Lean Software Development: An Agile Toolkit

The LESS 2010 conference was the first scientific conference dedicated to advancing the "lean enterprise software and systems" body of knowledge. It fostered interactions by joining the lean product development community with the agile community coupled with innovative ideas nurtured by the beyond budgeting school of thinking. The conference was organized in collaboration with the Lean Software and Systems Consortium (LSSC). The conference is established as a conference series. The idea of the conference was to offer a unique platform for advancing the state of the art in research and practice by bringing the leading researchers and practitioners to the same table. Indeed, LESS 2010 attracted a unique mix of participants including academics, researchers, leading consultants and industry practitioners. The aim of the conference was to use this diverse community to advance research and practical knowledge concerning lean thinking within the field of software business and development. LESS 2010 had more than 60% of its speakers come from the industry and the remaining from academia. LESS is poised to grow as we advance into future iterations of the conference and become the conference for lean thinking in systems and software development. Its growth and credibility will be advanced by the communities and knowledge exchange platform it provides. LESS offers several avenues for knowledge exchange to create a highly collaborative environment. Each year, we aim to bring novelty to a program that fosters collaboration, letting new ideas thrive during and after the conference.

There are many books that seek to explain Lean and Agile software that offer theory, techniques, and examples. Michael Levine's first book, A Tale of Two Systems, is one of the best, synthesizing Lean manufacturing and product development with agile software concepts in an engaging business novel. However, there has been precious little practical guidance for those seeking to change existing organizations to become Lean and Agile, until now. Mr. Levine has followed the successful approach of A Tale of Two Systems, telling two simultaneous intertwined and contrasting stories, to bring organizational transformation to life. Mary O'Connell and James "Wes" Wesleyan, recently engaged to be married, share a commitment to Lean and Agile Software. They have recently become leaders in two very different companies — one, stuck in a slow-moving, unresponsive, process-driven quagmire of a software culture; the other, struggling through the chaos of a sales-driven, process-less swirl. Together with their wise mentor, Neville Roberts, they identify two approaches to making needed changes: Drive People (a top-down approach focused on processes and tools), and People Driven (an enablement approach focused on people and organizations). Mary and Wes evaluate their situations and choose approaches that best fit for them, and the transformations commence. A Tale of Two Transformations differs from many information technology books by grappling with all the complexities of our organizations: the people, the politics, the

financials, the processes – in short, the culture from which our Lean and Agile journeys must begin. The change model presented in the flow of the stories is generally applicable, and can help anyone thinking about how to improve their organization.

This book illustrates how goal-oriented, automated measurement can be used to create Lean organizations and to facilitate the development of Lean software, while also demonstrating the practical implementation of Lean software development by combining tried and trusted tools. In order to be successful, a Lean orientation of software development has to go hand in hand with a company's overall business strategy. To achieve this, two interrelated aspects require special attention: measurement and experience management. In this book, Janes and Succi provide the necessary knowledge to establish "Lean software company thinking," while also exploiting the latest approaches to software measurement. A comprehensive, company-wide measurement approach is exactly what companies need in order to align their activities to the demands of their stakeholders, to their business strategy, etc. With the automatic, non-invasive measurement approach proposed in this book, even small and medium-sized enterprises that do not have the resources to introduce heavyweight processes will be able to make their software development processes considerably more Lean. The book is divided into three parts. Part I, "Motivation for Lean Software Development," explains just what "Lean Production" means, why it can be advantageous to apply Lean concepts to software engineering, and which existing approaches are best suited to achieving this. Part II, "The Pillars of Lean Software Development," presents the tools needed to achieve Lean software development: Non-invasive Measurement, the Goal Question Metric approach, and the Experience Factory. Finally, Part III, "Lean Software Development in Action," shows how different tools can be combined to enable Lean Thinking in software development. The book primarily addresses the needs of all those working in the field of software engineering who want to understand how to establish an efficient and effective software development process. This group includes developers, managers, and students pursuing an M.Sc. degree in software engineering.

