# Integrating Cmmi And Agile Development Case Studies And Proven Techniques For Faster Performance Improvement Sei Series In Software Engineering

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**Agile Development with ICONIX Process** Dec 24 2021 *Describes an agile process that works on large projects *Ideal for hurried developers who want to develop software in teams *Incorporates real-life C#/.NET web project; can compare this with cases in book

 Writing Effective Use Cases Nov 22 2021 Writing use cases as a means of capturing the behavioral requirements of software systems and business processes is a practice that is quickly gaining popularity. Use cases provide a beneficial means of project planning because they clearly show how people will ultimately use the system being designed. On the surface, use cases appear to be a straightforward and simple concept. Faced with the task of writing a set of use cases, however, practitioners must ask: "How exactly am I supposed to write use cases?" Because use cases are essentially prose essays, this question is not easily answered, and as a result, the task can become formidable. In Writing Effective Use Cases, object technology expert Alistair Cockburn presents an up-to-date, practical guide to use case writing. The author borrows from his extensive experience in this realm, and expands on the classic treatments of use cases to provide software developers with a "nuts-and-bolts" tutorial for writing use cases. The book thoroughly covers introductory, intermediate, and advanced concepts, and is, therefore, appropriate for all knowledge levels. Illustrative writing examples of both good and bad use cases reinforce the author's instructions. In addition, the book contains helpful learning exercises--with answers--to illuminate the most important points. Highlights of the book include: A thorough discussion of the key elements of use cases--actors, stakeholders, design scope, scenarios, and more A use case style guide with action steps and suggested formats An extensive list of time-saving use case writing tips A helpful presentation of use case templates, with commentary on when and where they should be employed A proven methodology for taking advantage of use cases With this book as your guide, you will learn the essential elements of use case writing, improve your use case writing skills, and be well on your way to employing use cases effectively for your next development project.

 **The IFPUG Guide to IT and Software Measurement** Jun 05 2020 The widespread deployment of millions of current and emerging software applications has placed software economic studies among the most critical of any form of business analysis. Unfortunately, a lack of an integrated suite of metrics makes software economic analysis extremely difficult. The International Function Point Users Group (IFPUG), a nonprofit and member-governed organization, has become the recognized leader in promoting the effective management of application software development and maintenance activities. The IFPUG Guide to IT and Software Measurement brings together 52 leading software measurement experts from 13 different countries who share their insights and expertise. Covering measurement programs, function points in measurement, new technologies, and metrics analysis, this volume: Illustrates software measurement's role in new and emerging technologies Addresses the impact of agile development on software measurement Presents measurement as a powerful tool for auditing and accountability Includes metrics for the CIO Edited by IFPUG's Management and Reporting Committee, the text is useful for IT project managers, process improvement specialists, measurement professionals, and business professionals who need to interact with IT professionals and participate in IT decision-making. It includes coverage of cloud computing, agile development, quantitative project management, process improvement, measurement as a tool in accountability, project ROI measurement, metrics for the CIO, value stream mapping, and benchmarking.

 **Agile Development with ICONIX Process** Jul 31 2022 *Describes an agile process that works on large projects *Ideal for hurried developers who want to develop software in teams *Incorporates real-life C#/.NET web project; can compare this with cases in book

 **Introduction to Software Engineering** Jan 31 2020 Practical Guidance on the Efficient Development of High-Quality Software Introduction to Software Engineering, Second Edition equips students with the fundamentals to prepare them for satisfying careers as software engineers regardless of future changes in the field, even if the changes are unpredictable or disruptive in nature. Retaining the same organization as its predecessor, this second edition adds considerable material on open source and agile development models. The text helps students understand software development techniques and processes at a reasonably sophisticated level. Students acquire practical experience through team software projects. Throughout much of the book, a relatively large project is used to teach about the requirements, design, and coding of software. In addition, a continuing case study of an agile software development project offers a complete picture of how a successful agile project can work. The book covers each major phase of the software development life cycle, from developing software requirements to software maintenance. It also discusses project management and explains how to read software engineering literature. Three appendices describe software patents, command-line arguments, and flowcharts.

