

Agile Software Requirements Lean Requirements Practices For Teams Programs And The Enterprise Agile Software Development Series

Discover what is involved with Lean Software Development and Kanban so that you can more efficiently deliver software to your customers. Incorporating Lean Manufacturing and Lean IT principles and practices are essential to delivering software to your customers quickly and easily. This book, *A Gentle Introduction to Lean Software Development*, will help you understand how the lean principles can be applied to software development, Lean Software Architecture and Lean Software Strategies, so that you can more efficiently deliver software to your customers. In this book you will learn about... Lean Manufacturing Lean Software Development Applying Lean Software Development? Agile Software Development vs. Lean Software Development Software Practices to Support Lean Kanban About the Author Stephen Haunts is an experienced software developer with a focus on Microsoft .NET technologies and security for back-end enterprise systems. Stephen is also a Pluralsight Author, blogger at www.stephenhaunts.com, writer and international conference speaker at events like NDC London, NDC Oslo, NDC Sydney, Techorama and SDD Conf. Stephen also runs a user group called Derbyshire Dot Net in the UK.

SAFe®: The World's Leading Framework for Enterprise Agility "SAFe® 4.0 Distilled is the book we've all been waiting for. It breaks down the complexity of the Framework into easily digestible explanations and actionable guidance. A must-have resource for beginners as well as seasoned practitioners." —Lee Cunningham, Sr. Director, Enterprise Agile Strategy at VersionOne, Inc. To succeed in today's adapt-or-die marketplace, businesses must be able to rapidly change the way they create and deliver value to their customers. Hundreds of the world's most successful companies—including Hewlett Packard Enterprise, AstraZeneca, Cisco, and Philips—have turned to the Scaled Agile Framework® (SAFe®) to achieve agility at scale and maintain a competitive edge. *SAFe® 4.0 Distilled: Applying the Scaled Agile Framework® for Lean Software and Systems Engineering* explains how adopting SAFe can quickly improve time to market and increase productivity, quality, and employee engagement. In this book, you will Understand the business case for SAFe: its benefits, the problems it solves, and how to apply it Get an overview of SAFe across all parts of the business: team, program, value stream, and portfolio Learn why SAFe works: the power of SAFe's Lean-Agile mindset, values, and principles Discover how systems thinking, Agile development, and Lean product development form the underlying basis for SAFe Learn how to become a Lean-Agile leader and effectively drive an enterprise-wide transformation

This book is open access under a CC BY license. The volume constitutes the proceedings of the 18th International Conference on Agile Software Development, XP 2017, held in Cologne, Germany, in May 2017. The 14 full and 6 short papers presented in this volume were carefully reviewed and selected from 46 submissions. They were organized in topical sections named: improving agile processes; agile in organization; and safety critical software. In addition, the volume contains 3 doctoral symposium papers (from 4 papers submitted).

"This remarkable book combines practical advice, ready-to-use techniques, and a deep understanding of why this is the right way to develop software. I have seen software teams transformed by the ideas in this book." --Mike Cohn, author of *Agile Estimating and Planning* "As a lean practitioner myself, I have loved and used their first book for years. When this second book came out, I was delighted that it was even better. If you are interested in how lean principles can be useful for software development organizations, this is the book you are looking for. The Poppendiecks offer a beautiful blend of history, theory, and practice." --Alan Shalloway, coauthor of *Design Patterns Explained* "I've enjoyed reading the book very much. I feel it might even be better than the first lean book by Tom and Mary, while that one was already exceptionally good! Mary especially has a lot of knowledge related to lean techniques in product development and manufacturing. It's rare that these techniques are actually translated to software. This is something no other book does well (except their first book)." --Bas Vodde "The new book by Mary and Tom Poppendieck provides a well-written and comprehensive introduction to lean principles and selected practices for software managers and engineers. It illustrates the application of the values and practices with well-suited success stories. I enjoyed reading it." --Roman Pichler "In *Implementing Lean Software Development*, the Poppendiecks explore more deeply the themes they introduced in *Lean Software Development*. They begin with a compelling history of lean thinking, then move to key areas such as value, waste, and people. Each chapter includes exercises to help you apply key points. If you want a better understanding of how lean ideas can work with software, this book is for you." --Bill Wake, independent consultant In 2003, Mary and Tom Poppendieck's *Lean Software Development* introduced breakthrough development techniques that leverage Lean principles to deliver unprecedented agility and value. Now their widely anticipated sequel and companion guide shows exactly how to implement Lean software development, hands-on. This new book draws on the Poppendiecks' unparalleled experience helping development organizations optimize the entire software value stream. You'll discover the right questions to ask, the key issues to focus on, and techniques proven to work. The authors present case studies from leading-edge software organizations, and offer practical exercises for jumpstarting your own Lean initiatives. Managing to extend, nourish, and leverage agile practices Building true development teams, not just groups Driving quality through rapid feedback and detailed discipline Making decisions Just-in-Time, but no later Delivering fast: How PatientKeeper delivers 45 rock-solid releases per year Making tradeoffs that really satisfy customers Implementing Lean Software Development is indispensable to anyone who wants more effective development processes--managers, project leaders, senior developers, and architects in enterprise IT and software companies alike. Agile techniques have demonstrated immense potential for developing more effective, higher-quality software. However, scaling these techniques to the enterprise presents many challenges. The solution is to integrate the principles and practices of Lean Software Development with Agile's ideology and methods. By doing so, software organizations