This book contains the refereed proceedings of the 13th International Conference on Agile Software Development, XP 2012, held in Malmö, Sweden, in May 2012. In the last decade, we have seen agile and lean software development strongly influence the way software is developed. Agile and lean software development has moved from being a way of working for a number of pioneers to becoming, more or less, the expected way of developing software in industry. The topics covered by the selected full papers include general aspects of agility, agile teams, studies related to the release and maintenance of software, and research on specific practices in agile and lean software development. They are complemented by four short papers capturing additional aspects of agile and lean projects.

Foundations, Theory, and Practice

Bringing Methodologies from Industry to the Classroom

Getting the Most Out of Agile, Scrum, and Lean Kanban
Lean Software Development A Complete Guide - 2020 Edition
Lean Requirements Practices for Teams, Programs, and the Enterprise
A Gentle Introduction to Lean Software Development
Accelerate

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

Create Thriving, High-Performing Teams and Organizations with Scrumban Scrumban allows you to use Kanban as a catalyst for increasingly valuable changes to your existing software development processes, amplifying and expanding upon Scrum's benefits. Now, there's a definitive guide to Scrumban that explains what it is (and isn't), how and why it works, and how to use it to improve both team and organizational performance. Comprehensive, coherent, and practical, The Scrumban [R]Evolution will help you incrementally apply proven Lean/Agile principles to get what matters most: pragmatic, bottom-line results. Pioneering Scrumban coach Ajay Reddy clarifies Scrumban's core concepts and principles, and illuminates their application through real-life examples. He takes you from the absolute basics through sustainable adoption, and from choosing metrics to advanced forecasting and adaptive management. Whatever your role in the organization, this essential guide liberates you to tailor Kanban systems based on your unique challenges–and to solve delivery problems and improvement stagnation you haven't been able to solve with Scrum alone. Discover how Scrumban can help you reignite stalled Agile initiatives Clarify crucial relationships between purpose, values, and performance Quickly develop shared understanding in and across teams Use Scrumban to better manage Product Owner/Customer expectations Improve the rollout of Scrum in

any team using Scrumban Use Scrumban and let real improvements spread with least resistance Use the right metrics to gain insight, track progress, and improve forecasting Take advantage of Scrumban's advanced capabilities as you gain experience Develop leaders to successfully guide your Agile initiatives Integrate modeling to reliably refine your forecasting and decision-making 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.

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.

Lean Software Development in Action

Introduction to Agile Methods

Scaled Agile Framework® for Lean Software and Systems Engineering

Ask the Right Questions

An Agile Perspective

Scrumban - Essays on Kanban Systems for Lean Software Development

Lean Thinking

This book explores the application of agile and lean techniques,

originally from the field of software development and manufacturing, to various aspects of education. It covers a broad range of topics, including applying agile teaching and learning techniques in the classroom, incorporating lean thinking in educational workflows, and using team-based approaches to student-centred activities based on agile principles and processes. Demonstrating how agile and lean ideas can concretely be applied to education, the book offers practical guidance on how to apply these ideas in the classroom or lecture hall, as well as new concepts that could spark further research and development.

How to scale ATDD to large projects --

Building on their breakthrough bestsellers Lean Software Development and Implementing Lean Software Development, Mary and Tom Poppendieck's latest book shows software leaders and team members exactly how to drive high-value change throughout a software organization—and make it stick. They go far beyond generic implementation guidelines, demonstrating exactly how to make lean work in real projects, environments, and companies. The Poppendiecks organize this book around the crucial concept of frames, the unspoken mental constructs that shape our perspectives and control our behavior in ways we rarely notice. For software leaders and team members, some frames lead to long-term failure, while others offer a strong foundation for success. Drawing on decades of experience, the authors present twenty-four frames that offer a coherent, complete framework for leading lean software development. You'll discover powerful new ways to act as competency leader, product champion, improvement mentor, front-line leader, and even visionary. Systems thinking: focusing on customers, bringing predictability to demand, and revamping policies that cause inefficiency Technical excellence: implementing low-dependency architectures, TDD, and evolutionary development processes, and promoting deeper developer expertise Reliable delivery: managing your biggest risks more effectively, and optimizing both workflow and schedules Relentless improvement: seeing problems, solving problems, sharing the knowledge Great people: finding and growing professionals with purpose, passion, persistence, and pride Aligned leaders: getting your entire leadership team on the same page From the world's number one experts in Lean software development, Leading Lean Software Development will be indispensable to everyone who wants to transform the promise of lean into reality—in enterprise IT and software companies alike.

