

# Managing The Unexpected Resilient Performance In An Age Of Uncertainty

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## The Complete Idiot's Guide to Coaching for Excellence

Resilience is a word that is used in many different ways in different contexts, this new and innovative book focuses on psychological resilience in the workplace, examining other key aspects such as physical health and resilient teams, drawing from the latest research and the authors own practical experience.

## Spaceport Earth

This book explores the application of breakthrough technologies to improve transportation performance. Transportation systems represent the “blood vessels” of a society, in which people and goods travel. They also influence people’s lives and affect the liveability and sustainability of our cities. The book shows how emergent technologies are able to monitor the condition of the structure in real time in order to schedule the right moment for maintenance activities and so reduce the disturbance to users. This book is a valuable resource for those involved in research and development in this field. Part I discusses the context of transportation systems, highlighting the major issues and challenges, the importance of understating human factors that could affect the maintenance operations and the main goals in terms of safety standards. Part II focuses on process-oriented innovations in transportation systems; this section stresses the importance of including design parameters in the planning, offering a comparison between risk-based and condition-based maintenance and, lastly,

showing applications of emergent technologies. Part III goes on to reflect on the technical-oriented innovations, discussing the importance of studying the physical phenomena that are behind transportation system failures and problems. It then introduces the general trend of collecting and analyzing big data using real-world cases to evaluate the positive and negative aspects of adopting extensive smart sensors for gathering information on the health of the assets. The last part (IV) explores cultural and behavioural changes, and new knowledge management methods, proposing novel forms of maintenance and vocational training, and introduces the need for radical new visions in transportation for managing unexpected events. The continuous evolution of maintenance fields suggests that this compendium of “state-of-the-art” applications will not be the only one; the authors are planning a collection of cutting-edge examples of transportation systems that can assist researchers and practitioners as well as students in the process of understanding the complex and multidisciplinary environment of maintenance engineering applied to the transport sector.

### **Sensemaking in Organizations**

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

### **Applications of Contemporary Management Approaches in Supply Chains**

This book introduces fundamental concepts of cyber resilience, drawing expertise from academia, industry, and government. Resilience is defined as the ability to recover from or easily adjust to shocks and stresses. Unlike the concept of security - which is often and incorrectly conflated with resilience -- resilience refers to the system's ability to recover or regenerate its performance after an unexpected impact produces a degradation in its performance. A clear understanding of distinction between security, risk and resilience is important for developing appropriate management of cyber threats. The book presents insightful discussion of the most current technical issues in cyber resilience, along with relevant methods

and procedures. Practical aspects of current cyber resilience practices and techniques are described as they are now, and as they are likely to remain in the near term. The bulk of the material is presented in the book in a way that is easily accessible to non-specialists. Logical, consistent, and continuous discourse covering all key topics relevant to the field will be of use as teaching material as well as source of emerging scholarship in the field. A typical chapter provides introductory, tutorial-like material, detailed examples, in-depth elaboration of a selected technical approach, and a concise summary of key ideas.

### **Managing the Urgent and Unexpected**

The authors of this book set out a system of safety strategies and interventions for managing patient safety on a day-to-day basis and improving safety over the long term. These strategies are applicable at all levels of the healthcare system from the frontline to the regulation and governance of the system. There have been many advances in patient safety, but we now need a new and broader vision that encompasses care throughout the patient's journey. The authors argue that we need to see safety through the patient's eyes, to consider how safety is managed in different contexts and to develop a wider strategic and practical vision in which patient safety is recast as the management of risk over time. Most safety improvement strategies aim to improve reliability and move closer toward optimal care. However, healthcare will always be under pressure and we also require ways of managing safety when conditions are difficult. We need to make more use of strategies concerned with detecting, controlling, managing and responding to risk. Strategies for managing safety in highly standardised and controlled environments are necessarily different from those in which clinicians constantly have to adapt and respond to changing circumstances. This work is supported by the Health Foundation. The Health Foundation is an independent charity committed to bringing about better health and health care for people in the UK. The charity's aim is a healthier population in the UK, supported by high quality health care that can be equitably accessed. The Foundation carries out policy analysis and makes grants to front-line teams to try ideas in practice and supports research into what works to make people's lives healthier and improve the health care system, with a particular emphasis on how to make successful change happen. A key part of the work is to make links between the knowledge of those working to deliver health and health care with research evidence and analysis. The aspiration is to create a virtuous circle, using what works on the ground to inform effective policymaking and vice versa. Good health and health care are vital for a flourishing society. Through sharing what is known, collaboration and building people's skills and knowledge, the Foundation aims to make a difference and contribute to a healthier population.