leverage Lean's powerful capabilities for "optimizing the whole" and managing complex enterprise projects. A combined "Lean-Agile" approach can dramatically improve both developer productivity and the software's business value. In this book, three expert Lean software consultants draw from their unparalleled experience to gather all the insights, knowledge, and new skills you need to succeed with Lean-Agile development. Lean-Agile Software Development shows how to extend Scrum processes with an Enterprise view based on Lean principles. The authors present crucial technical insight into emergent design, and demonstrate how to apply it to make iterative development more effective. They also identify several common development "anti-patterns" that can work against your goals, and they offer actionable, proven alternatives. Lean-Agile Software Development shows how to Transition to Lean Software Development quickly and successfully Manage the initiation of product enhancements Help project managers work together to manage product portfolios more effectively Manage dependencies across the software development organization and with its partners and colleagues Integrate development and QA roles to improve quality and eliminate waste Determine best practices for different software development teams The book's companion Web site, www.netobjectives.com/lasd, provides updates, links to related materials, and support for discussions of the book's content.

This book constitutes the proceedings of 26th International Conference on Advanced Information Systems Engineering, CAiSE 2014, held in Thessaloniki, Greece in June 2014. The 41 papers and 3 keynotes presented were carefully reviewed and selected from 226 submissions. The accepted papers were presented in 13 sessions: clouds and services; requirements; product lines; requirements elicitation; processes; risk and security; process models; data mining and streaming; process mining; models; mining event logs; databases; software engineering.

Satisfy Stakeholders by Solving the Right Problems, in the Right Ways In Beyond Requirements , Kent J. McDonald shows how applying analysis techniques with an agile mindset can radically transform analysis from merely "gathering and documenting requirements" to an important activity teams use to build shared understanding. First, McDonald discusses the unique agile mindset, reviews the key principles underlying it, and shows how these principles link to effective analysis. Next, he puts these principles to work in four wide-ranging and thought-provoking case studies. Finally, he drills down on a full set of techniques for effective agile analysis, using examples to show how, why, and when they work. McDonald's strategies will teach you how to understand stakeholders' needs, identify the best solution for satisfying those needs, and build a shared understanding of your solution that persists throughout the product lifecycle. He also demonstrates how to iterate your analysis, taking advantage of what you learn throughout development, testing, and deployment so that you can continuously adapt, refine, and improve. Whether you're an analysis practitioner or you perform analysis tasks as a developer, manager, or tester, McDonald's techniques will help your team consistently find and deliver better solutions. Coverage includes Core concepts for analysis: needs/ solutions, outcome/output, discovery/delivery Adapting Lean Startup ideas for IT projects: customer delivery, build-measure-learn, and metrics Structuring decisions, recognizing differences between options and commitments, and overcoming cognitive biases Focusing on value: feature injection, minimum viable products, and minimum marketable features Understanding how analysis flows alongside your project's lifecycle Analyzing users: mapping stakeholders, gauging commitment, and creating personas Understanding context: performing strategy (enterprise) analysis Clarifying needs: applying decision filters, assessing project opportunities, stating problems Investigating solutions: impact and story mapping, collaborative modeling, and acceptance criteria definition Kent J. McDonald uncovers better ways of delivering value. His experience includes work in business analysis, strategic planning, project management, and product development in the financial services, health insurance, performance marketing, human services, nonprofit, and automotive industries. He has a BS in industrial engineering from Iowa State University and an MBA from Kent State University. He is coauthor of *Stand Back and Deliver: Accelerating Business Agility* (Addison-Wesley, 2009).

Publisher Fact Sheet A concise, hands-on approach to managing & improving the critical requirements process in software development.

This business parable reviews two different systems development projects. One project was an abject, expensive failure, while the other succeeded in creating a major new revenue stream, bringing in new customers. By reviewing the tales of these two systems, readers will develop a better understanding of what works and what doesn't when it comes to the leadership and action steps required to reinvent a company's procedures to get in step with the times. CEO Evan Nogelmeyer discovers to his dismay that in today's business world, technology is not just for technologists. But does he discover this soon enough and once he does, does he have the tools and the business savvy he needs to stave off disaster? Evan and his team are all well-intentioned, successful business leaders with advanced degrees and backgrounds in marketing and business. But, without technical backgrounds, do they have what it takes to manage the technology overhaul so critical to the very survival of their company and the future of their own careers? *A Tale of Two Systems: Lean and Agile Software Development for Business Leaders* reviews two fictional systems development projects: Cremins United and Troubled Real Estate Information Management, both launched at the imaginary Cremins Corporation. Cremins is a venerable printing company that must transform itself to survive in the Internet age. One project proves to be an abject and expensive failure, while the other succeeds in creating a major new revenue stream and solving important customer needs. Contrasting the methods employed in a traditional, process-centric 'waterfall' approach, with a lean and agile-inspired approach, this book provides business leaders with a tangible understanding of why lean thinking is so well-suited to contemporary environments requiring flexibility, speed, and the input of specialized knowledge. At the conclusion of the two tales, author Michael Levine articulates a series of conclusions and principles based on Lean Product Development, Agile, and his 25 years of experience in business systems development. While the tales told and the companies and employees that inhabit them are pure fiction, the lessons to be learned are very real and very applicable in today's highly competitive market, where victory goes time and time again to the lean and the agile.