What data is available from your customers? What is lean agile software development? How important are agile principles for practitioners? How are the teams for each project, how many persons, and what are roles? How do you create code that is always releasable? This one-of-a-kind Lean Software Development self-assessment will make you the established Lean Software Development domain standout by revealing just what you need to know to be fluent and ready for any Lean Software Development challenge. How do I reduce the effort in the Lean Software Development work to be done to get problems solved? How can I ensure that plans of action include every Lean Software

Development task and that every Lean Software Development outcome is in place? How will I save time investigating strategic and tactical options and ensuring Lean Software Development costs are low? How can I deliver tailored Lean Software Development advice instantly with structured going-forward plans? There's no better guide through these mind-expanding questions than acclaimed best-selling author Gerard Blokdyk. Blokdyk ensures all Lean Software Development essentials are covered, from every angle: the Lean Software Development self-assessment shows succinctly and clearly that what needs to be clarified to organize the required activities and processes so that Lean Software Development outcomes are achieved. Contains extensive criteria grounded in past and current successful projects and activities by experienced Lean Software Development practitioners. Their mastery, combined with the easy elegance of the self-assessment, provides its superior value to you in knowing how to ensure the outcome of any efforts in Lean Software Development are maximized with professional results. Your purchase includes access details to the Lean Software Development self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows you exactly what to do next. Your exclusive instant access details can be found in your book. You will receive the following contents with New and Updated specific criteria: - The latest quick edition of the book in PDF - The latest complete edition of the book in PDF, which criteria correspond to the criteria in... - The Self-Assessment Excel Dashboard - Example pre-filled Self-Assessment Excel Dashboard to get familiar with results generation - In-depth and specific Lean Software Development Checklists - Project management checklists and templates to assist with implementation INCLUDES LIFETIME SELF ASSESSMENT UPDATES Every self assessment comes with Lifetime Updates and Lifetime Free Updated Books. Lifetime Updates is an industry-first feature which allows you to receive verified self assessment updates, ensuring you always have the most accurate information at your fingertips.
Achieving Enterprise Agility
A New Perspective on Object-Oriented Design
Better Software Through Collaboration
A Tale of Two Transformations
Lean-agile Acceptance Test-driven Development
A Tale of Two Systems
Design Patterns Explained
"This remarkable book combines practical advice, ready-to-use techniques, anda deep understanding of why this is the right way to develop software. I haveseen 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 youare interested in how lean principles can be useful for software developmentorganizations, this is the book you are looking for. The Poppendiecks offer abeautiful 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 thefirst lean book by Tom and Mary, while that one was already exceptionallygood! Mary especially has a lot of knowledge related to lean techniques inproduct development and manufacturing. It's rare that these techniques areactually 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 andcomprehensive introduction to lean principles and selected practices for softwaremanagers and engineers. It illustrates the application of the values andpractices with well-suited success stories. I enjoyed reading it." --Roman Pichler "In Implementing Lean Software Development, the Poppendiecks explore moredeeply the themes they introduced in Lean Software Development. They beginwith a compelling history of lean thinking, then move to key areas such asvalue, waste, and people. Each chapter includes exercises to help you apply keypoints. If you want a better understanding of how lean ideas can work withsoftware, 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.

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.

