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from the automotive industry to the semiconductor industry manufacturers are suffering from an overabundance of automation methods that they cannot fully comprehend or afford and glamorous leadership techniques that are simply not sustainable in this respect management has lost its way beyond world class productivity shows why a return to traditional tools and the power of people can help companies meet today's challenges in the manufacturing sector beyond world class productivity gives readers a balance of essential information theory and case studies readers can expect to gain new insights into engineering approaches to productivity profitability and real or non real gain including useful tools for industrial engineering effectiveness in unit labor costs feasibility studies work simplification and developing mind innovation practical examples and their accompanying commentary come from the author's 40 years of real world experience on the shop floor and in the boardroom figures are also provided to illustrate actual productivity results from real companies both managers and engineers can appreciate beyond world class productivity as an enlightening guide to the improvement of productivity and profitability within the manufacturing sector there are a lot of important skills needed for a career in engineering as well as academic skills future engineers need to be able to present data work in project teams carry out experiments problem solve and write reports this book emphasises the importance of these core skills and supports engineering students as they successfully navigate their courses and move forward into a career of ongoing development written in a friendly and encouraging style skills for engineering and built environment students provides guidance on both the study and the professional practice of engineering addresses common worries and pitfalls debunking myths and demystifying jargon helps with milestones such as group projects presentations work placements and job interviews supported by interviews with students lecturers young engineers and employers skills for engineering and built environment students guides students and early career professionals through an important transition stage thoroughly preparing them for the world of work whether you are building a small or a large engineering team and whether you're a technical manager looking to strengthen your team or an hr manager who wants to learn what makes a good technical employee this book is for you how engineers in the mining and oil and gas industries attempt to reconcile competing domains of public accountability the growing movement toward corporate social responsibility csr urges corporations to promote the well being of people and the planet rather than the sole pursuit of profit in extracting accountability jessica smith investigates how the public accountability of corporations emerges from the everyday practices of the engineers who work for them focusing on engineers who view social responsibility as central to their profession she finds the corporate context of their work prompts them to attempt to reconcile competing domains of accountability to formal guidelines standards and policies to professional ideals to the public and to themselves their efforts are complicated by the distributed agency they experience as corporate actors they are not always authors of their actions and frequently act through others drawing on extensive interviews archival research and fieldwork smith traces the ways that engineers in the mining and oil and gas industries accounted for their actions to multiple publics from critics of their industry to their own friends and families she shows how the social license to operate and an underlying pragmatism lead engineers to ask how resource production can be done responsibly rather than whether it should be done at all she analyzes the liminality of engineering consultants who experienced greater professional autonomy but often felt hamstrung when positioned as outsiders finally she explores how critical participation in engineering education can nurture new accountabilities and chart more sustainable resource futures ready to give your design skills a real boost this eye opening book helps you explore the design structure behind most of today's hit video games you'll learn principles and practices for crafting games that generate emotionally charged experiences a combination of elegant game mechanics compelling fiction and pace that fully immerses players in clear and approachable prose design pro tynan sylvester also looks at the day to day process necessary to keep your project on track including how to work with a team and how to avoid creative dead ends packed with examples this book will change your perception of game design create game mechanics to trigger a range of emotions and provide a variety of play explore several options for combining narrative with interactivity build interactions that let multiplayer gamers get into each other's heads motivate players through rewards that align with the rest of the game establish a metaphor vocabulary to help players learn which design aspects are game mechanics plan test and analyze your design through iteration rather than deciding everything up front learn how your game's market positioning will affect your design in essence readers discover step by step how to start manage an outstanding engineering practice and exactly how to gain a reputation as an expert in their specialty this is both a handbook for new engineers and a constant reference manual for seasoned professionals the book is divided into five parts preparation planning implementation managing and cashing out preparation includes selecting a collage make sure that it has the right accreditation to allow you take the professional engineering license exam abet eac accredited take the eit exam in your senior year at college while the fundamentals of engineering are still fresh in your mind gain experience a minimum of four 4 years of certifiable experience in engineering work join engineering societies become an officer make contacts gain credentials and build a reputation in the industry planning includes recognize opportunities buying an existing practice starting upon another engineer's retirement becoming a partner in an existing firm or hanging out your shingle consider ownership options carefully consider the pros cons of being on your own verses having partners choose specialties choosing between being a single discipline or multi discipline firm prepare a business plan learn how to write a business