

# **Overview of Contents**

1	Introduction – Chances and Challenges in Business Networking .....	1
<b>Part 1: Building the Foundation.....</b>		<b>15</b>
2	Enterprise in the Information Age .....	17
3	The Networked Enterprise.....	55
<b>Part 2: Business Concepts .....</b>		<b>87</b>
4	Strategies for Business Networking .....	89
5	Business Networking Lessons Learned: Supply Chain Management at Riverwood International .....	111
6	Electronic Commerce and Supply Chain Management at 'The Swatch Group' .....	121
7	Knowledge Enabled Customer Relationship Management ....	135
<b>Part 3: Information System Concepts.....</b>		<b>153</b>
8	Future Application Architecture for the Pharmaceutical Industry .....	155
9	Overview on Supply Chain Management Systems .....	175
10	Electronic Commerce in the Procurement of Indirect Goods.	193
11	Templates: Standardization for Business Networking .....	211
12	eServices for Integrating eMarkets.....	229
<b>Part 4: Key Success Factors.....</b>		<b>247</b>
13	Key Success Factors for Business Networking Systems .....	249
14	Towards a Method for Business Networking .....	265

15 Application of the Business Networking Method at SAP .....	289
16 Architecture Planning for Global Networked Enterprises.....	305
17 Business Networking - Summary and Outlook .....	323
List of Abbreviations .....	331
Glossary .....	335
References.....	345
Index .....	379
Authors .....	395
Questionnaire for Networkability Assessment .....	397

# **Table of Contents**

<b>1</b>	<b>Introduction – Chances and Challenges in Business Networking .....</b>	<b>1</b>
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 System Concepts .....	8
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 in Business Networking .....	11
	<b>Part 1: Building the Foundation.....</b>	<b>15</b>
<b>2</b>	<b>Enterprise in the Information Age.....</b>	<b>17</b>
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

<b>3</b>	<b>The Networked Enterprise .....</b>	<b>55</b>
3.1	Introduction.....	56
3.2	Business Networking Case Examples .....	57
3.2.1	Dell: Supply Chain Management and Customer Relationship Management.....	57
3.2.2	Amazon.com: Supply Chain Management and Customer Relationship Management.....	59
3.2.3	Avnet Marshall: Supply Chain Management and Customer Relationship Management .....	61
3.2.4	SAP: Customer Relationship Management.....	62
3.2.5	MarketSite.net: Procurement and Sales .....	63
3.2.6	UBS: Procurement .....	65
3.2.7	Migros Cooperative: Development .....	66
3.2.8	Commtech: Procurement, Finance, Real Estate and Taxes.....	67
3.3	Networked Business Processes .....	69
3.3.1	Networking Through Coordination.....	70
3.3.2	Collaborative Processes .....	71
3.4	Model of a Networked Enterprise .....	75
3.4.1	eServices .....	75
3.4.2	Standards.....	76
3.4.3	Model.....	76
3.5	Networkability as a Competitive Factor.....	77
3.5.1	Concept and Design Objects of Networkability .....	78
3.5.2	Approaches to Measuring Networkability .....	79
3.6	Consequences for Management: Design for Networkability.....	81
3.7	Conclusions.....	84
<b>Part 2: Business Concepts .....</b>	<b>87</b>	
<b>4</b>	<b>Strategies for Business Networking .....</b>	<b>89</b>
4.1	Introduction.....	90
4.1.1	Strategic Relevance of Business Networking .....	90
4.1.2	Overview of Strategies.....	91
4.2	Organization Strategies .....	92
4.2.1	Outsourcing – Externalizing Non-core Competencies .....	93
4.2.2	Insourcing – Strengthening Existing Competencies .....	94
4.2.3	Virtual Organizing – New Segments with Cooperation Partners .....	95
4.2.4	Developing New Business Segments.....	96
4.2.5	Summary of Organization Strategies .....	98