 The Agile Safety Case Jul 07 2020 The safety case (SC) is one of the railway industry's most important deliverables for creating confidence in their systems. This is the first book on how to write an SC, based on the standard EN 50129:2003. Experience has shown that preparing and understanding an SC is difficult and time consuming, and as such the book provides insights that enhance the training for writing an SC. The book discusses both "regular" safety cases and agile safety cases, which avoid too much documentation, improve communication between the stakeholders, allow quicker approval of the system, and which are important in the light of rapidly changing technology. In addition, it discusses the necessity of frequently updating software due to market requirements, changes in requirements and increased cyber-security threats. After a general introduction to SCs and agile thinking in chapter 1, chapter 2 describes the majority of the roles that are relevant when developing railway-signaling systems. Next, chapter 3 provides information related to the assessment of signaling systems, to certifications based on IEC 61508 and to the authorization of signaling systems. Chapter 4 then explains how an agile safety plan satisfying the requirements given in EN 50126-1:1999 can be developed, while chapter 5 provides a brief introduction to safety case patterns and notations. Lastly, chapter 6 combines all this and describes how an (agile) SC can be developed and what it should include. To ensure that infrastructure managers, suppliers, consultants and others can take full advantage of the agile mind-set, the book includes concrete examples and presents relevant agile practices. Although the scope of the book is limited to signaling systems, the basic foundations for (agile) SCs are clearly described so that they can also be applied in other cases.

 **Agile Development of Diagnostic Knowledge Systems** Nov 10 2020 The success of diagnostic knowledge systems has been proved over the last decades. Nowadays, intelligent systems are embedded in machines within various domains or are used in interaction with a user for solving problems. However, the development of a knowledge system is still a critical issue. Similarly to projects dealing with customized software at a highly innovative level a precise specification often cannot be given in advance. Moreover, necessary requirements of the knowledge system can be defined not until the project has been started or are changing during the development phase. This thesis motivates that classical, document-centered approaches cannot be applied in such a setting. We introduce an agile process model for developing diagnostic knowledge systems, mainly inspired by the ideas of the eXtreme Programming methodology known in software engineering. The engineering process is supported at a primary level by the introduction of knowledge containers, that define an organized view of knowledge contained in the system. The actual knowledge is acquired and formalized right from start, and the integration to runnable knowledge systems is done continuously in order to allow for an early and concrete feedback. The validity and maintainability of the collected knowledge is ensured by appropriate test methods and restructuring techniques, respectively. Additionally, we propose learning methods to support the knowledge acquisition process sufficiently. The process model and its activities are evaluated in two real life applications: in a medical and in an environmental project the benefits of the agile development are clearly demonstrated.

 **Integrating User-Centred Design in Agile Development** May 05 2020 This book examines the possibilities of incorporating elements of user-centred design (UCD) such as user experience (UX) and usability with agile software development. It explores the difficulties and problems inherent in integrating these two practices despite their relative similarities, such as their emphasis on stakeholder collaboration. Developed from a workshop held at NordiCHI in 2014, this edited volume brings together researchers from across the software development, UCD and creative design fields to discuss the current state-of-the-art. Practical case studies of integrating UCD in Agile development across diverse contexts are presented, whilst the different futures for UCD and other design practices in the context of agile software development are identified and explored. Integrating User Centred Design in Agile Development will be ideal for researchers, designers and academics who are interested in software development, user-centred design, agile methodologies and related areas.

 **The Art of Agile Development** Jul 19 2021 For those considering Extreme Programming, this book provides no-nonsense advice on agile planning, development, delivery, and management taken from the authors' many years of experience. While plenty of books address the what and why of agile development, very few offer the information users can apply directly.

 Integrating User-Centred Design in Agile Development Mar 27 2022 This book examines the possibilities of incorporating elements of user-centred design (UCD) such

as user experience (UX) and usability with agile software development. It explores the difficulties and problems inherent in integrating these two practices despite their relative similarities, such as their emphasis on stakeholder collaboration. Developed from a workshop held at NordiCHI in 2014, this edited volume brings together researchers from across the software development, UCD and creative design fields to discuss the current state-of-the-art. Practical case studies of integrating UCD in Agile development across diverse contexts are presented, whilst the different futures for UCD and other design practices in the context of agile software development are identified and explored. Integrating User Centred Design in Agile Development will be ideal for researchers, designers and academics who are interested in software development, user-centred design, agile methodologies and related areas.

