: www.telegraph.co.uk/technology/2016/10/05/talktalk-hit-with-record-fine-for-cyber-attack

www.alva-group.com/en/the-reputational-risk-of-cyber-attacks-talktalk-case-study

www.ft.com/content/9bfb4e72-7965-11e5-a95a-27d368e1ddf7

www.telegraph.co.uk/news/2017/11/22/british-spy-chiefs-launch-investigation-uber-hacking-scandal

Secure e-commerce transactions

For digital businesses offering online sales, there are also additional security risks from the customer or merchant perspective:

- (a) transaction or credit-card details stolen in transit;
- (b) customer's credit-card details stolen from merchant's server;
- (c) merchant or customer is not who they claim to be.

In this section we assess the measures that can be taken to reduce the risk of these breaches of e-commerce security. We start by reviewing some of the theory of online security and then review the techniques used.

Principles of secure systems

Before we look at the principle of secure systems, it is worth reviewing the standard terminology for the different parties involved in the transaction:

- *Purchasers*. These are the consumers buying the goods.
- *Merchants*. These are the retailers.
- *Certification authority (CA)*. This is a body that issues digital certificates that confirm the identity of purchasers and merchants.
- *Banks*. These are traditional banks.
- *Electronic token issuer*. A virtual bank that issues digital currency.

The basic requirements for security systems from these different parties to the transaction are as follows:

- 1 Authentication - are parties to the transaction who they claim to be (risk (c) above)?
- 2 Privacy and confidentiality - are transaction data protected? The consumer may want to make an anonymous purchase. Are all non-essential traces of a transaction removed from the public network and all intermediary records eliminated (risks (b) and (c) above)?
- 3 Integrity - have there been checks that the message sent is complete, i.e. that it is not corrupted?
- 4 Non-repudiability - ensures sender cannot deny sending message.
- 5 Availability - how can threats to the continuity and performance of the system be eliminated?

Kesh *et al.* (2002) explore the security requirements for e-commerce in more detail.

Approaches to developing secure systems

Digital certificates (keys)

Consist of keys made up of large numbers that are used to uniquely identify individuals.

Symmetric encryption

Both parties to a transaction use the same key to encode and decode messages.

Asymmetric encryption

Both parties use a related but different key to encode and decode messages.

Digital certificates

There are two main methods of encryption using **digital certificates**.

1 Secret-key (symmetric) encryption

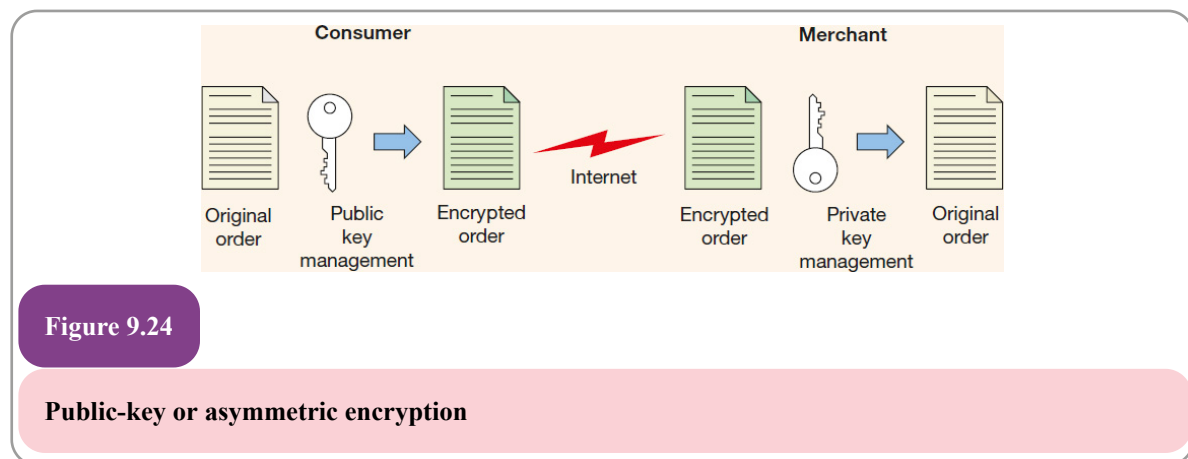
Symmetric encryption involves both parties having an identical (shared) key that is known only to them. Only this key can be used to encrypt and decrypt messages. The secret key has to be passed from one party to the other before use in much the same way as a copy of a secure attaché case key would have to be sent to a receiver of information. This approach has traditionally been used to achieve security between two separate

parties, such as major companies conducting EDI. Here, the private key is sent out electronically or by courier to ensure it is not copied.

This method is not practical for general e-commerce, as it would not be safe for a purchaser to give a secret key to a merchant since control of it would be lost and it could not then be used for other purposes. A merchant would also have to manage many customer keys.

2 Public-key (asymmetric) encryption

Asymmetric encryption is so called since the keys used by the sender and receiver of information are different. The two keys are related by a numerical code, so only the pair of keys can be used in combination to encrypt and decrypt information. Figure 9.24 shows how public-key encryption works in an e-commerce context. A customer can place an order with a merchant by automatically looking up the public key of the merchant and then using this key to encrypt the message containing their order. The scrambled message is then sent across the Internet and on receipt by the merchant is read using the merchant's private key. In this way, only the merchant (who has the only copy of the private key) can read the order. In the reverse case, the merchant could confirm the customer's identity by reading identity information such as a digital signature encrypted with the private key of the customer using their public key.



Pretty Good Privacy (PGP) is a public-key encryption system used to encrypt email messages.

Digital signatures

A method of identifying individuals or companies using public-key encryption.

Digital signatures

Digital signatures can be used to create commercial systems by using public-key encryption to achieve authentication: the merchant and purchaser can prove they are genuine. The purchaser's digital signature is encrypted before sending a message using their private key and, on receipt, the public key of the purchaser is used to decrypt the digital signature. This proves the customer is genuine. Digital signatures are not widely used currently due to the difficulty of setting up transactions, but they will become more widespread as the public-key infrastructure (PKI) stabilises and use of certificate authorities increases.

Certificate and certificate authorities (CAs)

A certificate is a valid copy of the public key of an individual or organisation, together with identification information. It is issued by a trusted third party (TTP) or certificate authority (CA).

The public-key infrastructure (PKI) and certificate authorities (CAs)

In order for digital signatures and public-key encryption to be effective it is necessary to be sure that the public key intended for decryption of a document actually belongs to the person you believe is sending you the document. The developing solution to this problem is the issuance by a trusted third party (TTP) of a message containing owner identification information and a copy of the public key of that person. The TTPs are usually

referred to as **certificate authorities (CAs)**, and various bodies such as banks and the Post Office are likely to fulfil this role. That message is called a **certificate**. In reality, as asymmetric encryption is rather slow, it is often only a sample of the message that is encrypted and used as the representative digital signature.

Example certificate information could include:

- user identification data;
- issuing authority identification and digital signature;
- user's public key;
- expiry date of this certificate;
- class of certificate;
- digital identification code of this certificate.

It is proposed that different classes of certificates would exist according to the type of information contained. For example:

- name, email address;
- driver's licence, national insurance number, date of birth;
- credit check;
- organisation-specific security clearance data.

Virtual private networks

Virtual private network (VPN)

Private network created using the public network infrastructure of the Internet.

A **virtual private network (VPN)** is a private wide-area network that runs over the public network, rather than a more expensive private network. The technique by which VPN operates is sometimes referred to as 'tunnelling', and involves encrypting both packet headers and content using a secure form of the Internet Protocol known as IPSec. VPNs enable the global organisation to conduct its business securely, but using the public Internet rather than more expensive proprietary systems.

Current approaches to e-commerce security

In this section we review the approaches used by e-commerce sites to achieve security using the techniques described above.

Secure Sockets Layer (SSL)

A commonly used encryption technique for scrambling data as it is passed across the Internet from a customer's web browser to a merchant's web server.

Secure Electronic Transaction (SET)

A standard for public-key encryption intended to enable secure e-commerce transactions; lead-development by Mastercard and Visa.

Secure Sockets Layer protocol (SSL)

SSL is a security protocol used in the majority of B2C e-commerce transactions since it is easy for the customer to use without the need to download additional software or a certificate.

When a customer enters a secure checkout area of an e-commerce site, SSL is used and the customer is prompted that 'you are about to view information over a secure connection' and a key symbol is used to denote this security. When encryption is occurring they will see that the web address prefix in the browser changes from 'http://' to 'https://' and a padlock appears at the bottom of the browser window.

The main facilities it provides are security and confidentiality. SSL enables a private link to be set up between customer and merchant. Encryption is used to scramble the details of an e-commerce transaction as it is passes between sender and receiver and also when the details are held on the computers at each end. It would require a determined attempt to intercept such a message and decrypt it. SSL is more widely used than the rival S-HTTP method. Since, with enough computing power, time and motivation, it is possible to decrypt

messages encrypted using SSL, much effort is being put into finding more secure methods of encryption such as **SET**. From a merchant's point of view there is also the problem that authentication of the customer is not possible without resorting to other methods such as credit checks.

Certificate authorities (CAs)

For secure e-commerce, there is a requirement for management of the vast number of public keys. This management involves procedures and protocols necessary throughout the lifetime of a key - generation, dissemination, revocation and change - together with the administrative functions of time/date stamping and archiving. The successful establishment of a

CA is an immense challenge of trust-building and complex management. There are two opposing views on how that challenge should be met:

- *Decentralised*: market-driven, creating brand-name-based 'islands of trust' such as the Consumers Association. There is a practical need for a local physical office to present certificates of attestable value, e.g. passports, drivers' licences. Banks and the Post Office have a huge advantage.
- *Centralised*: in the UK, the Department of Trade and Industry (DTI) has proposed a hierarchical tree leading ultimately to the government.

The best-known commercial CA is Symantec SSL, which used to be Verisign (www.symantec.com/en/uk/ssl-certificates-emea/) and this is commonly used for merchant verification. Post offices and telecommunications suppliers are also acting as CAs. Examples in the UK include BT (www.trustwise.com) and the Post Office (viacode.com).

Reassuring the customer

Once the security measures are in place, content on the merchant's site can be used to reassure the customer - for example, Amazon (www.amazon.com) takes customer fears about security seriously, judging by the prominence and amount of content it devotes to this issue. Some of the approaches it uses indicate good practice in allaying customers' fears. These include:

- use of customer guarantee to safeguard purchase;
- clear explanation of SSL security measures used;
- highlighting the rarity of fraud ('ten million customers have shopped safely without credit card fraud');
- the use of alternative ordering mechanisms such as phone or fax;
- the prominence of information to allay fears - the guarantee is one of the main menu options.

Companies can also use independent third parties that set guidelines for online privacy and security. The best-known international bodies are TrustArc (www.trustarc.com) and Symantec SSL for payment authentication (www.symantec.com/en/uk/ssl-certificates-emea/).

Summary

- 1 Analysis of business and user requirements for digital business systems is important in delivering usable and relevant systems.
- 2 Process modelling is used to assess existing business processes and suggest revised processes. Techniques such as task analysis and flow process charts from workflow design are useful in understanding tasks that must be supported by the system and any weaknesses in the current process.
- 3 Data modelling for digital business systems mainly involves traditional entity relationship approaches.
- 4 Architectural designs involve assessing appropriate integration between legacy systems and new e-commerce systems. Such designs are based on the client-server approach.

- 5 The customer experience (CX) is important for helping to drive sales. It should be a core part of the overall business, rather than sitting in one department or developed channel-by-channel. The six pillars of CX are: personalisation, integrity, expectations, resolution, time and effort, and empathy.
- 6 User interface design can be improved through using structured approaches such as use-case and following evolving standards for site structure, page structure and content.
- 7 Security design is important to maintain trust among a customer base. Security solutions target protecting servers from attack and preventing interception of messages when they are in transit.

Exercises

Self-assessment questions

- 1 What are the risks if analysis and design are not completed adequately?
- 2 Distinguish between process analysis and data analysis.
- 3 What are workflow analysis and workflow management systems?
- 4 What are legacy data and what are the options for their incorporation into an e-commerce system?
- 5 What are the key aspects of CX?
- 6 What are the four main options for mobile site development?
- 7 Summarise the characteristics of a usable website according to Jakob Nielsen (www.useit.com)
- 8 How can e-commerce companies protect themselves from cybercrime?

Essay and discussion questions

- 1 Write a plan for the analysis and design of an e-commerce site, recommending which aspects of process and data analysis should be conducted and explaining how they should be integrated.
- 2 Write an essay on the significance of workflow systems to digital business, illustrating your answer with examples of organisations of your choice.
- 3 Write a report summarising the characteristics of a website with good usability.
- 4 How can the concept of customer experience (CX) be translated into e-commerce site design?
- 5 Assess the success of online retailers in designing secure e-commerce systems.

Examination questions

- 1 Summarise the purpose of process analysis.
- 2 What is meant by 'user-centred design'?
- 3 Explain the concept of task analysis with reference to a customer placing an order online.
- 4 Explain the stages involved in use-case analysis with reference to a customer placing an order online.
- 5 Describe the stages of data modelling with reference to a database for an e-procurement system.
- 6 Outline the main elements of CX that e-commerce sites should consider.
- 7 How do the attributes of a secure e-commerce site differ from customer and company viewpoints?
- 8 Explain the relationship between analysis, design and implementation for an e-commerce site.

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Web links

Big Data Hub (www.ibmbigdatahub.com) A collection of case study and research from IBM.

British Interactive Media Association (BIMA) (www.bima.co.uk) Good resources for the specialist in this area.

National Cyber Security Centre (www.ncsc.gov.uk/index/guidance) UK Government guidance documents on cyber security.

Royal National Institute for the Blind (www.rnib.org.uk/accessibility) Web accessibility guidelines.

Smashing Magazine (www.smashingmagazine.com). A site for web developers and web managers explaining site design approaches.

UI Access (www.uiaccess.com/access_links.html) Resources on website accessibility

User Interface Engineering (www.uie.com) Articles on usability, which often provide a counterpoint to those of Nielsen.

Web Design References (www.d.umn.edu/itss/support/training/online/webdesign) A collection from the University of Minnesota, Duluth, including articles and references on accessibility, information architecture and usability.

Web Style Guide (www.webstyleguide.com) Supporting site for the style guide book of P. Lynch and S. Horton of Yale Medical School. Complete text online.

Worldwide Web Consortium (www.w3.org/WAI) Web accessibility guidelines.

9 Managing digital business transformation and growth hacking

Chapter at a glance

Main topics

- The emergence of digital transformation as a discipline
- Understanding the reasons for digital transformation
- The framework of digital transformation
- What is growth hacking?
- Defining goals and KPIs
- How to use a single metric to run a start-up
- Creating a growth hacking mindset
- Use of Scrum, an agile methodology, in digital marketing
- Developing agile marketing campaigns
- The growth hacking process
- Creating the right environment for growth hacking
- Measuring implementation success

Focus on. . .

- Web analytics: Measuring and improving performance of digital business services
- Measuring social media marketing

Case studies

- 10.1** Transforming an entire industry and supply chain: Spotify and Spotify Connect
- 10.2** Learning from Amazon's culture of metrics
- 10.3** How Leon used PR to growth hack

Web support

The following additional case studies are available at

www.pearsoned.co.uk/chaffey

- SME adoption of sell-side e-commerce
- Death of the dot.com dream
- Encouraging SME adoption of sell-side e-commerce

The site also contains a range of study material designed to help improve your results.

Scan code to find the latest updates for topics in this chapter



Learning outcomes

After completing this chapter the reader should be able to:

- Critically analyse the journey of an organisation through transformation
- Review the approaches to be taken in a digital transformation exercise
- Produce a growth hacking/agile marketing plan
- Create a plan to measure and improve the effectiveness of digital businesses using analytics tools

Management issues

The issues for managers raised in this chapter include:

- When does a digital business need to think about implementing a digital transformation project?
- What are the non-technical aspects of a digital transformation project?
- How do we gain traction on a limited budget?
- What techniques are available to measure and optimise our services?
- Does the organisation have the right culture to support a growth hacking approach?

Links to other chapters

This chapter is an introduction to the evolving ideas around digital business transformation and growth hacking. It gives a context to the current and future views about how digital businesses are changing and how they are designed, and it also introduces how transformation and growth are managed. The chapters that inevitably feed into digital business transformation and growth hacking are:

- *Chapter 2* explains customer journeys and business revenue models, which links to digital transformation
- *Chapter 5* has sections on disruptive innovation and digital channel strategies that are particularly relevant to this chapter
- *Chapter 8* discusses the implementation of digital marketing plans, which relates to growth hacking
- *Chapter 9* has a section on customer experience (CX) that links to digital transformation and growth hacking

Introduction

As we move towards the third decade of the 21st century, organisations are changing at a faster rate than at any time since the dawn of the Industrial Revolution. Traditional methods of thinking about how we manage technology and change have started to unravel. The impact of digital on organisations and on society means that speed of change is very rapid, and the impact of change is enormous. Businesses need to make significant efforts in the way they respond to change in the environment by operating in different ways to the past. Digital transformation and growth hacking are two approaches on how to handle the change. See Case study 10.1 for an example of how Spotify is responding and then complete Activity 10.1.

Connect

Study 10.1

Transforming an entire industry and supply chain: Spotify and Spotify

Spotify was developed in 2006 and officially launched in 2008 as a freemium service to stream music across the Internet. At the time of writing it remains a service with a free-to-use limited service tier supported by advertising and a subscription model allowing access to greater features such as high-quality streaming and song downloads for times when the user is not connected to the Internet.

Unlike services such as iTunes, Spotify does not sell individual songs to listeners and then pass the proceeds of sales to artists. Instead, Spotify pays a royalty to artists based on a proportion of their income. This model has received criticism from artists and music labels, but Spotify continues to grow, and music artists find it a very difficult proposition to ignore. Other services have grown at the same time that offer similar services, such as Deezer and Tidal. Spotify competes in a busy marketplace and has two significant problem competitors - Apple Music and Amazon Music. What makes these significant is they are both music streaming businesses with a significant hardware proposition: Apple with its iPhone range, and Amazon's Alexa.

To counter these propositions, Spotify runs Spotify Connect, which includes its Software Development Kits (SDKs). This approach allows developers of software and apps, as well as manufacturers of hardware, to incorporate Spotify code into their creations. This embeds Spotify into software and hardware, effectively locking in the user of the app or the manufactured device.

At the time of writing, Spotify boasted of embedded connectivity in more than 300 devices from more than 80 different manufacturers, including high-end audio systems, in-car entertainment and TV platforms, as well as devices such as Amazon Firestick and Google Chromecast.

This move increases the number of interfaces where Spotify can be accessed, away from the two 'traditional' points of interaction - the website and the mobile app. This increase in the number of interfaces increases the opportunities to interact with the Spotify service. Most require the premium subscriptions, which logically adds to the company's revenue stream. Prospective owners of premium devices are more inclined to purchase a specific device if it has access to additional features. Spotify can be regarded as a desirable additional feature so manufacturers are keen to incorporate it. This symbiotic relationship is changing the way the music is managed from artist to listener. By doing this, Spotify hopes to influence the devices that people buy and also encourage subscription by residing on the device itself.

Spotify has transformed the way people consume music. It has become a verb to represent how one listens to music (in the same way that the phrase 'to google' became the verb to mean how one searched for information on the web). The transformation is from possessing music files (an earlier transformation) to streaming them - a significant alteration in the culture of music listening.

Activity 10.1

Digital opportunity

Purpose

To identify any new digital opportunities from which any organisation could look to take advantage.

Activity

- Make a list of any new technological developments that have occurred in the last 12 months that seem to have appeared from nowhere.
- Consider what changes are needed by any organisation to adapt to the development. What cultural, practice or process changes could the technology create? How would people change?

Base your answers on your own experience of other technological developments and changes you have observed in culture, practice or process.

Definitions of digital transformation

The definition of digital transformation is contentious - different commentators and theorists have differing views, and this can lead to some confusion. The confusion comes from opposing worldviews about what transforming means in the context of digital. People's interpretation depends on how they view the significance of an intervention in an organisation. For example, some practitioners might regard the (simple) implementation of a website for an organisation as digital transformation. Others might see that as too narrow a perspective, because it only focuses on one 'small' and discrete intervention within an organisation. The key perspective here is the context -

that simple website might reflect a massive change for the organisation. It is not so much the website that is the digital transformation, rather it is the (planned) transformative effect that it has on the organisation.

Digital transformation can be described as all of the changes that occur when ‘digital’ is applied to any human endeavour (Stolterman and Fors, 2004). Lankshear and Knobel (2008) have a slightly different view, and see it as the third stage in a journey that society or a community must make (the first stages being digital competence and then digital literacy). The definitions of digital transformation transcend just commercial businesses, and many definitions discuss similar notions of transformation within arts (Taylor and Winquist, 2002), science (Baker, 2014) and public service (Nam and Sayogo, 2011).

More modern and accepted interpretations of digital transformation are effectively summarised by work coming from MIT’s Center for Digital Business (Westerman *et al.*, 2011), starting from a study where they broke down the notion into two separate strands of thinking - that digital transformation is marked by a level of intensity of application and implementation of digitally driven projects, and also by the way an organisation manages change within itself to take advantage of digital. More recently, there is a clear sense that true digital transformation is about transforming whole organisations rather than working on isolated, individual digital projects (Kane *et al.*, 2015).

We’re really interested in the sense of digital transformation as it occurs in a business -whether commercial or in public service - and it’s these definitions that seem to make more sense in the context of digital business.

Definitions of digital business transformation

If we think about digital transformation in the context of a digital business, then we get a more focused sense of the meaning and purpose of transformation driven by digital. The definition of ‘digital business transformation’ has evolved and continues to as the notion of what ‘digital’ is changes. But even these newer definitions are varied and contentious.

Adapting versus adopting

The terms ‘adopting technology’ and ‘adapting to technology’ are critical to understanding digital business transformation. Choosing one term over another indicates a particular worldview about the role of digital in the business. When a business **adopts** a digital technology, the implication is that the organisation isn’t changing in any way - it is merely incorporating the technology into the organisation without any particular change to the business. Buying new hardware, such as simply supplying new laptops to the staff of a business where they previously had desktop computers, is merely adopting a new technology. Many argue that this does not represent transformation at all, and that transformation can only be represented by the adaptation of the organisation to digital technology. **Adaptation** implies that the organisation is changing to take advantage of the opportunities that digital can provide.

The Global Center for Digital Business Transformation defines digital business transformation as a journey where businesses ‘adopt digital technologies and business models to improve performance’ (Wade, 2015). The use of ‘adopt’ is contentious, because many businesses adopt technology without necessarily changing themselves - one might argue that (as has been suggested in the broader definitions of digital transformation) businesses need to **adapt** to digital technologies rather than just **adopt** them - yet they themselves as an organisation also go on to say ‘Digital business transformation is organisational change through the use of digital technologies and business models to improve performance’ (Wade, 2015).

Forrester (Gill, 2015) defines digital business alone as exploiting ‘digital technologies to both create new sources of value for customers and increase operational agility in service of customers’. Again, this really leaves out the idea of the ‘adaptation to’ principle and retains the ‘adoption’ principle.

Why is digital business transformation not just about IT?

The question is often asked as to why digital (business) transformation is not just about IT. This question comes from the assumption that digital is simply about technology, and is very much linked to the difference between ‘adopting’ technology and ‘adapting to’ technology. It is true to say that an organisation’s IT resources (in terms of its IT infrastructure, investment and support staff) are inevitably going to be linked to any digital business transformation effort. But it’s worth looking at where traditional IT decisions come from and how they differ from digital business transformations.

The applications portfolio - a precursor to digital business transformation

Ward and Peppard (2002) developed a model to understand the role of information technology in the organisation, allowing managers to understand the significance of technology investment. The role of technology in this model is dictated by the strategic significance placed upon it by the organisation itself. Ward and Peppard break these technology investments down into four specific types that allow an understanding of the role they are supposed to play, and these roles are shown in Figure 10.1, known as the IT Portfolio Grid. It’s interesting to note that Ward and Peppard don’t refer to these items as software, programs or IT but as ‘business applications’ - this in itself is an early step towards the understanding of how digital is involved in the transformation of business.

Ward and Peppard’s view of applications is that they could be extremely large and complex business processes that contain many IT hardware and software elements, along with designed elements of data, information and knowledge flows. Business applications in this context are whole business processes, not just software, and each application is defined by the role it plays in the organisation.

1 High-potential applications

High-potential applications are almost always developed ‘from within’ - even though certain elements may be imported from external sources, the combined holistic total of an application will be an in-house development, particularly the way in which all of the elements of the process are weaved together. The configuration of the process will almost always be unique to that business. As a result, many of the skills and competences associated with the digital opportunity may not exist (as yet) within the organisation (or indeed within the outside world) and so these skills develop at the same time as the project itself.

One of the important facets of high-potential applications is that the business needs to know when to shut it down. If an application in this quadrant isn’t able to demonstrate its value or potential within a given period of time, then it needs to be closed down. Although it is not expected for a high-potential to be profitable or to demonstrate any immediate cost benefits, the results of analysis must show that there is potential for these to happen. If not, the only conclusion is to shutter the whole application after all affordable avenues of enquiry, modification and development have been considered.

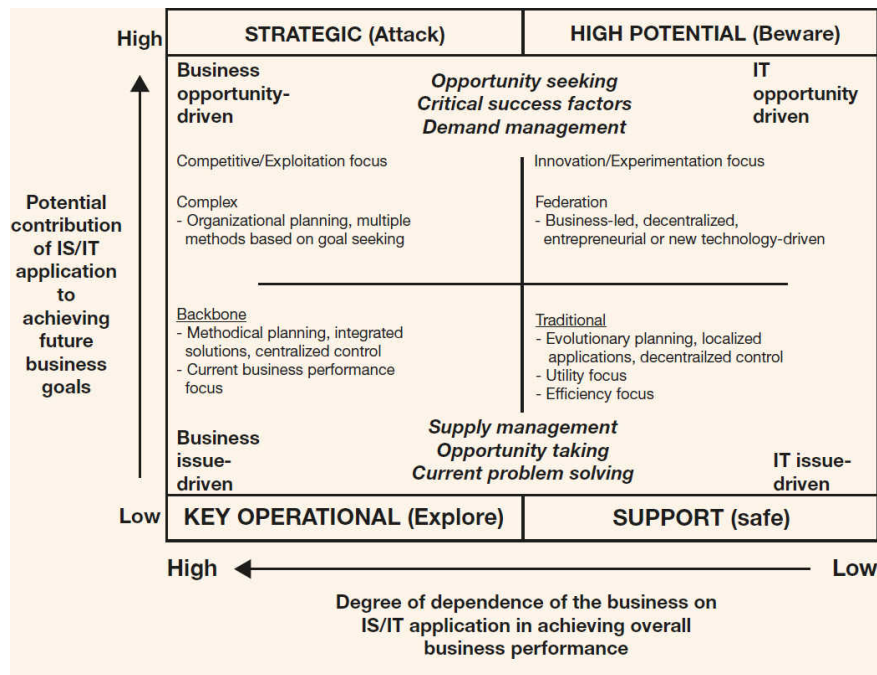


Figure 10.1

Ward and Peppard's IT Portfolio Grid

Source: Ward and Peppard. (2002)

On the other hand, if a high-potential does produce evidence of revenue or value generation or cost benefits, then the business needs to give consideration as to whether it should invest in the application and make it a strategic application

High-potential applications are those applications that currently do not provide value to the organisation, but they may well provide a value at some point in the future. These applications may be experimental in nature (they could be described as 'alpha' or 'beta' projects). These are often very new issues not only within the business but to the world in general. They are often highly entrepreneurial in nature. They are also difficult to quantify in terms of purpose and scope - the business is really not sure of what they are for. The purpose of high-potential applications is for the organisation to validate the need and value of a specific aspect of the application as well as the application as a whole.

A small area of the business may have been chosen to develop a high-potential application and use it for a short period of time.

2 What makes something a strategic application?

One of the most important features of a strategic application is the need for constant and permanent improvement. Strategic applications need to remain innovative in order to avoid a competitor copying the process, or parts of it. So, constant innovation and testing of new improvement maintains the strategic advantage and therefore strategic dimension of the application. The danger of a competitor imitating (or worse providing their improved version of) the application would immediately remove its strategic nature. This danger can sometimes come when the skills and competencies embodied by the staff associated with a key operational application leave the business and those staff go on to work within a competitor organisation. When the strategic advantage of an application disappears, there are two possible routes for the application to follow - the application becomes key operational or it becomes a support application.

Strategic applications are those applications where the organisation finds that it provides some kind of strategic advantage. For a commercial organisation, this advantage may come in the form of a cost saving, the provision of a service or the development of value for customers that competitors cannot apply or provide. There is something inherently unique about a strategic application, and so the component parts have an element of 'secrecy' about them. Any digital opportunity within the application is likely to be developed within the business - this ensures that the 'ingredients' of the total processes remain unique to the business and very difficult to replicate. The skills and competencies associated with the digital opportunity are relatively unique to the organisation, and the business has to give significant thought to retaining those skills. Other digital aspects of the strategic application may be imported from external sources but only where these are openly available elsewhere and where there is no specific advantage in developing these from within. Read Mini case study 10.1 to see how the Google algorithm is used as a strategic application.

Mini case study 10.1

The Google algorithm as a strategic application

What makes the Google Algorithm a strategic application in Ward and Peppard's definition? One key element is the continuing innovation at Google in 'improving' search results. There have been a series of 'algorithm updates' where aspects of the way the search engine displays results have changed. These updates have a number of causes - to improve the results that search engine users seek, to stop imitation by competitor search engines and to reduce the threat of 'gaming the system' by unscrupulous website owners and content developers, which would undermine the quality of the results the search engine provides (the issue of unscrupulous or 'black hat' search engine optimisation is a story for another book).

Ironically, the search engine algorithm at Google isn't a secret. It's a series of publicly available patents. However, the way these are used is a matter for internal debate at Google. Google embodies the process of combining different aspects of the search engine and ensures that this process is developed and kept in house. Perhaps Google's biggest headache is retaining the staff it has and preventing them from working with competitor firms. But the way that Google combines the elements of the algorithm is what (currently) gives it a strategic advantage. The real key to the advantage is the user data that Google has collected and how that is applied in the context of the algorithm. That data is unique and Google has collected (collects) it over many years. Its competitors don't have access to that rich resource of digital behaviour and must create their own.

3 Becoming a key operational application

As a result, almost all key operational applications are the result of significant testing around known business and industry needs. With that in mind, it's often the case that specific vendors may emerge to supply the needs of a specific industry. Those vendors may be small freelancers, who work on similar projects throughout the lifecycle of an industry's common key operational application, or large suppliers of services. Amazon's AWS (Amazon Web Service) is an example where a large platform owner provides similar services to different operators within a marketplace. The business needs are known. All of the operators within the sector need to rely on a service without which they will be at a disadvantage. In effect, AWS levels the playing field between the operators. At the same time, there is usually a large pool of talent well acquainted with provision of skills and competence within a specific sector, which means that staff are often happy to invest time in becoming proficient in these areas. Problems emerge when the demand for staff outstrips supply, or when potential staff move on to more interesting or profitable skills and competences in other areas and industry sectors.

Key operational applications have a habit of becoming known as legacy systems, and so it can be important for an organisation to constantly monitor a marketplace for changes in business needs or, sometimes, the opportunity to spot a strategic application that could render an existing key operational application redundant.

Key operational applications are those applications that are fundamental to the operation of the organisation in the industry or environment within which it operates. In essence, an organisation employs a key operational application in order to avoid disadvantage relative to competitors (who would have the application), suppliers (who would use a process to gain power) or customers (who would use the absence of the application to dominate or subvert the relationship with the organisation). Key operational applications are regarded as essential to the operation of the business within the sector it operates, and so without them the business cannot function successfully inside that area (see Box 10.1).

Box 10.1

The data centre and key operational applications

Almost every organisation that has a data centre (with some very notable exceptions) isn't in the business of providing data centres to other people. Data centres have formed important parts of organisations where there is significant data processing - for example banks (core business: handling financial transactions), e-commerce stores (core business: retail) and logistics firms (core business: delivery). Historically, organisations needed data centres because there was no provider of data centres - and so the organisation had to build its own resource to carry out this activity. But data centre operation was not the core business of the organisation.

At the time of writing (and as mentioned in Chapter 3), there are significant providers of cloud computing services that can be used to carry out the data processing activities of many organisations. These cloud computing organisations have data processing as a core business of their own - they sell it as a commodity, have established systems to manage the risk and have investments in technology where the cost of investment is distributed between customers.

Cloud computing consumption embodies the moment when an organisation has moved data processing into a key operational application - known business needs, where there is no advantage to managing one's own data centre. In fact, there might be an argument to suggest that continuing to manage one's own data centre puts an organisation at a competitive disadvantage in terms of cost as well as risk to the business should the data centre fail.

4 Support applications

Support applications are those applications that exist for relatively mundane or legal purposes. The reasoning behind a support application is to ensure the lowest-cost, long-term solution to a well-established business need. Support applications convey no business advantage and (to some extent) their short-term non-availability would not put an organisation at any disadvantage - more likely it would be an inconvenience. As an example, most organisations have an established approach to payroll management. One of the facets of a support application is that it may be easily outsourced to a specialist provider or bureau. A digital opportunity in this area is often used to significantly lower the cost of the support application. Indeed, provision of the support application to other businesses may be the digital opportunity for a specialist business. Microsoft's constant development and evolution of its Office suite of software is its own strategic advantage - there are relatively few competitors (nothing comes near in terms of sales volume) - and, as a result, it can guarantee that most office workers globally are trained in its use. That provides a rationale for its use as part of a support application in the majority of businesses worldwide (see Mini case study 10.2).

If an application is mandated in a business by law (such as health and safety or financial compliance) then the business itself will look for the cheapest, long-term solution to that legal requirement. In almost every case, that application will be provided by an external business that

specialises in its provision, and indeed makes the provision of a digital component of that application its own digital business opportunity.

Microsoft Office?

10.2

If I am in a digitally transformed business, why am I still using

This piece of content is being authored using Microsoft Word, yet a quick look on any search engine or social media platform will soon find you hundreds of comments about 'how awful Microsoft Office [and its component applications - Word, Excel, PowerPoint, etc.] is'. Yet for such an awful reputation, the product line is thriving. It continues to be the priority enterprise office software package used all over the world. There have been (and continue to be) plenty of contenders - among them Google's G Suite as a cloud-based application, Apple's iWork (limited to Apple devices) and Libre Office.

Instinctively, the cost of Microsoft Office should make the other options more attractive. Even with Microsoft's monthly enterprise pricing, it is still twice as expensive as Google's G Suite. So what makes Microsoft the support application of choice?

The critical issue is the total cost of ownership surrounding training. In Western Europe and the United States, it's usually a common competency requirement of employees to be familiar with Microsoft Office applications in those environments where use of such applications is core. Training is usually easy to find and significant numbers of support staff are available to service the Microsoft Office environment. Compared to the other offerings, the total cost is significantly lower and the level of effort required to support it is much lower.

Can it last? Its shift into being a cloud-based application puts it squarely in competition with Google's G Suite. The transformation that we might expect in people's outlook is not that they need a specific tool in the office but that they have a specific job or series of tasks to complete. The way for Microsoft to survive in that environment is to place less emphasis on 'Office' per se and more on creating solutions that allow digitally literate users to carry out the tasks they need. As users become increasingly mobile and access solutions via wearables, the traditional face of office software will change - and companies will choose the lowest-cost, long-term solution to their needs.

The emergence of digital transformation as a discipline

History of change and change management

Digital transformation and digital business transformation are in effect descendants of the original ideas around the discipline of change management. Change management evolved in the very early 1960s as a response to the growing understanding of how planned and unplanned change affected the behaviour and attitude of people who worked in organisations. History is replete with huge waves of change and the effect it had on people in organisations, none more so than with the arrival of disruptive technologies during the Industrial Revolution. Many lives were lost over the years of

the late 18th century and 19th century as workers and factory owners clashed over the introduction of new technologies that fundamentally removed the need for people to do the work. The growth of Marxism and Socialism can be traced back to the experiences of writers who lived and observed the consequences of change in these times across Europe, along with the growth of mass political parties and the trade union movement.