4.3	Networking Strategies .....	99
4.3.1	Electronic Commerce – Transaction Perspective.....	101
4.3.2	Supply Chain Management – Flow Perspective .....	104
4.3.3	Customer Relationship Management – Relationship Perspective.....	107
4.3.4	Summary of Networking Strategies .....	108
4.4	Interaction of Business Networking Strategies .....	109
4.5	Conclusions .....	110
<b>5</b>	<b>Business Networking Lessons Learned: Supply Chain Management at Riverwood International .....</b>	<b>111</b>
5.1	Business Networking Is Customer and Supplier Integration.....	112
5.2	Establishing the Business Networking Vision .....	113
5.3	Implementing the Business Networking Vision.....	114
5.4	As the Tide Comes In All Boats Go Up.....	115
5.5	Shaping Competitive Advantage.....	116
5.6	Creating the Coordination Backbone .....	117
5.7	Becoming Part of the Business Networking Infrastructure .....	118
<b>6</b>	<b>Electronic Commerce and Supply Chain Management at ‘The Swatch Group’ .....</b>	<b>121</b>
6.1	Introduction.....	122
6.2	Comparison of Concepts .....	122
6.3	Case Study: EC and SCM at ETA SA.....	124
6.3.1	Goals of EC and SCM at ETA SA.....	124
6.3.2	Initial Problems at ETA SA .....	124
6.3.3	Phase I: Re-engineering the Supply Chain.....	125
6.3.4	Phase II: Introduction of a EC Solution .....	126
6.3.5	Complementarity of Concepts and Implementation.....	128
6.4	Critical Success Factors at ETA SA.....	129
6.4.1	Master Data Management as ‘Hidden Success Factor’ .....	129
6.4.2	Strategic Alignment with Marketing Strategy .....	130
6.4.3	Reciprocity of Benefits .....	130
6.4.4	Common Basis for Communication.....	131
6.4.5	Method for Structured Procedure.....	132
6.5	Conclusions and Next Steps.....	133

<b>7 Knowledge Enabled Customer Relationship Management.....</b>	<b>135</b>
7.1 Introduction.....	136
7.1.1 Business Trend: Customer Centricity .....	136
7.1.2 Technology Trend: Tools for Marketing, Sales and Service Automation .....	137
7.2 Case Study: LGT Bank .....	139
7.3 Managing Customer Knowledge.....	141
7.3.1 Knowledge Management .....	141
7.3.2 Relationship Marketing.....	142
7.3.3 Knowledge Enabled Customer Relationship Management.....	143
7.4 Towards a CRM Reference Model.....	144
7.4.1 Business Processes.....	145
7.4.2 Knowledge Structure .....	148
7.4.3 Knowledge Infrastructure .....	150
7.4.4 Knowledge Measurements .....	151
7.5 Knowledge in Business Networks.....	152
<b>Part 3: Information System Concepts.....</b>	<b>153</b>
<b>8 Future Application Architecture for the Pharmaceutical Industry .....</b>	<b>155</b>
8.1 Introduction – New Business Models Are Emerging .....	156
8.2 From Business Model to Application Architecture .....	157
8.3 Future Business in the Pharmaceutical Industry .....	159
8.3.1 Elements of the Business Model.....	160
8.3.2 Relevance of the Seven Trends for the Pharmaceutical Industry .....	162
8.4 Application Architecture of the Information Age .....	164
8.4.1 Flexibility .....	165
8.4.2 Networking - Capability of Integration .....	165
8.4.3 Standardization .....	166
8.5 Components of the Application Architecture.....	166
8.5.1 Future Application Architecture Areas .....	166
8.5.2 ‘Extended’ Make-or-Buy Decision .....	168
8.5.3 Application Architecture Components.....	170
8.6 Summary and Outlook .....	173