SAFe®: The World's Leading Framework for Enterprise Agility "Philips is continuously driving to develop high-quality software in a predictable, fast, and Agile way. SAFe addresses this primary goal, and offers these further benefits: reduced time-to-market, improved quality, stronger alignment across geographically distributed multi-disciplinary teams, and collaboration across teams to deliver meaningful value to customers with reduced cycle time." —Sundaresan Jagadeesan, SW CoE Program Director, Philips To succeed in today's adapt-or-die marketplace, businesses must be able to rapidly change the way they create and deliver value to their customers. Hundreds of the

world's most successful companies—including Intel, Capital One, AstraZeneca, Cisco, and Philips—have turned to the Scaled Agile Framework® (SAFe®) to achieve agility at scale and maintain a competitive edge. SAFe® 4.5 Distilled: Applying the Scaled Agile Framework® for Lean Enterprises explains how adopting SAFe can quickly improve time to market and increase productivity, quality, and employee engagement. In this book, you will Understand the business case for SAFe: its benefits, the problems it solves, and how to apply it Get an overview of SAFe across all parts of the business: team, program, value stream, and portfolio Learn why SAFe works: the power of SAFe's Lean-Agile mindset, values, and principles Discover how systems thinking, Agile development, and Lean product development form the underlying basis for SAFe Learn how to become a Lean-Agile leader and effectively drive an enterprise-wide transformation Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

A classic treatise that defined the field of applied demand analysis, *Consumer Demand in the United States: Prices, Income, and Consumption Behavior* is now fully updated and expanded for a new generation. Consumption expenditures by households in the United States account for about 70% of America's GDP. The primary focus in this book is on how households adjust these expenditures in response to changes in price and income. Econometric estimates of price and income elasticities are obtained for an exhaustive array of goods and services using data from surveys conducted by the Bureau of Labor Statistics, providing a better understanding of consumer demand. Practical models for forecasting future price and income elasticities are also demonstrated. Fully revised with over a dozen new chapters and appendices, the book revisits the original Taylor-Houthakker models while examining new material as well, such as the use of quantile regression and the stationarity of consumer preference. It also explores the emerging connection between neuroscience and consumer behavior, integrating the economic literature on demand theory with psychology literature. The most comprehensive treatment of the topic to date, this volume will be an essential resource for any researcher, student or professional economist working on consumer behavior or demand theory, as well as investors and policymakers concerned with the impact of economic fluctuations.

With the award-winning book *Agile Software Development: Principles, Patterns, and Practices*, Robert C. Martin helped bring Agile principles to tens of thousands of Java and C++ programmers. Now .NET programmers have a definitive guide to agile methods with this completely updated volume from Robert C. Martin and Micah Martin, *Agile Principles, Patterns, and Practices in C#*. This book presents a series of case studies illustrating the fundamentals of Agile development and Agile design, and moves quickly from UML models to real C# code. The introductory chapters lay out the basics of the agile movement, while the later chapters show proven techniques in action. The book includes many source code examples that are also available for download from the authors' Web site. Readers will come away from this book understanding Agile principles, and the fourteen practices of Extreme Programming Spiking, splitting, velocity, and planning iterations and releases Test-driven development, test-first design, and acceptance testing Refactoring with unit testing Pair programming Agile design and design smells The five types of UML diagrams and how to use them effectively Object-oriented package design and design patterns How to put all of it together for a real-world project Whether you are a C# programmer or a Visual Basic or Java programmer learning C#, a software development manager, or a business analyst, *Agile Principles, Patterns, and Practices in C#* is the first book you should read to understand agile software and how it applies to programming in the .NET Framework.

Requirements engineering is the process by which the requirements for software systems are gathered, analyzed, documented, and managed throughout their complete lifecycle. Traditionally it has been concerned with technical goals for, functions of, and constraints on software systems. Aurum and Wohlin, however, argue that it is no longer appropriate for software systems professionals to focus only on functional and non-functional aspects of the intended system and to somehow assume that organizational context and needs are outside their remit. Instead, they call for a broader perspective in order to gain a better understanding of the interdependencies between enterprise stakeholders, processes, and software systems, which would in turn give rise to more appropriate techniques and higher-quality systems. Following an introductory chapter that provides an exploration of key issues in requirements engineering, the book is organized in three parts. Part 1 presents surveys of state-of-the-art requirements engineering process research along with critical assessments of existing models, frameworks and techniques. Part 2 addresses key areas in requirements engineering, such as market-driven requirements engineering, goal modeling, requirements ambiguity, and others. Part 3 concludes the book with articles that present empirical evidence and experiences from practices in industrial projects. Its broader perspective gives this book its distinct appeal and makes it of interest to both researchers and practitioners, not only in software engineering but also in other disciplines such as business process engineering and management science. "Mastering the Requirements Process: Getting Requirements Right" sets out an industry-proven process for gathering and verifying requirements, regardless of whether you work in a traditional or agile development environment. In this sweeping update of the bestselling guide, the authors show how to discover precisely what the customer wants and needs, in the most efficient manner possible.