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. Winner of the Shingo Publication Award Accelerate your organization to win in the marketplace. How can we apply technology to drive business value? For years, we've been told that the performance of software delivery teams doesn't matter?that it can't provide a competitive advantage to our companies. Through four years of groundbreaking research to include data collected from the State of DevOps reports conducted with Puppet, Dr. Nicole Forsgren, Jez Humble, and Gene Kim set out to find a way to measure software delivery performance?and what drives it?using rigorous statistical methods. This book presents both the findings and the science behind that research, making the information accessible for readers to apply in their own organizations. Readers will discover how to measure the performance of their teams, and what capabilities they should invest in to drive higher performance. This book is ideal for management at every level.

Product-Focused Software Process Improvement
SAFe® 4.0 Reference Guide
The Scrumban [R]Evolution
Implementing Lean Software Development
12th International Conference, PROFES 2011, Torre Canne, Italy, June 20-22,

2011. Proceedings
The Science of Lean Software and DevOps: Building and Scaling High
Performing Technology Organizations
Learning to Become Agile
This succinct book explains how you can apply the practices of Lean software development to dramatically increase productivity and quality. Based on techniques that revolutionized Japanese manufacturing, Lean principles are being applied successfully to product design, engineering, the supply chain, and now software development. With The Art of Lean Software Development, you'll learn how to adopt Lean practices one at a time rather than taking on the entire methodology at once. As you master each practice, you'll see significant, measurable results. With this book, you will: Understand Lean's origins from Japanese industries and how it applies to software development Learn the Lean software development principles and the five most important practices in detail Distinguish between the Lean and Agile methodologies and understand their similarities and differences Determine which Lean principles you should adopt first, and how you can gradually incorporate more of the methodology into your process Review hands-on practices, including descriptions, benefits, trade-offs, and roadblocks Learn how to sell these principles to management The Art of Lean Software Development is ideal for busy people who want to improve the development process but can't afford the disruption of a sudden and complete transformation. The Lean approach has been yielding dramatic results for decades, and with this book, you can make incremental changes that will produce immediate benefits. "This book presents Lean practices in a clear and concise manner so readers are motivated to make their software more reliable and less costly to maintain. I recommend it to anyone looking for an easy-to-follow guide to transform how the developer views the process of writing good software."-- Bryan Wells, Boeing Intelligence & Security Sytems Mission System "If you're new to Lean software development and you're not quite sure where to start, this book will help get your development process going in the right direction, one step at a time."-- John McClenning, software development lead, Aclara
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.
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.
Lean Thinking was launched in the fall of 1996, just in time for the recession of 1997. It told the story of how American, European, and Japanese firms applied a simple set of principles called 'lean thinking' to survive the recession of 1991 and grow steadily in sales and profits through 1996. Even though the recession of 1997 never happened, companies were starving for information on how to make themselves leaner and more efficient. Now we are dealing with the recession of 2001 and the financial meltdown of 2002. So what happened to the exemplar firms profiled in Lean Thinking? In the new fully revised edition of this bestselling book those pioneering lean thinkers are brought up to date. Authors James Womack and Daniel Jones offer new guidelines for lean thinking firms and bring their groundbreaking practices to a brand new generation of companies that are looking to stay one step ahead of the competition.
Lean and Agile Software Development
From Concept to Cash
Results Are not the Point
Thinking and Organizational Tools for Large-Scale Scrum

How HP Transformed LaserJet FutureSmart Firmware

A Gentle Introduction to Agile and Lean Software Development

Agile and Lean Concepts for Teaching and Learning

"This book brings together the necessary methodologies and resources for organizations to understand the challenges and discover the solutions that will enhance their businesses"--

This open access book constitutes the proceedings of the 21st International Conference on Agile Software Development, XP 2020, which was planned to be held during June 8-12, 2020, at the IT University of Copenhagen, Denmark. However, due to the COVID-19 pandemic the conference was postponed until an undetermined date. XP is the premier agile software development conference combining research and practice. It is a hybrid forum where agile researchers, academics, practitioners, thought leaders, coaches, and trainers get together to present and discuss their most recent innovations, research results, experiences, concerns, challenges, and trends. Following this history, for both researchers and seasoned practitioners XP 2020 provided an informal environment to network, share, and discover trends in Agile for the next 20 years. The 14 full and 2 short papers presented in this volume were carefully reviewed and selected from 37 submissions. They were organized in topical sections named: agile adoption; agile practices; large-scale agile; the business of agile; and agile and testing.