The first half of the 20th century brought great change but this was to a great extent overshadowed by the two great wars of the period. It's not until the 1960s that we begin to see the evolution of the ideas of change management evolve. Early thinking in this field came from the belief that 'all change is bad' and that the process of managing change allows people to accept change (Welbourne, 2014). It's now accepted that this model of managing change isn't about discrete periods of change followed by discrete periods of no change - at the time of writing, many authors accept that change is a constant state rather than discrete periods of change activity. As a result, managing change in a modern context is about how people are different to how they were 50 years ago, and how business is also very different.

Managing change has evolved through the experiences of organisations who made it their business to manage change in other organisations. Phrases such as 'business process reengineering' emerged in the 1970s and 1980s. These change management approaches were often noted by their 'top-down' approach to change management. Subsequent research and experience of these models and approaches to change management were heavily criticised (Anderson and Ackerman-Anderson, 2001) as the change centred around changing the business while still (in many cases) not changing the people.

The contemporary view of change management is that it is very much about managing the change of people, perhaps more so than managing the change of business. This lends credence in our digital business transformation thinking to Lankshear and Knobel's (2008) idea that digital literacy and competence have to precede digital transformation.

Many change management writers imply that the two big current drivers of change in organisations are globalisation and technology innovation. Both of these are external motivators of change, and as a result it implies that change doesn't come from an internal motivation source such as an organisation's staff (Strebel, 1996) and that many aspects of an organisation, such as culture, structure and business routine, are set up in such a way that change is very difficult to create. For digital business transformation projects, we need to look at the transformative effects that digital innovation can have not only on the business in terms of things such as cutting costs or making a profit, but also on the ability of digital innovation to transform organisational culture, business structures and business processes. Indeed it's the position of the authors that what makes transformation in a digital business occur (as opposed to a business simply adopting technology) is the ability of new digital innovations to transform culture, structure and process. And so this change means that 'digital' takes a new position of strategic importance within the organisation.

The change in strategic position of digital versus technology

The evolution of 'digital' shows a distinctive journey from something that is an expensive 'add-on' through the emergence of 'IT management' to the position of the contemporary digital enterprise where digital is at the heart of the whole organisation.

Many commentators look at the emergence of the World Wide Web in 1991 (and to some extent some other supporting technologies prior to that date) as the moment when (any) organisations really start to take digital to heart. Historically, technology was a barrier to entry (irrespective of the capability of technology generally) due to the costs of the technology itself. Massive and disruptive technological change was limited to large corporations and government bodies that could absorb the costs associated with big technological change. The rise of the web demonstrated that technological innovation could occur to some extent with very little associated technology cost. Websites were

(and are) comparatively cheap to design, build and host. The unit costs of emailing millions of people are very low. The ubiquity of supporting technology means that technology itself is no longer strategic. Technology no longer provides an advantage in itself. Some might argue that it is no longer key operational and that the very term 'supporting technology' implies that technology really has been demoted, for want of a better term, to a support application under Ward and Peppard's model. Something else has adopted the strategic position, and that is the broader 'digital' proposition.

We know that 'digital' encompasses not just technology but also cultures (culture of organisations but also the culture that has emerged 'online' since the arrival of the Internet), the practices of being online (business practice as well as broader societal practice) and processes that have been and can be created purely online. The strategic nature of digital is about adapting to digital technology, culture, process and practice and not just adopting technology. To an extent, adapting to the technology might well be the easy part of the process. Adapting an organisation and its people to the cultures, practices and processes that those technologies have enabled is a more difficult job.

It is the view of the authors that digital business transformation and digital transformation can be viewed as one and the same thing, and that the process of digital transformation is about adapting to the technologies of digital through the adaptation of organisations to the cultures, processes and practices of digital.

The need for digital transformation

A compelling case needs to be put forward for digital transformation. It is clearly a more complex activity than the simple acquisition and implementation of technology. It combines all of the issues of contemporary change management with the complex issues of digital. It's not clear whether digital transformation is a revolutionary or evolutionary process -that's governed by the organisation and its context. It is clearly in many cases not a cheap thing to do, but on the other hand it does not necessarily become a 'big bang' expenditure issue either. There are many hidden costs, or costs that cannot be quantified in financial or quantitative terms. The focus of digital transformation is on outcomes and outputs. Placing digital transformation at the heart of strategic thinking allows the organisation to set goals at the highest level and ensures that anything done to transform the business is done with the purpose of achieving these goals. Digital transformation must have purpose.

The importance of digital transformation has seen the growth of roles in existing organisations at the highest level of leadership, where digital is the key factor in those roles, such as chief digital officer or chief digital business director. There is some debate as to whether such roles should exist. On the one hand, digital is important yet remains relatively enigmatic (as a discipline) to many stakeholders in organisations. Having a chief digital officer indicates the level of importance at the highest level to observers. On the other hand, if digital is to be so pervasive and be at the heart of everything that the organisations does, then it should not be regarded as in the realm of only one senior executive but the responsibility of all. Historically, the responsibility for technology, computing and IT has been placed by many firms with finance directors, because early systems were centred around accounting practice and calculations. Over time the role has evolved into roles such as IT director and chief technology officer - emphasising the importance of the technology but nothing necessarily beyond that. Roles such as chief information officer, chief knowledge officer and even chief intelligence officer emerged. But again these roles do not evoke or represent the holistic view of what digital is; rather they focus on the application and use of technology in pursuit of business. It is the view of the authors that all of these roles risk losing focus on the full impact of digital technology, culture, practice and process.

Digital transformation allows the organisation to question the way the business operates, hence it has its strong routes in change management. At the same time, it also explores the opportunities provided by digital technology. As such, the digital transformation process should be an outward-looking process that explores what is possible and then looks for ways in which opportunities can be applied in the organisation. Those opportunities can be in the technology opportunities that arise through the adaptation of the business, opportunities provided by the way culture is affected or

changed in the digital age, opportunities provided by new practices that emerge in the digital age or opportunities that are provided through the use of new processes that have emerged in the digital age. The impact is often huge (which can have serious consequences for an organisation if not well managed), even if the perception is of a small change. With that in mind, it's worth understanding that there are a number of common areas (or reasons) where digital transformation occurs with increasing regularity, within both existing and new (start-up) organisations.

Understanding the reasons for digital transformation

The opportunities provided by digital

According to a number of writers (Westerman *et al.*, 2011), there are three significant themes that highlight where the main impacts and opportunities for success exist. These are:

- customer service and service design;
- business and organisational processes;
- business models.

Each of these areas provides its own unique set of opportunities and very specific circumstances that use the particular elements of what digital is. However, we cannot regard the list as permanently exhaustive. It should be considered that the future is likely to provide new digital technology opportunities, new digital cultural opportunities, new digital practices and new digital processes. These may go on to impact whole new areas for opportunity in the business.

Where does digital transformation occur?

Customer experience and service design

The management of the interface between the organisation and its customers has evolved over time and has been managed by businesses historically in a relatively fragmented way. This is due in part to how businesses in isolation, and as a whole, have developed. There are a series of different disciplines that govern how people and technology work together. Of particular interest to the digital business practitioner, these have evolved from studies in the 'man-machine interface', through areas such as human-computer interaction (HCI), usability and user experience (UX). But the broader field of the interface between the organisation and the customer transcends the simple technology interface. Even the relatively contemporary UX field focuses almost exclusively on design (albeit it a relatively broad view) of technology-driven interfaces for websites and mobile applications. This particular view of the business is only one of three key fields within customer experience and service design. The areas that have so far benefited from digital transformation all seem to loosely fit into customer insight, adding value to offerings and customer interfaces.

Customer insight

Customer insight in its simplest terms is the information and knowledge an organisation has about its customers. This insight can come from extrinsic and external sources such as data collected by other organisations, data from market research or even analytics data provided by companies such as Google. Internal customer insight comes from the relationships that organisations have with their own customers. This can come from explicit sources such as surveys, where customers are actively canvassed for information, or it can come from more implicit internal sources, such as sales data or analytical data about customer behaviour.

Customer insight can occur at the granular level about individual customers or it can be at a group level and be about whole customer segments. Individual customer data can come from external sources, such as electoral records or credit-scoring companies, or it can come from internal sources such as customer records or purchase histories.

Organisations have collected data, information and knowledge about their own customers for many years, but it is only in recent times that the insight has been actively used and exploited to improve customer experience and, by implication, to improve the circumstances of the organisation itself (see Mini case study 10.3).

What do we mean by customer insight and digital transformation?

If we take our definition of digital transformation from earlier ('adapting to digital technology, culture, process and practice'), we need to effectively ask this question: 'How can we adapt to digital technology, process, practice and culture to use customer insight?'. To use customer insight more effectively, the organisation needs to change in one or all of those areas. The organisation may need to adapt to new technology, adapt to new processes, adapt to new practices or alter its culture to take advantage of customer insight. The biggest problem for organisations historically is not that they do not have customer insight, but they are not set up to take advantage of the insight they have. As a result, insight has often gone unused and unexploited (and still does). The risk for businesses is that they don't know what customers want or what they are like, and as a result they may be making mistakes or missing out on real opportunities to provide what customers want.

Mini case study 10.3

Hertz marketing

In 2016, global vehicle rental firm Hertz needed to find a way to improve the performance of its sales and marketing function. It wanted to try and get more from the money it spent on analytics and search engine marketing and a greater return on the media spend in online advertising in different platforms.

Hertz, like many businesses, realised that data about customers came from many sources and in many formats. Knowing where this information came from allowed Hertz to know about the journey each individual customer makes when engaging with the organisation. This is important, because there can be a belief that a particular approach to marketing doesn't convert if viewed in isolation. There was a need to digitally transform the aspect of customer insight into a single view of the customer (rather than lots of different views of the same customer being held on different systems and managed by different parts of the business).

Hertz used the opportunity to transform the way it collected, held and analysed the data from customers, so that it could create a holistic view of the customer wherever they interacted with the firm. This meant that it could streamline its marketing effort and get greater value from improving the right advertising and marketing messages to the right potential and repeating customers.

Hertz was able to understand a lot more about which marketing actions could attribute sales. Instead of simply looking at single marketing actions (such as clickthrough rates on adverts),

combining views on all the actions meant that it could see that many different marketing interactions would be used to bring a customer to the organisation.

Adding value

The term ‘value’ is loaded. It’s far too easy to think of it as an issue around cost and price, but the notion of value isn’t about price as such (although that may well form part of the issue). It’s sometimes better to use the term ‘benefits’ rather than value. If we say, ‘How do we add benefits to our offering?’, it sometimes makes a lot more sense.

There are many ways to add value (and these often involve having access to individual customer insight). Customers like to receive some kind of reward (either financial or non-financial) for their purchase or loyalty to an organisation. Customers like to be reminded of certain things about the organisation, for example when a sale is due or when goods that they have ordered are about to be delivered. Customers like recognition of their behaviour, such as loyalty. Customers like to receive support towards making a purchase as well as after a purchase. They also like to receive help and advice on making the purchase itself, such as recommendations of purchase choice or options available.

What do we mean by adding value and digital transformation?

We need to ask our question: ‘How can we adapt to digital technology, process, practice and culture to provide value?’. It’s clear that having access to customer insight is critical, so that stage of transformation may be a priority. To add value, the organisation needs to consider how to adapt to new technology, adapt to new processes, adapt to new practices or alter its culture to provide customer value (see Box 10.2). The biggest problem for organisations is that they may not use customer insight to inform themselves about what value customers seek to derive from their products and services. As a result, customers may remain with unmet or under-served needs.

Box 10.2

Customer value in digitally transformed organisations

DPD sends its customers a series of SMS text messages about their imminent delivery. As the time of delivery gets closer, customers receive a message letting them know about the window for delivery. Customers can interact and change the date or location for delivery. This creates greater satisfaction for end customers but it also reduces the number of missed deliveries by the courier.

Loyalty schemes exist in almost all retail organisations but some organisations move them into new levels. Sephora uses customer insight to drive different levels of reward based on different spend levels. Higher spend levels kick off different rewards, all of which are influenced by the recency, frequency and monetary value (RFM) of the spend. This creates different communications and different offers for each individual customer.

Many organisations provide personalised customer support to existing customers with known credentials. Many customers can deal directly with an organisation through a dedicated chat mechanism on an app or website. In many cases, the first line of enquiry might be via a chatbot before a case is escalated to a real human. Organisations report that many simple queries can be supported this way, allowing for simple issues to be dealt with quickly. This creates greater customer satisfaction and allows organisations to reserve human intervention for more exception-based, specialist interaction with customers.

Spotify provides a new playlist - Discover Weekly - every week for its listeners that takes their personal song-play history and links that to other listeners who have similar listening habits. On that basis, Spotify recommends new songs for the listener that its algorithm believes would be most suited to that listener.

Interfaces with customers

The word ‘interface’ can sometimes be difficult to comprehend because of its recent use in the context of computing. As a result, for many people it simply means a screen on a computer. But interface has a far more simple and less technological interpretation: interface should simply represent the place where two parties interact.

The growth in computing since the early 1980s has allowed the word interface to be hijacked somewhat and interface was increasingly used to describe the point where humans interact with technology. The fashion in the 1980s and 1990s was to talk about the humancomputer interface and as a result it’s this particular meaning that has taken hold in modern consciousness. That doesn’t mean that it is inaccurate. The emergence of the World Wide Web allowed commentators in the mid-1990s to talk about a company’s website as the interface between customers and the organisation. This was an increasingly more accurate idea of an interface but it still really linked a computer to the idea. Add the growth of mobile and mobile apps to the mix and the talk is still about improving the interface - the very surface or visible top layer of a computing application, rather than a discussion of the point where an outsider comes into contact with an organisation.

When we move away from the technology idea of interface, we can actually make a lot more sense of the discussion of the term in the context of digital transformation. A simple paper form is an interface. The moment a person calls a company’s contact centre or walks into a high-street store and talks to a member of staff at a cash register - they are experiencing an interface with that organisation. Interface truly means any situation where the individual comes into contact with the organisation - this view of interface makes it far easier to think about opportunities for digital transformation. In recent years, the phrase ‘touch-point’ has been suggested as an alternative to the word interface in order to shift the focus away from existing technology and the idea of a screen. And humans experience many different touchpoints with an organisation even during a single interaction with that business. The word interface itself could refer to a cohesive and planned arrangement of touch-points that a person experiences.

What do we mean by interfaces with customers and digital transformation?

We need to ask our question: ‘How can we adapt to digital technology, process, practice and culture to change and improve the interface with customers?’. These four elements provide an opportunity to change (or create from scratch) new ‘interfaces’ between the organisation and the customer. What digital technology can the organisation adapt to provide an interface with its customers? What processes and practices need to change to provide that interface? What digital cultural changes does the organisation need to adapt to in order to provide a digitally transformed interface? The biggest problem for businesses is that they do not use customer insight to inform the organisation about the interface that customers (see Box 10.3).

Box 10.3

Interfaces in digitally transformed organisations

Back in 2007 the BBC launched the first version of its iPlayer (having been trialled for two years with specific users with certain Internet service providers), which evolved over the following years to include greater functionality and availability on different platforms. Its

initial launch back then allowed people to watch TV programmes that had been broadcast on the BBC on Windows machines.

iPlayer has evolved significantly over time. But it's not the technological development that makes it interesting, it's the evolution in practice, process and culture that underpins the iPlayer's journey.

There are key moments that give us an idea about this. The main one is how people's behaviour regarding viewing habits is radically changing. There is a clear shift from watching live broadcasts of programmes to the consumption of recorded content via streaming platforms. The second is the proliferation and variety of platforms on which streaming content is consumed, from mobile devices through games consoles to smart TVs and set-top boxes for satellite, cable and over-the-air. Each of these platforms represents a view on the interface between the BBC and its viewers.

Some of the processes and practices behind iPlayer remain steadfastly 20th century - not because of any issue with the BBC or the iPlayer per se, but because of the issues around copyright and the way the BBC is funded through the TV licence. It's possible that changes to these matters may affect the way the BBC deal with the future of the iPlayer. What's clear is that it is an interface that BBC viewers use a great deal. So much so that the entire catalogue of BBC3 programming is now only ever available through iPlayer, having previously been a broadcast TV channel.

Business process

What business processes have emerged that are products of 'digital'? Technological developments mean that certain processes within the organisation can be speeded up - but what happens when those processes are no longer required? One of the biggest criticisms of digitisation of process is that the very same process that existed as a manual process is simply the same process shifted onto a digital platform.

Automation of business process

In a digital transformation context, the automation of business process should not simply take the existing process and digitise it. The transformation is about changing the process entirely and allowing the organisation to take advantage of a digital opportunity to adapt to the technology rather than simply adopt it. Automating an existing process is likely to almost entirely avoid any advantage associated with automation. The process needs to be rethought so that steps in the process itself can be changed, added to or completely removed if they do not need to be there. Practitioners talk about the removal of steps or touchpoints within processes. Business processes can be questioned in the context of the digital transformation process.

Key drivers to automate processes are often about the time taken by existing information-intensive processes. Banking and insurance (see Box 10.4) are often cited as examples where the time taken to approve a bank loan or an application for insurance cover has dropped from the traditional 'days' to minutes. The critical measure in some cases was that the same information could be used in different parts of the process - historically, things might have to be entered as data several times, whereas now they can be entered once and those data can then be shared (legally) to different parts of the whole process.

Box 10.4

Digital transformation and change to the insurance sector

Domestic insurance purchase, such as car or house insurance, has changed dramatically since the 1970s. Originally people would buy a policy via an insurance broker, who would have direct contact with a number of underwriters. People did not liaise directly with insurance companies themselves. When a claim was made, people would deal with a broker.

In the late 1980s, with the arrival of call centres, insurance companies began a process of disintermediation and removed the step of insurance brokers by allowing customers to contact insurance companies directly for the purchase and management of insurance policies.

The arrival of websites soon removed the need for people to ring call centres. It also allowed insurance companies to move the job of data entry from insurance employees onto the customers themselves. The time involved for customers was not dissimilar to the time spent making a phone call. The cost-saving for insurers was dramatic.

However, this change in process also meant a proliferation of online insurance companies, which meant that, in order to explore different offers, customers would have to apply the same information for each insurer - a time-consuming action. New insurance companies had to compete through expensive advertising just to be considered by potential new customers. Cue the arrival of the insurance comparison site.

Comparison sites allow customers to enter their information once and for numerous companies to 'pitch' a price and a proposition. This allows many companies to be considered but it also means that the competition for customers becomes extremely tight.

The current model within many national economies is for insurance underwriters to offer only some of their products through comparison sites but to then make certain other products only available through their own websites. The change of process over time to take advantage of a digital opportunity has had mixed blessings for insurers. At the same time, customers now have to consider several different comparison sites. Until very recently, Google was offering insurance comparison in its European search engines through small apps in the organic results page for searches around insurance, until a legal ruling by the EU rendered this as an anti-competitive practice.

The product (an insurance policy) has altered very little, but the process required to obtain one has changed a great deal in 40 years.

The business model

What business models have emerged that are products of 'digital'? Technological developments mean that certain business models have emerged that were not possible previously. Changes to culture, practices and processes also mean that new business models can be explored and exploited. But what business models are changing?

- 24/7 anywhere: the idea that customers can access an organisation at any time of the day and from any location. As an example, Amazon's storefront is permanently open and you can purchase from Amazon anywhere in the world where there is a delivery or postal service.
- A move away from 'What can I sell you?' to 'What do you need?': the idea that a focus on customer outcomes rather than a focus on the organisation's products is critical. As an example, Strategyzer's value proposition design (VPD) model forces organisations to focus on customer 'jobs', 'pains' and 'gains' rather than on product features when considering how a business model should work.
- A move away from assets and a move towards access to services: the idea that it is not about owning physical assets that is key, but that it is possible to connect people who own those assets with people who want access to those assets. As an example, Airbnb does not own any hotels or properties but operates a reservation system for short-term lets in private properties.

You will see (and we have discussed some of them earlier in this text) a whole series of examples where the digital business has transformed a marketplace by adapting to a digital opportunity. At the time of writing, services such as Spotify, Apple Music, Amazon Prime Music and Google Play Music all connect users using different devices who want to listen to music from an enormous catalogue of artists. The business model of buying physical music assets (such as CDs, tapes, mini discs and vinyl) becomes redundant for the consumption of music - although there is a remarkable market around the purchase of physical music assets. The key feature of streaming and instant accessibility removes the need to physically possess music. The business model in the music industry based around the sale of physical music assets has dwindled enormously. Culturally, there is a shift to listening to music on demand and away from possessing media containing music. The same shift in culture is reflected in the consumption of video media. There has been a cultural shift away from viewing live broadcast media and owning media containing video content to viewing streaming video on demand. This digital cultural shift influences and creates the business model of organisations such as Netflix or NowTV as much as the digital technology enables it - one might argue that the digital cultural shift occurred earlier than the availability of the digital technology with the growth of consuming pirated music and video content in the 1990s and early 2000s (LUIS and Bertin, 2013).

New business where digital is at the heart of the opportunity

We've spent some considerable time emphasising that the key driver to digital transformation is not just about technology. However, this does not exclude the situations where the arrival and emergence of a new digital technology creates a chance for the creation and transformation of a new business opportunity.

The development and maturing of smart mobile phone technology, along with the development environments for app creation, 3G and GPS together created the perfect conditions for the creation of the Uber app in a marketplace where there was an unmet or under-served need for a ride-hailing service. Uber would not have been possible without those four technology conditions, even though the business opportunity itself may have lain dormant for some time as an unmet need. See also Mini case study 10.4.

Mini case study 10.4

Digital technology at the heart of the business opportunity

Mobike is a bicycle-sharing company that originally started in China and (at the time of writing) now has operations in the UK and Europe.

Bicycle sharing is not new as a concept - but original ideas around this idea resulted in solutions in London with a cycle hire scheme (currently called Santander Bikes as a result of sponsorship from the bank) in 2007 and Vélib in Paris. These approaches required expensive infrastructure investments around locking and payment systems. Bicycles are expensive and as a result their spread has been limited to significant major capitals and conurbations.

Mobike was able to centre its opportunity around the Mobike app. The app is at the heart of the business opportunity. The app controls membership, payment and controls the locking and unlocking of Mobike bicycles. This removes the need for expensive on-street locking and payment system infrastructure. Locking of the bicycle is managed by an Internet-enabled lock, rendering the bicycle unusable without access to the app or physically damaging the bicycle.

It's easy to think of Mobike as a bicycle business, but the argument is that it is a mobile app business that enables the use of a physical asset. It's possible to think of other applications for the app where access to a real-world asset for a short time can be enabled through an app. In that sense, it is a membership system that provides 'keys' for unlocking services and products. The app is at the heart of the business opportunity.

Adapting the existing business to a digital opportunity

Transformation, as a word, seems to indicate the previous existence of something else. Opportunities for transformation are going to exist in organisations already in operation (see Mini case study 10.5 for example). So digital transformation in this instance, rather than creating new business around a digital opportunity, refers to the adaptation of an existing business around a digital opportunity. We've talked previously about the need to adapt the business to a digital opportunity rather than simply adopt digital technology.

Adoption is simply the acquisition of a technology into a business. In many cases, organisations adopt technology because it is fashionable, new, 'shiny', or because they are worried about being 'left behind'. The problem is that this does not necessarily make a digital business. It just means they have technology but they might not be benefiting from it - it could be making things worse. Adoption can be an indicator of a lack of strategic thinking - rather than ascertaining what the goals are (what do our customers want, what do we (want to) sell or promote, what are we trying to achieve?), the technology is going to determine what the goals are - and these might be at odds with what the business wants to achieve. Adopting technology can indicate that the opportunities afforded by digital culture, practice and processes are missed. Without these, it could be an issue that means the maximum return (financial or other) from technology isn't achieved. The goal of digital transformation is to adapt the business so that it can take advantage of digital culture, processes and practice and maximise return on digital technologies.

Mini case study 10.5

Domino's Pizza as a constantly transforming business

On the face of it, Domino's Pizza could appear to be a relatively traditional fast-food franchise and chain business. It's based in real-world premises and relies on pick-up of real product from its premises by customers or delivery to customers using delivery staff.

But Domino's has long had a digital culture of looking to where customers might be in terms of communication and delivery channel. There is a view that the younger audience that Domino's seeks to target could be more likely to inhabit newer channels of communication and retail opportunity. Moving away from the traditional channel of calling on the telephone for a pizza, Domino's was one of the first organisations that allowed takeaway food to be ordered from a website. Domino's Anyware platform approach is about enabling a customer to use any channel they desire to order pizza from their local store.

There are the inevitable mobile and tablet apps, but even these (at the time of writing) contain features that smooth and ease the ordering process. Domino's encourages the creation of 'Pizza Profiles' and 'Easy Orders' - fundamentally, customer preferences that can be used for retained customers.

Dependent on location, voice commands in the Domino's app can create a swift purchase. Easy Orders can be ordered in 10 seconds using the Zero Click app, or through any one of the voice channels to which Domino's has adapted its ordering process - including Amazon Alexa and Google Home. There is even an integration via Ford's SYNC AppLink to allow in-car ordering.

These public-facing customer-driven channels dictate the strategy - go where they are, operate how they want to operate. This constant state of transformation means adapting to new processes, cultures and practices (consider how pizza might be ordered from Slack), and only then is the technology itself given the light of day.

(Refer to Chapter 9, p. 454 for an interview with Nick Dutch, head of digital at Domino's Pizza UK, on how they create digital experiences.)

Source: <https://anyware.dominos.com/>

The framework of digital transformation

There are many organisations that purport to have the winning formula for digital transformation. There are plenty of consulting firms with proprietary methodologies, but there are common themes of process that run through all successful digital transformation projects (Nylén and Holmström, 2015). One thing that is worth noting is that a framework for digital transformation can appear linear, compartmentalised and seem to be designed to run once. On the contrary, the themes we discuss below are iterative, with activities feeding back and forward through the process. And it is an ongoing, constant process, which some liken to a never-ending journey.

The process of review

Successful digital transformation projects do not dive straight in and start innovating or implementing - we have previously seen the consequences of technology-first activity, when no thought has been given to the strategic and business issues within the business. As with any proper strategic process, the process of review phase is used to establish the current situation of the organisation - but this strategic review has some specific components.

As we've mentioned earlier, the process of digital transformation can be initiated because there is an opportunity to place a digital innovation at the heart of the organisation -remembering that innovation can be around digital technology, digital culture, digital practice or digital processes.

So, at this review stage, the organisation probably needs to look at four issues:

- What the digital opportunity is.
- How sure the organisation is of the opportunity.
- What level of digital the leadership of the organisation possesses.
- How mature as a digital business the organisation sees itself.

These issues are reviewed in tandem rather than in series - they are part of an integrated process.

What the digital opportunity is

Identifying the digital opportunity should come as a consequence of regular environmental scanning. The unique nature of digital means that the evolution of technology, culture, processes and practice is extremely fast and (at this stage in history) very difficult to predict. This digital scanning activity should involve not only the collection of information about new technologies, devices and channels, but also intelligence about new skills and capabilities that contribute to digital practice. The digital scanning activity also needs to collect information about digital cultural changes, as well as innovations in digital processes. It's very easy to get fixated on the technology, but the scanning activity needs to look beyond that.

How sure the organisation is of the opportunity

It is very easy for evangelists within an organisation to get carried away with the excitement of a new digital innovation. As we've mentioned previously, this has historically led to businesses getting involved in technologies that aren't aligned with the strategic views of the organisation. This part of the process is intended to ensure that the digital opportunity can be expressed in tangible terms for opportunity for the business and whether the organisation can be assured of its success.

Opportunity analysis will look at questions that are quite traditional in thinking, such as (but not an exhaustive list):

- Is there an opportunity to grow the business with existing customers or new customers?
- What are the kinds of revenue we can forecast or expect?
- What value can this create for customers?

Success assurance looks at more internal issues and, again these are quite traditional in their thinking, such as:

- How stable, permanent and reliable is the new technology, culture, process or practice?
- Can the opportunity be scaled up?
- How safe is it for the business to adapt to this digital opportunity?

Both opportunity and success assurance approaches may already be existing activities within the organisation's strategic review process, or they may require some alteration to ensure they are included. For greenfield developments or start-ups, part of the process of becoming an organisation will be to develop this as a robust strategic activity within the business' strategic thinking.

What level of digital the leadership of the organisation possesses

The organisation needs to look at its board and senior manager levels to assess the digital leadership of the business. At the time of writing, there is significant demand for the kind of senior managers and leaders who possess the kind of qualities required for leading digital transformation, and an under-supply of the 'right kind' of people. There are two considerations that make the issue of digital leadership problematic - existing digital leaders tend to be very focused within their digital technology field (often working specifically within technology businesses) and possibly lack broader understanding of the wider organisation, while broad-based leaders may have the integrated understanding of the wider business but lack the necessary experience, culture or competence to understand the impact of the digital opportunity. Historically, leaders who have been attracted to digital have very different career paths compared to more traditional managers. Digital leaders can be very focused and very specialised. Broad-based leaders have access to skills that involve motivating people and being able to influence organisations.

An existing organisation is likely to have more broad-based leaders and fewer digital leaders. A tech start-up is more likely to have the opposite. The reality is that organisations are going to need both kinds of leader, and both kinds of leader are going to have to evolve, so businesses do really need to look at a leadership profile that encompasses both.

How mature as a digital business the organisation sees itself

Traditional strategic thinking around a business trying to understand itself will look at some essence of maturity. In digital transformation, the business needs to give consideration to how 'digitally mature' it is. There are many consulting organisations that offer evaluations of the digital maturity of a business (often referred to as a digital maturity index) and these are often used to benchmark against similar organisations within an industry vertical.

Differing stakeholders in the business are surveyed on attitudes and understanding of their capability, as well as their understanding of customers and digital activities. Stakeholders are often asked about their views of the level of digital in things such as innovation, process practice and

technology, as well as broader ideas of management and leadership and the way the organisation is structured (Kane, 2017). It is expected that a digital transformation project or programme would improve subsequent scoring on a digital maturity index at a later date, and that goals of such a project would take into account a need to move scores in such an index.

The process of review should, as part of a wider strategic review, provide the insight required for the organisation to contemplate developing a digital transformation strategy.

The process of strategy

We've mentioned previously about digital transformation taking place in the wider strategic thinking of an organisation. Historic models of strategic thinking have been questioned by some as being stuck in a mindset more akin to the later 20th century and from times when the competitive environment was more predictable - perhaps from pre-Internet times (Reeves *et al.*, 2015). There are concerns that relying on models of thinking from times when there wasn't the same pressure from innovation or speed of change is highly dangerous (Warren, 2012).

The development of a digital transformation strategy can borrow some of the relevant features of strategy development. There are some key themes that seem to occur regularly in successful digital strategies.

A focus on the objective for the future rather than solving an existing problem

Many organisations fall into the trap of developing digital transformation to 'fix' things that are wrong. It's important to remedy existing problems, both within and outside the organisation, but a digital transformation strategy's focus should be about opportunities rather than problems (see Box 10.5). Digital transformation strategy should be about focusing on creating achievable (or proximate) goals built around key themes that are important to the organisation (and that the organisation envisions will become important).

The other significant difference between traditional strategic objectives and digital transformation objectives is speed and time. Traditionally, strategic thinking was about the long term, with goals and objectives spanning multiples of years (think five-year plans). Digital transformation objectives are more likely to be set around much shorter intervals - maybe months or weeks in some cases. The reason for this is because of the speed of change and development in issues relating to digital, particularly in the development of technology. We will see later, when we look at growth hacking, different ways of managing the strategy (and subsequent resourcing and implementation) where a technological opportunity is driving innovation.

Box 10.5

Digital-first theme in UK government

In 2012 the UK government created the global governmental theme of 'Digital First' as a guiding theme for digital transformation projects across central government. The theme was designed to respond to the opportunity that people have raised expectations about how they interact with any organisation. The vision behind this theme was that digital shouldn't just be a way to do things - it should be the best way to do things with an organisation and the way that people prefer and seek out.

The theme of Digital First has driven the design of objectives in a series of UK government departments and agencies since 2012, with a focus on opportunities that digital

creates (Government, 2012).

Source: Cabinet Office (2012) Government Digital Strategy.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/296336/Government_Digital_Strategy_-_November_2012.pdf

It's critical that digital transformation objectives are aligned with business objectives. Any that fall outside the scope of the business objectives communicated by the broader business strategy need careful consideration - two things can and should happen. Either the organisation at a higher level needs to change existing objectives or create new ones (to allow advantage to be taken of the digital opportunity), or the digital transformation objective itself needs to be changed or even shelved.

The process of strategy for digital transformation should then drive details on understanding resourcing and implementation.

The process of resourcing and planning

Once the roadmap for digital transformation is complete, there are two things that the digital transformation project has to give thought to:

- the design of the transformation;
- a programme for change.

The design of the transformation

There needs to be a master plan for implementation of a transformation project. Given the relative speed in which digital transformation projects need to be implemented compared to traditional business objectives, the size of these projects and their plans needs to be relatively small.

There are traditional ways of planning that are very familiar, but newer more contemporary methods of planning could be more useful in certain circumstances - indeed, the process of planning itself might be the focus of a digital transformation project, so that teams can take advantage of digital innovations and place a digital opportunity right at the heart of the planning for transformation. We'll explore this a little later when we look at growth hacking.

A programme for change

Perhaps more important is the plan for change that will occur in the organisation. In order to take advantage of a digital opportunity, aspects of the organisation need to adapt to it - this is perhaps where the true 'transformation' takes place.

Change needs to occur in the digital literacy and digital competence of stakeholders in the organisation. There is the inevitable training that needs to occur with existing staff, but plans also need to be made for the recruitment of new staff with new skills required in this instance.

A more difficult but fundamental programme for change might be around organisation culture, especially when adapting to a digital culture in order to gain an advantage. Past examples include creating a culture where working from home and commuting less is important, or where management of teams and work patterns allows activity to occur over a 24-hour period rather than the traditional 9-5 working day. Change is often very difficult and, if badly managed, can have the opposite effect. Every case study about positive management of change comes back to the same single set of ideas - communicate everything and put employees first.

The process of deployment

The traditional method of planning the deployment and implantation of a digital transformation project could be undertaken in the same way as any project where change has to be implemented. Traditional approaches to project management make a lot of sense where something might be very big, but where projects are smaller, faster and more responsive, there may be more appropriate ways of managing deployment.

Digital provides interesting opportunities to explore deployment in different ways, particularly when one looks at adapting to digital culture itself. Technology-focused teams, particularly software-development teams, have in recent years started to work in different ways to implement projects through a process of agile development. Agile can be a useful way of looking at implementing a transformation project.

The 12 principles of agile (Beck, 2001) fit particularly well into defining characteristics of digital transformation. In particular, the focus on collaboration with end-users and customers, small self-organising teams and responding to change resonate highly with themes of digital transformation. Hackathons have recently been used to deploy small transformation projects (Grijpink *et al.*, 2015), and actually encompass the broader principles of a digital transformation framework. Both of these approaches emphasise the issue of speed and time that affects digital transformation objectives. We explore other ideas around implantation later when we look at growth hacking.

The process of living with, and evaluating, digital transformation

We've emphasised that digital transformation is an iterative process and that these themes in a broad digital transformation framework are not conducted in isolation from each other, and that the process of implementation might itself be a transformed approach to the whole framework.

A significant number of digital transformation projects are deemed to have failed. In an interview with *Forbes* magazine, Michael Gale reports that one in eight digital transformations might be regarded as completely successful, while more than half are regarded as complete failures (Gale, 2016). Studies abound of failure rates of transformation projects, with some giving an ultimatum to organisations - failure of transformation will inevitably lead to business failure (Couchbase, 2017).

By carrying out that act of review and strategy during the starting phase of a digital transformation project, it is much easier to conduct an evaluation of a project itself (or more accurately a phase of transformation if we accept that transformation is an ongoing process).

