# Contents

Part I  Introduction

1  Continuous Software Engineering: An Introduction  
    Jan Bosch  
    3

2  Climbing the “Stairway to Heaven”: Evolving From Agile Development to Continuous Deployment of Software  
    Helena Holmström Olsson and Jan Bosch  
    15

3  Academia–Industry Collaboration: Getting Closer is the Key!  
    Anna Sandberg  
    29

Part II  Agile Practices

4  Role of Architects in Agile Organizations  
    Antonio Martini, Lars Pareto, and Jan Bosch  
    39

5  Teams Interactions Hindering Short-Term and Long-Term Business Goals  
    Antonio Martini, Lars Pareto, and Jan Bosch  
    51

6  A Framework for Speeding Up Interactions Between Agile Teams and Other Parts of the Organization  
    Antonio Martini, Lars Pareto, and Jan Bosch  
    67

7  Customer-Specific Teams for Agile Evolution of Large-Scale Embedded Systems  
    Helena Holmström Olsson, Anna B. Sandberg, and Jan Bosch  
    83
Part III  Continuous Integration

8 The CIViT Model in a Nutshell: Visualizing Testing Activities to Support Continuous Integration ................................. 97
Agneta Nilsson, Jan Bosch, and Christian Berger

9 Continuous Integration Flows ........................................... 107
Daniel Ståhl and Jan Bosch

10 Towards Continuous Integration for Cyber-Physical Systems on the Example of Self-Driving Miniature Cars ............... 117
Christian Berger

11 Industrial Application of Visual GUI Testing: Lessons Learned ... 127
Emil Alégroth and Robert Feldt

Part IV  R&D as an Innovation System

12 Post-deployment Data Collection in Software-Intensive Embedded Products ................................................. 143
Helena Holmström Olsson and Jan Bosch

13 The HYPEX Model: From Opinions to Data-Driven Software Development .............................................. 155
Helena Holmström Olsson and Jan Bosch

Part V  Organizational Performance Metrics

14 Profiling Prerelease Software Product and Organizational Performance ........................................................... 167
Vard Antinyan, Miroslaw Staron, and Wilhelm Meding

15 Industrial Self-Healing Measurement Systems .................. 183
Miroslaw Staron and Wilhelm Meding

Part VI  Industry Best Practices and Case Studies

16 Experiences from Implementing Agile Ways of Working in Large-Scale System Development .............................. 203
Jonas Wigander

17 Scaling Agile Mechatronics: An Industrial Case Study .......... 211
Jonn Lantz and Ulf Eliasson

Index ................................................................. 223
Continuous Software Engineering
Bosch, J. (Ed.)
2014, XIV, 226 p. 50 illus., 30 illus. in color., Hardcover
ISBN: 978-3-319-11282-4