

Continuous Architecture Sustainable Architecture In An Agile And Cloud Centric World

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Building the Agile Business through Digital Transformation Neil Perkin 2021-06-03

How can businesses transform to achieve competitive advantage in a digital-enabled world? How can managers and leaders create a culture that supports lasting change through these transformations? Building the Agile Business through Digital Transformation is an in-depth guide for all those needing to better understand, implement and lead digital transformation in the workplace. It sets aside traditional thinking and outdated strategies to explain what steps need to be taken for an organization to become truly agile, embed innovation and develop talent to succeed. This majorly revised second edition of Building the Agile Business through Digital Transformation contains new material on the culture and mindset challenges of shifting at scale from linear to agile working, and using data effectively in organizational decision-making. Full of practical advice, examples and real-life insights from organizations at the leading edge of digital transformation including AirBnb, Amazon and Google, this book is an essential guide to driving success by becoming an agile and digital native business.

Domain Storytelling - Stefan Hofer 2021-09-27
Storytelling is at the heart of human communication--why not use it to overcome

costly misunderstandings when designing software? By telling and visualising stories, domain experts and team members make business processes and domain knowledge tangible. Domain Storytelling enables everyone to understand the relevant people, activities, and work items. With this guide, the method's inventors explain how domain experts and teams can work together to capture insights with simple pictographs, show their work, solicit feedback, and get everyone on the same page. Stefan Hofer and Henning Schwentner introduce the methods easy pictographic language, scenario-based modeling techniques, workshop format, and relationship to other modeling methods. Using step-by-step case studies, they guide you through solving many common problems: Fully align all project participants and stakeholders, both technical and business-focused Master a simple set of symbols and rules for modeling any process or workflow Use workshop-based collaborative modeling to find better solutions faster Draw clear boundaries to organise your domain, software, and teams Transform domain knowledge into requirements, embedded naturally into an agile process Move your models from diagrams and sticky notes to code Gain better visibility into your IT landscape so you can consolidate or optimise it This guide is for everyone who wants more effective

software--from developers, architects, and team leads to the domain experts, product owners, and executives who rely on it every day.

Software Architecture: The Hard Parts - Neal Ford 2021-09-23

There are no easy decisions in software architecture. Instead, there are many hard parts--difficult problems or issues with no best practices--that force you to choose among various compromises. With this book, you'll learn how to think critically about the trade-offs involved with distributed architectures.

Architecture veterans and practicing consultants Neal Ford, Mark Richards, Pramod Sadalage, and Zhamak Dehghani discuss strategies for choosing an appropriate architecture. By interweaving a story about a fictional group of technology professionals--the Sysops Squad--they examine everything from how to determine service granularity, manage workflows and orchestration, manage and decouple contracts, and manage distributed transactions to how to optimize operational characteristics, such as scalability, elasticity, and performance. By focusing on commonly asked questions, this book provides techniques to help you discover and weigh the trade-offs as you confront the issues you face as an architect. Analyze trade-offs and effectively document your decisions Make better decisions regarding service granularity Understand the complexities of breaking apart monolithic applications Manage and decouple contracts between services Handle data in a highly distributed architecture Learn patterns to manage workflow and transactions when breaking apart applications

Sustainable Software Development Kevin Tate 2006

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

Continuous Architecture - Pierre Pureur 2015-11-13

Continuous Architecture provides a broad architectural perspective for continuous delivery, and describes a new architectural approach that supports and enables it. As the pace of innovation and software releases increases, IT departments are tasked to deliver value quickly and inexpensively to their business partners. With a focus on getting software into

end-users hands faster, the ultimate goal of daily software updates is in sight to allow teams to ensure that they can release every change to the system simply and efficiently. This book presents an architectural approach to support modern application delivery methods and provide a broader architectural perspective, taking architectural concerns into account when deploying agile or continuous delivery approaches. The authors explain how to solve the challenges of implementing continuous delivery at the project and enterprise level, and the impact on IT processes including application testing, software deployment and software architecture. Covering the application of enterprise and software architecture concepts to the Agile and Continuous Delivery models Explains how to create an architecture that can evolve with applications Incorporates techniques including refactoring, architectural analysis, testing, and feedback-driven development Provides insight into incorporating modern software development when structuring teams and organizations

Architecture Principles Danny Greefhorst 2011-04-29

Enterprises, from small to large, evolve continuously. As a result, their structures are transformed and extended continuously. Without some means of control, such changes are bound to lead to an overly complex, uncoordinated and heterogeneous environment that is hard to manage and hard to adapt to future changes. Enterprise architecture principles provide a means to direct transformations of enterprises. As a consequence, architecture principles should be seen as the cornerstones of any architecture. In this book, Greefhorst and Proper focus on the role of architecture principles. They provide both a theoretical and a practical perspective on architecture principles. The theoretical perspective involves a brief survey of the general concept of principle as well as an analysis of different flavors of principles. Architecture principles are regarded as a specific class of normative principles that direct the design of an enterprise, from the definition of its business to its supporting IT. The practical perspective on architecture principles is concerned with an approach to the formulation of architecture principles, as well as their actual use in

organizations. To illustrate their use in practice, several real-life cases are discussed, an application of architecture principles in TOGAF is included, and a catalogue of example architecture principles is provided. With this broad coverage, the authors target students and researchers specializing in enterprise architecture or business information systems, as well as practitioners who want to understand the foundations underlying their practical daily work.