Living with a phase of digital transformation actually equates to evaluating the process as it runs, and may require several approaches to be considered. Organisations (in particular leaders) that have adopted an agile approach will use the process of regular check-ins with transformation teams and employees. This allows for progress to be checked, to observe whether changes are having the effect desired from the strategy stage, and to make any corrections and put remedies in place if this is required.

Inevitably there is a period when a whole project itself needs to be evaluated in terms of success. Evaluation will review the issues raised in the initial stages of the project:

- Did the transformation grow the business with existing customers or new customers?
- Did it generate the forecasted or expected revenues and what revenue can we forecast or expect?
- Did it create the value that customers wanted?
- Has the organisation been able to scale up the opportunity from a small idea to a much larger proposition?

Furthermore, reviews will also explore:

- How stable is the new technology, culture, process or practice now that the organisation has adapted to it?
- How permanent is the new technology, culture, process or practice now that the organisation has adapted to it?
- How reliable is the new technology, culture, process or practice now that the organisation has adapted to it?
- Were all the risks and issues associated with the new technology, culture, process or practice adequately identified and were the counter-measures appropriate?

The organisation should also review its digital maturity index again to see whether an appropriate transformation has taken place that is recognised by its own employees, and a review of the leadership should show increasing digital awareness and enculturation of broad-base leaders and increasing broader awareness of the organisation among the digital leadership. Evaluation of the strategy should explore achievement of broader business objectives through successful achievement of transformation objectives - this is particularly important where achievement of the transformation objective is regarded as the critical success factor for the broader business objective.

The digital transformation of marketing is also happening - in the form of growth hacking, which will be covered in the next section of this chapter.

What is growth hacking?

Growth hacking

An approach to improving the commercial results from online services through structured testing and optimisation of marketing approaches.

Growth hacking (also referred to as 'agile marketing' and 'growth marketing') is used to boost awareness and lead generation and conversion. It originated in the start-up scene on the West Coast of the US several years ago and early adopters included Software as a Service (SaaS) subscription businesses and social networks such as Facebook and LinkedIn. More recently, the concept has been enthusiastically accepted worldwide, not just by start-ups. Larger businesses have also sought to change their mindset to a more iterative, continuous approach to increasing sales.

Box 10.6

Growth hacking

Andrew Chen, an entrepreneur who is an adviser and investor to many start-ups, describes a growth hacker as follows, in his post 'Growth Hacker Is the New VP Marketing' (Chen, 2012).

'Growth hackers are a hybrid of marketer and coder, one who looks at the traditional question of "How do I get customers for my product?" and answers with A/B tests, landing pages, viral factor, email deliverability, and Open Graph. On top of this, they layer the discipline of direct marketing, with its emphasis on quantitative measurement, scenario modelling via spreadsheets, and a lot of database queries'.

This quote shows that many of the features, such as a focus on testing and learning through conversion rate optimisation (CRO), are not new - indeed, they have been featured in this text for several editions - but it shows a change in mindset in how business transformation can be achieved. Another key feature of growth hacking is examining

techniques for getting viral growth through encouraging users to share their experiences. The growth of Hotmail from 0 to 12 million users before it was bought by Microsoft is a favourite anecdote of growth hackers. For Hotmail, the sharing was rapid due to the email signature: 'PS I love you. Get your free email at Hotmail. Signature.' Today, encouraging sharing through social sign-on and social sharing is more an approach sought by growth hackers. These techniques have helped companies such as LinkedIn grow from 13 million to 175 million users, according to Schranz (2012), who explained that Facebook's Growth team started by establishing a simple framework of things to measure and improve to make it easier for everyone to understand what to focus on and why it matters:

- Acquisition - get people in front of your product. . .
- Activation - provide a great initial experience. . .
- Engagement - keep people engaged, deliver value. . .
- Virality - get people to recommend your product. . .

Some of the principles of growth hacking are being adopted by existing businesses, looking to enhance the sales of their digital channels. For example, *The Guardian's* advert for a Head of Growth Hacking described the growth in the role as:

The Guardian is committed to a 'digital-first' strategy and in order to support this, we are seeking a Head of Growth Hacking to manage a virtual, cross functional team focused on GNM's growth hacking plan. This role is responsible for finding innovative ways to accelerate adoption, use, and retention to drive up audiences to the Guardian's digital product portfolio.

Sean Ellis, a marketer and entrepreneur who has worked for companies such as Drop-box and Eventbrite, devised the term 'growth hacking' in 2010. Originating from Silicon Valley, growth hacking has successfully been used to build high-growth companies such as Hotmail (see Mini case study 10.6), PayPal, Twitter, Airbnb, Instagram and Uber. Ellis says:

Startups live and die by their ability to drive customer acquisition growth... [they] are under extreme resource constraints and need to figure out how to break through the noise to let their target customers know they have a superior solution for a critical problem... the best growth hacks take advantage of the unique opportunities available in a connected world where digital experiences can spread rapidly.

Growth hacking is now gaining traction in the UK and has recently been termed 'the next big thing for marketing' by *Advertising Age*. Even well-established organisations such as *the Guardian* have recently advertised related job roles, such as 'Head of Growth Hacking' (see Box 10.6), which has further raised its profile.

Although the term 'hacking' has technology connotations, more traditional companies such as Regus and Penguin Books are also using the principles of growth hacking. This indicates that the concept is not just relevant to technology start-ups and this movement has wider implications. It's a form of marketing digital disruption because technology is an enabler for marketers to understand and respond to user behaviour more rapidly.

In order to understand the concepts behind growth hacking (which is more of a mindset than list of digital marketing techniques) it's important to understand the idea behind hacking. Gorbis (2013) talks about this in *Harvard Business Review*: '... Things are hack-able - the way we've designed various systems is not pre-ordained or immutable. We can tinker, re-design, and play with them. . . [Hackers] don't ask for permission to do what they do. . . They are less interested in technologies per se than in playing with established ways of doing things and conventional ways of thinking, creating, learning, and being.'

Sometimes a marketing budget can stifle creativity because it's too easy to go for the 'traditional' approach (as demonstrated by the Hotmail mini case study). Instead, growth hackers set a goal to acquire so many users/visitors and come up with ways to achieve their goal *without* a marketing budget - i.e. by utilising time and creativity. PR and social media are particularly good ways to do this (as covered in Chapters 7 and 8).

Errol Damelin, the founder and CEO of Wonga, summarises this approach very well (Tobin, 2012):

The rules of supply and demand dictate that the way established firms are currently marketing will already be expensive. . . As an entrepreneur, you have to be non-traditional.

Mini case study 10.6

Hotmail



Figure 10.2

Hotmail

Source: NetPhotos/Alamy Stock Photo

Sometimes simple ideas are the most effective - the story of how Hotmail grew is a great example of this.

In 1996 co-workers Saber Bhatia and Jack Smith planned to start a company called Javasoftware. However, they were afraid their boss would catch them, so they built a web-based email system.

The founders raised \$300k to help launch the webmail product but usage was unimpressive. Their 'traditional' growth strategy was to buy billboards and radio adverts.

The company's investor had a different idea - thinking back to his MBA, one of his professors had covered the concept of Tupperware parties. Basically, a certain percentage of women at each party became salespeople for the brand by referring more business. This harnessed the power of social dynamics and network effects to spread the product - could webmail do something like this?

Hotmail added a piece of text at the bottom of every email that read 'PS: I love you. Get your free email at Hotmail' with a link back to its homepage.

They started averaging 3,000 users a day. Within 6 months they had 1 million users and just five weeks later they'd hit the 2 million mark. One of the founders sent *one* email to a friend in

India and in three weeks, they had 30,000 users in that country.

When they sold to Microsoft 1.5 years after launch, Hotmail had 8.5 million users (to put this in context, there were only 70 million Internet users at the time).

Scrum

An agile framework for effective team collaboration on complex and adaptive problems, mainly used for software development.

Facing bigger players with bigger budgets, the odds are stacked against you. Identify the people you want to be customers, and go get them, whether via guerrilla marketing, creating controversy, or making a story. The instinct to do what other companies in the same space are doing is probably the wrong thing to do.

Therefore, focusing on growth and being creative/non-traditional are two important parts of a growth hacker's arsenal. But what about the 'digital' element?

This is where agile methodologies from software design come in (particularly **Scrum**) -marketers use 'test, learn and commit' loops. Instead of coming up with one big idea, they use a series of micro-optimisations and tests to find out what works (and what doesn't). The Scrum process is covered in more detail later in this chapter.

Defining goals and KPIs

The starting point is setting a key performance indicator (KPI), which will help a business focus on its end goal. Basically, a KPI should be a number that will quickly tell you if things are going well (or not) in your company. In the context of an e-commerce company, growth targets can be simplified into three areas - volume, quality and value. Example objectives could include:

- 1 Volume.** These are objectives for the size of audience you will reach on your site, measured through unique visitors or visits. With a new or start-up business, brand growth is important so there should be a KPI of brand mentions and searches.
- 2 Quality.** These are objectives for achieving interaction and conversion with site visitors. Therefore, conversion rates to 'add-to-basket' and 'checkout to sale' are important.
- 3 Value.** This is the £, € and \$ overall and profit. It is important to look at both short-term and long-term value; objectives should be set for growing an average order value. Longer-term objectives of repeat customer order value based on repeat customer conversion rate should also be reviewed as a KPI. With a new business, it's particularly important to break this down into second-order conversion over a specific time period.

Also, revenue per visit is a useful objective since this combines quality and value and demonstrates the efficiency of conversion journeys and site merchandising.

The RACE planning framework was covered in Chapter 8, p. 377 and can be used to create a performance dashboard.

Stage 1: Reach

This initial phase in the customer engagement process is where prospects are conducting research and exploring their options. Primary goals should be to publish quality content and use effective direct marketing techniques to build awareness of a brand, products and/or services. The KPIs associated with this step for different media channels include:

- **Analogue marketing**

- Advertising
- Impressions
- Response rate
- Cost per conversion
- Direct mail
- Delivery rate
- Response rate
- Cost per conversion
- Trade shows and other events
- Registration
- Attendees
- Satisfaction
- Public/media relations
- News releases
- Journalist enquiries
- Interviews
- Pickups/coverage
- Positive mentions
- Endorsements by journalists/influencers
- Share of voice
- **Digital marketing**
 - Website and blog
 - Search engine optimisation effectiveness
 - Pay-per-click advertising efficiency: impressions; cost per click; cost per conversion
 - User sessions
 - Webinars
 - Attendee rate
 - Drop-off rate
 - Engagement rate
 - Conversion rate
 - Social media
 - Connections

Stage 2: Act

This phase is all about persuading prospects to start interacting with a brand and begin making buying decisions. Therefore, primary goals should be to continue publishing content and using direct marketing techniques, but also to engage directly with prospects -online and offline.

In addition to the KPIs associated with stage 1, the following should also be included:

- **Analogue marketing**
 - Inbound phone calls
- **Digital marketing**
 - Website and blog
 - Subscribers
 - Backlinks
 - Time on site

- Downloads
- Social media
- Engagement: likes; shares; retweets; comments; etc.
- Sentiment
- Conversions
- Leads
- Quality
- Conversions

Stage 3: Convert

During this phase, prospects become customers. Therefore, primary goals should be to generate purchases and integrate various nurturing, marketing automation and remarketing techniques to ensure relevance and drive repeat sales.

In addition to the KPIs associated with stages 1 and 2, the following elements should also be included:

- **Digital marketing**
 - Website and blog
 - Return visitors
 - E-commerce transactions
 - Leads
 - Cost per lead
 - Orders
 - Revenue from purchases
 - Average order value

Stage 4: Engage

During this phase, the focus should be on creating repeat customers and leveraging relationships with those customers over time. Therefore, a company's key focus should be on building and expanding customer engagements and measuring customer lifetime value, not only from individual customers, but from the value of the customer advocates that have been created. This is covered in more detail in Chapter 8.

In addition to the KPIs associated with stages 1, 2, and 3, the following should also be added:

- **Digital marketing**
- **Website and blog**
 - Email: open rate; clickthrough rate; bounce rate; unsubscribe rate
 - Social media: customer advocacy
 - Orders: revenue from repeat purchases
- **ROI**
 - All marketing campaigns and initiatives
 - Customer lifetime value

Effective marketing dashboards incorporate as many of the above elements as possible, from each of the four stages of the RACE framework. The impetus for creating and using a marketing dashboard should be about measuring results - effectiveness, efficiency and bottom-line ROI - not just activity. If possible, make the dashboard publicly available throughout the whole organisation and tie goals to a compensation programme for the company's marketing team. This will help drive marketing and sales alignment, as well as specific results important to an organisation's success.

How to use a single metric to run a start-up

Start-up businesses have an added challenge - they have extreme resource constraints. This means that, although collecting data is easy, if there is too much to analyse it can take too long to review and might bury the one key metric that matters. Generally, there are four main reasons why start-ups should focus on a single metric:

- 1 It answers the most important business question
- 2 It forces the team to draw a line in the sand and have a clear goal
- 3 It forces the entire company
- 4 It inspires a culture of experimentation (see Figure 10.3).

There are six broadly defined business models; each of them has a different focus and therefore a different key goal. Examples include:

- 1 **Transactional:** *Someone buys something*
- 2 **Collaborative:** *Someone votes, comments or creates content for you*
- 3 **SaaS:** *Someone uses your system, and the value they get means they don't churn or cancel their subscription*
- 4 **Media:** *Someone clicks on a banner, pay-per-click ad, or affiliate link*
- 5 **Game (and many free mobile apps):** *Players pay for additional content, time savings, extra lives, in-game currencies and so on*
- 6 **App (and many fee or paying mobile apps):** *Players pay for additional content, time savings, extra lives, in-game currencies and so on.*

Further information on the single metric concept can be found at:
<http://blog.kissmetrics.com/single-startup-metric/>.

The concept of 'one key thing' has been covered in a best-selling book by Keller and Papasan (2012). They argue that achievers always work from a clear sense of priority and that distraction undermines results. They suggest asking the focusing question 'What's the one thing I can do. . . that by doing it, everything else will be easier or unnecessary?'. This approach has worked for Instagram (see Mini case study 10.8).

So far, we have seen that growth hacking is a combination of two things. The growth part is about how you shift the kind of metrics that matter most to a business. These are typically things such as number of customers or revenue and profitability and engagement of daily and weekly users - rather than softer, more brand-awareness elements. They are the things that make a big difference to a business and whether it succeeds or fails.

The hacking part is really the means by which to get growth. It means taking a different approach to 'normal' marketing - instead, cutting to the chase, doing things quickly, 'swimming against the flow' and creative use of technology and data. Facebook founder Mark Zuckerberg has famously said (Blodget, 2009):

Move fast and break things. Unless you are breaking stuff, you are not moving fast enough.

This refers to the fact that new tools and features on the platform might not be perfect, but speed of creation is key. Facebook was one of the first companies to use growth hacking to gain traction.

Creating a growth hacking mindset

Growth hacking is an approach, rather than a set of tools. To illustrate this, it is worth thinking about an effective growth hack that has nothing to do with either marketing or business. Instead, it tells the story of a winning mindset.

In 1996, Britain's cycling team was ranked 17th in the world and had won just two bronze medals at the Atlanta Olympic Games. By 2012 they ranked first in the world and British riders had won 12 medals (8 gold) at the London Olympic Games. The team's success was largely down to the coaching of Sir David Brailsford. His approach was to break down everything that went into riding a bike and improve it by 1%. Putting all of the 1% margins together meant that, in 2012, British Team Sky had won 70% of the gold medals in cycling at the Olympics.

There wasn't a magic silver bullet, but a series of micro, cost-effective and human-centred optimisations that could be effectively scaled. This demonstrates what a growth hacking mindset looks like.

Therefore, to be a good growth hacker:

- Mindset is extremely important. Growth hackers focus on accelerated growth on a minimum budget. It's all about users (or an alternative KPI, depending on your business).
- Being curious and creative are key elements. Don't get fixated on spending a particular budget, go back to basics and think about tapping into human behaviour (we're social animals).
- The internal culture is important. The business needs to be open to experimentation -some ideas will fail.
- A good (Pi-shaped) team is required. Marketers with a broad base of knowledge in all areas, but capabilities in both 'left-brain' and 'right-brain' disciplines, are needed. They are both analytical and data-driven, yet understand brands, storytelling and experiential marketing.

The team element is very important, as one individual is unlikely to have all the skills needed for growth-focused marketing.

Ideal skill set of a growth hacking team

In terms of building a growth hacking team with the right skill set, four key specialisms are needed (see Figure 10.3).

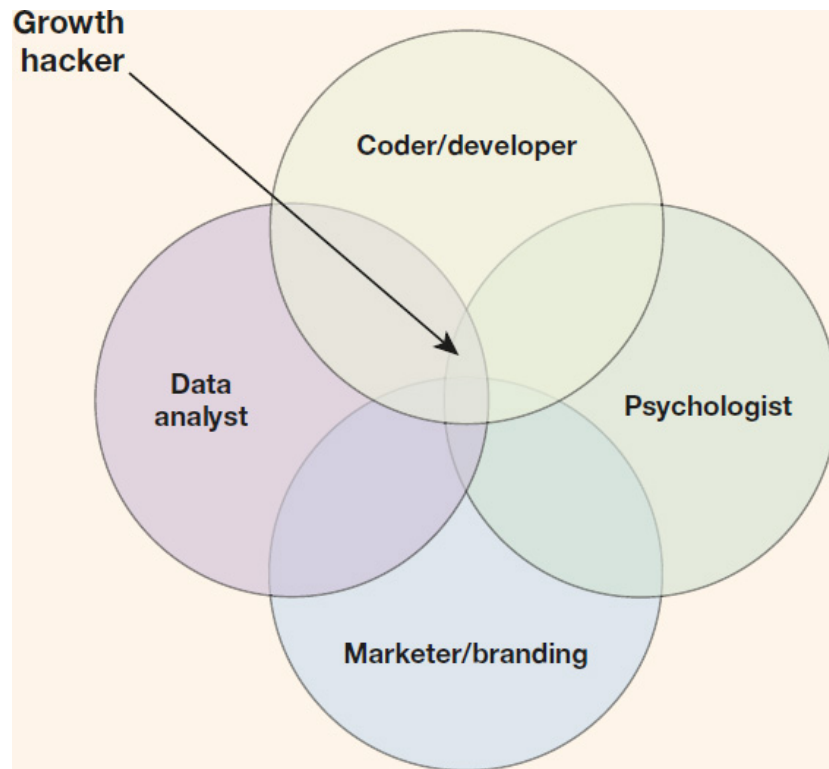


Figure 10.3

Ideal skill set of a growth hacking team

These specialisms are needed for the following reasons:

- *Coder/developer*: These people are needed to technically make things happen and push boundaries using programming skills (see Mini case study 10.7 for an example of this).
- *Psychologist*: A deep understanding of human behaviour and how to tap into that behaviour will help growth marketing campaigns (see Mini case study 10.6) and understanding the power of social dynamics and networking effects.
- *Marketer/branding*: Someone needs to understand the different traction/marketing channels available to a business and the importance of branding to generate sales. Although survival is more important than branding in the early days of a start-up, even companies such as Uber and Airbnb have been through a proper brand identity process.
- *Data analyst*: Most businesses have access to a huge amount of data, but many don't understand what it actually means. The right analytics will tell you what works and what doesn't - it makes success repeatable.

Use of Scrum, an agile methodology, in digital marketing

There are sometimes tensions in how marketers should work - mainly, between intuition and rigour and art and science. The explosive growth of marketing technology has meant that rather than spending several months planning a marketing campaign in great detail, marketers can try out initial ideas and use the outcomes to refine a campaign through 'test, learn and commit' loops.

Forrester (2013) found that 'The traditional annual planning route is ripe for extinction, as 69% of our B2B marketing leaders say that conditions change too quickly to keep plans current'. This sentiment is echoed by Ben Edwards, VP of Global Communications and Digital Marketing at IBM (Friedlein, 2014), who says:

Mini case study 10.7

Airbnb

The huge success of Airbnb has often been accredited to an early growth hack, which demonstrates the power of using a mix of marketer and coder. The company leveraged Craigslist, a platform with millions of users looking for accommodation, to increase its user base.

Basically, when users completed a form to list a bedroom on Airbnb, they were given the option to also post on Craigslist.

This was a great marketing and coding hack because Craigslist didn't have a public API (i.e. it didn't offer an easy solution for companies to cross-post their listings). Airbnb had to reverse-engineer how Craigslist forms worked and then make their product compatible to automate the process.

Craigslist soon 'fixed' its vulnerabilities that allowed the integration, so that Airbnb could no longer cross-promote its listings. By this stage the room rental platform had substantially grown its user base. Really good growth hacks tend to have a short timespan (usually before others start copying and the idea gets saturated and loses its appeal).

Airbnb's Craigslist integration is a great example of 'piggy-backing' on another platform to benefit from its reach and marketing efforts. This was a growth hack also used by PayPal when it partnered with eBay and Zynga within Facebook.

Traditional marketing has involved complex, heavy, expensive things like advertising and direct mail via print inserts. That sort of thing has used long upfront planning cycles and fixed execution.

As we move to digital marketing, just as we moved to digital products and digital product development, the cost of change and failure drops dramatically and there's a great opportunity to collapse those upfront planning cycles into something much smaller and then iterate rapidly based on what you learn through short periods of execution, measured for outcomes.

So that's the broad answer - collapsed upfront planning, iterative cycles of planning and execution based on continuous improvement.

Agile marketing is about responding quickly to the evolving needs of the customer and new technologies. Instead of the traditional approach of producing a marketing plan, implementing it and then evaluating its success at the end of the process, agile is about running small marketing 'experiments' to test assumptions and continuously monitoring their performance to maintain, adapt or change the activity. This continuous cycle is about working in iterations (or repetitions), as can be seen in Figure 10.4.

One of the most used agile methods is Scrum, which has come from a product development environment. The traditional approach to the product development process is like a relay race - one group of specialists passing the baton to the next group. However, in order to excel in a competitive

market, speed and flexibility are needed. This is where a holistic or ‘rugby’ approach is needed (i.e. Scrum) - the team works together as a unit from start to finish, passing the ball backwards and forwards.

Agile businesses have to get something out there in the world and test it, usually with digital channels because they are large, measurable, responsive and inexpensive, and then make decisions based on what they’ve learned.

Other benefits include:

- understanding what customers really want and continuously reviewing those needs to make sure your marketing stays relevant;
- continuously testing small elements of the overall marketing campaign to discover what has the most positive impact on customers;
- iteratively testing campaigns on the fly and incorporating the learning as you go, rather than measuring success at the end and using the results to do something different ‘next time’;

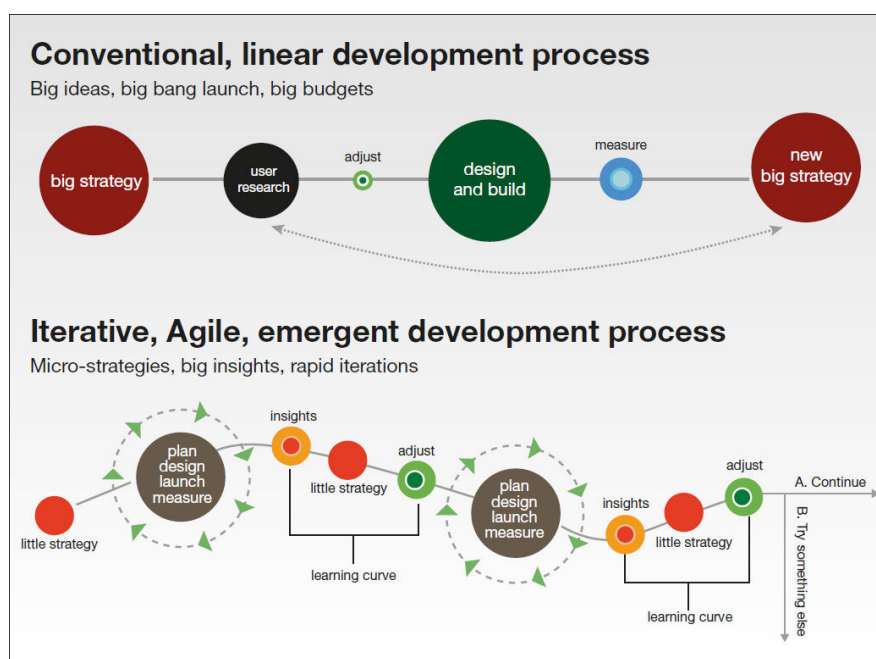


Figure 10.4

Iterative process

Source: David Armano

- continuous campaign delivery - with campaign elements modified on the fly, in response to performance;
- strong collaboration between marketing, operations and finance.

This agile marketing approach is particularly relevant for start-ups because they do not have the resources to put a lot of time and money into a big idea that might not work. Instead, this methodology is based on implementing smaller iterative projects quickly and cheaply - making decisions based on testing and data, rather than opinions and experiences.

However, this concept of rapid experimentation and using scientific methods to prove, or disprove, hypotheses does not exist solely in the start-up domain. Even larger organisations should follow an ‘experimental orientation’ to remain competitive. Scottish Enterprise Agency and

Transport for London are both implementing agile approaches to their marketing campaigns and product/service development.

Scrum meetings

Scrum can also be used for operationally project managing teams. Although its practice hasn't widely been used in managing marketing teams, the organisations that have used it find that it's a good way of keeping on top of running iterative campaigns.

In terms of planning campaigns, best practice recommends running no more than 90-day planning cycles. Smart Insights has produced a useful 90-day planning template to help with this (see Table 10.1). The previous section on goals and KPIs can help determine company objectives.

There are also some good online project management tools available to help teams keep track of activity, such as Basecamp.com.

Figure 10.5 provides an overview of the mechanics of a Scrum meeting. There are three core roles within a Scrum process:

- 1 Product Owner (voice of the customer)
- 2 Development Team (responsible for delivering activity in increments)
- 3 Scrum Master (the team leader, who acts as a buffer between the team and any distracting influencers).

The Scrum process is then divided into the following 'events'.

Table 10.1

RACE 90-day mapping of objectives to activities

Objectives 90-day targets	Tactics 90-day initiatives	Resources and content assets
<i>Plan objectives (overall contribution)</i> 90-day targets: Leads Sales revenue	Planned marketing or content campaigns to align with: Month 1: New Year campaign Month 2: Reserve and collect campaign Month 3: Plan Easter campaign	Month 1: Campaign assets Month 2: Campaign assets Month 3: Campaign assets
<i>Reach objectives</i> 90-day targets: Unique visitors Year-on-year: +25%	Activities that increase awareness and visits: SEO: Generic - internal link update SEO: Long-tail via blog SEO: Guest blogging AdWords: Enhanced campaign review AdWords, Remarketing	Infographics AdWords remarketing creative
<i>Act objectives</i> 90-day targets: Add-to-basket conversion Search conversion Product page conversion	Activities that improve customer experience: and content effectiveness Value proposition test Product page enhancement Improve blog integration	Select customer feedback tool Develop new product page templates

<i>Convert objectives</i> 90-day targets: AOV Revenue per visit Overall conversion Smartphone conversion	Activities that improve conversion and average order value: Checkout start page test Abandon cart email tests	Checkout start page Abandon cart template
<i>Engage objectives</i> 90-day targets: Revenue per email Repeat sales conversion Reviews per customer	Activities that improve existing customer engagement and advocacy: Welcome sequence email test Renewal emails Facebook custom audience and promoted tweet tests Customer review emails	Welcome email creative Review email creative

Source: Smart Insights, 'Company XYZ - 90-day (Q4) Marketing Activity Plan (January-March '17)'

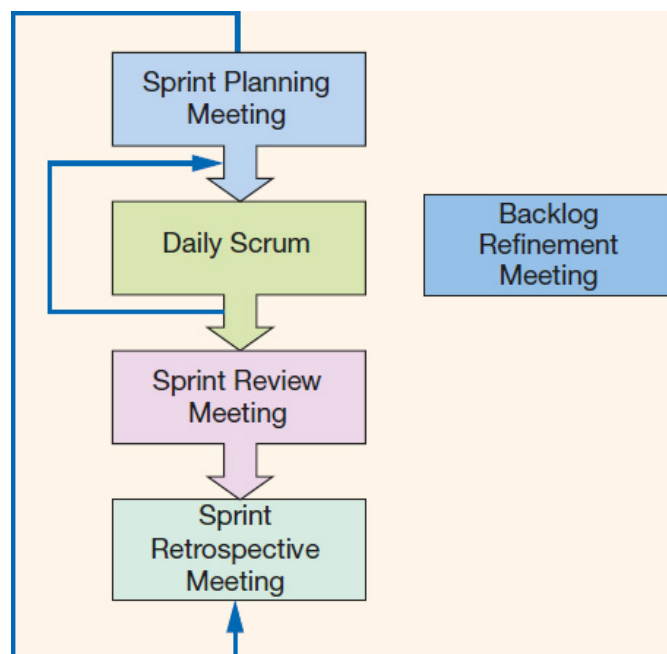


Figure 10.5

Scrum meeting

Sprint planning

To select what work needs to be done, prepare the sprint backlog with the team (and how much time it will take to do the work) and work to a four-hour time limit for a two-week planning sprint. During the first half of the sprint, the team agree what product backlog items need to be considered and during the second half the development team establish the tasks required to deliver the backlog items (called a sprint backlog).

Daily Scrum

Every day during a sprint, the team hold a stand-up meeting of no more than 15 minutes. The meeting should happen at the same time, in the same location, every day; team members come prepared and each person answers three questions:

- What did I do yesterday that helped the development team meet the sprint goal?
- What will I do today to help the development team meet the sprint goal?
- Do I see any impediment that prevents me or the development team from meeting the sprint goal?

Box 10.7

Using Scrum in marketing teams

If you are going to be implementing agile methods into a marketing department, these are some of the key things to consider:

- Review meetings can take too long for teams of eight or more people.
- A month is probably too long for a marketing sprint because of the unpredictability of schedule demands.
- Task estimating takes time to learn.

Marketing projects should be executed in ‘mini development cycles’, each lasting no more than a month.

Any impediments identified in the Daily Scrum are recorded by the Scrum Master and displayed on the team’s Scrum board, with someone designated for working toward a resolution (outside of the Daily Scrum). Detailed discussions should not happen during the Daily Scrum.

Sprint review and retrospective

During the sprint review, the team reviews the work that was completed and the planned work that wasn’t completed.

At the sprint retrospective, the team answers two questions:

- 1 What went well during the sprint?
- 2 What could be improved in the next sprint?

They then identify and agree continuous process improvement actions (see Box 10.7).

Developing agile marketing campaigns

Programmatic marketing

Automated bidding on advertising inventory in real time, for the opportunity to show an ad to a specific customer in a specific context.

A good ‘rule of thumb’ is to use a marketing 70:20:10 rule:

- 70% of your marketing should be planned activity;
- 20% of your marketing should be automated marketing that responds to various actions of the user (such as **programmatic marketing**);
- 10% of your marketing should be entirely agile - reacting to news and events as and when they happen.

In order to achieve this, the right resources are needed - a creative team who can generate sharable content quickly - the correct tools in place to listen to social media feeds/provide alerts to relevant topics and a culture that is open to ideas and experimentation (i.e. one that is not risk-averse).

Social media is a perfect medium for agile marketing because of its real-time responsiveness.

Figure 10.6 shows a Specsavers advert, with text added to reflect the Brexit Referendum result using Specsavers 'should have gone to Specsavers' slogan.



Figure 10.6

Specsavers Advert

Source: Joe Doylem/Alamy Stock Photo

The growth hacking process

There are five key pillars to achieving growth hacking success:

- 1 Product/market fit (create an MVP - minimum viable product)
- 2 User data analysis
- 3 Conversion rate optimisation
- 4 Viral growth
- 5 Retention and scalable growth.

1 Product/market fit (create an MVP - Minimum Viable Product)

Product/market fit is a product or service offering that perfectly satisfies the need of a particular user segment, which creates a loyal and passionate user base.

Traditionally, marketers are given a finished product and it's their job to generate sales. In the world of growth hacking, a different approach is taken... instead, the product build phase should be entered as quickly as possible with a minimum viable product (MVP). This is a basic (or beta) product without any 'bells and whistles'. Marketers are enlisted during this initial product development phase to help put the MVP in front of potential customers to gain feedback. This is done by running surveys, testing and iterating to improve the product.

Sustainable growth is only possible if a large group of people consider the product or service a 'must have'. This is difficult to achieve without user feedback and product improvement before officially launching the product to upscale the business. The idea of 'fail fast, fail cheap' and improvement via constant experimentation can be seen in the Instagram mini case study.

PayPal co-founder and technology start-up investor Peter Thiel believes that:

If a product requires advertising or salespeople to sell it, it's not good enough.

Most tech start-ups take the 'traditional' approach of building a product and then seek funding to assist with bringing in new users via sales and marketing. However, technology start-up investors require 'proof-of-concept' before releasing funding, so that key marketing metrics such as cost of acquisition and month-over-month growth can be provided to prove sustainability.

The model in Figure 10.7 shows each stage of the start-up process and how customer feedback is an important part of finding a business model that works.

The perfect target market for a start-up is a small target audience served by few or no competitors because trying to enter a large market already served by competing companies will erode profits.

One of the main aspects of the products we use on a regular basis is that we're hooked on them. How often do you use platforms such as Facebook and Twitter and/or products like your iPhone or iPad? Eyal (2014) is an expert on applied consumer psychology; he has developed a model that helps people build better products and achieve product/market fit. The 'Hook Canvas' can be seen in Figure 10.8. Designing a habit-forming product has four parts: trigger, action, rewards and investment. We will look at each of these in more detail next.

Trigger

Triggers come in two types - external and internal. External triggers are embedded within information and tell the user what to do next (e.g. click a link in an email). Internal triggers are when a product becomes aligned with a thought, emotion or pre-existing routine - i.e. capturing moments with friends/family via photos and sharing them on Facebook. Once internal triggers become part of people's routine behaviour, the habit is formed.

Listen to customers

During customer development, a start-up searches for a business model that works. If customer feedback reveals that its business hypotheses are wrong, it either revises from or “pivots” to new hypotheses. Once a model is proven, the start-up starts executing, building a formal organization. Each stage of customer development is iterative: A start-up will probably fail several times before finding the right approach.

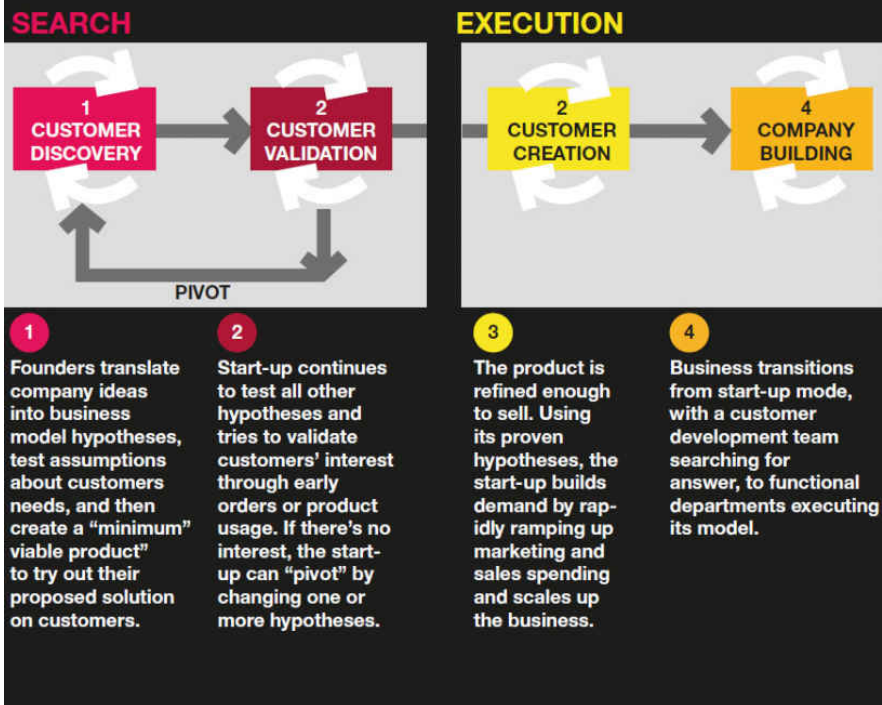


Figure 10.7

Lean start-up

Source: <https://hbr.org/2013/05/why-the-lean-start-up-changes-everything>

Action

After a trigger comes the intended action. There are two pulleys of human behaviour - motivation and ability. Although motivation is a widely contested topic in psychology, this model is based on the fact there are three core motivators driving our desire to act: seek pleasure and avoid pain; seek hope and avoid fear; and seek social acceptance and avoid rejection. It is worth considering that negative emotions, such as fear, can be powerful motivators. The other 'pulley' links to usability, i.e. the ability of the user to take action easily. Companies such as Pinterest, Instagram and Snapchat have simplified online content creation and sharing, they have used modern technology to take out steps. Fogg (n.d.) describes six elements of simplicity: time, money, physical effort, brain cycles (level of mental effort/focus needed to take an action), social deviance and non-routine (how much it matches or disrupts existing routine). To put this in context, Google has reduced the amount of time and cognitive effort required to find information.

