

Software Engineering Project Management

Although software development is one of the most complex activities carried out by man, sound development processes and proper project management can help ensure your software projects are delivered on time and under budget. Providing the know-how to manage software projects effectively, Introduction to Software Project Management supplies an accessible introduction to software project management. The book begins with an overview of the fundamental techniques of project management and the technical aspects of software development. This section supplies the understanding of the techniques required to mitigate uncertainty in projects and better control the complexity of software development projects. The second part illustrates the technical activities of software development in a coherent process—describing how to customize this process to fit a wide range of software development scenarios. Examines project management frameworks and software development standards, including ESA and NASA guidelines, PRINCE2®, and PMBOK® Addresses open source development practices and tools so readers can adopt best practices and get started with tools that are available for free Explains how to tailor the development process to different kinds of products and formalities, including the development of web applications Includes access to additional material for both practitioners and teachers at www.spmbook.com Supplying an analysis of existing development and management frameworks, the book

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describes how to set up an open-source tool infrastructure to manage projects. Since practitioners must be able to mix traditional and agile techniques effectively, the book covers both and explains how to use traditional techniques for planning and developing software components alongside agile methodologies. It does so in a manner that will help you to foster freedom and creativity in assembling the processes that will best serve your needs.

A breakthrough approach to managing agile software development, Agile methods might just be the alternative to outsourcing. However, agile development must scale in scope and discipline to be acceptable in the boardrooms of the Fortune 1000. In *Agile Management for Software Engineering*, David J. Anderson shows managers how to apply management science to gain the full business benefits of agility through application of the focused approach taught by Eli Goldratt in his *Theory of Constraints*. Whether you're using XP, Scrum, FDD, or another agile approach, you'll learn how to develop management discipline for all phases of the engineering process, implement realistic financial and production metrics, and focus on building software that delivers maximum customer value and outstanding business results. Coverage includes: Making the business case for agile methods: practical tools and disciplines How to choose an agile method for your next project Breakthrough application of Critical Chain Project Management and constraint-driven control of the flow of value Defines the four new roles for the agile manager in software projects—and competitive IT organizations

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Whether you're a development manager, project manager, team leader, or senior IT executive, this book will help you achieve all four of your most urgent challenges: lower cost, faster delivery, improved quality, and focused alignment with the business.

A Lifetime of Invaluable Management Insights from Legendary Software Quality Guru Watts S. Humphrey In 1986, Watts S. Humphrey made an outrageous commitment: a promise to transform software development. As the pioneering innovator behind SEI's Capability Maturity Model (CMM), Personal Software Process (PSP), and Team Software Process (TSP), Humphrey has more than met that promise. But his contributions go beyond methodology: For decades, his deeply personal writings on project management have been admired by software engineers worldwide. *Reflections on Management* brings together Humphrey's best and most influential essays and articles--sharing insights that will be indispensable for anyone who must achieve superior results in software or any other endeavor. Collected here for the first time, these works offer compelling insights into everything from planning day-to-day work to improving quality, encouraging teamwork to becoming a truly great leader. All of these writings share a powerful vision, grounded by a life in software that has extended across nearly six decades. The vision is this: To succeed, professionals must effectively manage for more than plans, schedules, and code--they must manage teams, bosses, and above all, themselves.

Software Project Management explains the latest management strategies and

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techniques in software developments. It covers such issues as keeping the team motivated, cost-justifying strategies, deadlines and budgets.

Why another book on software project management? For some time, the fields of project management, computer science, and software development have been growing rapidly and concurrently. Effective support for the enterprise demands the merging of these efforts into a coordinated discipline, one that incorporates best practices from both systems development and project management life cycles. Robert K. Wysocki creates that discipline in this book--a ready reference for professionals and consultants as well as a textbook for students of computer information systems and project management. By their very nature, software projects defy a "one size fits all" approach. In these pages you will learn to apply best-practice principles while maintaining the flexibility that's essential for successful software development. Learn how to make the planning process fit the need