Software Architecture Carlos E. Cuesta
2018-09-19

This book constitutes the refereed proceedings of the 12th European Conference on Software Architecture, ECSA 2018, held in Madrid, Spain, in September 2018. The 17 full papers presented together with 7 short papers were carefully reviewed and selected from 96 submissions. They are organized in topical sections as follows: Self-Adaptive Architectures, IoT Architectures, Embedded and Cyber-Physical Systems, Microservices Architectures, Service-Oriented Architectures, Architectural Design Decisions, Software Architecture in Practice.

Clean Architecture - Robert C. Martin
2017-09-12

Practical Software Architecture Solutions from the Legendary Robert C. Martin ("Uncle Bob") By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books *Clean Code* and *The Clean Coder*, legendary software craftsman Robert C. Martin ("Uncle Bob") reveals those rules and helps you apply them. Martin's *Clean Architecture* doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms

impose discipline by restricting what developers can do Understand what's critically important and what's merely a "detail" Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures *Clean Architecture* is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Adapting Configuration Management for Agile Teams - Mario E. Moreira 2010-04-15

Adapting Configuration Management for Agile Teams provides very tangible approaches on how Configuration Management with its practices and infrastructure can be adapted and managed in order to directly benefit agile teams. Written by Mario E. Moreira, author of *Software Configuration Management Implementation Roadmap*, columnist for CM Crossroads online community and writer for the Agile Journal, this unique book provides concrete guidance on tailoring CM for Agile projects without sacrificing the principles of Configuration Management.

Clean Agile Robert C. Martin 2019-09-12
Agile Values and Principles for a New Generation "In the journey to all things Agile, Uncle Bob has been there, done that, and has the both the t-shirt and the scars to show for it. This delightful book is part history, part personal stories, and all wisdom. If you want to understand what Agile is and how it came to be, this is the book for you." –Grady Booch "Bob's frustration colors every sentence of *Clean Agile*, but it's a justified frustration. What is in the world of Agile development is nothing compared to what could be. This book is Bob's perspective on what to focus on to get to that 'what could be.' And he's been there, so it's worth listening." –Kent Beck "It's good to read Uncle Bob's take on Agile. Whether just beginning, or a seasoned Agilista, you would do well to read this book. I agree with almost all of it. It's just some of the parts make me realize my own shortcomings,

dammit. It made me double-check our code coverage (85.09%).” –Jon Kern Nearly twenty years after the Agile Manifesto was first presented, the legendary Robert C. Martin (“Uncle Bob”) reintroduces Agile values and principles for a new generation—programmers and nonprogrammers alike. Martin, author of Clean Code and other highly influential software development guides, was there at Agile’s founding. Now, in Clean Agile: Back to Basics, he strips away misunderstandings and distractions that over the years have made it harder to use Agile than was originally intended. Martin describes what Agile is in no uncertain terms: a small discipline that helps small teams manage small projects . . . with huge implications because every big project is comprised of many small projects. Drawing on his fifty years’ experience with projects of every conceivable type, he shows how Agile can help you bring true professionalism to software development. Get back to the basics—what Agile is, was, and should always be Understand the origins, and proper practice, of SCRUM Master essential business-facing Agile practices, from small releases and acceptance tests to whole-team communication Explore Agile team members’ relationships with each other, and with their product Rediscover indispensable Agile technical practices: TDD, refactoring, simple design, and pair programming Understand the central roles values and craftsmanship play in your Agile team’s success If you want Agile’s true benefits, there are no shortcuts: You need to do Agile right. Clean Agile: Back to Basics will show you how, whether you’re a developer, tester, manager, project manager, or customer. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

A Practical Approach to Large-Scale Agile Development - Gary Gruver 2012-11-15

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

Continuous Architecture in Practice - Murat Erder 2021-04

In Continuous Architecture in Practice, three

leading software architecture experts update the discipline's classic practices for today's environments, software development contexts, and applications. Coverage includes: Discover what's changed, and how the architect's role must change Reflect today's quality attributes in evolvable architectures Understand team-based software architecture, and architecture as a "flow of decisions" Architect for security, including continuous threat modeling and mitigation Explore architectural opportunities to improve performance in continuous delivery environments Architect for scalability, avoid common scalability pitfalls, and scale microservices and serverless environments Improve resilience and reliability in the face of inevitable failures Architect data for NoSQL, big data, and analytics Use architecture to promote innovation: case studies in AI/ML, chatbots, and blockchain

