

Agility And Discipline Made Easy

Break the Old, Waterfall Habits that Hinder Agile Success: Drive Rapid Value and Continuous Improvement When agile teams don't get immediate results, it's tempting for them to fall back into old habits that make success even less likely. In *Being Agile*, Leslie Ekas and Scott Will present eleven powerful techniques for rapidly gaining substantial value from agile, making agile methods stick, and launching a “virtuous circle” of continuous improvement. Drawing on their experience helping more than 100 teams transition to agile, the authors review its key principles, identify corresponding practices, and offer breakthrough approaches for implementing them. Using their techniques, you can break typical waterfall patterns and go beyond merely “doing agile” to actually thinking and being agile. Ekas and Will help you clear away silos, improve stakeholder interaction, eliminate waste and waterfall-style inefficiencies, and lead the agile transition far more successfully. Each of their eleven principles can stand on its own: when you combine them, they become even more valuable. Coverage includes Building “whole teams” that cut across silos and work together throughout a product's lifecycle Engaging product stakeholders earlier and far more effectively Overcoming inefficient “waterfalls” and “big batch” waterfall thinking Getting past the curse of multi-tasking Eliminating dangerous technical and project debt Repeatedly deploying “release-ready” software in real user environments Delivering what customers really need, not what you think they need Fixing the root causes of problems so they don't recur Learning from experience: mastering continuous improvement Assessing whether you're just “doing agile” or actually “being agile” *Being Agile* will be indispensable for all software professionals now adopting agile; for coaches, managers, engineers, and team members who want to get more value from it and for students discovering it for the first time.

Agility and Discipline Made Easy Practices from OpenUP and RUP Pearson Education This book constitutes the thoroughly refereed post-conference proceedings of the 12th International Joint Conference on Software Technologies, ICSOFT 2017, held in Madrid, Spain, in July 2017. The 17 revised full papers and 24 short papers presented were carefully reviewed and selected from 85 submissions. The topics covered in the papers include: software quality and metrics; software testing and maintenance; development methods and models; systems security; dynamic software updates; systems integration; business process modelling; intelligent problem solving; multi-agent systems; and solutions involving big data, the Internet of Things and business intelligence.

Successfully delivering Solutions via Patterns In *Patterns-Based Engineering*, two leading experts bring together true best practices for developing and deploying successful software-intensive systems. Drawing on their extensive enterprise development experience, the authors clearly show how to deliver on the promise of a patterns-based approach—and consistently create higher-quality solutions faster, with fewer resources. Lee Ackerman and Celso Gonzalez demonstrate how *Patterns-Based Engineering* (PBE) can help you systematically overcome common obstacles to success with patterns. By bringing discipline and clarity to patterns usage, their techniques enable you to replicate your success broadly and scale patterns to even the largest projects. The authors introduce powerful ways to discover, design, create,

package, and consume patterns based on your organization's experience and best practices. They also present extensive coverage of the nontechnical aspects of making patterns work, including a full chapter of guidance on clearing up misconceptions that stand in your way. Coverage includes Using patterns to optimize the entire development lifecycle, including design, coding, testing, and deployment Systematically managing the risks and economic returns associated with patterns Effectively implementing PBE roles, tasks, work products, and tools Integrating PBE with existing development processes, including eXtreme Programming, Scrum, and OpenUP Using Domain Specific Languages (DSLs) with patterns Whether you're an architect, designer, developer, analyst, project manager, or process engineer, Patterns-Based Engineering will help you to consistently derive greater business value and agility from patterns.

It's not enough to say that the CIO is the geek who wears the suit, IT leaders must, now more than ever, take a seat at the table. In *A Seat at the Table*, CIO Mark Schwartz explores the role of IT leadership as it is now and opens the door to reveal IT leadership as it should be—an integral part of the value creation engine. With wit and an easy style, Schwartz reveals that the only way to become an Agile IT leader is to be courageous—to throw off the attitude and assumptions that have kept CIOs from taking their rightful seat at the table. CIOs, step on up, your seat at the table is waiting for you.