How to scale ATDD to large projects --

Discover how to implement and operate in an Agile manner at every level of your enterprise and at every point from idea to delivery. Learn how Agile-mature organizations adapt nimbly to microchanges in market conditions. Learn cutting-edge practices and concepts as you extend your implementation of Agile through the entire enterprise to meet customer needs. Veteran Agile coach Mario Moreira argues that two critical conditions must be conscientiously cultivated at a company before it can expect to reap in full measure the business benefits of mature Agile. First, individuals at every level must be committed to the mindset and the implementation of practices rigorously focused on delivering value to the customer. Second, all employees must be empowered to take ownership. This holistic transformation wrenches the status quo and provokes a strong focus where customers and employees matter. What You'll Learn Establish an idea pipeline to quickly and productively evolve customer value through all levels of the enterprise Incorporate a discovery mindset—experimental, incremental, design, and divergent thinking—and fast feedback loops to increase the odds that what you build aligns more closely to what customer wants Leverage Lean Canvas, personas, story mapping, value stream mapping, Cost of Delay, servant leadership, self-organization, and more to deliver optimum value to customers Use continuous agile budgeting and idea pipelines at the senior levels of the enterprise to enable you to adapt to the speed of the market Reinvent human resources, portfolio management, finance, and many areas of management toward new roles in the enablement of customer value Map a top-to-bottom and end-to-end holistic view of your Agile galaxy to gauge where you are today and where you'd like to go in your Agile future Be truly Agile throughout your enterprise, focused on customer value and employees above all else Who This Book Is For Executives and senior management; sponsors of Agile within a company; ScrumMasters and Agile coaches, champions, and consultants; project management and quality assurance officers (PMOs and AMOs); portfolio managers; product managers and product owners; marketing and business managers; functional, middle, and resource managers; engineering heads and managers; cross-functional engineering/scrum teams; and entrepreneurs and venture capitalists

This book constitutes the proceedings of the 5th International Conference on Lean and Agile Software Development, LASD 2021, which was held online on January 23, 2021. The conference received a total of 32 submissions, of which 10 full and 2 short papers are included in this volume. In addition, one keynote paper is also included. To live the agile mindset, the LASD conference focuses on highly relevant research outcomes and fosters their way into practice. Topics discussed in this volume range from teams under COVID-19 through women in Agile, to product road-mapping and non-functional requirements.

User experience (UX) design has traditionally been a deliverables-based practice, with wireframes, site maps, flow diagrams, and mockups. But in today's web-driven reality, orchestrating the entire design from the get-go no longer works. This hands-on book demonstrates Lean UX, a deeply collaborative and cross-functional process that lets you strip away heavy deliverables in favor of

building shared understanding with the rest of the product team. Lean UX is the evolution of product design; refined through the real-world experiences of companies large and small, these practices and principles help you maintain daily, continuous engagement with your teammates, rather than work in isolation. This book shows you how to use Lean UX on your own projects. Get a tactical understanding of Lean UX—and how it changes the way teams work together Frame a vision of the problem you're solving and focus your team on the right outcomes Bring the designer's tool kit to the rest of your product team Break down the silos created by job titles and learn to trust your teammates Improve the quality and productivity of your teams, and focus on validated experiences as opposed to deliverables/documents Learn how Lean UX integrates with Agile UX

This text includes comprehensive solutions, proven processes and real-world insights for capturing requirements at the right level of detail without compromising agility.

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

Resource added for the Business Analyst program 101021?.

Describes Agile Modeling Driven Design (AMDD) and Test-Driven Design (TDD) approaches, database refactoring, database encapsulation strategies, and tools that support evolutionary techniques Agile software developers often use object and relational database (RDB) technology together and as a result must overcome the impedance mismatch The author covers techniques for mapping objects to RDBs and for implementing concurrency control, referential integrity, shared business logic, security access control, reports, and XML An agile foundation describes fundamental skills that all agile software developers require, particularly Agile DBAs Includes object modeling, UML data modeling, data normalization, class normalization, and how to deal with legacy databases Scott W. Ambler is author of Agile Modeling (0471202827), a contributing editor with Software Development (www.sdmagazine.com), and a featured speaker at software conferences worldwide

Studies on software project delivery show that the most common cause of failure is mismanagement of the project's requirements. This book takes a holistic approach to managing requirements to show you how to bridge the gap between requirements and specifications and deliver a successful software project that meets your client's expectations.

"I spend much time helping organizations capture requirements and even more time helping them recover from not capturing requirements. Many of them have gone through some motions regarding requirements as if they were sleepwalking. It's time to wake up and do it right-and this book is going to be their alarm clock." -Jerry Weinberg, author of numerous books on productivity enhancement "In today's complex, fast-paced software development environment, collaboration-the intense peer-to-peer conversations that result in products, decisions, and knowledge sharing-is absolutely essential to success. But all too often, attempts to collaborate degenerate into agonizing meetings or ineffectual bull sessions. Ellen's wonderful book will help you bridge the gap-turning the agony of meetings into the ecstasy of effective collaboration." -Jim Highsmith, a pioneer in adaptive software development methods "Requirements by Collaboration presents a wealth of practical tools and techniques for facilitating requirements development workshops. It is suitable-no, essential reading-for requirements workshop facilitators. It will help both technical people and customer representatives participate in these critical contributions to software success." -Karl Wiegers, Principal Consultant, Process Impact, author of Software Requirements "The need for this particular book, at this particular time, is crystal clear. We have entered a new age where software development must be viewed as a form of business problem solving. That means direct user participation in developing "requirements," or more accurately, in jointly working the business problem. That, in turn, means facilitated sessions. In this book, Ellen Gottesdiener provides a wealth of practical ideas for ensuring that you have exactly the right stuff for this all-important area of professional art." -Ronald G. Ross, Principal, Business Rule Solutions, LLC, Executive Editor, www.BRCCommunity.com "Gottesdiener's years of software development experience coupled with her straight-forward writing style make her book a perfect choice for either a senior developer or a midlevel project manager. In addition to her technical experience, her knowledge of group dynamics balance the book by educating the reader on how to manage conflict and personality differences within a requirements team-something that is missing from most requirements textbooks...It is a required "handbook" that will be referred to again and again." -Kay Christian, ebusiness Consultant, Conifer, Colorado "Requirements by Collaboration is a "must read" for any system stakeholder. End users and system analysts will learn the significant value they can add to the systems development process. Management will learn the tremendous return they may receive from making a modest time/people investment in facilitated sessions. Facilitators will discover ways to glean an amazing amount of high-quality information in a relatively brief time." -Russ Schwartz, Computer System Quality Consultant, Global Biotechnology Firm "In addition to showing how requirements are identified, evaluated, and confirmed, Ellen provides important guidance based on her own real-world experience for creating and managing the workshop environment in which requirements are generated. This book is an engaging and invaluable resource for project teams and sponsors, both business and IT, who are