A Practical Approach to Large-Scale Agile Development Oct 02 2022 Today, even the largest development organizations are turning to agile methodologies, seeking major productivity and quality improvements. However, large-scale agile development is difficult, and publicly available case studies have been scarce. Now, three agile pioneers at Hewlett-Packard present a candid, start-to-finish insider's look at how they've succeeded with agile in one of the company's most mission-critical software environments: firmware for HP LaserJet printers. This book tells the story of an extraordinary experiment and journey. Could agile principles be applied to re-architect an enormous legacy code base? Could agile enable both timely delivery and ongoing innovation? Could it really be applied to 400+ developers distributed across four states, three continents, and four business units? Could it go beyond delivering incremental gains, to meet the stretch goal of 10x developer productivity improvements? It could, and it did—but getting there was not easy. Writing for both managers and technologists, the authors candidly discuss both their successes and failures, presenting actionable lessons for other development organizations, as well as approaches that have proven themselves repeatedly in HP's challenging environment. They not only illuminate the potential benefits of agile in large-scale development, they also systematically show how these benefits can actually be achieved. Coverage includes: • Tightly linking agile methods and enterprise architecture with business objectives • Focusing agile practices on your worst development pain points to get the most bang for your buck • Abandoning classic agile methods that don't work at the largest scale • Employing agile methods to establish a new architecture • Using metrics as a "conversation starter" around agile process improvements • Leveraging continuous integration and quality systems to reduce costs, accelerate schedules, and automate the delivery pipeline • Taming the planning beast with "light-touch" agile planning and lightweight long-range forecasting • Implementing effective project management and ensuring accountability in large agile projects • Managing tradeoffs associated with key decisions about organizational structure • Overcoming U.S./India cultural differences that can complicate offshore development • Selecting tools to support quantum leaps in productivity in your organization • Using change management disciplines to support greater enterprise agility

Agile and Iterative Development Aug 08 2020 This is the definitive guide for managers and students to agile and iterativedevelopment methods: what they are, how they work, how to implement them, andwhy they should.

**Emerging Innovations in Agile Software Development** Mar 15 2021 Agile is a relatively recent methodology used in the development process of a project. Therefore, it is important to share new emerging knowledge with researchers and professionals interested in adopting an agile mindset. Emerging Innovations in Agile Software Development focuses on the use of agile methodologies to manage, design, develop, test and maintain software projects. Emphasizing research-based solutions for contemporary software development, this publication is designed for use by software developers, researchers, and graduate-level students in software engineering and project management programs.

**Agile Processes in Software Engineering and Extreme Programming** Sep 08 2020 The XP conference series established in 2000 was the first conference dedicated to agile processes in software engineering. The idea of the conference is to offer a unique setting for advancing the state of the art in the research and practice of agile processes. This year's conference was the ninth consecutive edition of this international event. The conference has grown to be the largest conference on agile software development outside North America. The XP conference enjoys being one of those conferences that truly brings practitioners and academics together. About 70% of XP participants come from industry and the number of academics has grown steadily over the years. XP is more of an experience rather than a regular conference. It offers several different ways to interact and strives to create a truly collaborative environment where new ideas and exciting findings can be presented and shared. For example, this year's open space session, which was "a conference within a conference", was larger than ever before. Agile software development is a unique phenomenon from several perspectives.

**HCI International 2020 - Late Breaking Papers: User Experience Design and Case Studies** Sep 28 2019 This book constitutes late breaking papers from the 22nd International Conference on Human-Computer Interaction, HCII 2020, which was held in July 2020. The conference was planned to take place in Copenhagen, Denmark, but had to change to a virtual conference mode due to the COVID-19 pandemic. From a total of 6326 submissions, a total of 1439 papers and 238 posters have been accepted for publication in the HCII 2020 proceedings before the conference took place. In addition, a total of 333 papers and 144 posters are included in the volumes of the proceedings published after the conference as "Late Breaking Work" (papers and posters). These contributions address the latest research and development efforts in the field and highlight the human aspects of design and use of computing systems. The 54 late breaking papers presented in this volume were organized in two topical sections named: User Experience Design and Evaluation Methods and Tools; Design Case Studies; User Experience Case Studies.

Testing in Scrum Oct 29 2019 These days, more and more software development projects are being carried out using agile methods like Scrum. Agile software development promises higher software quality, a shorter time to market, and improved focus on customer needs. However, the transition to working within an agile methodology is not easy. Familiar processes and procedures change drastically. Software testing and software quality assurance have a crucial role in ensuring that a software development team, department, or company successfully implements long-term agile development methods and benefits from this framework. This book discusses agile methodology from the perspective of software testing and software quality assurance management. Software development managers, project managers, and quality assurance managers will obtain tips and tricks on how to organize testing and assure quality so that agile projects maintain their impact. Professional certified testers and software quality assurance experts will learn how to work successfully within agile software teams and how best to integrate their expertise. Topics include: Agile methodology and classic process models How to plan an agile project Unit tests and test first approach Integration testing and continuous integration System testing and test nonstop Quality management and quality assurance Also included are five case studies from the manufacturing, online-trade, and software industry as well as test exercises for self-assessment. This book covers the new ISTQB Syllabus for Agile Software Testing and is a relevant resource for all students and trainees worldwide who plan to undertake this ISTQB certification.

