
Contents

1	Introduction	1
1.1	Importance of Manufacturing	3
1.2	Strategic Manufacturing Management	5
1.3	Limits of Existing Models	6
1.4	Current Business Climate of Manufacturing Companies	7
1.5	Aim and Structure of the Book	11
1.6	Summary	13
2	Development of Production Management: From Site to Network Optimisation	15
2.1	Manufacturing Networks as Part of Production Management	15
2.2	From Site to Network Management	17
2.3	Management Approaches at Site Level	26
2.3.1	Site Location Choices	26
2.3.2	Site Roles	28
2.3.3	Lean Manufacturing	32
2.4	Management Approaches at Network Level	37
2.4.1	Framework Models and Management Frameworks for Network Management	37
2.4.2	Quantitative Design and Optimisation Approaches	40
2.4.3	Strategic-Qualitative Design and Optimisation Approaches	40
2.4.4	Critical Evaluation of Existing Approaches	42
2.5	Summary	43
3	A Reference Framework for Network Design	45
3.1	Strategy	47
3.1.1	Manufacturing Strategy	47
3.1.2	Network Strategy	48
3.2	Configuration	50
3.2.1	Network Structure	51
3.2.2	Specialisation	52
3.2.3	Resources	53
3.2.4	Internal Supply Chain	55

3.3	Coordination	57
3.3.1	Organisation	58
3.3.2	Coopetition	59
3.4	Network FIT	63
3.5	The PARTS Method for Network Management	64
3.6	Summary	66
4	Clarification of the Initial Strategic Situation	67
4.1	From Business to Manufacturing Strategy	67
4.2	Manufacturing and Network Strategy	69
4.2.1	Manufacturing Strategy	69
4.2.2	Network Strategy	72
4.3	Strategy Types in Practice	75
4.3.1	Manufacturing Strategy	76
4.3.2	Network Strategy	77
4.4	Strategy Analysis and Definition in the Case of Mechanical Engineering Ltd.	79
4.5	Summary	84
5	Network Configuration	85
5.1	Introduction	85
5.2	Design of the Network Structure	86
5.3	Design of the Network Specialisation	88
5.4	Design of the Site Specialisation	90
5.5	Design of the Network Resources	95
5.6	Design of the Internal Supply Chain Structure	98
5.7	Configuration Types in Practice	101
5.8	Design of the Network Configuration in the Case of Mechanical Engineering Ltd.	104
5.9	Summary	111
6	Network Coordination	113
6.1	Designing the Network Organisation	113
6.2	Centralisation and Standardisation in the Production Network	116
6.2.1	Framework Development and Description	116
6.2.2	The Underlying Logic	124
6.3	Resource Allocation and Sharing in the Network	128
6.3.1	Framework Development and Description	128
6.3.2	The Underlying Logic	134
6.4	Management of Network Flows	137
6.4.1	Framework Development and Description	137
6.4.2	The Underlying Logic	144
6.5	Incentive Mechanisms in the Network	147
6.5.1	Framework Development and Description	147
6.5.2	The Underlying Logic	154

6.6	Coordination Types in Practice	158
6.7	Design of the Network Coordination in the Case of Mechanical Engineering Ltd.	160
6.7.1	Centralisation and Standardisation	160
6.7.2	Resource Allocation and Sharing	163
6.7.3	Information and Knowledge Sharing	166
6.8	Design of the Network FIT in the Case of Mechanical Engineering Ltd.	170
6.9	Summary	171
7	Analysis and Design of Networks in Practice	173
7.1	From a Management Architecture to an Optimisation Process . . .	173
7.2	Food Ltd.: Formulation of a Network Mission	179
7.2.1	Network Analysis and Target Setting	179
7.2.2	Scenario Development	183
7.3	Summary	188
8	Outlook and Summary	191
8.1	Institutionalisation of the Network Management	191
8.2	Summary	194
	Appendix A	197
	Appendix B	253
	Literature	259
	Index	269

Strategic Management of Global Manufacturing
Networks

Aligning Strategy, Configuration, and Coordination

Friedli, Th.; Mundt, A.; Thomas, S.

2014, XII, 271 p. 128 illus.,

ISBN: 978-3-642-34185-4