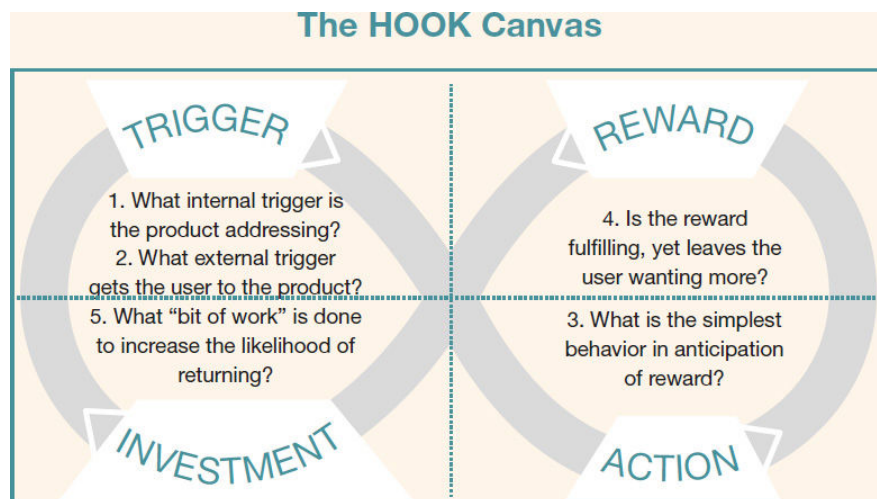


Figure 10.8

The Hook model

Source: www.slideshare.net/nireyal/hooked-model/135

Rewards

The variable reward phase is when users are rewarded by solving a problem, thus reinforcing their motivation for taking the action in the first place. Variable schedules of reward are a powerful way to hook users. Research has shown that levels of dopamine surge when the brain is expecting a reward and introducing variability multiplies the effect, activating the parts of the brain associated with wanting and desire. Lotteries and slot machines work on this premise. There are three ways a product can heighten a user's search for variable rewards:

- rewards of the tribe - gratification from others;
- rewards of the hunt - material goods, money or information;
- rewards of the self - mastery, completion, competency or consistency.

Investment

This is the last phase of the Hook Canvas: before users create mental associations that activate automatic behaviours, they need to first invest in the product. This links to a psychological phenomenon called the escalation of commitment - the more users invest time and effort into a product or service, the more they value it. Therefore, this stage is about asking users to do a bit of work - investment is generally in the form of asking the user to give some combination of time, data, effort, social capital or money. Company's such as Giffgaff have utilised this phase well, by asking for user-generated content for its knowledge base (see the section on 'Artificial virality', p. 588).

More information about user behaviour and what drives customer engagement can be found on Eyal's website, www.nirandfar.com.

One product that has hooked millions of people is Instagram. The photo- and video-sharing social network has a team that are conversant in psychology as much as technology. Many people have made using the app a part of their daily routines - forming a connection between the need to capture images of things around them and using the app on an ever-present mobile device.

For many people, Instagram started off as a brief distraction (i.e. to relieve boredom), only to become part of a regular routine. The fear of losing a special moment instigates a pang of stress, which triggers Instagram users to open the app and alleviate the pain by capturing a photo. Also, because the app is a social network, it dispels boredom by connecting users with others, sharing photos and swapping banter. It also lessens or stops the pain of 'fear of missing out'.

Instagram's journey to product/market fit is an interesting one, as you can read in Mini case study 10.8.

Mini case study 10.8

Instagram



Figure 10.9

Instagram

Source: tanuha2001/Shutterstock.com

Instagram started life called Brbn, named after a whisky. Originally launched as a location-based iPhone app, it allowed users to check-in at particular locations, make future check-in plans, earn points for hanging out with friends and post pictures of their meet-ups.

It wasn't very successful. All of its features confused users. To tweak the app, they looked at the user analytics and found that most people were using it to share photos.

Based on the usage data, they scaled down the product and focused on its photo-sharing infrastructure. They also looked at the competition - Hipstamatic had great filters but photo-sharing was difficult, and Face-book was great for social networking but not photo-sharing. They decided to build something in between.

After months of experimentation and prototyping, they released a simple photo-sharing app called Instagram.

2 User data analysis

The Instagram mini case study highlights the importance of user data analysis.

One of the key aspects of growth hacking is to find user patterns and test/optimize activities that are linked to growth. However, one of the key challenges faced by start-ups is that there is so much data available it is becoming increasingly difficult to understand *how* the data can be used to create actionable insights.

User data analysis should be a mix of quantitative and qualitative research and a business should develop a systematic method to feed into business insights.

Main areas of user testing

The five main areas of user testing are:

- 1 Technology analysis, such as conversion rate per browser
- 2 Heuristic analysis, such as relevancy, distraction and online value proposition
- 3 Web analytics, such as flow reports
- 4 Qualitative surveys, such as exit surveys
- 5 Usability testing, such as user session videos.

The information gained from this type of analysis can then be used to test hypotheses relating to user growth and to validate ideas. This process is essential to finding ‘non-norm’ solutions to achieve growth in a short amount of time.

Another important tool (available in Google Analytics) is cohort analysis. Instead of looking at cumulative totals or gross numbers, data are broken down into the performance of each group of customers (a cohort) that comes into contact with the product independently. This method helps companies understand customer flows, which provides more predictive power than traditional gross metrics.

However, one of the main challenges facing a start-up during the launch stage is having enough customers to provide meaningful data. This is why product/market fit is so important - so that the product initially ‘sells itself’.

3 Conversion rate optimisation

User data analysis is not an isolated approach to growth hacking - it links to every stage in the cycle, from product/market fit to retention. The information collected from data can then be used for conversion rate optimisation (CRO), to help build an effective growth engine (as shown in Figure 10.10).

This approach is basically using structured testing to improve website effectiveness. Growth optimisation is moving from data, to insight and then to money. User data analysis is needed throughout this CRO process, so that activity can be prioritised.

Generally, a company should use a *minimum* sample size of 250 to test changes for CRO. They also need to think about business cycles - for example, if your weekend traffic is very different, ending a test by excluding that segment would make your sample unrepresentative.

Key CRO elements

There are three main conversion rate optimisation elements:

- 1 **Tools** - insights, creating pages, personalisation, campaign and automation
- 2 **People** - insight, management, creative execution, test set-up, implementation, outsource
- 3 **Process** - planning and creating new ads and content, optimising old ads and content.

According to Eisenberg *et al.* (2011), there are 30 key optimisation factors to consider (see Table 10.2).

Box 10.8

Heuristic analysis

According to Phillips (2016), a heuristic-based analysis approach for e-commerce companies would include the following:

1 Determining conversion rate for different device types

A helpful place to start is to determine whether the conversion rate for orders is different by device.

2 Segmenting critical conversion rates by key dimensions to understand differences, such as by marketing channel

You may segment conversion rate by paid search on the mobile versus paid search on the desktop.

3 Identifying the bounce rate on your landing pages

Product pages, category pages, brand pages and the home page can be landing pages for email, search and display advertising campaigns. Ensuring that these pages perform as effectively as possible by testing the creative is important.

Identifying the exit rate on important pages

The exit rate is the percentage of people who leave the site on that page. If you notice large exit rates on certain pages, such as login pages, purchasing pages, shipping pages and order summary pages, then you can consider testing them.

Source: Extract from *Ecommerce Analytics* by J. Phillips (2016)

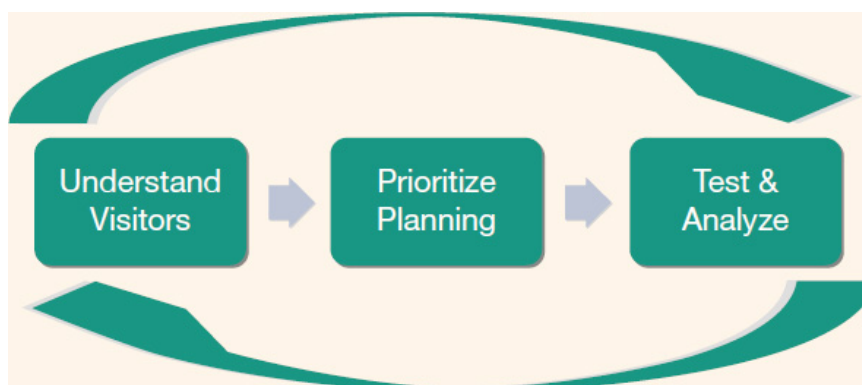


Figure 10.10

The conversion optimisation loop

Source: [www.slideshare.net/seanellis/cro-presno-for-growth-hackers-conf-nov-2013-ellis-updated-28050686/7-](http://www.slideshare.net/seanellis/cro-presno-for-growth-hackers-conf-nov-2013-ellis-updated-28050686/7-Steps_to_Better_ConversionsTwitter_SeanElliswwwGrowthHackerscom7)

Steps_to_Better_ConversionsTwitter_SeanElliswwwGrowthHackerscom7

Table 10.2

30 Key optimisation factors

Element	Details
Planning	• WIIFM: What's in it for me? • Unique value proposition/campaign proposition • The buying decision • Categorisation
Structure	• Usability • Look and feel • Searchability • Layout, visual clarity and eye tracking • Purchasing • Tools • Error prevention • Browser compatibility • Product presentation • Load time • AIDAS (scent) • Trust and credibility
Momentum	• Navigation/user of links • Product selection/categorisation • Up-sell/cross-sell • Calls to action/forms • Point of action • Security and privacy • Persuasive copywriting • Content • Headlines • Readability
Communication	• Use of colour and images • Terminology/jargon • 'We-We' Test (customer-focused language) • Features like reviews

Source: <https://www.slideshare.net/Emerce/emerce-performance-bryan-eisenber>

There are seven main areas that can help improve website conversion and sales:

- 1 A/B testing and multivariate testing
- 2 Having a structured approach
- 3 Customer journey analysis (covered in Chapter 8)
- 4 Copy optimisation
- 5 Online surveys/customer feedback
- 6 Cart abandonment analysis

7 Segmentation (covered in Chapters 7 and 8).

Parizek (2013) has produced a conversion rate optimisation maturity model (see Figure 10.11), which is based on seven key pillars:

- **People** - the quality and quantity of a team is essential.
- **Knowledge** - this is aligned with people. CRO starts with online marketing basics, having an overview of what e-commerce is, how traffic generation works, what web analytics is and how to read reports and take actions. The next stage is to add online testing knowledge, principles of user experience, web analytics knowledge and copywriting skills. It is impossible for a single person to be an expert in all those areas, so a well-acting team is needed.
- **Activities** - there are various quantitative and qualitative activities that can be run to understand customers better. The higher the quality and frequency, the better the outcome.
- **Tests of strategy and frequency** - one of the main CRO activities is A/B and multivariate testing (discussed next in this chapter). The maturity of a company's testing processes is extremely important: tests can be executed on an ad hoc basis; or a more mature approach will plan and execute in a testing roadmap. Or, better still, tests are run in an iterative manner.
- **Processes** - the overall CRO processes in a company are another important asset. Do key departments cooperate smoothly? How about communication and politics within the company? Are deliverables such as testing roadmaps, testing summaries and learning overviews recorded and used? All of these are variables that influence CRO results significantly.
- **Sponsor** - this is usually a high-ranking employee who is an advocate of CRO, trusts the team and fights for budget. They support CRO efforts and share the plans and results with senior management, if the team are unable to.
- **Tools** - tools need to be in place to conduct analyses and tests. There are many different tools available to do this - such as web analytics, heatmaps, surveys, feedbacks, targeting and testing tools. In general, the more mature a company's CRO efforts are, the more sophisticated the tools.

A/B and multivariate testing

Often site owners and marketers reviewing the effectiveness of a site will disagree and the only method to be certain of the best-performing design or creative alternatives is through designing and running experiments to evaluate the best to use. Matt Round, then director of personalisation at Amazon, speaking at the E-metrics summit in 2004, said the Amazon philosophy, described further in Case study 10.2, is:

Data trumps intuition.

A/B testing and multivariate testing are two measurement techniques that can be used to review design effectiveness to improve results.

A/B testing

In its simplest form, **A/B or AB testing** refers to testing two different versions of a page or a page element such as a heading, image or button. Some members of the site are served alternately, with the visitors to the page randomly split between the two pages. Hence it is sometimes called 'live split testing'. The goal is to increase page or site effectiveness against key performance indicators including clickthrough rates, conversion rates and revenue per visit.

A/B or AB testing

Refers to testing two different versions of a page or a page element, such as a heading, image or button, for effectiveness.

	Level1	Level2	Level3	Level4	Level5
	Starting with Optimization	Optimization using as-hoc Online Testing	Regular Online Testing and Optimization with clear plans	Data-driven Optimization as a key online marketing asset	CRO is in your company's DNA
PEOPLE	Online marketing generalist	Part-time conversion optimization specialist	Full-time conversion optimization specialist	Small conversion optimization team	Large conversion optimization team
KNOWLEDGE	Basics of online marketing	Level 1 Conversion optimization basics	Level 2 Deeper knowledge about CRO, UX and analytics Content management and copywriting	Level 3 Targeting knowledge Excellence in UCD/UX Advanced analytics including segmentation	Level 4 Management skills Customer analytics Business analytics MBA
ACTIVITIES	Basic traffic and conversion report analysis Sales report monitoring	Level 1 Advanced traffic and conversion report analysis Online testing UX principles and testing	Level 2 Customer feedback and survey analysis Basic segmentation and targeting Competitor analysis	Level 3 Advanced analytics Advanced segmentation and targeting Extensive UX research Personalization	Level 4 Multichannel analysis and optimization 1:1 Personalization Data mining 360° business analysis
TESTING STRATEGY & FREQUENCY	No testing strategy 1-2 tests per quarter	Ad-hoc testing 1-2 tests per month	Regular and planned testing 2-3 tests per month	Iterative testing 3+ tests per month	Disciplined testing 6+ tests per month
PROCESSES	None	Random/ad-hoc	Regular and standardized	Optimized	Super-optimized
TOOLS	Web analytics tools	Level 1 Online testing and targeting tools	Level 2 Customer survey and feedback Heatmaps and screen recording tools	Level 3 Customer experience management tools Personalization tools	Level 4 Personalization automation tools Multichannel analytics and optimization tools
SPONSOR	None	Head of Online	Director level	VP level	Entire organization

Figure 10.11

Conversion rate optimisation maturity model

Source: <http://online-behavior.com/analytics/conversion-optimization-model>

When completing A/B testing it is important to identify a realistic baseline or **control page** (or audience sample) to compare against. This will typically be an existing landing page. Two new alternatives can be compared to previous control, which is known as an ABC test. Different variables are then applied, as in Table 10.3.

An example of the power of A/B testing is an experiment Skype performed on its main top bar navigation, where it found that changing the main menu option 'Call Phones', to 'Skype Credit' and 'Shop' to 'Accessories' gave an increase of 18.75% revenue per visit (Skype were speaking at the 2007 E-metrics summit). That's significant when you have hundreds of millions of visitors! It also shows the importance of being direct with navigation and simply describing the offer available rather than the activity.

Table 10.3

A/B test example

Test	A (Control)	B (Test page)
Test 1	Original page	New headline, existing button, existing body copy
Test 2	Original page	Existing headline, new button, existing body copy
Test 3	Original page	Existing headline, existing button, new body copy

Control page

The page against which subsequent optimisation will be assessed. Typically a current landing page.

rate

Mini case study 10.9

Multivariate testing at National Express Group increases conversion

The National Express Group is the leading provider of travel solutions in the UK. Around 1 billion journeys a year are made worldwide on National Express Group's bus, train, light rail and express coach and airport operations. A significant proportion of ticket bookings are made online through the company's website at www.nationalexpress.com.

The company used multivariate testing provider Oracle Maxymiser to run an experiment to improve conversion rate of a fare selection page that was the penultimate step in booking. The analysis team identified a number of subtle alterations to content and calls to action on the page with the aim of stimulating visitor engagement and driving a higher percentage of visitors through to successful conversion without changing the structure of the page or National Express brand identity. In order to aid more effective up-sell to insurance add-ons, changes to this call to action were also proposed.

It was decided that a multivariate test would be the most effective approach to determine the best-performing combination of content. The variants jointly developed by Oracle Maxymiser and the client were tested with all live site visitors and the conversion rate of each combination monitored. They tried 3,500 possible page combinations and during the live test the underperforming combinations were taken out to maximise conversion rates at every stage.

At the end of the testing period, after reaching statistical validity, results showed that the best combination of elements showed a 14.11% increase in conversion rates for the page, i.e. 14.11% more visitors were sent through to the fourth and final step in the registration process, immediately hitting bottom-line revenue for National Express (Figure 10.12).

Content combination	Maxybox A	Maxybox B	Maxybox C	Maxybox D	Maxybox E	Lift on control
1	Variant 3	Variant 2	Variant 4	Variant 3	Variant 1	14.11%
2	Variant 3	Variant 3	Variant 4	Default	Default	14.09%
3	Variant 6	Variant 3	Variant 4	Default	Default	11.15%
4	Variant 3	Variant 3	Variant 2	Default	Variant 3	10.57%
Default content	Variant 3	Variant 2	Default	Default	Default	0.00%

Conversion rate uplift by page combination:

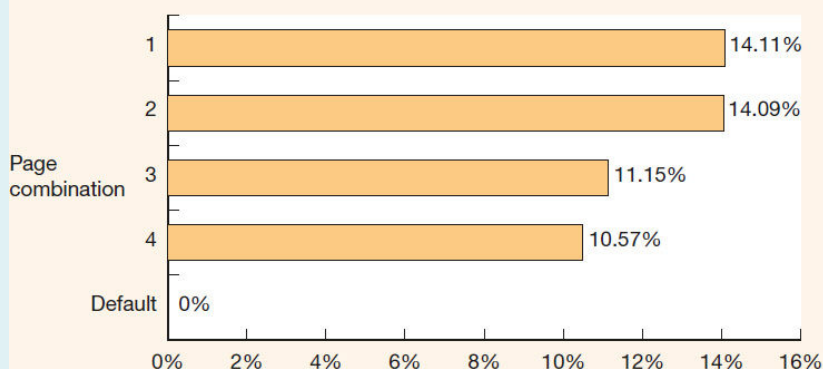


Figure 10.12

Results of multivariate testing for National Express

Multivariate testing

Multivariate testing is a more sophisticated form of A/B testing that enables simultaneous testing of pages for different combinations of page elements that are being tested. This enables selection of the most effective combination of design elements to achieve the desired goal.

An example of a multivariate test is shown in Mini case study 10.9.

In order to achieve significantly higher increases in sales growth, companies need to complete six to seven A/B tests or multivariant tests a month. An example of how powerful this technique can be is demonstrated in Mini case study 10.10.

Forward path analysis

Reviews the combinations of clicks that occur from a page. This form of analysis is most beneficial for important pages such as the home page, product and directory pages. Use this technique to identify messaging/navigation combinations that work best to yield the most clicks from a page.

Clickstream analysis and visitor segmentation

Clickstream analysis refers to detailed analysis of visitor behaviour in order to diagnose problems and opportunities. Table 10.4 gives an indication of the type of questions asked by author Dave Chaffey when reviewing clients' sites.

Path analysis

Aggregate clickstreams are usually known within web analytics software as 'forward' or 'reverse' paths. This is a fairly advanced form of analysis, but the principle is straightforward - you seek to learn from the most popular paths.

Viewed at an aggregate level across the site through 'top paths' type reports, this doesn't appear particularly useful as the top paths are often:

- Home page: Exit
- Home page: Contact Us: Exit
- News page: Exit

Mini case study 10.10

How Obama raised \$60 million by running an experiment

To demonstrate the power of conversion rate optimisation across all types of campaigns, a simple experiment in December 2007 has actually changed the course of history.

Dan Siroker was the Director of Analytics for the Obama 2008 campaign; his job was to use data to help make better decisions when running the campaign. He did this by running an experiment to test two pages of the campaign splash page - the media section and the call-to-action button.

Four buttons and six different media types were tested (three images and three videos); the metric to measure success was sign-up rate (number of people who signed up divided by number of people who saw a particular variation).

The test was run using Google Website Optimizer and was a multivariate test (i.e. they tested all of the combinations of buttons and media against each other at the same time).

Staff believed that 'Sam's video' would be the best media. However, all of the videos did worse than all of the images.

This page had a sign-up rate of 11.6%, against the original sign-up rate of 8.26% (40.6% improvement). This equated to 2.8 million email addresses and an additional \$60 million in donations. Key lessons learned:

- Every website visitor is an opportunity - take advantage of this through website optimisation and A/B or multivariate testing.
- Always question assumptions - videos were the most popular media but they didn't perform.
- Experiment early and often - small incremental changes can generate aggregated marginal gains.

Source: <http://blog.optimizely.com/2010/11/29/how-obama-raised-60-million-by-running-a-simple-experiment/>

Table 10.4

A summary of how an analyst will interpret web analytics data. GA is terminology for Google Analytics (www.google.com/analytics), one of the most widely used tools

Analyst question	Typical web analytics report terminology	Diagnosis of analyst used to improve performance
How successful is the site at achieving engagement and outcomes?	Conversion goals (GA) Bounce rates (GA) Pages/visit (GA)	• Is engagement and conversion consistent with other sites in the sector? • What are maximum engagement and conversion rates from different referrers?
Where are visitors entering the site?	Top entry pages Top landing pages (GA)	• How important is the home page compared to other page categories and landing pages? Does page popularity reflect product popularity? • Check that messaging and calls to action are effective on these pages • Assess source of traffic, in particular keywords from search engines, and apply elsewhere
What are sources of visitors (referrers)?	Referrers Traffic sources Filters set up to segment visitors	• Are the full range of digital media channels relevant for a company represented? • Is the level of search engine traffic consistent with the brand reputation?

What is the most popular content?	Top content (GA)	• What are the main link partners driving free traffic (potential for more)? • Is page popularity as expected? Are there problems with findability caused by navigation labelling? • Which content is most likely to influence visitors to outcome? • Which content is most popular with returning visitors segment? • How popular are different forms of navigation, e.g. top menu, sidebar menus?
Which are the most popular findability methods?	Site search (GA)	• What are the most popular searches? Where do searches tend to start? Are they successfully finding content or converting to sale?
Where do visitors leave the site?	Top exit pages (GA)	• Are these as expected (home page, About Us page, transaction completion)? • Are there error pages (e.g. 404 not found) that cause visitors to leave? • How can attrition in conversion funnels be improved?
Which clickstreams are taken?	Path analysis Top paths (GA)	• What does forward path analysis show are the most effective calls to action? • What does reverse path analysis indicate about the pages that influence sale?

Clickstream analysis becomes more actionable when the analyst reviews clickstreams in the context of a single page - this is **forward path analysis** or **reverse path analysis**.

On-site search effectiveness

On-site search is another crucial part of clickstream analysis since it is a key way of finding content, so a detailed search analysis will pay dividends. Key search metrics to consider are:

- number of searches;
- average number of searches per visitor or searcher;
- % of searches returning zero results;
- % of site exits from search results;
- % of returned searches clicked;
- % of returned searches resulting in conversion to sale or other outcome;
- most popular search terms - individual keyword and key phrases.

Reverse path analysis

Indicates the most popular combination of pages and/or calls to action that lead to a page. This is particularly useful for transactional pages such as the first checkout page on a consumer site; a lead-generation or 'contact us' page on a business-to-business site; an email subscription page or a call-me-back option.

Visitor segmentation

Segmentation is a fundamental marketing approach, but it is often difficult within web analytics to relate customer segments to web behaviour because the web analytics data aren't integrated with customer or purchase data, although this is possible in the most advanced systems such as Adobe Analytics, Sitecore and Mixpanel.

However, all analytics systems have a capability for some segmentation and it is possible to create specific filters or profiles to help understand one type of site visitor behaviour. Examples include:

- First-time visitors or returning visitors
- Visitors from different referrer types including:
 - Google organic
 - Google paid
 - Strategic search keyphrases, brand keyphrases, etc.
 - Display advertising
- Converters against non-converters
- Geographic segmentation by country or region (based on IP addresses)
- Type of content accessed, e.g. are some segments more likely to convert? For example, speaking at Ad Tech London '06, MyTravel reported that it segments visitors into:
 - Site flirt (two pages or less)
 - Site browse (two pages or more)
 - Saw search results
 - Saw quote
 - Saw payment details
 - Saw booking confirmation details.

Budgeting

To estimate profitability and return on investment of e-channels as part of budgeting, companies need to consider both tangible and intangible costs and benefits.

A similar approach can be used to calculating the ROI of enhancements to an e-commerce site. Hanson (2000) suggests an approach to this that requires identification of revenue from the site, costs from site and costs from supporting it via a call centre. These are related to profit as follows:

Operating profit = Net income from sales — E-commerce site costs — Call-centre costs

Net income from sales = (Product price — Unit cost) x Sales — Fixed product costs

E-commerce site costs = Site fixed costs + ((% site support contacts) x Cost site support contact x Sales)

Call-centre (CC) costs = CC fixed costs + ((% CC support contacts) x Cost CC support contact x Sales)

Different approaches for estimating costs are recommended by Bayne (1997):

- **Last year's Internet marketing budget.** This is assuming the site has been up and running for some time.
- **Percentage of company sales.** It is again difficult to establish this for the first iteration of a site.
- **Percentage of total marketing budget.** This is a common approach. Typically, the percentage will start small (less than 5%, or even 1%), but will rise as the impact of the Internet increases.
- **Reallocation of marketing dollars.** The money for digital marketing will often be taken by cutting back other marketing activities.

- **What other companies in your industry are spending?** This is definitely necessary in order to assess and meet competitive threats, but competitors may be over-investing.
- **Creating an effective online presence.** In this model of ‘paying whatever it takes’, a company spends sufficient money to create a website that is intended to achieve their objectives. This may be a costly option, but for industries in which the Internet is having a significant impact, it may be the wise option. A larger-than-normal marketing budget will be necessary to achieve this.
- **A graduated plan tied into measurable results.** This implies an ongoing programme in which investment each year is tied into achieving the results established in a measurement programme.
- **A combination of approaches.** Since the first budget will be based on many intangibles, it is best to use several methods and present high-, medium- and low-expenditure options for executives with expected results related to costs.

As a summary to this section, complete Activity 10.2.

Activity 10.2

Creating a measurement plan for a B2C company

Purpose

To develop skills in selecting appropriate techniques for measuring digital business effectiveness.

Activity

This activity acts as a summary to this section on digital business measurement. Review Table 10.5 and assess the frequency with which metrics in each of the following categories should be reported and acted upon for a sell-side e-commerce site. For each column, place an R in the row for the frequency with which you think the data should be recorded.

Table 10.5

Alternative timescales for reporting e-commerce site performance

	Promotion	Behaviour	Satisfaction	Outcomes	Profitability
Hourly					
Daily					
Weekly					
Monthly					
Quarterly					
Re-launch					

In Chapter 1, we started this text with a case study of the world’s largest digital business, which has transformed the taxi industry. In this last chapter we offer the case of the world’s second-largest online retailer, showing how the growth hacking culture of test, learn, refine is key to its success.

Context

Why a case study on Amazon? Surely everyone knows about who Amazon is and what it does? Yes, well, that may be true, but this case goes beyond the surface to review innovations in Amazon's business and revenue model based on a historical review from its published annual reports (United States SEC filings).

Like eBay, Amazon.com was born in 1995. The name reflected the vision of Jeff Bezos to produce a large-scale phenomenon like the River Amazon. This ambition has proved justified since, just eight years later, Amazon passed the \$5 billion sales mark - it took Wal-Mart 20 years to achieve this.

Vision and strategy

Amazon's mission statement centres around its customers, providing them with a place where they can search and discover anything they may wish to buy online. This is a fairly generic statement, but previous statements (i.e. from the SEC filings in 2008) are more specific. They focus on the customer experience, but also mention three core buying motivations: low prices, convenience and a wide selection of products. Consider how these core marketing messages summarising the Amazon online value proposition are communicated both on-site and through offline communications.

Of course, achieving customer loyalty and repeat purchases has been key to Amazon's success. Many dot.coms failed because they succeeded in achieving awareness, but not loyalty. Amazon has achieved both. In its latest SEC filing for the 2013 Annual Report it stress how it seeks to achieve this by reiterating a comment in a letter made by Jeff Bezos to shareholders in 1997 when it first became a publicly quoted company:

We will continue to measure our programs and the effectiveness of our investments analytically, to jettison those that do not provide acceptable returns, and to step up our investment in those that work best. We will continue to learn from both our successes and our failures.

More recently, this approach has been applied to a range of business model innovations including: Fire TV, smartphone and tablets, grocery delivery in the West coast of the United States, Prime Instant Video, Amazon Fashion and expansion to Amazon Web services (AWS).

In practice, as is the case for many online retailers, the lowest prices are for the most popular products, with less popular products commanding higher prices and a greater margin for Amazon. Free shipping offers are used to encourage increase in basket size, since customers have to spend over a certain amount to receive free shipping. The level at which free shipping is set is critical to profitability and Amazon has changed it as competition has changed and for promotional reasons.

Amazon communicates the fulfilment promise in several ways, including presentation of latest inventory availability information, delivery date estimates and options for expedited delivery, as well as delivery shipment notifications and update facilities.

This focus on the customer has translated to excellence in service, with the 2004 American Customer Satisfaction Index giving Amazon.com a score of 88, which was at the time the highest customer satisfaction score ever recorded in any service industry, online or offline.

Round (2004) notes that Amazon focuses on customer satisfaction metrics. Each site is closely monitored, with standard service availability monitoring (for example, using Keynote or Mercury Interactive) site availability and download speed. Interestingly, it also monitors per-minute site revenue upper/lower bounds - Round describes an alarm system rather like a power plant where if revenue on a site falls below \$10,000 per minute, alarms go off! There are also internal performance service level agreements for web services where T% of the time, different pages must return in X seconds.

Competition

In its SEC (2005) filing Amazon describes the environment for its products and services as ‘intensely competitive’. It views its main current and potential competitors as: (1) physical-world retailers, catalogue retailers, publishers, vendors, distributors and manufacturers of products, many of which possess significant brand awareness, sales volume and customer bases, and some of which currently sell, or may sell, products or services through the Internet, mail-order or direct marketing; (2) other online e-commerce sites; (3) a number of indirect competitors, including media companies, web portals, comparison shopping websites and web search engines, either directly or in collaboration with other retailers; and (4) companies that provide e-commerce services, including website development, third-party fulfilment and customer service.

It believes the main competitive factors in its market segments include ‘selection, price, availability, convenience, information, discovery, brand recognition, personalised services, accessibility, customer service, reliability, speed of fulfillment, ease of use and ability to adapt to changing conditions, as well as our customers’ overall experience and trust in transactions with us and facilitated by us on behalf of third-party sellers’.

For services offered to business and individual sellers, additional competitive factors include the quality of its services and tools, its ability to generate sales for third parties it serves and the speed of performance for its services.

From auctions to marketplaces

Amazon auctions (known as zShops) were first launched in March 1999, in large part as a response to the success of eBay. They were promoted heavily from the home page, category pages and individual product pages. Despite this, a year after launch they had only achieved a 3.2% share of the online auction compared to 58% for eBay and it only declined from this point.

Today, competitive prices of products are available through third-party sellers in the ‘Amazon Marketplace’, which are integrated within the standard product listings. The strategy to offer such an auction facility was initially driven by the need to compete with eBay, but now the strategy has been adjusted such that Amazon describes it as part of the approach of low pricing.

Although it might be thought that Amazon would lose out on enabling its merchants to sell products at lower prices, in fact Amazon makes greater margin on these sales since merchants are charged a commission on each sale and it is the merchant who bears the cost of storing inventory and fulfilling the product to customers. As with eBay, Amazon is just facilitating the exchange of bits and bytes between buyers and sellers without the need to distribute physical products.

How ‘the culture of metrics’ started

A common theme in Amazon’s development is the drive to use a measured approach to all aspects of the business, beyond the finance. Marcus (2004) describes an occasion at a corporate ‘boot-camp’ in January 1997 when Amazon CEO Jeff Bezos ‘saw the light’:

‘At Amazon, we will have a Culture of Metrics,’ he said while addressing his senior staff. He went on to explain how web-based business gave Amazon an ‘amazing window into human behavior.’ Marcus says: ‘Gone were the fuzzy approximations of focus groups, the anecdotal fudging and smoke blowing from the marketing department. A company like Amazon could (and did) record every move a visitor made, every last click and twitch of the mouse. As the data piled up into virtual heaps, hummocks and mountain ranges, you could draw all sorts of conclusions about their chimerical nature, the consumer. In this sense, Amazon was not merely a store, but an immense repository of facts. All we needed were the right equations to plug into them.’

James Marcus then goes on to give a fascinating insight into a breakout group discussion of how Amazon could better use measures to improve its performance. Marcus was in the Bezos group, brainstorming customer-centric metrics. Marcus (2004) summarises the dialogue, led by Bezos:

'First, we figure out which things we'd like to measure on the site,' he said. 'For example, let's say we want a metric for customer enjoyment. How could we calculate that?'

There was silence. Then somebody ventured: 'How much time each customer spends on the site?'

'Not specific enough,' Jeff said.

'How about the average number of minutes each customer spends on the site per session,' someone else suggested. 'If that goes up, they're having a blast.'

'But how do we factor in purchase?' I [Marcus] said feeling proud of myself. 'Is that a measure of enjoyment?'

'I think we need to consider frequency of visits, too,' said a dark-haired woman I didn't recognize. 'Lot of folks are still accessing the web with those creepy-crawly modems. Four short visits from them might be just as good as one visit from a guy with a T-1. Maybe better.'

'Good point,' Jeff said. And anyway, enjoyment is just the start. In the end, we should be measuring customer ecstasy.'

It is interesting that Amazon was having this debate about the elements of RFM analysis (described in Chapter 8) in 1997, after already having achieved \$16 million of revenue in the previous year. Of course, this is a miniscule amount compared with today's billions of dollar turnover. The important point was that this was the start of a focus on metrics that can be seen through the description of Matt Round's work later in this case study.

In its 2013 annual report, Amazon explains its ongoing approach to experimentation. It explains how it has created its own internal experimentation platform called 'Weblab', which it uses to evaluate improvements to its website and products. In 2013 it ran 1,976 Weblabs worldwide, up from 1,092 in 2012, and 546 in 2011. One recent example of how they are applied is a new feature called 'Ask an owner'. From a product page, customers can ask any question related to the product, and Amazon routes these questions to owners of the product who then supply an answer.

From human to software-based recommendations

Amazon has developed internal tools to support this 'culture of metrics'. Marcus (2004) describes how the 'Creator Metrics' tool shows content creators how well their product listings and product copy are working. For each content editor such as Marcus, it retrieves all recently posted documents including articles, interviews, booklists and features. For each one it then gives a conversion rate to sale plus the number of page views, adds (added to basket) and repels (content requested, but the back button then used). In time, the work of editorial reviewers such as Marcus was marginalised since Amazon found that the majority of visitors used the search tools rather than read editorials and they responded to the personalised recommendations as the matching technology improved (Marcus likens early recommendation techniques to 'going shopping with the village idiot').