plan including how to estimate expenses income for both start up and your first year apply for a business loan discover the secrets to getting a business loan implementation includes pre start up check list once you have made the go decision find out the initial steps to take things to avoid start up check list discover how to actually start your practice step by step managing includes acquiring service learn how to select the right attorney cpa and obtain the insurance coverage needed marketing discover the marketing materials methods that will keep your firm busy expert learn the secret of gaining a reputation as an expert by publishing technical articles fees uncover the mysteries of preparing winning profitable fee proposals forensic engineering find out how to make this interesting profitable litigation specialty part of your engineering practice cashing out includes selling your firm learn how to sell your practice for the maximum profit and retire comfortably customer experience engineering applied to the engineering department is rare but needed most companies keep support ux engineering product and cx separate to address this gap this book highlights roles and techniques that are proven to accelerate issue detection and prevention by 30 or more with the author's vast experience in tech support he has developed techniques and skills that allow engineers to gain customer insights faster and through new and insightful sources that are within their reach you will develop a deep understanding of the impact of issues understand and optimize the speed of the engineering feedback loop issue resolution time and develop the ability to calculate the cost of the issues or customer friction to the business in aggregate and on a case by case basis organizations can save significant money and add additional revenue by addressing customer friction proactively in collaboration with product engineering and site reliability engineering sre functions and reduce the average time of an issue resolution by 80 the cross functional leadership mentoring and engineering techniques you'll learn from this proactive stance are very valuable and teachable and this book will show you the path forward what you will learn gain the techniques and tools necessary to validate customer journey success in production contribute to customer centric key performance indicators kpis on executive dashboards create meaningful insights and data points that allowed the feedback loop to be optimized and efficient who this book is for professionals participating in the value stream of digital software engineering for the benefit of customer experiences directly or indirectly you may be an engineer practicing devops or site reliability or you might be a product owner ux designer or researcher you might be working in support and seeking for new ways to engage with your engineering teams sharing experience in engineering design is based on papers presented at the engineering and product design education conference e pde 2002 this volume is vital reading for all those students practitioners and professionals operating in the field of product and engineering design and education contents include the integration of design and business issues in the engineering curriculum what are the qualities and competencies required by product design employers product design courses lead the way in providing the graduate with the necessary skills to get the top job designing for a sustainable future promoting outreach through the use of case studies degree design exploring creativity from the start assessing creativity theory and practice developing an appreciation of the complex interactions between life cycle analysis and design for manufacture strategic design and product development a practical application of business process re engineering in bespoke manufacturing engineering design modules teaching by projects product design project teaching using athletic transport artefacts as the vehicle sketching a dying art overcoming human barriers to knowledge based systems in design observing the user experience a practitioner's guide to user research aims to bridge the gap between what digital companies think they know about their users and the actual user experience individuals engaged in digital product and service development often fail to conduct user research the book presents concepts and techniques to provide an understanding of how people experience products and services the techniques are drawn from the worlds of human computer interaction marketing and social sciences the book is organized into three parts part i discusses the benefits of end user research and the ways it fits into the development of useful desirable and successful products part ii presents techniques for understanding people's needs desires and abilities part iii explains the communication and application of research results it suggests ways to sell companies and explains how user centered design can make companies more efficient and profitable this book is meant for people involved with their products user experience including program managers designers marketing managers information architects programmers consultants and investors explains how to create usable products that are still original creative and unique a valuable resource for designers developers project managers anyone in a position where their work comes in direct contact with the end user provides a real world perspective on research and provides advice about how user research can be done cheaply quickly and how results can be presented persuasively gives readers the tools and confidence to perform user research on their own designs and tune their software user experience to the unique needs of their product and its users what needs to change for your business to grow sustainably the engineering and construction industry is at a tipping point how can we foster long term growth in uncertain times how do we navigate technology driven disruption and meet the challenge of net zero emissions and how do we create a more inclusive collaborative and sustainable industry for the future the steel ceiling achieving sustainable growth in engineering and construction highlights current issues facing businesses in the engineering and construction sector in australia and outlines what it takes for your business to withstand the economic test of time this book gives you the strategic plan you need to break through the steel ceiling holding you back in clear and actionable terms with examples and stories from the industry it outlines an effective methodology you can use to grow your enterprise sustainably