### **How Safe is Safe Enough?**

This book constitutes the refereed proceedings of the 7th Security Research Conference, Future Security 2012, held in

Bonn, Germany, in September 2012. The 78 revised full papers presented were carefully reviewed and selected from 137 submissions. The papers are organized in topical sections on supply chain and critical infrastructure protection; security situational awareness; crisis management; security for critical infrastructure and urban areas; sensor technology; social, psychological and political aspects; cyber defense and information security; maritime and border security; detection of hazardous materials; food chain security; aviation security; ergonomic aspects.

### **Managing the Unexpected**

Resilience has become an important topic on the safety research agenda and in organizational practice. Most empirical work on resilience has been descriptive, identifying characteristics of work and organizing activity which allow organizations to cope with unexpected situations. Fewer studies have developed testable models and theories that can be used to support interventions aiming to increase resilience and improve safety. In addition, the absent integration of different system levels from individuals, teams, organizations, regulatory bodies, and policy level in theory and practice imply that mechanisms through which resilience is linked across complex systems are not yet well understood. Scientific efforts have been made to develop constructs and models that present relationships; however, these cannot be characterized as sufficient for theory building. There is a need for taking a broader look at resilience practices as a foundation for developing a theoretical framework that can help improve safety in complex systems. This book does not advocate for one definition or one field of research when talking about resilience; it does not assume that the use of resilience concepts is necessarily positive for safety. We encourage a broad approach, seeking inspiration across different scientific and practical domains for the purpose of further developing resilience at a theoretical and an operational level of relevance for different high-risk industries. The aim of the book is twofold: 1. To explore different approaches for operationalization of resilience across scientific disciplines and system levels. 2. To create a theoretical foundation for a resilience framework across scientific disciplines and system levels. By presenting chapters from leading international authors representing different research disciplines and practical fields we develop suggestions and inspiration for the research community and practitioners in high-risk industries. This book is Open Access under a CC-BY licence.; Explores different approaches for operationalization of resilience across scientific disciplines and system levels Creates a theoretical foundation for a resilience framework across scientific disciplines and system levels Develops suggestions and inspiration for the research community and practitioners in high-risk industries Presents chapters from leading international authors representing different research disciplines and practical fields This work was published by Saint Philip Street Press pursuant to a Creative Commons license permitting commercial use. All rights not granted by the work's license are retained by the author or authors.

### **The Practitioner's Handbook of Project Performance**

Social and behavioral science has for decades studied and recognized leadership as a social exchange between leaders and followers. But leadership is rather complex, and as such, it tends to lead to an increased interest within and across different disciplines. This book is an attempt to provide theoretical and empirical framework to better understand leadership challenges in various contexts. The authors cover an array of themes that span from an individual level to an organizational and societal level. In this volume, two sections are presented. The first section based on individual level focuses on different leadership styles and abilities, and the other section provides theories to understand leadership in public administration, in industrial settings and in nonprofit organizations.

### **Transportation Systems**

Growth, profit, and productivity are among the most important goals of business. In a world of intense competition both domestically and abroad, the most effective way for companies to achieve goals is by energizing their most important asset: their staff. From the executive suite to the assembly line, each staff person is a member of a team that is paid to do the best he or she can to further the interests of the company. However, keeping staff motivated and working at peak performance is no easy task, especially with traditional 'top-down' managements. That's why the powerful model of coaching works so effectively. Thousand of companies are training their personnel in and out of management to use coaching to achieve amazing results through costly consultants and training workshops. Now, master coach Jane Creswell shares her decades of corporate coaching experience in *The Complete Idiot's Guide to Coaching for Excellence*. In clear, concrete, and business-friendly language, she explains how corporate coaching works, the benefits it presents, and how it can be implemented in any workplace setting, large or small.