Master IBM's Breakthrough DAD Process Framework for Succeeding with Agile in Large, Complex, Mission-Critical IT Projects It is widely recognized that moving from traditional to agile approaches to build software solutions is a critical source of competitive advantage. Mainstream agile approaches that are indeed suitable for small projects require significant tailoring for larger, complex enterprise projects. In *Disciplined Agile Delivery*, Scott W. Ambler and Mark Lines introduce IBM's breakthrough Disciplined Agile Delivery (DAD) process framework, which describes how to do this tailoring. DAD applies a more disciplined approach to agile development by acknowledging and dealing with the realities and complexities of a portfolio of interdependent program initiatives. Ambler and Lines show how to extend Scrum with supplementary agile and lean strategies from Agile Modeling (AM), Extreme Programming (XP), Kanban, Unified Process (UP), and other proven methods to provide a hybrid approach that is adaptable to your organization's unique needs. They candidly describe what practices work best, why they work, what the trade-offs are, and when to consider alternatives, all within the context of your situation. Disciplined Agile Delivery addresses agile practices across the entire lifecycle, from requirements, architecture, and development to delivery and governance. The authors show how these best-practice techniques fit together in an end-to-end process for successfully delivering large, complex systems--from project initiation through delivery. Coverage includes Scaling agile for mission-critical enterprise endeavors Avoiding mistakes that drive poorly run agile projects to chaos Effectively initiating an agile project Transitioning as an individual to agile Incrementally building consumable solutions Deploying agile solutions into complex production environments Leveraging DevOps, architecture, and other enterprise disciplines Adapting your governance strategy for agile projects Based on facts, research, and extensive experience, this book will be an indispensable resource for every enterprise software leader and practitioner--whether they're seeking to optimize their existing agile/Scrum process or improve the agility of

an iterative process.

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 tar pit 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.

Transform your organization using Agile principles with this proven framework The Six Disciplines of Agile Marketing provides a proven framework for applying Agile principles and processes to marketing. Written by celebrated consultant Jim Ewel, this book provides a concise, approachable, and adaptable strategy for the implementation of Agile in virtually any marketing organization. The Six Disciplines of Agile Marketing discusses six key areas of practical concern to the marketer who hopes to adopt Agile practices in their organization. They include: Aligning the team on common goals Structuring the team for greater efficiency Implementing processes like Scrum and Kanban in marketing Validated Learning Adapting to Change Creating Remarkable Customer Experiences The Six Disciplines of Agile Marketing also discusses four shifts in beliefs and behaviors necessary to achieving an Agile transformation in marketing organizations. They include: A shift from a focus on outputs to one based on outcomes A shift from a campaign mentality to one based on continuous improvement A shift from an internal focus to a customer focus

"The Japanese samurai Musashi wrote: 'One can win with the long sword, and one can win with the short sword. Whatever the weapon, there is a time and situation in which it is appropriate.' "Similarly, we have the long RUP and the short RUP, and all sizes in between. RUP is not a rigid, static recipe, and it evolves with the field and the practitioners, as demonstrated in this new book full of wisdom to illustrate further the liveliness of a process adopted by so many organizations around the world. Bravo!" --Philippe Kruchten, Professor, University of British Columbia "The Unified Process and its practices have had, and continue to have, a great impact on the software industry. This book is a refreshing new look at some of the principles underlying the Unified Process. It is full of practical guidance for people who want to start, or increase, their adoption of proven practices. No matter where you are today in terms of software maturity, you can start improving tomorrow." --Ivar Jacobson, Ivar Jacobson Consulting "Kroll and Maclsaac have written a must-have book. It is well organized with new principles for software development. I encounter many books I consider valuable; I consider

this one indispensable, especially as it includes over 20 concrete best practices. If you are interested in making your software development shop a better one, read this book!" --Ricardo R. Garcia, President, Global Rational User Group Council, www.rational-ug.org/index.php

"Agile software development is real, it works, and it's here to stay. Now is the time to come up to speed on agile best practices for the Unified Process, and this book provides a great starting point." --Scott W. Ambler, practice leader, Agile Modeling

"IBM and the global economy have become increasingly dependent on software over the last decade, and our industry has evolved some discriminating best practices. Per and Bruce have captured the principles and practices of success in this concise book; a must for executives, project managers, and practitioners. These ideas are progressive, but they strike the right balance between agility and governance and will form the foundation for successful systems and software developers for a long time." --Walker Royce, Vice President, IBM Software Services-Rational

