

Cmmi And Six Sigma

This book is for anyone motivated and driven by the desire to create improvements within their team or wider business.

This book addresses the emergence of multi-channel broadcasting. Televisions, PC's, handheld and mobile reception devices now all receive content that was once solely distributed by broadcast TV. No book currently on the market addresses the production infrastructure necessary to efficiently produce content for multi-channel delivery to a variety of reception platforms/devices. Readers will acquire an overview of not just the technology, but processes that impact the creative process and new cross-platform advertising sale/buy model.

The CMMI provides a framework for process improvement spanning the life cycle of a product or service, from conception through delivery and maintenance. Widely and beneficially adopted around the world, the size and apparent complexity of the framework have nonetheless been daunting to some organizations. That need not be so. With a proper guide to help navigate around unknown dangers, potential pitfalls, and false paths, you too, can realize substantial business value from a successful CMMI implementation. This book is such a guide, full of the real-life examples to ease your way, and written in a lighter style to ease your reading. The CMMI® Survival Guide is an effective resource for multiple readerships. If you are just now considering a process improvement program, with the CMMI among your options, the authors' discussion of relevant issues will enhance your business case right from the start. If you have already decided to implement the CMMI, the authors' practical knowledge will help you make the most of your efforts. Even if you are well into a CMMI implementation, but are lost, stuck, or going around in circles, the authors' valuable advice will help you regain your direction. If you work in a smaller or resource-strapped organization, you will particularly benefit from the authors' description of alternative paths to process improvement—approaches that are more incremental or agile, and less intensive, than you might imagine for a CMMI implementation. The authors draw on their extensive experience working with diverse organizations, and on the CMMI tools, techniques, and templates developed for those organizations. Whatever your background or need, the CMMI® Survival Guide will help you survey the CMMI territory, consult possible road maps, learn from other CMMI explorers, weigh the benefits of hiring a living guide, and even consider whether the trip is right for you.

A new edition of this title is available, ISBN-10: 0321461088 ISBN-13: 9780321461087

If you do not measure, you do not know, and if you do not know, you cannot manage. Modern Quality Management and Six Sigma shows us how to measure and, consequently, how to manage the companies in business and industries. Six Sigma provides principles and tools that can be applied to any process as a means used to measure defects and/or error rates. In the new millennium thousands of people work in various companies that use Modern Quality Management and Six Sigma to reduce the cost of products and eliminate the defects. This book provides the necessary guidance for selecting, performing and evaluating various procedures of Quality Management and particularly Six Sigma. In the book you will see how to use data, i.e. plot, interpret and validate it for Six Sigma projects in business, industry and even in medical laboratories.

This proposal constitutes an algorithm of design applying the design for six sigma thinking, tools, and philosophy to software design. The algorithm will also include conceptual design frameworks, mathematical derivation for Six Sigma capability upfront to enable design teams to disregard concepts that are not capable upfront, learning the software development cycle and saving development costs. The uniqueness of this book lies in bringing all those methodologies under the umbrella of design and provide detailed description about how these methods, QFD, DOE, the robust method, FMEA, Design for X, Axiomatic Design, TRIZ can be utilized to help quality improvement in software development, what kinds of different roles those methods play in various stages of design and how to combine those methods to form a comprehensive strategy, a design algorithm, to tackle any quality issues in the design stage.

Since the 1980s, Lean and Six Sigma have been used independently to make existing processes better, faster and more cost effective. For almost twenty years, countless companies have embraced the power of blending the two process improvement methodologies. This has resulted in major financial successes throughout the world, but no one denies that we have learned a lot in the last two decades. Just in time to meet the challenges we will experience in 2020, and beyond, SSD Global Solutions has introduced Leaner Six Sigma (LrSS). LrSS makes the concepts and tools within these two popular methodologies easier and quicker to understand. Regardless, if you plan to take an industry-standard exam or simply want to apply critical-thinking and problem-solving models to your daily life, this book helps you rapidly navigate your path. Originally, to steer our way through traditional Six Sigma, it was necessary to understand complicated statistics. Then, with Lean, the heavy emphasis on manufacturing made it difficult to apply theories to the service sector. After the combination of Lean and Six Sigma became widespread, many of the core concepts still involved understanding historical references. Fast-forward, we now have spreadsheet-based calculators and programs that build charts and graphs in a couple of clicks. Many "Best Practices" have been established which allows for process improvements without re-inventing the wheel. Over the years, talented subject matter experts and practitioners have discovered useful shortcuts to make Lean Six Sigma, Leaner. This groundbreaking work shows how LrSS reduces the learning curve for those unfamiliar with quality initiatives. It streamlines the fundamentals for students wanting to take exams in Lean, Six Sigma or Lean Six Sigma. LrSS also provides the mature Lean Six Sigma practitioner, innovative techniques to explain Lean Six Sigma theories to the new user. Lean Six Sigma has served us well, but it is time to utilize all the lessons learned and software tools available today. It is time to embrace next-

