

Overview of Contents

1	Introduction	1
Part 1: Building the Foundation		15
2	Enterprise in the Information Age.....	17
3	Business Networking: A Process-oriented Framework	55
Part 2: Business Concepts.....		93
4	Strategies for Business Networking	95
5	Business Networking Lessons Learned: Supply Chain Management at Riverwood International.....	117
6	Electronic Commerce and Supply Chain Management at 'The Swatch Group'	127
7	Knowledge Enabled Customer Relationship Management.....	143
Part 3: Information System Concepts		161
8	Future Application Architecture for the Pharmaceutical Industry	163
9	Information Systems for Supply Chain Management: An Overview	185
10	Electronic Commerce in the Procurement of Indirect Goods	201
11	Templates: Achieving Standardization for Business Networking.....	219
Part 4: Key Success Factors		239
12	Key Success Factors for Transaction-oriented Business Networking Systems	241

13	Towards a Method for Business Networking.....	257
14	Shaping Business Process Networks at ETA SA.....	277
15	Shaping Applications for Global Networked Enterprises.....	293
16	Business Networking - Summary and Outlook.....	313
	List of Abbreviations.....	321
	Glossary.....	325
	References	335
	Index.....	371
	Authors	375

Table of Contents

1	Introduction	1
1.1	Networked Enterprise: The Vision	2
1.1.1	Business Networking and the New Economy.....	2
1.1.2	Five Phases Towards Business Networking	2
1.2	Networking the Enterprise: The Transformation	4
1.2.1	Closing the Gap Between Strategy and Reality	4
1.2.2	Achieving Networkability	5
1.2.3	Part One: Building the Foundation	6
1.2.4	Part Two: Business Concepts	7
1.2.5	Part Three: Information Systems Concepts	7
1.2.6	Part Four: Key Success Factors	8
1.3	Research Approach	9
1.3.1	Applied Research: Providing Practical Guidelines	9
1.3.2	Action Research: Balancing Rigor and Relevance	10
1.3.3	Competence Centers Electronic Business Networking and inter-Business Networking.....	11
1.4	Acknowledgements.....	13
	Part 1: Building the Foundation	15
2	Enterprise in the Information Age	17
2.1	Challenge of the Information Age	18
2.2	Imperatives of Business in the Internet Age	19
2.2.1	Coverage	20
2.2.2	Partnering	20
2.2.3	Critical Mass of Customers and Suppliers.....	20
2.2.4	Position in the Business Network	21
2.2.5	Focusing	21
2.2.6	Process Efficiency	22
2.2.7	Networkability.....	22
2.2.8	Change Management	23
2.3	Seven Trends	23
2.3.1	Enterprise Resource Planning.....	24
2.3.2	Knowledge Management	28
2.3.3	Smart Appliances.....	32
2.3.4	Business Networking	36
2.3.5	Electronic Services	43

2.3.6	Customer Process Support.....	45
2.3.7	Value Management.....	51
3	Business Networking: A Process-oriented Framework	55
3.1	Introduction.....	56
3.1.1	Entrepreneurial Challenges of CONMAT	56
3.1.2	Business Networking at Strategy-, Process- and Information System-Level	57
3.2	Some Business Networking Cases.....	58
3.2.1	Dell: Supply Chain Management and Customer Relationship Management	62
3.2.2	Amazon.com: Supply Chain Management and Customer Relationship Management.....	63
3.2.3	Marshall: Supply Chain Management and Customer Relationship Management	65
3.2.4	SAP: Customer Relationship Management	66
3.2.5	MarketSite.net: Procurement and Sales	68
3.2.6	UBS: Procurement.....	69
3.2.7	Migros Cooperative: Development.....	71
3.2.8	Commtech: Procurement, Finance, Real Estate and Taxes	72
3.3	Networked Business Processes	74
3.3.1	Process Orientation as Design Principle for the Networking of Business Units	74
3.3.2	Networking Through Coordination	75
3.3.3	Benefits and Options from a Process-oriented Point of View	78
3.4	Networking Infrastructure.....	80
3.4.1	Networking Applications.....	80
3.4.2	Networking Services.....	81
3.4.3	Networking Technologies.....	83
3.5	Model of a Networked Enterprise.....	84
3.6	Consequences for Management	87
3.6.1	Alternative Courses of Action and Procedures for Networking.....	87
3.6.2	Orientation for Selecting Services, Applications and Technologies.....	88
3.7	Conclusion	91

Part 2: Business Concepts.....93

4 Strategies for Business Networking.....95

4.1	Introduction.....	96
4.1.1	Strategic Relevance of Business Networking	96
4.1.2	Overview of Strategies	97
4.2	Organization Strategies.....	98
4.2.1	Outsourcing – Externalizing Non-core Competencies.....	99
4.2.2	Insourcing – Strengthening Existing Competencies	100
4.2.3	Virtual Organizing – New Segments with Cooperation Partners	101
4.2.4	Developing New Business Segments	102
4.2.5	Summary of Organization Strategies	104
4.3	Networking Strategies.....	105
4.3.1	Electronic Commerce – Transaction Perspective	107
4.3.2	Supply Chain Management – Flow Perspective	110
4.3.3	Customer Relationship Management – Relationship Perspective.....	113
4.3.4	Summary of Networking Strategies.....	114
4.4	Interaction of Business Networking Strategies	115
4.5	Conclusions.....	116