"Finally, the RUP is presented in digestible, byte-size pieces. Kroll and Maclsaac effectively describe a set of practices that can be adopted in a low-ceremony, ad hoc fashion, suited to the culture of the more agile project team, while allowing them to understand how to scale their process as needed." --Dean Leffingwell, author and software business advisor and executive

"This text fills an important gap in the knowledge-base of our industry: providing agile practices in the proven, scalable framework of the Unified Process. With each practice able to be throttled to the unique context of a development organization, Kroll and Maclsaac provide software teams with the ability to balance agility and discipline as appropriate for their specific needs." --Brian G. Lyons, CTO, Number Six Software, Inc.

In *Agility and Discipline Made Easy*, Rational Unified Process (RUP) and Open Unified Process (OpenUP) experts Per Kroll and Bruce Maclsaac share twenty well-defined best practices that you and your team can start adopting today to improve the agility, predictability, speed, and cost of software development. Kroll and Maclsaac outline proven principles for software development, and supply a number of supporting practices for each. You'll learn what problems each practice addresses and how you can best leverage RUP and OpenUP (an open-source version of the Unified Process) to make the practice work for you. You'll find proactive, prescriptive guidance on how to adopt the practices with minimal risk and implement as much or as little of RUP or OpenUP as you want. Learn how to apply sample practices from the Unified Process so you can Execute your project in iterations Embrace and manage change Test your own code Describe requirements from the user perspective Architect with components and services Model key perspectives Whether you are interested in agile or disciplined development using RUP, OpenUP, or other agile processes, this book will help you reduce the anxiety and cost associated with software improvement by providing an easy, non-intrusive path toward improved results--without overwhelming you and your team.

The agile community has figured out how to build and then continually improve very high-performance software development teams. This is akin to creating a race car engine and then evolving it to get more power, better fuel efficiency, and greater speed. Sadly in many cases we take these great engines, put them into an organizational tractor, and then complain that we're not winning the race. What we need to do is take our great race car engines (our development teams), put them into a race car (a DevOps ecosystem), have a great pit crew and driver (an effective IT organization), and then provide somewhere to race (an organization that can leverage IT to make money). That's what this book is all about - Moving from optimizing team performance to optimizing the entire enterprise. Business agility - being an adaptive, lean, responsive, and learning organization - is the race that enterprises need to win today. Yet there is no quick fix, no silver bullet, to attain business agility. This is a multi-year journey requiring hard work, experimentation, and most importantly a willingness to improve. The Disciplined Agile framework lowers risks and provides a path to accelerate your journey to business agility. The framework is unique in that it is the only one that puts all the pieces

together into a cohesive enterprise roadmap for business agility transformation. This book begins with an overview of the challenges and opportunities that organizations face. We then describe seven principles that provide the underpinnings of the Disciplined Agile framework. Then the book works through Disciplined Agile Delivery (how to build a world-class engine), Disciplined DevOps (the race car), Disciplined Agile IT (the race car and its team), and what it means to be a Disciplined Agile Enterprise (the racing business). The book ends with a plan for starting with an Agile transformation and then evolving into a long-term continuous improvement strategy. Do you have the discipline it takes to win the race to business agility? More than 300,000 developers have benefited from past editions of *UML Distilled*. This third edition is the best resource for quick, no-nonsense insights into understanding and using UML 2.0 and prior versions of the UML. Some readers will want to quickly get up to speed with the UML 2.0 and learn the essentials of the UML. Others will use this book as a handy, quick reference to the most common parts of the UML. The author delivers on both of these promises in a short, concise, and focused presentation. This book describes all the major UML diagram types, what they're used for, and the basic notation involved in creating and deciphering them. These diagrams include class, sequence, object, package, deployment, use case, state machine, activity, communication, composite structure, component, interaction overview, and timing diagrams. The examples are clear and the explanations cut to the fundamental design logic. Includes a quick reference to the most useful parts of the UML notation and a useful summary of diagram types that were added to the UML 2.0. If you are like most developers, you don't have time to keep up with all the new innovations in software engineering. This new edition of Fowler's classic work gets you acquainted with some of the best thinking about efficient object-oriented software design using the UML--in a convenient format that will be essential to anyone who designs software professionally.