Microservices - Eberhard Wolff 2016-10-03
The Most Complete, Practical, and Actionable Guide to Microservices Going beyond mere theory and marketing hype, Eberhard Wolff presents all the knowledge you need to capture the full benefits of this emerging paradigm. He illuminates microservice concepts, architectures, and scenarios from a technology-neutral standpoint, and demonstrates how to implement them with today's leading technologies such as Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud. The author fully explains the benefits and tradeoffs associated with microservices, and guides you through the entire project lifecycle: development, testing, deployment, operations, and more. You'll find best practices for architecting microservice-based systems, individual microservices, and nanoservices, each illuminated with pragmatic examples. The author supplements opinions based on his experience with concise essays from other experts, enriching your understanding and illuminating areas where experts disagree. Readers are challenged to experiment on their own the concepts explained in the book to gain hands-on experience. Discover what microservices are, and how they differ from other forms of modularization Modernize legacy applications and efficiently build new systems Drive more value from continuous delivery with microservices Learn

how microservices differ from SOA Optimize the microservices project lifecycle Plan, visualize, manage, and evolve architecture Integrate and communicate among microservices Apply advanced architectural techniques, including CQRS and Event Sourcing Maximize resilience and stability Operate and monitor microservices in production Build a full implementation with Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud Explore nanoservices with Amazon Lambda, OSGi, Java EE, Vert.x, Erlang, and Seneca Understand microservices' impact on teams, technical leaders, product owners, and stakeholders Managers will discover better ways to support microservices, and learn how adopting the method affects the entire organization. Developers will master the technical skills and concepts they need to be effective. Architects will gain a deep understanding of key issues in creating or migrating toward microservices, and exactly what it will take to transform their plans into reality.

Becoming an Agile Software Architect - Rajesh R V 2021-03-19

A guide to successfully operating in a lean-agile organization for solutions architects and enterprise architects Key Features Develop the right combination of processes and technical excellence to address architectural challenges Explore a range of architectural techniques to modernize legacy systems Discover how to design and continuously improve well-architected sustainable software Book Description Many organizations have embraced Agile methodologies to transform their ability to rapidly respond to constantly changing customer demands. However, in this melee, many enterprises often neglect to invest in architects by presuming architecture is not an intrinsic element of Agile software development. Since the role of an architect is not pre-defined in Agile, many organizations struggle to position architects, often resulting in friction with other roles or a failure to provide a clear learning path for architects to be productive. This book guides architects and organizations through new Agile ways of incrementally developing the architecture for delivering an uninterrupted, continuous flow of values that meets customer needs. You'll explore various aspects of Agile

architecture and how it differs from traditional architecture. The book later covers Agile architects' responsibilities and how architects can add significant value by positioning themselves appropriately in the Agile flow of work. Through examples, you'll also learn concepts such as architectural decision backlog, the last responsible moment, value delivery, architecting for change, DevOps, and evolutionary collaboration. By the end of this Agile book, you'll be able to operate as an architect in Agile development initiatives and successfully architect reliable software systems. What you will learn Acquire clarity on the duties of architects in Agile development Understand architectural styles such as domain-driven design and microservices Identify the pitfalls of traditional architecture and learn how to develop solutions Understand the principles of value and data-driven architecture Discover DevOps and continuous delivery from an architect's perspective Adopt Lean-Agile documentation and governance Develop a set of personal and interpersonal qualities Find out how to lead the transformation to achieve organization-wide agility Who this book is for This agile study guide is for architects currently working on agile development projects or aspiring to work on agile software delivery, irrespective of the methodology they are using. You will also find this book useful if you're a senior developer or a budding architect looking to understand an agile architect's role by embracing agile architecture strategies and a lean-agile mindset. To understand the concepts covered in this book easily, you need to have prior knowledge of basic agile development practices.

Just Enough Software Architecture - George Fairbanks 2010-08-30

This is a practical guide for software developers, and different than other software architecture books. Here's why: It teaches risk-driven architecting. There is no need for meticulous designs when risks are small, nor any excuse for sloppy designs when risks threaten your success. This book describes a way to do just enough architecture. It avoids the one-size-fits-all process trap with advice on how to tune your design effort based on the risks you face. It democratizes architecture. This book seeks to make architecture relevant to all software

developers. Developers need to understand how to use constraints as guiderails that ensure desired outcomes, and how seemingly small changes can affect a system's properties. It cultivates declarative knowledge. There is a difference between being able to hit a ball and knowing why you are able to hit it, what psychologists refer to as procedural knowledge versus declarative knowledge. This book will make you more aware of what you have been doing and provide names for the concepts. It emphasizes the engineering. This book focuses on the technical parts of software development and what developers do to ensure the system works not job titles or processes. It shows you how to build models and analyze architectures so that you can make principled design tradeoffs. It describes the techniques software designers use to reason about medium to large sized problems and points out where you can learn specialized techniques in more detail. It provides practical advice. Software design decisions influence the architecture and vice versa. The approach in this book embraces drill-down/pop-up behavior by describing models that have various levels of abstraction, from architecture to data structure design.