from a small business to megaproject capability develop a clear understanding of the economic forces impacting the infrastructure sector in australia craft a roadmap for evolving your business and remaining competitive in today's landscape build leadership skills and hone the vision values and culture that drive your business learn how to better manage precious time increase revenue and improve returns on equity implement the four pillars that are the foundation for a thriving sustainable business author peter wilkinson has more than 30 years experience in transforming industry business capability from small business to large scale government projects in this book he provides you with the knowledge and the game plan you need to build a thriving business ready to compete in today's industry environment a practical guide to all key elements of pharmaceuticals and biotech manufacturing and design engineers working in the pharmaceutical and biotech industries are routinely called upon to handle operational issues outside of their fields of expertise traditionally the competencies required to fulfill those tasks were achieved piecemeal through years of self teaching and on the job experience until now practical pharmaceutical engineering provides readers with the technical information and tools needed to deal with most common engineering issues that can arise in the course of day to day operations of pharmaceutical biotech research and manufacturing engineers working in pharma biotech wear many hats they are involved in the conception design construction and operation of research facilities and manufacturing plants as well as the scale up manufacturing packaging and labeling processes they have to implement fda regulations validation assurance quality control and good manufacturing practices gmp compliance measures and to maintain a high level of personal and environmental safety this book provides readers from a range of engineering specialties with a detailed blueprint and the technical knowledge needed to tackle those critical responsibilities with confidence at minimum after reading this book readers will have the knowledge needed to constructively participate in contractor user briefings provides pharmaceutical industry professionals with an overview of how all the parts fit together and a level of expertise that can take years of on the job experience to acquire addresses topics not covered in university courses but which are crucial to working effectively in the pharma biotech industry fills a gap in the literature providing important information on pharmaceutical operation issues required for meeting regulatory guidelines plant support design and project engineering covers the basics of hvac systems water systems electric systems reliability maintainability and quality assurance relevant to pharmaceutical engineering practical pharmaceutical engineering is an indispensable tool of the trade for chemical engineers mechanical engineers and pharmaceutical engineers employed by pharmaceutical and biotech companies engineering firms and consulting firms it also is a must read for engineering students pharmacy students chemistry students and others considering a career in pharmaceuticals ready to give your design skills a real boost this eye opening book helps you explore the design structure behind most of today's hit video games you'll learn principles and practices for crafting games that generate emotionally charged experiences a combination of elegant game mechanics compelling fiction and pace that fully immerses players in clear and 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marketing responsibilities are often accepted by engineers who have little formal marketing training and an incomplete grasp of marketing principles relevant to the uk engineering industry it is aimed not only at engineers with little or no marketing experience but also at those with existing experience who wish to fit their knowledge into a systemized approach at most technology companies you'll reach senior software engineer the career level for software engineers in five to eight years at that career level you'll no longer be required to work towards the next promotion and being promoted beyond it is exceptional rather than expected at that point your career path will branch and you have to decide between remaining at your current level continuing down the path of technical excellence to become a staff engineer or switching into engineering management of course the specific titles vary by company and you can replace senior engineer and staff engineer with whatever titles your company prefers over the past few years we've seen a flurry of books unlocking the engineering management career path like camille fournier's the manager lara hogan's resilient management and my own elegant puzzle the management career isn't an easy one but increasingly there are maps available for navigating it on the other hand the transition into staff engineer and its further evolutions like principal and distinguished engineer remains challenging and undocumented what are the skills you need to develop to reach staff engineer are technical abilities alone sufficient to reach and succeed in that role how do most folks reach this role what is your manager's role in helping you along the way will you enjoy being a staff engineer or you will toil for years to achieve a role that doesn't suit you staff engineer leadership beyond the management track is a pragmatic look at attaining and operate in these staff plus roles nowadays there is software everywhere in our life it controls cars airplanes factories medical implants without software banking logistics and transportation media and even scientific research would not function in the accustomed way building and maintaining software is a knowledge intensive endeavour and requires that specific experiences are handled successfully however neither knowledge nor experience can be collected stored and shipped like physical goods instead these delicate resources require dedicated techniques knowledge and experience are often called company assets yet this is only part of the truth it is only software engineers and other creative employees who will effectively exploit an organization's knowledge and experience kurt schneider's textbook is written for those who want to make better use of their own knowledge and experience either personally or within their group or company everyone related to software development will benefit from his detailed explanations and case studies project managers software engineers quality assurance responsables and knowledge managers his