The Classic Guide to ATL—Now Updated for ATL 8 and Visual Studio 2005 Four leading Windows programming experts systematically reveal ATL's inner workings, explaining not just how ATL works, but why it works the way it does. Client-side developers will master ATL's resources for windowing, COM control, MFC integration, web service proxy generation, and more. Server-side programmers will discover ATL's full COM server and object services, and its extensive support for high-throughput, high-concurrency web applications, and services. Every Windows developer will learn powerful ways to increase flexibility, reduce overhead, and maximize transparency and control.

- Discover ATL's internals through diagrams, example code, and internal ATL implementation code
- Walk through wizards that simplify ATL usage in common applications
- Master string handling in C++, COM, and ATL
- Leverage ATL smart types, including CComPtr, CComQIPtr, CComBSTR, and CComVariant
- Understand and choose the right options for implementing IUnknown
- Create glue code that exposes COM objects from COM servers
- Use canned interface implementations to support object persistence, COM collections, enumerators, and connection points
- Build standalone applications and UI components with ATL window classes and controls
- Use ATL Server to develop web applications that run on Microsoft IIS

The five-volume set LNCS 9786-9790 constitutes the refereed proceedings of the 16th International Conference on Computational Science and Its Applications, ICCSA 2016, held in Beijing, China, in July 2016. The 239 revised full papers and 14 short papers presented at 33 workshops were carefully reviewed and selected from 849 submissions. They are organized in five thematical tracks: computational methods, algorithms and scientific applications; high performance computing and networks; geometric modeling, graphics and visualization; advanced and emerging applications; and information systems and technologies.

Users can dramatically improve the design, performance, and manageability of object-oriented code without altering its interfaces or behavior. "Refactoring" shows users exactly how to spot the best opportunities for refactoring and exactly how to do it, step by step.

The capability to design quality software and implement modern information systems is at the core of economic growth in the 21st century. This book aims to review and analyze software engineering technologies, focusing on the evolution of design and implementation platforms as well as on novel computer systems.

Service engineering is increasingly posing challenges to traditional software engineering methodologies including specification, modeling, architecture, and verification, just to name a few. On the other hand, the latest advancements in software engineering are continuously leveraged in Service Engineering research, especially in the design and implementation of service-oriented systems. Several mutual impacts between service engineering and software engineering could be observed in the last decade, and many research efforts have been devoted to the field. However, in spite of the considerable efforts and significant contributions, few have attempted to summarize the research results systematically.

This book constitutes the proceedings of the 9th International Conference on Social Computing and Social Media, SCSM 2017, held as part of the 19th International Conference on Human-Computer Interaction, HCII 2017, held in Vancouver, Canada, in July 2017. HCII 2017 received a total of 4340 submissions, of which 1228 papers were accepted for publication after a careful reviewing process. The papers thoroughly cover the entire field of Human-Computer Interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. The two volumes set of SCSM 2017 presents 67 papers which are organized in the following topical sections: user experience and behavior in social media, customer behavior and social media, social issues in social media, social media for communication, learning and aging, opinion mining and sentiment analysis, social data and analytics.

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:

- 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.
- 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.
- 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.

Object-Oriented Analysis and Design for Information Systems clearly explains real object-oriented programming in practice. Expert author Raul Sidnei Wazlawick explains concepts such as object responsibility, visibility and the real need for delegation in detail. The object-oriented code generated by using these concepts in a systematic way is concise, organized and reusable. The patterns and solutions presented in this book are based in research and industrial applications. You will come away with clarity

regarding processes and use cases and a clear understand of how to expand a use case. Wazlawick clearly explains clearly how to build meaningful sequence diagrams. Object-Oriented Analysis and Design for Information Systems illustrates how and why building a class model is not just placing classes into a diagram. You will learn the necessary organizational patterns so that your software architecture will be maintainable. Learn how to build better class models, which are more maintainable and understandable. Write use cases in a more efficient and standardized way, using more effective and less complex diagrams. Build true object-oriented code with division of responsibility and delegation.