- * Understand how and why software development must be planned on a certainty-to-uncertainty continuum
- * Categorize your projects on a four-quadrant model
- * Learn when to use each of the five SDPM strategies--Linear, Incremental, Iterative, Adaptive, and Extreme
- * Explore the benefits of each strategic model and what types of projects it supports best
- * Recognize the activities that go into the Scoping, Planning, Launching, Monitoring/Controlling, and Closing phases of each strategy
- * Apply this knowledge to the specific projects you manage
- * Get a clear picture of where you are and how to get where you want to go

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The increase in project outsourcing has forced traditional programmers to take on the role of project managers and quickly learn how to manage software projects. The author discusses all of the essentials in widely accepted project management methodology, from managing programmers to assessing and eliminating risk. The book covers the iterative development model, using Microsoft Project 2003, as well as a variety of methodologies including eXtreme, open source, SQA testing, software life cycle management, and more. The companion Web site contains tools, case studies and other resources to help even novices get up and running.

Requirements Engineering and Management for Software Development Projects presents a complete guide on requirements for software development including engineering, computer science and management activities. It is the first book to cover all aspects of requirements management in software development projects. This book introduces the understanding of the requirements, elicitation and gathering, requirements analysis, verification and validation of the requirements, establishment of requirements, different methodologies in brief, requirements traceability and change management among other topics. The best practices, pitfalls, and metrics used for efficient software requirements management are also covered. Intended for the professional market, including software engineers, programmers, designers and researchers, this book is also suitable for advanced-level students in computer science or engineering courses as a textbook or reference.

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Most software project problems are sociological, not technological. Peopleware is a book on managing software projects.

Very few software projects are completed on time, on budget, and to their original specification causing the global IT software industry to lose billions each year in project overruns and reworking software. Research supports that projects usually fail because of management mistakes rather than technical mistakes. Risk Management in Software Development Projects focuses on what the practitioner needs to know about risk in the pursuit of delivering software projects. Risk Management in Software Development Projects will help all practicing IT Project Managers and IT Managers understand:

- * Key components of the risk management process
- * Current processes and best practices for software risk identification
- * Techniques of risk analysis
- * Risk Planning
- * Management processes and be able to develop the process for various organizations

Incomplete or missed requirements, omissions, ambiguous product features, lack of user involvement, unrealistic customer expectations, and the proverbial scope creep can result in cost overruns, missed deadlines, poor product quality, and can very well ruin a project. Project Scope Management: A Practical Guide to Requirements for Engineering, Product, Construction, IT and Enterprise Projects describes how to elicit, document, and manage requirements to control project

scope creep. It also explains how to manage project stakeholders to minimize the risk of an ever-growing list of user requirements. The book begins by discussing how to collect project requirements and define the project scope. Next, it considers the creation of work breakdown structures and examines the verification and control of the scope. Most of the book is dedicated to explaining how to collect requirements and how to define product and project scope inasmuch as they represent the bulk of the project scope management work undertaken on any project regardless of the industry or the nature of the work involved. The book maintains a focus on practical and sensible tools and techniques rather than academic theories. It examines five different projects and traces their development from a project scope management perspective—from project initiation to the end of the execution and control phases. The types of projects considered include CRM system implementation, mobile number portability, port upgrade, energy-efficient house design, and airport check-in kiosk software. After reading this book, you will learn how to create project charters, high-level scope, detailed requirements specifications, requirements management plans, traceability matrices, and a work breakdown structure for the projects covered.

Project-Based Software Engineering is the first book to provide hands-on process

and practice in software engineering essentials for the beginner. The book presents steps through the software development life cycle and two running case studies that develop as the steps are presented. Running parallel to the process presentation and case studies, the book supports a semester-long software development project. This book focuses on object-oriented software development, and supports the conceptualization, analysis, design and implementation of an object-oriented project. It is mostly language-independent, with necessary code examples in Java. A subset of UML is used, with the notation explained as needed to support the readers' work. Two running case studies a video game and a library check out system show the development of a software project. Both have sample deliverables and thus provide the reader with examples of the type of work readers are to create. This book is appropriate for readers looking to gain experience in project analysis, design implementation, and testing.

