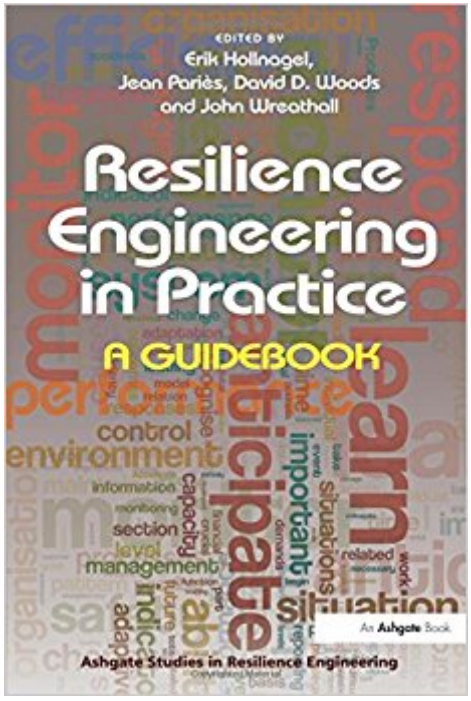
Resilience Engineering In Practice: A Guidebook (Ashgate Studies In Resilience Engineering)



Synopsis

Resilience engineering has since 2004 attracted widespread interest from industry as well as academia. Practitioners from various fields, such as aviation and air traffic management, patient safety, off-shore exploration and production, have quickly realised the potential of resilience engineering and have became early adopters. The continued development of resilience engineering has focused on four abilities that are essential for resilience. These are the ability a) to respond to what happens, b) to monitor critical developments, c) to anticipate future threats and opportunities, and d) to learn from past experience - successes as well as failures. Working with the four abilities provides a structured way of analysing problems and issues, as well as of proposing practical solutions (concepts, tools, and methods). This book is divided into four main sections which describe issues relating to each of the four abilities. The chapters in each section emphasise practical ways of engineering resilience and feature case studies and real applications. The text is written to be easily accessible for readers who are more interested in solutions than in research, but will also be of interest to the latter group.

Book Information

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Customer Reviews

Although risk management has brought greater safety to socio-technical systems, a new approach is still strongly needed. Erik Hollnagel’s excellent book offers the right approach; that resilient

behaviour by people leads to stable systems. Those searching for a more profound understanding of system safety must read this book as it is a practical guide to this new approach.' Akinori Komatsubara, Waseda University, Japan 'With crises abounding, the concept of resilience is more relevant than ever. Manifold examples from a variety of high-risk industries provide insights into the four basic requirements for resilience: responding, monitoring, anticipating, and learning. Tools are presented that support the assessment of these requirements as well as their promotion, be it by training emergency management, handling fatigue of system operators, supporting preventive maintenance, providing better rules for managing conflicting goals, or improving incident reporting. The book, by Erik Hollnagel and his colleagues, will be a great resource for system designers and decision-makers in organizations in their endeavours to keep the uncertainties and complexities of our world at bay.' Gudela Grote, ETH Zurich, Switzerland 'Be prepared to be unprepared.' How do you do that? By absorbing the evocative data, nuanced terminology, sustained guidance, and broad applications summarized here. Resilience is about more than engineering as becomes clear in these descriptions of the actual, critical, potential, and factual events that unfold when 'disturbances fall outside the operational envelope.' Resilience engineering is a hot topic. Here is the one book that shows you why!' Karl E. Weick, University of Michigan, USA 'The book is very practical in the sense that only relevant and significant theories or frameworks are discussed followed by extensive descriptions of the situations on the field. Solution-seekers are the group of readers who will benefit the most from reading the book. The book will also be a significant reference for researchers, particularly those interested in closing the gap between theories and practices of engineering resilience. --'Human Factors & Ergonomics Society European Chapter Newsletter June 2011

Erik Hollnagel (Ph.D., psychology) is Professor and Industrial Safety Chair at ÃƒÆ'Ã¢â ¬Â cole des Mines de Paris (France), Professor Emeritus at University of LinkÃƒÆ'Ã Â¶ping (Sweden), and Visiting Professor at the Norwegian University of Science and Technology (NTNU) in Trondheim (Norway). He has since 1971 worked at universities, research centres, and industries in several countries and with problems from several domains, including nuclear power generation, aerospace and aviation, air traffic management, software engineering, healthcare, and land-based traffic. His professional interests include industrial safety, resilience engineering, accident investigation, cognitive systems engineering and cognitive ergonomics. He has published more than 250 papers and authored or edited 17 books, some of the most recent titles being The ETTO Principle (Ashgate, 2009), Resilience Engineering Perspectives: Preparation and Restoration (Ashgate, 2009), Resilience Engineering Perspectives: Remaining Sensitive to the Possibility of Failure

(Ashgate, 2008), Resilience Engineering: Concepts and Precepts (Ashgate, 2006), and Barriers and Accident Prevention (Ashgate, 2004). Erik Hollnagel is Editor-in-chief of Ashgate Studies in Resilience Engineering and, together with Pietro C. Cacciabue, Editor-in-Chief of the International Journal of Cognition, Technology & Work. Jean PariÃƒÂ¨s graduated from the French National School of Civil Aviation as an engineer, then joined the DGAC for several positions dealing with air safety regulations. He was a member of the ICAO Human Factors & Flight Safety Study Group since its creation in 1988. In 1990, he joined the Bureau EnquÃƒÆ'Ã Â²tes Accident as Deputy Head, and Head of Investigations, where he led the technical investigation into the Mont Saint-Odile air accident, 1992. In 1994, Jean left the BEA to be a founding member - and now the CEO - of DÃƒÂ©dale SA. Set in Paris and Melbourne (Australia), DÃƒÂ©dale activity focuses on the Human and Organisational dimensions

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