Many systems development practitioners find traditional "one-size-fits-all" processes inadequate for the growing complexity, diversity, dynamism, and assurance needs of their products and services. The Incremental Commitment Spiral Model (ICSM) responds with a principle- and risk-based framework for defining and evolving your project and corporate process assets. This book explains ICSM's framework of decision criteria and principles, and shows how to apply them through relevant examples. Information is considered both an essential element of organizational design and an asset to be processed and managed. Further research on and application of topics relating to the architecture, management, and use of information is imperative to organizational success. The Handbook of Research on Information Architecture and Management in Modern Organizations focuses on information as an essential element of organizational design and emphasizes the strategic role of knowledge transfer and management in organizations across industries. Taking a cross-disciplinary approach to information architecture and management, this publication draws on research essential to diverse organizations and is designed for use by business professionals, researchers, academicians, and upper-level students. This comprehensive reference work features key research and concepts on topics related to information functionality, information modeling, information overload, information retrieval, innovation management, organizational architecture, informed governance, and relevant applications across industries.

As the application of object technology--particularly the Java programming language--has become commonplace, a new problem has emerged to confront the software development community. Significant numbers of poorly designed programs have been created by less-experienced developers, resulting in applications that are inefficient and hard to maintain and extend. Increasingly, software system professionals are discovering just how difficult it is to work with these inherited, "non-optimal" applications. For several years, expert-level object programmers have employed a growing collection of techniques to improve the structural integrity and performance of such existing software programs. Referred to as "refactoring," these practices have remained in the domain of experts because no attempt has been made to transcribe the lore into a form that all developers could use. . .until now. In Refactoring: Improving the Design of Existing Code, renowned object technology mentor Martin Fowler breaks new ground, demystifying these master practices and demonstrating how software practitioners can realize the significant benefits of this new process. With proper training a skilled system designer can take a bad design and rework it into well-designed, robust code. In this book, Martin Fowler shows you where opportunities for refactoring typically can be found, and how to go about reworking a bad design into a good one. Each refactoring step is simple--seemingly too simple to be worth doing. Refactoring may involve moving a field from one class to another, or pulling some code out of a method to turn it into its own method, or even pushing some code up or down a hierarchy. While these individual steps may seem

elementary, the cumulative effect of such small changes can radically improve the design. Refactoring is a proven way to prevent software decay. In addition to discussing the various techniques of refactoring, the author provides a detailed catalog of more than seventy proven refactorings with helpful pointers that teach you when to apply them; step-by-step instructions for applying each refactoring; and an example illustrating how the refactoring works. The illustrative examples are written in Java, but the ideas are applicable to any object-oriented programming language.

The Only Official RUP® Certification Prep Guide and Compact RUP Reference The IBM® Rational Unified Process® has become the de facto industry-standard process for large-scale enterprise software development. The IBM Certified Solution Designer - IBM Rational Unified Process V7.0 certification provides a powerful way for solutions developers to demonstrate their proficiency with RUP. The first and only official RUP certification guide, this book fully reflects the latest versions of the Rational Unified Process and of the IBM RUP exam. Authored by two leading RUP implementers, it draws on extensive contributions and careful reviews by the IBM RUP process leader and RUP certification manager. This book covers every facet of RUP usage. It has been carefully organized to help you prepare for your exam quickly and efficiently--and to provide a handy, compact reference you can rely on for years to come. Coverage includes A full section on RUP exam preparation and a 52-question practice exam Core RUP concepts, the new RUP process architecture, and key principles of business-driven development RUP's architecture-centric approach to iterative development: practical issues and scenarios Patterns for successful RUP project implementation--and "anti-patterns" to avoid The Unified Method Architecture (UMA): basic content and process elements RUP content disciplines, in depth: Business Modeling, Requirements, Analysis and Design, Implementation, Test, Deployment, Project Management, Change and Configuration Management, and Environment Essential RUP work products, roles, and tasks RUP phases, activities, and milestones RUP tailoring and tools for your organization--including introductions to IBM Rational Method Composer (RMC) and MyRUP

What is agile data warehousing? -- Iterative development in a nutshell -- Streamlining project management -- Authoring better user stories -- Deriving initial project backlogs -- Developer stories for data integration -- Estimating and segmenting projects -- Adapting agile for data warehousing -- Starting and scaling agile data warehousing.