generation thinking with Leaner Six Sigma! Terra Vanzant Stern, PhD is also the author of Lean and Agile Project Management: How to Make Any Project Better, Faster, and More Cost Effective.

Written by experienced process improvement professionals who have developed and implemented computer based systems in organizations around the world, Interpreting the CMMI®: A Process Improvement Approach, Second Edition provides you with specific techniques for performing process improvement. Employing everyday language and supported by real world examples, the authors describe the fundamental concepts of the CMMI model, covering goals, practices, architecture, and definitions, and provide a structured approach for implementing the concepts of the CMMI into any organization. They discuss getting started in the process improvement effort, as well as how to continue on to high maturity. They walk you through the myriad of charts and graphs involved in statistical process control and offer practical recommendations. They also provide information on blending different process improvement initiatives into organizational programs (including agile development), and in this edition include more in-depth information. The authors distill the knowledge gained in their combined 70 years of experience in project management, software engineering, systems engineering, metrics, quality assurance, appraisals, training, process improvement, and team building. Whether you are new to process improvement or an experienced professional, this volume will save you time wasted on false starts, false promises by marketers, and failed deadlines. The authors have been responsible for successfully implementing process improvement in several different organizations. This book is based on real-life experience, not on academic theories. It provides workable solutions to inherent challenges such as appropriate roles and responsibility, resistance to change, and meaningful documentation, thus transforming CMMI concepts into practical applications.

Software engineering requires specialized knowledge of a broad spectrum of topics, including the construction of software and the platforms, applications, and environments in which the software operates as well as an understanding of the people who build and use the software. Offering an authoritative perspective, the two volumes of the Encyclopedia of Software Engineering cover the entire multidisciplinary scope of this important field. More than 200 expert contributors and reviewers from industry and academia across 21 countries provide easy-to-read entries that cover software requirements, design, construction, testing, maintenance, configuration management, quality control, and software engineering management tools and methods. Editor Phillip A. Laplante uses the most universally recognized definition of the areas of relevance to software engineering, the Software Engineering Body of Knowledge (SWEBOK®), as a template for organizing the material. Also available in an electronic format, this encyclopedia supplies software engineering students, IT professionals, researchers, managers, and scholars with unrivaled coverage of the topics that encompass this ever-changing field. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

Today, technology has become too much a part of overall corporate success for its effectiveness to be left to chance. The stakes are too high. Fortunately, the idea of 'quality management' is being reinvigorated. In the last decade process programs have become more and more prevalent. And, out of all the available options, three have moved to the top of the chain. These three are: The 9001:2000 Quality Management Standard from the International Standards Organization; The Capability Maturity Model Integration from the Software Engineering Institute; and Six Sigma, a methodology for improvement shaped by companies such as Motorola, Honeywell, and General Electric. These recognized and proven quality programs are rising in popularity as more technology managers are looking for ways to help remove degrees of risk and uncertainty from their business equations, and to introduce methods of predictability that better ensure success. Process Improvement Essentials combines the foundation needed to understand process improvement theory with the best practices to help individuals implement process improvement initiatives in their organization. The three leading programs: ISO 9001:2000, CMMI, and Six Sigma--amidst the buzz and hype--tend to get lumped together under a common label. This book delivers a combined guide to all three programs, compares their applicability, and then sets the foundation for further exploration. It's a one-stop-shop designed to give you a working orientation to what the field is all about.