presentation is based on years of both practical experience with companies such as boeing daimler and nokia and research in renowned environments such as the fraunhofer institute each chapter is self contained it clearly states its learning objectives gives in depth presentations shows the techniques practical relevance in application scenarios lists detailed references for further reading and is finally completed by exercises that review the material presented and also challenge further critical examinations the overall result is a textbook that is equally suitable as a personal resource for self directed learning and as the basis for a one semester course on software engineering and knowledge management providing engineers with the tools and skills to survive and become successful in the work place gives experience based highly realistic guidance to a cross section of young and even established engineers delivers practical guidance and acts as a handy resource so that lessons do not have to be learned the hard way with numerous errors and costly problems includes real world examples and case studies from a 45 year veteran in the engineering field this civil engineering book is one of a kind this book is structured to raise the level of expertise in civil engineering and to improve the competitiveness in the global markets a civil engineer is someone who applies scientific knowledge to improve infrastructure and common utilities that meet basic human needs civil engineers plan design and manage large construction projects this could include bridges buildings dams tunnels buildings airports water and sewage systems transport links and other major structures they use computer modelling software and data from surveys tests and maps to create project blueprints these plans advise contractors on the best course of action and help minimise environmental impact and risk buildings and bridges are often the first structures to come to mind because they are the most obvious engineering creations but civil engineers are also responsible for less visible creations and contributions every time we open a water faucet we expect water to come out without thinking that civil engineers made it possible in many cases by designing systems that transport water to cities from mountain sources that are sometimes hundreds of miles away civil engineering is one of the oldest and broadest engineering professions it focuses on the infrastructure necessary to support a civilized society the roman aqueducts the great european cathedrals and the earliest metal bridges were built by highly skilled forerunners of the modern civil engineer these craftsmen of old relied on their intuition trade skills and experience based design rules or heuristics derived from years of trial and error experiments but rarely passed on to the next generation this book of civil engineering covers below subjects fundamentals building construction concrete technology construction engineering environmental science and engineering geotechnical engineering geothermal engineering hydraulics pavement structural engineering transportation engineering municipal solid waste management water resources engineering in contrast today's civil engineers bring to bear on these problems a knowledge of the physical and natural sciences mathematics computational methods economics and project management civil engineers design and construct buildings transportation systems such as roads tunnels bridges railroads and airports and facilities to manage and maintain the quality of water resources society relies on civil engineers to maintain and advance human health safety and our standard of living those projects that are vital to a community's survival are often publicly funded to ensure that they get done even where there is no clear or immediate profit motive welcome to our multi device world a world where a user's experience with one application can span many devices a smartphone a tablet a computer the tv and beyond this practical book demonstrates the variety of ways devices relate to each other combining to create powerful ensembles that deliver superior integrated experiences to your users learn a practical framework for designing multi device experiences based on the 3cs consistent complementary and continuous approaches graduate from offering everything on all devices to delivering the right thing at the right time on the best available device apply the 3cs framework to the broader realm of the internet of things and design multi device experiences that anticipate a fully connected world learn how to measure your multi device ecosystem performance get ahead of the curve by designing for a more connected future some years ago the author became very much impressed with the fact which can be observed in any engineering organization that the chief obstacles to the success of individual engineers or of the group comprising a unit were of a personal and administrative rather than a technical nature it was apparent that both the author and his associates were getting into much more trouble by violating the unwritten laws of professional conduct than by committing technical sins against the well documented laws of science since the former appeared to be indeed unwritten at that time as regards any adequate and convenient text the following laws were originally formulated and collected into a sort of scrapbook to provide a set of house rules or a professional code for a design engineering section of a large manufacturing organization although they are admittedly fragmentary and incomplete they are offered here for whatever they may be worth to younger men just starting their careers and to older men who know these things perfectly well but who all too often fail to apply them in practice just a few points should be emphasized none of these laws is theoretical or imaginary and however obvious and trite they may appear their repeated violation is responsible for much of the frustration and embarrassment to which engineers everywhere are liable in fact this paper is primarily a record derived from direct observation over a period of seventeen years of the experience of four engineering departments three of them newly organized and struggling to establish themselves by the trial and error method it has however been supplemented and