Continuous Architecture - Murat Erder 2015-10-21

Continuous Architecture provides a broad architectural perspective for continuous delivery, and describes a new architectural approach that supports and enables it. As the pace of innovation and software releases increases, IT departments are tasked to deliver value quickly and inexpensively to their business partners. With a focus on getting software into end-users hands faster, the ultimate goal of daily software updates is in sight to allow teams to ensure that they can release every change to the system simply and efficiently. This book presents an architectural approach to support modern application delivery methods and provide a broader architectural perspective, taking architectural concerns into account when deploying agile or continuous delivery approaches. The authors explain how to solve the challenges of implementing continuous delivery at the project and enterprise level, and the impact on IT processes including application testing, software deployment and software

architecture. Covering the application of enterprise and software architecture concepts to the Agile and Continuous Delivery models Explains how to create an architecture that can evolve with applications Incorporates techniques including refactoring, architectural analysis, testing, and feedback-driven development Provides insight into incorporating modern software development when structuring teams and organizations

Agile Software Architecture - Muhammad Ali Babar 2013-11-27

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

Fundamentals of Software Architecture - Mark Richards 2020-01-28

Salary surveys worldwide regularly place software architect in the top 10 best jobs, yet no real guide exists to help developers become architects. Until now. This book provides the first comprehensive overview of software architecture's many aspects. Aspiring and existing architects alike will examine architectural characteristics, architectural patterns, component determination, diagramming and presenting architecture, evolutionary architecture, and many other topics. Mark Richards and Neal Ford—hands-on practitioners who have taught software architecture classes professionally for years—focus on architecture principles that apply across all technology stacks. You'll explore software architecture in a modern light, taking into account all the innovations of the past decade. This book examines: Architecture patterns: The technical basis for many architectural decisions Components: Identification, coupling, cohesion, partitioning, and granularity Soft skills: Effective team management, meetings, negotiation, presentations, and more Modernity: Engineering practices and operational approaches that have changed radically in the past few years Architecture as an engineering discipline: Repeatable results, metrics, and concrete valuations that add rigor to software architecture

Introduction to Disciplined Agile Delivery 2nd Edition - Mark Lines 2018-01-15

Introduction to Disciplined Agile Delivery 2nd Edition provides a quick overview of how agile software development works from beginning-to-end. It describes Disciplined Agile Delivery (DAD), the first of four levels of the Disciplined Agile (DA) process decision framework, and works through a case study describing a typical agile team's experiences adopting a DA approach. The book describes how the team develops the first release of a mission-critical application while working in a legacy enterprise environment. It describes their experiences from beginning-to-end, starting with their initial team initiation efforts through construction and finally to deploying the solution into production. It also describes how the team stays together for future releases, overviewing their process improvement efforts from their Scrum-based beginnings

through to a lean continuous delivery approach that fits in with their organization's evolving DevOps strategy. The DAD framework is a hybrid of existing methods such as Scrum, Kanban, Agile Modeling, SAFe, Extreme Programming, Agile Data, Unified Process and many others. DAD provides the flexibility to use various approaches and plugs the gaps not addressed by mainstream agile methods. In a nutshell, DAD is "pragmatic agile." DAD describes proven strategies to adapt and scale your agile initiatives to suit the unique realities of your enterprise without having to figure it all out by yourself. Here's an overview of what each chapter covers: Chapter 1: Introduction. This chapter provides a quick overview of the book and a brief history of Disciplined Agile. Chapter 2: Reality over Rhetoric. This chapter explores several common myths about DAD and more importantly disproves them. Chapter 3: Disciplined Agile Delivery in a Nutshell. This chapter provides a brief yet comprehensive overview of DAD. Chapter 4: Introduction to the Case Study. This chapter introduces us to the team, describes the market opportunity that they hope to address, and describes the environment in which they're working. Chapter 5: Inception. The team's initiation effort includes initial requirements modeling and planning with their stakeholders in a streamlined manner, initial architecture modeling, setting up their physical work environment, setting up the start of their tooling infrastructure, initial risk identification, and finally securing stakeholder support and funding for the rest of the first release. Chapters 6 through 10: Construction. These chapters each describe a single Construction iteration, sharing the team's experiences during each of those two-week timeboxes. Chapter 11: Transition. The two-week transition phase focuses on final testing and fixing, training the support/help-desk staff, finishing a few short end-user "how to" videos, and deploying the solution into production. Chapter 12: The Road to Disciplined DevOps. This chapter overviews the team's improvement efforts over the next few releases, describing how they evolve from the agile Scrum-based lifecycle to a leaner approach and eventually to continuous delivery. All of this dovetails into their organization's efforts to implement a Disciplined DevOps strategy.