<b>9   Overview on Supply Chain Management Systems .....</b>	<b>175</b>
9.1   Introduction .....	176
9.1.1   Objectives .....	176
9.1.2   Supply Chain Pyramid .....	177
9.2   Planning Processes and Planning Horizons.....	179
9.3   Software Concepts for Supply Chain Management .....	180
9.3.1   Transaction and Planning Systems.....	180
9.3.2   Material Requirements Planning (MRP I) .....	181
9.3.3   Manufacturing Resource Planning (MRP II) .....	181
9.3.4   Advanced Planning Systems .....	183
9.4   Brief Overview on Advanced Planning Systems .....	185
9.4.1   Functionality and Modules.....	185
9.4.2   Rhythm Solutions of i2 Technologies.....	188
9.4.3   Manugistics6 of Manugistics .....	189
9.4.4   APO of SAP .....	189
9.4.5   Numetrix of J.D. Edwards.....	190
9.5   Conclusions .....	190
<b>10   Electronic Commerce in the Procurement of Indirect Goods .....</b>	<b>193</b>
10.1   Challenge in Indirect / MRO Procurement.....	194
10.1.1   Introduction.....	194
10.1.2   Current Procurement Scenarios .....	195
10.1.3   Relevance of Indirect / MRO Procurement.....	197
10.2   Vendors of Desktop Purchasing Systems.....	198
10.2.1   Ariba Operating Resources Management System.....	198
10.2.2   Commerce One BuySite / MarketSite.....	199
10.2.3   iPlanet BuyerXpert / ECXpert .....	199
10.3   Overview of System Components and Functionality .....	200
10.4   Process and Workflow Functionality .....	201
10.4.1   Catalog and Sourcing Services .....	201
10.4.2   Purchase Requisition and Order Placement .....	202
10.4.3   Delivery and Receipt.....	203
10.4.4   Payment and Booking .....	204
10.4.5   Process Management .....	204
10.5   Content Management .....	204
10.5.1   Content Classification.....	205
10.5.2   Content Aggregation.....	205
10.5.3   Content Personalization .....	206

10.6 System Administration.....	207
10.7 Integration with Legacy / ERP Systems.....	207
10.8 Potential Savings of Desktop Purchasing Systems .....	208
<b>11 Templates: Standardization for Business Networking ....</b>	<b>211</b>
11.1 Introduction .....	212
11.2 Definition and Approaches to Standardization.....	213
11.2.1 Definition and Dimensions of Standardization .....	213
11.2.2 Requirements of Inter-process Integration.....	214
11.2.3 Approaches to Close the ‘Organization Gap’ .....	215
11.3 Template Handbook .....	216
11.3.1 Idea of a Template Handbook.....	217
11.3.2 Components of a Template Handbook.....	217
11.3.3 Activities in Template Design and Roll-out.....	218
11.3.4 Who Should Design and Use a Template Handbook? .....	219
11.4 Template Handbook at the Robert Bosch Group .....	220
11.4.1 Development of the Template Handbook .....	220
11.4.2 Overview and Experiences.....	221
11.4.3 Example Documents .....	223
11.5 Benefits of Templates in a Pharmaceutical Company.....	225
11.6 Conclusions.....	227
<b>12 eServices for Integrating eMarkets.....</b>	<b>229</b>
12.1 Business Networking and ERP Integration .....	230
12.2 eMarkets and eServices in Business Networking.....	231
12.2.1 Evolution and Market Potential .....	231
12.2.2 Benefits of eMarkets .....	231
12.2.3 Benefits of Process Integration .....	232
12.2.4 Integration Requirements.....	232
12.3 eServices for Integration - Case of Triaton .....	234
12.3.1 newtron and Triaton – eMarket and System Supplier.....	234
12.3.2 Considerations on eMarket Integration Potential.....	235
12.3.3 Triaton eService ‘A2A e-Link for eMarkets’ .....	236
12.3.4 Cooperation newtron and Triaton .....	237
12.3.5 Business Process Support and Benefits.....	239
12.4 Implementation and Architecture of A2A e-Link for eMarkets.....	240

