

SIX TH EDITION

DIGITAL BUSINESS AND E-COMMERCE MANAGEMENT

STRATEGY, IMPLEMENTATION AND PRACTICE

DAVE CHAFFEY

PEARSON

Brief contents



	Preface	xiv
	Guided tour	xxvi
	About the author	xxviii
	Publisher's acknowledgements	xxix
Part 1	Introduction	1
	1 Introduction to digital business and e-commerce	3
	2 Marketplace analysis for e-commerce	41
	3 Managing digital business infrastructure	77
	4 E-environment	127
Part 2	Strategy and applications	177
	5 Digital business strategy	179
	6 Supply chain management	247
	7 E-procurement	297
	8 Digital marketing	323
	9 Customer relationship management	387
Part 3	Implementation	467
	10 Change management	468
	11 Analysis and design	517
	12 Digital business service implementation and optimisation	597
	Glossary	650
	Index	666

Contents

What is the difference between digital business

Different types of sell-side e-commerce

Options for companies to reach their

Supply chain management

Drivers of digital technology adoption

E-government defined

Cost/efficiency drivers

Competitiveness drivers

Digital business opportunities

Trends update: Social network usage

Owned, earned and paid media options

Web 2.0 and user-generated content

Business or consumer models of e-commerce

The six key types of digital media channels

Trends update: E-commerce growth rates

and e-commerce?

E-commerce defined

Digital business defined

Intranets and extranets

Digital marketing

audience online

transactions

Preface

Guided tour



32

32 32 34

55

57

57

58

58 58

62

62

64

66

67

67

67 67

67

68

68

68

68

69 70

Risks and barriers to digital business adoption

Commercial arrangement for transactions

Online publisher and intermediary revenue models

Calculating revenue for an online business

Different types of online intermediary

Summary of the types of intermediary

Examples of e-commerce failures

Case Study 2.1 i-to-i - a global marketplace for a

The importance of search engines

Business models for e-commerce

Focus on Online start-up companies

Assessing online businesses

Valuing Internet start-ups

and influencers

Revenue models

1 Concept

2 Innovation

3 Execution

5 Financing

start-up company

Why dot-coms failed

4 Traffic

6 Profile

Evaluating an organisation's digital

bout the author cknowledgements	xxviii xxix		business capabilities Drivers of consumer technology adoption	
okilo wio agomonio	MAX		Barriers to consumer Internet adoption	
			Case Study 1.2 eBay - the world's largest	
			online business?	
Part 1			Summary	
			Exercises	
Introduction	1		References	
			Web links	
Introduction to digital business and				
e-commerce	3	2	Marketplace analysis for e-commerce	
Learning outcomes	3		Learning outcomes	
Management issues	3		Management issues	
Links to other chapters	3		Links to other chapters	
Introduction	4		Introduction	
The impact of electronic communications on			Business and revenue models for e-commerce	
traditional businesses	6		Online marketplace analysis	
Inbound marketing	6		Strategic agility	
Social media marketing	7		A process for online marketplace analysis	
Trends update: Social media usage	7		Location of trading in the marketplace	
Mobile commerce	12		Review of marketplace channel structures	
Case Study 1.1 The Facebook business			Location of trading in the marketplace	
model	8		The importance of multichannel	
Trands undata: Mobile usage	10		marketnlace models	