**Changing Software Development** Jun 17 2021 Changing Software Development explains why software development is an exercise in change management and organizational intelligence. An underlying belief is that change is learning and learning creates knowledge. By blending the theory of knowledge management, developers and managers will gain the tools to enhance learning and change to accommodate new innovative approaches such as agile and lean computing. Changing Software Development is peppered with practical advice and case studies to explain how and why knowledge, learning and change are important in the development process. Today, managers are pre-occupied with knowledge management, organization learning and change management; while software developers are often ignorant of the bigger issues embedded in their work. This innovative book bridges this divide by linking the software world of technology and processes to the business world of knowledge, learning and change.

Agile Processes in Software Engineering and Extreme Programming Jan 25 2022 This book contains the refereed proceedings of the 11th International Conference on Agile Software Development, XP 2010, held in Trondheim, Norway, in June 2010. In order to better evaluate the submitted papers and to highlight the applicational aspects of agile software practices, there were two different program committees, one for research papers and one for experience reports. Regarding the research papers, 11 out of 39 submissions were accepted as full papers; and as far as the experience reports were concerned, the respective number was 15 out of 50 submissions. In addition to these papers, this volume also includes the short research papers, the abstracts of the posters, the position papers of the PhD symposium, and the abstracts of the panel on "Collaboration in an Agile World".

Integrating CMMI and Agile Development Nov 03 2022 Many organizations that have improved process maturity through Capability Maturity Model Integration (CMMI®) now also want greater agility. Conversely, many organizations that are succeeding with Agile methods now want the benefits of more mature processes. The solution is to integrate CMMI and Agile. Integrating CMMI® and Agile Development offers broad guidance for melding these process improvement methodologies. It presents six detailed case studies, along with essential real-world lessons, big-picture insights, and mistakes to avoid. Drawing on decades of process improvement experience, author Paul McMahon explains how combining an Agile approach with the CMMI process improvement framework is the fastest, most effective way to achieve your business objectives. He offers practical, proven techniques for CMMI and Agile integration, including new ways to extend Agile into system engineering and project management and to optimize performance by focusing on your organization's unique, culture-related weaknesses.

Agile Software Engineering Sep 20 2021 Overview and Goals The agile approach for software development has been applied more and more extensively since the mid nineties of the 20th century. Though there are only about ten years of accumulated experience using the agile approach, it is currently conceived as one of the mainstream approaches for software development. This book presents a complete software engineering course from the agile angle. Our intention is to present the agile approach in a holistic and compreh- sive learning environment that fits both industry and academia and inspires the spirit of agile software development. Agile software engineering is reviewed in this book through the following three perspectives: l The Human perspective, which includes cognitive and social aspects, and refers to learning and interpersonal processes between teammates, customers, and management. l The Organizational perspective, which includes managerial and cultural aspects, and refers to software project management and control. l The Technological perspective, which includes practical and technical aspects, and refers to design, testing, and coding, as well as to integration, delivery, and maintenance of software products. Specifically, we explain and analyze how the explicit attention that agile software development gives these perspectives and their interconnections, helps viii Preface it cope with the challenges of software projects. This multifaceted perspective on software development processes is reflected in this book, among other ways, by the chapter titles, which specify dimensions of software development projects such as quality, time, abstraction, and management, rather than specific project stages, phases, or practices.

**Software War Stories** Jan 13 2021 A comprehensive, practical book on software management that dispels real-world issues through relevant case studies Software managers inevitably will meet obstacles while trying to deliver quality products and provide value to customers, often with tight time restrictions. The result: Software War Stories. This book provides readers with practical advice on how to handle the many issues that can arise as a software project unfolds. It utilizes case studies that focus on what can be done to establish and meet reasonable expectations as they occur in government, industrial, and academic settings. The book also offers important discussions on both traditional and agile methods as well as lean development concepts. Software War Stories: Covers the basics of management as applied to situations ranging from agile projects to large IT projects with infrastructure problems Includes coverage of topics ranging from planning, estimating, and organizing

to risk and opportunity management Uses twelve case studies to communicate lessons learned by the author in practice Offers end-of-chapter exercises, sample solutions, and a blog for providing updates and answers to readers' questions Software War Stories: Case Studies in Software Management mentors practitioners, software engineers, students and more, providing relevant situational examples encountered when managing software projects and organizations.

**Introduction to Software Engineering** Oct 22 2021 Practical Guidance on the Efficient Development of High-Quality Software Introduction to Software Engineering, Second Edition equips students with the fundamentals to prepare them for satisfying careers as software engineers regardless of future changes in the field, even if the changes are unpredictable or disruptive in nature. Retaining the same organization as its predecessor, this second edition adds considerable material on open source and agile development models. The text helps students understand software development techniques and processes at a reasonably sophisticated level. Students acquire practical experience through team software projects. Throughout much of the book, a relatively large project is used to teach about the requirements, design, and coding of software. In addition, a continuing case study of an agile software development project offers a complete picture of how a successful agile project can work. The book covers each major phase of the software development life cycle, from developing software requirements to software maintenance. It also discusses project management and explains how to read software engineering literature. Three appendices describe software patents, command-line arguments, and flowcharts.

