Which strategies and tactics are needed to develop and implement a digital business?
How do we work out where to put our investment?
What are the things that have to happen in an organisation to make a digital business successful?
How should businesses select the best digital technology, media and insight sources to compete?

This new edition of Dave Chaffey’s bestselling book, joined this time by fellow authors Tanya Hemphill and David Edmundson-Bird, is your guide to answering these tough questions. Written in an engaging and informative style, Digital Business and E-Commerce Management will give you the knowledge and skills to be able to handle the speed of change faced by organisations in the digital world.

In this seventh edition of the book, Chaffey, Hemphill and Edmundson-Bird bring together the most recent academic and practitioner thinking. Covering all aspects of digital business including strategy, digital communications and transformation, Digital Business and E-Commerce Management gives you the benefit of:

- A structured approach to review, plan and implement a digital business strategy for all types of organisation
- The latest on digital marketing techniques in SEO, social media communications and content marketing
- All new case studies providing examples of organisations and their experiences of digital business and e-commerce
- A brand new chapter introducing the concepts of digital business transformation and growth hacking

Whether you’re a student studying digital business and e-commerce, a marketer or a business manager, Digital Business and E-Commerce Management is the essential text to help you understand and apply the concepts of digital, strategy and implementation.

Dr Dave Chaffey FCIM, FIDM is co-founder of the publisher Smart Insights.
Tanya Hemphill MSc (Dist.) Chartered Marketer MCIM MCIPR MIPM is Senior Lecturer at Manchester Metropolitan University and MD of WeDisrupt.
David Edmundson-Bird MSc FRSA is Principal Lecturer in Digital Marketing at Manchester Metropolitan University.
DIGITAL BUSINESS AND E-COMMERCE MANAGEMENT
At Pearson, we have a simple mission: to help people make more of their lives through learning.

We combine innovative learning technology with trusted content and educational expertise to provide engaging and effective learning experiences that serve people wherever and whenever they are learning.

From classroom to boardroom, our curriculum materials, digital learning tools and testing programmes help to educate millions of people worldwide – more than any other private enterprise.

Every day our work helps learning flourish, and wherever learning flourishes, so do people.

To learn more, please visit us at www.pearson.com/uk
Brief contents

Preface xiv
About the authors xxv
Acknowledgements xxvii
Publisher's acknowledgements xxviii

Part 1 Introduction 1

1 Introduction to digital business 3
2 Opportunity analysis for digital business and e-commerce 36
3 Managing digital business infrastructure 72
4 Key issues in the digital environment 120

Part 2 Strategy and applications 177

5 Digital business strategy 179
6 Supply chain and demand 248
7 Digital marketing 303
8 Customer relationship management 365

Part 3 Implementation 449

9 Customer experience and service design 450
10 Managing digital business transformation and growth hacking 522

Glossary 609
Index 623
Contents

Preface xiv
About the authors xxv
Acknowledgements xxvii
Publisher’s acknowledgements xxviii

Part 1
Introduction 1

1 Introduction to digital business 3
   Learning outcomes 3
   Management issues 3
   Links to other chapters 3
   Introduction 4
   The impact of digital communications on traditional businesses 6
   Inbound marketing 6
   Social media marketing 7
   Trends update: Social media usage 7
   Case study 1.1: The Uber business model 8
   Mobile commerce 10
   Trends update: Mobile usage 10
   What is the difference between a digital business and an e-commerce business? 11
   E-commerce defined 11
   Trends update: E-commerce growth rates 12
   Digital business defined 13
   Intranets and extranets 13
   Different types of sell-side e-commerce 14
   Digital marketing 16
   Trends update: Social network usage 17
   Options for organisations to reach a digital audience 17
   Owned, earned and paid media options 17
   The six key types of digital media channels 18
   The social internet and user-generated content 20
   Supply chain management 21
   Business or consumer models of e-commerce transactions 22
   Dot Gov defined 23
   Digital business opportunities 24
   Drivers of digital technology adoption 25
   Cost/efficiency drivers 25
   Competitiveness drivers 26
   Barriers to the adoption of technology by digital business stakeholders 27
   Evaluating an organisation’s digital business capabilities 28
   Drivers of consumer technology adoption 28
   Barriers to consumer digital adoption 29
   Case study 1.2: Amazon – the world’s largest digital business? 30
   Summary 32
   Exercises 33
   References 34
   Web links 35