13

13

13

14

15

17

18

19

19

19

20

23

24

24

28

28

30

30

30

xiv

xxvi

	Summary	73		Microformats	116
	Exercises	74		Focus on Internet governance	116
	References	75		The net neutrality principle	117
	Web links	76		The Internet Corporation for Assigned Names and Numbers (ICANN, www.icann.org)	118
3	Managing digital business infrastructure	77		The Internet Society (www.isoc.org)	119
	Learning outcomes	77		The Internet Engineering Task Force	110
	Management issues	77		(IETF, www.ietf.org)	119
	Links to other chapters	77		The World Wide Web Consortium	110
	Introduction	78		(www.w3.org)	119
	Supporting the growing range of digital business	70		Telecommunications Information Networking	
	technology platforms	82		Architecture Consortium (TINA-C,	
	Desktop, laptop and notebook platforms	83		www.tinac.com/)	119
	Mobile phone and tablet platforms	83		How can companies influence or take	
	Trends update: Mobile usage	83		control of Internet standards?	119
	Other hardware platforms	85		Open-source software	120
	Augmented reality	87		Case Study 3.1 Innovation at Google	121
	Digital business infrastructure components	88		Summary	123
	A short introduction to Internet technology	89		Exercises	123
	Management issues in creating a new			References	124
	customer-facing digital service	90		Web links	125
	Domain name selection	90			
	Uniform resource locators (URLs)	91	4	E-environment	127
	Domain name registration	92		Learning outcomes	127
	Managing hardware and systems software			Management issues	127
	infrastructure	92		Links to other chapters	127
	Layer II – Systems software	93		Introduction	128
	Managing digital business applications			Social and legal factors	131
	infrastructure	93		Factors governing e-commerce service adoption	131
	Focus on Web services, SaaS, cloud computing			Understanding users' access requirements	132
	and service-oriented architecture (SOA)	96		Consumers influenced by using the	
	Benefits of web services or SaaS	96		online channel	133
	Application programming interfaces (APIs)	97		Motivation for use of online services	133
	Challenges of deploying SaaS	97		Purchased online	136
	Cloud computing	98		Business demand for digital business services	136
	Examples of cloud computing web services Virtualisation	99 101		B2B profiles Adoption of digital business by businesses	137 137
	Service-oriented architecture (SOA)	101		Privacy and trust in e-commerce	138
	Selecting hosting providers	102		Privacy legislation	139
	Managing service quality when selecting Internet	102		Why personal data are valuable for	100
	service and cloud hosting providers	103		digital businesses	139
	ISP connection methods	103		Anti-spam legislation	145
	Issues in management of ISP and hosting	.00		Regulations on privacy and electronic	0
	relationships	103		communications	145
	Speed of access	103		Worldwide regulations on privacy and	
	Availability	105		electronic communications	145
	Service level agreements	106		Other e-commerce legislation	150
	Security	106		1 Marketing your e-commerce business	150
	Managing internal digital communications through			2 Forming an electronic contract (contract	
	intranets and extranets	107		law and distance-selling law)	152
	Intranet applications	107		3 Making and accepting payment	153
	Extranet applications	109		4 Authenticating contracts concluded	
	Encouraging use of intranets and extranets	112		over the Internet	153
	IPTV (Internet TV)	113		5 Email risks	153
	Voice over IP (VoIP)	113		6 Protecting intellectual property (IP)	153
	Widgets	113		7 Advertising on the Internet	154
	Web presentation and data exchange standards	114		8 Data protection	154
	Examples of XML applications	114		Environmental and green issues related to	
	Semantic web standards	115		Internet usage	154

Taxation	155		The balanced scorecard approach to	
Tax jurisdiction	156		objective setting	216
Freedom-restrictive legislation	157		Strategy definition	217
Economic and competitive factors	158		Selection of digital business strategy	
Case Study 4.1 The implications of			options	217
globalisation for consumer attitudes	160		Decision 1: Digital business channel priorities	218
The implications of e-commerce for international			The diversification of digital platforms	220
B2B trading	161		Decision 2: Market and product development	
Political factors	162		strategies	220
Internet governance	164		Decision 3: Positioning and differentiation	
E-government	164		strategies	224
Technological innovation and technology assessment	165		Decision 4: Business, service and revenue	
Approaches to identifying emerging technology	168		models	225
Summary	170		Decision 5: Marketplace restructuring	228
Exercises	171		Decision 6: Supply chain management	220
References	172		capabilities	228
Web links	174		Decision 7: Internal knowledge management	220
WED III INS	174		capabilities	230
			Decision 8: Organisational resourcing and	200
Part 2				230
r urt 2			capabilities	
Strategy and applications 1	77		Strategy implementation	232
o a aregy and appropries			Failed digital business strategies	232
Digital business strategy	179		Digital business strategy implementation	004
Digital business strategy	179		success factors for SMEs	234
Learning outcomes			Case Study 5.3 Boo hoo – learning from	004
Management issues	179		the largest European dot-com failure	234
Links to other chapters	179		Focus on Aligning and impacting digital business	
Introduction	180		strategies	237
Development of the social business	180		Elements of IS strategy	238
What is digital business strategy?	184		Investment appraisal	238
The imperative for digital business strategy	185		Decisions about which business	0.40
Digital channel strategies	186		applications to invest in	240
Strategy process models for digital business	189		The productivity paradox	240
Strategic analysis	192		Summary	242
Resource and process analysis	193		Exercises	243
Stage models of digital business development	193		References	244
Application portfolio analysis	195		Web links	246
Organisational and IS SWOT analysis	196			
Human and financial resources	197	6	Supply chain management	247
Competitive environment analysis	198		Learning outcomes	247
Demand analysis	199		Management issues	247
Assessing competitive threats	199		Links to other chapters	247
Competitive threats	199		Introduction	248
Sell-side threats	201		Problems of supply chain management	251
Buy-side threats	202		What is supply chain management?	252
Co-opetition	203		Using technology to support supply chain	
Competitor analysis	203		management – an example	253
Resource-advantage mapping	203		A simple model of a supply chain	255
Strategic objectives	203		Case Study 6.1 Shell Chemicals redefines its	
Defining vision and mission	203		customers' supply chains	259
How can digital business create business value?	207		What is logistics?	263
Case Study 5.1 Debenhams creates value through			Push and pull supply chain models	265
mobile commerce	208		Focus on The value chain	266
Objective setting	209		Restructuring the internal value chain	267
The online revenue contribution	211		The value stream	268
Conversion modelling for sell-side			Value chain analysis	268
e-commerce	211		Value networks	270
Case Study 5.2 Setting the Internet revenue			Towards the virtual organisation	271
contribution at Sandvik Steel	213		Options for restructuring the supply chain	272

