Record Nr. Autore	UNINA9910454098603321 Woods David D.
Titolo	Resilience Engineering : Concepts and Precepts / / editors, Hollnagel, Erik
Pubbl/distr/stampa	Boca Raton, FL : , : CRC Press, , 2017
ISBN	1-317-06529-8 1-315-60568-6 1-317-06528-X 9786611097301 1-281-09730-6 0-7546-8136-X
Edizione	[1st edition]
Descrizione fisica	1 online resource (410 p.)
Disciplina	620/.00452
Soggetti	Reliability (Engineering) System analysis Decision making Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. [371]-388) and indexes.
Nota di contenuto	Cover; CONTENTS; PREFACE; PROLOGUE: RESILIENCE ENGINEERING CONCEPTS; Hindsight and Safety; From Reactive to Proactive Safety; Resilience; PART I: EMERGENCE; 1 RESILIENCE: THE CHALLENGE OF THE UNSTABLE; Understanding Accidents; Anticipating Risks; SYSTEMS ARE EVER-CHANGING; 2 ESSENTIAL CHARACTERISTICS OF RESILIENCE; Avoiding the Error of the Third Kind; Dynamic Balancing Acts; Acknowledgements; 3 DEFINING RESILIENCE; Pictures of Resilience; How Do We Recognise Resilience When We See It?; Is Road Traffic Resilient?; Conclusion; NATURE OF CHANGES IN SYSTEMS 4 COMPLEXITY, EMERGENCE, RESILIENCEIntroduction; Emergence and Systems; From Emergence to Resilience; Conclusion; 5 A TYPOLOGY OF RESILIENCE SITUATIONS; Resilience against What?; Situation I. The Regular Threat; Situation II. The Irregular Threat; Situation III. The Unexampled Event; Time: Foresight, Coping, and Recovery; Foresee and Avoid; Coping with Ongoing Trouble; Repairing after Catastrophe;

1.

	Conclusion; Acknowledgement; RESILIENT SYSTEMS; 6 INCIDENTS - MARKERS OF RESILIENCE OR BRITTLENESS?; Incidents are Ambiguous; 'Decompensation.' A Pattern in Adaptive Response; Acknowledgements 7 RESILIENCE ENGINEERING: CHRONICLING THE EMERGENCE OF CONFUSED CONSENSUSResilience Engineering and Getting Smarter at Predicting the Next Accident; Modelling the Drift into Failure; Work as Imagined versus Work as Actually Done; Towards Broader Markers of Resilience; PART II: CASES AND PROCESSES; 8 ENGINEERING RESILIENCE INTO SAFETY-CRITICAL SYSTEMS; Resilience and Safety; STAMP; The Models; Principal Findings and Anticipated Outcomes/Benefits; Implications for Designing and Operating Resilient Systems; 9 IS RESILIENCE REALLY NECESSARY? THE CASE OF RAILWAYS; Introduction Observations on Safety Management in Railway Track MaintenanceAssessing Resilience; Discussion and Conclusions; SYSTEMS ARE NEVER PERFECT; 10 STRUCTURE FOR MANAGEMENT OF WEAK AND DIFFUSE SIGNALS; Problem Awareness; Forum for Consultation; Strengthening the Forum; Other Fora; A Bundle of Arrows; 11 ORGANIZATIONAL RESILIENCE AND INDUSTRIAL RISK; Introduction; What is the Nature of Resilience?; Planning and Flexibility in Operational Systems; The Role of Quality and Safety in Achieving Resilience; The Problem of Organizational Change; Change in Technology; Conclusions - the Focus on Resilience AN EVIL CHAIN MECHANISM LEADING TO FAILURES12 SAFETY MANAGEMENT IN AIRLINES; Introduction; How Safe is Flying?; Current Practices in Safety Management; Models of Risk and Safety; What Next? From Safety to Resilience; 13 TAKING THINGS IN ONE'S STRIDE: COGNITIVE FEATURES OF TWO RESILIENT PERFORMANCES; Introduction; Example 1: Handling a 'Soft' Emergency; Example 2: Response to a Bus Bombing; Analysis; Conclusion; 14 EROSION OF MANAGERIAL RESILIENCE: FROM VASA TO NASA; Vasa to Columbia; Managerial Resilience; Safety Culture and Managerial Resilience; Measuring Managerial Resilience Training Managerial Resilience
Sommario/riassunto	"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."Provided by publisher.