2 Opportunity analysis for digital business and e-commerce 36
   Learning outcomes 36
   Management issues 36
   Links to other chapters 36
   Introduction 37
   Business and revenue models for e-commerce 37
   Digital marketplace analysis 38
      Case study 2.1: How Boden grew from an eight-product menswear catalogue to an international brand with over £300 million in sales 39
      Strategic agility 41
      Case study 2.2: Unilever demonstrates strategic agility 41
   A process for digital marketplace analysis 42
      Case study 2.3: Macy’s – using omnichannel growth strategies to improve customer experience 44
   Location of trading in the marketplace 49
      Review of marketplace channel structures 49
      Location of trading in the marketplace 52
      The importance of omnichannel marketplace models 52
      Commercial arrangement for transactions 54
      Summary of the types of intermediary 55
      The importance of search engines 56
   Business models for e-commerce 56
      Revenue models 58
      Online publisher and intermediary revenue models 58
      Calculating revenue for an online business 60
      Focus on Digital start-up companies 63
      Assessing digital businesses 63
3 Managing digital business infrastructure

3.1 Introduction

Managing issues in creating a new customer-facing digital service

- Supporting the growing range of digital business technology platforms
- Desktop, laptop and notebook platforms
- Mobile phone and tablet platforms
- Trends update: Mobile usage
- Other hardware platforms
- Augmented reality

3.2 Digital business infrastructure components

- A short introduction to digital technology

3.3 Management issues

- Domain name selection
- Uniform resource locators (URLs)
- Domain name registration
- Managing hardware and systems software infrastructure
- Layer II – systems software
- Managing digital business applications infrastructure

Focus on The development of customer experiences and digital services

- Benefits of web services or SaaS
- Application programming interfaces (APIs)
- Challenges of deploying SaaS
- Cloud computing
- Examples of cloud computing web services
- Virtualisation
- Service-orientated architecture (SOA)
- Selecting hosting providers
- Managing service quality when selecting Internet service and cloud hosting providers
- ISP connection methods
- Issues in management of ISP and hosting relationships
- Speed of access
- Availability
- Service level agreements
- Security

4 Key issues in the digital environment

4.1 Introduction

Social factors
Legal and ethical factors
Economic factors
Political factors
Technology factors
Cultural factors
Factors affecting e-commerce buying behaviour
Understanding users’ access requirements
Consumers influenced by using the online channel
Motivation for use of online services
Business demand for digital business services
E-commerce sales across the EU
Privacy and trust in e-commerce
Privacy legislation
Why personal data is valuable for digital business
Worldwide regulations on privacy and electronic communications
Viral email marketing
Other e-commerce legislation
Marketing your e-commerce business
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Forming an electronic contract (contract law and distance-selling law)</td>
</tr>
<tr>
<td>3 Making and accepting payment</td>
</tr>
<tr>
<td>4 Authenticating contracts concluded over the Internet</td>
</tr>
<tr>
<td>5 Email risks</td>
</tr>
<tr>
<td>6 Protecting intellectual property (IP)</td>
</tr>
<tr>
<td>7 Advertising on the Internet</td>
</tr>
<tr>
<td>8 Data protection</td>
</tr>
<tr>
<td>Environmental and green issues related to Internet usage</td>
</tr>
<tr>
<td>Taxation</td>
</tr>
<tr>
<td>Tax jurisdiction</td>
</tr>
<tr>
<td>Freedom-restrictive legislation</td>
</tr>
<tr>
<td>Economic and competitive factors</td>
</tr>
<tr>
<td>Case study 4.1: The implications of micro-localisation vs. globalisation based on consumer attitudes</td>
</tr>
<tr>
<td>The implications of e-commerce for international B2B trading</td>
</tr>
<tr>
<td>Government and digital transformation</td>
</tr>
<tr>
<td>Internet governance</td>
</tr>
<tr>
<td>E-government</td>
</tr>
<tr>
<td>Technological innovation and technology assessment</td>
</tr>
<tr>
<td>Approaches to identifying emerging technology</td>
</tr>
<tr>
<td>Summary</td>
</tr>
<tr>
<td>Exercises</td>
</tr>
<tr>
<td>References</td>
</tr>
<tr>
<td>Web links</td>
</tr>
</tbody>
</table>