5 Business Networking Lessons Learned: Supply Chain Management at Riverwood International117

5.1	Business Networking Is Customer and Supplier Integration	118
5.2	Establishing the Business Networking Vision	119
5.3	Implementing the Business Networking Vision	120
5.4	As the Tide Comes In all Boats Go Up.....	121
5.5	Shaping Competitive Advantage	122
5.6	Creating the Coordination Backbone	123
5.7	Becoming Part of the Business Networking Infrastructure.....	124

6	Electronic Commerce and Supply Chain Management at ‘The Swatch Group’	127
6.1	Introduction.....	128
6.2	Analysis of Concepts	128
6.2.1	Supply Chain Management - Flow Perspective.....	128
6.2.2	Electronic Commerce - Transaction Perspective.....	130
6.2.3	Comparison of Concepts	131
6.3	Case Study: EC and SCM at ETA SA	133
6.3.1	Goals of EC and SCM at ETA SA.....	133
6.3.2	Initial Problems at ETA SA.....	133
6.3.3	Phase I: Re-Engineering the Supply Chain.....	134
6.3.4	Phase II: Introduction of EC Solution.....	135
6.3.5	Complementarity of Concepts and Implementation	137
6.4	Critical Success Factors at ETA SA	138
6.4.1	Master Data Management as ‘Hidden Success Factor’	138
6.4.2	Strategic Alignment with Marketing Strategy	139
6.4.3	Reciprocity of Benefits	139
6.4.4	Common Basis for Communication	139
6.4.5	Method for Structured Procedure	140
6.5	Conclusions and Next Steps.....	142
7	Knowledge Enabled Customer Relationship Management	143
7.1	Introduction.....	144
7.1.1	Business Trend: Customer Centricity	144
7.1.2	Technology Trend: Tools for Marketing, Sales and Service Automation	145
7.2	Case Study: LGT Bank	147
7.3	Managing Customer Knowledge	149
7.3.1	Knowledge Management.....	149
7.3.2	Relationship Marketing	150
7.3.3	Knowledge Enabled Customer Relationship Management	151
7.4	Towards a CRM Reference Model	153
7.4.1	Business Processes	153
7.4.2	Knowledge Structure	156
7.4.3	Knowledge Infrastructure	158
7.4.4	Knowledge Measurements.....	159

7.5	Knowledge in Business Networks	160
Part 3:	Information System Concepts	161
8	Future Application Architecture for the Pharmaceutical Industry	163
8.1	Introduction – New Business Models Are Emerging.....	164
8.2	From Business Model to Application Architecture	165
8.3	Future Business in the Pharmaceutical Industry	167
8.3.1	Elements of the Business Model.....	168
8.3.2	Relevance of Seven the Trends for the Pharmaceutical Industry.....	170
8.4	Application Architecture of the Information Age	172
8.4.1	Flexibility	173
8.4.2	Networking - Capability of Integration	173
8.4.3	Standardization	174
8.5	Components of the Application Architecture	174
8.5.1	Future Application Architecture Areas.....	174
8.5.2	'Extended' Make-or-Buy Decision.....	176
8.5.3	Application Architecture Components	179
8.6	Summary and Outlook	182
9	Information Systems for Supply Chain Management: An Overview	185
9.1	Introduction.....	186
9.1.1	Objectives	187
9.1.2	Supply Chain Pyramid.....	187
9.2	Planning Processes and Planning Horizons	189
9.3	Software Concepts for Supply Chain Management	190
9.3.1	Transaction and Planning Systems	190
9.3.2	Material Requirements Planning (MRP I).....	191
9.3.3	Manufacturing Resource Planning (MRP II).....	191
9.3.4	Advanced Planning Systems.....	193
9.4	Brief Overview on Advanced Planning Systems	194
9.4.1	Rhythm Solutions of i2 Technologies	198
9.4.2	Manugistics6 of Manugistics	198

9.4.3	APO of SAP	199
9.4.4	Numetrix of J.D. Edwards	199
9.5	Conclusions.....	200
10	Electronic Commerce in the Procurement of Indirect Goods	201
10.1	Challenge in Indirect / MRO Procurement	202
10.1.1	Introduction	202
10.1.2	Current Procurement Scenarios	203
10.1.3	Relevance of Indirect / MRO Procurement	205
10.2	Vendors of Desktop Purchasing Systems	206
10.2.1	Ariba Operating Resources Management System of Ariba Technologies.....	206
10.2.2	Commerce One BuySite / MarketSite of Commerce One	207
10.2.3	Netscape BuyerXpert / ECXpert of Netscape Communications	207
10.3	Overview of System Components and Functionality.....	208
10.4	Process and Workflow Functionality	209
10.4.1	Catalog and Sourcing Services	209
10.4.2	Purchase Requisition and Order Placement.....	210
10.4.3	Delivery and Receipt	211
10.4.4	Payment and Booking.....	212
10.4.5	Process Management	212
10.5	Content Management.....	212
10.5.1	Content Classification.....	213
10.5.2	Content Aggregation.....	213
10.5.3	Content Personalization.....	214
10.6	System Administration	215
10.7	Integration with Legacy / ERP Systems	215
10.8	Potential Savings of Desktop Purchasing Systems	216
11	Templates: Achieving Standardization for Business Networking	219
11.1	Introduction.....	220
11.2	Definition and Approaches to Standardization	221
11.2.1	Definition and Dimensions of Standardization.....	221