confirmed by the experience of others as gathered from numerous discussions lectures and the literature so that it most emphatically does not reflect the unique experience or characteristics of any one organization furthermore many of these rules are generalizations to which exceptions will occur in special circumstances there is no thought of urging a slavish adherence to rules and red tape for there is no substitute for judgment and at times vigorous individual initiative is needed to cut through formalities in an emergency but in many respects these laws are like the basic laws of society they cannot be violated too often with impunity notwithstanding striking exceptions in individual cases in this new highly practical guide expert embedded designer and manager lewin edwards answers the question how do i become an embedded engineer embedded professionals agree that there is a treacherous gap between graduating from school and becoming an effective engineer in the workplace and that there are few resources available for newbies to turn to when in need of advice and direction this book provides that much needed guidance for engineers fresh out of school and for the thousands of experienced engineers now migrating into the popular embedded arena this book helps new embedded engineers to get ahead quickly by preparing them for the technical and professional challenges they will face detailed instructions on how to achieve successful designs using a broad spectrum of different microcontrollers and scripting languages are provided the author shares insights from a lifetime of experience spent in the trenches covering everything from small vs large companies and consultancy work vs salaried positions to which types of training will prove to be the most lucrative investments this book provides an expert s authoritative answers to questions that pop up constantly on usenet newsgroups and in break rooms all over the world an approachable friendly introduction to working in the world of embedded design full of design examples using the most common languages and hardware that new embedded engineers will be likely to use every day answers important basic questions on which are the best products to learn trainings to get and kinds of companies to work for engineering in perspective provides a unique look into the career of one of britain s most widely experienced engineers professor tony ridley ridley analyses key moments from his career to identify the real world skills required for success through this he examines how important it is that a successful engineer has not only traditional engineering skills but also good interpersonal skills coupled with a deep understanding of social economic and political factors ridley s career case studies include his time as first director general of the tyne wear passenger transport executive and working on the creation of the metro first managing director of the hong kong mass transit railway chairman and managing director of london underground the development of the docklands light railway and working through the trauma of the kings cross fire as professor of transport engineering at imperial college london ridley was involved in national and international engineering bodies including president of the institution of civil engineers the book contains papers from this time that develop the concept of the breadth of engineering highly relevant for engineering students newly qualified engineers educators and employers this book allows examination of successes and failures of important engineering projects from the 20th century with lessons and insights for the 21st century engineer a systems approach to managing the complexities of process industries discusses the principles of system engineering system thinking complexity thinking and how these apply to the process industry including benefits and implementation in process safety management systems the book focuses on the ways system engineering skills plm and iiot can radically improve effectiveness of implementation of the process safety management system covering lifecycle megaproject system engineering and project management issues this book reviews available tools and software and presents the practical web based approach of analysis dynamic evaluation of project processes adepp for system engineering of the process manufacturing development and operation phases key solutions proposed include adding complexity management steps in the risk assessment framework of iso 31000 and utilization of installation lifecycle management this study of this end to end process will help users improve operational excellence and navigate the complexities of managing a chemical or processing plant presents a review of operational excellence and process safety management methods along with solutions to complexity assessment and management provides a comparison of the process manufacturing industry with discrete manufacturing identifying similarities and areas of customization for process manufacturing discusses key solutions for managing the complexities of process manufacturing development and operational phases this co edited volume compares chinese and western experiences of engineering technology and development in doing so it builds a bridge between the east and west and advances a dialogue in the philosophy of engineering divided into three parts the book starts with studies on epistemological and ontological issues with a special focus on engineering design creativity management feasibility and sustainability part ii considers relationships between the history and philosophy of engineering and includes a general argument for the necessity of dialogue between history and philosophy it continues with a general introduction to traditional chinese attitudes toward engineering and technology and philosophical case studies of the chinese steel industry railroads and cybernetics in the soviet union part iii focuses on engineering ethics and society with chapters on engineering education and practice in china and the west the book s analyses of the interactions of science engineering ethics politics and policy in different societal contexts are of special interest the volume as a whole marks a new stage in the emergence of the philosophy of engineering as a new regionalization of philosophy this carefully edited interdisciplinary volume grew out of an international conference on the philosophy of engineering hosted by the university of the chinese academy of sciences in beijing it includes 30 contributions by leading philosophers social scientists and engineers from australia china europe and the united states the aim of this report is to encourage enhanced richness and relevance of the undergraduate engineering education experience and thus produce better prepared and more globally competitive graduates by providing practical guidance for incorporating real world experience in us engineering programs the report a collaborative