**Part 2 Strategy and applications**

<table>
<thead>
<tr>
<th>5 Digital business strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning outcomes</td>
</tr>
<tr>
<td>Management issues</td>
</tr>
<tr>
<td>Links to other chapters</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Development of the social business</td>
</tr>
<tr>
<td>What is digital business strategy?</td>
</tr>
<tr>
<td>The imperative for digital business strategy</td>
</tr>
<tr>
<td>Digital channel strategies</td>
</tr>
<tr>
<td>Platform strategy</td>
</tr>
<tr>
<td>Strategy process models for digital business</td>
</tr>
<tr>
<td>Strategic analysis</td>
</tr>
<tr>
<td>Resource and process analysis</td>
</tr>
<tr>
<td>Stage models of digital business development</td>
</tr>
<tr>
<td>Application portfolio analysis</td>
</tr>
<tr>
<td>Organisational and IS SWOT analysis</td>
</tr>
<tr>
<td>Human and financial resources</td>
</tr>
<tr>
<td>Competitive environment analysis</td>
</tr>
<tr>
<td>Demand analysis</td>
</tr>
<tr>
<td>Assessing competitive threats</td>
</tr>
<tr>
<td>Competitive threats</td>
</tr>
<tr>
<td>Sell-side threats</td>
</tr>
<tr>
<td>Buy-side threats</td>
</tr>
<tr>
<td>Competitor analysis</td>
</tr>
</tbody>
</table>

| Resource-advantage mapping | 205 |
| Strategic objectives | 206 |
| Defining vision and mission | 206 |
| VMOST | 207 |
| How can digital business create business value? | 210 |
| Case study 5.1: Arriva Bus redesigns its m-ticket app and boosts revenue by over 17% | 210 |
| Objective setting | 212 |
| The online revenue contribution | 213 |
| Conversion modelling for sell-side e-commerce | 213 |
| Case study 5.2: Setting the Internet revenue contribution at Sandvik Steel | 215 |
| The balanced scorecard approach to objective setting | 217 |
| Strategy definition | 218 |
| Selection of digital business strategy options | 218 |
| Decision 1: Digital business channel priorities | 220 |
| The diversification of digital platforms | 221 |
| Decision 2: Market and product development strategies | 221 |
| Decision 3: Positioning and differentiation strategies | 224 |
| Decision 4: Business, service and revenue models | 228 |
| Decision 5: Marketplace restructuring | 229 |
| Decision 6: Supply chain management capabilities | 229 |
| Case study 5.3: Zappos innovates in the digital marketplace | 229 |
| Decision 7: Internal knowledge management capabilities | 231 |
| Decision 8: Organisational resourcing and capabilities | 231 |
| Strategy implementation | 234 |
| Failed digital business strategies | 234 |
| Digital business strategy implementation success factors for SMEs | 235 |
| Case study 5.4: Boo hoo – learning from the largest European dot.com failure | 235 |
| Focus on Aligning and impacting digital business strategies | 238 |
| Elements of information systems (IS) strategy | 239 |
| Investment appraisal | 241 |
| Decisions about which business applications to invest in | 241 |
| The productivity paradox | 242 |
| Summary | 243 |
| Exercises | 244 |
| References | 244 |
| Web links | 247 |

<table>
<thead>
<tr>
<th>6 Supply chain and demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning outcomes</td>
</tr>
<tr>
<td>Management issues</td>
</tr>
<tr>
<td>Links to other chapters</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Case study 6.1: Fast-fashion retailer Zara uses its supply chain to achieve competitive advantage</td>
</tr>
</tbody>
</table>
## Contents