As the software industry continues to evolve, professionals are continually searching for practices that can assist with the various problems and challenges in information technology (IT). Agile development has become a popular method of research in recent years due to its focus on adapting to change. There are many factors that play into this process, so success is no guarantee. However,

combining agile development with other software engineering practices could lead to a high rate of success in problems that arise during the maintenance and development of computing technologies. Software Engineering for Agile Application Development is a collection of innovative research on the methods and implementation of adaptation practices in software development that improve the quality and performance of IT products. The presented materials combine theories from current empirical research results as well as practical experiences from real projects that provide insights into incorporating agile qualities into the architecture of the software so that the product adapts to changes and is easy to maintain. While highlighting topics including continuous integration, configuration management, and business modeling, this book is ideally designed for software engineers, software developers, engineers, project managers, IT specialists, data scientists, computer science professionals, researchers, students, and academics.

To fully leverage the value of software architecture in enterprise development projects, you need to expressly and consciously link architecture with project management. This book shows how, drawing on powerful lessons learned at Siemens, one of the world's leading software development organizations. The authors offer insight into project management for software architects, insight into

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software architecture for project managers, and above all, insight into integrating the two disciplines to maximize the effectiveness of both of them. Learn how to develop cost and schedule estimates for development projects, based on software architecture; how to clarify architecture so projects can be more effectively planned and managed; and then how to use architecture to organize, implement, and measure the project iteratively as work progresses.

The book describes how to manage and successfully deliver large, complex, and expensive systems that can be composed of millions of line of software code, being developed by numerous groups throughout the globe, that interface with many hardware items being developed by geographically dispersed companies, where the system also includes people, policies, constraints, regulations, and a myriad of other factors. It focuses on how to seamlessly integrate systems, satisfy the customer's requirements, and deliver within the budget and on time.

The guide is essentially a “shopping list” of all the activities that could be conducted with tailoring guidelines to meet the needs of each project.

Software Project ManagementA Process-Driven ApproachCRC Press

To build reliable, industry-applicable software products, large-scale software project groups must continuously improve software engineering processes to increase product quality, facilitate cost reductions, and adhere to tight schedules.

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Emphasizing the critical components of successful large-scale software projects, *Software Project Management: A Process-Driven Approach* discusses human resources, software engineering, and technology to a level that exceeds most university-level courses on the subject. The book is organized into five parts. Part I defines project management with information on project and process specifics and choices, the skills and experience needed, the tools available, and the human resources organization and management that brings it all together. Part II explores software life-cycle management. Part III tackles software engineering processes and the range of processing models devised by several domestic and international organizations. Part IV reveals the human side of project management with chapters on managing the team, the suppliers, and the customers themselves. Part V wraps up coverage with a look at the technology, techniques, templates, and checklists that can help your project teams meet and exceed their goals. A running case study provides authoritative insight and insider information on the tools and techniques required to ensure product quality, reduce costs, and meet project deadlines. Praise for the book: This book presents all aspects of modern project management practices ... includes a wealth of quality templates that practitioners can use to build their own tools. ... equally useful to students and professionals alike. —Maqbool Patel, PhD,

SVP/CTO/Partner, Acuitec

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

Taking a unique approach, this practical introduction gives readers the full flavor of software project management and detailed coverage of the entire development process, not just the lists of management tasks other books provide. This approach leads the reader through various

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stages of the development process in a pragmatic and readable way, with a diversity of topics explained.

Part of the new Digital Filmmaker Series! Digital Filmmaking: An Introduction is the first book in the new Digital Filmmaker Series. Designed for an introductory level course in digital filmmaking, it is intended for anyone who has an interest in telling stories with pictures and sound and won't assume any familiarity with equipment or concepts on the part of the student. In addition to the basics of shooting and editing, different story forms are introduced from documentary and live events through fictional narratives. Each of the topics is covered in enough depth to allow anyone with a camera and a computer to begin creating visual projects of quality.

Drawing on best practices identified at the Software Quality Institute and embodied in bodies of knowledge from the Project Management Institute, the American Society of Quality, IEEE, and the Software Engineering Institute, Quality Software Project Management teaches 34 critical skills that allow any manager to minimize costs, risks, and time-to-market. Written by leading practitioners Robert T. Futrell, Donald F. Shafer, and Linda I. Shafer, it addresses the entire project lifecycle, covering process, project, and people. It contains extensive practical resources-including downloadable checklists, templates, and forms.

