## Contents

### Part I  Introduction

1 Continuous Software Engineering: An Introduction ........................................ 3  
   Jan Bosch

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

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

### Part II  Agile Practices

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

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

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

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