<table>
<thead>
<tr>
<th>Problem Area</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems of supply chain management</td>
<td>252</td>
</tr>
<tr>
<td>What is supply chain management and e-procurement?</td>
<td>253</td>
</tr>
<tr>
<td>A simple model of a supply chain</td>
<td>255</td>
</tr>
<tr>
<td>Case study 6.2: Shell Chemicals redefines its customers’ supply chains</td>
<td>258</td>
</tr>
<tr>
<td>What is logistics?</td>
<td>261</td>
</tr>
<tr>
<td>Push and pull supply chain models</td>
<td>262</td>
</tr>
<tr>
<td>Focus on: The value chain</td>
<td>263</td>
</tr>
<tr>
<td>Restructuring the internal value chain</td>
<td>265</td>
</tr>
<tr>
<td>The value stream</td>
<td>265</td>
</tr>
<tr>
<td>Value chain analysis</td>
<td>266</td>
</tr>
<tr>
<td>Value networks</td>
<td>267</td>
</tr>
<tr>
<td>Options for restructuring the supply chain</td>
<td>269</td>
</tr>
<tr>
<td>Using digital business to restructure the supply chain</td>
<td>271</td>
</tr>
<tr>
<td>Technology options and standards for supply chain management</td>
<td>272</td>
</tr>
<tr>
<td>Case study 6.3: Argos uses e-supply chain management to improve customer convenience</td>
<td>273</td>
</tr>
<tr>
<td>IS-supported upstream supply chain management</td>
<td>274</td>
</tr>
<tr>
<td><strong>RFID and the Internet of Things</strong></td>
<td>274</td>
</tr>
<tr>
<td>IS-supported downstream supply chain management</td>
<td>274</td>
</tr>
<tr>
<td>Outbound logistics management</td>
<td>275</td>
</tr>
<tr>
<td>IS infrastructure for supply chain management</td>
<td>275</td>
</tr>
<tr>
<td>Supply chain management implementation</td>
<td>276</td>
</tr>
<tr>
<td>Data standardisation and exchange</td>
<td>277</td>
</tr>
<tr>
<td>The supply chain management strategy process</td>
<td>277</td>
</tr>
<tr>
<td>Goal-setting and performance management for eSCM</td>
<td>278</td>
</tr>
<tr>
<td>Managing partnerships</td>
<td>279</td>
</tr>
<tr>
<td>Managing global distribution</td>
<td>280</td>
</tr>
<tr>
<td>Case study 6.4: RFID – keeping track starts its move to a faster track</td>
<td>282</td>
</tr>
<tr>
<td>What is e-procurement?</td>
<td>283</td>
</tr>
<tr>
<td>Understanding the procurement process</td>
<td>283</td>
</tr>
<tr>
<td>Types of procurement</td>
<td>284</td>
</tr>
<tr>
<td>Participants in different types of e-procurement</td>
<td>285</td>
</tr>
<tr>
<td>Drivers of e-procurement</td>
<td>286</td>
</tr>
<tr>
<td>Examples of the benefits of e-procurement</td>
<td>288</td>
</tr>
<tr>
<td>Case study 6.5: Honeywell improves efficiency through SCM and e-procurement</td>
<td>288</td>
</tr>
<tr>
<td>Focus on: Estimating e-procurement costs</td>
<td>289</td>
</tr>
<tr>
<td>The impact of cost savings on profitability</td>
<td>289</td>
</tr>
<tr>
<td>Barriers and risks of e-procurement adoption</td>
<td>289</td>
</tr>
<tr>
<td>Implementing e-procurement</td>
<td>291</td>
</tr>
<tr>
<td>Integrating company systems with supplier systems</td>
<td>293</td>
</tr>
<tr>
<td>Focus on: B2B marketplaces</td>
<td>295</td>
</tr>
<tr>
<td>Types of marketplace</td>
<td>295</td>
</tr>
<tr>
<td>The future of e-procurement</td>
<td>296</td>
</tr>
<tr>
<td>Summary</td>
<td>297</td>
</tr>
<tr>
<td>Exercises</td>
<td>298</td>
</tr>
<tr>
<td>References</td>
<td>299</td>
</tr>
<tr>
<td><strong>Web links</strong></td>
<td>301</td>
</tr>
</tbody>
</table>

## 7 Digital marketing

### Learning outcomes
- Management issues
- Links to other chapters

### Introduction
- Chapter structure

### What is digital marketing?
- Marketing defined
  - Inbound marketing
  - Content marketing

### Digital marketing planning
- Is a separate digital marketing plan required?

### Situation analysis
- Customer demand analysis
- Qualitative customer research
- Competitor analysis
- Intermediary or influencer analysis
- Internal marketing audit

### Objective setting
- Case study 7.1: The evolution of easyJet’s online revenue contribution

### Strategy
- Market and product positioning
- Target market strategies
- Content strategy

### Focus on: Characteristics of digital media communications
- 1 Interactivity
- 2 Intelligence
- 3 Individualisation
- 4 Integration
- 5 Industry restructuring
- 6 Independence of location

### Tactics
- Product
- Case study 7.2: Dell gets closer to its customers online
- Price
- Place
- Promotion
- People, process and physical evidence