CMMI® for Development (CMMI-DEV) describes best practices for the development and maintenance of products and services across their lifecycle. By integrating essential bodies of knowledge, CMMI-DEV provides a single, comprehensive framework for organizations to assess their development and maintenance processes and improve performance. Already widely adopted throughout the world for disciplined, high-quality engineering, CMMI-DEV Version 1.3 now accommodates other modern approaches as well, including the use of Agile methods, Lean Six Sigma, and architecture-centric development. CMMI® for Development, Third Edition, is the definitive reference for CMMI-DEV Version 1.3. The authors have revised their tips, hints, and cross-references, which appear in the margins of the book, to help you better understand, apply, and find information about the content of each process area. The book includes new and updated perspectives on CMMI-DEV in which people influential in the model's creation, development, and transition share brief but valuable insights. It also features four new case studies and five contributed essays with practical advice for adopting and using CMMI-DEV. This book is an essential resource--whether you are new to CMMI-DEV or are familiar with an earlier version--if you need to know about, evaluate, or put the latest version of the model into practice. The book is divided into three parts. Part One offers the broad view of CMMI-DEV, beginning with basic concepts of process improvement. It introduces the process areas, their components, and their relationships to each other. It describes effective paths to the adoption and use of CMMI-DEV for process improvement and benchmarking, all illuminated with fresh case studies and helpful essays. Part Two, the bulk of the book, details the generic goals and practices and the twenty-two process areas now comprising CMMI-DEV. The process areas are organized alphabetically by acronym for easy reference. Each process area includes goals, best practices, and examples. Part Three contains several useful resources, including CMMI-DEV-related references, acronym definitions, a glossary of terms, and an index.

An easily-digestible and fully updated view of CMMI for practitioners as well as executives, managers and the simply curious.

Abstract: "Organizations that endeavor to improve their processes often find themselves juggling many approaches to achieve that improvement. To be most effective, all improvement initiatives selected should be implemented in an integrated fashion, not as layered or stovepiped efforts. This document focuses on the joint use of two popular improvement initiatives:

Capability Maturity Model Integration (CMMI) and Six Sigma. Successfully implementing CMMI and Six Sigma together requires an understanding of the relationships between the two. This report contains a brief summary of each initiative and then outlines the connections between frameworks commonly used in Six Sigma and the CMMI process areas. Coupling this knowledge with a conscious strategy enables an organization to create tactical plans and specific mappings to support implementation. Example strategies and tactics that organizations have used to integrate these initiatives are also provided."

Written by experienced process improvement professionals who have developed and implemented systems in organizations around the world, *Interpreting the CMMI®: A Process Improvement Approach* provides you with specific techniques for performing process improvement using the CMMI® and the family of CMM models. Kulpa and Johnson describe the fundamental concepts of the CMMI® model - goals, practices, architecture, and definitions - in everyday language, give real-world examples, and provide a structured approach for implementing the concepts of the CMMI® into any organization. They walk you through the myriad charts and graphs involved in statistical process control and offer recommendations for which tools to use. The book covers roles and responsibilities, people issues, how to generate meaningful documentation, how to overcome resistance to change, and how to track the success of your efforts. It provides examples of plans, policies, processes, procedures, and team charters. The appendices include matrices summarizing the different assessment techniques that have now been approved by the SEI for use, "pros and cons" associated with this model, some of the myths that have arisen from the marketing of the CMMI® effort, and forms and templates. The book comes with a CD-ROM that contains forms and templates that can be downloaded and customized. The authors distill the knowledge gained in their combined 60 years of experience in project management, software engineering, systems engineering, metrics, quality assurance, configuration management, training, documentation, process improvement, and team building. Whether you are new to process improvement or an experienced professional, *Interpreting the CMMI®: A Process Improvement Approach* saves you time wasted on false starts, false promises by marketers, and failed deadlines.

Practical Support for Lean Six Sigma Software Process Definition: Using IEEE Software Engineering Standards addresses the task of meeting the specific documentation requirements in support of Lean Six Sigma. This book provides a set of templates supporting the documentation required for basic software project control and management and covers the integration of these templates for their entire product development life cycle. Find detailed documentation guidance in the form of organizational policy descriptions, integrated set of deployable document templates, artifacts required in support of assessment, organizational delineation of process documentation.

Real Process Improvement Using the CMMI presents readers with non-academic, real-world approaches to process improvement via CMMI. The author provides concepts and techniques for CMMI-based process improvement which are as effective as they are innovative. Professionals at all levels from system engineers to CEOs will find a wealth

Innovations and Advances in Computer Sciences and Engineering includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the areas of Computer Science, Software Engineering, Computer Engineering, and Systems Engineering and Sciences. *Innovations and Advances in Computer Sciences and Engineering* includes selected papers from the conference proceedings of the International Conference on Systems, Computing Sciences and Software Engineering (SCSS 2008) which was part of the International Joint Conferences on Computer, Information and Systems Sciences and Engineering (CISSE 2008).