*Scaling Lean & Agile Development* Jun 25 2019 Lean Development and Agile Methods for Large-Scale Products: Key Thinking and Organizational Tools for Sustainable Competitive Success Increasingly, large product-development organizations are turning to lean thinking, agile principles and practices, and large-scale Scrum to sustainably and quickly deliver value and innovation. However, many groups have floundered in their practice-oriented adoptions. Why? Because without a deeper understanding of the thinking tools and profound organizational redesign needed, it is as though casting seeds on to an infertile field. Now, drawing on their long experience leading and guiding large-scale lean and agile adoptions for large, multisite, and offshore product development, and drawing on the best research for great team-based agile organizations, internationally recognized consultant and best-selling author Craig Larman and former leader of the agile transformation at Nokia Networks Bas Vodde share the key thinking and organizational tools needed to plant the seeds of product development success in a fertile lean and agile enterprise. Coverage includes Lean thinking and development combined with agile practices and methods Systems thinking Queuing theory and large-scale development processes Moving from single-function and component teams to stable cross-functional cross-component Scrum feature teams with end-to-end responsibility for features Organizational redesign to a lean and agile enterprise that delivers value fast Large-scale Scrum for multi-hundred-person product groups In a competitive environment that demands ever-faster cycle times and greater innovation, applied lean thinking and agile principles are becoming an urgent priority. Scaling Lean & Agile Development will help leaders create the foundation for their lean enterprise—and deliver on the significant benefits of agility. In addition to the foundation tools in this text, see the companion book Practices for Scaling Lean & Agile Development: Large, Multisite, and Offshore Product Development with Large-Scale Scrum for complementary action tools.

Agile Enterprise Engineering: Smart Application of Human Factors Sep 01 2022 This concise book provides a survival toolkit for efficient, large-scale software development. Discussing a multi-contextual research framework that aims to harness human-related factors in order to improve flexibility, it includes a carefully selected blend of models, methods, practices, and case studies. To investigate mission-critical communication aspects in system engineering, it also examines diverse, i.e. cross-cultural and multinational, environments. This book helps students better organize their knowledge bases, and presents conceptual frameworks, handy practices and case-based examples of agile development in diverse environments. Together with the authors' previous books, "Crisis Management for Software Development and Knowledge Transfer" (2016) and "Managing Software Crisis: A Smart Way to Enterprise Agility" (2018), it constitutes a comprehensive reference resource adds value to this book.

*Agile Project Management: Managing for Success* Feb 23 2022 Management and enables them to deal with the demands and complexities of modern, agile systems/software/hardware development teams. The book examines the project/program manager beyond the concepts of leadership and aims to connect to employees' sense of identity. The text examines human psychological concepts such as "locus of control," which will help the manager understand their team members' view and how best to manage their "world" contributions. The authors cover new management tools and philosophies for agile systems/software/hardware development teams, with a specific focus on how this relates to engineering and computer science. This book also includes practical case studies. Discusses management skills needed as they relate to the advances in software development practices Examines how to manage an agile development team that includes teams across geographically, ethnically, and culturally diverse backgrounds Embraces all of the aspects of modern management and leadership

Software Engineering for Agile Application Development Nov 30 2019 As the software industry continues to evolve, professionals are continually searching for practices that can assist with the various problems and challenges in information technology (IT). Agile development has become a popular method of research in recent years due to its focus on adapting to change. There are many factors that play into this process, so success is no guarantee. However, combining agile development with other software engineering practices could lead to a high rate of success in problems that arise during the maintenance and development of computing technologies. Software Engineering for Agile Application Development is a collection of innovative research on the methods and implementation of adaptation practices in software development that improve the quality and performance of IT products. The presented materials combine theories from current empirical research results as well as practical experiences from real projects that provide insights into incorporating agile qualities into the architecture of the software so that the product adapts to changes and is easy to maintain. While highlighting topics including continuous integration, configuration management, and business modeling, this book is ideally designed for software engineers, software developers, engineers, project managers, IT specialists, data scientists, computer science professionals, researchers, students, and academics.