### Focus on: Digital branding
- Brand identity
- The importance of brand online

### Actions
- Control
- Summary
- Exercises
- References
- Web links

## 8 Customer relationship management

### Learning outcomes
- Management issues
- Links to other chapters

### Introduction
- Marketing applications of CRM

### Exercises

### References

### Web links
Case study 8.1: How Warby Parker disrupted the eyewear industry 368
What is eCRM? 371
From eCRM to social CRM 372
Benefits of eCRM 372
Customer engagement strategy 374
Permission marketing 374
Customer profiling 375
Conversion marketing 376
The online buying process 379
Differences in buyer behaviour in target markets 380
Differences between B2C and B2B buyer behaviour 380
Influences on purchase 380
The net promoter score 382
Customer acquisition management 383
Focus on Marketing communications for customer acquisition, including search engine marketing, digital PR, online partnerships, interactive advertising, email marketing and social media marketing 383
The characteristics of interactive marketing communications 383
1 From push to pull 383
2 From monologue to dialogue 384
3 From one-to-many to one-to-some and one-to-one 384
4 From one-to-many to many-to-many communications 384
5 From ‘lean-back’ to ‘lean-forward’ 384
6 The medium changes the nature of standard marketing communications tools such as advertising 384
7 Increase in communications intermediaries 385
8 Integration remains important 385
Assessing marketing communications effectiveness 385
Digital marketing communications 387
1 Search engine marketing (SEM) 388
2 Digital PR 397
Focus on Social media and social CRM strategy 398
3 Online partnerships 409
4 Digital advertising 410
5 Email marketing 413
6 Social media marketing 416
Customer retention management 418
Personalisation and mass customisation 420
Creating personalisation 421
Extranets 422
Opt-in email 423
Techniques for managing customer activity and value 423
Lifetime-value modelling 424
Focus on Excelling in e-commerce service quality 426
Improving online service quality 426
Tangibles 427
Reliability 427
Responsiveness 427
Assurance 427
Empathy 428
Customer extension 429
Advanced online segmentation and targeting techniques 430
Sense, Respond, Adjust – delivering relevant e-communications through monitoring customer behaviour 432
Recency, Frequency, Monetary value (RFM) analysis 432
Technology solutions for CRM 435
Types of CRM applications 437
Integration with back-office systems 437
The choice of single-vendor solutions or a more fragmented choice 438
Data quality 439
Case study 8.2: Tesco.com increases product range and uses triggered communications to support CRM 439
Summary 442
Exercises 442
References 443
Web links 447

Part 3
Implementation 449

9 Customer experience and service design 450
Learning outcomes 450
Management issues 450
Links to other chapters 450
Introduction 451
Analysis for digital technology projects 451
Process modelling 454
Process mapping 455
Task analysis and task decomposition 455
Process dependencies 457
Workflow management 457
Flow process charts 457
Effort duration analysis 459
Network diagrams 459
Event-driven process chain (EPC) model 461
Validating a new process model 462
Data modelling 464
1 Identify entities 464
2 Identify attributes for entities 464
3 Identify relationships between entities 464
Big Data and data warehouses 464
Design for digital technology projects 468
Architectural design of digital business systems 469
Focus on User-centred site design and customer experience management 471
Customer experience management framework 477
Customer experience design 478
Implementation 478
Usability 480
Evaluating designs 480
Use-case analysis 481
Persona and scenario analysis 481
Stages in use-case analysis 484
Designing the information architecture 487
Card sorting 488
Blueprints 488
Wireframes 490
Customer orientation 491
Elements of site design 493
Site design and structure 493
Page design 496
Content design 497
Mobile design 498
Mobile site design option A. Responsive design 498
Mobile site design option B. Adaptive design 498
Mobile site design option C. HTML5 499
Mobile site design option D. Separate mobile domain (screen scrape) 501
Web accessibility 502
Case study 9.1: Providing a better online user experience in a B2B market 504
Focus on Security design for digital business 506
Secure e-commerce transactions 512
Principles of secure systems 513
Approaches to developing secure systems 513
Digital certificates 513
Digital signatures 514
The public-key infrastructure (PKI) and certificate authorities (CAs) 514
Virtual private networks 515
Current approaches to e-commerce security 515
Secure Sockets Layer protocol (SSL) 515
Certificate authorities (CAs) 515
Reassuring the customer 516
Summary 516
Exercises 517
References 518
Web links 520