By bringing together various current directions, Software Project Management in a Changing World focuses on how people and organizations can make their processes more change-adaptive. The selected chapters closely correspond to the project management knowledge areas introduced by the Project Management Body of Knowledge, including its extension for managing software projects. The contributions are grouped into four parts, preceded by a

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general introduction. Part I “Fundamentals” provides in-depth insights into fundamental topics including resource allocation, cost estimation and risk management. Part II “Supporting Areas” presents recent experiences and results related to the management of quality systems, knowledge, product portfolios and global and virtual software teams. Part III “New Paradigms” details new and evolving software-development practices including agile, distributed and open and inner-source development. Finally, Part IV “Emerging Techniques” introduces search-based techniques, social media, software process simulation and the efficient use of empirical data and their effects on software-management practices. This book will attract readers from both academia and practice with its excellent balance between new findings and experience of their usage in new contexts. Whenever appropriate, the presentation is based on evidence from empirical evaluation of the proposed approaches. For researchers and graduate students, it presents some of the latest methods and techniques to accommodate new challenges facing the discipline. For professionals, it serves as a source of inspiration for refining their project-management skills in new areas.

Often referred to as the “black art” because of its complexity and uncertainty, software estimation is not as difficult or puzzling as people think. In fact, generating accurate estimates is straightforward—once you understand the art of creating them. In his highly anticipated book, acclaimed author Steve McConnell unravels the mystery to successful software estimation—distilling academic information and real-world experience into a practical guide for working software professionals. Instead of arcane treatises and rigid modeling techniques, this guide highlights a proven set of procedures, understandable formulas, and heuristics that individuals and development teams can apply to their projects to help achieve estimation

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proficiency. Discover how to: Estimate schedule and cost—or estimate the functionality that can be delivered within a given time frame Avoid common software estimation mistakes Learn estimation techniques for you, your team, and your organization * Estimate specific project activities—including development, management, and defect correction Apply estimation approaches to any type of project—small or large, agile or traditional Navigate the shark-infested political waters that surround project estimates When many corporate software projects are failing, McConnell shows you what works for successful software estimation. This six-volume-set (CCIS 231, 232, 233, 234, 235, 236) constitutes the refereed proceedings of the International Conference on Computing, Information and Control, ICCIC 2011, held in Wuhan, China, in September 2011. The papers are organized in two volumes on Innovative Computing and Information (CCIS 231 and 232), two volumes on Computing and Intelligent Systems (CCIS 233 and 234), and in two volumes on Information and Management Engineering (CCIS 235 and 236).

The Software Engineering Risk Management (SERIM) application will help you find a safer path through the software development jungle. SERIM takes periodic "readings" on the status of your software development projects so you can focus on high-priority risk areas. After risks are identified, SERIM helps you develop proactive plans for mitigating risk before they sabotage your projects. SERIM may be used in the pre-requirements phase to develop risk projections that help you plan your projects more realistically. This interactive, easy-to-use Windows application gives you an automated way to determine the risks of your software project. Determine within minutes how risky your software project is during all stages of development. The product is based on the SERIM model in the bestselling book Software

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Engineering Risk Management. Using the mathematics of probability, Dr. Karolak has designed formulas that assess your projects' risks by entering numeric ratings for a series of metric questions within the ten major software development risk factors, analyze your projects' risk scores from any or all of the five different analytical perspectives, and "Drill down" within each analytical perspective to design action plans to improve your probability of success with any high-priority metric question. The SERIM model: Identifies different risks for technical implementation, cost, and schedule, Predicts risks by software development phases, Provides a means for corrective action to reduce risks, Identifies the effectiveness of your software risk management activities, Measures the risk associated with your software product and process, Is user friendly and comes with example projects, Handles multiple projects for analyzing software risks.