Chapter 13: Closing Thoughts. This chapter overviews the disciplined agile resources that are available to you. Appendix: The Disciplined Agile Framework. This short appendix overviews our ongoing work on the Disciplined Agile framework to address the full scope of an agile business. At 111 pages, you should find this book to be a quick, informative read. What's Different in This Edition: Chapter 3 was completely rewritten to reflect the changes to DAD. Chapter 12 was rewritten to describe how the team evolved into a Disciplined DevOps strategy. Appendix A was rewritten to reflect the latest release of the DA framework. General updates were made throughout the book.

The Art of Readable Code - Dustin Boswell
2011-11-03

As programmers, we've all seen source code that's so ugly and buggy it makes our brain ache. Over the past five years, authors Dustin Boswell and Trevor Foucher have analyzed hundreds of examples of "bad code" (much of it their own) to determine why they're bad and how they could be improved. Their conclusion? You need to write code that minimizes the time it would take someone else to understand it—even if that someone else is you. This book focuses on basic principles and practical techniques you can apply every time you write code. Using easy-to-digest code examples from different languages, each chapter dives into a different aspect of coding, and demonstrates how you can make your code easy to understand. Simplify naming, commenting, and formatting with tips that apply to every line of code Refine your program's loops, logic, and variables to reduce complexity and confusion Attack problems at the function level, such as reorganizing blocks of code to do one task at a time Write effective test code that is thorough and concise—as well as readable "Being aware of how the code you create affects those who look at it later is an important part of developing software. The authors did a great job in taking you through the different aspects of this challenge, explaining the details with instructive examples." —Michael Hunger, passionate Software Developer

Lean Architecture - James O. Coplien
2011-01-06

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

Choose Your WoW - Scott W. Ambler 2020

"Hundreds of organizations around the world have already benefited from Disciplined Agile Delivery (DAD). Disciplined Agile (DA) is the only comprehensive tool kit available for guidance on building high-performance agile teams and optimizing your way of working (WoW). As a hybrid of all the leading agile and lean approaches, it provides hundreds of strategies to help you make better decisions within your agile teams, balancing self-organization with the realities and constraints of your unique enterprise context. The highlights of this handbook include: #1. As the official source of knowledge on DAD, it includes greatly improved and enhanced strategies with a revised set of goal diagrams based upon learnings from applying DAD in the field. #2 It is an essential handbook to help coaches and teams make better decisions in their daily work, providing a wealth of ideas for experimenting with agile and lean techniques while providing specific guidance and trade-offs for those "it depends" questions. #3 It makes a perfect study guide for Disciplined Agile certification. Why "fail fast" (as our industry likes to recommend) when you can learn quickly on your journey to high performance? With this handbook, you can make better decisions based upon proven, context-based strategies, leading to earlier success and better outcomes"--

Combining Business Process Management and Enterprise Architecture for Better

Business Outcomes - Claus T. Jensen

2011-03-31

This IBM® Redbooks® publication explains how to combine business process management (BPM) and Enterprise Architecture (EA) for better business outcomes. This book provides a unique synergistic approach to BPM and EA, based on a firm understanding of the life cycles of the enterprise and the establishment of appropriate collaboration and governance processes. When carried out together, BPM provides the business context, understanding, and metrics, and EA provides the discipline to translate business vision and strategy into architectural change. Both are needed for sustainable continuous improvement. This book provides thought leadership and direction on the topic of BPM and EA synergies. Although technical in nature, it is not a typical IBM Redbooks publication. The book provides guidance and direction on how to collaborate effectively across tribal boundaries rather than technical details about IBM software products. The primary audience for this book is leaders and architects who need to understand how to effectively combine BPM and EA to drive, as a key differentiator, continuous improvement and transformational change with enterprise scope.

The Unicorn Project - Gene Kim 2019-11-26

The Phoenix Project wowed over a half-million readers. Now comes the Wall Street Journal Bestselling The Unicorn Project! "The Unicorn Project is amazing, and I loved it 100 times more than The Phoenix Project..."—FERNANDO CORNAGO, Senior Director Platform Engineering, Adidas "Gene Kim does a masterful job of showing how ... the efforts of many create lasting business advantages for all."—DR. STEVEN SPEAR, author of The High-Velocity Edge, Sr. Lecturer at MIT, and principal of HVE LLC. "The Unicorn Project is so clever, so good, so crazy enlightening!"—CORNELIA DAVIS, Vice President Of Technology at Pivotal Software, Inc., Author of Cloud Native Patterns This highly anticipated follow-up to the bestselling title The Phoenix Project takes another look at Parts Unlimited, this time from the perspective of software development. In The Unicorn Project, we follow Maxine, a senior lead developer and architect, as she is exiled to the Phoenix Project, to the horror of her friends and colleagues, as

