

Table of Contents

Foreword by Prof. Hasso Plattner	v
Preface	vii
1 Introduction	1
1.1 Definitions and Terminology.....	3
1.2 Benefits of Supply Chain Management.....	5
1.3 Risks and Obstacles of Supply Chain Management.....	8
2 The Scope of Supply Chain Management	11
2.1 Collaboration in Supply Chains.....	11
2.1.1 Insufficient Collaboration Results in the Bullwhip Effect	11
2.1.2 Types of Collaboration	12
2.2 Business Architectures for Supply Chain Management.....	23
2.2.1 Supply Chain Planning Matrices.....	23
2.2.2 The Supply Chain Operations Reference Model	24
2.2.3 A Supply Chain Pyramid.....	26
2.3 Desirable Features of SCM Systems	28
2.3.1 Design of Supply Chain and Information Architecture	29
2.3.2 Collaborative Product Design (“Design for SCM”)	33
2.3.3 Sales and Demand Planning.....	34
2.3.4 Procurement Planning	43
2.3.5 Production Planning	45
2.3.6 Distribution Planning	50
2.3.7 Return and After-Sales Processes	54
2.3.8 Controlling and Support Processes	55
3 Processes of SCM Covered by mySAP SCM 5.0	59
3.1 Introduction.....	59
3.2 mySAP Business Suite	59
3.3 mySAP SCM	60
3.4 Generic Processes Enabled by mySAP SCM 5.0 at a Glance	61
3.5 Process View of mySAP SCM	62
3.5.1 Demand and Supply Planning	62
3.5.2 ServiceParts Planning.....	63
3.5.3 Procurement.....	65
3.5.4 Manufacturing	66
3.5.5 Warehousing.....	67

3.5.6	Order Fulfillment.....	68
3.5.7	Transportation	69
3.5.8	Supply Chain Design and Analytics	70
3.6	Relationship between the Supply Chain Pyramid and the Solution Map.....	70
4	SAP Systems for Supply Chain Management.....	73
4.1	Overview of SAP SCM™	73
4.2	Supply Chain Management with SAP APO™	78
4.2.1	Demand Planning	79
4.2.2	Supply Network Planning	84
4.2.3	Supply Chain Collaboration.....	96
4.2.4	Production Planning and Detailed Scheduling.....	100
4.2.5	Global Available-to-Promise.....	107
4.2.6	Transportation Planning and Vehicle Scheduling.....	113
4.2.7	Maintenance and Service Planning	115
4.3	Collaboration supported by SAP ICH™	118
4.3.1	Supplier Collaboration	118
4.3.2	Responsive Replenishment	123
4.4	Service Parts Planning with SAP APO™ and SAP ICH™.....	128
4.4.1	Forecasting	132
4.4.2	Inventory Planning	136
4.4.3	Distribution Requirements Planning and Procurement.....	138
4.4.4	Deployment and Inventory Balancing	142
4.4.5	Surplus and Obsolescence Planning.....	146
4.4.6	Supersession	147
4.5	Forecasting and Replenishment with SAP F&R™	149
4.6	Controlling and Support Processes with SAP SCM™	152
4.6.1	Tracking and Tracing with SAP EM™	152
4.6.2	Alert Monitoring	153
4.7	Data Integration and Master Data.....	155
4.7.1	System Landscape and Data Integration	155
4.7.2	RFID with SAP Auto-ID Infrastructure.....	156
4.7.3	Master Data	159
5	Supply Chain Management Case Studies.....	161
5.1	Case Study Colgate-Palmolive	161
5.1.1	Company Profile	161
5.1.2	Objective of the Use of SAP APO™	161
5.1.3	Parties Involved in the “Extended Enterprise”.....	162
5.1.4	Structure/Network	162
5.1.5	IT Infrastructure	163
5.1.6	SAP APO™.....	163
5.1.7	Use of Additional SAP Products.....	165
5.1.8	Interview.....	165

5.2 Case Study Danfoss	166
5.2.1 Company Profile	166
5.2.2 SCM Based on SAP Systems.....	167
5.2.3 Interview.....	168
5.3 Case Study Henkel.....	170
5.3.1 Company Profile	170
5.3.2 Objective of the Use of SAP Systems.....	170
5.3.3 Parties Involved in the “Extended Enterprise”	171
5.3.4 IT Infrastructure	171
5.3.5 SAP Systems	171
5.3.6 Use of Additional SAP Products.....	174
5.3.7 Interview.....	174
5.4 Case Study Hilti.....	175
5.4.1 Company Profile	175
5.4.2 IT Organization and Evolution of IT Systems	175
5.4.3 Procedure Model for Conversion to SAP Systems	177
5.4.4 SCM Based on SAP Systems.....	177
5.4.5 Present Status and Future Developments	179
5.4.6 Interview.....	179
5.5 Case Study Nestlé.....	181
5.5.1 Company Profile	181
5.5.2 Supply Chain Management Organization	181
5.5.3 GLOBE – Global Business Excellence	182
5.5.4 Technical Implications of GLOBE	183
5.5.5 SCM and GLOBE Based on SAP Systems	184
5.5.6 Present Status (Mid 2008)	185
5.5.7 Future Developments	186
5.5.8 Interview.....	186
6 Supply Chain Management in Midsize Companies, Based on the New Hosted Solution SAP Business ByDesign™	189
6.1 Cross Application Characteristics of SCM.....	189
6.2 Components of SCM in SAP Business ByDesign™.....	191
6.3 SCM Principles in SAP Business ByDesign™	192
6.3.1 Demand Driven Planning and Execution.....	192
6.3.2 Decoupling of Planning and Execution.....	193
6.3.3 Interlocking of Warehousing and Manufacturing Execution.....	193
6.3.4 Supporting Execution Level Users.....	194
6.4 Summary and Prospects.....	194
Abbreviations.....	195
References	199
Index	203