

# Contents

<b>1</b>	<b>Introducing Agile Service Development</b>	<b>1</b>
1.1	Introduction	1
1.2	Services and Service Thinking	3
1.2.1	Service Definitions and Properties	5
1.2.2	Our Definition of Service	6
1.2.3	Service Development as a Wicked Problem	7
1.2.4	The Need for Agility	9
1.3	Agile Enterprise Engineering	10
1.3.1	Limits to an Engineering Approach	11
1.3.2	The Enterprise Engineering Manifesto	12
1.4	Towards an Engineering Approach to Agile Service Development	13
<b>2</b>	<b>Agility</b>	<b>17</b>
2.1	Introduction	17
2.2	Common Agile Methods	19
2.3	Operationalizing Agility	21
2.3.1	Business Agility	23
2.3.2	Process Agility	25
2.3.3	System Agility	27
2.4	Business Drivers for Agility	29
2.4.1	Describing Agility Drivers	31
2.4.2	Product and Service Dynamics	32
2.4.3	Revenue Dynamics	34
2.4.4	Volume Dynamics	35
2.4.5	Channel Flexibility	35
2.4.6	Supply Chain Flexibility	37
2.4.7	Continuous Compliance	38
2.4.8	Technology Adoption	39

- 3 Agile Architecture** ..... 41
  - 3.1 Introduction ..... 41
  - 3.2 Architecture to Manage Agility ..... 44
    - 3.2.1 Agility Aspects ..... 46
    - 3.2.2 Operating Models ..... 49
    - 3.2.3 Standardization and Variation ..... 50
    - 3.2.4 Model-Based Development ..... 52
  - 3.3 Architecture Processes in an Agile Context ..... 53
    - 3.3.1 A Risk-Driven Approach ..... 54
    - 3.3.2 Refactoring and Technical Debt ..... 55
    - 3.3.3 An Agile Architecture Process ..... 56
  
- 4 Service Modelling** ..... 59
  - 4.1 Introduction ..... 59
  - 4.2 The Role of Models in Agile Service Development ..... 60
  - 4.3 Adoption Levels of Modelling ..... 63
  - 4.4 The ASD Framework ..... 64
    - 4.4.1 Service Aspects ..... 66
    - 4.4.2 Abstraction Levels ..... 68
    - 4.4.3 Overview and Use of the Framework ..... 70
    - 4.4.4 Modelling AgiSurance ..... 71
  - 4.5 The ASD Conceptual Model ..... 72
    - 4.5.1 The Context Domain ..... 73
    - 4.5.2 Requirements Modelling ..... 75
    - 4.5.3 Interaction Modelling ..... 77
    - 4.5.4 Structure Modelling ..... 79
    - 4.5.5 Function Modelling ..... 81
    - 4.5.6 Coordination Modelling ..... 82
    - 4.5.7 Decision Modelling ..... 85
    - 4.5.8 Product Modelling ..... 88
    - 4.5.9 Integrated Service Metamodel ..... 90
  - 4.6 Model Integration ..... 90
  - 4.7 Requirements for Tool Support ..... 93
  
- 5 Patterns for Agility** ..... 95
  - 5.1 Introduction ..... 95
  - 5.2 Conceptual Model ..... 97
  - 5.3 Pattern Classification ..... 98
    - 5.3.1 Activities ..... 98
    - 5.3.2 Problem Type ..... 99
    - 5.3.3 Role ..... 100
    - 5.3.4 Contribution to Agility ..... 100
  - 5.4 Pattern Catalogue ..... 101
  - 5.5 Example: Multichannel Management Patterns ..... 102
  - 5.6 Patterns at Work ..... 107

<b>6</b>	<b>An Agile Way of Working</b>	111
6.1	Introduction	111
6.2	A Situational Approach to an Agile Way of Working	113
6.3	Practices, Goals, and Stakeholders	114
6.3.1	Practices as Method Fragments	114
6.3.2	Identifying Practices	116
6.3.3	Situational Factors	116
6.3.4	Stakeholder and Goals	120
6.4	Constructing a Situational Way of Working	121
6.5	Step 1: Identify Situational Factors, Goals, and Practices	123
6.5.1	Setting Goals	123
6.5.2	Situational Factors: Strategy and Business Drivers	124
6.5.3	Situational Factors: Service	126
6.5.4	Situational Factors: The Process	128
6.6	Step 2: Select Agile Practices	129
6.7	Step 3: Combine Practices	129
6.7.1	Assembly Through Activities	130
6.7.2	Assembly Through Artefacts	131
6.7.3	Assembly Through Conditions	131
6.7.4	Assembly Through Process Increments	132
6.7.5	Assembly Through Iteration Matching	133
6.7.6	Activity Planning	134
6.7.7	Tool Support	138
6.8	Step 4: Execute the Way of Working	138
6.9	Step 5: Reflect on the Way of Working	139
<b>7</b>	<b>Stakeholder Communication</b>	141
7.1	Introduction	141
7.2	Communication Situations	146
7.3	Communication Set-Ups	152
7.3.1	Artefact Creation Patterns and Communication Practices	152
7.3.2	Structures, Languages, Representations; Topics	154
7.3.3	Participants and Facilitation	156
7.3.4	Space and Time; Media, Tools, and Technologies	157
7.4	Communication Needs and Capabilities of Stakeholders	158
7.4.1	Measuring the Meaning of Concepts	159
7.4.2	Abstraction Skills in Talking About Models	161
7.5	Model Visualization Guidelines	164
7.5.1	Semiotic Clarity	165
7.5.2	Symbol/Edge Overlap	166
7.5.3	Minimize Edge Bends	167
7.5.4	Semantic Transparency	168
7.5.5	Complexity Management	168
7.5.6	Visual Expressiveness	169

7.6	Communication Practices .....	170
7.6.1	Apply Focused Conversations .....	170
7.6.2	If a Problem Cannot Be Modelled, Do Not Model the Problem .....	171
7.6.3	Do Not Communicate the Model, Communicate the Effects of the Model .....	171
7.6.4	Collaboratively Model, But Not Just for the Model .....	172
7.6.5	Respect Stakeholders Perspectives During Modelling .....	172
7.6.6	Do Not Organize Stakeholder Interaction Sessions Without a Concrete Purpose of the Model .....	173
7.6.7	Avoid Collaborative Sessions with Polarized Stakeholders ..	173
7.6.8	Communication Does Not Stop After the Service Has Been Created .....	174
7.6.9	Be Aware of Power and Hierarchies That Might Affect the Outcome .....	174
7.6.10	Apply User Involvement with Care, Not by Default .....	175
7.6.11	Do Not Always Publish a Model Publicly .....	175
7.6.12	Use Visualization Wisely .....	175
7.6.13	Take into Account the Limitations of Your Domain Experts .....	175
<b>8</b>	<b>Adopting Agile Service Development .....</b>	<b>177</b>
8.1	Barriers to Agility .....	177
8.1.1	Technical Barriers .....	177
8.1.2	Organizational Barriers .....	178
8.2	Scaling Up Agile Processes .....	180
8.3	A Capability Model for Agile Service Development .....	181
8.3.1	System Agility Capabilities .....	182
8.3.2	Business and Process Agility Capabilities .....	184
8.3.3	Investing in Agility .....	188
8.4	Concluding Remarks .....	188
	<b>References .....</b>	<b>193</b>
	<b>Index .....</b>	<b>201</b>

Agile Service Development

Combining Adaptive Methods and Flexible Solutions

Lankhorst, M. (Ed.)

2012, XX, 204 p., Hardcover

ISBN: 978-3-642-28187-7