*Agile Software Development Ecosystems* Feb 11 2021 Traditional software development methods struggle to keep pace with the accelerated pace and rapid change of Internet-era development. Several "agile methodologies" have been developed in response -- and these approaches to software development are showing exceptional promise. In this book, Jim Highsmith covers them all -- showing what they have in common, where they differ, and how to choose and customize the best agile approach for your needs.KEY TOPICS:Highsmith begins by introducing the values and principles shared by virtually all agile software development methods. He presents detailed case studies from organizations that have used them, as well as interviews with each method's principal authors or leading practitioners. Next, he takes a closer look at the key features and techniques associated with each major Agile approach: Extreme Programming (XP), Crystal Methods, Scrum, Dynamic Systems Development Method (DSDM), Lean Development, Adaptive Software Development (ASD), and Feature-Driven Development (FDD). In Part III, Highsmith offers practical advice on customizing the optimal agile discipline for your own organization.MARKET:For all software developers, project managers, and other IT professionals seeking more flexible, effective approaches to developing software.

Agile Software Development May 17 2021 Section 1 Agile development Section 2 Agile design Section 3 The payroll case study Section 4 Packaging the payroll system Section 5 The weather station case study Section 6 The ETS case study

Extreme Programming and Agile Processes in Software Engineering Aug 27 2019 The LNCS series reports state-of-the-art results in computer science research, development, and education, at a high level and in both printed and electronic form. Enjoying tight cooperation with the R & D community, with numerous individuals, as well as with prestigious organizations and societies, LNCS has grown into the most comprehensive computer science research forum available. The scope of LNCS, including its subseries LNAI, spans the whole range of computer science and information technology including interdisciplinary topics in a variety of application fields. Book jacket.

*The Innovative CIO* Mar 03 2020 "Does your organization fumble when it comes to innovation? 'The Innovative CIO' presents a pragmatic guide to overcoming the 10 'innovation killers' within your company." --Dennis McCafferty "CIO Insight", 1/23/2013 (www.cioinsight.com/it-management/innovation/slideshows/ten-ways-to-kill-innovation/) "Are you unwittingly stifling your employees' entrepreneurial spirit? 'The Innovative CIO' discusses 'innovation killers' that could be holding back your small business or startup." --Paul Shread "TIME/Business & Money", 1/29/2013 (business.time.com/2013/01/29/removing-barriers-to-innovation/#ixzz2JSrUlD3A) The Chief Information Officer's influence in the business organization has been waning for years. The rest of the C-suite has come to regard Information Technology as slow, costly, error-prone, boring, and unresponsive to business needs. This perception blinds company leaders to the critical value IT can deliver and threatens the competitive health and long-term survival of their enterprise. The modern CIO must reassert the operational and strategic importance of technology to the enterprise and reintegrate it with every department and level of the business from boardroom to mailroom. IT leaders must design, sell, and implement a vigorous culture of IT competence and innovation that pervades the enterprise. The culture must be rooted in bidirectional exchange across organizations and C-level policies that drive technology innovation as the engine of business innovation. The authors, international IT strategists and innovators, quantify the benefits and risks of IT innovation, survey and rank the myriad innovation opportunities from mature, new, and emerging technologies,and identify the organizational structures and processes that have been proven to deliver ongoing innovation. Buttressing their brief with dozens of case studies and specific examples, The Innovative CIO shows you how to: Take advantage of the IT and business innovation opportunities created by new and emerging technologies Shift IT innovation from afterthought to prime mover in strategic business planning Inject IT into the dynamic core of your organization's culture, training, structure, practice, and policy

**Research Issues in Systems Analysis and Design, Databases and Software Development** Jan 01 2020 Presents the capabilities and features of new ideas and concepts in the information systems development, database, and forthcoming technologies. Provides a representation of topnotch research in all areas of systems analysis and design and databases.

*AGILE in Practice* Jun 29 2022 Practical guidance to Implement AGILE, KANBAN, XP and SCRUM with 600+ Expert Solutions included KEY FEATURES ● Supportive materials for PMI-ACP and SAFe exam preparation. ● Proven use-cases on implementation of Kanban, Agile and Scrum across business projects. ● 600+ interview questions, quizzes and business solutions to acquire lucrative Agile project management jobs. DESCRIPTION This book is a pragmatic guidance teaching modern IT professionals how to improvise and scale up IT delivery capabilities using leading project management methodologies including Agile and Kanban. It is equipped with use-cases and hundreds of solutions and the readers will learn to examine the strength of their project management function and how to improvise it. The book brings exclusive knowledge on several strategies to put into implementation in the event of natural disaster like Covid-19 and for future crisis management. You will be acquainted with the popular tools and technologies that your organization can make use of it for better collaboration on projects. You will learn the various project performance metrics for each of these project management methodologies. As an added advantage of this book, you can get yourself ready for one of the popular and critical professional examinations like PMP-ACP and SAFe. Key strategies to beat Covid-19 Pandemic and for crisis management Key enablers to build Organizational