punishment for contributing to a payroll outage. She tries to survive in what feels like a heartless and uncaring bureaucracy and to work within a system where no one can get anything done without endless committees, paperwork, and approvals. One day, she is approached by a ragtag bunch of misfits who say they want to overthrow the existing order, to liberate developers, to bring joy back to technology work, and to enable the business to win in a time of digital disruption. To her surprise, she finds herself drawn ever further into this movement, eventually becoming one of the leaders of the Rebellion, which puts her in the crosshairs of some familiar and very dangerous enemies. The Age of Software is here, and another mass extinction event looms—this is a story about rebel developers and business leaders working together, racing against time to innovate, survive, and thrive in a time of unprecedented uncertainty...and opportunity. “The Unicorn Project provides insanely useful insights on how to improve your technology business.”—DOMINICA DEGRANDIS, author of *Making Work Visible* and Director of Digital Transformation at Tasktop ——— “My goal in writing *The Unicorn Project* was to explore and reveal the necessary but invisible structures required to make developers (and all engineers) productive, and reveal the devastating effects of technical debt and complexity. I hope this book can create common ground for technology and business leaders to leave the past behind, and co-create a better future together.”—Gene Kim, November 2019

The Software Architect Elevator - Gregor Hohpe 2020-04-08

As the digital economy changes the rules of the game for enterprises, the role of software and IT architects is also transforming. Rather than focus on technical decisions alone, architects and senior technologists need to combine organizational and technical knowledge to effect change in their company’s structure and processes. To accomplish that, they need to connect the IT engine room to the penthouse, where the business strategy is defined. In this guide, author Gregor Hohpe shares real-world advice and hard-learned lessons from actual IT transformations. His anecdotes help architects, senior developers, and other IT professionals

prepare for a more complex but rewarding role in the enterprise. This book is ideal for: Software architects and senior developers looking to shape the company’s technology direction or assist in an organizational transformation Enterprise architects and senior technologists searching for practical advice on how to navigate technical and organizational topics CTOs and senior technical architects who are devising an IT strategy that impacts the way the organization works IT managers who want to learn what’s worked and what hasn’t in large-scale transformation

Agile Software Requirements Dean Leffingwell 2010-12-27

“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.

Software Technologies - Marten van Sinderen
2020-07-21

This book constitutes the thoroughly refereed post-conference proceedings of the 14th International Conference on Software Technologies, ICSOFT 2019, held in Prague, Czech Republic, in July 2019. The 10 revised full papers were carefully reviewed and selected from 116 submissions. The topics covered in the papers include: business process modelling, IT service management, interoperability and service-oriented architecture, project management software, scheduling and estimating, software metrics, requirements elicitation and specification, software and systems integration, etc.

Holding Back The Tears - Annie Mitchell
2013-09-16

This is true story about real people is set in Edinburgh City and Dundee, where a petite Scottish Lassie called Rosie Gilmour, mother to Finlay Sinclair, receives news of the death of her son - who tragically has taken his own life by hanging. Rosie pretends her son is still alive by talking to him, for that takes away the unbearable pain of her loss. But once she begins to face up to the fact that Finlay is not coming back, her conversations become more of a challenge than she can handle. When memories of her past are triggered by everyday life events, they take her mind back and forth in time - back to her own childhood days in 1960, when she flirted with the fairground boys, and to the day she gave birth to Finlay - "ME LADDIE". Rosie's Scottish accent becomes more apparent whenever her emotions are heightened and she begins to recite poetry. She goes on to reveal doubts about her own self-worth and how she re-unites her role as mother - a role she had denied herself for seven years prior to Finlay's death. Rosie learns how to forgive herself and how to accept her loss with using practical coping strategies that sometimes but not always work for her. Many voices of different natures and walks of life appear in Rosie's, story with

each one offering a part of their own belief to try and console her in her misery - except that she turns her back on any advice or support offered. Rosie is convinced that she can cope with her loss on her own and "needs no help from anyone, thank you" - until a sweet, gentle, soft-spoken voice begins to travel with her throughout her ordeal, leaving her no other choice but to listen. Eventually moving to the countryside in Angus, Rosie finds the isolation gives her life a new meaning offering her the opportunity to re-value her belief's about her own self values and decides the time has come to give her son a memorial service and invite a chosen few dance companions whom she met on a regular basis in Edinburgh to honour this day. Rosie begins to accept she will never be the same person she once had been and shall never be again, believing now her journey through grief taught her many lessons making her a stronger and better person than she imagined she could ever be.