This book constitutes the refereed proceedings of the 12 International Conference on Product-Focused Software Process Improvement, PROFES 2011, held in Torre Canne, Italy, in June 2011. The 24 revised full papers presented together with the abstracts of 2 keynote addresses were carefully reviewed and selected from 54 submissions. The papers are organized in topical sections on agile and lean practices, cross-model quality improvement, global and competitive software development, managing diversity, product and process measurements, product-focused software process improvement, requirement process improvement, and software process improvement.

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.

Leading Lean Software Development

Agile Software Requirements

An Agile Toolkit

for Agile Software Development

An Agile Toolkit: An Agile Toolkit

Lean-Agile Software Development

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. "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.

A Thorough Introduction to the Agile Framework and Methodologies That Are Used Worldwide Organizations of all shapes and sizes are embracing Agile methodologies as a way to transform their products, customer satisfaction, and employee engagement. Many people with varying levels of work experience are interested in understanding the architecture and nuances of Agile, but it is difficult to know where to start. Numerous practitioner books are available, but there has never been a single source for unbiased information about Agile methodologies–until now. Introduction to Agile Methods is the place to start for students and professionals who want to understand Agile and become conversant with Agile values, principles, framework, and processes. Authors Sondra Ashmore and Kristin Runyan use academic research and their own experiences with numerous Agile implementations to present a clear description of the essential concepts. They address all key roles and the entire development life cycle, including common roadblocks that must be overcome to be successful. Through the authors' realistic use cases, practical examples, and thought-provoking interviews with pioneering practitioners, complex concepts are made relatable. No matter what your role or level of experience, this book provides a foundational understanding that can be used to start or enhance any Agile effort. Coverage includes How Agile compares with the Waterfall method and when to use each Why Agile demands a cultural transformation–and how that looks to each participant Comparing various Agile methodologies, including Scrum, Kanban, Extreme Programming (XP), Crystal, Feature Driven Development (FDD), Lean, and DSDM Understanding the roles within Agile and how they work together to create superior results Agile approaches to requirements gathering, planning, estimating, tracking, reporting, testing, quality, and integration Extending Agile beyond IT

Corey Ladas' groundbreaking paper "ScrumBan" has captured the imagination of the software development world. Scrum and agile

methodologies have helped software development teams organize and become more efficient. Lean methods like kanban can extend these benefits. Kanban also provides a powerful mechanism to identify process improvement opportunities. This book covers some of the metrics and day-to-day management techniques that make continuous improvement an achievable outcome in the real world. ScrumBan the book provides a series of essays that give practitioners the background needed to create more robust practices combining the best of agile and lean.
Banish Waste And Create Wealth In Your Corporation
Lean Software Development
A Practical Approach to Large-Scale Agile Development
Achieving Enterprise Agility Through Innovative Software Development
A Practical and Incremental Approach
First International Conference, LESS 2010, Helsinki, finland, October 17-20, 2010, Proceedings
The Art of Agile Development

Lean Software DevelopmentAn Agile ToolkitAddison-Wesley Professional "Build, Measure and Learn" as Steve Blank says: is much more elaborate than putting software into production to see if it works. The Lean Startup movement is very promising, but for many teams it ends up translating into an important question: "Yeah, but what to build ?""In ThoughtWorks, our response has been a process called an inception. We gather together a good sample of the people who will be affected by the product and have an intensive session to set an initial direction, using a series of exercises focusing on collaboration and the capture of broad goals. We don't attempt a detailed specification, as that is exactly the kind of thing that becomes out of date as soon as code hits production. But we do want to understand what kind of outcomes we are hoping for, the features that we think will drive these outcomes, and how to assess the effectiveness of our product.With The Lean Inception, Paulo has captured his experience in running these inceptions over the last decade. In particular it's focused on his work to boil the inception down to its essence, concentrating the activity on a single, if very intensive, week of work. Paulo shares how he makes this work, through writing a product vision, capturing personas, understanding the user journeys, and developing high-level features. The result isn't a detailed plan of work, which we find quickly rots into irrelevance. It is a guiding set of goals to set us off in the right direction. It doesn't plan out a final product, with all the features that our users will need, instead it focuses on an initial product that we can release and learn from - the Minimum Viable Product. " - Martin Fowler, Chief Cientist at ThoughtWorks