A comprehensive reference manual to the Certified Six Sigma Master Black Belt Body of Knowledge and study guide for the CSSMBB exam.

A hybrid methodology, Lean Six Sigma (LSS) is designed to accommodate global challenges and constraints by capitalizing on Six Sigma and Lean Thinking. LSS incorporates best practices from programs such as the International Organization for Standardization (ISO), Capability Maturity Model, and Total Quality Management. International Lean Six Sigma practitioners must understand the dynamics of LSS, along with its cultural aspects and regulations. *Lean Six Sigma: International Standards and Global Guidelines, Second Edition* provides this understanding. The book assumes that the overall goal of operational excellence is to ensure that organizational tasks and activities are being performed to the best of their process capabilities. It defines continuous improvement as activities that support and empower environments to make flexible decisions that lead to ongoing improvement and effectiveness. Coverage includes: New global LSS standards International implementation of process improvement programs New international LSS applications International Lean Six Sigma areas of competency The book defines many of the terms popularized by process improvement programs, such as center of excellence and business transformation. It documents these practices and explains how to perform future activities in accordance with the recorded practices. Exploring international approaches to Lean Six Sigma, it details the new ISO Standard for Six Sigma and also addresses the role of project management in LSS. Illustrating the synergies between Lean and Six Sigma and how they partner with other process improvement programs and initiatives, this book is an ideal study guide for those preparing to take the LSS Black Belt certification exam.

CMMI® (Capability Maturity Model® Integration) is an integrated, extensible framework for improving process capability and quality across an organization. It has become a cornerstone in the implementation of continuous improvement for both industry and governments around the world. Rich in both detail and guidance for a wide set of organizational domains, the CMMI Product Suite continues to evolve and expand. Updated for CMMI Version 1.2, this third edition of CMMI® Distilled again provides a concise and readable introduction to the model, as well as straightforward, no-nonsense information on integrated, continuous process improvement. The book now also includes practical advice on how to use CMMI in tandem with other approaches, including Six Sigma and Lean, as well as new and expanded guidance on preparing for, managing, and using appraisals. Written so that readers unfamiliar with model-based process improvement will understand how to get started with CMMI, the book offers insights for those more experienced as well. It can help battle-scarred process improvement veterans, and experienced suppliers and acquirers of both systems and services, perform more effectively. CMMI® Distilled is especially appropriate for executives and managers who need to understand why continuous improvement is valuable, why CMMI is a tool of choice, and how to maximize the return on their efforts and investments. Engineers of all kinds (systems, hardware, software, and quality, as well as acquisition personnel and service providers) will find ideas on how to perform better. The three authors, all involved with CMMI since its inception, bring a wealth of experience and knowledge to this book. They highlight the pitfalls and shortcuts that are all too often learned by costly experience, and they provide a context for understanding why the use of

CMMI continues to grow around the world.

"A process improvement framework such as Capability Maturity Model (CMM) can help develop the maturity of a software development organization over time to achieve predictable and repeatable process performance. However, in the absence of a methodology for process performance measurement, ongoing data-oriented process improvement is hard to institutionalize. For organizations following CMMI, this makes navigating their way through higher-level process management and optimization activities called forth in CMMI Level 4 and Level 5 especially challenging. Altogether, this constitutes a major stumbling block for software organizations striving for higher process improvement in an organization. Six-Sigma introduces tremendous process measurability through its statistical error-control focus and offers compelling tools and techniques that have strong applicability to software development. Six-Sigma focus on data and metrics married with the CMMI coverage of all aspects of software development through its Process Areas can together provide a powerful process control and improvement framework. A CMMI and Six-Sigma hybrid framework has been presented as a means of achieving software development performance and productivity improvements through statistical error control. Such a hybrid CMMI and Six Sigma framework provides not just greater guidance and rigor in certain areas than CMMI alone but also an inherent flexibility by making an extensive toolset available for use in a wide variety of scenarios. This integrated framework demonstrates that CMMI and Six Sigma are highly complementary and are capable of adding greater value when used in conjunction with each other. This is partly because together they address the weaknesses that may become apparent when either framework is used alone. Six Sigma answers the 'how' for areas where CMMI only provides the 'what'. Conversely, CMMI provides the overall vision and roadmap that is lacking from individual Six Sigma improvements. It is hoped that this will serve as a blueprint for an implementation of CMMI that makes use of relevant Six Sigma tools and techniques"--Abstract.