### **Safety at the Sharp End**

Safety is not easy, it is a full time effort, and is equally important whether people are on the job or on personal time. If an organization is serious about mission success, it must take 'risk' seriously as well. Leaders need to be involved in the risk game at every turn, and understand the key elements (discussed throughout this book) that help them to win. Winning the risk game is what safety is all about. As in operational success, risk management requires the best human faculties to achieve victory; talent of organizational players and commitment from top leadership rule the day. The book covers leadership, safety programs, and risk management for organizations and individuals. It helps in professional development, grooming current and future leaders to understand their roles in safety and risk management. Central to the author's message are: Seven truths of safety that the author discovered as a senior safety officer. Four roadblocks to achieving zero mishaps that must be aggressively addressed. Nine elements to risk reduction, with which leaders must become familiar. He establishes the importance of an organizational leader's role in the safety/risk management game and provides the

answer to, 'How safe is safe enough?' Often, managers at various levels do not have an understanding of what goes into a safety program, this book tells them, from an expert's view. The readership includes: executives and middle management; all leaders as a professional development book and students. It is also a supplemental textbook for safety and risk management courses.

### **Close Calls**

Increasingly, scholars view reliability—the ability to plan for and withstand disaster—as a social construction. However, there is a tendency to evoke this concept only in the face of catastrophes, such as the British Petroleum oil spill or the Space Shuttle Challenger explosion. This book frames reliability as a fundamental issue in the study of organizations—one that can also improve day-to-day operations. Bringing together a diverse cast of contributors, it considers how we can account for the ability of some organizations to maintain high reliability and what we can learn from them. The chapters distinguish reliability from related lines of inquiry; take stock of relevant research from different disciplinary perspectives; highlight implications for practice; and identify directions, questions, and priorities for future research. The first of its kind in over twenty years, this volume delivers a dynamic base of shared knowledge and an integrative research agenda at a time when organizational reliability has never been so important.

### **Exploring Resilience**

Health systems everywhere are expected to meet increasing public and political demands for accessible, high-quality care. Policy-makers, managers, and clinicians use their best efforts to improve efficiency, safety, quality, and economic viability. One solution has been to mimic approaches that have been shown to work in other domains, such as quality management, lean production, and high reliability. In the enthusiasm for such solutions, scant attention has been paid to the fact that health care as a multifaceted system differs significantly from most traditional industries. Solutions based on linear thinking in engineered systems do not work well in complicated, multi-stakeholder non-engineered systems, of which health care is a leading example. A prerequisite for improving health care and making it more resilient is that the nature of everyday clinical work be well understood. Yet the focus of the majority of policy or management solutions, as well as that of accreditation and regulation, is work as it ought to be (also known as 'work-as-imagined'). The aim of policy-makers and managers, whether the priority is safety, quality, or efficiency, is therefore to make everyday clinical work - or work-as-done - comply with work-as-imagined. This fails to recognise that this normative conception of work is often oversimplified, incomplete, and outdated. There is therefore an urgent need to better understand everyday clinical work as it is done. Despite the common focus on deviations and failures, it is undeniable that clinical work goes right far more often than it goes wrong, and that we only can make it better if we understand how this happens. This second volume of *Resilient Health*

Care continues the line of thinking of the first book, but takes it further through a range of chapters from leading international thinkers on resilience and health care. Where the first book provided the rationale and basic concepts of RHC, the Resilience of Everyday Clinical Work breaks new ground by analysing everyday work situations in primary, secondary, and tertiary care to identify and describe the fundamental strategies that clinicians everywhere have developed and use with a fluency that belies the demands to be resolved and the dilemmas to be balanced. Because everyday clinical work is at the heart of resilience, it is essential to appreciate how it functions, and to understand its characteristics.

### **Proceedings of the Fourth Resilience Engineering Symposium**

Central to the issue of improving project performance is the application of deterministic, probabilistic processes, and techniques to reduce human error. To that end, we as project managers often endeavour to implement and follow a project management methodology in the belief that we can reduce the scope for emerging ambiguous requirements, ill-matched resource needs and availability, contractual and funding constraints, and other unwanted uncertainties. However, such 'self-evidently correct' processes are not without their limitations. The management of uncertainty needs to be viewed not from a procedural, 'stand-alone' perspective but from a behavioural, people-driven perspective - that is, Mindfulness. Mindfulness is a project-wide human capability to anticipate key events from emerging trends, constantly adapt to change, and rapidly bounce back from adversity. Resilient project managers are forward-thinking and able to foresee relevant scenarios that are likely to occur and which may have damaging effects on performance. We strive to be prepared for the best but also for the worst, and learning is nurtured and encouraged. We believe that with purpose, whatever uncertainty hits us, and regardless of the damage caused, we can prevent a crisis from happening in the first place. When a crisis occurs, we can recover and bounce back from shocks, quickly restoring 'normal' management. This book goes beyond commonly accepted standards in project management and looks past mere compliance to determinism and probabilistic approaches to managing uncertainty. Relying on the power of mindful thinking, it identifies an art to manage uncertainty.