Unlocking Agility - Jorgen Hesselberg
2018-07-11

Practical Guidance and Inspiration for Launching, Sustaining, or Improving Any Agile Enterprise Transformation Initiative As long-time competitive advantages disappear, astute executives and change agents know they must achieve true agile transformation. In *Unlocking Agility*, Jorgen Hesselberg reveals what works, what doesn't, and how to overcome the daunting obstacles. Distilling 10+ years of experience leading agile transformation in the enterprise, Hesselberg guides you on jumpstarting change, sustaining momentum, and executing superbly on customer commitments as you move forward. He helps you identify appropriate roles for consultants, optimize organizational structures, set realistic expectations, and measure against them. He shares first-hand accounts from pioneering transformation leaders at firms including Intel, Nokia, Salesforce.com, Spotify, and many more.

- Balance building the right thing, the right way, at the right speed
- Design a holistic transformation strategy using five dimensions of agility: Technology, Organizational Design, People, Leadership, and Culture
- Promote agile skills, knowledge, and abilities throughout your workforce
- Incorporate powerful leadership models,

including Level 5, Teal, and Beyond Budgeting • Leverage business agility metrics to affect norms and change organizational culture • Establish your Agile Working Group, the engine of agile transformation • Define operating models and strategic roadmaps for unlocking agility, and track your progress You already know agile transformation is essential. Now, discover how to customize your strategy, execute on it in your environment, and achieve it.

Software Architecture Knowledge Management - Muhammad Ali Babar
2010-05-03

A software architecture manifests the major early design decisions, which determine the system's development, deployment and evolution. Thus, making better architectural decisions is one of the large challenges in software engineering. Software architecture knowledge management is about capturing practical experience and translating it into generalized architectural knowledge, and using this knowledge in the communication with stakeholders during all phases of the software lifecycle. This book presents a concise description of knowledge management in the software architecture discipline. It explains the importance of sound knowledge management practices for improving software architecture processes and products, and makes clear the role of knowledge management in software architecture and software development processes. It presents many approaches that are in use in software companies today, approaches that have been used in other domains, and approaches under development in academia. After an initial introduction by the editors, the contributions are grouped in three parts on "Architecture Knowledge Management", "Strategies and Approaches for Managing Architectural Knowledge", and "Tools and Techniques for Managing Architectural Knowledge". The presentation aims at information technology and software engineering professionals, in particular software architects and software architecture researchers. For the industrial audience, the book gives a broad and concise understanding of the importance of knowledge management for improving software architecture process and building capabilities in designing and evaluating

better architectures for their mission- and business-critical systems. For researchers, the book will help to understand the applications of various knowledge management approaches in an industrial setting and to identify research challenges and opportunities.

Team Topologies - Matthew Skelton
2019-09-17

In Team Topologies DevOps consultants Matthew Skelton and Manuel Pais share secrets of successful team patterns and interactions to help readers choose and evolve the right team patterns for their organization, making sure to keep the software healthy and optimize value streams. Team Topologies will help readers discover: • Team patterns used by successful organizations. • Common team patterns to avoid with modern software systems. • When and why to use different team patterns • How to evolve teams effectively. • How to split software and align to teams.

Open Agile Architecture™ - A publication of The Open Group

Open Agile Architecture™, a standard of The Open Group, offers an approach to architect at scale with agility. It provides guidance and best practices for Enterprise Architects seeking to transition into Agile and Digital contexts. Empowering an Enterprise to Succeed with its Digital-Agile Transformation Agile teams drive the enterprise's Digital Transformation by inventing new business models, delivering superior customer experiences, developing digital products, and architecting highly-automated operating systems. The Open Agile Architecture Standard was designed keeping the needs of all business stakeholders in mind: Business Leaders - to drive the enterprise's Digital and Agile change journey Enterprise Architects - to extend their scope of influence in an Agile at scale world Product Managers - to help transform customer experience, innovate products, and generate growth Product Owners - to accelerate their transformation from managing feature backlogs to steering value delivery Operations Managers - to enable them to leverage Lean and automation to generate sustainable competitive advantages Software Engineers - to leverage the power of digital technologies to co-innovate with the business The more Agile the enterprise, the faster the

learning cycles, and faster learning cycles translate to shorter time-to-market resulting in more agility. By adopting an Open Agile Architecture approach, your organization can capitalize on this accelerated learning cycle, meaning your Agile and Digital capabilities continuously and simultaneously co-create one another.