In order to maximize IT resources and justify IT expenditures, CIO's and other IT managers must be able to identify meaningful metrics and explain them in a way that management can understand. The Business Value of IT: Managing Risks, Optimizing Performance, and Measuring Results solves this problem by providing practical answers to these questions: What does IT contribute to the business? Why should we care about IT governance? How can we best measure IT performance? How do we mitigate the risks associated with change? Leading consultants Michael D. Harris, David E. Herron, and Stasia Iwanicki share their real-world experiences to explain how you can demonstrate IT's value, and potentially find extra value you didn't know your IT organization creates. They also show how to apply risk management to process improvement and avoid unintended consequences of process improvement programs. The text provides the understanding required to discover the processes necessary to: prioritize your organization's IT activities, identify alternative measurement frameworks, and evaluate the best approaches to outsourcing. Many IT organizations have successfully implemented the techniques described in this book to increase their business value. This work identifies the organizational and cultural obstacles you need to remove to get started along the same path.

Proven techniques for improving software and process quality with Six Sigma This practical, in-depth guide explains how to apply Six Sigma to solve common product and process improvement challenges in the software and IT industry. Six Sigma Software Quality Improvement covers Define, Measure, Analyze, Improve, and Control (DMAIC), Lean Six Sigma, Design for Six Sigma (DFSS), and Define, Measure, Analyze, Design, and Verify (DMADV). Featuring more than 20 success stories from Motorola, IBM, Cisco, Seagate, Xerox, Thomson Reuters, TCS, EMC, Infosys, and Convergys, the book offers first-hand accounts of corporate Six Sigma programs and explains how these companies are successfully leveraging Six Sigma for software process and quality improvement. The success stories reveal how: Motorola minimized business risk before changing business-critical applications TCS improved fraud detection for a global bank Infosys improved software development productivity for a large multinational bank IBM reduced help desk escalations and overhead activities EMC improved development productivity Motorola realized significant cost avoidance by streamlining processes and project documentation Xerox achieved high-speed product development Seagate reduced application downtime and improved availability to 99.99% Cisco successfully reinvented its Six Sigma program Convergys injected Six Sigma into the company's DNA Thomson Reuters' Six Sigma program gathered significant momentum in a short time Six Sigma was successfully applied in many other projects for defect reduction, cycle time reduction, productivity improvement, and more

"In this book, I have found answers to key questions and misconceptions about the relationship between Six Sigma and the Capability Maturity Model Integration [CMMI]....Among my key takeaways is that the relationship between Six Sigma and CMMI exemplifies one of the principles of S4/IEE: CMMI provides process infrastructure that is needed to support a successful Six Sigma strategy." --Forrest W. Breyfogle III, CEO, Smarter Solutions, Inc. "Finally, a book that bridges the software and hardware process tool set. To date, there have been hardware and software engineers who for one reason or another have not communicated their process methods. And so, myths formed that convinced the hardware community that CMMI was only for software and likewise convinced the software community that Six Sigma was only for hardware. It is both refreshing and thought provoking to dispel these myths." --Jack Ferguson, Manager, SEI Appraisal Program, Software Engineering Institute CMMI and Six Sigma represent two of the best-known process improvement initiatives. Both are designed to enhance work quality and thereby produce business advantages for an organization. It's a misconception that the two are in competition and cannot be implemented simultaneously. Practitioners originally trained in either CMMI or Six Sigma are now finding that the two initiatives work remarkably well together in the pursuit of their common goal. CMMI® and Six Sigma: Partners in Process Improvement focuses on the synergistic, rather than competitive, implementation of CMMI and Six Sigma--with synergy translating to "faster, better, cheaper" achievement of mission success. Topics range from formation of the value proposition to specific implementation tactics. The authors illustrate how not taking advantage of what both initiatives have to offer puts an organization at risk of sinking time, energy, and money into "inventing" a solution that already exists. Along the way they debunk a few myths about Six Sigma applications in software. While the authors

concentrate on the interoperability of Six Sigma and CMMI, they also recognize that organizations rarely implement only these two initiatives. Accordingly, the discussion turns to the emerging realm of "multimodel" process improvement and strategies and tactics that transcend models to help organizations effectively knit together a single unified internal process standard. Whether you work in the defense industry, for a commercial organization, or for a government agency--wherever quality and efficiency matter--you'll find this book to be a valuable resource for bridging process issues across domains and building an improvement strategy that succeeds.