### **Still Not Safe**

David Hurst has a unique knowledge of organizations—their function and their failure—both in theory and in practice. He has spent twenty-five years as an operating manager, often in crises and turnaround conditions, and is also a widely experienced consultant, teacher, and writer on business. This book is his innovative integration of management practice and theory, using a systems perspective and analogies drawn from nature to illustrate groundbreaking ideas and their practical application. It is designed for readers unfamiliar with sophisticated management concepts and for active practitioners seeking to advance their management and leadership skills. Hurst's objective is to help readers make meaning from their own management experience and education, and to encourage improvement in their practical

judgment and wisdom. His approach takes an expansive view of organizations, connecting their development to humankind's evolutionary heritage and cultural history. It locates the origins of organizations in communities of trust and follows their development and maturation. He also crucially tracks the decline of organizations as they age and shows how their strengths become weaknesses in changing circumstances. Hurst's core argument is that the human mind is rational in an ecological, rather than a logical, sense. In other words, it has evolved to extract cues to action from the specific situations in which it finds itself. Therefore contexts matter, and Hurst shows how passion, reason, and power can be used to change and sustain organizations for good and ill. The result is an inspirational synthesis of management theory and practice that will resonate with every reader's experience.

### **Resilience**

The term "patient safety" rose to popularity in the late nineties, as the medical community -- in particular, physicians working in nonmedical and administrative capacities -- sought to raise awareness of the tens of thousands of deaths in the US attributed to medical errors each year. But what was causing these medical errors? And what made these accidents to rise to epidemic levels, seemingly overnight? *Still Not Safe* is the story of the rise of the patient-safety movement -- and how an "epidemic" of medical errors was derived from a reality that didn't support such a characterization. Physician Robert Wears and organizational theorist Kathleen Sutcliffe trace the origins of patient safety to the emergence of market trends that challenged the place of doctors in the larger medical ecosystem: the rise in medical litigation and physicians' aversion to risk; institutional changes in the organization and control of healthcare; and a bureaucratic movement to "rationalize" medical practice -- to make a hospital run like a factory. If these social factors challenged the place of practitioners, then the patient-safety movement provided a means for readjustment. In spite of relatively constant rates of medical errors in the preceding decades, the "epidemic" was announced in 1999 with the publication of the Institute of Medicine report *To Err Is Human*; the reforms that followed came to be dominated by the very professions it set out to reform. Weaving together narratives from medicine, psychology, philosophy, and human performance, *Still Not Safe* offers a counterpoint to the presiding, doctor-centric narrative of contemporary American medicine. It is certain to raise difficult, important questions around the state of our healthcare system -- and provide an opening note for other challenging conversations.

### **Resilience and Urban Disasters**

Drawing on extensive and detailed fieldwork within airlines-an industry that pioneered near-miss analysis- this book develops a clear set of practical implications and theoretical propositions regarding how all organizations can learn from 'near-miss' events and better manage risk and resilience.

## **Future Security**

For Resilience Engineering, 'failure' is the result of the adaptations necessary to cope with the complexity of the real world, rather than a breakdown or malfunction. The performance of individuals and organizations must continually adjust to current conditions and, because resources and time are finite, such adjustments are always approximate. This definitive new book explores this groundbreaking new development in safety and risk management, where 'success' is based on the ability of organizations, groups and individuals to anticipate the changing shape of risk before failures and harm occur. Featuring contributions from many of the worlds leading figures in the fields of human factors and safety, Resilience Engineering provides thought-provoking insights into system safety as an aggregate of its various components, subsystems, software, organizations, human behaviours, and the way in which they interact. The book provides an introduction to Resilience Engineering of systems, covering both the theoretical and practical aspects. It is written for those responsible for system safety on managerial or operational levels alike, including safety managers and engineers (line and maintenance), security experts, risk and safety consultants, human factors professionals and accident investigators.

## **Building Resilience for Success**

Tracing some of the economic highs and lows that impacted the world in the aftermath of Hurricane Katrina, an introduction to the emerging field of resilience research explains how to approach disruptions in ecosystems, businesses and governments to better reinforce interdependent world systems. 40,000 first printing.