Large-Scale Scrum Craig Larman 2016-09-23
In *Large-Scale Scrum*, Craig Larman and Bas Vodde offer the most direct, concise, actionable guide to reaping the full benefits of agile in distributed, global enterprises. Larman and Vodde have distilled their immense experience helping geographically distributed development organizations move to agile. Going beyond their previous books, they offer today's fastest, most focused guidance: "brass tacks" advice and field-proven best practices for achieving value fast, and achieving even more value as you move forward. Targeted to enterprise project participants and stakeholders, *Large-Scale Scrum* offers straight-to-the-point insights for scaling Scrum across the entire project lifecycle, from sprint planning to retrospective. Larman and Vodde help you: Implement proven Scrum frameworks for large-scale developments Scale requirements, planning, and product management Scale design and architecture Effectively manage defects and interruptions Integrate Scrum into multisite and offshore projects Choose the right adoption strategies and organizational designs This will be the go-to resource for enterprise stakeholders at all levels: everyone who wants to maximize the value of Scrum in large, complex projects.

Accelerate - Nicole Forsgren PhD 2018-03-27
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.

Designing Data-Intensive Applications - Martin Kleppmann 2017-03-16

Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

DevOps for the Modern Enterprise - Mirco Hering 2018-04-03

Many organizations are facing the uphill battle of modernizing their legacy IT infrastructure. Most have evolved over the years by taking lessons from traditional or legacy manufacturing: creating a production process that puts the emphasis on the process instead of the people performing the tasks, allowing the organization to treat people like resources to try to achieve high-quality outcomes. But those practices and ideas are failing modern IT, where collaboration and creativeness are required to

achieve high-performing, high-quality success. Mirco Hering, a thought leader in managing IT within legacy organizations, lays out a roadmap to success for IT managers, showing them how to create the right ecosystem, how to empower people to bring their best to work every day, and how to put the right technology in the driver's seat to propel their organization to success. But just having the right methods and tools will not magically transform an organization; the cultural change that is the hardest is also the most impactful. Using principles from Agile, Lean, and DevOps as well as first-hand examples from the enterprise world, Hering addresses the different challenges that legacy organizations face as they transform into modern IT departments.

Microservice Architecture - Irakli

Nadareishvili 2016-07-18

Have you heard about the tremendous success Amazon and Netflix have had by switching to a microservice architecture? Are you wondering how this can benefit your company? Or are you skeptical about how it might work? If you've answered yes to any of these questions, this practical book will benefit you. You'll learn how to take advantage of the microservice architectural style for building systems, and learn from the experiences of others to adopt and execute this approach most successfully.

Agile Analytics - Ken Collier 2012

Using Agile methods, you can bring far greater innovation, value, and quality to any data warehousing (DW), business intelligence (BI), or analytics project. However, conventional Agile methods must be carefully adapted to address the unique characteristics of DW/BI projects. In *Agile Analytics*, Agile pioneer Ken Collier shows how to do just that. Collier introduces platform-agnostic Agile solutions for integrating infrastructures consisting of diverse operational, legacy, and specialty systems that mix commercial and custom code. Using working examples, he shows how to manage analytics development teams with widely diverse skill sets and how to support enormous and fast-growing data volumes. Collier's techniques offer optimal value whether your projects involve "back-end" data management, "front-end" business analysis, or both. Part I focuses on Agile project management techniques and delivery team coordination, introducing core practices that

shape the way your Agile DW/BI project community can collaborate toward success Part II presents technical methods for enabling continuous delivery of business value at production-quality levels, including evolving superior designs; test-driven DW development; version control; and project automation Collier brings together proven solutions you can apply right now--whether you're an IT decision-maker, data warehouse professional, database administrator, business intelligence specialist, or database developer. With his help, you can mitigate project risk, improve business alignment, achieve better results--and have fun along the way.

Sustainable Software Architecture Carola Lilienthal 2019-09-02

Today's programmers don't develop software systems from scratch. Instead, they spend their time fixing, extending, modifying, and enhancing existing software. Legacy systems often turn into an unwieldy mess that becomes increasingly difficult to modify, and with architecture that continually accumulates technical debt. Carola Lilienthal has analyzed more than 300 software systems written in Java, C#, C++, PHP, ABAP, and TypeScript and, together with her teams, has successfully refactored them. This book condenses her experience with monolithic systems, architectural and design patterns, layered architectures, domain-driven design, and microservices. With more than 200 color images from real-world systems, good and sub-optimal sample solutions are presented in a comprehensible and thorough way, while recommendations and suggestions based on practical projects allow the reader to directly apply the author's knowledge to their daily work. "Throughout the book, Dr. Lilienthal has provided sound advice on diagnosing, understanding, disentangling, and ultimately preventing the issues that make software systems brittle and subject to breakage. In addition to the technical examples that you'd expect in a book on software architecture, she takes the time to dive into the behavioral and human aspects that impact sustainability and, in my experience, are inextricably linked to the health of a codebase. She also expertly zooms out, exploring architecture concepts such as domains and layers, and then zooms in to the

class level where your typical developer works day-to-day. This holistic approach is crucial for implementing long-lasting change." From the Foreword of Andrea Goulet CEO, Corgibytes, Founder, Legacy Code Rocks
Building Evolutionary Architectures - Neal Ford
2017-09-18

The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques,

and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time.