Although there are countless books about process improvement and business performance, there is a dearth of literature on how process improvement yields business performance results. Filling this need, *Return On Process (ROP): Getting Real Performance Results from Process Improvement* provides strategic and tactical guidance on how to achieve a positive ROP. The book details a comprehensive and coherent end-to-end process for integrating organizational performance objectives and measures to process improvement activities. Describing how to achieve real business performance results from process improvement, it supplies sound, proven advice on how to improve your organization's software and systems development and delivery processes in ways that affect your business. Defining the relationship between performance and process, the book presents metrics for business performance and explains how to set performance and process improvement goals, measure process improvement results, and lead a performance culture. Filled with examples and case studies that illustrate key concepts, it provides "how to" information based on three role categories: executive, manager, and practitioner. Describing non-traditional and innovative ways to achieve process and performance improvement, the book includes action plan guides at the end of each chapter that provide clear-cut guidance on exactly what you should and shouldn't do.

CMMI® for Services (CMMI-SVC) is a comprehensive set of guidelines to help organizations establish and improve processes for delivering services. By adapting and extending proven standards and best practices to reflect the unique challenges faced in service industries, CMMI-SVC offers providers a practical and focused framework for achieving higher levels of service quality, controlling costs, improving schedules, and ensuring user satisfaction. A member of the newest CMMI model, CMMI-SVC Version 1.3, reflects changes to the model made for all constellations, including clarifications of high-maturity practices, alignment of the sixteen core process areas, and improvements in the SCAMPI appraisal method. The indispensable CMMI® for Services, Second Edition, is both an introduction to the CMMI-SVC model and an authoritative reference for it. The contents include the complete model itself, formatted for quick reference. In addition, the book's authors have refined the model's introductory chapters; provided marginal notes to clarify the nature of particular process areas and to show why their practices are valuable; and inserted longer sidebars to explain important concepts. Brief essays by people with experience in different application areas further illustrate how the model works in practice and what benefits it offers. The book is divided into three parts. Part One begins by thoroughly explaining CMMI-SVC, its concepts, and its use. The authors provide robust information about service concepts, including a discussion of lifecycles in service environments; outline how to start using CMMI-SVC; explore how to achieve process improvements that last; and offer insights into the relationships among process areas. Part Two describes generic goals and practices, and then details the complete set of twenty-four CMMI-SVC process areas, including specific goals, specific practices, and examples. The process areas are organized alphabetically by acronym and are tabbed for easy reference. Part Three contains several useful resources, including CMMI-SVC-related references, acronym definitions, a glossary of terms, and an index. Whether you are new to CMMI models or are already familiar with one or more of them, this book is an essential resource for service providers interested in learning about or implementing process improvement.

Going beyond the usual how-to guide, *Lean Six Sigma Secrets for the CIO* supplies proven tips and valuable case studies that illustrate how to combine Six Sigma's rigorous quality principles with Lean methods for uncovering and eliminating waste in IT processes. Using these methods, the text explains how to take an approach that is all about improving IT performance, productivity, and security—as much as it is about cutting costs. Savvy IT veterans describe how to use Lean Six Sigma with IT governance frameworks such as COBIT and ITIL and warn why these frameworks should be considered starting points rather than destinations. This complete resource for CIOs and IT managers provides effective strategies to address the human element that is so fundamental to success and explains how to maximize the voice of your customers while keeping in touch with the needs of your staff. And perhaps most importantly—it provides the evidence needed to build your case to upper management. Supplying you with the tools to create methods that will bring out the best in your employees; *Lean Six Sigma Secrets for the CIO* provides the understanding required to manage your IT operations with unique effectiveness and efficiency in service of the bottom line.

CMMI-ACQ® (Capability Maturity Model® Integration for Acquisition) describes best practices for the successful acquisition of products and services. Providing a practical framework for improving acquisition processes, CMMI-ACQ addresses the growing trend in business and government for organizations to purchase or outsource required products and services as an alternative to in-house development or resource allocation. Modeled after CMMI®, Second Edition, which documented CMMI for Development, this book is the definitive reference for the current release of CMMI for Acquisition (version 1.2). In addition to the entire CMMI-ACQ model, the book includes tips, hints, cross-references, and other author notes to help you understand, apply, and find more information about the content of the acquisition process areas. The authors also have added two chapters to illustrate the application of CMMI-ACQ in industry (a case study from General Motors) and government. Whether you are new to CMMI models or are already familiar with one or more of them, you will find this book an essential resource for managing your acquisition processes and improving your overall performance. The book is divided into three parts. Part One introduces CMMI-ACQ in the broad context of CMMI models, including essential concepts and useful background. It then describes and shows the