## **Safer Healthcare**

Many 21st century operations are characterised by teams of workers dealing with significant risks and complex technology, in competitive, commercially-driven environments. Informed managers in such sectors have realised the necessity of understanding the human dimension to their operations if they hope to improve production and safety performance. While organisational safety culture is a key determinant of workplace safety, it is also essential to focus on the non-technical skills of the system operators based at the 'sharp end' of the organisation. These skills are the cognitive and social skills required for efficient and safe operations, often termed Crew Resource Management (CRM) skills. In industries such as civil aviation, it has long been appreciated that the majority of accidents could have been prevented if better non-technical skills had been demonstrated by personnel operating and maintaining the system. As a result, the aviation industry has pioneered the development of CRM training. Many other organisations are now introducing non-technical skills training, most notably within the healthcare sector. *Safety at the Sharp End* is a general guide to the theory and practice of non-technical skills for safety. It covers the identification, training and evaluation of non-technical skills and has been written for use by individuals

who are studying or training these skills on CRM and other safety or human factors courses. The material is also suitable for undergraduate and post-experience students studying human factors or industrial safety programmes.

### **The New Ecology of Leadership**

Practitioners operate in a necessary reality. We work in a space where project performance is above theory or methodology. In the best environments, delivery and an affirmative culture are what matter most. In the worst, it is politics and survival. In any environment we are challenged to adopt best practices and adapt our style to the environment in which the project is occurring. This is a book about those best practices and practitioner experiences. It is a must have reference and guide book for project managers, general managers, business leaders and project management researchers. This book is the result of the hard work and dedication of more than 35 authors from more than 15 countries across four continents. It brings a diversity of experience, professional and personal. It includes practitioners, leading academics, renowned theorists and many who straddle those roles. The chapters cover experiences in software, large scale infrastructure projects, finance and health care, to name a few. The chapters themselves take many forms. Check out the table of contents to get a deeper sense of the topics included. All provide real-world guidance on delivering high performing projects and show you how to build, lead and manage high performing teams. The Practitioners Handbook of Project Performance is complete in itself. It can also be an enticing start to an ongoing dialogue with the authors and a pleasurable path to get deeper into the subject of project performance. Find your favorite place to begin learning from these chapters, to begin taking notes and taking away nuggets to use in your everyday. But don't stop there. Contact information and further resources for this diverse team of experts authors are found throughout. The Practitioners Handbook is a modern guide to the leading edge of project performance management and a path to the future of project delivery.

### **Mindful Project Management**

Assess your organization's level of resilience and develop new methods to improve with this practical guide.

### **Contemporary Leadership Challenges**

This book addresses unexpected disasters and shocks in cities and urban systems by providing quantitative and qualitative tools for impact analysis and disaster management. Including environmental catastrophes, political turbulence and economic shocks, Resilience and Urban Disasters explores a large range of tumultuous events and key case studies to thoroughly cover these core areas. In particular, the socio-economic impacts on urban systems that are subject to disasters are explored.

## **Managing The Unexpected: Assuring High Performance In An Age Of Complexity**

In the Way of the SEAL, ex-Navy Commander Mark Divine reveals exercises, meditations and focusing techniques to train your mind for mental toughness, emotional resilience and uncanny intuition. Along the way you'll reaffirm your ultimate purpose, define your most important goals, and take concrete steps to make them happen. A practical guide for businesspeople or anyone who wants to be an elite operator in life, this book will teach you how to: · Lead from the front, so that others will want to work for you · Practice front-sight focus, the radical ability to focus on one thing until victory is achieved · Think offense, all the time, to eradicate fear and indecisiveness · Smash the box and be an unconventional thinker so you're never thrown off-guard by chaotic conditions · Access your intuition so you can make "hard right" decisions · Achieve twenty times more than you think you can · and much more Blending the tactics he learned from America's elite forces with lessons from the Spartans, samurai, Apache scouts, and other great warrior traditions, Divine has distilled the fundamentals of success into eight powerful principles that will transform you into the leader you always knew you could be. Learn to think like a SEAL, and take charge of your destiny at work, home and in life.