Experimentation and testing at Amazon

The 'culture of metrics' also led to a test-driven approach to improving results at Amazon. Matt Round, speaking at E-metrics 2004 when he was director of personalisation at Amazon, describes the philosophy as 'data trumps intuitions'. He explained how Amazon used to have a lot of arguments about which content and promotion should go on the all-important home page or category pages. He described how every category VP wanted top-centre and how the Friday meetings about placements for next week were getting 'too long, too loud, and lacked performance data'.

But today 'automation replaces intuitions' and realtime experimentation tests are always run to answer these questions, since actual consumer behaviour is the best way to decide upon tactics.

Marcus (2004) also notes that Amazon has a culture of experiments, of which A/B tests are key components. Examples where A/B tests are used include new home page design, moving features around the page, different algorithms for recommendations and changing search relevance rankings. These involve testing a new treatment against a previous control for a limited time of a few days or a

week. The system will randomly show one or more treatments to visitors and measure a range of parameters such as units sold and revenue by category (and total), session time, session length, etc. The new features will usually be launched if the desired metrics are statistically significantly better. Statistical tests are a challenge though, as distributions are not normal (they have a large mass at zero, for example, of no purchase). There are other challenges, since multiple A/B tests are running every day and A/B tests may overlap and so conflict. There are also longer-term effects where some features are ‘cool’ for the first two weeks and the opposite effect where changing navigation may degrade performance temporarily. Amazon also finds that as its users evolve in their online experience, the way they act online has changed. This means that Amazon has to constantly test and evolve its features.

Technology

It follows that the Amazon technology infrastructure must readily support this culture of experimentation and this can be difficult to achieve with standardised content management. Amazon has achieved its competitive advantage through developing its technology internally and with a significant investment in this, which may not be available to other organisations without the right focus on the online channels.

Round (2004) describes the technology approach as ‘distributed development and deployment’. Pages such as the home page have a number of content ‘pods’ or ‘slots’ that call web services for features. This makes it relatively easy to change the content in these pods and even change the location of the pods on-screen. Amazon uses a flowable or fluid page design, unlike many sites, which enables it to make the most of real estate on-screen.

Data-driven automation

Round (2004) said that ‘data is king at Amazon’. He gave many examples of data-driven automation, including customer channel preferences, managing the way content is displayed to different user types such as new releases and top-sellers, merchandising and recommendation (showing related products and promotions) and also advertising through paid search (automatic ad generation and bidding).

The automated search advertising and bidding system for paid search has had a big impact at Amazon. Sponsored links were initially done by humans, but this was unsustainable due to the range of products at Amazon. The automated programme generates keywords, writes ad creative, determines best landing page, manages bids and measures conversion rates, profit per converted visitor and updates bids. Again, the problem of volume is there: Matt Round described how the book *How to Make Love Like a Porn Star* by Jenna Jameson received tens of thousands of clicks from pornography-related searches, but few actually purchased the book. So the update cycle must be quick to avoid large losses.

There is also an automated email measurement and optimisation system. The campaign calendar used to be manually managed with relatively weak measurement and it was costly to schedule and use. A new system:

- automatically optimises content to improve customer experience;
- avoids sending an email campaign that has low click-through or high unsubscribe rate;
- includes inbox management (avoids sending multiple emails per week);
- has a growing library of automated email programmes covering new releases and recommendations;

but there are challenges if promotions are too successful and inventory isn’t available.

Your recommendations

‘Customers Who Bought X. . . also bought Y’ is Amazon’s signature feature. Round (2004) describes how Amazon relies on acquiring and then crunching a massive amount of data. Every

purchase, every page viewed and every search is recorded. So there are now two new versions: 'Customers who shopped for X also shopped for Y' and 'Customers who searched for X also bought Y'. They also have a system codenamed 'Goldbox', which is a cross-sell and awareness-raising tool. Items are discounted to encourage purchases in new categories!

He also describes the challenge of techniques for sifting patterns from noise (sensitivity filtering), and how clothing and toy catalogues change frequently so recommendations become out of date. The main challenge, however, is the massive data size arising from millions of customers, millions of items and recommendations made in real time.

Partnership strategy

As Amazon grew, its share price growth enabled partnership or acquisition with a range of companies in different sectors. Marcus (2004) describes how Amazon partnered with Drugstore.com (pharmacy), Living.com, Pets.com (pet supplies), Wineshopper.com (wines), Home-Grocer.com (groceries), Sothebys.com (auctions) and Kozmo.com (urban home delivery). In most cases, Amazon purchased an equity stake in these partners, so that it would share in their prosperity. It also charged them fees for placements on the Amazon site to promote and drive traffic to their sites. Similarly, Amazon charged publishers for prime position to promote books on its site, which caused an initial hue and cry, but this abated when it was realised that paying for prominent placements was widespread in traditional booksellers and supermarkets. Many of these new online companies failed in 1999 and 2000, but Amazon had covered the potential for growth and was not pulled down by these partners, even though for some, such as Pets.com, it had an investment of 50%.

Analysts sometimes refer to 'Amazoning a sector', meaning that one company becomes dominant in an online sector such as book retail such that it becomes very difficult for others to achieve market share. In addition to developing, communicating and delivering a very strong proposition, Amazon has been able to consolidate its strength in different sectors through its partnership arrangements and through using technology to facilitate product promotion and distribution via these partnerships. The Amazon retail platform enables other retailers to sell products online using the Amazon user interface and infrastructure through its 'Syndicated Stores' programme. Similarly, in the US, Borders, a large book retailer, uses the Amazon merchant platform for distributing its products. Such partnerships help Amazon extend its reach into the customer base of other suppliers, and of course, customers who buy in one category such as books can be encouraged to purchase from other areas such as clothing or electronics.

Another form of partnership referred to above is the Amazon Marketplace, which enables Amazon customers and other retailers to sell their new and used books and other goods alongside the regular retail listings. A similar partnership approach is the Amazon 'Merchants®' programme, which enables third-party merchants (typically larger than those who sell via the Amazon Marketplace) to sell their products via Amazon. Amazon earns fees either as fixed fees or as sales commissions per unit. This arrangement can help customers, who get a wider choice of products from a range of suppliers with the convenience of purchasing them through a single checkout process.

Finally, Amazon has also facilitated formation of partnerships with smaller companies through its affiliates programme. Internet legend records that Jeff Bezos, the creator of Amazon, was chatting at a cocktail party to someone who wanted to sell books about divorce via her website. Subsequently, Amazon.com launched its Associates Program in July 1996 and it is still going strong. Amazon does not use an affiliate network, which would take commissions from sale, but, thanks to the strength of its brand, has developed its own affiliate programme. Amazon has created tiered performance-based incentives to encourage affiliates to sell more Amazon products.

Marketing communications

In its SEC filings, Amazon typically states that the aims of its communications strategy are (unsurprisingly) to:

- 1 increase customer traffic to its website;

- 2 create awareness of its products and services;
- 3 promote repeat purchases;
- 4 develop incremental product and service revenue opportunities;
- 5 strengthen and broaden the Amazon.com brand name.

Amazon also believes that its most effective marketing communications are a consequence of its focus on continuously improving the customer experience. This then creates word-of-mouth promotion, which is effective in acquiring new customers and may also encourage repeat-customer visits.

As well as this, Marcus (2004) describes how Amazon used the personalisation enabled through technology to reach out to a difficult-to-reach market, which Bezos originally called 'the hard middle'. Bezos's view was that it was easy to reach 10 people (you called them on the phone) or the 10 million people who bought the most popular products (you placed a Super Bowl ad), but more difficult to reach those in between. The search facilities in the search engine and on the Amazon site, together with its product recommendation features, meant that Amazon could connect its products with the interests of these people.

Online advertising techniques include paid-search marketing, interactive ads on portals, email campaigns and search engine optimisation. These are automated as far as possible, as described earlier in the case study. As previously mentioned, the affiliate programme is also important in driving visitors to Amazon and Amazon offers a wide range of methods of linking to its site to help improve conversion. For example, affiliates can use straight text links leading direct to a product page and they also offer a range of dynamic banners that feature different content such as books about Internet marketing or a search box.

Amazon also uses cooperative advertising arrangements, better known as 'contra-deals', with some vendors and other third parties. For example, a print advertisement in 2005 for a particular product such as a wireless router with a free wireless laptop card promotion was to feature a specific Amazon URL in the ad. In product fulfilment packs, Amazon may include a leaflet for a non-competing online company such as Figleaves.com (lingerie) or Expedia (travel). In return, Amazon leaflets may be included in customer communications from the partner brands.

Amazon's associates programme directs customers to its website by enabling independent websites to make millions of products available to its audiences with fulfilment performed by Amazon or third parties. It pays commissions to hundreds of thousands of participants in its associates programme when its customer referrals result in product sales.

In addition, it offers everyday free shipping options worldwide and recently announced Amazon.com Prime in the US, its first membership programme, in which members receive free two-day shipping and discounted overnight shipping. Although marketing expenses do not include the costs of free shipping or promotional offers, it views such offers as effective marketing tools.

Sources: Internet Retailer (2004); Marcus (2004); Round (2004); SEC (2005) filings of Annual Reports from 2013.

Questions

- 1 By referring to the case study, Amazon's website for your country and your experience of Amazon offline communications, evaluate how well Amazon communicates its core proposition and promotional offers.
- 2 Using the case study, characterise Amazon's approach to marketing communications.
- 3 Explain what distinguishes Amazon in its uses of technology for competitive advantage.
- 4 How does the Amazon 'culture of metrics' differ from that in other organisations, from your experience?

4 Viral growth

Some digital businesses have grown exponentially because of viral growth, also known as ‘word-of-mouth’ marketing. This is because user data analysis is difficult with a low customer base, so gaining more customers after launching an MVP is an extremely important part of growth hacking.

A key issue is that consumers are showing increasing resistance to traditional forms of advertising. Since 2006, there has also been a significant drop in search engine marketing clickthrough rates (CTRs). Therefore, to achieve high growth quickly, marketers are turning to alternative strategies such as viral marketing.

The growth of social media has dramatically changed the web’s collaboration structure and therefore social influence diffusion is a key aspect of viral marketing. Growth hackers are particularly focused on identifying ‘influential’ users in a social network and finding key metrics that drive growth. For example, Twitter found that by persuading new users to follow at least ten people, the chances of that user returning increased dramatically. Facebook’s ‘engaged user’ metric was ten friends in seven days.

Growth is more likely to be obtained by a large wave of early adopters via media efforts such as PR coverage (covered in Chapter 8). PR can help build a brand and amplify messages to targeted audiences.

Most growth hackers use a hybrid model of viral and non-viral channels to achieve strong and sustainable growth. Channels such as the press will provide a quick ‘spike’ of users and others, such as app stores, will provide a stream of users over time.

Companies can engineer digital (and physical) products to increase peer-to-peer promotion (refer to Figure 10.10, the Hook model). According to Aral and Walker (2011), simply adding a ‘share’ button to a product can increase peer-to-peer influence by 400%. Also, when products have *passive* features, such as automated notifications, automated targeting and embedded offers, they get a 246% increase in total adoption.

There are three main types of product virality:

- **inherent virality**, which is built into the product and happens as a function of its use;
- **artificial virality**, which is forced and often built into a reward system;
- **word-of-mouth virality**, which is when conversations are generated by satisfied users (independent of a product or service).

Inherent virality: Skype

Skype is a product built with inherent virality. When users first download it and do not have any contacts, the product does not offer users any benefits. However, as soon as a user sends a contact request to someone they know, they unlock the product’s value - free local and international calls, instant messages, video calls, screen sharing, etc.

The product is only useful to a user if they share it with someone else. Skype is marketed by its users because their experience is improved by recommending it to others (300 million users and growing). The more people you invite to join, the more valuable Skype becomes to you as a user. WhatsApp also has the same viral mechanics as Skype embedded in the product.

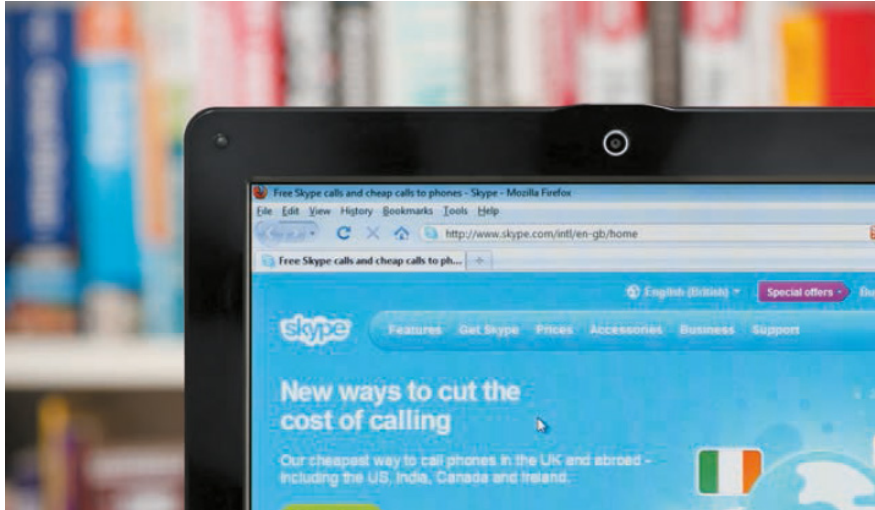


Figure 10.13

Skype

Source: M4OS Photos/Alamy Stock Photo

In the past, Skype has teamed up with Facebook to help generate cross-platform sign-ups (using a similar ‘network effect’ principle as Airbnb).

Artificial virality: Giffgaff

Giffgaff has successfully used gamification (i.e. using game-design elements to encourage engagement) to reward its community for helping others. This has helped the company achieve an exceptionally high Net Promoter Score (NPS).

Community members have asked around 130,000 questions in its forums since 2010, which have received more than a million answers.

Gamification is used to provide users who answer questions ‘kudos’ and payment points, which can be taken as a cash reward.

This approach has not only helped create an online ‘buzz’ around the brand but has meant that the company hasn’t needed the type of call-centre operation its competitors use.

Giffgaff is crowd-sourcing users to create videos for its knowledge base. It clearly provides different ‘payback points’ for the type of role someone plays in producing a video.

Other examples of ‘artificial virality’ that can be used to generate growth include:

- adding features for users to collaborate on whatever they are doing;
- having a referral programme and offering users a free month if they get someone else signed up to the product, so that both parties benefit;
- sending promotional gifts to segmented users to help ‘evangelise’ them.

Word-of-mouth virality: Zappos

Shoe retailer Zappos is all about ‘delivering happiness’. The company’s CEO, Tony Hsieh, decided to invest in the customer experience instead of advertising. He felt that providing exceptional

customer service would help drive repeat business and word-of-mouth recommendations (see Case study 5.3 in Chapter 5).

He was right - ten years after the company set up, it had more than \$1 billion in annual gross sales, achieved by word-of-mouth marketing. Zappos' customers are its advocates, and they often use social media to express their delight with the organisation's amazing customer service.

Measuring virality

Growth hackers measure virality by calculating the viral coefficient (also called the K-Factor, see Box 10.9). Your company or campaign is truly viral when its K-Factor is 1 or more. However, having a viral coefficient greater than one is very rare and even 0.2 to 0.3 is a sustainable level.

5 Retention and scalable growth

Research into e-loyalty by Reichheld and Schefter (2000) found that in the early years, the cost of acquiring a customer renders many customer relationships unprofitable. However, in subsequent years, the cost of servicing loyal customers falls and the volume of their purchases rises - providing accelerated profit growth.

Box 10.9

Calculating the K-Factor

Finding your Viral Coefficient

If you want to grow your digital business, a great way of doing this is for your current visitors /users to recommend it to their friends (i.e. third-party endorsement).

A Viral Coefficient, also known as the K-Factor, is a way of seeing how viral a product or service is. Improving the K-Factor will help a company to acquire new users or customers; after all, most start-ups fail as they don't have enough online presence about them. A positive K-Factor will help a business grow exponentially because of its focus on user / customer acquisition.

How to Calculate the K-Factor

- 1 Start with your current number of users (e.g 100)
- 2 Multiply that by the average number of invitations or referrals your users / customers provide (100×10)
- 3 Find the percentage of referrals who took the action that you wanted, e.g. they signed up to be a new user themselves (12%)
- 4 If 1000 invitations were sent out and 12% signed up for your product or a new service, you would have 120 new users.
- 5 As you initially had 100 users and you gained an additional 120 users, you divide the number of new users by the number of existing users to calculate your K-Factor ($120 / 100 = 1.2$).

To achieve viral growth, a product or service needs to have a K-Factor of greater than 1. In this example, a K-Factor of 1.2 would typically represent slight growth. A growth rate of 20 or more is difficult to achieve but represents meteoric growth amongst users / customers.

Key Considerations:

- 1 Only measure acquisition** - If all of your users send out 10 invites to a website to other people, but none of them sign up or make a purchase the K-Factor is 0. New visitors must convert.
- 2 The importance of Viral Cycle Time** - defined as how many steps that a user has to go through in order to share a product/service. The simpler, the better; for example, a YouTube video can easily become viral because sharing it only requires copying and pasting the browser URL into Twitter or Facebook. If, however, a user needs to be signed in, and then manually copy and paste a friend's email address into an application, it is unlikely many referrals will be made.

One of the best ways of achieving viral growth is to offer users a benefit or reward for sharing or recruiting new users. As an example, Dropbox grew very quickly as it gave current users more free space by referring friends. FreeAgent offers current users subscription discounts for every friend they introduce.

Marketing Metrics (Hull, 2013) found that the likelihood of selling to an existing customer is around 60-70%, compared to 5-20% for a new prospect. This suggests that customer retention is very important for scalable growth.

Growth hackers understand the value of loyalty and customer retention, so it is embedded in their business strategy. Therefore, reducing churn and increasing engagement are important activities for high-growth start-ups.

One way of measuring and benchmarking customer advocacy is via the Net Promoter Score (NPS). This is linked to viral coefficient measurements because customers are asked 'Will you recommend us?'. They are then segmented into Detractors, Passives and Promoters.

The Detractors are likely to churn in the next 30-90 days, so NPS is a useful tool to help measure growth. It is also used by growth hackers in the product/market fit stage to help decide whether to persevere or pivot the business.

Survey tools such as Survey Monkey include NPS templates.

Figure 10.14 shows the key elements of growth hacking against the organisational life-cycle, from start-up to scale-up.

Creating the right environment for growth hacking

Growth hacking will only be effective when operated in the right organisational culture. Below are some of the key management considerations of this:

- Some experiments will fail - senior decision-makers need to understand and support an agile and experimental culture. This won't suit every business.
- The team needs to understand what growth hacking is and have the skills to persuade others of its value. When experiments are run they may cause problems for other people and/or impact on other areas of the business.
- Most people who get involved in tech start-ups are often from a computer science or engineering background, not from a communications, creative, design or marketing background. Therefore,

many think that marketing is advertising, i.e. the things they see on TV or billboards. Start-ups that understand and appreciate marketing at an early stage have a better chance of succeeding.

- Most founders only use traction channels that they are already familiar with and too many companies focus on the same channels. A key aspect of generating accelerated growth is ‘swimming against the flow and spotting opportunities’. It is about doing marketing differently and using new or emerging communication channels. The only way to stand out and gain traction is to position a product away from the crowd and leverage new channels and other people’s audiences.

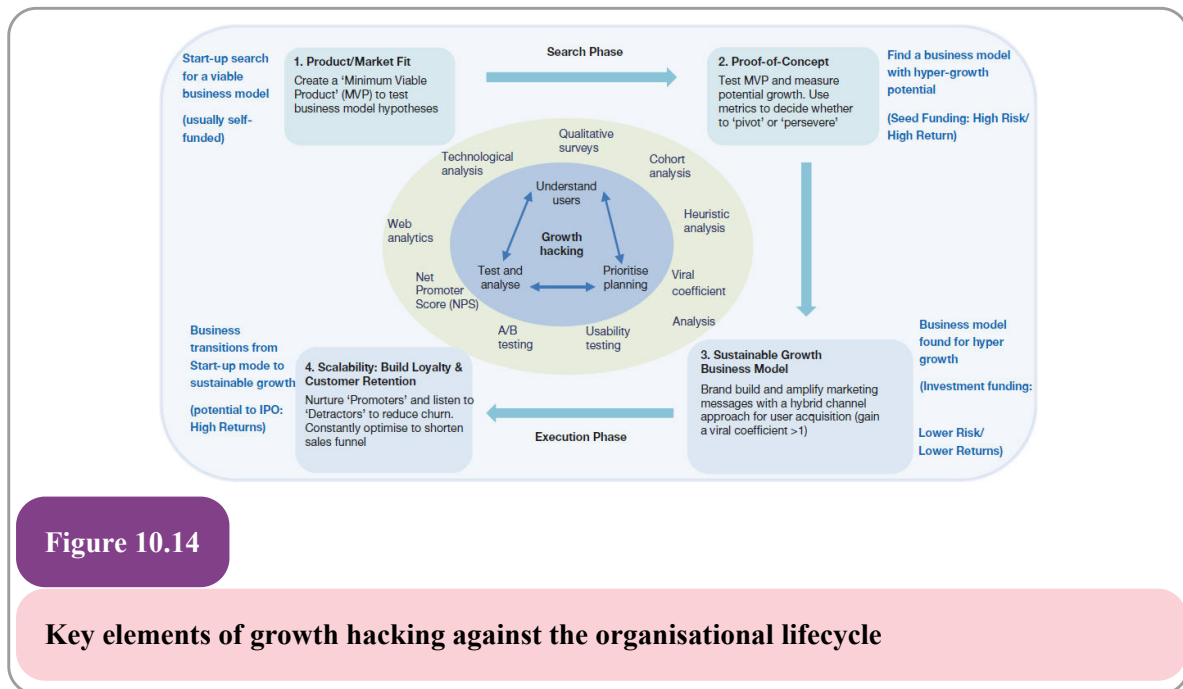


Table 10.6 summarises the ten key aspects of growth hacking.

Bridging the digital and physical world

The SmartWool mini case study (10.11) is a good example of integrating online and offline communications channels.

Despite growth hacking being perceived as a ‘digital’ form of marketing, traditional channels are just as important for growth hackers. In fact, some growth hackers have seen that ‘real-life’ marketing techniques can massively outperform most people who only use digital. Ultimately, the decision on what channel to use depends on the product and its users.

The best marketers don’t think online and offline. They think:

- Who am I talking to?
- What am I trying to achieve?
- What are the best ways using different media in different environments to achieve my objectives?

There are major advantages of giving users something tangible in a digital world. There’s so much noise online now, that offline is becoming increasingly important. For example, the biggest ‘win’ that online takeaway service Just-Eat had during its start-up phase was putting stickers on takeaway restaurants’ windows.

Best traditional marketing methods for growth hacking

Research by author Tanya Hemphill has shown that the best offline marketing channels for growth hacking are:

Table 10.6

The ten commandments of growth hacking

Growth hacking commandment	Practical implications
Immerse yourself in the customer experience	• Talk to your customers, identify trends, understand why they need your product or service • Magic bullets rarely exist; if you spend too long looking for them you'll take your eye off the ball. Focus on the things that matter - serve amazing customer experiences (like Zappos) and product value (like Instagram and Skype)
Understand the landscape you are operating in	• Some products or services are never going to achieve viral growth because of what they are and the market the company operates in • Try to predict the future needs of your customer - be one step ahead of them. Never fall behind or your competition will get there first. Think about how Instagram offered a more superior photo-sharing app than Facebook
Develop the unique rules of growth for your particular organisation	• What are your company's growth metrics or KPIs? • What's the one metric you need to move, to get to the next stage? • Be growth-focused and use data to make sure you are on track • Be technical and have a strong market focus
Make extensive use of pilots and prototypes	• Build fast, test fast. Start with a minimum viable product (MVP) and talk to users about it • Does your product serve a real need? Be honest!
Experiment early and often for aggregated marginal gains	• Don't look for a silver bullet, test lots of small things • Rather than having one web page, have a series of web pages and work out which one converts the best (think back to the Obama case study)
Focus on asking the right questions	• What's going to make the biggest difference to your business? Working out how to get there • Don't think online or offline. Think: <i>Who am I talking to? What am I trying to achieve? What is the best way to get there?</i>
Use behavioural quantitative market research to sharpen selection	• Constantly A/B test - you can only hack something once you start testing an idea and find out what actually works • Analysis has to be spot on. But there's a difference between analysis and insight; growth hackers understand the difference

Use qualitative research to improve intuition

- You need to be able to take apart a top-level number. . . 'We had 10 million visits today. X of them were in this category and did this and Y were in that category, they might have done that'
- People buy brands and emotion, and this is needed whatever your business is, whatever you are working on. Growth hacking is not just a scientific numbers game
- Qualitative research is very important. It's about understanding the 'why' and provides you with more of a 3D focus on exactly why things happen
- Use qualitative data to find out: What are our users interested in? What else are they looking for? What's their experience like? The numbers may be going up but if people are really irritated by something you've pitched to them, you won't be able to capture them again like you did in the beginning

Clearly define and communicate new offers

- Run numerous tests but have a plan for the sort of things that the hypotheses should be, they should be documented somewhere in an Excel file. Track the results. You should re-run the experiments; never assume that if you're doing them in January, the results will be the same in June - products have seasonal customers
- There's never perfect data but there's a lot more data in the digital space than the offline world. You can serve messages to different people through testing tools (such as Optimizely) and check analytics on email, social media, etc., which allow you to instantaneously get feedback and adapt your approach accordingly

Encourage a culture of creativity and experimentation across teams

- You can't growth hack without the right team. They need to understand what growth hacking is. If they don't understand it, they're going to struggle. And you're all going to be doing a lot more fighting and arguing internally, and you won't get anything done
- If you're running experiments, or doing things that cause problems for other teams (which can happen), you need to be able to negotiate and work them out. You can't just exist in a silo

- sponsorship of conferences - laptop stickers, sponsoring drinks, good speakers wearing branded T-shirts;
- running events;
- promotional gifts - T-shirts and stickers;
- customer relationship management and direct mail;
- advertising (particularly TV);
- partnerships/business development;
- public relations (PR).

PR is particularly good for building trust. You can get anyone to your website but making them give you something, preferably money, requires a degree of trust. One start-up found that a business article in *Wired* magazine generated 60,000 product sign-ups.

Mini case study 10.11

How SmartWool flipped the paradigm

Understanding SmartWool's key customers provided a key insight into how to communicate with them. Digital advertising agency Victors and Spoils (V&S) found that SmartWool's loyal customers weren't interested in traditional advertising. Instead, these outdoorsy types wanted to interact with the company in a more meaningful way.

In the past, SmartWool used world-class athletes for guidance on product design and marketing. This was an old-school approach based on the view that expert knowledge was scarce. However, V&S flipped this idea on its head and via Facebook recruited a community of passionate users to test SmartWool's products.

Six months after the launch of the campaign, they signed up 2,500 field testers (more than 10% of its Facebook following). These excited fans bought the new products and started testing them straight away - they then offered different insights into the product's performance, recommended improvements and provided ideas for new products.

Ideas included adding thumbholes to its jacket sleeves, so that they could function as mittens, and developing lighter-weight running socks in a wider range of colours. The company took these suggestions on board and adapted their product range.

The whole process culminated in an advertising campaign that featured field testers with their innovations. The campaign performed well online and in print, improving brand message retention and e-commerce conversion.

This is one way a more established firm has opened up communication with its user base to find new ways to bring them into every part of the product innovation and marketing development process.

SmartWool has demonstrated that even legacy brands need to step back and think of new ways to reconnect with their advocates. The company still needed to hack its way to growth before someone else beat them to it.

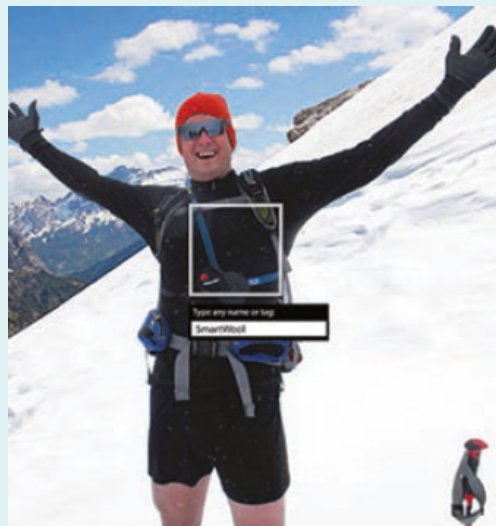


Figure 10.15

SmartWool

Source: ZUMA Press Inc./Alamy Stock Photo

Adding the *Wired* logo on the front page of their website also helped increase the company's conversion rate because of user trust.

This is a good example of the importance of press and PR to help build and amplify messages to targeted audiences. In practice, it's worth using a PR agency because the industry is so 'contact driven'.

Another example of a company using PR to gain growth on a low budget is the restaurant chain Leon (see Case study 10.3).

Case Study 10.3

How Leon used PR to growth hack

Restaurant chain Leon has doubled its number of outlets in just 12 months and increased its breakfast sales, thanks to a low-cost PR campaign.

The aim of its 'Lean and Clean' campaign was focused on doubling breakfast sales in 12 months and the premise behind its activity was to promote healthy eating and living.

Leon started by adding healthy breakfast choices onto its menu and signing-up Instagram fitness and nutrition vlogger Joe Wicks. The social media influencer had a good following but wasn't 'mainstream' because his book hadn't yet been published. They did a contra-deal, swapping services (i.e. free meals, book promotions and PR coverage) instead of money.

The restaurant chain created two fitness videos with the vlogger to create buzz on social media. They appeared with the hashtag #LeanwithLeon.

They also targeted cyclists around London with specially designed flyers that attached to the handlebars of parked bikes. The flyers offered recipients a free Leon breakfast to celebrate cycling as a healthy activity. Merging physical and digital, people took pictures of the flyers and posted them across various social media sites.



Figure 10.16

Leon

Source: Robert Evans/Alamy Stock Photo

The company also encourages staff to drive sales via strong customer service. It recently ran a one-week competition that challenged employees to increase sales of certain dishes for the chance to win two cases of Prosecco. This resulted in a 12% increase in sales.

Key lessons learned:

- Small budgets force you to be more creative.
- Contra-deals with social media influencers can benefit both parties - don't be afraid to ask.
- Think about using physical 'stunts' to generate online buzz.

Don't forget internal marketing - think of fun ways to encourage your employees to work towards particular goals (get them actively involved).

Source: www.marketingweek.com/2016/04/20/how-leon-got-maximum-value-from-minimum-spend

Remember that even more traditional channels should be tested to see if they drive growth. For example:

- PR agencies should initially work on a project basis (not a retainer fee).
- Advertising space should be bought last minute so it's cheap and tested before committing to a certain number of insertions.
- Branded merchandise should be bought in small numbers.
- Direct mail should be tested with a small sample size and different creative execution.

Growth hacking framework

Figure 10.17 shows a growth hacking framework produced by Tanya Hemphill; each element is explained in further detail below.

Stage 1: Product market fit

Growth hacking can only occur *after* a start-up has achieved product market fit. Companies who try to scale their marketing before product market fit, waste money. If a product needs a 'hard push' to sell it, it's not good enough.

Using the lean start-up concept of building a minimum viable product and testing it to gain user feedback for product improvements makes good business sense. This is an 'economical way of thinking' to help generate revenue as quickly as possible because the build stage is usually quite expensive. However, start-up founders tend to be very passionate about their idea and are sometimes reluctant to make changes to their product. Once again, we come back to mindset.

Stage 2: Growth hacking

There's only one key question you need to ask: 'What can we do to achieve high growth quickly and cheaply?'. Don't get distracted from your end goal - become obsessive about growth.

Successful growth hacking comes from data-informed marketing - don't just put the whole budget behind a campaign because of gut feel. Marketers with a growth mindset should run cheap tests based on validated assumptions to see what actually works best. See Box 10.10 for an overview of testing and analysing.

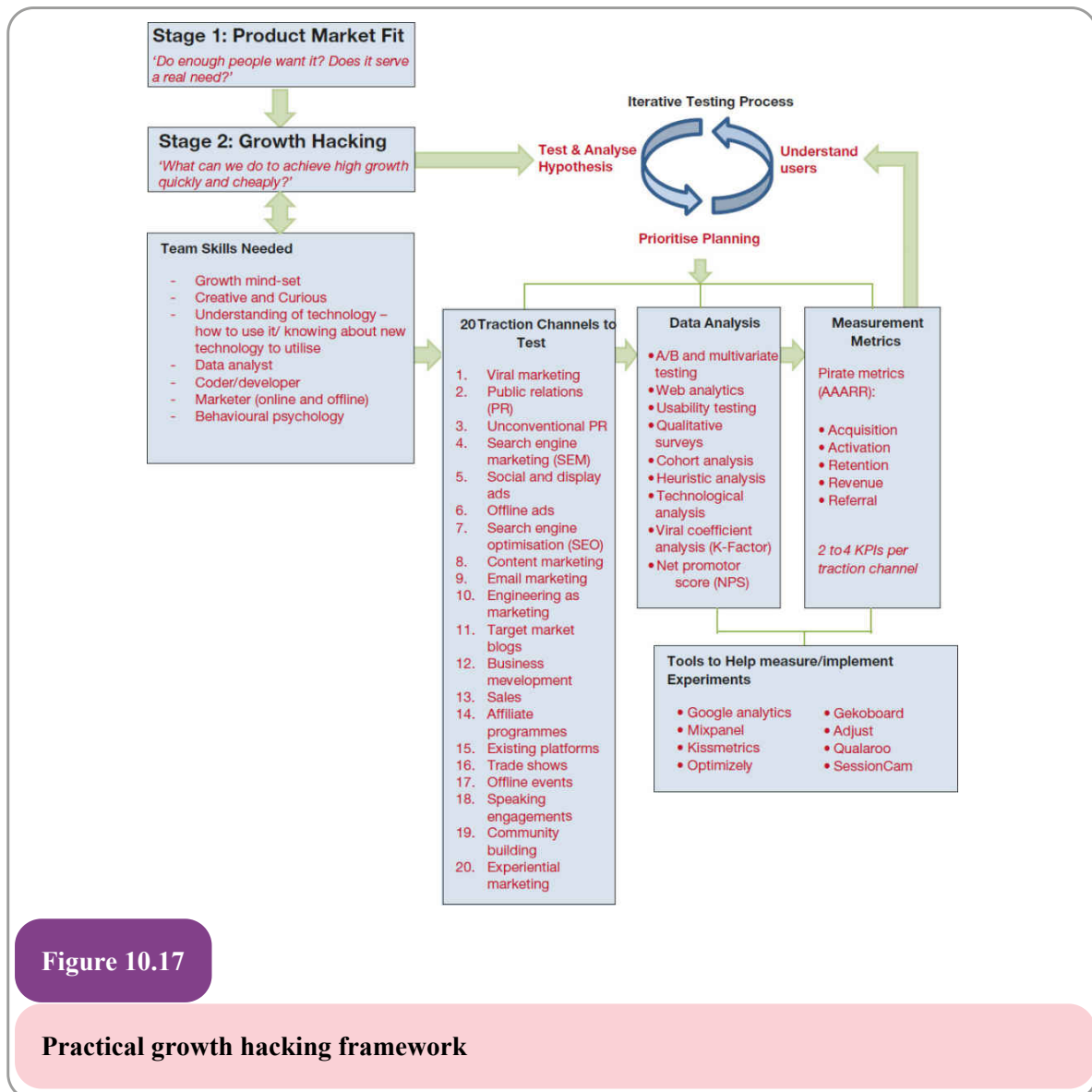


Figure 10.17

Practical growth hacking framework

This experiment-driven marketing approach has its roots in agile methodologies, using ‘test, learn and commit’ loops.

The main difference between ‘analyse and test’ and ‘conversion rate optimisation’ (CRO) is that the first comes from a more tactical standpoint and the latter is more focused on strategy and mindset.

Box 10.10

Testing and analysing

- Run ‘tight tests’ and do not get emotionally attached to ideas or dismiss an idea because it fails. Look at all of the contributing factors and try to understand what causes those things to work or not.
- Run numerous tests and document them somewhere, like an Excel file or use a tool such as Pipefy.com. An invaluable level of insight can be gained from a regular testing programme - re-run experiments because even different seasons can change results.