Resilience and enterprise maturity model Portfolio/ Upstream Kanban implementations lessons learnt and key takeaways PMI-ACP and SAFe exam preparation Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools Interview Questions and answers on Agile SCRUM, XP, DSDM, KANBAN and SCRUMBAN Useful Tips & techniques for successful Agile transformation in any Organization and The Art of Agile Development Agile & Kanban Metrics JIRA tool use in Projects / Programs WHAT YOU WILL LEARN ● Gain strong hold on concepts of KANBAN, XP, FDD, DSDM, SCRUMBAN and SCRUM. ● Exclusive coverage on strategies to beat Covid-19 Pandemic and future crisis management. ● Learn to build Organizational Resilience and enterprise maturity model. ● Ready guidance to prepare for PMI-ACP and SAFe certification. ● Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools. WHO THIS BOOK IS FOR This book is for Scrum Masters, Product Owners, Developers, CXOs and professionals closely associated with Agile Scrum, Kanban, XP projects to further improve their knowledge of Agile with valuable pragmatic insights. Experienced-level professionals and Agile enthusiasts having relevant experience can also acquire an in-depth knowledge of the advanced concepts in project management. TABLE OF CONTENTS 1. Key success factors for adopting Agile SCRUM Kanban in any organizations 2. Why Personal Agility matters 3. Tricky Real-world Agile SCRUM & KANBAN Case Studies, Demos and tools 4. Agile SCRUM KANBAN Maturity assessment Nuts & Bolts 5. Useful Tips & techniques for successful Agile transformation in any Organization and The Art of Agile Development 6. Common Agile SCRUM KANBAN misconceptions 7. Key Takeaways 8. Glossary 9. Quiz Session 10. Test your Knowledge

**Agile and Lean Service-Oriented Development: Foundations, Theory, and Practice** Aug 20 2021 Challenges in unpredictable markets, changing customer requirements, and advancing information technologies have lead to progression towards service oriented engineering and agile and lean software development. These prevailing approaches to software systems provide solutions to challenges in demanding business environments. Agile and Lean Service-Oriented Development: Foundations, Theory and Practice explores the groundwork of service-oriented and agile and lean development and the conceptual basis and experimental evidences for the combination of the two approaches. Highlighting the best tools and guidelines for these developments in practice, this book is essential for researchers and practitioners in the software development and service computing fields.

**Agile Analytics** Apr 03 2020 Using Agile methods, you can bring far greater innovation, value, and quality to any data warehousing (DW), business intelligence (BI), or analytics project. However, conventional Agile methods must be carefully adapted to address the unique characteristics of DW/BI projects. In Agile Analytics, Agile pioneer Ken Collier shows how to do just that. Collier introduces platform-agnostic Agile solutions for integrating infrastructures consisting of diverse operational, legacy, and specialty systems that mix commercial and custom code. Using working examples, he shows how to manage analytics development teams with widely diverse skill sets and how to support enormous and fast-growing data volumes. Collier's techniques offer optimal value whether your projects involve "back-end" data management, "front-end" business analysis, or both. Part I focuses on Agile project management techniques and delivery team coordination, introducing core practices that shape the way your Agile DW/BI project community can collaborate toward success Part II presents technical methods for enabling continuous delivery of business value at production-quality levels, including evolving superior designs; test-driven DW development; version control; and project automation Collier brings together proven solutions you can apply right now--whether you're an IT decision-maker, data warehouse professional, database administrator, business intelligence specialist, or database developer. With his help, you can mitigate project risk, improve business alignment, achieve better results--and have fun along the way.

**Automated Software Engineering: A Deep Learning-Based Approach** Jul 27 2019 This book discusses various open issues in software engineering, such as the efficiency of automated testing techniques, predictions for cost estimation, data processing, and automatic code generation. Many traditional techniques are available for addressing these problems. But, with the rapid changes in software development, they often prove to be outdated or incapable of handling the software's complexity. Hence, many previously used methods are proving insufficient to solve the problems now arising in software development. The book highlights a number of unique problems and effective solutions that reflect the state-of-the-art in software engineering. Deep learning is the latest computing technique, and is now gaining popularity in various fields of software engineering. This book explores new trends and experiments that have yielded promising solutions to current challenges in software engineering. As such, it offers a valuable reference guide for a broad audience including systems analysts, software engineers, researchers, graduate students and professors engaged in teaching software engineering.

Product-Focused Software Process Improvement Oct 10 2020 This book constitutes the refereed proceedings of the 7th International Conference on Product-Focused Software Process Improvement, PROFES 2006, held in Amsterdam, June 2006. The volume presents 26 revised full papers and 12 revised short papers together with 6 reports on workshops and tutorials. The papers constitute a balanced mix of academic and industrial aspects, organized in topical sections on decision support, embedded software and system development, measurement, process improvement, and more.