relationships among all the components of the CMMI-ACQ process areas, and explains paths to the adoption and use of the model for process improvement and benchmarking. Finally, two separate chapters describe special acquisition needs in a government environment and real experiences with CMMI-ACQ from industry. Part Two first describes generic goals and generic practices, and then, in twenty-two sections, details each of the CMMI-ACQ process areas, including specific goals, specific practices, and examples. These process areas are organized alphabetically by process area acronym to facilitate quick reference. Part Three provides several useful references, including sources for further information about CMMI and CMMI-ACQ, acronym definitions, a glossary of terms, and an index.

Millions of dollars are spent annually on process improvement initiatives that too frequently fall short of their goals. Due at least in part to this situation, today many are turned off and have tuned out when it comes to the multitude of process and performance improvement approaches along with their related hype and buzzwords. Agile, CMMI, Kanban, Lean, Six Sigma, Lean Six Sigma, PSP, and TSP to name just a few. Drawing on decades of process improvement experience, author Paul E. McMahon explains why we are facing these problems and how you can get yourself and your organization back on track focused on the things that matter most to both your own personal performance and your organization's performance. This book is equally about personal and organizational performance. This book discusses many popular improvement approaches including the CMMI, Lean Six Sigma, and Agile Retrospectives; it highlights fifteen (15) fundamentals common to all successful improvement efforts where sustainable high value performance improvements are achieved; and it shares a vision (and an actual example that holds promise) of a simple "thinking framework" that can help counter the patterns that may be holding you and your organization back from the sustainable high performance you seek. Paul also shares real examples from his consulting experiences, a personal performance improvement experience, and stories from high performing athletes and musicians to help you think about performance improvement outside-the-box.

"In this book, I have found answers to key questions and misconceptions about the relationship between Six Sigma and the Capability Maturity Model Integration [CMMI]....Among my key takeaways is that the relationship between Six Sigma and CMMI exemplifies one of the principles of S4/IEE: CMMI provides process infrastructure that is needed to support a successful Six Sigma strategy." —Forrest W. Breyfogle III, CEO, Smarter Solutions, Inc. "Finally, a book that bridges the software and hardware process tool set. To date, there have been hardware and software engineers who for one reason or another have not communicated their process methods. And so, myths formed that convinced the hardware community that CMMI was only for software and likewise convinced the software community that Six Sigma was only for hardware. It is both refreshing and thought provoking to dispel these myths." —Jack Ferguson, Manager, SEI Appraisal Program, Software Engineering Institute CMMI and Six Sigma represent two of the best-known process improvement initiatives. Both are designed to enhance work quality and thereby produce business advantages for an organization. It's a misconception that the two are in competition and cannot be implemented simultaneously. Practitioners originally trained in either CMMI or Six Sigma are now finding that the two initiatives work remarkably well together in the pursuit of their common goal. CMMI® and Six Sigma: Partners in Process Improvement focuses on the synergistic, rather than competitive, implementation of CMMI and Six Sigma—with synergy translating to "faster, better, cheaper" achievement of mission success. Topics range from formation of the value proposition to specific implementation tactics. The authors illustrate how not taking advantage of what both initiatives have to offer puts an organization at risk of sinking time, energy, and money into "inventing" a solution that already exists. Along the way they debunk a few myths about Six Sigma applications in software. While the authors concentrate on the interoperability of Six Sigma and CMMI, they also recognize that organizations rarely implement only these two initiatives. Accordingly, the discussion turns to the emerging realm of "multimodel" process improvement and strategies and tactics that transcend models to help organizations effectively knit together a single unified internal process standard. Whether you work in the defense industry, for a commercial organization, or for a government agency—wherever quality and efficiency matter—you'll find this book to be a valuable resource for bridging process issues across domains and building an improvement strategy that succeeds.