## **Cyber Resilience of Systems and Networks**

It's the 21st-century and everything about the space industry is changing, and leading that charge are private sector companies including Elon Musk's SpaceX and Jeff Bezos's Blue Origin, which are building a dizzying array of new spacecraft and rockets, not just for government use, but for any paying customer. At the heart of this space revolution are spaceports, the center and literal launching pads of spaceflight. Spaceports cost hundreds of millions of dollars, face extreme competition, and host operations that do not tolerate failures—which can often be fatal. Aerospace journalist Joe Pappalardo has witnessed space rocket launches around the world, from the jungle of French Guiana to the coastline of California. In his comprehensive work Spaceport Earth, Pappalardo describes the rise of private companies and how they are reshaping the way the world is using space for industry and science. Spaceport Earth is a travelogue through modern space history as it is being made, offering space enthusiasts, futurists, and technology buffs a close perspective of rockets and launch sites, and chronicling the stories of industrial titans, engineers, government officials, billionaires, schemers, and politicians who are redefining what it means for humans to be a spacefaring species.

## **Managing the Unexpected**

## **Organizing for Reliability**

## **The Way of the SEAL**

Since the first edition of *Managing the Unexpected* was published in 2001, the unexpected has become a growing part of our everyday lives. The unexpected is often dramatic, as with hurricanes or terrorist attacks. But the unexpected can also come in more subtle forms, such as a small organizational lapse that leads to a major blunder, or an unexamined assumption that costs lives in a crisis. Why are some organizations better able than others to maintain function and structure in the face of unanticipated change? Authors Karl Weick and Kathleen Sutcliffe answer this question by pointing to high reliability organizations (HROs), such as emergency rooms in hospitals, flight operations of aircraft carriers, and firefighting units, as models to follow. These organizations have developed ways of acting and styles of learning that enable them to manage the unexpected better than other organizations. Thoroughly revised and updated, the second edition of the groundbreaking book *Managing the Unexpected* uses HROs as a template for any institution that wants to better organize for high reliability.

## **Project Resilience**

Improve your company's ability to avoid or manage crises *Managing the Unexpected, Third Edition* is a thoroughly revised text that offers an updated look at the groundbreaking ideas explored in the first and second editions. Revised to reflect events emblematic of the unique challenges that organizations have faced in recent years, including bank failures, intelligence failures, quality failures, and other organizational misfortunes, often sparked by organizational actions, this critical book focuses on why some organizations are better able to sustain high performance in the face of unanticipated change. High reliability organizations (HROs), including commercial aviation, emergency rooms, aircraft carrier flight operations, and firefighting units, are looked to as models of exceptional organizational preparedness. This essential text explains the development of unexpected events and guides you in improving your organization for more reliable performance. "Expect the unexpected" is a popular mantra for a reason: it's rooted in experience. Since the dawn of civilization, organizations have been rocked by natural disasters, civil unrest, international conflict, and other unexpected crises that impact their ability to function. Understanding how to maintain function when catastrophe strikes is key to keeping your organization afloat. Explore the many different kinds of unexpected events that your organization may face Consider updated case studies and research Discuss how highly reliable organizations are able to maintain control during unexpected events Discover tactics that may bolster your organization's ability to face the unexpected with confidence *Managing the Unexpected, Third Edition* offers updated, valuable content to professionals who want to strengthen the preparedness of their organizations—and confidently face unexpected challenges.

## **Managing the Unexpected**

Virginia Mason Medical Center (VMMC) was one of the first health care organizations to implement Lean and its methodologies. Other organizations have followed VMMC's lead, but this world class organization still leads in the utilization of innovative Lean tools. *Accelerating Health Care Transformation with Lean and Innovation: The Virginia Mason Experience* describes how VMMC has systematically integrated innovative structures, methods, and cultural practices into its implementation of Lean. Describing how your organization can create a strategy and build a culture of innovation and learning, it supplies concrete examples that show—not just conceptually, but through VMMC's actual experiences—how Lean and innovation can work hand-in-hand to incrementally improve and radically transform your value streams. Explaining how to use the voices and experiences of patients and their families to drive improvement and innovation in new directions, the book supplies a clear understanding of how Lean can help you achieve your goals in today's increasingly demanding marketplace.

### **The Organizational Resilience Handbook**

As the title suggests, *Project Resilience* is about making projects and project managers more resilient. It offers a glimpse into our tendencies to be irrational in the face of adversity: risk, uncertainty and complexity. The second purpose is to offer a new perspective to aid in managing risky, and in particular uncertain and complex projects. The authors go beyond commonly-accepted standards in project management with the aim of providing an understanding of how to implement project-wide resilience. The purpose is to guide, not to prescribe. It is best used as a trigger for a thinking process to define your own unique approach to managing uncertainty, not to replace your experience and judgement. Ultimately, it has been written to challenge traditional wisdom in project management, and to address the rationale for creative best practices.