Agile Development in the Real World Apr 27 2022 This book is a practical guide for new agile practitioners and contains everything a new project manager needs to know to get up to speed with agile practices quickly and sort out the hype and dogma of pseudo-agile practices.The author lays out the general guidelines for running an agile project with the assumption that the project team may be working in a traditional environment (using the waterfall model, or something similar). Agile Development in the Real World conveys valuable insights to multiple audiences: For new-to-agile project managers, this book provides a distinctive approach that Alan Cline has used with great success, while showing the decision points and perspectives as the agile project moves forward from one step to the next. This allows new agile project managers or agile coaches to choose between the benefits of agile and the benefits of other methods. For the agile technical team member, this book contains templates and sample project artifacts to assist in learning agile techniques and to be used as exemplars for the new practitioner's own project. For the Project Management Office (PMO), the first three chapters focus on portfolio management. They explain, for the agilists' benefit, how projects are selected and approved, and why projects have an inherent "shelf-life" that results in hard deadlines that may seem arbitrary to traditional technical teams. What You Will Learn: How and why the evolution of project management, from PM-1 (prescriptive) to PM-2 (adaptive) affects modern 21st century project management. How sociology (stakeholder management), psychology (team dynamics), and anthropology (organizational culture) affect the way software is developed today, and why it is far more effective A clear delineation of what must to be accomplished by all the roles (PM, BA, APM, Developer, and Tester), why those roles are needed, and what they must do Step-by-step guide for a successful project based on studies and the author's own experiences. Specific techniques for each role on the development team, both in the pre-iteration and iteration cycles, of product development. The appendices contain templates that the team could use or modify to tailor their own agile processes specific to the team, project, and organization.

**Agile Software Development Teams** Dec 12 2020 This book explores how agile development practices, in particular pair programming, code review and automated testing, help software development teams to perform better. Agile software engineering has become the standard software development paradigm over the last decade, and the insights provided here are taken from a large-scale survey of 80 professional software development teams working at SAP SE in Germany. In addition, the book introduces a novel measurement tool for assessing the performance of software development teams. No previous study has researched this topic with a similar data set comprising insights from more than 450 professional software engineers.

SafeScrum® – Agile Development of Safety-Critical Software May 29 2022 This book addresses the development of safety-critical software and to this end proposes the SafeScrum® methodology. SafeScrum® was inspired by the agile method Scrum, which is extensively used in many areas of the software industry. Scrum is, however, not intended or designed for use with safety-critical systems; hence the authors propose guidelines and additions to make it both practically useful and compliant with the additional requirements found in safety standards. The book provides an overview of agile software development and how it can be linked to safety and relevant safety standards. SafeScrum® is described in detail as a useful approach for reaping the benefits of agile methods, and is intended as a set of ideas and a basis for adaptation in industry projects. The book covers roles, processes and practices, and documentation. It also includes tips on how standard software process tools can be employed. Lastly, some insights into relevant research in this new and emerging field are provided, and selected real-world examples are presented. The ideas and descriptions in this book are based on collaboration with the industry, in the form of discussions with assessment organizations, general discussions within the research fields of safety and software, and last but not least, the authors' own experiences and ideas. It was mainly written for practitioners in industry who know a great deal about how to produce safety-critical software but less about agile development in general and Scrum in particular.

Practices for Scaling Lean & Agile Development Apr 15 2021 Lean and Agile Development for Large-Scale Products: Key Practices for Sustainable Competitive Success Increasingly, large product-development organizations are turning to lean thinking, agile principles and practices, and large-scale Scrum to sustainably and quickly deliver value and innovation. Drawing on their long experience leading and guiding lean and agile adoptions for large, multisite, and offshore product development, internationally recognized consultant and best-selling author Craig Larman and former leader of the agile transformation at Nokia Networks Bas Vodde share the key action tools needed for success. Coverage includes Frameworks for large-scale Scrum for multihundred-person product groups Testing and building quality in Product management and the end of the "contract game" between business and R&D Envisioning a large release, and planning for multiteam development Low-quality legacy code: why it's created, and how to stop it Continuous integration in a large multisite context Agile architecting Multisite or offshore development Contracts and outsourced development In a competitive environment that demands ever-faster cycle times and greater innovation, the practices inspired by lean thinking and agile principles are ever-more relevant. Practices for Scaling Lean & Agile Development will help people realize a lean enterprise—and deliver on the significant benefits of agility. In addition to the action tools in this text, see the companion book Scaling Lean & Agile Development: Thinking and Organizational Tools for Large-Scale Scrumfor complementary foundation tools.