This book contains the refereed proceedings of the 4th International Conference on Lean Enterprise Software and Systems, LESS 2013, held in Galway, Ireland, in December 2013. LESS fosters interactions between practitioners and

researchers by joining the lean product development and the agile software development communities in a highly collaborative environment. Each year, the program combines novelties and recent research results that make new ideas thrive during and after the conference. This year, the conference agenda was expanded to incorporate topics such as portfolio management, open innovation and enterprise transformation. The 14 papers selected for this book represent a diverse range of experiences, studies and theoretical achievements. They are organized in four sections on lean software development, quality and performance, case studies and emerging developments.

What company doesn't want energized workers, delighted customers, genuine efficiency, and breakthrough innovation? The Lean Mindset shows how lean companies really work–and how a lean mindset is the key to creating stunning products and delivering amazing services. Through cutting-edge research and case studies from leading organizations, including Spotify, Ericsson, Intuit, GE Healthcare, Pixar, CareerBuilder, and Intel, you'll discover proven patterns for developing that mindset. You'll see how to cultivate product teams that act like successful startups, create the kind of efficiency that attracts customers, and leverage the talents of bright, creative people. The Poppendiecks weave lean principles throughout this book, just as those principles must be woven throughout the fabric of your truly lean organization. Learn How To Start with an inspiring purpose, and overcome the curse of short-term thinking Energize teams by providing well-framed challenges, larger purposes, and a direct line of sight between their work and the achievement of those purposes Delight customers by gaining unprecedented insight into their real needs, and building products and services that fully anticipate those needs Achieve authentic, sustainable efficiency without layoffs, rock-bottom cost focus, or totalitarian work systems Develop breakthrough innovations by moving beyond predictability to experimentation, beyond globalization to decentralization, beyond productivity to impact Lean approaches to software development have moved from novelty to widespread use, in large part due to the principles taught by Mary and Tom Poppendieck in their pioneering books. Now, in The Lean Mindset, the Poppendiecks take the next step, looking at a company where multidiscipline teams are expected to ask the right questions, solve the right problems, and deliver solutions that customers love.

4th International Conference, LESS 2013, Galway, Ireland, December 1-4, 2013, Proceedings
Lean Architecture
5th International Conference, LASD 2021, Virtual Event, January 23, 2021, Proceedings
Lean Vs. Agile Vs. Design Thinking
What You Really Need to Know to Build High-Performing Digital Product Teams
Agile Processes in Software Engineering and Extreme Programming
The Art of Lean Software Development

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 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. Discover what is involved with Agile and Lean Software Development, Scrum, Extreme Programming, Lean and Kanban Learning new software development processes can be difficult, but switching to Agile and Lean doesn't need to be complicated. Explore the theories behind Agile and Lean Software Development, and learn how to make it work for you. In a Gentle Introduction to Agile and Lean Software Development, author Stephen Haunts will guide you to a fuller understanding of Agile, Scrum, Extreme Programming, Lean, and Kanban. You will learn about the advantages and disadvantages, and how to get the most out of it. In this book you will learn... Introduction Waterfall Development and its Problems What is Agile? Common Agile Misconceptions and Mistakes Advantages and Disadvantages Extreme Programming (XP) Scrum 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 has been a professional software and applications developer since 1996 and as a hobby since he was 10. Stephen has worked in many different industries including computer games, online banking, retail finance, healthcare & pharmaceuticals and insurance. Stephen started programming in BASIC on machines such as the Dragon 32, Vic 20 and the Amiga and moved onto C and C++ on the IBM PC. Stephen has been developing software in C# and the .NET framework since first being introduced to it in 2003. As well as being an accomplished software developer, Stephen is also an experienced development leader and has

led, mentored and coached teams to deliver many high-value, high-impact solutions in finance and healthcare. Outside of Stephen's day job, he is also an experienced tech blogger who runs a popular blog called Coding in the Trenches at http: //www.stephenhaunts.com/, and he is also a training course author for the popular online training company Pluralsight. Stephen also runs several open source projects including SafePad, Text Shredder, Block Encryptor, and Smoke Tester-the post-deployment testing tool.