### **Resilient Health Care**

High reliability organizations (HROs) such as ER units in hospitals or firefighting units, are designed to perform well under extreme stress and pressure. Using HROs as the model for the 21st century organization, Karl Weick and Kathleen Sutcliffe show executives and upper level managers the competencies their organizations need to develop in order to handle surprises effectively and with a high degree of reliability without sacrificing speed.

### **Designing Data-Intensive Applications**

How the best companies prepare for and manage modern vulnerabilities--from cybersecurity risks to climate change: new tools, processes and organizations for developing corporate resilience. A catastrophic earthquake is followed by a tsunami that inundates the coastline, and around the globe manufacturing comes to a standstill. State-of-the-art passenger jets are

grounded because of a malfunctioning part. A strike halts shipments through a major port. A new digital device decimates the sales of other brands and sends established firms to the brink of bankruptcy. The interconnectedness of the global economy today means that unexpected events in one corner of the globe can ripple through the world's supply chain and affect customers everywhere. In this book, Yossi Sheffi shows why modern vulnerabilities call for innovative processes and tools for creating and embedding corporate resilience and risk management. Sheffi offers fascinating case studies that illustrate how companies have prepared for, coped with, and come out stronger following disruption--from the actions of Intel after the 2011 Japanese tsunami to the disruption in the "money supply chain" caused by the 2008 financial crisis. Sheffi, author of the widely read *The Resilient Enterprise*, focuses here on deep tier risks as well as corporate responsibility, cybersecurity, long-term disruptions, business continuity planning, emergency operations centers, detection, and systemic disruptions. Supply chain risk management, Sheffi shows, is a balancing act between taking on the risks involved in new products, new markets, and new processes--all crucial for growth--and the resilience created by advanced risk management.

### **Safety-II in Practice**

Safety-I is defined as the freedom from unacceptable harm. The purpose of traditional safety management is therefore to find ways to ensure this 'freedom'. But as socio-technical systems steadily have become larger and less tractable, this has become harder to do. Resilience engineering pointed out from the very beginning that resilient performance - an organisation's ability to function as required under expected and unexpected conditions alike - required more than the prevention of incidents and accidents. This developed into a new interpretation of safety (Safety-II) and consequently a new form of safety management. Safety-II changes safety management from protective safety and a focus on how things can go wrong, to productive safety and a focus on how things can and do go well. For Safety-II, the aim is not just the elimination of hazards and the prevention of failures and malfunctions but also how best to develop an organisation's potentials for resilient performance - the way it responds, monitors, learns, and anticipates. That requires models and methods that go beyond the Safety-I toolbox. This book introduces a comprehensive approach for the management of Safety-II, called the Resilience Assessment Grid (RAG). It explains the principles of the RAG and how it can be used to develop the resilience potentials. The RAG provides four sets of diagnostic and formative questions that can be tailored to any organisation. The questions are based on the principles of resilience engineering and backed by practical experience from several domains. *Safety-II in Practice* is for both the safety professional and academic reader. For the professional, it presents a workable method (RAG) for the management of Safety-II, with a proven track record. For academic and student readers, the book is a concise and practical presentation of resilience engineering.

### **Accelerating Health Care Transformation with Lean and Innovation**

Properly performing health care systems require concepts and methods that match their complexity. Resilience engineering provides that capability. It focuses on a system's overall ability to sustain required operations under both expected and unexpected conditions rather than on individual features or qualities. This book contains contributions from international experts in health care, organisational studies and patient safety, as well as resilience engineering. Whereas current safety approaches primarily aim to reduce the number of things that go wrong, Resilient Health Care aims to increase the number of things that go right.

### **Resilient Health Care, Volume 2**

Sometimes unanticipated threats or opportunities create a situation in which work is required unexpectedly. On these occasions, such urgent and unexpected work demands an instant start, in contrast to the often lengthy processes of investigation, evaluation, development, selection and planning normal in businesses and public services before the start of a project. Managing the Urgent and Unexpected explores what is different managerially if work is unexpected, its implementation is urgent and an immediate start it is required. The authors draw on twelve cases ranging from the launch of the Freeview television system in the United Kingdom to the sifting and removal of the New York World Trade Center pile of debris following the 9/11 terrorist attack. They summarise how the response to each of these events was managed, demonstrate that opportunities may sometimes be created in the face of adversity and suggest how normal organizations can prepare to manage abnormal demands. Urgent and unexpected projects have to be rare in business or government to be economically and socially tolerable. And yet organizations can and should be prepared for the unexpected. The lessons offered here will help private and public organizations plan how to authorize and support future urgent work to take advantage of immediate new business opportunities or to protect or restore systems and services.