A hands-on guide for creating a winning engineering project Engineering Project Management is a practical, step-by-step guide to project management for engineers. The author – a successful, long-time practicing engineering project manager – describes the techniques and strategies for creating a successful engineering project. The book introduces engineering projects and their management, and then proceeds stage-by-stage through the engineering life-cycle project, from requirements, implementation, to phase-out. The book offers information for understanding the needs of the end user of a product and other stakeholders associated with a project, and is full of techniques based on real,

hands-on management of engineering projects. The book starts by explaining how we perform the actual engineering on projects; the techniques for project management contained in the rest of the book use those engineering methods to create superior management techniques. Every topic – from developing a work-breakdown structure and an effective project plan, to creating credible predictions for schedules and costs, through monitoring the progress of your engineering project – is infused with actual engineering techniques, thereby vastly increasing the effectivity and credibility of those management techniques. The book also teaches you how to draw the right conclusions from numeric data and calculations, avoiding the mistakes that often cause managers to make incorrect decisions. The book also provides valuable insight about what the author calls the social aspects of engineering project management: aligning and motivating people, interacting successfully with your stakeholders, and many other important people-oriented topics. The book ends with a section on ethics in engineering.

This important book: Offers a hands-on guide for developing and implementing a project management plan Includes background information, strategies, and techniques on project management designed for engineers Takes an easy-to-understand, step-by-step approach to project management Contains ideas for launching a project, managing large amount of software, and tips for ending a

project Structured to support both undergraduate and graduate courses in engineering project management, Engineering Project Management is an essential guide for managing a successful project from the idea phase to the completion of the project.

Looks at a successful software project and provides details for software development for clients using object-oriented design and programming.

Software Security Engineering draws extensively on the systematic approach developed for the Build Security In (BSI) Web site. Sponsored by the Department of Homeland Security Software Assurance Program, the BSI site offers a host of tools, guidelines, rules, principles, and other resources to help project managers address security issues in every phase of the software development life cycle (SDLC). The book's expert authors, themselves frequent contributors to the BSI site, represent two well-known resources in the security world: the CERT Program at the Software Engineering Institute (SEI) and Cigital, Inc., a consulting firm specializing in software security. This book will help you understand why Software security is about more than just eliminating vulnerabilities and conducting penetration tests Network security mechanisms and IT infrastructure security services do not sufficiently protect application software from security risks Software security initiatives should follow a risk-management approach to

identify priorities and to define what is “good enough”—understanding that software security risks will change throughout the SDLC Project managers and software engineers need to learn to think like an attacker in order to address the range of functions that software should not do, and how software can better resist, tolerate, and recover when under attack

Virtual Project Management: Software Solutions for Today and the Future explores the technical management issues involved in the revolutionary new way of building complex software intensive systems faster and cheaper by employing the power of distributed operations. The book examines the implementation issues that cut deep inside present day collocated engineering organizations and recommends practical and affordable actions to aid organizations seeking increased productivity through distributed operations. The demand for integrated solutions constructed from a combination of existing and newly developed software increases daily. Many organizations find themselves with shortages of the critical skills necessary to compete in many of these newly created markets. Employing virtual collaborative development provides a dramatic increase in a company's opportunities to successfully compete. Virtual collaboration provides a broader skill and product knowledge base coupled with a deeper pool of personnel to potentially employ. It removes two of the major barriers - company

affiliation and physical location. Virtual Project Management: Software Solutions for Today and the Future focuses on critical characteristics underlying how work actually gets done in traditional collocated engineering environments. It examines the changes taking place on virtual projects through a series of anecdotes based on real project experiences. The book provides an 8 step practical and affordable plan that can be used as a framework in either setting up and executing a new virtual project, or in instituting improvements to a project that has drifted off course. Others have lived through the pain of learning lessons the hard way. You don't need to follow their path. The insights and solutions offered by Paul McMahon answer the questions virtual project leaders will be asking well into the 21st century.