If you are in search of real-world practical scenarios of IT performance management practices, with a desire to obtain examples of strategic directives, accountabilities, outcomes, and performance measures for managing IT services, with an interest toward how performance management integrates with strategic and operational management, then Integrat

The Practical, Example-Rich Guide to Building Better Systems, Software, and Hardware with DFSS Design for Six Sigma (DFSS) offers engineers powerful opportunities to develop more successful systems, software, hardware, and processes. In Applying Design for Six Sigma to Software and Hardware Systems, two leading experts offer a realistic, step-by-step process for succeeding with DFSS. Their clear, start-to-finish roadmap is designed for successfully developing complex high-technology products and systems that require both software and hardware development. Drawing on their unsurpassed experience leading Six Sigma at Motorola, the authors cover the entire project lifecycle, from business case through scheduling, customer-driven requirements gathering through execution. They provide real-world examples for applying their techniques to software alone, hardware alone, and systems composed of both. Product developers will find proven job aids and specific guidance about what teams and team members need to do at every stage. Using this book's integrated, systems approach, marketers, software professionals, and hardware developers can converge all their efforts on what really matters: addressing the customer's true needs. Learn how to Ensure that your entire team shares a solid understanding of customer needs Define measurable critical parameters that reflect customer requirements Thoroughly assess business case risk and opportunity in the context of product roadmaps and portfolios Prioritize development decisions and scheduling in the face of resource constraints Flow critical parameters down to quantifiable, verifiable requirements for every sub-process, subsystem, and component Use predictive engineering and advanced optimization to build products that robustly handle variations in manufacturing and usage Verify system capabilities and reliability based on pilots or early production samples Master new statistical techniques for ensuring that supply chains deliver on time, with minimal inventory Choose the right DFSS tools, using the authors' step-by-step flowchart If you're an engineer involved in developing any new technology solution, this book will help you reflect the real Voice of the Customer, achieve better results faster, and eliminate fingerpointing. About the Web Site The accompanying Web site, sigmaexperts.com/dfss, provides an interactive DFSS flowchart, templates, exercises, examples, and tools.

Since Six Sigma has had marked success in improving quality in other settings, and since the quality of software remains poor, it seems a natural evolution to apply the concepts and tools of Six Sigma to system development and the IT department. Until now however, there were no books available that applied these concepts to the system development p

Use CMMI to Improve Project Management Efficiency, Effectiveness, and Accountability The Capability Maturity Model Integration (CMMI) Maturity Level 2 offers powerful, end-to-end tools for improvement throughout your organization. In Project Management Success with CMMI®, James Persse demonstrates exactly how to apply CMMI Level 2 to virtually any project, program, or process. User friendly, concise, and easy to follow, this book helps you implement all seven CMMI Level 2 process areas; customize CMMI for your unique projects and organization; and achieve powerful, quantifiable results. The author takes a practical approach to the business and operational needs of project management, carefully linking the realities of business and technical projects with CMMI recommendations. Drawing on his unsurpassed CMMI field experience, Persse presents case studies, anecdotes, and examples—all designed to illuminate what works and what doesn't. Persse introduces the substance and intention of all

seven CMMI Level 2 process areas. For each area, he shows how to define goals, implement best practices, understand issues of sizing and scope, and avoid pitfalls and misinterpretations. He is also the first to explain how CMMI can integrate with the tools and skills of the Project Management Institute's Project Management Body of Knowledge, improving the effectiveness of both. Coverage includes Understanding project management as value management Planning projects and structuring expectations Monitoring and controlling projects Managing requirements, configurations, and supplier agreements Implementing effective measurement and analysis Assuring process and product quality Project Management Success with CMMI® is an invaluable resource for anyone responsible for managing projects, programs, or processes—including those who are new to CMMI and project management. The book's companion Web site (www.prenhallprofessional.com/title/0132333058) contains an extensive library of downloadable CMMI project management resources corresponding to each of the seven CMMI process areas.

This book offers a comprehensive guide to implementing a company-wide management system (CWMS), utilising up-to-date methodologies of lean-six sigma in order to achieve high levels of business excellence. It builds the foundation for quality and continuous improvement, which can be implemented in any organization. The book begins with an introduction to and an overview of CWMSs, and reviews the existing literature on various management systems. It then discusses the integration and implementation of lean-six sigma in supply chain management. The integration approach presented highlights the link between the existing management systems and shows how continuous improvement methodologies are incorporated. The book then examines the components of CWMS, comparing them to other systems. It also explores Kano-based six sigma and concludes with further recommendations for reading. This book covers five management systems integrated into one novel approach that can be followed by organizations wishing to achieve quality and business excellence. Covering lean-six sigma – an essential element of management systems – it is a valuable resource for practitioners and academics alike.

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