

Table of contents

List of figures	11
List of tables	13
List of abbreviations	15
1. Introduction	17
1.1 The research question	18
1.2 The social process of collaborative innovation	21
1.3 A sociological approach to innovation management	24
1.4 The praxis of collaborative innovation	29
1.5 Structure of this book	32
2. The management of collaborative innovation	35
2.1 Open innovation – A straight road to success?	36
2.1.1 Rules and practices of IP management	41
2.1.2 Preliminary conclusions: Blind spots in the open innovation debate	44
2.2 Key objectives of collaborative innovation management	46
2.2.1 Knowledge boundaries – The cognitive barriers of collaborative innovation	47
2.2.2 Types of barriers to collaborative innovation and knowledge integration	51
3. Establishing technology fields	55
3.1 The institutional elements of innovation projects	56
3.2 Standards of technology development	60
3.3 Three strategies of establishing an innovation praxis	67
3.3.1 Proposition 1: Monitoring technical standards and sanctioning their non-conformity	68
3.3.2 Proposition 2: Establishing a praxis of collaborative problem-solving	69
3.3.3 Proposition 3: Adapting technical standards from adjacent fields	70
4. A multiple case study design for understanding innovation projects	73
4.1 The process of “casing”	74
4.2 The structure of the empirical chapters	76

4.3	Discussing rigor criteria	77
4.4	Identifying empirical cases of innovation projects	78
4.4.1	Wind energy technologies	79
4.4.2	Patterns of technological innovation	81
4.4.3	Data collection and problem-centered interviews	83
5.	Projects of incremental innovation	91
5.1	Positions of partners in the field	91
5.1.1	Case A: An incumbent supplier and market leader	92
5.1.2	Case B: A newcomer and niche product supplier	92
5.2	Analysed practices of knowledge integration	94
5.2.1	Case A: Highly regulated product development	94
5.2.2	Case B: A new component supply relation	95
5.3	Realizing technology development	97
5.3.1	Case A: Imposing technical standards	98
5.3.2	Contractually defined technology projects	98
5.3.3	Case B: Dominating a supply relation	106
5.4	Institutional barriers and what they caused	112
5.4.1	Case A: Loss of innovation capabilities	112
5.4.2	Case B: Remaining trapped in a market niche	115
5.5	Interim conclusions	116
6.	Projects of radical innovation	119
6.1	Positions of partners in the field	119
6.1.1	Case C: The three major players	119
6.1.2	Case D: A newly established innovation network	123
6.2	Analysed practices of knowledge integration	125
6.2.1	Case C: Specifying a radical innovation	126
6.2.2	Case D: Establishing an innovation network	128
6.3	Realizing technology development	130
6.4	Case C: Working together with experts	130
6.4.1	Relying on a boundary spanner	130
6.4.2	Case D: Relying on personal trust	136
6.5	Institutional barriers and what they caused	143
6.5.1	Case C: 'Blind spots' of technology development	143
6.5.2	Case D: Institutional concentration of expertise	147
6.6	Interim conclusions	150
7.	Emerging technology fields	153

7.1	An emerging field of technology development	153
7.1.1	New environmental regulations	154
7.1.2	The major players	156
7.1.3	Cases E & F: Two system suppliers, two solutions	158
7.2	Analysed practices of knowledge integration	159
7.2.1	Case E: Relying on individual creativity and inventiveness	160
7.2.2	Case F: Technology transfer from oil and gas	161
7.3	Realizing technology development	162
7.3.1	Case E: Technical invention vs. trial-and-error learning	163
7.3.2	Case F: Creatively combining technical standards	170
7.4	Institutional barriers and what they caused	176
7.4.1	Case E: Lacking trust in system suppliers	177
7.4.2	Case F: Lacking customer cooperation	180
7.5	Interim conclusions	181
8.	Conclusions	185
8.1	The author's main argument	186
8.2	Advancing innovation management research	187
8.3	Summarizing the empirical findings	190
8.3.1	Using coercive power to impose technical standards	191
8.3.2	Relying on personal trust to gain some control	194
8.3.3	Individual imagination vs. trial-and-error learning	197
8.4	Synthesis: The institutional barriers to collaborative innovation	199
8.4.1	Incremental innovation: Incumbents are bound to existing technical standards	200
8.4.2	Radical innovation: The inability to build coalitions with powerful actors	200
8.4.3	Emerging fields of technology development: The lacking legitimacy of system suppliers	201
8.5	Theoretical relevance	203
8.6	Practical relevance	204
8.7	Limitations and implications for future research	205
9.	Appendix	207
9.1	Interview guide	207
	Bibliography	209