As companies evolve to adopt, integrate, and leverage software as the defining element of their success in the 21st century, a rash of processes and methodologies are vying for their product teams' attention. In the worst of cases, each discipline on these teams -- product management, design, and software engineering -- learns a different model. This short, tactical book reconciles the perceived differences in Lean Startup, Design Thinking, and Agile software development by focusing not on rituals and practices but on the values that underpin all three methods. Written by Jeff Gothelf, the co-author of the award-winning Lean UX and Sense & Respond, the tactics in this book draw on Jeff's years of practice as a team leader and coach in companies ranging from small high-growth startups to large enterprises. Whether you're a product manager, software engineer, designer, or team leader, you'll find practical tools in this book immediately applicable to your team's daily methods.

21st International Conference on Agile Software Development, XP 2020, Copenhagen, Denmark, June 8-12, 2020, Proceedings

Lean Enterprise Software and Systems

Agile and Lean Service-Oriented Development: Foundations, Theory, and Practice

Scaling Lean & Agile Development

Lean and Agile Software Development for Business Leaders

Bringing Lean and Agile Software Development to Life

Lean Inception: How to Align People and Build the Right Product

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 toward 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; and 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. 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.

"One of the great things about the book is the way the authors explain concepts very simply using analogies rather than programming examples–this has been very inspiring for a product I'm working on: an audio-only introduction to OOP and software development." –Bruce Eckel "...I would expect that readers with a basic understanding of object-oriented programming and design would find this book useful, before approaching design patterns completely. Design Patterns Explained complements the existing design patterns texts and may perform a very useful role, fitting between introductory texts such as UML Distilled and the more advanced patterns books." –James Noble Leverage the quality and productivity benefits of patterns–without the complexity! Design Patterns Explained, Second Edition is the field's simplest, clearest, most practical introduction to patterns. Using dozens of updated Java examples, it shows programmers and architects exactly how to use patterns to design, develop, and deliver software far more effectively. You'll start with a complete overview of the fundamental principles of patterns, and the role of object-oriented analysis and design in contemporary software development. Then, using easy-to-understand sample code, Alan Shalloway and James Trott illuminate dozens of today's most useful patterns: their underlying concepts, advantages, tradeoffs, implementation techniques, and pitfalls to avoid. Many patterns are accompanied by UML diagrams. Building on their best-selling First Edition, Shalloway and Trott have thoroughly updated this book to reflect new software design trends, patterns, and implementation techniques. Reflecting extensive reader feedback, they have deepened and clarified coverage throughout, and reorganized content for even greater ease of understanding. New and revamped coverage in this edition includes Better ways to start "thinking in patterns" How design patterns can facilitate agile development using eXtreme Programming and other methods How to use commonality and variability analysis to design application architectures The key role of testing into a patterns-driven development process How to use factories to instantiate and manage objects more effectively The Object-Pool Pattern–a new pattern not identified by the "Gang of Four" New study/practice questions at the end of every chapter Gentle yet thorough, this book assumes no patterns experience whatsoever. It's the ideal "first book" on patterns, and a perfect complement to Gamma's classic Design Patterns. If you're a programmer or architect who wants the clearest possible understanding of design patterns–or if you've struggled to make them work for you–read this book.

Delivers the cutting - edge of proven practices crafted to your needs for immediate and long - term success with your development efforts.

Changing Software Development

The Lean Mindset

13th International Conference, XP 2012, Malmö, Sweden, May 21-25, 2012, Proceedings

Sustainable Software Development