Using digital business to restructure the			The future of e-procurement	319
supply chain	275		Summary	320
Technology options and standards for supply			Exercises	320
chain management	275		References	321
Adoption rates of digital business applications	277		Web links	322
Benefits of e-supply chain management	277			
Case Study 6.2 Argos uses e-supply chain		8	Digital marketing	323
management to improve customer convenience	278		Learning outcomes	323
IS-supported upstream supply chain			Management issues	323
management	280		Links to other chapters	323
RFID and The Internet of Things	280		Introduction	324
IS-supported downstream supply chain			Chapter structure	325
management	281		What is digital marketing?	328
Outbound logistics management	281		Marketing defined	328
IS infrastructure for supply chain management	283		Digital marketing defined	330
Supply chain management implementation	284		Inbound marketing	331
Data standardisation and exchange	284		Content marketing	331
The supply chain management strategy	201		Digital marketing planning	334
process	285		Is a separate digital marketing plan	004
Goal-setting and performance management	200			335
for e-SCM	287		required?	336
	287 287		Situation analysis	
Managing partnerships			Customer demand analysis	338
Managing global distribution	289		Qualitative customer research	340
Case Study 6.3 RFID: keeping track starts	000		Competitor analysis	341
its move to a faster track	290		Intermediary or influencer analysis	343
Summary	292		Internal marketing audit	344
Exercises	292		Objective setting	344
References	293		Case Study 8.1 The evolution of easyJet's online	
Web links	295		revenue contribution	347
			Strategy	350
E-procurement	297		Market and product positioning	351
Learning outcomes	297		Target market strategies	352
Management issues	297		Content strategy	357
Links to other chapters	297		Focus on Characteristics of digital media	
Introduction	298		communications	358
What is e-procurement?	299		1 Interactivity	358
Understanding the procurement process	301		2 Intelligence	359
Types of procurement	302		3 Individualisation	360
Participants in different types of			4 Integration	361
e-procurement	303		5 Industry restructuring	363
Drivers of e-procurement	304		6 Independence of location	363
Examples of the benefits of e-procurement	305		Tactics	363
Case Study 7.1 Cambridge Consultants reduces	S		Product	366
costs through e-procurement	306		Case Study 8.2 Dell gets closer to its	
Focus on Estimating e-procurement costs	308		customers online	368
The impact of cost savings on profitability	308		Price	371
Barriers and risks of e-procurement adoption	310		Place	374
Implementing e-procurement	310		Promotion	376
Integrating company systems with	010		People, process and physical evidence	377
supplier systems	312		Focus on Online branding	378
Focus on B2B marketplaces	314		Brand identity	379
Why did so many B2B marketplaces fail?	316		The importance of brand online	380
	310		Actions	381
Reasons for limited adoption of	016			
e-marketplaces	316		Control	383
From neutral to private B2B exchanges	316		Summary	383
Case Study 7.2 Covisint – a typical history of a	017		Exercises	383
B2B marketplace?	317		References	384
Types of marketplace	318		Web links	386

Organisational culture

Focus on Knowledge management

445

445

500

501

Learning outcomes

Management issues

Introduction

What is e-CRM?