10 Managing digital business transformation and growth hacking 522
Learning outcomes 522
Management issues 522
Links to other chapters 522
Introduction 523
Case study 10.1: Transforming an entire industry and supply chain: Spotify and Spotify Connect 523
Definitions of digital transformation 524
Definitions of digital business transformation 524
Why is digital business transformation not just about IT? 525
The applications portfolio – a precursor to digital business transformation 525
The emergence of digital transformation as a discipline 530
History of change and change management 530
The change in strategic position of digital versus technology 531
The need for digital transformation 531
Understanding the reasons for digital transformation 532
The opportunities provided by digital 532
Where does digital transformation occur? 532
Customer experience and service design 532
Customer insight 533
Adding value 534
Interfaces with customers 535
Business process 536
The business model 537
New business where digital is at the heart of the opportunity 538
Adapting the existing business to a digital opportunity 539
The framework of digital transformation 540
The process of review 540
What the digital opportunity is 540
How sure the organisation is of the opportunity 541
What level of digital the leadership of the organisation possesses 541
How mature as a digital business the organisation sees itself 541
The process of strategy 542
A focus on the objective for the future rather than solving an existing problem 542
The process of resourcing and planning 543
The design of the transformation 543
A programme for change 543
The process of deployment 543
The process of living with, and evaluating, digital transformation 544
What is growth hacking? 545
Defining goals and KPIs 548
How to use a single metric to run a start-up 550
Creating a growth hacking mindset 551
Ideal skill set of a growth hacking team 551
Use of Scrum, an agile methodology, in digital marketing 552
Scrum meetings 554
Sprint planning 556
Daily Scrum 556
Sprint review and retrospective 557
Developing agile marketing campaigns 557
The growth hacking process 558
1 Product/market fit (create an MVP – Minimum Viable Product) 558
Trigger 558
Action 559
Rewards 560
Investment 560
2 User data analysis 561
Main areas of user testing 561
3 Conversion rate optimisation 562
Key CRO elements 562
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/B and multivariate testing</td>
<td>564</td>
</tr>
<tr>
<td>Clickstream analysis and visitor segmentation</td>
<td>567</td>
</tr>
<tr>
<td>Budgeting</td>
<td>569</td>
</tr>
<tr>
<td>Case study 10.2: Learning from Amazon’s culture of metrics</td>
<td>571</td>
</tr>
<tr>
<td>4 Viral growth</td>
<td>575</td>
</tr>
<tr>
<td>Inherent virality: Skype</td>
<td>576</td>
</tr>
<tr>
<td>Artificial virality: Giffgaff</td>
<td>577</td>
</tr>
<tr>
<td>Word-of-mouth virality: Zappos</td>
<td>577</td>
</tr>
<tr>
<td>Measuring virality</td>
<td>577</td>
</tr>
<tr>
<td>5 Retention and scalable growth</td>
<td>577</td>
</tr>
<tr>
<td>Creating the right environment for growth hacking</td>
<td>579</td>
</tr>
<tr>
<td>Bridging the digital and physical world</td>
<td>580</td>
</tr>
<tr>
<td>Best traditional marketing methods for growth hacking</td>
<td>580</td>
</tr>
<tr>
<td>Case study 10.3: How Leon used PR to grow hack</td>
<td>582</td>
</tr>
<tr>
<td>Growth hacking framework</td>
<td>583</td>
</tr>
<tr>
<td>Twenty traction channels to test</td>
<td>585</td>
</tr>
<tr>
<td>Data analysis</td>
<td>586</td>
</tr>
<tr>
<td>Measuring implementation success</td>
<td>589</td>
</tr>
<tr>
<td>Focus on Web analytics: Measuring and improving performance of digital business services</td>
<td>589</td>
</tr>
<tr>
<td>Principles of performance management and improvement</td>
<td>590</td>
</tr>
<tr>
<td>Stage 1: Creating a performance management system</td>
<td>590</td>
</tr>
<tr>
<td>Stage 2: Defining the performance metrics framework</td>
<td>592</td>
</tr>
<tr>
<td>Focus on Measuring social media marketing</td>
<td>596</td>
</tr>
<tr>
<td>Stage 3: Tools and techniques for collecting metrics and summarising results</td>
<td>598</td>
</tr>
<tr>
<td>Collecting site outcome data</td>
<td>599</td>
</tr>
<tr>
<td>Selecting a web analytics tool</td>
<td>600</td>
</tr>
<tr>
<td>User testing prioritisation</td>
<td>603</td>
</tr>
<tr>
<td>Summary</td>
<td>603</td>
</tr>
<tr>
<td>Exercises</td>
<td>604</td>
</tr>
<tr>
<td>References</td>
<td>605</td>
</tr>
<tr>
<td>Web links</td>
<td>607</td>
</tr>
<tr>
<td>Glossary</td>
<td>609</td>
</tr>
<tr>
<td>Index</td>
<td>623</td>
</tr>
</tbody>
</table>
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.

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.

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.

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!

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 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 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 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.