committed to achieving results in the most productive manner possible." -Hal Thilmony, Senior Manager, Business Process Improvement (Finance), CiscoSystems, Inc. "Project managers should read this book for assistance with planning the requirements process. Experienced facilitators will enrich their knowledge. New facilitators can use this book to get them up to speed and become more effective in less time." -Rob Stroober, Competence Development Manager and Project Manager, Deloitte & Touche Consultdata, The Netherlands "While many books discuss the details of software requirement artifacts (for example, use cases), Ellen's new book zeros in on effective workshop techniques and tools used to gather the content of these artifacts. As a pioneer in requirements workshops, she shares her real-life experiences in a comprehensive and easy-to-read book with many helpful examples and diagrams." -Bill Bird, Aera Energy LLC "Requirements by Collaboration is absolutely full of guidance on the most effective ways to use workshops in requirements capture. This book will help workshop owners and facilitators to determine and gain agreement on a sound set of requirements, which will form a solid foundation for the development work that is to follow." -Jennifer Stapleton, Software Process Consultant and author of DSDM: The Method in Practice "This book provides an array of techniques within a clear, structured process, along with excellent examples of how and when to use them. It's an excellent, practical, and really useful handbook written by a very experienced author!" -Jean-Anne Kirk, Director DSDM Consortium and IAF Professional Development "Ellen has written a detailed, comprehensive, and practical handbook for facilitating groups in gathering requirements. The processes she outlines give the facilitator tools to bring together very different perspectives from stakeholders elegantly and with practical, useable results." -Jo Nelson, Principal, ICA Associates, Inc., Chair, IAF (2001-2002) Requirements by Collaboration: Workshops for Defining Needs focuses on the human side of software development--how well we work with our customers and teammates. Experience shows that the quality and degree of participation, communication, respect, and trust among all the stakeholders in a project can strongly influence its success or failure. Ellen Gottesdiener points out that such qualities are especially important when defining user requirements and she shows in this book exactly what to do about that fact. Gottesdiener shows specifically how to plan and conduct requirements workshops. These carefully organized and facilitated meetings bring business managers, technical staff, customers, and users into a setting where, together, they can discover, evolve, validate, verify, and agree upon their product needs. Not only are their requirements more effectively defined through this collaboration, but the foundation is laid for good teamwork throughout the entire project. Other books focus on how to build the product right. Requirements by Collaboration focuses instead on what must come first--the right product to build.

Agile Software Requirements Lean Requirements Practices for Teams, Programs, and the Enterprise Addison-Wesley Professional

WHAT IS THIS BOOK ABOUT? Communicate Business Needs in an Agile (e.g. Scrum) or Lean (e.g. Kanban) Environment Problem solvers are in demand in every organization, large and small, from a Mom and Pop shop to the federal government. Increase your confidence and your value to organizations by improving your ability to analyze, extract, express, and discuss business needs in formats supported by Agile, Lean, and DevOps. The single largest challenge facing organizations around the world is how to leverage their Information Technology to gain competitive advantage. This is not about how to program the devices; it is figuring out what the devices should do. The skills needed to identify and define the best IT solutions are invaluable for every role in the organization. These skills can propel you from the mail room to the boardroom by making your organization more effective and more profitable. Whether you: - are tasked with defining business needs for a product or existing software, - need to prove that a digital solution works, - want to expand your User Story and requirements discovery toolkit, or - are interested in becoming a Business Analyst, this book presents invaluable ideas that you can steal. The future looks bright for those who embrace Lean concepts and are prepared to engage with the business community to ensure the success of Agile initiatives. **WHAT YOU WILL LEARN** Learn Step by Step When and How to Define Lean / Agile Requirements Agile, Lean, DevOps, and Continuous Delivery do not change the need for good business analysis. In this book, you will learn how the new software development philosophies influence the discovery, expression, and analysis of business needs. We will cover User Stories, Features, and Quality Requirements (a.k.a. Non-functional Requirements – NFR). User Story Splitting and Feature Drill-down transform business needs into technology solutions. Acceptance Tests (Scenarios, Scenario Outlines, and Examples) have become a critical part of many Lean development approaches. To support this new testing paradigm, you will also learn how to identify and optimize Scenarios, Scenario Outlines, and Examples in GIVEN-WHEN-THEN format (Gherkin) that are the bases for Acceptance Test Driven Development (ATDD) and Behavior Driven Development (BDD). This book presents concrete approaches that take you from day one of a change initiative to the ongoing acceptance testing in a continuous delivery environment. The authors introduce novel and innovative ideas that augment tried-and-true techniques for: - discovering and capturing what your stakeholders need, - writing and refining the needs as the work progresses, and - developing scenarios to verify that the software does what it should. Approaches that proved their value in conventional settings have been redefined to ferret out and eliminate waste (a pillar of the Lean philosophy). Those approaches are fine-tuned and perfected to support the Lean and Agile movement that defines current software development. In addition, the book is chock-full of examples and exercises that allow you to confirm your understanding of the presented ideas. **WHO WILL BENEFIT FROM READING THIS BOOK?** How organizations develop and deliver working software has changed significantly in recent years. Because the change was greatest in the developer community, many books and courses justifiably target that group. There is, however, an overlooked group of people essential to the development of software-as-an-asset that have been neglected. Many distinct roles or job titles in the business community perform business needs analysis for digital solutions. They include: - Product Owners - Business Analysts - Requirements Engineers - Test Developers - Business- and Customer-side Team Members - Agile Team Members - Subject Matter Experts (SME) - Project Leaders and Managers - Systems Analysts and Designers - AND "anyone wearing the business analysis hat", meaning anyone responsible for defining a future IT solution **TOM AND ANGELA'S** (the authors) **STORY** Like all good IT stories, theirs started on a project many years ago. Tom was the super techie, Angela the super SME. They fought their way through the 3-year development of a new policy maintenance