- When you do something, think of it as a test because that means you recognise that you are operating in a dynamic environment. Analyse what has happened and, based on the results, you may iterate, optimise or change.
- Know what to test and what to focus on because people have a limited amount of time, energy and effort. Just focus on what is going to make the biggest difference, using data analytics and business modelling to work on where the opportunity is.

The key elements of CRO are as follows:

- Analysing ‘emotion’ is important - trying to work out why people do things and taking people on emotional journeys to the point of conversion.
- CRO is a mix of copywriting, SEO, PPC, social media, UX design and psychology. It involves analysing results and looking at key performance indicators; only two to four are needed for a small business.
- CRO should be channel-focused and put into ‘buckets’ of paid, owned and earned media.

Twenty traction channels to test

Most company owners, manager and marketers tend to stick to the marketing (or traction) channels they know. Growth hacking requires people to get out of their comfort zone and go back to basics.

One way to do this is to pretend you do not know anything about marketing and have to run experiments to find the best solution to achieving high sales. Weinberg and Mares (2015) found 19 traction channels; we have added one more to make it 20 key online and offline traction channels (see Table 10.7).

Table 10.7

20 traction channels to test

Channel	Description
Viral marketing	Get your users to market your product/service for you
Public relations (PR)	Get favourably mentioned in traditional media
Unconventional PR	Do stunts and offer an exceptional service for word-of-mouth marketing
Search engine marketing (SEM)	Reach segmented targets by advertising on search engines
Social and display ads	Advertise on social media and websites to reach millions of prospective customers
Offline ads	Use rational TV, radio and print advertising to generate new customers
Search engine optimisation (SEO)	Get to the top of the organic search listings

Content marketing	Use your owned media, such as your blog, to educate and reach customers
Email marketing	Communicate and convert your prospects with targeted emails
Engineering as marketing	Use engineering resources to build tools that acquire customers (e.g. Airbnb)
Target market blogs	Target influential blogs to research new audiences
Business development	Use partnerships to acquire customers
Sales	Sell your product/service to enterprises and other customers
Affiliate programmes	Get affiliates to sell your product for you, for a small percentage of sales
Existing platforms	Tie growth to a larger platform such as Facebook, LinkedIn or the App Store
Trade shows	Recruit customers and partners by going to industry trade shows
Offline events	Create an event to bring customers to you
Speaking engagements	Convey your expertise to large groups of potential customers
Community building	Build a community around your company or product
Experiential marketing	'Live marketing', which engages prospects by immersing them in a fun and memorable experience

Figure 10.18 is a useful chart from Silicon Valley investor Dave McClure from 500 Hats, which can help prioritise what channels to test.

McClure has often spoken about the marketing funnel and start-up Pirates metrics (AAARR). These are a useful tool for all types of organisation;

- **Acquisition** (top of the funnel): How do users find us?
- **Activation**: Do users have a great first experience?
- **Retention**: Do users come back?
- **Revenue**: How do we make money?
- **Referral** (bottom of the funnel): Do users tell others?

The marketing funnel can then be cross-referenced against various traction channels, so that a marketing strategy with a focus on growth can be built. Figure 10.19 shows how the customer lifecycle links to the Pirates metric framework.

Data analysis

Merging quantitative and qualitative data is a key component to growth hacking.

Quantitative data is useful to tell you *what* is happening on a website or mobile app but qualitative will help explain *why* things happen. Although it is widely recognised that both types of data analysis are important, gathering qualitative data doesn't always happen and often gets ignored by companies (particularly start-ups).

There is a range of tools to help companies gather information for user data analysis (these are also used for CRO and testing and analysing):

- **Google Analytics** Google's free web analytics platform
- **Mixpanel** A paid-for advanced mobile and web analytics
- **Kissmetrics** Paid-for group and segment analysis
- **Optimizely** Website and mobile app testing platform
- **Gekoboard** KPI dashboard software

Example Marketing Channels					
<i>disclaimer: estimates of vol, cost/user, time & effort are subjective – actual costs are dependent on your specific business</i>					
Channel	Volume	Cost/user	Time to implement	Mktg Effort	Prod Effort
Viral / Referral	Depends on CTA; size of accessible social networks / # users	low/zero	Low for FB social networks; med/hi for normal sites	low	low/med
Email	Depends on CTA, size of your house lists, email signups	low/med	Low	low/med	low/med (med = create templates)
Blogs / Bloggers	Depends on # blogs in your segment, competitive scenario	low/med	Low (if just you blogging); med (if you're setting up big CMS / evangelizing to other bloggers)	low/med	low/zero (med = CMS, prof design)
SEO	Depends on your keywords	Low/zero	Medium (depends on your search geeks)	low/zero	med/hi
SEM	Depends on your keywords	Depends	Low/med (depends on your marketing)	Low/med	low/med (landing pages = med)
Contest	Small unless big prize \$ (don't, keep it under \$5k)	low/med	low/med (depends on contest, site, campaign)	Med	low/zero (med = prof contest site)
Widget	Depends on CTA; size of accessible sites, level of adoption + bloggers	low/med	Low/med	med	med/hi (depends on complexity)
Domains	Depends on keywords, domain costs	depends	low	low	Low (redirects/co-brand?)
PR	Depends on your business & audience & news	Med/hi	medium (develop story, build contacts)	med/hi	low/zero
Blz Dev / Partner	Depends on partner, size of customer base, conversion	med-high	med/hi (capture metrics, generate reports)	Med/hi	med/hi (reports, co-branding)
Affiliate / Lead Gen	Depends on economics	Med/hi	med/hi (need to build affiliate program, capture metrics, generated report)	med/hi	med/hi (depends on reqd tracking & reporting)
Direct / radio	Depends on geography	Med/hi	medium	Med/hi	low/zero
Telemktg	Depends on target demographics	med-high	med-high	High	low/zero if no system; Med/hi if integrated SFA
TV	Potentially large (if you spend)	High	Med-high	High	Med/hi (production cost)

Figure 10.18

Example marketing channel and start-up metrics

Source: <http://500hats.typepad.com/500blogs/2008/09/startup-metri-1.html>

- **Adjust** Attribution and analytics for apps
- **Qualaroo** Website surveys for customer insights
- **SessionCam** Enables you to watch how real users interact with your website, to help improve website conversion.

Figure 10.20 summarises the operational elements of growth hacking.

In summary, growth hacking is about finding 'non-norm' solutions to achieve growth in a short space of time. Every growth hack is different because if everyone did them, they would not work.

Get different teams involved, be creative and provide the right environment for creative thinking. If you need to, get a facilitator into your organisation to help generate new ideas. Growth hacking ideas might include the following activities:

- share content that people love reading;
- run regular landing page tests;
- include build-in sharing features;

- cross-platform promotion (non-competing companies with the same users);
- generate artificial virality;
- leverage the power of social media influencers;
- partnerships;
- PR.

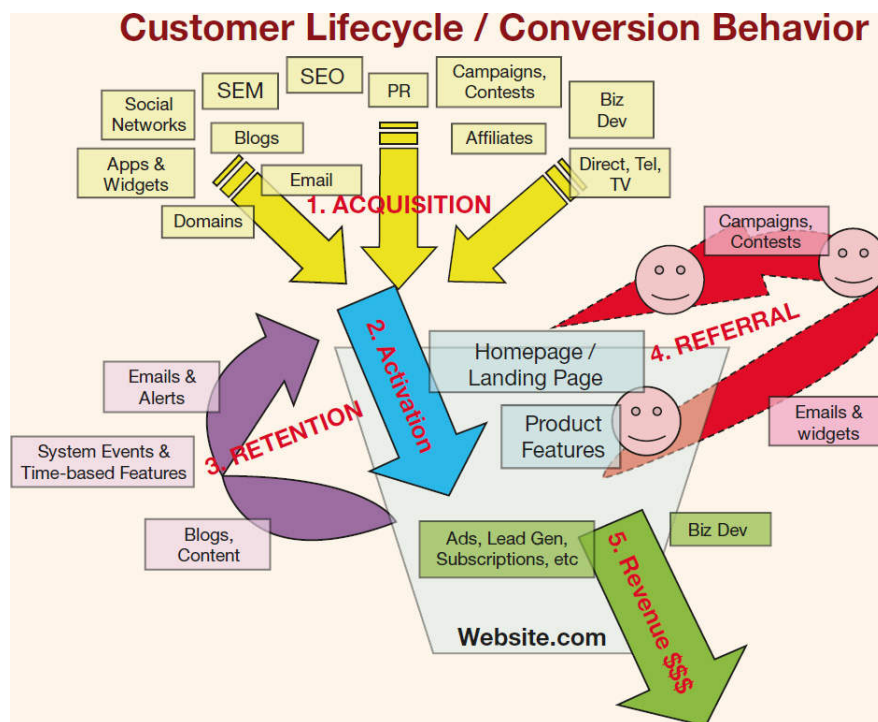


Figure 10.19

Dave McClure's customer lifecycle/conversion behaviour

Source: www.slideshare.net/dmc500hats/startup-metrics-for-pirates-long-version

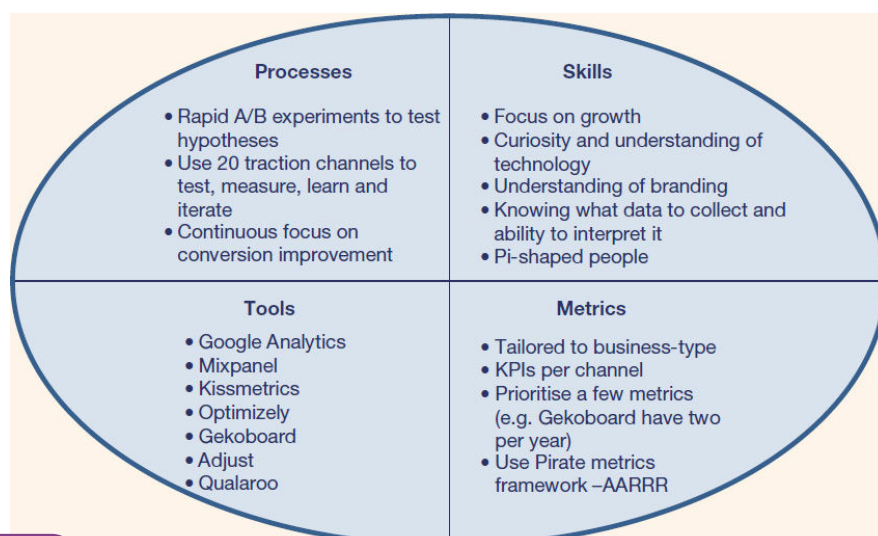


Figure 10.20

Operational elements of growth hacking

It's worth noting that email is still a highly effective channel that most growth hackers use. They experiment with such things as icons in subject lines, the length of emails, different colours and layouts and the tone of voice used.

Measuring implementation success

As we have already found out, an agile approach of testing and optimising can only be taken if the performance of activities is monitored and results are acted upon. Digital businesses and e-commerce companies that have a successful approach to measuring and optimising their activities are often those that thrive and grow. This section provides further detail on measuring results via web analytics.

Focus on Web analytics: Measuring and improving performance of digital business services

Web analytics

Techniques used to assess and improve the contribution of digital marketing to a business, including reviewing traffic volume, referrals, clickstreams, online reach data, customer satisfaction surveys, leads and sales.

We will review measuring and improving the effectiveness of e-commerce systems in detail since it is a key part of optimising e-commerce. We focus on measurement of sell-side e-commerce, since the approach is most advanced for this sector, but the principles and practice can be readily applied to other types of digital business system such as intranets and extranets.

Companies that have a successful approach to e-commerce often seem to share a common characteristic. They attach great importance and devote resources to monitoring the success of their online marketing and putting in place the processes to continuously improve the performance of their digital channels. This culture of measurement is visible in the UK bank Alliance and Leicester (Santander). Stephen Leonard, head of e-commerce, described their process as 'Test, Learn, Refine' (*Revolution*, 2004). Graeme Findlay, senior manager, customer acquisition of e-commerce at A&L, explains further: 'Our online approach is integrated with our offline brand and creative strategy, with a focus on direct, straightforward presentation of strong, value-led messages. Everything we do online, including creative, is driven by an extensive and dynamic testing process.'

Seth Romanow, director of customer knowledge at Hewlett-Packard, speaking at the 2004 E-metrics summit, described the company's process as 'Measure, Report, Analyse, Optimise'. Amazon refers to its approach as 'The Culture of Metrics' (see Case study 10.2). Jim Sterne, who convenes an annual event devoted to improving digital performance (www.emetrics.org), has summarised his

view on the required approach in his book *Web Metrics* (Sterne, 2002) as ‘TIMITI’, which stands for ‘Try It! Measure It! Tweak It!’, i.e. online content should be reviewed and improved continuously rather than as a periodic or ad hoc process. The importance of defining an appropriate approach to measurement and improvement is such that the term **web analytics** has developed to describe this key digital marketing activity. The Digital Analytics Association (www.digitalanalyticsassociation.org) has been developed by vendors, consultants and researchers in this area. Eric Petersen (2004), an analyst specialising in web analytics, defines it as follows:

Web analytics is the assessment of a variety of data, including web traffic, web-based transactions, web server performance, usability studies, user submitted information [i.e. surveys], and related sources to help create a generalised understanding of the visitor experience online.

You can see that in addition to what are commonly referred to as ‘site statistics’ about web traffic, sales transactions, usability and researching customers’ views through surveys are also included. However, this suggests analysis for the sake of it - whereas the business purpose of analytics should be emphasised. The definition could also refer to comparison of site-visitor volumes and demographics relative to competitors’ using panels and ISP-collected data. Our definition is:

Web analytics is the customer-centred evaluation of the effectiveness of Internet-based marketing in order to improve the business contribution of online channels to an organisation.

Principles of performance management and improvement

Performance management system

A process used to evaluate and improve the efficiency and effectiveness of an organisation and its processes.

Performance measurement system

The process by which metrics are defined, collected, disseminated and actioned.

Design for analysis (DFA)

The required measures from a site are considered during design to better understand the audience of a site and their decision points.

Digital marketing metrics

Measures that indicate the effectiveness of Internet marketing activities in meeting customer, business and marketing objectives.

To improve results for any aspect of any business, performance management is vital. As Bob Napier, chief information officer at Hewlett-Packard, was reported to have said back in the 1960s:

You can't manage what you can't measure.

The processes and systems intended to monitor and improve the performance of an organisation and specific management activities such as digital marketing are widely known as **performance management systems** and are based on the study of **performance measurement systems**.

Measurement is often neglected when a website is first created. Measurement is often highlighted as an issue once early versions of a site have been ‘up and running’ for a few months or even years, and employees start to ask questions such as ‘How many customers are visiting our site, how many sales are we achieving as a result of our site and how can we improve the site to achieve a return on investment?’. The consequence of this is that performance measurement is often built into an online presence retrospectively. If measurement is built into site management, a more accurate approach can be developed and it is more readily possible to apply a technique known as **design for analysis**

(DFA). Here, the site is designed so companies can better understand the types of audience and their decision points. For example, for Dell (www.dell.com), the primary navigation on the home page is by business type. This is a simple example of DFA since it enables Dell to estimate the proportion of different audiences to their site and at the same time connect them with relevant content. Other examples of DFA include:

- breaking up a long page or form into different parts, so you can see which parts people are interested in;
- a URL policy used to recommend entry pages for printed material;
- grouping content by audience type or buying decision and setting up content groups of related content within web analytics systems;
- measuring attrition at different points in a customer journey, e.g. exit points on a five-page buying cycle.

In this section, we will review approaches to performance management by examining three key elements of an e-commerce performance improvement system. These are, first, the *process* for improvement, second, the measurement framework that specifies groups of relevant **digital marketing metrics** and, finally, an assessment of the suitability of tools and techniques for collecting, analysing, disseminating and actioning results.

Stage 1: Creating a performance management system

The essence of performance *management* is suggested by the definition for performance *measurement* used by Andy Neely of Cranfield School of Management's Centre for Business Performance. He defines (Neely *et al.*, 2002) performance measurement as:

the process of quantifying the efficiency and effectiveness of past actions through acquisition, collation, sorting, analysis, interpretation and dissemination of appropriate data.

Effectiveness

Meeting process objectives, delivering the required outputs and outcomes. 'Doing the right thing.'

Efficiency

Minimising resources or time needed to complete a process. 'Doing the thing right.'

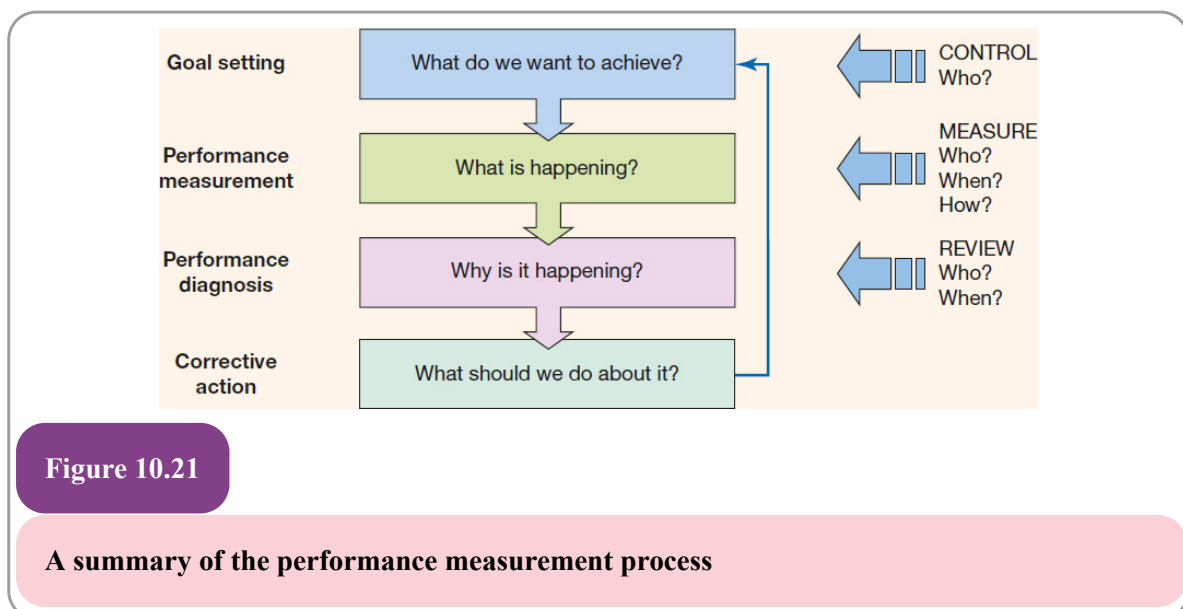
Performance management extends this definition to the process of analysis and actioning change in order to drive business performance and returns. Marketers can apply many of the approaches of business performance management to digital marketing. As you can see from the definition, performance is measured primarily through information on process **effectiveness** and **efficiency**, as introduced in Chapter 5 in the section on objective setting where we noted that it is important to include both effectiveness and efficiency measures.

The need for a structured performance management process is clear if we examine the repercussions if an organisation does not have one. These include: poor linkage of measures with strategic objectives, or even absence of objectives; key data not collected; data inaccuracies; data not disseminated or analysed; or no corrective action. Many of the barriers to improvement of measurement systems reported by respondents in Adams *et al.* (2000) also indicate the lack of an effective process. The barriers can be grouped as follows:

- *senior management myopia* - performance measurement not seen as a priority, not understood or targeted at the wrong targets - reducing costs rather than improving performance;
- *unclear responsibilities for delivering and improving the measurement system*;
- *resourcing issues* - lack of time (perhaps suggesting lack of staff motivation), the necessary technology and integrated systems;
- *data problems* - data overload or of poor quality, limited data for benchmarking.

To avoid these pitfalls, a coordinated, structured measurement process such as that shown in Figure 10.21 is required. Figure 10.21 indicates four key stages in a measurement process. These were defined as key aspects of annual plan control by Kotler (1997). Stage 1 is a goal-setting stage where the aims of the measurement system are defined - this will usually take the strategic Internet marketing objectives as an input to the measurement system. The aim of the measurement system will be to assess whether these goals are achieved and specify corrective marketing actions to reduce variance between target and actual key performance indicators. Stage 2, performance measurement, involves collecting data to determine the different metrics that are part of a measurement framework, as discussed in the next section. Stage 3, performance diagnosis, is the analysis of results to understand the reasons for variance from objectives (the 'performance gap' of Friedman and Furey, 1999) and selection of marketing solutions to reduce variance. The purpose of Stage 4, corrective action, according to Wisner and Fawcett (1991), is:

to identify competitive position, locate problem areas, assist the firm in updating strategic objectives and making tactical decisions to achieve these objectives and supply feedback after the decisions are implemented.



In a digital marketing context, corrective action is the implementation of these solutions as updates to website content, design and associated marketing communications. At this stage the continuous cycle repeats, possibly with modified goals. Bourne *et al.* (2000) and Plant (2000) suggest that, in addition to reviewing objectives, the suitability of the metrics should also be reviewed and revised.

Measurement is not something that can occur on an ad hoc basis because if it is left to the individual they may forget to collect the data needed. A 'measurement culture' is one in which each employee is aware of the need to collect data on how well the company is performing and on how well it is meeting its customers' needs. This is an essential part of growth hacking.

Stage 2: Defining the performance metrics framework

Measurement for assessing the effectiveness of digital marketing can be thought of as answering these questions:

- 1 Are the corporate objectives identified in the digital marketing strategy being met?
- 2 Are the marketing objectives defined in the digital marketing strategy and plan achieved?

3 Are the marketing communications objectives identified in the digital marketing plan achieved?

4 How efficient are the different promotional techniques used to attract visitors to the site?

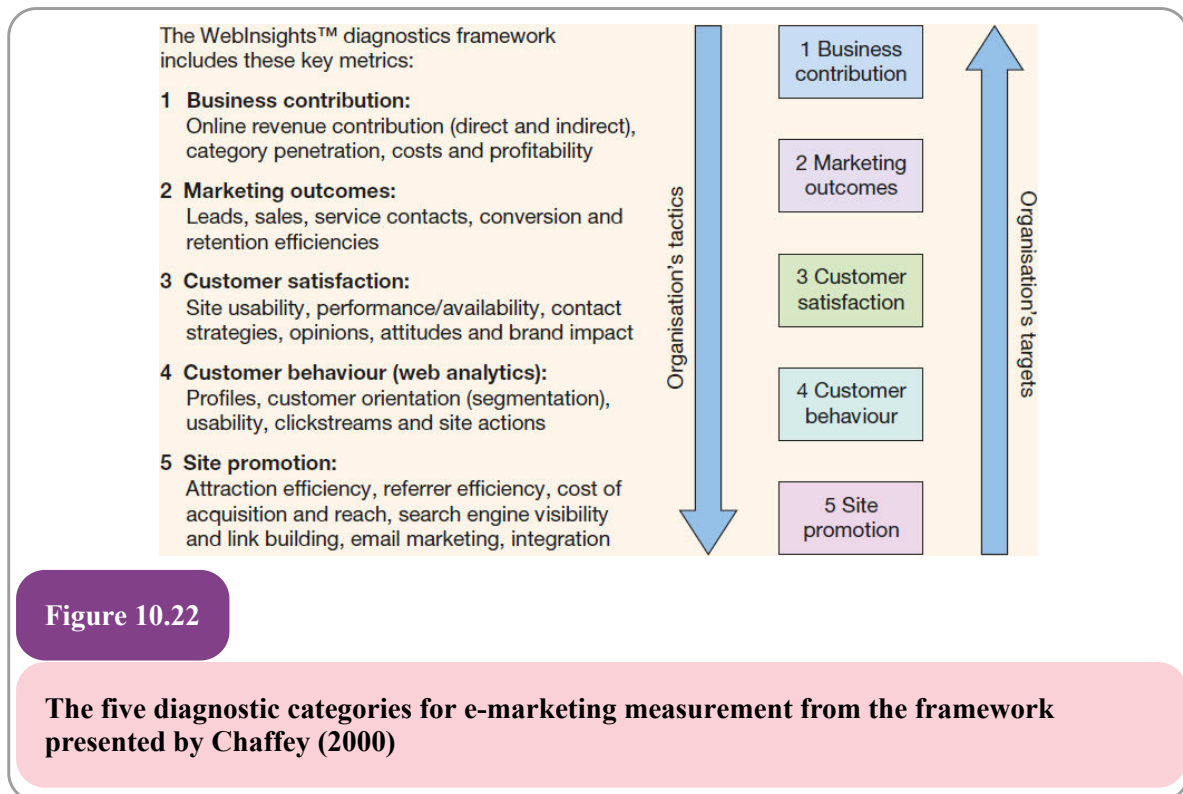
Efficiency measures are more concerned with minimising the costs of online marketing, while maximising the returns for different areas of focus such as acquiring visitors to a website, converting visitors to outcome or achieving repeat business.

Chaffey (2000) suggests that organisations define a measurement framework that defines groupings of specific metrics used to assess digital marketing performance. He suggests that suitable measurement frameworks will fulfil the following criteria:

- A** Include macro-level effectiveness metrics, which assess whether strategic goals are achieved and indicate to what extent digital marketing contributes to the business (revenue contribution and return on investment).
- B** Include micro-level metrics, which assess the efficiency of digital marketing tactics and implementation. Wisner and Fawcett (1991) note that, typically, organisations use a hierarchy of measures and they should check that the lower-level measures support the macro-level strategic objectives. Such measures are often referred to as *performance drivers*, since achieving targets for these measures will assist in achieving strategic objectives. Marketing performance drivers help optimise digital marketing by attracting more site visitors and increasing conversion to desired marketing outcomes.
- C** Assess the impact of the digital marketing on the satisfaction, loyalty and contribution of key stakeholders (customers, investors, employees and partners), as suggested by Adams *et al.* (2000).
- D** The framework must be flexible enough to be applied to different forms of online presence, whether business-to-consumer, business-to-business, not-for-profit or transactional e-commerce, CRM-orientated or brand-building. Adams *et al.* (2000) note that a 'one-size-fits-all' framework is not desirable.
- E** Enable a comparison of the performance of different digital channels with other channels, as suggested by Friedman and Furey (1999).
- F** The framework can be used to assess digital marketing performance against competitors' or out-of-sector best practice.

When identifying metrics it is common practice to apply the widely used SMART mnemonic, and it is also useful to consider three levels - business measures, marketing measures and specific Internet marketing measures (see objective-setting section in Chapter 5).

Chaffey (2000) presented a framework of measures, shown in Figure 10.22, which can be applied to a range of different companies. Metrics for the categories are generated as objectives from digital marketing planning, which then need to be monitored to assess the success of strategy and its implementation. Objectives can be devised in a top-down fashion, starting with strategic objectives for business contribution and marketing outcomes and leading to tactical objectives for customer satisfaction, behaviour and site promotion. An alternative perspective is bottom-up - success in achieving objectives for site promotion, on-site customer behaviour and customer satisfaction lead sequentially to achieving objectives for marketing outcomes and business contribution.



5 Site promotion

Site promotion measures evaluate the volume, quality, value and cost of where the website, social presence or mobile site visitors originate - online or offline, and what are the sites or offline media that prompted their visit. Web analytics can be used to assess which intermediary sites customers are referred from and which keywords they typed into search engines when trying to locate product information. Similar information on referrers is not typically available for visits to social media sites. Promotion is successful if traffic is generated that meets objectives of volume and quality. Quality will be determined by whether visitors are in the target market and have a propensity for the service offered (conversion rates, bounce rate and cost of acquisition for different referrers).

Key measure: referral mix. For each referral source such as offline communication or banner ads online, it should be possible to calculate:

- % of all referrals (or visitors);
- cost of acquisition (CPA) or cost per sale (CPS);
- revenue per visit generated;
- contribution to sales or other outcomes.

Site promotion

Measures that assess why customers visit a site - which adverts they have seen, which sites they have been referred from.

Customer behaviour

Describes which content is visited, time and duration.

4 Customer behaviour (web analytics)

Once customers have been attracted to the site we can monitor content accessed, when they visit and how long they stay, and whether this interaction with content leads to satisfactory marketing outcomes such as new leads or sales. If visitors are incentivised to register on-site it is possible to

build up profiles of behaviour for different segments. It is also important to recognise return visitors, for whom cookies or log-ins are used.

Customer satisfaction

Evaluation of the customer's opinion of the service quality on the site and supporting services such as email.

Conversion rate

Percentage of site visitors who perform a particular action such as making a purchase.

Channel outcomes

Record of customer actions taken as a consequence of a site visit.

Key measure:

bounce rates for different pages, i.e. proportion of single-page visits:

Home page views/all page views, e.g. $20\% = (2,358/11,612)$

Page views/visitor sessions, e.g. $6 = 11,612/2,048$

Repeats: visitor sessions/visitors, e.g. $2 = 2,048/970$.

3 Customer satisfaction

Customer satisfaction with the online experience is vital in achieving the desired channel outcomes, although it is difficult to set specific objectives. However, it is not directly reported through web analytics, so is often not reported at all. Research methods such as online questionnaires, focus groups and interviews can be used to assess customers' opinions of the website content and customer service and how it has affected overall perception of brand.

2 Marketing outcomes

Traditional marketing objectives, such as number of sales, number of leads, **conversion rates** and targets for customer acquisition and retention, should be set and then compared to other channels. Dell Computer (www.dell.com) records on-site sales and also orders generated as a result of site visits but placed by phone to a specific number unique to the site. Key marketing outcomes include:

- registration to site or subscriptions to an email newsletter;
- requests for further information such as a brochure or a request for a call-back from a customer service representative;
- responding to a promotion such as an online competition;
- an offline (phone or store) lead or sale influenced by a visit to the site;
- a sale on-site.

A widely used method of assessing **channel outcomes** is to review the conversion rate, which gives an indication of the percentage of site visitors who take a particular outcome. For example:

Conversion rate, visitors to purchase = 2% (10,000 visitors, of which 200 make purchases)

Conversion rate, visitors to registration = 5% (10,000 visitors, of which 500 register)

Attrition rate

Percentage of site visitors who are lost at each stage in making a purchase.

Channel profitability

The profitability of the website, taking into account revenue and cost and discounted cash flow.

A related concept is the **attrition rate**, which describes how many visitors are lost at each stage of visiting a site. Figure 10.23 shows that, for a set time period, only a proportion of site visitors will make their way to product information, a small proportion will add an item to a basket and a smaller proportion still will actually make a purchase. A key feature of e-commerce sites is that there is a

high attrition rate between a customer's adding an item to a basket and subsequently making a purchase. Digital marketers work to decrease this 'shopping basket abandonment rate' through improving usability and modifying messaging to persuade visitors to continue the 'user journey'. This is referred to as conversion rate optimisation (CRO).

1 Business contribution

A contribution to business **channel profitability** is always the ultimate aim of e-commerce business. To assess this, leading companies set an online contribution target of achieving a certain proportion of sales via the channel. When easyJet (www.easyjet.com) launched its e-commerce facility in 1998, it set an Internet contribution target of 30% by 2000. It put the resources and communications plan in place to achieve this and its target was reached in 1999. Assessing contribution is more difficult for a company that cannot sell products online, but the role of digital channels in influencing purchase should be assessed. Discounted cash flow techniques are used to assess the rate of return over time. Service contribution from digital channels should also be assessed.

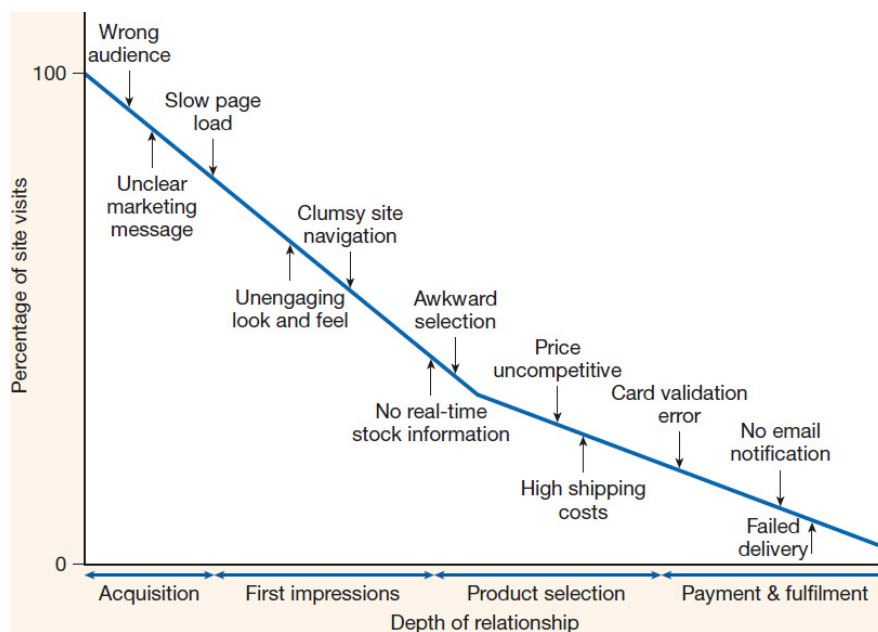


Figure 10.23

Attrition through e-commerce site activities

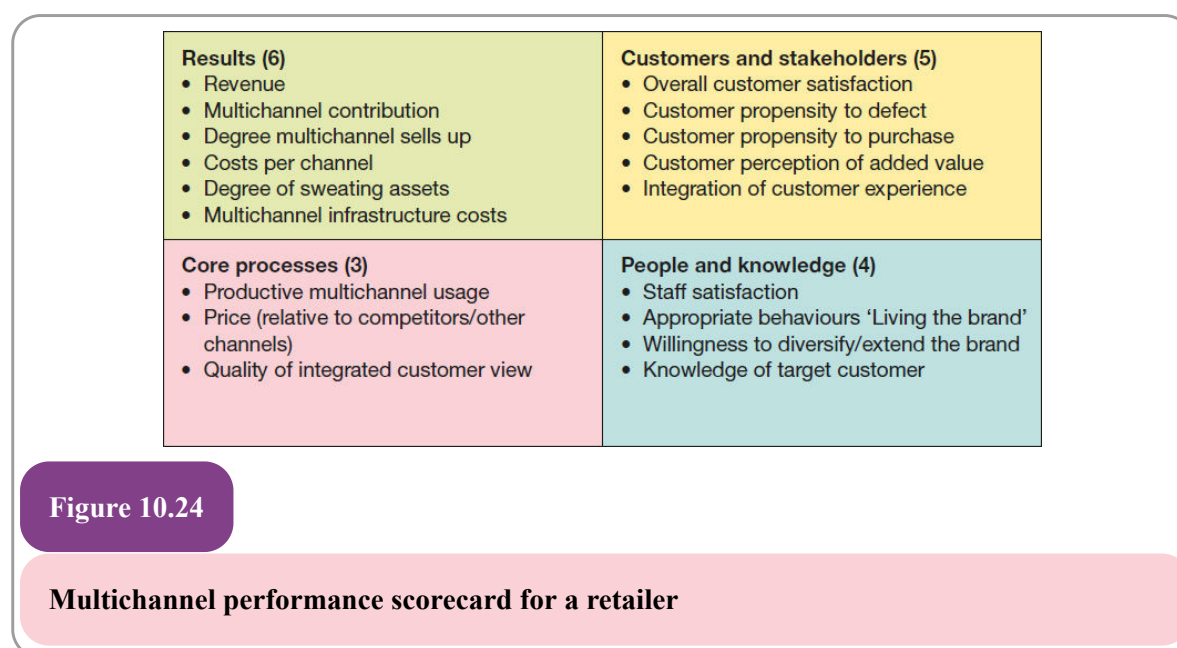
Multichannel evaluation

The frameworks we have presented in this chapter are explained in the context of an individual channel. But, as Wilson (2008) has pointed out, there is a need to evaluate how different channels support each other.

He suggests the most important aspect of multichannel measurement is to measure 'channel cross-over effects'. This involves asking, for example: 'How can the impact of a paid search campaign be measured if it is as likely to generate traffic to a store, salesforce or call centre as to a website? How can the impact of a direct mail campaign be tracked if it generates website traffic as well as direct responses?'