11.2.2 Requirements of Inter-process Integration.....	223
11.2.3 Approaches to Close the 'Organization Gap'	224
11.3 Template Handbook.....	225
11.3.1 Idea of a Template Handbook.....	225
11.3.2 Components of a Template Handbook	225
11.3.3 Activities in Template Design and Roll-out	226
11.3.4 Who Should Design and Use a Template Handbook?.....	227
11.4 Template Handbook at the Robert Bosch Group	228
11.4.1 Development of the Template Handbook.....	228
11.4.2 Overview and Experiences	229
11.4.3 Example Documents.....	231
11.5 Benefits of Templates in a Pharmaceutical Company	234
11.6 Conclusions.....	236
Part 4: Key Success Factors	239
12 Key Success Factors for Transaction-oriented Business Networking Systems	241
12.1 Challenges in Designing Business Networking Systems	242
12.1.1 Adoption-lag of Interorganizational Systems	242
12.1.2 Gap Between Business and IT Issues	243
12.2 Characterization of Business Networking Systems	244
12.2.1 Types of Transaction-oriented Business Networking Systems.....	244
12.2.2 Specifics of Business Networking Systems.....	245
12.3 Key Success Factors in Designing Business Networking Systems	247
12.3.1 Cases for Business Networking Systems.....	247
12.3.2 Setting-up Partner Profiles.....	250
12.3.3 Reciprocity: Creating Win-Win Situations	252
12.3.4 Networking Projects are Business Projects	253
12.3.5 Nucleus and Rapid Diffusion: 'Grow by Chunking'	254
12.3.6 Standards and System Integration as a Conditio Sine Qua Non.....	254
12.4 Conclusions.....	255
13 Towards a Method for Business Networking	257
13.1 Challenges of Making Business Networking Happen.....	258
13.1.1 Relevance of a Method for Business Networking	258
13.1.2 Existing Approaches and Requirements	258

13.1.3 Benefits of an Engineering Approach.....	260
13.1.4 Procedure Model of Method.....	262
13.2 CASE I: eProcurement at Deutsche Telekom AG	263
13.2.1 Business Context of Deutsche Telekom AG	263
13.2.2 Options for Organizing Procurement.....	263
13.2.3 Steps Undertaken at Deutsche Telekom	265
13.3 CASE II: Supply Chain Management at Riverwood	
International	267
13.3.1 Supply Chain Scenario at Riverwood International.....	267
13.3.2 Steps Undertaken at Riverwood International	269
13.4 Towards a Method for Business Networking.....	271
13.4.1 Design Areas of a Method for Business Networking	272
13.4.2 Techniques for Business Networking	273
13.5 Conclusions and Outlook.....	275
14 Shaping Business Process Networks at ETA SA	277
14.1 Challenge of Designing Process Networks	278
14.1.1 Introduction	278
14.1.2 Business Networking Potentials	279
14.1.3 Actions Required	280
14.1.4 Applying the Three-Level Model of Business	
Networking at ETA SA	282
14.2 Method for Designing Process Networks	283
14.2.1 Managing Project Complexity.....	283
14.2.2 Result Model	285
14.3 Case Example: Market Launch of New Products at ETA SA.....	287
14.4 Conclusions.....	289
15 Shaping Applications for Global Networked	
Enterprises	293
15.1 Introduction.....	294
15.1.1 Challenge of Architecture Planning.....	294
15.1.2 Goals of Architecture Planning.....	295
15.2 Business Architecture	297
15.2.1 Organization Profile	297
15.2.2 Process Architecture	300
15.3 Application Architecture.....	301
15.3.1 Distribution Concepts in Packaged Software	301
15.3.2 Integration Areas at the Application Level.....	302

15.3.3 Structure of Application Architecture.....	303
15.4 Methodological Procedure.....	305
15.4.1 Existing Approaches.....	305
15.4.2 Deficits of Existing Methods.....	307
15.4.3 Proposed Method.....	308
15.5 Conclusions and Outlook.....	310
16 Business Networking - Summary and Outlook	313
16.1 The Bottom Line of Business Networking.....	314
16.1.1 Improving Business Efficiency and Creating New Opportunities	314
16.1.2 Goals of Business Networking	315
16.1.3 Model of Business Networking	315
16.2 Next Steps in Business Networking.....	317
16.2.1 Changing Face of Business Networking Systems	317
16.2.2 The Advent of eServices.....	318
16.2.3 Networking of Smart Appliances and Real-life Objects.....	319
List of Abbreviations.....	321
Glossary.....	325
References	335
Index	371
Authors.....	375