effort of the national academy of engineering nae and advanced micro devices inc amd builds on two nae reports on the engineer of 2020 that cited the importance of grounding engineering education in real world experience this project also aligns with other nae efforts in engineering education such as the grand challenges of engineering changing the conversation and frontiers of engineering education this publication presents 29 programs that have successfully infused real world experiences into engineering or engineering technology undergraduate education the real world engineering education committee acknowledges the vision of amd in supporting this project which provides useful exemplars for institutions of higher education who seek model programs for infusing real world experiences in their programs the nae selection committee was impressed by the number of institutions committed to grounding their programs in real world experience and by the quality creativity and diversity of approaches reflected in the submissions a call for nominations sent to engineering and engineering technology deans chairs and faculty yielded 95 high quality submissions two conditions were required of the nominations 1 an accredited 4 year undergraduate engineering or engineering technology program was the lead institutions and 2 the nominated program started operation no later than the fall 2010 semester within these broad parameters nominations ranged from those based on innovations within a single course to enhancements across an entire curriculum or institution infusing real world experiences into engineering education is intended to provide sufficient information to enable engineering and engineering technology faculty and administrators to assess and adapt effective innovative models of programs to their own institution s objectives recognizing that change is rarely trivial the project included a brief survey of selected engineering deans concern in the adoption of such programs engineering technologies covers the mandatory units for the eal level 3 diploma in engineering and technology each compulsory unit is covered in detail with activities case studies and self test questions where relevant review questions are provided at the end of each chapter and a sample multiple choice examination is included at the end of the book the book has been written to ensure that it covers what learners need to know answers to selected questions in the book together with a wealth of supporting resources can be found on the book s companion website numerical answers are provided in the book itself written specifically for the eal level 3 diploma in engineering and technology this book covers the two mandatory units engineering and environmental health and safety and engineering organizational efficiency and improvement within each unit the learning outcomes are covered in detail and the book includes activities and test your knowledge sections to check your understanding at the end of each chapter is a checklist to make sure you have achieved each objective before you move on to the next section at key2engtech com you can download answers to selected questions found within the book as well as reference material and resources this book is a must have for all learners studying for their eal level 3 diploma award in engineering and technology nowadays there is software everywhere in our life it controls cars airplanes factories medical implants without software banking logistics and transportation media and even scientific research would not function in the accustomed way building and maintaining software is a knowledge intensive endeavour and requires that specific experiences are handled successfully however neither knowledge nor experience can be collected stored and shipped like physical goods instead these delicate resources require dedicated techniques knowledge and experience are often called company assets yet 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challenge further critical examinations the overall result is a textbook that is equally suitable as a personal resource for self directed learning and as the basis for a one semester course on software engineering and knowledge management achieve any cost goals in half the time and achieve stable production with quality designed in right the first time design for manufacturability how to use concurrent engineering to rapidly develop low cost high quality products for lean production is still the definitive work on dfm this second edition extends the proven methodology to the most advanced product development process with the addition of the following new unique and original topics which have never been addressed previously these topics show you how to cut cost from 1 2 to 1 10 in 9 categories with ways to remove that much cost from product charges and pricing commercialize innovation starting with manufacturable research and learning from the new section on scalability you will learn how to design products and processing equipment to quickly scale up to any needed demand or desired growth design product families that can be built on demand in platform cells that also mass customize products to order make lean production easier to implement with much more effective results while making build to order practical with spontaneous supply chains and eliminating forecasted inventory by including an updated chapter on designing products for lean production the author s 30 years of experience teaching companies dfm based on pre class surveys and plant tours is the foundation of this most advanced design process it includes incorporating dozens of proven dfm guidelines through up front concurrent engineering teamwork that cuts the time to stable production in half and curtails change orders for ramps rework redesign substituting cheaper parts change orders to fix the changes unstable design specs part obsolescence and late discovery of manufacturability issues at periodic design reviews this second edition is for the whole product development community including engineers who want to learn the most advanced dfm techniques managers who want to lead the most advanced product development project team leaders who want to immediately apply all the principles taught in this book in their own micro climate improvement leaders and champions who want to implement the above and ensure that the company can design products and versatile processing equipment for low volume high mix product varieties designing half to a tenth of cost categories can avoid substituting cheap parts which degrades quality and encourages standardization and spontaneous supply chains