Links to other chapters

Benefits of e-CRM

Customer profiling

The online buying process

buyer behaviour

Influences on purchase

The net promoter score

and social media marketing

1 From push to pull

communications

one-to-one

communications

as advertising

effectiveness

2 Online PR

Extranets

Tangibles

and value

Opt-in email

Lifetime-value modelling

Improving online service quality

3 Online partnerships

5 Email marketing

4 Interactive advertising

Social media marketing

Conversion marketing

Permission marketing

	What is knowledge?	502	Mobile site design option B. Screen-scrape	564
	Objectives of knowledge management	503	Mobile site design option C. Responsive	
	Implementing knowledge management	504	design	564
	Technologies for implementing knowledge		Mobile site design option D. HTML5	565
	management	505	Mobile site design option E. Adaptive	
	Using collaborative approaches for knowledge		design	567
	management	507	Web accessibility	567
	Case Study 10.2 Using collaborative tools		Case Study 11.1 Providing an effective online	
	to support knowledge management at		experience for local markets	570
	Janssen-Cilag Australia	507	Focus on Security design for digital business	572
	Towards the social business	510	Managing computer viruses	577
	What is social business?	510	Types of virus	577
	Risk management	511	Protecting computer systems against viruses	578
	Summary	512	Controlling information service usage	579
	Exercises	513	Monitoring of electronic communications	579
	References	514	Employee monitoring legislation	582
	Web links	516	Email management	583
			 Minimising spam (unsolicited email) 	583
11	Analysis and design	517	2 Minimising internal business email	585
	Learning outcomes	517	3 Minimising external business email	586
	Management issues	517	4 Minimising personal email (friends and family)	
	Links to other chapters	517	Hacking	586
	Introduction	518	Protecting computer systems against hackers	587
	Analysis for digital technology projects	521	Secure e-commerce transactions	588
	Process modelling	522	Principles of secure systems	588
	Process mapping	522	Approaches to developing secure systems	589
	Task analysis and task decomposition	523	Digital certificates	589
	Process dependencies	524	Digital signatures	590
	Workflow management	524	The public-key infrastructure (PKI) and	
	Flow process charts	525	certificate authorities (CAs)	590
	Effort duration analysis	526	Virtual private networks	590
	Network diagrams	528	Current approaches to e-commerce security	590
	Event-driven process chain (EPC) model	529	Secure Sockets Layer Protocol (SSL)	590
	Validating a new process model	531	Certificate authorities (CAs)	591
	Data modelling	531	Reassuring the customer	591
	1 Identify entities	531	Summary	592
	2 Identify attributes for entities	531	Exercises	592
	3 Identify relationships between entities	531	References	593
	Big Data and data warehouses	533	Web links	595
	Design for digital technology projects	536		
	Architectural design of digital business systems	536	12 Digital business service implementation	
	Focus on User-centred site design and customer		and optimisation	597
	experience management	538	Learning outcomes	597
	Usability	543	Management issues	597
	Evaluating designs	544	Links to other chapters	597
	Use-case analysis	544	Introduction	598
	Persona and scenario analysis	545	Optimisation of digital business services	599
	Stages in use-case analysis	547	Alternatives for acquiring digital business systems	602
	Designing the information architecture	550	Managing web content	603
	Card sorting	552	Web application frameworks and application	
	Blueprints	552	servers	605
	Wireframes	552	Content management systems	606
	Customer orientation	555	Selecting e-commerce servers	607
	Elements of site design	558	Testing	608
	Site design and structure	558	The testing process	608
	Page design	562	Testing environments	609
	Content design	562	Changeover	609
	Mobile design	562	Database creation and data migration	610
	Mobile site design option A. Simple mobile site.	563	Deployment planning	611

		Comonio	71111
Content management and maintenance	611	5 Channel profitability	627
Managing a content marketing strategy	611	Multichannel evaluation	627
Frequency and scope of content and site		Focus on Measuring social media marketing	628
updating	614	Stage 3: Tools and techniques for collecting	
Maintenance process and responsibilities	615	metrics and summarising results	629
Process for routine content changes	615	Collecting site-visitor activity data	629
Frequency of content updates	618	Comparing apples to oranges?	630
Process for major changes	618	Collecting site outcome data	631
Initiatives to keep content fresh	618	Selecting a web analytics tool	632
Managing content for a global site	620	AB and multivariate testing	635
Focus on Web analytics: measuring and improving		Clickstream analysis and visitor	
performance of digital business services	621	segmentation	637
Principles of performance management and		Budgeting	639

Case Study 12.1 Learning from Amazon's

culture of metrics

Summary

Exercises

References

Web links

Glossary

Index

621

622

623

624

625

625

626

Contents

642

647 647

648

649

650

666

Lecturer Resources

1 Channel promotion

3 Channel satisfaction

4 Channel outcomes

2 Channel buyer behaviour

Stage 1: Creating a performance management

Stage 2: Defining the performance metrics

improvement

system

framework

For password-protected online resources tailored to support the use of this textbook in teaching, please visit www.pearsoned.co.uk/chaffey