This book provides a coherent methodology for Model-Driven Requirements Engineering which stresses the systematic treatment of requirements within the realm of modelling and model transformations. The underlying basic assumption is that detailed requirements models are used as first-class artefacts playing a direct role in constructing software. To this end, the book presents the Requirements Specification Language (RSL) that allows precision and formality, which eventually permits automation of the process of turning requirements into a working system by applying model transformations and code generation to RSL. The book is structured in eight chapters. The first two chapters present the main concepts and give an introduction to requirements modelling in RSL. The next two chapters concentrate on presenting RSL in a formal way, suitable for automated processing. Subsequently, chapters 5 and 6 concentrate on model transformations with the emphasis on those involving RSL and UML. Finally, chapters 7 and 8 provide a summary in the form of a systematic methodology with a comprehensive case study. Presenting technical details of requirements modelling and model transformations for requirements, this book is of interest to researchers, graduate students and advanced practitioners from industry. While researchers will benefit from the latest results and possible research directions in MDRE, students and practitioners can exploit the presented information and practical techniques in several areas, including requirements engineering, architectural design, software language construction and model transformation. Together with a tool suite available online, the book supplies the reader with what it promises: the means to get from

requirements to code “in a snap”.

“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.

Many current AI and machine learning algorithms and data and information fusion processes attempt in software to estimate situations in our complex world of nested feedback loops. Such algorithms and processes must gracefully and efficiently adapt to technical challenges such as data quality induced by these loops, and interdependencies that vary in complexity, space, and time. To realize effective and efficient designs of computational systems, a Systems Engineering perspective may provide a framework for identifying the interrelationships and patterns of change between components rather than static snapshots. We must study cascading interdependencies through this perspective to understand their behavior and to successfully adopt complex system-of-systems in society. This book derives in part from the presentations given at the AAAI 2021 Spring Symposium session on Leveraging Systems Engineering to Realize Synergistic AI / Machine Learning Capabilities. Its 16 chapters offer an emphasis on pragmatic aspects and address topics in systems engineering; AI, machine learning, and reasoning; data and information fusion; intelligent systems; autonomous systems; interdependence and teamwork; human-computer interaction; trust; and resilience. The biggest lie we were told is that a college education will prepare us for a lifelong career. If you go to college or put in your four years and earn a bachelor's degree, you will find a rewarding and stimulating career with a comfortable salary and benefits. The reality is, there is a huge skill gap between the classroom and the workplace, and this skill gap is the main reason I watched countless friends struggle post-school to find a meaningful career. While we sent out resumes and cleaned up our LinkedIn profiles, an entire generation of college graduates moved back home to live with friends or family because we couldn't afford to pay rent thanks to being, on average, \$35,000 in debt to student loan companies. Here's why: We are living in an Age of Agility. The world is changing so quickly, higher education can't keep pace and as a result, we aren't given the tools to prepare us for a sustainable and rewarding career. College graduates are not prepared to enter the workforce. Unlike other pop business books, I'm not selling an empty box of "dream big and work hard." This is a book about defining the path to your dream and working smart. Rather than focusing only on the current state of the industry, this book is about the skills you need to keep pace with the industry as it changes.

No matter how the industry shifts, agile skills—skills like social and emotional intelligence, communication, self-management, and creative problem-solving—will always be relevant. Instead of teaching you what to think, this book will teach you how to think. If you like where this is going, flip to Why Read This Book—there's a good chance *Age of Agility* was written for you.

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. This book discusses emerging trends in the field of managing knowledge work due to technological innovations. The book is organized in 3 sections. The first section, entitled "Managing Knowledge, Projects and Networks", discusses knowledge processes and their

use, reuse or generation in the context of an organization. The second section, entitled "Managing Knowledge using Social Media", focuses on factors influencing adoption and usage, the role of social media in managing knowledge, and factors that influence employees' acceptance and participation. The third section brings into discussion new approaches and technologies for acquiring knowledge. The book will be useful to both academics engaged in research in knowledge management and practitioners who are considering or implementing strategies for managing one of their most important resources.