About The Book: Richard Thayer's popular; bestselling book presents a top-down, practical view of managing a successful software engineering project. The book builds a framework for project management activities based on the planning, organizing, staffing, directing, and controlling model. Thayer provides information designed to help you understand and successfully perform the unique role of a project manager. This book is a must for all project managers in the software field. The text focuses on the five functions of general management by first describing each function and then detailing the project management activities

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that support each function. This new edition shows you how to manage a software development project, discusses current software engineering management methodologies and techniques, and presents general descriptions and project management problems. The book serves as a guide for your future project management activities. The text also offers students sufficient background and instructional material to serve as a main supplementary text for a course in software engineering project management. · Introduction to Management · Software Engineering · Software Engineering Project Management · Planning s Software Engineering Project · Planning: Software Cost, Schedule, and Size · Organizing a Software Engineering Project · Staffing a Software Engineering Project · Directing a Software Engineering Project · Controlling a Software Engineering Project · Controlling: Software Metrics and Visibility of Progress

Managing risk is essential for every organization. However, significant opportunities may be lost by concentrating on the negative aspects of risk without bearing in mind the positive attributes. The objective of Project Risk Management: Managing Software Development Risk is to provide a distinct approach to a broad range of risks and rewards associated with the design, development, implementation and deployment of software systems. The

traditional perspective of software development risk is to view risk as a negative characteristic associated with the impact of potential threats. The perspective of this book is to explore a more discerning view of software development risks, including the positive aspects of risk associated with potential beneficial opportunities. A balanced approach requires that software project managers approach negative risks with a view to reduce the likelihood and impact on a software project, and approach positive risks with a view to increase the likelihood of exploiting opportunities. Project Risk Management: Managing Software Development Risk explores software development risk both from a technological and business perspective. Issues regarding strategies for software development are discussed and topics including risks related to technical performance, outsourcing, cybersecurity, scheduling, quality, costs, opportunities and competition are presented. Bringing together concepts across the broad spectrum of software engineering with a project management perspective, this volume represents both a professional and scholarly perspective on the topic. "If you're looking for solid, easy-to-follow advice on estimation, requirements gathering, managing change, and more, you can stop now: this is the book for you."--Scott Berkun, Author of The Art of Project Management What makes software projects succeed? It takes more than a good idea and a team of

talented programmers. A project manager needs to know how to guide the team through the entire software project. There are common pitfalls that plague all software projects and rookie mistakes that are made repeatedly--sometimes by the same people! Avoiding these pitfalls is not hard, but it is not necessarily intuitive. Luckily, there are tried and true techniques that can help any project manager. In *Applied Software Project Management*, Andrew Stellman and Jennifer Greene provide you with tools, techniques, and practices that you can use on your own projects right away. This book supplies you with the information you need to diagnose your team's situation and presents practical advice to help you achieve your goal of building better software. Topics include: Planning a software project Helping a team estimate its workload Building a schedule Gathering software requirements and creating use cases Improving programming with refactoring, unit testing, and version control Managing an outsourced project Testing software Jennifer Greene and Andrew Stellman have been building software together since 1998. Andrew comes from a programming background and has managed teams of requirements analysts, designers, and developers. Jennifer has a testing background and has managed teams of architects, developers, and testers. She has led multiple large-scale outsourced projects. Between the two of them, they have managed every aspect of software

development. They have worked in a wide range of industries, including finance, telecommunications, media, nonprofit, entertainment, natural-language processing, science, and academia. For more information about them and this book, visit stellman-greene.com

This book presents IPQMS (Integrated Planning and Quality Management System) as a powerful management methodology. This system ensures cost-effectiveness as well as quality in the constructed project, environmental cleanups, and other sectors - providing an integrative force for essential teamwork in industry and government. This book contains business and engineering case studies, illustrating a principle, issue, or approach in making a decision. Each case study examines the spectrum of a particular project, demonstrating the interrelationships among policy makers, planners, designers, implementers, and managers in creating a project.