1to1 Media (2008) summarises recommendations by Forrester (2013) of measuring the following outcomes:

- 1 Total number of hybrid customers.** These include the number and proportion who research online and purchase offline.
- 2 Distribution and spend levels of those hybrid customers.** Proportion, average order value and type of category spend for these customers.
- 3 Cross-channel conversion.** For example, online researchers who subsequently buy offline and potentially vice versa.
- 4 Customer spend with competitors by channel.** This would have to be established by primary research for each brand. Audience measurement services such as Hitwise will give information on share of search, share of visitors and upstream/downstream patterns of visitors.



An example of a balanced scorecard-style dashboard developed to assess and compare channel performance for a retailer is presented in Figure 10.24.

Focus on Marketing Measuring social media

Social media marketing has its own range of specialist measures, which can appear confusing, but are best understood in the context of a combination of website and PR measures. These show the volume, quality, sentiment and value of interactions. Analyst Altimeter (2011) has created a useful framework, shown in Figure 10.25, which helps map out different social media measures in the context of level of business management.

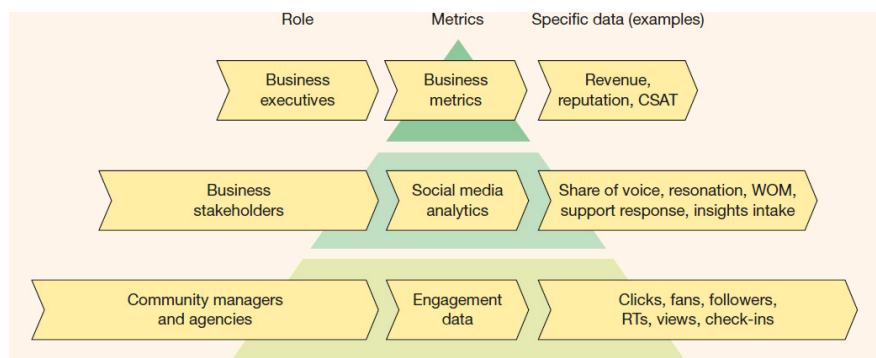


Figure 10.25

A framework for different measures used to evaluate and manage social media marketing

Source: Altimeter (2011).

You can see that there are three levels of KPIs:

- *Business-level KPIs to measure contribution from social media.* These KPIs include contribution to revenue through direct sales attributed to social media. Softer measures include reputation and customer satisfaction (CSAT).
- *Reach and influence KPIs to review reach, share of voice and sentiment.* These show the relative comparison of a brand's reach.
- *Engagement KPIs to manage social media.* These are the easiest measures to collect, but the least valuable since they don't directly show contribution to business value. Although easy to collect, data on interaction with social sites is often supplied separately by the owners of the different social presence and tools for managing social interaction. A new class of social analytics tools have been created to bring this data together. Figure 10.26 shows an example from Twitter Analytics, showing different aspects of engagement for one of the authors' Twitter accounts (you can do this for your own Twitter account) - this shows how many people were shown tweets, how many times the user was mentioned in other Twitter users' tweets, and which tweets were most popular or gained the most shares.

A common question within social media is how to assess the value of a consumer connecting with a brand, by liking on Facebook, following on Twitter or using a brand's hashtag on Instagram. Since the tracking of social media can't show what an individual does on the network, specific value is difficult to establish. Instead, what we can assess is the relative purchase rates of visitors from social media sites to websites compared to other channels, using measures such as conversion rate and revenue per visitor.

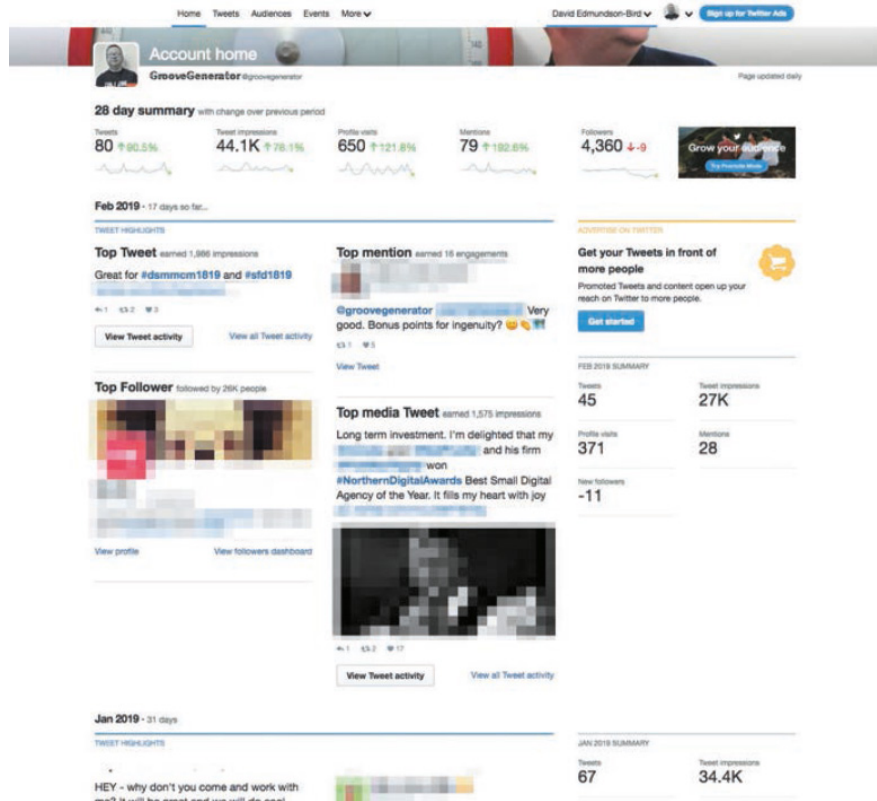


Figure 10.26

Example of measures from Twitter Analytics, showing engagement with one of the authors' Twitter accounts.

Source: with permission from David Edmundson-Bird.

Site-visitor activity data

Information on content and services accessed by e-commerce site visitors.

Log-file analyser

A separate program, such as Webtrends, that is used to summarise the information on customer activity in a log file.

Page impression

A more reliable measure than a hit, denoting one person viewing one page.

Unique visitors

Individual visitors to a site measured through cookies or IP addresses on an individual computer.

Stage 3: Tools and techniques for collecting metrics and summarising results

Techniques to collect metrics include the collection of **site-visitor activity data**, such as that collected from site log-files, the collection of metrics about outcomes such as online sales or email enquiries and traditional marketing research techniques such as questionnaires and focus groups, which collect information about the customer's experience on the website.

Collecting site-visitor activity data

Site-visitor activity data captured in web analytics systems records the number of visitors on the site and the paths or clickstreams they take through the site as they visit different content. There is a wide variety of technical terms to describe these activity data, which digital marketers need to be conversant with.

Traditionally, this information has been collected using a log-file analysis web analytics tool. The server-based log file is added to every time a user downloads a piece of information and is analysed using a **log-file analyser**. Examples of transactions within a log file are:

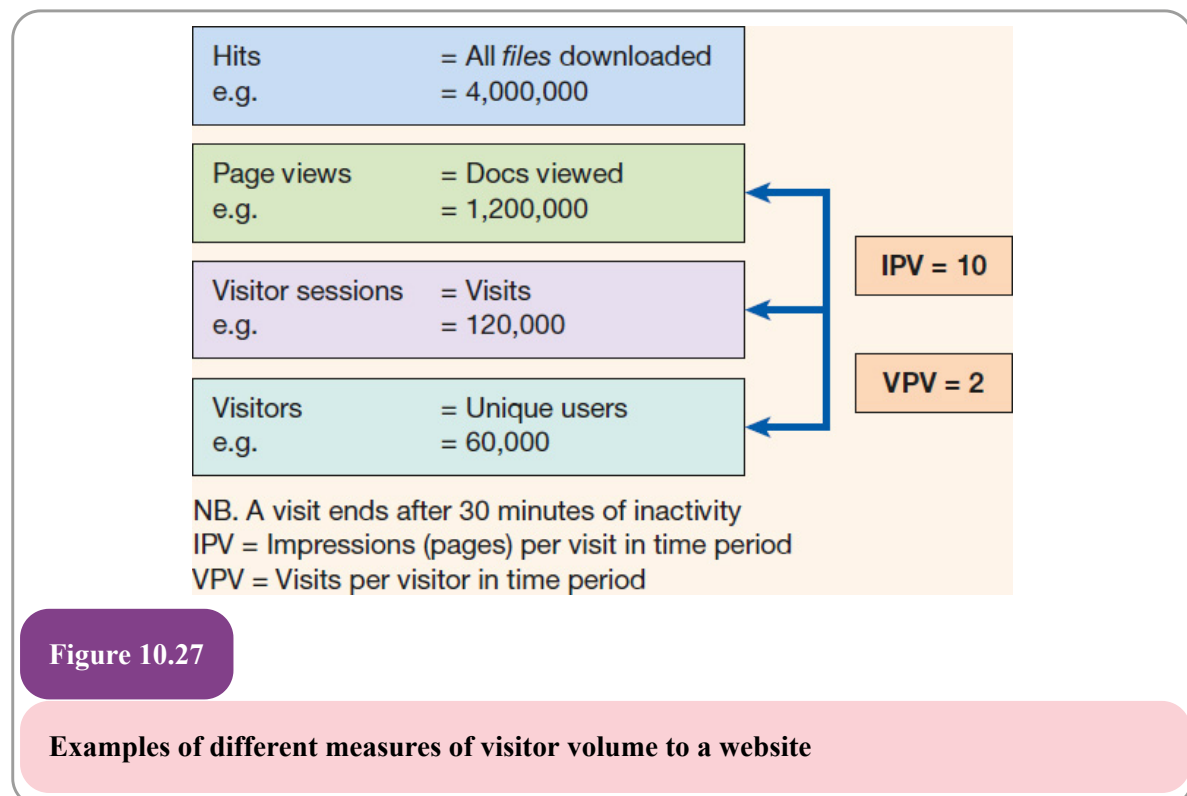
```
www.davechaffey.com - [05/Oct/2012:00:00:49 -000] "GET/index.html HTTP/1.0" 200 33362
```

```
www.davechaffey.com - [05/Oct/2012:00:00:49 -000] "GET/logo.gif HTTP/1.0"200 54342
```

Page impressions or page views and **unique visitors** are measures of site activity.

An example of visitor volume to a website using different measures based on real, representative data for one month is presented in Figure 10.27. You can see how hits are much higher than page views and unique visitors and are quite misleading in terms of the ‘opportunities to see’ a message. We can also learn from the ratio between some of these measures the figure indicates:

- *Impressions (pages) per visit (IPV)* - the average number of pages viewed per visitor to a site (this is indicative of engagement with a site since the longer a visitor stays on a ‘sticky site’, the higher this value will be). Duration on a site in minutes is inaccurate since this figure is skewed upwards by visitors who arrive on a site and are inactive before their session times out at 30 minutes.



- *Visits per (unique) visitor (VPV)* - this suggests the frequency of site visits. These data are reported for a month, during which time one would not expect many returning visitors. So, it is often more relevant to present these data across a quarter or a year.

Other information giving detailed knowledge of customer behaviour that can be reported by any web analytics package includes:

- top pages;
- entry and exit pages;
- path or clickstream analysis showing the sequence of pages viewed;
- country of visitor's origin (actually dependent on the location of their ISP);
- browser and operating system used;
- referring URL and domain (where the visitor came from).

Comparing apples to oranges?

With many different web analytics tools being used on different sites, it is important that there are standards for measuring visitor volumes. In particular, there are different techniques for measuring unique visitors, which can be measured through IP addresses, but this is more accurate if it is combined with cookies and browser types. International standards bodies such as the IFABC (www.ifabc.org) and Digital Analytics Association (www.digitalanalyticsassociation.org) and UK organisations such as ABC electronic (www.abce.org.uk) and JICWEBS (www.jicwebs.org) have worked to standardise the meaning of and data collection methods for different measures. Media buyers are particularly interested in accurate audited figures of media sites, and organisations such as ABC electronic are important for this.

Collecting site outcome data

Site outcome data refer to information about a customer performing a significant action that is of value to the marketer. This is usually a transaction that is recorded. It involves more than downloading of a web page and is proactive. Key marketing outcomes include:

- registration to site or subscriptions to an email newsletter;
- requests for further information such as a brochure or a request for a call-back from a customer service representative;
- responding to a promotion such as an online competition;
- a sale influenced by a visit to the site;
- a sale on-site.

When reviewing the efficiency of different digital communications tools referred to in Chapter 7, it is important to assess the outcomes generated. Measuring quantity of click-throughs to a site is simplistic; it is conversion to these outcomes that should be used to assess the quality of traffic.

An important aspect of measures collected offline is that the marketing outcomes may be recorded in different media according to how the customer has performed mixed-mode buying. What we are really interested in is whether the website influenced the enquiry or sale. For all contact points with customers, staff need to be instructed to ask how they found out about the company, or made their decision to buy. Although this is valuable information it is often intrusive, and a customer placing an order may be annoyed to be asked such a question. To avoid alienating the customer, these questions about the role of the website can be asked later, perhaps when the customer is filling in a registration or warranty card. Another device that can be used to identify use of the website is to use a specific phone number for customers coming from the website.

It will be apparent that to collect some of these measures we may need to integrate different information systems. Where customers provide details such as an email address and name in response to an offer, these are known as 'leads' and they may need to be passed on to a direct-sales team or recorded in a customer relationship management system (see Chapter 8 for more information). For full visibility of customer behaviour, the outcomes from these systems need to be integrated with the site-visitor activity data.

Selecting a web analytics tool

There is a bewildering range of hundreds of web analytics tools, varying from shareware packages with often primitive reporting through to complex systems that may cost hundreds of thousands of dollars a year for a popular site. You can gain an idea of the range of tools by visiting the Web Analytics Demystified site (<https://analyticsdemystified.com/community/>) to find the tools used to monitor your sites or competitors' sites.

Given this, it is difficult for the digital marketer to select the best tool or tools to meet their needs. One of the first issues to consider is the different types of measures that need to be integrated within the performance management system. Figure 10.28 gives an indication of the types of data that need to be integrated, which include:

1 Operational data. Data would be ideally collected and reported within a single tool at this level, but unfortunately to obtain the best reporting it is often necessary to resort to four different types of tools or data source:

- Referrer data from acquisition campaigns such as search marketing or digital advertising. Separate tools are often also required for retention email marketing.
- Site-centric data about visitor volume and clickstream behaviour.
- Customer response and profile data.
- Transactional data about leads and sales, which are often obtained from separate legacy systems.

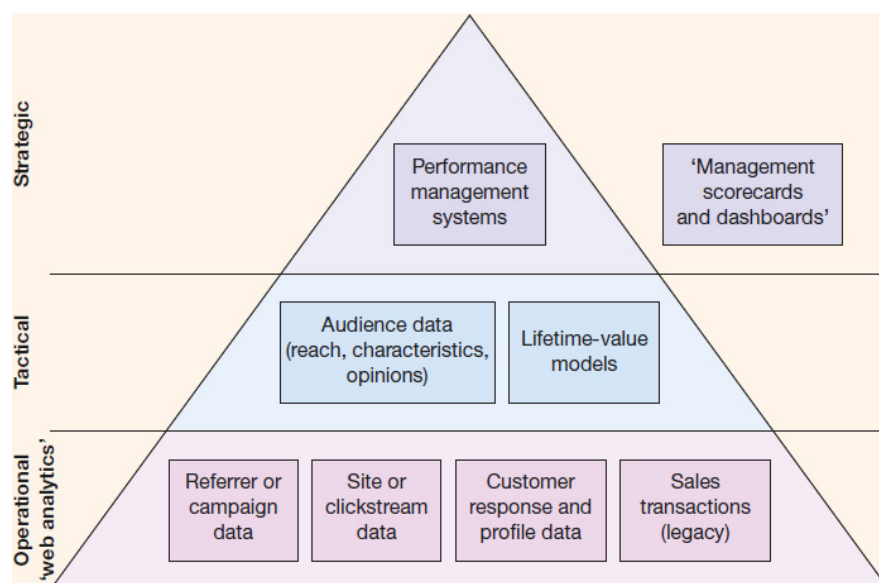


Figure 10.28

Different types of data within a performance management system for Internet marketing

2 Tactical data. These data are typically models of required response, such as:

- Reach models with online audience share data for different demographic groupings from sources such as Hitwise and Nielsen NetRatings.
- Lifetime-value models, which are created to assess profitability of visitors to the site from different sources and so need to integrate with operational data.

3 Strategic data. Performance management systems for senior managers will give the big picture, presented as scorecards or dashboards showing the contribution of digital channels to the organisation in terms of sales, revenue and profitability for different products. These data indicate trends and relative performance within the company and against competitors, such that the Internet marketing strategy can be reviewed for effectiveness.

So, an important requirement of a web analytics tool is that it should seek to integrate all these different data sources. The other main requirements of a web analytics tool to consider include:

- reporting of marketing performance (many are technical tools that do not clearly report on results from a marketing perspective);
- accuracy of technique;
- analysis tools;
- integration with other marketing information systems (export);
- ease of use and configuration;
- cost, which often varies according to site-visitor volumes and number of system users;
- suitability for reporting on digital marketing campaigns.

Many tracking tools were originally developed to report on the performance of the site and the pages accessed, rather than specifically to report on digital marketing campaigns. It is therefore important that companies have an excellent campaign reporting capability, such as:

- 1** Can the tool track from point of entry to site through to outcome such as site registration or sale? Integration with data to reflect actual leads or sales in a legacy system should also be reported.
- 2** Can the tool track and compare a range of digital media types? For example, interactive (banner) ads, affiliates, email marketing, natural and paid search, as explained in Chapter 8.
- 3** Can return-on-investment models be constructed - for example, by entering costs and profitability for each product?
- 4** Can reports be produced at both a detailed level and a summary level? This enables comparison of performance for different campaigns and different parts of the business.
- 5** Is there capability to track clickthroughs at an individual respondent level for email campaigns? This is important for follow-up marketing activities after an email list member has expressed interest in a product through clicking on a promotion link.
- 6** Are post-view responses tracked for ads? Cookies can be used to assess visitors who arrive on the site at a later point in time, rather than immediately.
- 7** Are post-click responses tracked for affiliates? Similarly, visitors from affiliates may buy the product not on their first visit, but on a later visit.
- 8** Do email campaign summaries give unique clicks as well as total clicks? If an email communication such as a newsletter contains multiple links, then total clicks will be higher.
- 9** Is real-time reporting available? Is immediate access to campaign performance data available?
- 10** Is cross-campaign and cross-product or content reporting available? Is it readily possible to compare campaigns and sales levels across different products or different parts of the site rather than an aggregate?

Accuracy is another important aspect of web analytics tools. Perhaps the worst problems of log-file analysis are the problems of under-counting and over-counting. These are reviewed in Table 10.8.

Table 10.8

Inaccuracies caused by server-based log-file analysis

Sources of under-counting	Sources of over-counting
Caching in user's web browsers (when a user accesses a previously accessed file, it is loaded from the memory of the user's computer on a server-based cache on their PC)	Frames (a user viewing a framed page with three frames will be recorded as three page impressions or page views)
Caching on proxy servers (proxy servers are used within organisations or ISPs to reduce Internet traffic by storing copies of frequently used pages)	Spiders and robots (traversing of a site by spiders from different search engines is recorded as page impressions; these spiders can be excluded, but this is time-consuming)
Firewalls (these do not usually exclude page impressions, but they usually assign a single IP address for the user of the page, rather than referring to an individual's PC)	Executable files (these can also be recorded as hits or page impressions unless excluded)
Dynamically generated pages, generated 'on-the-fly', are difficult to assess with server-based log files	

Table 10.9

A comparison of different online metrics collection methods

Technique	Strengths	Weaknesses
1 Server-based log-file analysis of site activity	• Directly records customer behaviour on-site, plus where they were referred from • Low cost	• Not based around marketing outcomes such as leads, sales • Size - even summaries may be over 50 pages long • Doesn't directly record channel satisfaction • Under-counting and over-counting • Misleading unless interpreted carefully
2 Browser-based site activity data	• Greater accuracy than server-based analysis • Count all users, cf. panel approach	• Relatively expensive method • Similar weaknesses to server-based technique apart from accuracy • Limited demographic information
3 Panel activity and demographic data	• Provide competitor comparisons • Give demographic profiling	• Depend on extrapolation from limited sample that may not be representative

	• Avoid under-counting and over-counting	
4 Outcome data , e.g. enquiries, customer service emails	• Record marketing outcomes	• Difficulty of integrating data with other methods of data collection when collected manually or in other information systems
5 Online questionnaires Customers are prompted randomly - every nth customer or after customer activity or by email	• Can record customer satisfaction and profiles • Relatively cheap to create and analyse	• Difficulty of recruiting respondents who complete accurately • Sample bias - tends to be advocates or disgruntled customers who complete
6 Online focus groups Synchronous recording	• Relatively cheap to create	• Difficult to moderate and coordinate • No visual cues, as with offline focus groups
7 Mystery shoppers Customers are recruited to evaluate the site, e.g. www.mysteryshopper.com	• Structured tests give detailed feedback • Also tests integration with other channels such as email and phone	• Relatively expensive • Sample must be representative

Marketing research

The use of questionnaires and focus groups to assess customer perceptions of a website or broader marketing issues.

Another approach is to use the alternative *browser-based* or *tag-based* measurement system that records access to web pages every time a page is loaded into a user's web browser through running a short script, program or tag inserted into the web page. Potentially it is more accurate than server-based approaches for the reasons explained in Table 10.8. This approach usually runs as a hosted solution, with the metrics recorded on a remote server. Google Analytics is an example of this.

In addition to the quantitative web analytics measurement approaches discussed, traditional **marketing research** can be used to help determine the influence of the website and related communications on customer perception of the company and its products and services. The options for conducting survey research include interviews, questionnaires, focus groups and mystery shoppers. Each of these techniques can be conducted offline or online. The advantages and disadvantages of the different approaches are shown in Table 10.9.

As this section has shown, there are various analytics tools available to measure *how* people are behaving when they get to a website; then qualitative research can help explain *why* they are behaving in a particular way. These tools and techniques are an important part of the growth hacker's 'tool kit', so that they can test, measure and adjust activity in line with the best results achieved.

User testing prioritisation

It is important to log issues uncovered in user testing (via some of the methods mentioned above), generate a solution and prioritise them.

Summary

- 1 Organisations need to adapt to digital innovations rather than simply adopt technologies.
- 2 Change is happening at a greater speed than at any point in human history and much of this is down to technological development.
- 3 Digital transformation is a framework for managing the adaptation of organisations around innovations so that they can take advantage of a digital opportunity and place it at the heart of the organisation.
- 4 Organisations that fail to transform digitally are more likely to fail as organisations.
- 5 Growth hacking can only be done with a good product that has achieved product market fit (i.e. enough people want the product and it serves a real need).
- 6 Growth hacking is most effective when it is implemented by a multi-disciplined **team** of marketers, data analysts, psychologists, coders/developers and people who use and understand technology.
- 7 The core principle behind growth hacking is to quickly and cheaply test a marketing idea, use data to analyse the outcomes and to iterate, optimise, implement or change the experiment. Running A/B tests and checking data with analytical software such as Google Analytics, Mixpanel or Optimizely are essential components to this process.
- 8 Despite the high data-analysis element of growth hacking, it is an extremely creative process that requires people to ‘swim against the flow’ and spot emerging opportunities before anyone else does. This dichotomy of ‘intuition and rigour’ and ‘art and science’ makes it very difficult to find people with the right skill set; which is why building a growth hacking team is so important (or finding an agency with this type of team already in place).
- 9 Although digital marketing is a key element of growth hacking (because of the analytical part of obtaining quantitative user data and gaining insights from it), it is also important to use traditional marketing methods to bridge the gap between the physical and digital world.
- 10 Measuring the success of activities/campaigns requires processes, responsibilities and a measurement framework. A suggested framework for sell-side e-commerce assesses channel promotion, channel behaviour, channel satisfaction, channel outcomes and channel profitability. Selection of appropriate web analytics tools is important to assess the effectiveness of digital business activities.

Exercises

Self-assessment questions

- 1 What is the difference between digital literacy and digital competence?
- 2 What is the difference between adapting to digital and adopting digital technology?
- 3 Describe the things that make digital transformation different from digital business transformation.

- 4 Write a report to a manager recommending why a growth hacking approach should be taken to digital marketing.
- 5 Develop a plan for measuring the marketing effectiveness of an e-commerce site.
- 6 Discuss the balance of using a website and traditional offline methods for marketing research.
- 7 Explain what CRO is and what would be tested on an e-commerce site.

Essay and discussion questions

- 1 'Organisations that do not transform digitally are likely to fail as organisations.' Discuss.
- 2 You are a digital transformation consultant in a new start-up. Create a guide to the process of digital transformation for the founder, with particular reference to the issue of leadership.
- 3 You are a digital transformation consultant for an existing business. Create a guide to the process of digital transformation for the board, and identify the stages they need to go through.
- 4 Describe how a digital business could take a growth hacking approach.
- 5 Explain what a 'test, learn and commit' loop is and the benefits this approach brings to a digital business.
- 6 What are the objectives of testing? How do these relate to an e-commerce site?
- 7 What are the main elements of an e-commerce site measurement plan?

Examination questions

- 1 Explain the process of digital transformation for an existing organisation.
- 2 Discuss why organisations need to explore digital processes, practices and culture in digital transformation.
- 3 Describe the features of an organisation with whom you are familiar that has changed the way it manages its relationships with its customers, either through changes to the interface or changes to the way it does business.
- 4 Analyse the advantages and disadvantages of taking a growth hacking approach to digital marketing.
- 5 You are developing a testing plan for an e-commerce site. Outline five key aspects of the site you would test.
- 6 Explain the three different types of virality, with reference to a digital business successfully using each one.
- 7 Explain the following terms and why they are important for digital businesses:
 - (a) Minimum viable product (MVP)
 - (b) Conversion rate optimisation (CRO)
 - (c) Scrum methodology
 - (d) Qualitative and quantitative research.
- 8 Why are conversion and attrition rates important when evaluating the performance of an e-commerce site?
- 9 Suggest three key measures that indicate the contribution of an e-commerce site to overall business performance for a company with online and offline presence.

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Web links

Web analytics expertise

- Avinash Kaushik's blog (www.kaushik.net)** Avinash is an expert in web analytics and the Google evangelist for digital marketing. His popular blog shows how web analytics can be managed to control and improve return on digital marketing investments.
- Digital Analytics Association (www.digitalanalyticsassociation.org)** The trade association site has definitions and advice.
- Emetrics (www.emetrics.org/blog)** Jim Sterne's site has many resources for digital marketing metrics.
- Smart Insights Google Analytics (www.smartinsights.com/google-analytics)** Practical advice on how to generate value from the most popular digital analytics system.
- Web Analytics Demystified (www.webanalyticsdemystified.com)** Analyst Eric Peterson on web analytics.

Social media marketing analytics

These are the blogs of three of the leading commentators on social media marketing who discuss how to measure return from social media marketing.

Brian Solis (www.briansolis.com) **Jay Baer** (www.convinceandconvert.com) **Jeremiah Owyang** (www.web-strategist.com/blog)

Growth hacking

These are the best blogs on growth hacking and tech start-up entrepreneurship. **Andrew Chen** (<http://andrewchen.co>) Andrew was Head of Growth at Uber and is now a general partner at Andreessen Horowitz, one of the top venture capital firms in Silicon Valley.

Sean Ellis (www.startup-marketing.com) Sean was the first marketer at Dropbox and is founder and CEO of Qualaroo and Growthhackers. He is one of the leading experts on growth hacking.

Steve Blank (<http://steveblank.com>) Steve has a background in founding and building tech companies. He is author of *The Startup Owner's Manual*, about building early-stage companies.

Tanya Hemphill (www.digitaltanya.co.uk) Tanya is one of the UK's leading experts on growth hacking and also writes about tech start-ups and entrepreneurship.

Glossary

A

A/B or AB testing Refers to testing two different versions of a page or a page element, such as a heading, image or button, for effectiveness.

Accelerators Designed to accelerate early-stage growth-driven companies, these tend to be fixed-term, cohort-based programmes that include mentorship, training programmes and culminate in a public pitch event or demo day to find investors.

Accessibility An approach to site design intended to accommodate site usage using different browsers and settings, particularly required by the visually impaired.

Accessibility legislation Legislation intended to protect users of websites with disabilities, including visual disability.

Activity-based process definition methods Analysis tools used to identify the relationship between tasks within a business process.

Actors People, software or other devices that interface with a system.

Ad serving The term for displaying an advertisement on a website. Often the advertisement will be served from a web server different from the site on which it is placed.

Adapting versus adopting The terms ‘adopting technology’ and ‘adapting to technology’ are critical to understanding digital business transformation. Choosing one term over another indicates a particular worldview about the role of digital in the business. When a business **adopts** a digital technology, the implication is that the organisation isn’t changing in any way - it is merely incorporating the technology into the organisation without any particular change to the business. **Adaptation**

implies that the organisation is changing to take advantage of the opportunities that digital can provide.

Adaptive design Different layouts are applied to a site depending on the device and/or resolution. This can be achieved through rules implemented on the client device or on the server.

Affiliate A company promoting a merchant typically through a commission-based arrangement, either directly or through an affiliate network.

Affiliate marketing A commission-based arrangement where an e-retailer pays sites that link to it for sales leads (CPA-based) or, less commonly, visitors (CPC-based).

Agents Software programs that can assist humans by automatically gathering information from the Internet or exchanging data with other agents based on parameters supplied by the user.

Aggregated buying A form of customer union where buyers collectively purchase a number of items at the same price and receive a volume discount.

Aggregators An alternative term for price comparison sites. Aggregators include product, price and service information, comparing competitors within a sector such as financial services, retail or travel. Their revenue models commonly include affiliate revenues (CPA), pay-per-click advertising (CPC) and display advertising (CPM).

Allowable cost per acquisition A target maximum cost for generating leads or new customers profitably.

ALT tags Alt tags (alternative tags) appear after an image tag and contain a phrase associated with that image.

Analysis and design Analysis of system requirements and design for creation of a system.

Analysis for digital systems Using analytical techniques to capture and summarise business and user requirements.

Angels An angel investor or business angel is a private, high-net-worth individual or seed investor who provides capital for a business start-up, usually in exchange for an equity stake in the company (part ownership). They can invest individually or as part of a syndicate (a group of angels). Generally, angels invest between £10,000-£50,000 and seek a return on their investment over a period of three to eight years.

Applications service provider A provider of business applications such as email, workflow or groupware or any business application on a server remote from the user. A service often offered by ISPs.

Asymmetric encryption Both parties use a related but different key to encode and decode messages.

Attribute A property or characteristic of an entity, implemented as a field.

Attrition rate Percentage of site visitors who are lost at each stage in making a purchase.

Augmented reality (AR) Blends real-world digital data, captured typically with a digital camera in a webcam or mobile phone, to create a digital representation or experience mimicking that of the real world.

B

B2B electronic marketplaces, exchanges and hubs Virtual locations with facilities to enable trading between buyers and sellers.

Backbones High-speed communications links used to enable Internet communications across a country and internationally.

Bandwidth Indicates the speed at which data are transferred using a particular network medium. It is measured in bits per second (bps).

Behavioural ad targeting Advertisers target ads at a visitor as they move within or between sites dependent on their viewing particular sites or types of content that indicate their preferences.

Big Data Large and complex amounts of data. Often referred to as ‘the three Vs’: volume, velocity and variety.

Blog An online diary or news source prepared by an individual or a group of people.

Blueprints Show the relationships between pages and other content components.

Bounce rates Percentage of visitors entering a site who leave immediately after viewing one page only (known as ‘single-page visits’).

Brand The sum of the characteristics of a product or service as perceived by a user.

Brand equity The assets (or liabilities) linked to a brand’s name and symbol that add to (or subtract from) a service.

Brand experience The frequency and depth of interactions with a brand that can be enhanced through the Internet.

Brand identity The totality of brand associations, including name and symbols, that must be communicated.

Branding The process of creating and evolving successful brands.

Broad and shallow navigation More choices, fewer clicks to reach required content.

Broadband connection Access to the Internet via phone lines using a digital data transfer mechanism.

Brochureware A website to which a company has simply migrated its existing paper-based promotional literature without recognising the differences required by this medium.

Bundling Offering complementary services.

Business-alignment IS strategy The IS strategy is generated from the business strategy through techniques such as CSF analysis.

Business continuity management or disaster recovery Measures taken to ensure that information can be restored and accessed if the original information and access method are destroyed.

Business-impacting IS strategy IS strategy analyses opportunities for new technologies and processes to favourably impact the business strategy.

Business model A summary of how a company will generate revenue, identifying its product offering, value-added services, revenue sources and target customers.

Business-to-business (B2B) Commercial transactions between an organisation and other organisations (inter-organisational marketing).

Business-to-consumer (B2C) Commercial transactions between an organisation and consumers.

Buy-side e-commerce E-commerce transactions between a purchasing organisation and its suppliers.

C

C-suite This refers to top-level executives, who tend to have job titles beginning with 'C' - i.e. chief executive officer (CEO), chief financial officer (CFO), chief operating officer (COO), and chief information officer (CIO).

Card sorting or web classification The process of organising objects on the website in a consistent manner.

Cascading Style Sheets (CSS) A simple mechanism for adding style (e.g. fonts, colours, spacing) to web documents. CSS enables different style elements to be controlled across an entire site or section of a site.

Certificate and certificate authorities (CAs) A certificate is a valid copy of a public key of an individual or organisation, together with identification information. It is issued by a trusted third party (TTP) or certificate authority (CA).

Channel outcomes Recording of customer actions taken as a consequence of a site visit.

Channel profitability The profitability of the website, taking into account revenue and cost and discounted cash flow.

Channel switching The process by which a customer changes between online and offline channels during the buying process.

Churn rate The proportion of customers (typically subscribers) that no longer purchase a company's products or services within a certain time period.

Client-server The client-server architecture consists of client computers, such as PCs, sharing resources such as a database stored on more powerful server computers.

Client-server model A system architecture in which end-user machines such as PCs, known as 'clients', run applications while accessing data and possibly programs from a server.

Cloud computing The use of distributed storage and processing on servers connected by the Internet, typically provided as software or data storage as a subscription service provided by other companies.

Co-creation The process where brands and consumers work together to create better ideas, products and/or services.

Collaborative filtering Profiling of customer interest coupled with delivery of specific information and offers, often based on the interests of similar customers.

Commoditisation The process whereby product selection becomes more dependent on price than differentiating features, benefits and value-added services.

Community A customer-to-customer interaction delivered via email groups, web-based discussion forums or chat.

Competitor analysis for digital business Review of digital business services offered by existing and new competitors and adoption by their customers.

Consumer-to-business (C2B) Consumers approach a business with an offer.

Consumer-to-consumer (C2C) Consumers approach other consumers (or peers) with a proposition.

Content The design, text and graphical information that forms a web page. Good content is the key to attracting customers to a website and retaining their interest or achieving repeat visits.

Content management system (CMS) Software used to manage creation, editing and review of web-based content.

Content marketing ‘. . . the marketing and business process for creating and distributing relevant and valuable content to attract, acquire, and engage a clearly defined and understood target audience - with the objective of driving profitable customer action.’ (Pulizzi, 2012)

Content strategy The management of text, rich media, audio and video content aimed at engaging customers and prospects to meet business goals published through print and digital media including web and mobile platforms, which is repurposed and syndicated to different forms of web presence such as publisher sites, blogs, social media and comparison sites.

Contextual ‘display network’ Contextual ads are automatically displayed according to the type of content on partner publisher sites by the search engine.

Control page The page against which subsequent optimisation will be assessed. Typically a current landing page.

Conversion marketing Using marketing communications to maximise conversion of potential customers to actual customers and existing customers to repeat customers.

Conversion optimisation Using marketing communications to maximise conversion of potential customers to actual customers.