### **The Social Psychology of Organizing**

The teaching of organization theory and the conduct of organizational research have been dominated by a focus on decision-making and the concept of strategic rationality. However, the rational model ignores the inherent complexity and ambiguity of real-world organizations and their environments. In this landmark volume, Karl E Weick highlights how the 'sensemaking' process shapes organizational structure and behaviour. The process is seen as the creation of reality as an ongoing accomplishment that takes form when people make retrospective sense of the situations in which they find themselves.

### **Space Safety and Human Performance**

Space Safety and Human Performance provides a comprehensive reference for engineers and technical managers within aerospace and high technology companies, space agencies, operators, and consulting firms. The book draws upon the expertise of the world's leading experts in the field and focuses primarily on humans in spaceflight, but also covers operators of control centers on the ground and behavior aspects of complex organizations, thus addressing the entire spectrum of space actors. During spaceflight, human performance can be deeply affected by physical, psychological and psychosocial stressors. Strict selection, intensive training and adequate operational rules are used to fight performance degradation and prepare individuals and teams to effectively manage systems failures and challenging emergencies. The book is endorsed by the International Association for the Advancement of Space Safety (IAASS). Provides information on critical aspects of human performance in space missions Addresses the issue of human performance, from physical and psychosocial stressors that can degrade performance, to selection and training principles and techniques to enhance performance Brings together essential material on: cognition and human error; advanced analysis methods such as human reliability analysis; environmental challenges and human performance in space missions; critical human factors and man/machine interfaces in space systems design; crew selection and training; and organizational behavior and safety culture Includes an endorsement by the International Association for the Advancement of Space Safety (IAASS)

### **Human-Machine Reconfigurations**

In today's rapidly changing business environment, strong influence of globalization and information technologies drives practitioners and researchers of modern supply chain management, who are interested in applying different contemporary management paradigms and approaches, to supply chain process. This book intends to provide a guide to researchers, graduate students and practitioners by incorporating every aspect of management paradigms into overall supply chain functions such as procurement, warehousing, manufacturing, transportation and disposal. More specifically, this book aims to present recent approaches and ideas including experiences and applications in the field of supply chains, which may give a reference point and useful information for new research and to those allied, affiliated with and peripheral to the field of supply chains and its management.

### **The Power of Resilience**

Since the first edition of *Managing the Unexpected* was published in 2001, the unexpected has become a growing part of our everyday lives. The unexpected is often dramatic, as with hurricanes or terrorist attacks. But the unexpected can also come in more subtle forms, such as a small organizational lapse that leads to a major blunder, or an unexamined assumption that costs lives in a crisis. Why are some organizations better able than others to maintain function and structure in the face of unanticipated change? Authors Karl E. Weick and Kathleen M. Sutcliffe answer this question by

pointing to high reliability organizations (HROs), such as emergency rooms in hospitals, flight operations of aircraft carriers, and firefighting units, as models to follow. These organizations have developed ways of acting and styles of learning that enable them to manage the unexpected better than other organizations. Thoroughly revised and updated, the second edition of the groundbreaking book *Managing the Unexpected* uses HROs as a template for any institution that wants to better organize for high reliability. The authors reveal how HROs create a collective state of mindfulness that produces an enhanced ability to discover and correct errors before they escalate into a crisis. A mindful infrastructure continually Tracks small failures Resists oversimplification Is sensitive to operations Maintains capabilities for resilience Takes advantage of shifting locations of expertise Through a discussion of the principle of mindfulness and the practices that can be used to apply it, the authors show how to anticipate and respond to threats with flexibility rather than rigidity. Their practical, solutions-oriented approach includes numerous case studies demonstrating mindful practices and enables readers to assess and implement mindfulness in their own organizations. *Managing the Unexpected* is a guide for learning the hard-won lessons of high reliability organizations that are able to manage unexpected threats and bounce back in a stronger position to tackle future challenges.

### **Resilience Engineering**

This 2007 book is about how human actions and technological artifacts are intertwined.

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