system for an insurance company. They vehemently disagreed on many aspects, but in the process discovered a fundamental truth about IT projects. The business community (Angela) should decide on the business needs while the technical team's (Tom)'s job was to make the technology deliver what the business needed. Talk about a revolutionary idea! All that was left was learning how to communicate with each other without bloodshed to make the project a resounding success. Mission accomplished. They decided this epiphany was so important that the world needed to know about it. As a result, they made it their mission (and their passion) to share this ground-breaking concept with the rest of the world. To achieve that lofty goal, they married and began the mission that still defines their life. After over 30 years of living and working together 24x7x365, they are still wildly enthusiastic about helping the victims of technology learn how to ask for and get the IT solutions they need to do their jobs better. More importantly, they are more enthusiastically in love with each other than ever before!

Lean Business Analysis Weaponizes the Agile Software Development Revolution With the widespread adoption of Agile, software development has gone through some serious remodeling. The changes are a seismic shift from the days of mega-projects and monolithic methodologies. Agile teams build robust products incrementally and iteratively, requiring fast feedback from the business community to define ongoing work. As a result, the process of defining IT requirements is evolving rapidly. Backlogs replace requirements definition documents. User Stories, Epics and Features replace requirement statements. Scenarios and Examples replace test cases. The timing of business analysis activities is shifting like sand. But What Is LEAN Business Analysis? Business Analysis defines the future of Information Technology (IT) in an organization. Lean Business Analysis is the essential next step that enables the business community to take advantage of the speed of software delivery. This book offers a brief overview of how you can reduce waste in Business Analysis practices to optimally support the new lean and agile software development world. Learn how lean principles: Gain business agility by shifting from Project to Product Thinking Accelerate time-to-market with a Minimum Viable Product (MVP) Combat waste in your Business Analysis Life Cycle Optimize software development with effective Product Backlogs Improve the outcome of your Business Analysis techniques Express business needs in Features, User Stories, and Scenarios Deliver product quality with Acceptance (Business-Facing) Testing The authors describe the problems and the process plaguing organizations struggling to ensure that the software development community produces the IT environment that the business community needs. They also show solutions that take advantage of Lean Manufacturing principles to capture and analyze business needs. They explain types of waste prevalent in conventional Business Analysis and suggest approaches to minimize the waste while increasing the quality of the deliverables, namely actionable Features, User Stories, and Requirements that enable Agile Teams. Who Should Read This Book? This book will help anyone who is involved with Agile Software development. In particular, it targets the neglected business roles such as Product Owners, Business Analysts, Test Developers, Business-side and Agile Team Members, Subject Matter Experts, and Product Managers. Who Wrote It? The authors, Tom and Angela Hathaway, have taught thousands of students in face-to-face training, published multiple business analysis books, produced courses available on platforms such as Udemy.com with over 30K students, and enriched the global community with millions of views on their YouTube channel "baexperts".

Agile software development approaches have had significant impact on industrial software development practices. Today, agile software development has penetrated to most IT companies across the globe, with an intention to increase quality, productivity, and profitability. Comprehensive knowledge is needed to understand the architectural challenges involved in adopting and using agile approaches and industrial practices to deal with the development of large, architecturally challenging systems in an agile way. Agile Software Architecture focuses on gaps in the requirements of applying architecture-centric approaches and principles of agile software development and demystifies the agile architecture paradox. Readers will learn how agile and architectural cultures can co-exist and support each other according to the context. Moreover, this book will also provide useful leads for future research in architecture and agile to bridge such gaps by developing appropriate approaches that incorporate architecturally sound practices in agile methods. Presents a consolidated view of the state-of-art and state-of-practice as well as the newest research findings Identifies gaps in the requirements of applying architecture-centric approaches and principles of agile software development and demystifies the agile architecture paradox Explains whether or not and how agile and architectural cultures can co-exist and support each other depending upon the context Provides useful leads for future research in both architecture and agile to bridge such gaps by developing appropriate approaches, which incorporate architecturally sound practices in agile methods

With plenty of ideas, suggestions, and practical cases on software quality, this book will help you to improve the quality of your software and to deliver high-quality products to your users and satisfy the needs of your customers and stakeholders. Many methods for product quality improvement start by investigating the problems, and then work their way back to the point where the problem started. For instance audits and root cause analysis work this way. But what if you could prevent problems from happening, by building an understanding what drives quality, thus enabling to take action before problems actually occur? What Drives Quality explores how quality plays a role in all of the software development activities. It takes a deep dive into quality by listing the relevant factors of development and management activities that drive the quality of software products. It provides a lean approach to quality by analyzing the full development chain from customer requests to delivering products to users. I'm aiming this book at software developers and testers, architects, product owners and managers, agile coaches, Scrum masters, project managers, and operational and senior managers who consider quality to be important. A book on quality should be practical. It should help you, the reader of this book, to improve the quality of your software and deliver better products. It should inspire you and give you energy to persevere on your quality journey. What drives quality tries to do just that, and more. This book is based on my experience as a

developer, tester, team leader, project manager, quality manager, process manager, consultant, coach, trainer, and adviser in Agile, Lean, Quality and Continuous Improvement. It takes a deep dive into quality with views from different perspectives and provides ideas, suggestions, practices, and experiences that will help you to improve quality of the products that your organization is delivering. This book views software quality from an engineering, management, and social perspective. It explores the interaction between all involved in delivering high-quality software to users and provides ideas to do it quicker and at lower costs.