which will encourage lean initiatives using cellular manufacturing to shift production between lines for mixed production of platforms and build to order to offer the fastest order fulfillment can beat any competitors delivery time this book presents detailed explanations of how to formulate field development plans for oil and gas discovery the data and case studies provided here obtained from the authors field experience in the oil and gas industry around the globe offer a real world context for the theories and procedures discussed the book covers all aspects of field development plan processes from reserve estimations to economic analyses it shows readers in both the oil and gas industry and in academia how to prepare field development plans in a straightforward way and with substantially less uncertainty nowadays distributed software development has become more common in a distributed project setting managing experience is even more crucial than in a co located project problems like ineffective communication lack of awareness and trust and restrictive information flow policies impede experience exchange and raise the overall effort for software engineers to collaborate moreover sharing experiences is usually not part of the development process and considered additional effort this often leads to failure of the experience management initiative due to a lack of participation this thesis proposes a framework for qualitative and quantitative assessment of light weight experience collection light weight methods primarily aim at lowering the perceived effort and return a reasonable benefit to the experience bearers this thesis proposes characterizing criteria of light weight experience collection and a measurement system to measure gradations of expected effort and benefit of an experience collection method to support knowledge managers in choosing the appropriate collection method this thesis provides a catalogue of strategies from different categories and areas of application in distributed development projects this book provides actual entrepreneurial stories giving insight into the pitfalls and successes one might find in starting or even continuing with a small high tech business insights into innovative speculative and largely successful new ventures as experienced by those who went through the process are complemented by comments and observations from others in the field including researchers economists investors regional development agencies technology transfer organizations and universities the book is recommended to entrepreneurs in all high technology disciplines and in particular for students and early career professionals it can be also useful for undergraduate and postgraduate courses in entrepreneurship which many institutions are currently introducing and to those who are interested in how a high tech business might develop engineers and reliability professionals are increasingly being held accountable for materials and spare parts inventory management and in response they need to gain a better understanding of materials and spare parts inventory management principles and practices this practical book delivers just that this new edition will help you get the right parts in the right place at the right time for the right reason fully revised it provides specific coverage of the issues faced in and requirements for managing engineering materials and spare parts and what to do to improve your results it includes 29 exclusive examples and real life case studies to demonstrate the application of the concepts and ideas so that you will easy and quickly understand how to implement them what s more it will show you what to do to truly optimize your inventory holdings why inventory levels are almost always too high how to identifying the factors that have greatest impact on your inventory levels when to apply the 7 actions for inventory reduction where to focus your efforts for greatest effect and who to involve in taking action the concepts ideas tools and processes in this book have helped many companies achieve and sustain results that other inventory tools and approaches just could not match and it is sure to help you achieve true inventory optimization as well the second edition includes a new chapter on the mechanics of inventory management a pragmatic review of the management of inventory including introducing the materials and inventory management cycle comparing theoretical and actual inventory outcomes discussion on normal and poisson distribution models how to determine the re order point how to determine the re order quantity and commentary on monte carlo simulation an expanded chapter on the financial impact of inventory including a discussion of the key reports that need to be understood chapters on the influence of policies procedures and people additional discussion on issues faced and how to address them an expansion of the central process discussed in the first edition to a more comprehensive review process inventory process tm optimization an expanded section on executing an inventory review program a closing where to from here chapter 57 figures and diagrams 30 of them new and the others all revised and updated and six new tables with 8 in total eight new checklists specifically included as a new tool for the reader and is the result of direct reader requests an expanded glossary customer experience engineering applied to the engineering department is rare but needed most companies keep support ux engineering product and cx separate to address this gap this book highlights roles and techniques that are proven to accelerate issue detection and prevention by 30 or more with the author s vast experience in tech support he has developed techniques and skills that allow engineers to gain customer insights faster and through new and insightful sources that are within their reach you will develop a deep understanding of the impact of issues understand and optimize the speed of the engineering feedback loop issue resolution time and develop the ability to calculate the cost of the issues or customer friction to the business in aggregate and on a case by case basis organizations can save significant money and add additional revenue by addressing customer friction proactively in collaboration with product engineering and site reliability engineering sre functions and reduce the average time of an issue resolution by 80 the cross functional leadership mentoring and engineering techniques you ll learn from this proactive stance are very valuable and teachable and this book will show you the path forward

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