Trim Size: 176mm x 240mm Timinger530588 ftoc.tex V1 - February 14, 2025 11:15 A.M. Page 5

Contents

Introduction 9

About this book *9*
Aim of this book *10*
Target audience *10*
Prerequisites *10*
Structure of the book *10*
Use of colors, symbols and formats *11*

1 Standards and norms in project management 13

Overview *13*
PMI Project Management Body of Knowledge *16*
PRINCE2® *20*
ISO 21502 *22*
DIN 69901 *23*
IPMA Individual Competence Baseline *24*
Green Project Management P5 *26*
Agile Standards *27*
Modern Project Management *28*

2 Process models for plan-based project management 31

What does traditional mean here? *31*
Common characteristics of plan-based process models *34*
Sequential process models *41*
Concurrent process models *44*
Repetitive process models *46*
Practical examples and case studies *50*

3 Plan-based project management – tools, methods and ongoing tasks 53

Introduction *53*
Project initialization and definition *53*
Project planning *82*
Project controlling *106*
Project closure *118*
Ongoing project management tasks *126*
Practical examples and case studies *160*

4 Agile project management 169

Agile manifesto and agile values *169*
Scrum *174*
Scaled Scrum *200*
Kanban *209*
Lean project management and theory of constraints *221*
More agile process models *237*
Practical examples and case studies *244*

Trim Size: 176mm x 240mm Timinger530588 ftoc.tex V1 - February 14, 2025 11:15 A.M. Page 6

5 Hybrid project management **261**
Introduction *261*
Development of individual process models for successful project management *269*
Sequential application of different process models *284*
Parallel application of plan-based and agile process models *288*
Integrated application of different process models *296*
ScrumBan *299*
Software tools in hybrid projects *300*
Practical examples and case studies *301*

6 Leadership **323**
Introduction to leadership and team development *323*
Goals of leadership and team development *324*
Leadership concepts and styles *324*
Motivation *330*
Team composition and team development *335*
Communication *340*
Conflicts and crises *342*
Lateral leadership *345*
Leadership in agile environments *353*
Practical examples and case studies *358*

7 Interfaces of hybrid projects to programs and portfolios **365**
Overview *365*
Program management *371*
Portfolio management *373*
Characteristics of agile and hybrid program and portfolio management *376*
Practical examples and case studies *379*

8 Toolbox **383**
Introduction *383*
I Initialization *386*
D Definition *406*
P Planning *437*
M Monitoring and control *464*
C Closing *506*

9 Glossary **515**

10 Certificate Modern Project Management **527**
Norms and standards (1 question) *528*
Process models (3 questions) *528*
Plan-based project management incl. ongoing tasks (16 questions) *529*
Agile project management (16 questions) *531*
Hybrid project management (9 questions) *533*
Leadership (5 questions) *535*
Solutions *535*

Trim Size: 176mm x 240mm Timinger530588 ftoc.tex V1 - February 14, 2025 11:15 A.M. Page 7

11 Solutions to the exercises and case studies **537**
Case study 2.1: Definition of quality gates *537*
Case study 2.2: Traceability in the V-model *538*
Case study 2.3: Prototype planning spiral model *540*
Case study 3.1: Exercises for project initialization and definition *540*
Case study 3.2: Exercises for project planning *542*
Case study 3.3: Exercises for project control *545*
Case study 3.4: Exercises for project closure *547*
Case study 3.5: Exercises for ongoing project management tasks *547*
Case study 4.1: Sprint backlog *549*
Case study 4.2: Synchronization of several teams *549*
Case study 4.3: Customer and technical design requirements *550*
Case study 4.4: Large-scale project with Scrum *551*
Case study 4.5: Daily Scrum *551*
Case study 4.6: Overload due to incorrect velocity *552*
Case study 4.7: Agile scaling with Nexus *553*
Case study 4.10: Flow optimization *554*
Case study 4.11: Cumulative flow *555*
Case study 4.12: Optimizing bottlenecks *555*
Case study 4.13: Exercise replanning a project according to critical chain project management *556*
Case study 5.1: Criteria and selection of an organization-specific process model *557*
Case study 5.2: Situation analysis and target definition *558*
Case study 5.3: Development of an organization-specific process model for successful project management *559*
Case study 5.4: Introduction of a new process model *559*
Case study 5.5: Agile project management in the construction industry *560*
Case study 5.6: Plan-based project with Kanban *560*
Case study 5.7: Agile or hybrid large-scale project? *561*
Case study 5.8: Failed introduction of a new process model *563*
Case study 5.9: Hybrid product development process *564*
Case study 6.1: Team selection *565*
Case study 6.2: Communication within the team *566*
Case study 6.3: Project vision and participation *566*
Case study 6.4: Motivation *567*
Case study 6.5: Escalation *568*
Case study 7.1: Project comparison with the utility value analysis *568*
Case study 7.2: Hybrid program and portfolio management *570*

Bibliography **571**

Index **575**