Here is the first comprehensive approach to managing design-in-process inventory from the bestselling author of "Developing Products in Half the Time". Donald Reinertsen reveals a transparent system for tracking, measuring, and managing invisible "design-in-process" inventory to achieve lower costs, higher profits, and better processes. 20 line drawings.

"We need better approaches to understanding and managing software requirements, and Dean provides them in this book. He draws ideas from three very useful intellectual pools: classical management practices, Agile methods, and lean product development. By combining the strengths of these three approaches, he has produced something that works better than any one in isolation." –From the Foreword by Don Reinertsen, President of Reinertsen & Associates; author of Managing the Design Factory; and leading expert on rapid product development Effective requirements discovery and analysis is a critical best practice for serious application development. Until now, however, requirements and Agile methods have rarely coexisted peacefully. For many enterprises considering Agile approaches, the absence of effective and scalable Agile requirements processes has been a showstopper for Agile adoption. In Agile Software Requirements, Dean Leffingwell shows exactly how to create effective requirements in Agile environments. Part I presents the "big picture" of Agile requirements in the enterprise, and describes an overall process model for Agile requirements at the project team, program, and portfolio levels Part II describes a simple and lightweight, yet comprehensive model that Agile project teams can use to manage requirements Part III shows how to develop Agile requirements for complex systems that require the cooperation of multiple teams Part IV guides enterprises in developing Agile requirements for ever-larger "systems of systems," application suites, and product portfolios This book will help you leverage the benefits of Agile without sacrificing the value of effective requirements discovery and analysis. You'll find proven solutions you can apply right now—whether you're a software developer or tester, executive, project/program manager, architect, or team leader. "We need better approaches to understanding and managing software requirements, and Dean provides them in this book. He draws ideas from three very useful intellectual pools: classical management practices, Agile methods, and lean product development. By combining the strengths of these three approaches, he has produced something that works better than any one in isolation."--The Foreword by Don Reinertsen, President of Reinertsen & Associates; author of Managing the Design Factory; and leading expert on rapid product development Effective requirements discovery and analysis is a crit.

To support the broadening spectrum of project delivery approaches, PMI is offering A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Sixth Edition as a bundle with its latest, the Agile Practice Guide. The PMBOK® Guide – Sixth Edition now contains detailed information about agile; while the Agile Practice Guide, created in partnership with Agile Alliance®, serves as a bridge to connect waterfall and agile. Together they are a powerful tool for project managers. The PMBOK® Guide – Sixth Edition – PMI's flagship publication has been updated to reflect the latest good practices in project management. New to the Sixth Edition, each knowledge area will contain a section entitled Approaches for Agile, Iterative and Adaptive Environments, describing how these practices integrate in project settings. It will also contain more emphasis on strategic and business knowledge—including discussion of project management business documents—and information on the PMI Talent Triangle™ and the essential skills for success in today's market. Agile Practice Guide has been developed as a resource to understand, evaluate, and use agile and hybrid agile approaches. This practice guide provides guidance on when, where, and how to apply agile approaches and provides practical tools for practitioners and organizations wanting to increase agility. This practice guide is aligned with other PMI standards, including A Guide to the Project Management Body of Knowledge (PMBOK® Guide) – Sixth Edition, and was developed as the result of collaboration between the Project Management Institute and the Agile Alliance.

Lean Software Development: An Agile Toolkit Adapting agile practices to your development organization Uncovering and eradicating waste throughout the software development lifecycle Practical techniques for every development manager, project manager, and technical leader Lean software development: applying agile principles to your organization In Lean Software Development, Mary and Tom Poppendieck identify seven fundamental "lean" principles, adapt them for the world of software development, and show how they can serve as the foundation for agile development approaches that work. Along the way, they introduce 22 "thinking tools" that can help you customize the right agile practices for any environment. Better, cheaper, faster software development. You can have all three—if you adopt the same lean principles that have already revolutionized manufacturing, logistics and product development. Iterating towards excellence: software development as an exercise in discovery Managing uncertainty: "decide as late as possible" by building change into the system. Compressing the value stream: rapid development, feedback, and improvement Empowering teams and individuals without compromising coordination Software with integrity: promoting coherence, usability, fitness, maintainability, and adaptability How to "see the whole"—even when your developers are scattered across multiple locations and contractors Simply put, Lean Software Development helps you refocus development on value, flow, and people—so you can achieve breakthrough quality, savings, speed, and business alignment.