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 showooming, 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 as 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.
### Table A
In-depth case studies in *Digital Business and E-Commerce Management, 7th edition*

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Case study</th>
</tr>
</thead>
</table>
| 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 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 |
| 6 Supply chain and demand | 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 |
| 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>
<thead>
<tr>
<th>Week</th>
<th>Lecture topic</th>
<th>Seminar or tutorial topics</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 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 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture topic</th>
<th>Seminar or tutorial topics</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>L10 Customer Experience (CX)</td>
<td>Activity 9.1, Mini Case study 9.1, Debate 9.2</td>
<td>Introduction, Miele, Website design, Chapter 9</td>
</tr>
<tr>
<td>11</td>
<td>L11 Digital transformation</td>
<td>Activity 10.1, Case study 10.1, Case study 10.2</td>
<td>Introduction, Spotify, Amazon, Chapter 10</td>
</tr>
</tbody>
</table>
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.smartinsights.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, Euroffice, 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 @DigitalTanya.
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
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 Ezingeard, 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.
Text Credit(s):


Publisher’s acknowledgements

Crafting a Customer-Centered Web Experience. Addison-Wesley, Reading, MA. 438


Photo Credits:


Screenshot Credits:

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.

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

Opportunity 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

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
Key issues in the digital environment p. 120

- 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
Introduction to digital business

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

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.
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](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.)
Table 1.1  Timeline of innovation in business model or communications approach

<table>
<thead>
<tr>
<th>Year founded</th>
<th>Company/site</th>
<th>Category of innovation and business model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>Amazon</td>
<td>Retailer</td>
</tr>
<tr>
<td>1995 (March)</td>
<td>Yahoo! (yahoo.com)</td>
<td>Directory and portal</td>
</tr>
<tr>
<td>1995 (Sept)</td>
<td>eBay</td>
<td>Online auction</td>
</tr>
<tr>
<td>1995 (Dec)</td>
<td>AltaVista (altavista.com)</td>
<td>Search engine</td>
</tr>
<tr>
<td>1996</td>
<td>Hotmail (hotmail.com)</td>
<td>Web-based email. Viral marketing (using email signatures to promote service) Purchased by Microsoft in 1997</td>
</tr>
<tr>
<td>1998</td>
<td>Google (google.com)</td>
<td>Search engine</td>
</tr>
<tr>
<td>1999</td>
<td>Alibaba (alibaba.com)</td>
<td>B2B marketplace with $1.7 billion IPO on Hong Kong stock exchange in 2007</td>
</tr>
<tr>
<td>1999</td>
<td>MySpace (myspace.com), formerly eUniverse</td>
<td>Social network Purchased by News Corp. in 2005</td>
</tr>
<tr>
<td>2001</td>
<td>Wikipedia (wikipedia.com)</td>
<td>Open encyclopaedia</td>
</tr>
<tr>
<td>2002</td>
<td>Last.fm</td>
<td>A UK-based Internet radio and music community website</td>
</tr>
<tr>
<td>2003</td>
<td>Skype (skype.com)</td>
<td>Peer-to-peer Internet telephony. VoIP – Voice over Internet Protocol Purchased by eBay in 2005</td>
</tr>
<tr>
<td>2003</td>
<td>Second Life (secondlife.com)</td>
<td>Immersive virtual world</td>
</tr>
<tr>
<td>2004</td>
<td>Facebook (facebook.com)</td>
<td>Social network applications and groups</td>
</tr>
<tr>
<td>2005</td>
<td>YouTube (youtube.com)</td>
<td>Video sharing and rating</td>
</tr>
<tr>
<td>2006</td>
<td>Spotify (spotify.com)</td>
<td>Music track streaming</td>
</tr>
<tr>
<td>2009</td>
<td>Foursquare (foursquare.com)</td>
<td>A location-based social media website designed for mobile access</td>
</tr>
<tr>
<td>2011</td>
<td>Pinterest</td>
<td>Social network offering image sharing</td>
</tr>
<tr>
<td>2013</td>
<td>Slack (slack.com)</td>
<td>Collaborative team-working tool</td>
</tr>
<tr>
<td>2014</td>
<td>Google Glass</td>
<td>An example of a wearable computing device</td>
</tr>
<tr>
<td>2015</td>
<td>Apple Watch</td>
<td>An example of a wearable computing device</td>
</tr>
<tr>
<td>2016</td>
<td>Pokémon Go</td>
<td>Augmented reality gaming</td>
</tr>
<tr>
<td>2018</td>
<td>IBM Watson</td>
<td>An example of machine learning</td>
</tr>
</tbody>
</table>

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?
Introduction

The impact of digital communications on traditional businesses

Part 1

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.

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.

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.

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.

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?
Social media marketing

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.

**Trends update**


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](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.
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 for 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.