12.5 Digression: Solution Enhancement Potentials with IBM tpaML.....	243
12.6 Conclusions and Outlook .....	246
<b>Part 4: Key Success Factors.....</b>	<b>247</b>
<b>13 Key Success Factors for Business Networking Systems ....</b>	<b>249</b>
13.1 Challenges in Designing Business Networking Systems .....	250
13.1.1 Adoption-lag of Interorganizational Systems .....	250
13.1.2 Gap Between Business and IT Issues.....	251
13.2 Characterization of Business Networking Systems.....	252
13.2.1 Types of Transaction-oriented Business Networking Systems .....	252
13.2.2 Specifics of Business Networking Systems .....	253
13.3 Key Success Factors in Designing Business Networking Systems .....	255
13.3.1 Cases for Business Networking Systems .....	255
13.3.2 Setting-up Partner Profiles.....	257
13.3.3 Reciprocity: Creating Win-Win Situations .....	260
13.3.4 Networking Projects are Business Projects.....	261
13.3.5 Nucleus and Rapid Diffusion: 'Grow by Chunking' .....	261
13.3.6 Standards and System Integration as a 'Conditio Sine Qua Non'.....	262
13.4 Conclusions .....	263
<b>14 Towards a Method for Business Networking.....</b>	<b>265</b>
14.1 Challenges of Making Business Networking Happen.....	266
14.1.1 Relevance of a Method for Business Networking.....	266
14.1.2 Existing Approaches and Requirements .....	266
14.1.3 Benefits of an Engineering Approach.....	268
14.1.4 Focus and Procedure Model of the Method .....	270
14.2 Case I: eProcurement at Deutsche Telekom AG .....	272
14.2.1 Business Context of Deutsche Telekom AG.....	272
14.2.2 Options for Organizing Procurement .....	272
14.2.3 Steps Undertaken at Deutsche Telekom .....	274
14.3 Case II: Supply Chain Management at Riverwood International .....	275
14.3.1 Supply Chain Scenario at Riverwood International .....	275
14.3.2 Steps Undertaken at Riverwood International .....	277

14.4 Towards a Method for Business Networking .....	280
14.4.1 Design Areas of a Method for Business Networking .....	281
14.4.2 Meta Model .....	282
14.4.3 Role Model .....	283
14.4.4 Procedure Model and Techniques .....	283
14.5 Conclusions and Outlook .....	286
<b>15 Application of the Business Networking Method at SAP .</b>	<b>289</b>
15.1 Distinction Between Business Networking Strategies .....	290
15.1.1 Overview .....	290
15.1.2 Interaction of Strategies From the Customer Perspective .....	290
15.2 A Method for Implementing Supply Chain Modules .....	292
15.2.1 Goals of the Method .....	292
15.2.2 Business Networking Systems and Methods of SAP .....	292
15.2.3 Accelerated SAP (ASAP) Roadmap .....	293
15.2.4 Strategic Blueprint of ASAP for APO 2.0a .....	294
15.3 Reference Case for the Strategic Blueprint: Woodbridge, Int .....	295
15.4 Conclusions and Next Steps .....	302
<b>16 Architecture Planning for Global Networked Enterprises .....</b>	<b>305</b>
16.1 Introduction .....	306
16.1.1 Challenge of Architecture Planning .....	306
16.1.2 Goals of Architecture Planning .....	307
16.2 Business Architecture .....	309
16.2.1 Organization Profile .....	309
16.2.2 Process Architecture .....	311
16.3 Application Architecture .....	313
16.3.1 Distribution Concepts in Packaged Software .....	313
16.3.2 Integration Areas at the Application Level .....	313
16.3.3 Structure of Application Architecture .....	314
16.4 Methodological Procedure .....	316
16.4.1 Existing Approaches .....	316
16.4.2 Deficits of Existing Methods .....	318
16.4.3 Proposed Method .....	318
16.5 Conclusions and Outlook .....	321

<b>17 Business Networking - Summary and Outlook.....</b>	<b>323</b>
17.1 Bottom Line of Business Networking .....	324
17.1.1 Improving Business Efficiency and Creating New Opportunities .....	324
17.1.2 Goals of Business Networking.....	325
17.1.3 Changing Face of Business Networking Systems.....	326
17.1.4 Model of Business Networking.....	327
17.2 Next Steps in Business Networking .....	328
17.2.1 Advent of Process Portals and eServices .....	328
17.2.2 Networking Smart Appliances and Real-Life Assets.....	330
<b>List of Abbreviations .....</b>	<b>331</b>
<b>Glossary .....</b>	<b>335</b>
<b>References.....</b>	<b>345</b>
<b>Index.....</b>	<b>379</b>
<b>Authors .....</b>	<b>395</b>
<b>Questionnaire for Networkability Assessment.....</b>	<b>397</b>