This unique volume explores cutting-edge management approaches to developing complex software that is efficient, scalable, sustainable, and suitable for distributed environments. Practical insights are offered by an international selection of pre-eminent authorities, including case studies, best practices, and balanced corporate analyses. Emphasis is placed on the use of the latest software technologies and frameworks for life-cycle methods, including the design, implementation and testing stages of software development. Topics and features:

- Reviews approaches for reusability, cost and time estimation, and for functional size measurement of

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distributed software applications · Discusses the core characteristics of a large-scale defense system, and the design of software project management (SPM) as a service · Introduces the 3PR framework, research on crowdsourcing software development, and an innovative approach to modeling large-scale multi-agent software systems · Examines a system architecture for ambient assisted living, and an approach to cloud migration and management assessment · Describes a software error proneness mechanism, a novel Scrum process for use in the defense domain, and an ontology annotation for SPM in distributed environments · Investigates the benefits of agile project management for higher education institutions, and SPM that combines software and data engineering This important text/reference is essential reading for project managers and software engineers involved in developing software for distributed computing environments. Students and researchers interested in SPM technologies and frameworks will also find the work to be an invaluable resource. Prof. Zaigham Mahmood is a Senior Technology Consultant at Debasis Education UK and an Associate Lecturer (Research) at the University of Derby, UK. He also holds positions as Foreign Professor at NUST and IIU in Islamabad, Pakistan, and Professor Extraordinaire at the North West University Potchefstroom, South Africa.

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Managing Humans is a selection of the best essays from Michael Lopp's popular website Rands in Repose(www.randsinrepose.com). Lopp is one of the most sought-after IT managers in Silicon Valley, and draws on his experiences at Apple, Netscape, Symantec, and Borland. This book reveals a variety of different approaches for creating innovative, happy development teams. It covers handling conflict, managing wildly differing personality types, infusing

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innovation into insane product schedules, and figuring out how to build lasting and useful engineering culture. The essays are biting, hilarious, and always informative.

Project managers, technical leads, and Windows programmers throughout the industry share an important concern--how to get their development schedules under control. Rapid Development addresses that concern head-on with philosophy, techniques, and tools that help shrink and control development schedules and keep projects moving. The style is friendly and conversational--and the content is impressive.

Agile Estimating and Planning is the definitive, practical guide to estimating and planning agile projects. In this book, Agile Alliance cofounder Mike Cohn discusses the philosophy of agile estimating and planning and shows you exactly how to get the job done, with real-world examples and case studies. Concepts are clearly illustrated and readers are guided, step by step, toward how to answer the following questions: What will we build? How big will it be? When must it be done? How much can I really complete by then? You will first learn what makes a good plan--and then what makes it agile. Using the techniques in Agile Estimating and Planning, you can stay agile from start to finish, saving time, conserving resources, and accomplishing more. Highlights include: Why conventional prescriptive planning fails and why agile planning works How to estimate feature size using story points and ideal days--and when to use each How and when to re-estimate How to prioritize features using both financial and nonfinancial approaches How to split large features into smaller, more manageable ones How to plan iterations and predict your team's initial rate of progress How to schedule projects that have unusually high uncertainty or schedule-related risk How to estimate projects that will be worked on by multiple teams Agile Estimating and Planning supports any agile, semiagile, or

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iterative process, including Scrum, XP, Feature-Driven Development, Crystal, Adaptive Software Development, DSDM, Unified Process, and many more. It will be an indispensable resource for every development manager, team leader, and team member.

Not connecting software project management (SPM) to actual, real-world development processes can lead to a complete divorcing of SPM to software engineering that can undermine any successful software project. By explaining how a layered process architectural model improves operational efficiency, Process-Based Software Project Management out The Third Edition of Essentials of Project and Systems Engineering Management enables readers to manage the design, development, and engineering of systems effectively and efficiently. The book both defines and describes the essentials of project and systems engineering management and, moreover, shows the critical relationship and interconnection between project management and systems engineering. The author's comprehensive presentation has proven successful in enabling both engineers and project managers to understand their roles, collaborate, and quickly grasp and apply all the basic principles. Readers familiar with the previous two critically acclaimed editions will find much new material in this latest edition, including: Multiple views of and approaches to architectures The systems engineer and software engineering The acquisition of systems Problems with systems, software, and requirements Group processes and decision making System complexity and integration Throughout the presentation, clear examples help readers understand how concepts have been put into practice in real-world situations. With its unique integration of project management and systems engineering, this book helps both engineers and project managers across a broad range of industries successfully develop and manage a project team

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that, in turn, builds successful systems. For engineering and management students in such disciplines as technology management, systems engineering, and industrial engineering, the book provides excellent preparation for moving from the classroom to industry.

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