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.

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.
Chapter 1  Introduction to digital business

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:

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:


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.
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.

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.

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.

**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.

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.
Today, the term intranet is still used, but software services similar to Twitter and Facebook 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:
Chapter 1 Introduction to digital business

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, high-volume, 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.

---

**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](http://www.slack.com)

---

**Activity 1.3** Understanding different types of digital presence

**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:
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.

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 general rely on users having a public or semi-public profile within the boundaries of the site and growing and maintaining connections with other users.
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.

![The three main options for online media investment](image-url)
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.

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.monesupermarket.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.
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 fulfill 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.

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.
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.

(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).
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/rrp/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.

<table>
<thead>
<tr>
<th>Consumer or citizen</th>
<th>From: Supplier of content/service</th>
<th>Business (organisation)</th>
<th>Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer-to-Consumer (C2C)</td>
<td>eBay</td>
<td>Business-to-Consumer (B2C)</td>
<td>Government</td>
</tr>
<tr>
<td>• Peer-to-Peer (Skype)</td>
<td>Peer-to-Peer (Skype)</td>
<td>• Transactional: Amazon</td>
<td>• Government-to-Consumer (G2C)</td>
</tr>
<tr>
<td>• Blogs and communities</td>
<td>Blogs and communities</td>
<td>• Relationship-building: BP</td>
<td>• National government transactional: tax – Inland Revenue</td>
</tr>
<tr>
<td>• Product recommendations</td>
<td>Social networks: Instagram and Snapchat</td>
<td>• Brand-building: Unilever</td>
<td>• National government information</td>
</tr>
<tr>
<td>• Social networks: Instagram and Snapchat</td>
<td>• Media owner – News Corp</td>
<td>• Comparison intermediary: Kelkoo</td>
<td>• Local government services</td>
</tr>
<tr>
<td>Consumer-to-Business (C2B)</td>
<td>• Priceline</td>
<td>Business-to-Business (B2B)</td>
<td>Government-to-Business (G2B)</td>
</tr>
<tr>
<td>• Consumer-feedback,</td>
<td>• Consumer-feedback,</td>
<td>• Transactional: Eurooffice</td>
<td>• Government services and transactions: tax</td>
</tr>
<tr>
<td>communities or campaigns</td>
<td>communities or campaigns</td>
<td>• Relationship-building: BP</td>
<td>• Legal regulations</td>
</tr>
<tr>
<td>• Feedback to government</td>
<td>through pressure group or</td>
<td>• Feedback to government</td>
<td>• Inter-government services</td>
</tr>
<tr>
<td>individual sites</td>
<td>businesses and non-</td>
<td></td>
<td>• Exchange of information</td>
</tr>
<tr>
<td></td>
<td>governmental organisations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1.10 Summary and examples of transaction alternatives between businesses, consumers and governmental organisations
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)
Part 1 Introduction

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.
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.
Part 1 Introduction

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

<table>
<thead>
<tr>
<th>Tangible benefits</th>
<th>Intangible benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased sales from new sales leads giving rise to increased revenue from:</td>
<td>• Corporate image communication</td>
</tr>
<tr>
<td>− new customers, new markets</td>
<td>• Enhancement of brand</td>
</tr>
<tr>
<td>− existing customers (cross-selling)</td>
<td>• More rapid, more responsive marketing communications, including PR</td>
</tr>
<tr>
<td>• Marketing cost reductions from:</td>
<td>• Faster product development lifecycle enabling faster response to market needs</td>
</tr>
<tr>
<td>− reduced time in customer service</td>
<td>• Improved customer service</td>
</tr>
<tr>
<td>− digital sales</td>
<td>• Learning for the future</td>
</tr>
<tr>
<td>− reduced printing and distribution costs of marketing communications</td>
<td>• Meeting customer expectations to have a website</td>
</tr>
<tr>
<td>• Supply chain cost reductions from:</td>
<td>• Identifying new partners, supporting existing partners better</td>
</tr>
<tr>
<td>− reduced levels of inventory</td>
<td>• Better management of marketing information and customer information</td>
</tr>
<tr>
<td>− shorter cycle time in ordering</td>
<td>• Feedback from customers on products</td>
</tr>
<tr>
<td>• Administrative cost reductions from more efficient routine business processes</td>
<td></td>
</tr>
<tr>
<td>such as recruitment, invoice payment and holiday authorisation</td>
<td></td>
</tr>
</tbody>
</table>
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.

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.)
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 × 7 × 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 Reevoo (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.

**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.