The Must-have Reference Guide for SAFe® Practitioners "There are a lot of methods of scale out there, but the Scaled Agile Framework is the one lighting up the world." –Steve Elliot, Founder/CEO AgileCraft "You don't have to be perfect to start SAFe because you learn as you go—learning is built in. Before SAFe, I would not know how to help my teams but

now I have many tools to enable the teams. My job is really fun and the bottom line is I have never enjoyed my job more!” –Product Manager, Fortune 500 Enterprise Captured for the first time in print, the SAFe body of knowledge is now available as a handy desktop reference to help you accomplish your mission of building better software and systems. Inside, you’ll find complete coverage of what has, until now, only been available online at scaledagileframework.com. The SAFe knowledge base was developed from real-world field experience and provides proven success patterns for implementing Lean-Agile software and systems development at enterprise scale. This book provides comprehensive guidance for work at the enterprise Portfolio, Value Stream, Program, and Team levels, including the various roles, activities, and artifacts that constitute the Framework, along with the foundational elements of values, mindset, principles, and practices. Education & Training Key to Success The practice of SAFe is spreading rapidly throughout the world. The majority of Fortune 100 U.S. companies have certified SAFe practitioners and consultants, as do an increasing percentage of the Global 1000 enterprises. Case study results—visit scaledagileframework.com/case-studies—typically include: 20—50% increase in productivity 50%+ increases in quality 30—75% faster time to market Measurable increases in employee engagement and job satisfaction With results like these, the demand from enterprises seeking SAFe expertise is accelerating at a dramatic rate. Successful implementations may vary in context, but share a common attribute: a workforce well trained and educated in SAFe practices. This book—along with authorized training and certification—will help you understand how to maximize the value of your role within a SAFe organization. The result is greater alignment, visibility, improved performance throughout the enterprise, and ultimately better outcomes for the business.

“Companies have been implementing large agile projects for a number of years, but the ‘stigma’ of ‘agile only works for small projects’ continues to be a frequent barrier for newcomers and a rallying cry for agile critics. What has been missing from the agile literature is a solid, practical book on the specifics of developing large projects in an agile way. Dean Leffingwell’s book *Scaling Software Agility* fills this gap admirably. It offers a practical guide to large project issues such as architecture, requirements development, multi-level release planning, and team organization. Leffingwell’s book is a necessary guide for large projects and large organizations making the transition to agile development.” —Jim Highsmith, director, Agile Practice, Cutter Consortium, author of *Agile Project Management* “There’s tension between building software fast and delivering software that lasts, between being ultra-responsive to changes in the market and maintaining a degree of stability. In his latest work, *Scaling Software Agility*, Dean Leffingwell shows how to achieve a pragmatic balance among these forces. Leffingwell’s observations of the problem, his advice on the solution, and his description of the resulting best practices come from experience: he’s been there, done that, and has seen what’s worked.” —Grady Booch, IBM Fellow Agile development practices, while still controversial in some circles, offer undeniable benefits: faster time to market, better responsiveness to changing customer requirements, and higher quality. However, agile practices have been defined and recommended primarily to small teams. In *Scaling Software Agility*, Dean Leffingwell describes how agile methods can be applied to enterprise-class development. Part I provides an overview of the most common and effective agile methods. Part II describes seven best practices of agility that natively scale to the enterprise level. Part III describes an additional set of seven organizational capabilities that companies can master to achieve the full benefits of software agility on an enterprise scale. This book is invaluable to software developers, testers and QA personnel, managers and team leads, as well as to executives of software organizations whose objective is to increase the quality and productivity of the software development process but who are faced with all the challenges of developing software on an enterprise scale.

More and more Agile projects are seeking architectural roots as they struggle with complexity and scale - and they're seeking lightweight ways to do it Still seeking? In this book the authors help you to find your own path Taking cues from Lean development, they can help steer your project toward practices with longstanding track records Up-front architecture? Sure. You can deliver an architecture as code that compiles and that concretely guides development without bogging it down in a mass of documents and guesses about the implementation Documentation? Even a whiteboard diagram, or a CRC card, is documentation: the goal isn't to avoid documentation, but to document just the right things in just the right amount Process? This all works within the frameworks of Scrum, XP, and other Agile approaches

The Must-have Reference Guide for SAFe® Professionals “There are a lot of methods of scale out there, but the Scaled Agile Framework is the one lighting up the world.” –Steve Elliot, Founder/CEO AgileCraft “Since beginning our Lean-Agile journey with SAFe, Vantiv has focused its strategic efforts and its execution. We have improved the predictability of product delivery while maintaining high quality, and have become even more responsive to customers—resulting in higher customer satisfaction. And just as important, employee engagement went up over the past year.” –Dave Kent, Enterprise Agile Coach, Vantiv Fully updated to include the new innovations in SAFe 4.5, the SAFe® 4.5 Reference Guide is ideal for anyone serious about learning and implementing the world’s leading framework for enterprise agility. Inside, you’ll find complete coverage of the scaledagileframework.com knowledge base, the website that thousands of the world’s largest brands turn to for building better software and systems. SAFe was developed from real-world field experience and provides proven success patterns for implementing Lean-Agile software and systems development at enterprise scale. This book provides comprehensive guidance for work at the enterprise Portfolio, Large Solution, Program, and Team levels, including the various roles, activities, and artifacts that constitute the Framework. Education & Training Key to Success The practice of SAFe is spreading rapidly throughout the world. The majority of Fortune 100 companies have certified SAFe professionals and consultants, as do an increasing percentage of the Global 2000. Case study results—visit scaledagileframework.com/case-studies—typically include: 30 — 75% faster time-to-market 25 — 75% increase in productivity 20 — 50% improvements in quality 10 — 50% increased employee engagement Successful implementations

may vary in context but share a common attribute: a workforce well trained and educated in SAFe practices. This book—along with authorized training and certification—will help you understand how to maximize the value of your role within a SAFe organization. The result is greater alignment and visibility, improved performance throughout the enterprise, and ultimately better outcomes for the business.

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