In *Global Risk Agility and Decision Making*, Daniel Wagner and Dante Disparte, two leading authorities in global risk management, make a compelling case for the need to bring traditional approaches to risk management and decision making into the twenty-first century. Based on their own deep and multi-faceted experience in risk management across numerous firms in dozens of countries, the authors call for a greater sense of urgency from corporate boards, decision makers, line managers, policymakers, and risk practitioners to address and resolve the plethora of challenges facing today's private and public sector organizations. Set against the era of manmade risk, where transnational terrorism, cyber risk, and climate change are making traditional risk models increasingly obsolete, they argue that remaining passively on the side-lines of the global economy is dangerous, and that understanding and actively engaging the world is central to achieving risk agility. Their definition of risk agility taps into the survival and risk-taking instincts of the entrepreneur while establishing an organizational imperative focused on collective survival. The agile risk manager is part sociologist, anthropologist, psychologist, and quant. Risk agility implies not treating risk as a cost of doing business, but as a catalyst for growth. Wagner and Disparte bring the concept of risk agility to life through a series of case studies that cut across industries, countries and the public and private sectors. The rich, real-world examples underscore how once mighty organizations can be brought to their knees—and even their demise by simple miscalculations or a failure to just do the right thing. The reader is offered deep insights into specific risk domains that are shaping our world, including terrorism, cyber risk, climate change, and economic resource nationalism, as well as a frame of reference from which to think about risk management and decision making in our increasingly complicated world. This easily digestible book will shed new light on the often complex discipline of risk management. Readers will learn how risk management is being transformed from a business prevention function to a values-based framework for thriving in increasingly perilous times. From tackling governance structures and the tone at the top to advocating for greater transparency and adherence to value systems, this book will establish a new generation of risk leader, with clarion voices calling for greater risk agility. The rise of agile decision makers coincides with greater resilience and responsiveness in the era of manmade risk.

This book provides an understanding of how current research and practice has contributed towards improving quality issues in software, interaction and value. The book includes chapters on new methods/approaches that will enhance the field of usability. A balance between theoretical and empirical approaches is maintained throughout, and all those interested in exploring usability issues in human-computer interaction will find this a very useful book.

This easy-to-understand book discusses applications of current technologies and the foundations for their extension into emerging areas in the future. It includes research presented at two conferences: 5th International IBM Cloud Academy Conference, 2017, held in Wrocław, Poland. 5th Asia-Pacific Conference on Computer Assisted and System Engineering, 2017, held in Guilin, China. These conferences focused on system and application engineering, including achievements in the interdisciplinary topics of cloud computing, big data, IoT and mobile communications. Featuring 19 chapters, the book has the potential to influence current and future research and applications combining the best attributes of computing, mathematics,

artificial intelligence, biometrics and software engineering to create a comprehensive research application domain.

Being a certified bibliophile and a professional geek, I have more shelf space devoted to books on software methods than any reasonable human should possess. *Balancing Agility and Discipline* has a prominent place in that section of my library, because it has helped me sort through the noise and smoke of the current method wars. --From the Foreword by Grady Booch This is an outstanding book on an emotionally complicated topic. I applaud the authors for the care with which they have handled the subject. --From the Foreword by Alistair Cockburn The authors have done a commendable job of identifying five critical factors--personnel, criticality, size, culture, and dynamism--for creating the right balance of flexibility and structure. Their thoughtful analysis will help developers who must sort through the agile-disciplined debate, giving them guidance to create the right mix for their projects. --From the Foreword by Arthur Pyster *Agility and discipline: These apparently opposite attributes are, in fact, complementary values in software development. Plan-driven developers must also be agile; nimble developers must also be disciplined. The key to success is finding the right balance between the two, which will vary from project to project according to the circumstances and risks involved. Developers, pulled toward opposite ends by impassioned arguments, ultimately must learn how to give each value its due in their particular situations. *Balancing Agility and Discipline* sweeps aside the rhetoric, drills down to the operational core concepts, and presents a constructive approach to defining a balanced software development strategy. The authors expose the bureaucracy and stagnation that mark discipline without agility, and liken agility without discipline to unbridled and fruitless enthusiasm. Using a day in the life of two development teams and ground-breaking case studies, they illustrate the differences and similarities between agile and plan-driven methods, and show that the best development strategies have ways to combine both attributes. Their analysis is both objective and grounded, leading finally to clear and practical guidance for all software professionals--showing how to locate the sweet spot on the agility-discipline continuum for any given project.* 0321186125B10212003

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