Conversion rate Percentage of site visitors who perform a particular action such as making a purchase.

Conversion rate optimisation (CRO) Improving the commercial returns from a transactional site through increasing conversion to key goals such as sales, quotes, bookings or leads. CRO combines customer and competitor research with evaluation of customer behaviour using web analytics and AB and multivariate testing. (See Chapter 10 for details.)

Core competencies Resources, including skills or technologies, that provide a particular benefit to customers.

Core product The fundamental features of the product that meet the user's needs.

Cost per acquisition (CPA) The cost of acquiring a new customer. Typically limited to the communications cost and refers to cost per sale for new customers.

Cost per thousand (CPM) Cost per 1,000 (mille) ad impressions for a banner advert.

Countermediation Creation of a new intermediary such as a publisher or comparison site by an established company. May be a new site or acquired through purchase or partnering.

CPA (cost-per-acquisition) The cost to the advertiser (or the revenue received by the publisher) for each outcome such as a lead or sale generated after a click to a third-party site.

CPC (cost-per-click) The cost to the advertiser (or the revenue received by the publisher) of each click of a link to a third-party site.

CPM (cost-per-thousand) The cost to the advertiser (or the revenue received by the publisher) when an ad is served 1,000 times.

Cross-media optimisation studies (XMOS) Studies to determine the optimum spend across different media to produce the best results.

Crowdsourcing Utilising a network of customers or other partners to gain insights for new product or process innovations.

Customer acquisition Techniques used to gain new prospects and customers.

Customer behaviour Describes which content is visited, time and duration.

Customer-centric marketing An approach to marketing based on detailed knowledge of customer behaviour within the target audience that seeks to fulfil the individual needs and wants of customers.

Customer experience management (CXM) User experience improvements are broadened to consider the context of use to different physical locations or customer touchpoints across different digital platforms, including desktop, mobile sites, apps, social networks and email marketing. Context of use includes device type, location and interactions with customer service.

Customer extension Deepening the relationship with the customer through increased interaction and product transactions.

Customer insight Knowledge about customers' needs, characteristics, preferences and behaviours based on analysis of qualitative and quantitative data. Specific insights can be used to inform marketing tactics directed at groups of customers with shared characteristics.

Customer journey A description of modern multichannel buyer behaviour as consumers use different media to select suppliers, make purchases and gain customer support.

Customer lifecycle The stages each customer will pass through in a long-term relationship, through acquisition, retention and extension.

Customer orientation Developing site content and services to appeal to different customer segments or other members of the audience.

Customer relationship management (CRM) An approach to building and sustaining long-term business with customers.

Customer satisfaction Evaluation of the customer's opinion of the service quality on the site and supporting services such as email.

Customer scenario Alternative tasks or outcomes required by a visitor to a website. Typically accomplished in a series of stages of different tasks involving different information needs or experiences.

Customer self-service Customers perform information requests and transactions through a web interface rather than contact with customer support staff.

Customer share The proportion of customer expenditure in a particular category that belongs to a single customer.

Customer value Value dependent on product quality/service quality, price and fulfilment time.

D

Dark social Although dark social sounds mysterious and perhaps illicit, and is often confused with the dark web, it isn't the same thing. Dark social simply describes the phenomenon where you cannot identify the source of traffic to an asset (such as a landing page) in your digital realm with analytical software such as Google Analytics.

Database table Each database comprises several tables.

Dedicated server Server contains only content and applications for a single company.

Deep linking Jakob Nielsen's term for a user arriving at a site deep within its structure, rather than the more usual home page.

Demand analysis Assessment of the demand for e-commerce services among existing and potential customer segments.

Demand analysis for digital business Assessment of the demand for e-commerce services among existing and potential customer segments.

Design for analysis (DFA) The required measures from a site are considered during design to better understand the audience of a site and their decision points.

Destination site Typically a retailer or manufacturer site with sales and service information. Intermediaries such as media sites may be destination sites for some.

Dial-up connection Access to the Internet via phone lines using analogue modems. While it might seem surprising, there are still many thousands of UK dial-up users in places where broadband service is not available.

Digital business infrastructure The architecture of hardware, software, content and data used to deliver digital business services to employees, customers and partners.

Differential advantage A desirable attribute of a product offering that is not currently matched by competitor offerings.

Digital business How businesses apply digital technology and media to improve the competitiveness of their organisation through optimising internal processes with digital and traditional channels to market and supply.

Digital business applications infrastructure Applications that provide access to services and information inside and beyond an organisation.

Digital business strategy The approach by which the application of new technologies to existing business activities can support and influence business strategy and provide competitive advantage.

Digital certificates (keys) Consist of keys made up of large numbers that are used to uniquely identify individuals.

Digital channel service contribution The proportion of service-type processes that are completed using electronic channels.

Digital channel strategies Define how a company should set specific objectives and develop specific differential strategies for communicating with its customers and partners through electronic media.

Digital disruption The change that occurs when new technologies and business models affect the value proposition of existing goods and services.

Digital marketing This has a similar meaning to ‘electronic marketing’ - both describe the management and execution of marketing using digital media such as the web, email, digital TV, social media and mobile media in conjunction with digital data about customers’ behaviour, location and personal qualities.

Digital marketing communications Online techniques used to generate website traffic.

Digital marketing metrics Measures that indicate the effectiveness of Internet marketing activities in meeting customer, business and marketing objectives.

Digital marketing plan A plan to achieve the marketing objectives of the digital business strategy.

Digital marketplace Exchanges of information and commercial transactions between consumers, businesses and governments completed through different forms of online presence such as search engines, social networks, comparison sites and destination sites.

Digital media channels Digital communications techniques used to achieve goals of brand awareness, familiarity, favourability and to influence purchase intent by encouraging users of digital media to visit a website to engage with the brand or product and ultimately to purchase digitally or offline through traditional media channels such as by phone or in-store.

Digital PR Maximising favourable mentions of your company, brands, products or websites on third-party websites that are likely to be

visited by your target audience.

Digital rights management (DRM) The use of different technologies to protect the distribution of digital services or content such as software, music, movies or other digital data.

Digital signatures A method of identifying individuals or companies using public-key encryption.

Digital transformation Stolterman and Forse describe digital transformation as the changes that occur in any part of human society through the application of digital technology. Digital transformation in business occurs when there are significant changes to organisational processes, structures and systems implemented to improve organisational performance through increasing the application of digital technology.

Digital value proposition (DVP) A statement of the benefits of digital services reinforces the core proposition and differentiates from an organisation's non-digital offering and those of competitors.

Disintermediation The removal of intermediaries such as distributors or brokers that formerly linked a company to its customers.

Disruptive innovation This is when an innovation creates a new market or makes it easier to do business in an existing market; often displaces established market-leading organisations or accepted ways of doing things.

Domain name The domain name refers to the name of the web server and it is usually selected to be the same as the name of the company.

Domain name registration The process of reserving a unique web address that can be used to refer to the company website.

Dot Gov The application of digital technologies to government and public services for citizens and businesses.

Downstream supply chain Transactions between an organisation and its customers and intermediaries, equivalent to sell-side e-commerce.

Dynamic pricing Also known as 'surge pricing', this is a pricing strategy in which businesses set flexible prices for products or services based on current market demands.

E

Early adopter Company or department that invests in new technologies and techniques.

Early (first) mover An early entrant into the marketplace.

Effectiveness Meeting process objectives, delivering the required outputs and outcomes; ‘doing the right thing’.

Efficiency Minimising resources or time needed to complete a process; ‘doing the thing right’.

Efficient consumer response (ECR) ECR is focused on demand management aimed at creating and satisfying customer demand by optimising product assortment strategies, promotions and new product introductions. It creates operational efficiencies and cost savings in the supply chain through reducing inventories and deliveries.

Electronic commerce (e-commerce) All electronically mediated information exchanges between an organisation and its external stakeholders.

Electronic customer relationship management (eCRM) Using digital communications technologies to maximise sales to existing customers and encourage continued usage of online services.

Electronic economy (e-economy) The dynamic system of interactions between a nation’s citizens, businesses and government that capitalise on online technology to achieve a social or economic good.

Electronic government (e-government) The use of Internet technologies to provide government services to citizens.

Electronic procurement (e-procurement) The electronic integration and management of all procurement activities, including purchase request, authorisation, ordering, delivery and payment, between a purchaser and a supplier.

Electronic procurement system (EPS) An electronic system used to automate all or part of the procurement function.

Emergent strategy Strategic analysis, strategy development and strategy implementation are interrelated and developed together.

Enterprise application integration (EAI) Software used to facilitate communications between business applications, including data transfer and control.

Enterprise resource planning (ERP) applications Software providing integrated functions for major business functions such as production, distribution, sales, finance and human resources management.

Enterprise social media software Systems used inside organisations to enable real-time collaboration between employees and other stakeholders such as customers and suppliers to support business processes such as customer service, supply chain management and new product development.

Entity A grouping of related data, such as customer entity, implemented as a table.

Environmental scanning and analysis The process of continuously monitoring the environment and events and responding accordingly.

Ethical standards Practice or behaviour that is morally acceptable to society.

Expert review An analysis of an existing site or prototype by an experienced usability expert who will identify deficiencies and improvements based on their knowledge of web design principles and best practice.

Extended product Additional features and benefits beyond the core product.

External value chain or value network The links between an organisation and its strategic and non-strategic partners that form its external value chain.

Extranet A service provided through Internet and web technology delivered by extending an intranet beyond a company to customers, suppliers and collaborators.

Eyetracking A usability testing technique that provides a visual overlay of where visitors most commonly look at on the screen (heatmaps) and individual or common paths (gaze trails).

F

Field Attributes of ‘products’, such as date of birth.

FinTech This means ‘financial technology’ and is a growing sector that uses new technology and innovation in the financial services market to create disruptive business models and inclusive products. For example, bKash allows people in Bangladesh (where less than 15% of the population are connected to the formal banking sector) to safely send and receive money via mobile phones.

Firewall A specialised software application mounted on a server at the point where the company is connected to the Internet to prevent

unauthorised access.

First-party cookies Served by the site you are currently using - typical for e-commerce sites.

Flow Describes how easy it is for users of a site to move between the different pages of content of the site.

Forward path analysis Reviews the combinations of clicks that occur from a page. This form of analysis is most beneficial for important pages such as the home page, product and directory pages. Use this technique to identify messaging/navigation combinations that work best to yield the most clicks from a page.

G

Globalisation The increase of international trading and shared social and cultural values.

Growth hacking An approach to improving the commercial results from online services through structured testing and optimisation of marketing approaches.

H

Hackathon This is a sprint-type event, where people come together and use technology to solve problems/come up with new ideas and collaborate to make them reality.

Hosting provider A service provider that manages the server used to host an organisation website and its connection to the Internet backbones.

House list A list of prospect and customer names, email addresses and profile information owned by an organisation.

Hype cycle A graphic representation of the adoption, business application and maturity of specific technologies.

I

Identity theft The misappropriation of the identity of another person without their knowledge or consent.

Inbound email marketing Management of emails from customers by an organisation.

Inbound logistics The management of material resources entering an organisation from its suppliers and other partners.

Inbound marketing The consumer is proactive in actively seeking out information for their needs and interactions with brands are attracted through content, search and social media marketing.

Information architecture The combination of organisation, labelling and navigation schemes composing an information system.

Information asset register (IAR) A repository for the types, value and ownership of all information within an organisation.

Information asymmetry Imperfect informationsharing between members of a supply chain that increases uncertainty about demand and pricing.

Information organisation scheme The structure chosen to group and categorise information.

Information security management system An organisational process to protect information assets.

Information security policy A definition of the organisational approaches to information security and the responsibilities of employees in protecting information.

Information society A society with widespread access and transfer of digital information within business and the community.

Information supply chain An information-centric view of the supply chain that addresses the organisational and technological challenges of achieving technology-enabled supply chain management efficiency and effectiveness.

Intellectual property rights (IPR) Protecting the intangible property created by corporations or individuals, which is protected under copyright, trade secret and patent laws.

Interactivity The medium enables a dialogue between company and customer.

Internet-based market research The use of online questionnaires and focus groups to assess customer perceptions of a website or broader marketing issues.

Internet governance Control of the operation and use of the Internet.

Internet of Things (IoT) The interconnection of physical objects, such as buildings, household appliances, etc., by embedding technology so that they can collect and exchange data with each other via the Internet (i.e. ‘smart devices’).

Internet service provider (ISP) A provider providing home or business users with a connection to access the Internet. It can also host web-based applications.

Interruption marketing Marketing communications that disrupt customers' activities.

Interstitial ads Ads that appear between one page and the next while browsing a website.

Intranet A private network within a single company using Internet standards to enable employees to access and share information using web technology.

Inventory turnover An indication of efficiency of inventory turn calculated by the cost of goods sold divided by the average inventory.

K

Keyphrase (keyword phrase) The combination of words users of search engines type into a search box which form a search query.

L

Lifetime value (LTV) Lifetime value is the total net benefit that a customer or group of customers will provide a company over their total relationship with the company.

Link anchor text The text used to form the blue underlined hyperlink viewed in a web browser, defined in the HTML source.

Link-building A structured activity to include good-quality hyperlinks to your site from relevant sites with a good page rank.

Localisation Tailoring of website information for individual countries or regions.

Location-based marketing Location or proximity-based marketing is mobile marketing based on the GPS built into phones or based on interaction with other local digital devices such as wifi routers or mobile phone towers.

Log-file analyser A separate program such as Webtrends that is used to summarise the information on customer activity in a log file.

M

Malware Malicious software or toolbar, typically downloaded via the Internet, which acts as a 'trojan horse' by executing unwanted activities such as keylogging of user passwords or viruses that may collect email addresses.

Market traction Evidence that there is market demand for your product/service. Higher traction means that investors are more likely to be attracted to the start-up.

Marketing automation Software to automate receptive marketing tasks across multiple digital channels, such as email, social media and website actions.

Marketing-led or commercial-led site design Site design elements are developed to achieve customer acquisition, retention and communication of marketing messages.

Marketing mix Different factors that summarise the customer propositions offered by a business. Marketing mix refers to the four core Ps of Price, Product (including branding), Place and Promotion and the seven Ps of the extended Marketing mix, which include People, Process and Physical evidence.

Mashups Websites, pages or widgets that combine the content or functionality of one website or data source with another to create something offering a different type of value to web users from the separate types of content or functionality.

Mass customisation The creation of tailored marketing messages or products for individual customers or groups of customers typically using technology to retain the economies of scale and the capacity of mass marketing or production.

Media multiplier or halo effect The role of one media channel on influencing sale or uplift in brand metrics. Commonly applied to online display advertising, where exposure to display ads may increase clickthrough rates when the consumer is later exposed to a brand through other media.

Media Queries A styling approach within Cascading Style Sheets (CSS3) enabling the layout to change based on type of device at its scale.

Metamediaries Third parties that provide a single point of contact and deliver a range of services between customers and suppliers.

Meta-tags Keywords that are part of an HTML page that result in a higher search listing if they match the typed keyword.

Microformats A simple set of formats based on XHTML for describing and exchanging information about objects including product and travel reviews, recipes and event information.

Microsite A small-scale destination site reached on clickthrough that is part of the media owner's site.

Middleware Software used to facilitate communications between business applications, including data transfer and control, and is sometimes referred to as the 'glue' that joins up disparate services.

Mission statement This should clearly communicate what the organisation does, its purpose.

Mobile app A software application that is designed for use on a mobile phone, typically downloaded from an app store. iPhone and Android Apps are best known, but all smartphones support the use of apps, which can provide users with information, entertainment or location-based services such as mapping.

Mobile commerce and mobile business Mobile commerce refers to the online transactions and communications conducted using mobile devices such as smartphones and tablets, and typically with a wireless connection. Mobile business refers to the business models employed by organisations that exploit the technology surrounding such mobile devices and allow employees and stakeholders to benefit from the ability to be freed from a fixed location.

Mobile marketing Marketing to encourage consumer engagement when they're using mobile phones (particularly smartphones).

Mobile technology platforms Devices and services used by consumers to interact with other consumers and companies, including smartphones, tablets and wearable technology.

MRO Maintenance, repair and operating (MRO) goods are supplies consumed in the production process that are not part of the finished product - e.g. office supplies, airline tickets, spare parts, etc.

Multichannel and omnichannel marketing Customer communications and product distribution are supported by a combination of digital and traditional channels at different points in the buying cycle. Omnichannel references the importance of social media and mobile-based interactions in informing purchase.

Multichannel communications Offers a range of direct and indirect communication channels for consumers to interact with, but channels have limited or no integration and consumers are forced to repeat steps or receive different messages as they switch channels -e.g. websites, retail stores, mail-order catalogues, direct mail, email, mobile, etc.

Multichannel digital business strategy How a business interacts with its customers using a combination of direct and indirect communications channels.

Multichannel marketing strategy Defines how different marketing channels should integrate and support each other in terms of their proposition development and communications based on their relative merits for the customer and the company

Multiscreening A term used to describe simultaneous use of devices such as digital TV and tablets.

Multi-tenancy SaaS A single instance of a web service is used by different customers (tenants) run on a single server or load-balanced across multiple servers. Customers are effectively sharing processor, disk usage and bandwidth with other customers.

N

Narrow and deep navigation Fewer choices, more clicks to reach required content.

Net neutrality The principle of provision of equal access to different Internet services by telecommunications service providers.

Net Promoter Score (NPS) A measure of the number of advocates a company (or website) has who would recommend it compared to the number of detractors.

Notification The process whereby companies register with the data protection registrar to inform about their data holdings.

O

Offline marketing communications Traditional techniques such as print and TV advertising used to generate website traffic.

Omnichannel business strategy An approach that provides customers with a fully-integrated shopping experience that integrates user experiences across online and offline channels.

Omnichannel communications Fully integrates all consumer touchpoints and data sources to provide consumers with a *seamless* experience, regardless of how or where they choose to interact with the brand (i.e. desktop or mobile device, by telephone or in a physical store, etc.).

Online business model A summary of how a company will generate a profit, identifying its core product or service value proposition, target

customers in different markets, position in the competitive online marketplace or value chain and its projections for revenue and costs.

Online buyer behaviour An assessment of how consumers and business people use the Internet in combination with other communications channels when selecting and buying products and services.

Online customer experience The combination of rational and emotional factors of using a company's online services that influences customers' perceptions of a brand online.

Online ecosystem Describes the customer behaviour or flow of online visitors between search engines, media sites and other intermediaries to an organisation and its competitors.

Online intermediaries Websites that help connect web users with content they are seeking on destination sites. Includes new online intermediaries such as search engines and shopping comparison sites as well as traditional brokers, directories and newspaper and magazine publishers with a digital presence.

Online revenue contribution An assessment of the direct contribution of the Internet or other digital media to sales, usually expressed as a percentage of overall sales revenue.

Online value proposition (OVP) A statement of the benefits of e-commerce services that ideally should not be available in competitor offerings or offline offerings.

Open -source software Software developed collaboratively, independent of a vendor, by a community of software developers and users.

Opt-in A customer proactively agrees to receive further information.

Opt-out A customer declines the offer to receive further information.

Outbound email marketing Emails are sent to customers and prospects from an organisation.

Outbound logistics The management of resources supplied from an organisation to its customers and intermediaries.

Overlay Typically, an animated ad that moves around the page and is superimposed on the website content.

P

Page impression A more reliable measure than a hit, denoting one person viewing one page.

Page rank A scale of 0 to 10 used by Google to assess the importance of websites according to the number of inbound links (link popularity).

Page template A standard page layout format that is applied to each page of a website. Typically defined for different page categories (e.g. category page, product page, search page).

Path to purchase The different sites, channels, devices and information sources that consumers use to inform their purchase decision for a product or service. Also known as conversion pathways on a site.

People variable The element of the marketing mix that involves the delivery of service to customers during interactions with customers.

Performance drivers Critical success factors that govern whether objectives are achieved.

Performance management system A process used to evaluate and improve the efficiency and effectiveness of an organisation and its processes.

Performance measurement system The process by which metrics are defined, collected, disseminated and actioned.

Permission marketing Customers agree (opt-in) to be involved in an organisation's marketing activities, usually as a result of an incentive.

Persistent cookies Cookies that remain on the computer after a visitor session has ended. Used to recognise returning visitors.

Persona A summary of the characteristics, needs, motivations and environment of typical website users.

Personalisation Delivering customised content for the individual through web pages, email or push technology

Persuasion marketing Using design elements such as layout, copy and typography together with promotional messages to encourage site users to follow particular paths and specific actions rather than giving them complete choice in their navigation.

Physical evidence variable The element of the marketing mix that involves the tangible expression of a product and how it is purchased and used.

Place The element of the marketing mix that involves distributing products to customers in line with demand and minimising cost of

inventory, transport and storage.

Podcasts Individuals and organisations post online media (audio and video) that can be accessed in the appropriate players including the iPod, which first sparked the growth of this technique.

Positioning Influencing the customer's perception of a product within a marketplace.

Prescriptive strategy Strategic analysis, strategy development and strategy implementation are linked together sequentially.

Price elasticity of demand Measure of consumer behaviour that indicates the change in demand for a product or service in response to changes in price.

Price variable The element of the marketing mix that involves defining product prices and pricing models.

Pricing models Describe the form of payment such as outright purchase, auction, rental, volume purchase and credit terms.

Primary key The field that uniquely identifies each record in a table.

Primary persona A representation of the typical site user, who is strategically important to the effectiveness of the site but one whose needs are challenging to fulfil.

Privacy A moral right of individuals to avoid intrusion into their personal affairs.

Privacy statement Information on a website explaining how and why an individual's data are collected, processed and stored.

Private B2B exchanges A manufacturer or major supplier to different manufacturers creates a portal that is used for managing all aspects of procurement.

Process Part of a system that has a clearly defined purpose or objective and clearly defined inputs and outputs.

Process mapping Identification of location and responsibilities for processes within an organisation.

Process variable The element of the marketing mix that involves the methods and procedures companies use to achieve all marketing functions.

Productivity paradox Research results indicating a poor correlation between organisational investment in information systems and organisational performance measured by return on equity.

Programmatic marketing Automated bidding on advertising inventory in real time, for the opportunity to show an ad to a specific customer in a specific context.

Promotion The element of the marketing mix that involves communication with customers and other stakeholders to inform them about the product and the organisation.

Propensity modelling A name given to the approach of evaluating customer characteristics and behaviour and then making recommendations for future products.

Psychographic segmentation A breakdown of customers according to different characteristics.

Pull marketing communications The consumer is proactive in interacting with companies through actively seeking information or entertainment on company websites or social media sites through search engines, comparison intermediaries or direct navigation.

Pull media The consumer is proactive in selection of the message through actively seeking out a website responding to inbound marketing cues.

Pull supply chain An emphasis on using the supply chain to deliver value to customers who are actively involved in product and service specification.

Punchout catalogue A purchasing company accesses a dynamic real-time catalogue hosted by a supplier or intermediary containing detailed product information, pricing and product images.

Push marketing communications Communications are broadcast from an advertiser to consumers of the message, who are passive recipients.

Push supply chain A supply chain that emphasises distribution of a product to passive customers.

Q

Qualified lead Contact information for a customer and an indication of his or her propensity to purchase different products.

Quality score An assessment in paid search by Google AdWords (and now other search engines) of an individual ad triggered by a keyword that, in combination with the bid amount, determines the ranking of the ad relative to competitors'.

R

Radio-frequency identification (RFID) Microchip-based electronic tags are used for monitoring anything they are attached to, whether inanimate products or animate (people).

Really Simple Syndication (RSS) feeds Blogs, news or other content is published by an XML standard and syndicated for other sites or read by users in RSS reader software services. Now typically shortened to 'feed', e.g. news feed or sports feed.

Reciprocal links Links that are agreed between your and another's organisation.

Record A collection of fields for one instance of an entity, such as 'Customer Smith'.

Referrer The source of a website visit, e.g. paid search, affiliate marketing, online advertising or recorded as 'no referrer', i.e. when a URL is typed in directly

Reintermediation The creation of new intermediaries between customers and suppliers providing services such as supplier search and product evaluation.

Relationship Describes how different tables are linked.

Resource analysis Review of the technological, financial and human resources of an organisation and how they are utilised in business processes.

Responsive design Layout and formatting of website content is modified at the point of rendering to suit different screen resolutions and capabilities to produce a better experience to users of a range of desktop, tablet and smartphone devices using web development methods such as CSS and image scaling.

Revenue models Methods of generating income for an organisation.

Reverse path analysis Indicates the most popular combination of pages and/or calls to action that lead to a page. This is particularly useful for transactional pages such as the first checkout page on a consumer site, a lead-generation or 'contact us' page on a business-to-business site or an email subscription page or call-me-back option.

Rich media Digital assets such as ads that are not static images, but provide animation, video, audio or interactivity as a game or form to be completed.

S

Satisficing behaviour Consumers do not behave entirely rationally in product or supplier selection. They will compare alternatives, but then may make their choice given imperfect information.

Scenario A particular path or flow of events or activities within a use-case.

Scenario-based analysis Models of the future environment are developed from different starting points.

Scrum An agile framework for effective team collaboration on complex and adaptive problems, mainly used for software development.

Search engine optimisation (SEO) A structured approach used to improve the position of a company or its products in search engine natural or organic results listings for selected keyphrases.

Search engines Provide an index of content on registered sites that can be searched by keyword.

Search engines, spiders and robots Automatic tools known as 'spiders' or 'robots' index registered sites. Users search this by typing keywords and are presented with a list of pages.

Search marketing Companies seek to improve their visibility in search engines for relevant search terms by increasing their presence in the search engine results pages.

Searching behaviours Approaches to finding information vary from directed to undirected.

Secondary key A field that is used to link tables, by linking to a primary key in another table.

Secure Electronic Transaction (SET) A standard for public-key encryption intended to enable secure e-commerce transactions; lead-development by Mastercard and Visa.

Secure Sockets Layer (SSL) A commonly used encryption technique for scrambling data as it is passed across the Internet from a customer's web browser to a merchant's web server.

Segmentation Identification of different groups within a target market in order to develop different product offerings and communications for the groups.

Sell-side e-commerce E-commerce transactions between a supplier organisation and its customers.

Semantic web Interrelated content including data with defined meaning, enabling better exchange of information between computers and between people and computers.

Sense and respond communications Delivering timely, relevant communications to customers as part of a contact strategy based on assessment of their position in the customer lifecycle and monitoring specific interactions with a company's website, emails and staff.

Service level agreement (SLA) A contractual specification of service standards a contractor must meet.

Service-orientated architecture A collection of services that communicate with each other as part of a distributed systems architecture comprising different services.

Session cookies Cookies used to manage a single visitor session.

Share of search The audience share of Internet searches achieved by a particular audience in a particular market.

Showrooming When consumers decide to purchase a product online after looking at it in a physical retailer's store. This usually involves using a mobile device to see if they can buy it cheaper online (or find a promotion/special offer).

Single-tenancy SaaS A single instance of an application (and/or database) is maintained for all customers (tenants) who have dedicated resources of processor, disk usage and bandwidth. The single instance may be load-balanced over multiple servers for improved performance.

Site map A graphical or text depiction of the relationship between different groups of content on a website.

Site navigation scheme Tools provided to the user to move between different information on a website.

Site promotion Measures that assess why customers visit a site - which adverts they have seen, which sites they have been referred from.

Site-visitor activity data Information on content and services accessed by e-commerce site visitors.

Situation analysis Collection and review of information about an organisation's external environment and internal processes and resources in order to inform its strategies.

Social commerce A subset of e-commerce that encourages participation and interaction of customers in rating, selecting, buying

products and other social media interactions. This participation can occur on an e-commerce site or on third-party sites.

Social CRM The process of managing customer-to-customer conversations to engage existing customers, prospects and other stakeholders with a brand and so enhance customer relationship management.

Social media A category of media focusing on participation and peer-to-peer communication between individuals, with platforms providing the capability to develop user-generated content (UGC) and to exchange messages and comments between different users.

Social media marketing Monitoring and facilitating customer-to-customer interaction, participation and sharing through digital media to encourage positive engagement with a company and its brands leading to commercial value. Interactions may occur on a company site, social networks and other third-party sites.

Social network site (SNS) A site that facilitates peer-to-peer communication within a group or between individuals through providing facilities to develop user-generated content (UGC) and to exchange messages and comments between different users.

Social sign-in Users or members of sites can sign-in with their social network accounts such as Google+, Facebook or LinkedIn through use of APIs exchanging data between different web services.

Soft lock-in Customers or suppliers continue to use digital services because of the barrier of switching costs.

Software (intelligent) agents Software programs that assist humans by automatically gathering information from the Internet or exchanging data with other agents based on parameters supplied by the user.

Spam Unsolicited email (usually bulk-mailed and untargeted).

Spiders or robots Spiders are software processes, technically known as robots, employed by search engines to index web pages of registered sites on a regular basis.

Stage models Used to review how advanced a company is in its use of information and communications technology (ICT) to support different processes.

Start-up incubator A company that helps new and start-up businesses develop by providing services such as training, expert mentorship, access to advisors/investors and office space. Some even

provide seed money, usually in exchange for a small equity stake in the business.

Storyboarding The use of static drawings or screenshots of the different parts of a website to review the design concept with user groups.

Strategic agility The capability to innovate and so gain competitive advantage within a marketplace by monitoring changes within an organisation's marketplace and then to efficiently evaluate alternative strategies and select, review and implement appropriate candidate strategies.

Strategic analysis Collection and review of information about an organisation's internal processes and resources and external marketplace factors in order to inform strategy definition.

Strategic objectives Statement and communication of an organisation's mission, vision and objectives.

Strategy Definition of the future direction and actions of a company defined as approaches to achieve specific objectives.

Strategy definition Formulation, review and selection of strategies to achieve strategic objectives.

Strategy implementation Planning, actions and controls needed to achieve strategic goals.

Strategy process model A framework for approaching strategy development.

Streaming TV Streaming TV is delivered using Internet Protocol, either by a broadband connection or increasingly via mobile 3G/4G or 5G service. Streaming TV can be streamed using real-time broadcasting (such as the synchronous playing of a TV channel), real-time streaming of recorded content (such as a movie) or downloaded before playback.

Supply chain management (SCM) The coordination of all supply activities of an organisation from its suppliers and partners to its customers.

Supply chain network The links between an organisation and all partners involved in multiple supply chains.

Supply chain visibility Access to up-to-date, accurate, relevant information about supply chain processes to different stakeholders.

SWOT/TOWS analysis Strengths, weaknesses, opportunities and threats.

Symmetric encryption Both parties to a transaction use the same key to encode and decode messages.

System design Defines how an information system will operate.

T

Talk-through A user verbally describes their required actions.

Target marketing strategy Evaluation and selection of appropriate segments and the development of appropriate offers.

Task analysis Identification of different tasks, their sequence and how they are broken down.

Technology scouting A structured approach to reviewing technology innovations, akin to football scouting.

The Internet ‘The Internet’ refers to the physical network that links computers across the globe. It consists of the infrastructure of network servers and wired and wireless communication links between them that is used to hold and transport data between the client devices and web servers.

The long-tail concept A frequency distribution suggesting the relative variation in popularity of items selected by consumers.

Thin client An end-user access device (terminal) where computing requirements such as processing and storage (and therefore cost) are minimised.

Third-party cookies Served by another site to the one you are viewing - typical for portals where an ad network will track remotely or where the web analytics software places a cookie.

Three-tier client-server The first tier is the client that handles display, second is application logic and business rules, third is database storage.

Tipping point Using the science of social epidemics explains the principles that underpin the rapid spread of ideas, products and behaviours through a population.

Total cost of ownership (TCO) The sum of all cost elements of managing information systems for end-users, including purchase, support and maintenance.

Trademark A trademark is a unique word or phrase that distinguishes your company. The mark can be registered as plain or designed text, artwork or a combination.

Traffic-building campaign The use of online and offline promotion techniques to increase the audience of a site (both new and existing customers).

U

Unicorns Tech start-ups valued at over \$1 billion; according to Venturebeat (Koestsier, 2016), there were 229 unicorns up to January 2016. This includes companies such as Uber, Airbnb, Snapchat, Dropbox and Pinterest. Start-ups valued over \$10 billion are called decacorns - Facebook, Uber, Palantir and Xiaomi are on this list.

Unified Modelling Language (UML) A language used to specify, visualise and document the artefacts of an object-orientated system.

Uniform (universal) resource locator (URL) A web address used to locate a web page on a web server.

Unique visitors Individual visitors to a site measured through cookies or IP addresses on an individual computer.

Upstream supply chain Transactions between an organisation and its suppliers and intermediaries, equivalent to buy-side e-commerce.

URL strategy A defined approach to forming URLs, including the use of capitalisation, hyphenation and subdomains for different brands and different locations. This has implications for promoting a website offline through promotional or vanity URLs, search engine optimisation and findability. A clean URL that fits many of these aims is <http://www.domain.com/folder-name/document-name>. Care must be taken with capitalisation, since Linux servers parse capitals differently from lower-case letters.

Usability An approach to website design intended to enable the completion of user tasks.

Usability/user-testing Representative users are observed performing representative tasks using a system.

Use-case The sequence of transactions between an actor and a system that supports the activities of the actor.

Use-case modelling A user-centred approach to modelling system requirements.

User-centred design (UX) Design based on optimising the user experience according to all factors, including the user interface, that affect this.

Utility computing IT resources, and in particular software and hardware, are utilised on a pay-per-use basis and are managed externally as ‘managed services’.

V

Value chain (VC) A model that considers how supply chain activities can add value to products and services delivered to the customer.

Value network The links between an organisation and its strategic and non-strategic partners that form its external value chain.

Value stream The combination of actions required to deliver value to the customer as products and services.

Vendor-managed inventory (VMI) Supply chain partners manage the replenishment of parts or items for sale through sharing of information on variations in demand and stock levels for goods used for manufacture or sale.

Vertical integration The extent to which supply chain activities are undertaken and controlled within the organisation.

Viral marketing Email is used to transmit a promotional message to another potential customer.

Virtual integration The majority of supply chain activities are undertaken and controlled outside the organisation by third parties.

Virtual private network (VPN) Private network created using the public network infrastructure of the Internet.

Virtual world An electronic environment that simulates interactions between online characters known as avatars.

Virtualisation The indirect provision of technology services through another resource (abstraction). Essentially, one computer is using its processing and storage capacity to do the work of another.

Vision statement This is an organisation’s clear and inspirational long-term direction.

Voice over IP (VOIP) Voice data are transferred across the Internet - this enables phone calls to be made over the Internet.

W

Walk-through A user executes their actions through using a system or mock-up.

Web 2.0 concept A collection of web services that facilitate interaction of web users with sites to create user-generated content and encourage behaviours such as community or social network participation, **mashups**, content rating, use of **widgets** and tagging.

Web 3.0 concept A description of the web around 2009 incorporating high-speed connectivity, complex cross-community interactions, full range of digital media (text, voice, video) and an intelligent or semantic web where automated applications can access data from different digital services to assist searchers to perform complex tasks of supplier selection.

Web analytics Techniques used to assess and improve the contribution of digital marketing to a business, including reviewing traffic volume, referrals, clickstreams, online reach data, customer satisfaction surveys, leads and sales.

Web design personas A summary of the characteristics, needs, motivations and environment of typical website users.

Web services Business applications and software services are provided through Internet and web protocols, with the application managed on a separate server from where it is accessed through a web browser on an end-user's computer.

Widget A badge or button incorporated into a site or social network space by its owner, with content or services typically served from another site making widgets effectively a mini-software application or web service. Content can be updated in real time since the widget interacts with the server each time it loads.

Wireframes Also known as 'schematics', a way of illustrating the layout of an individual web page.

Workflow management (WFM) The automation of information flows; provides tools for processing the information according to a set of procedural rules.

World Wide Web (WWW) The most common technique for publishing information on the Internet. It is accessed through desktop or mobile web browsers, which display interactive web pages of embedded graphics and HTML/XML-encoded text.

Z

Zero Moment of Truth (ZMOT) A summary of today's multichannel consumer decision-making for product purchase, where consumers search and review ratings, styles, prices and comments on social media before visiting a retailer.

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