

1. Record Nr.	UNINA9910488691303321
Autore	Amadi-Echendu Joe E.
Titolo	Managing engineered assets : principles and practical concepts / / Joe E. Amadi-Echendu
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-76051-0
Descrizione fisica	1 online resource (141 pages)
Disciplina	658.5
Soggetti	Industrial management Manufacturing industries - Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Foreword by Georges Abdul-Nour -- Foreword by Adolfo Crespo Márquez -- Foreword by Belle R. Upadhyaya -- Preface -- Contents -- https://www.mdpi.com/journal/sustainability -- ?ul= -- https://www.mdpi.com/journal/sustainability -- About the Author -- 1 Definitions and Scope -- Abstract -- 1.1 EAM in the Era of Society 5.0 and 4IR -- 1.2 EAM is a Grand Challenge for Sustainable Development -- 1.3 EAM Historical Antecedents -- 1.3.1 Terotechnology -- 1.3.2 Safety and Legislative Antecedents -- 1.3.3 Other Antecedents -- 1.4 Asset Definitions -- 1.4.1 What is an Asset? -- 1.4.2 Asset Categories and Types -- 1.4.3 Discrete Assets, Asset Systems, Cyber Physical and Socio-Technological Systems -- 1.5 Definitions of Asset Management -- 1.6 Summary of the Chapter -- 1.7 Exercises -- References and Additional Reading -- 2 Value and Sustainability -- Abstract -- 2.1 Value -- 2.2 Investment -- 2.3 Valuation -- 2.4 Value and Valuation -- 2.5 Sustainability -- 2.5.1 Socio-Economic and Ecological Sustainability -- 2.5.2 Sustainability and Asset Management -- 2.6 Summary of the Chapter -- 2.7 Exercises -- References and Additional Reading -- 3 Technical Principles -- Abstract -- 3.1 Uncertainty -- 3.2 Risk -- 3.3 Reliability -- 3.4 Asset Integrity -- 3.5 Vulnerability -- 3.6 Resilience -- 3.7 Asset Condition -- 3.8 Summary -- 3.9 Exercises -- References and

Additional Reading -- 4 Practical Concepts -- Abstract -- 4.1 Planning, Organising and Scheduling -- 4.1.1 Planning -- 4.1.2 Organising -- 4.1.3 Scheduling -- 4.2 Team and Teaming -- 4.2.1 Team -- 4.2.2 Teaming -- 4.3 Due Diligence -- 4.4 Decision Making -- 4.5 Summary -- 4.6 Exercises -- References and Additional Reading -- 5 Engineering Asset Management Framework -- Abstract. 5.1 Business Cycles, Natural Cycles and Asset Life Phases/Stages -- 5.1.1 Business and Natural Cycles -- 5.1.2 The "Lifecycle" Argument -- 5.1.3 Asset Life Phases and Stages -- 5.1.4 Perceptions of Asset Life -- 5.2 Influence of Preceding Decisions on Asset Life Phase/Stage -- 5.3 Asset Structure -- 5.3.1 Asset Hierarchy -- 5.3.2 Asset Register -- 5.3.3 Influence of 4IR Technologies -- 5.4 Asset Management Guidelines, Regulations and Standards -- 5.5 The Asset Management System -- 5.6 Asset Management Framework -- 5.6.1 People Manage Engineered Assets -- 5.6.2 Organisational Structure -- 5.6.3 Processes and Procedures -- 5.7 Summary of the Chapter -- 5.8 Exercises -- References and Additional Reading -- 6 Asset Acquisition Stage -- Abstract -- 6.1 Asset Acquisition Considerations -- 6.1.1 Funding and Financing Issues -- 6.1.2 Technology and Technological Issues -- 6.1.3 Environment and Ecology Issues -- 6.1.4 Socio-Economic and Socio-Political Considerations -- 6.2 Asset Acquisition Options I -- 6.2.1 Outright Ownership -- 6.2.2 Hire/Lease -- 6.3 Asset Acquisition Options II: Partnerships -- 6.3.1 Public-Private Partnerships -- 6.3.2 Servitisation -- 6.3.3 Dematerialisation -- 6.4 From Asset Acquisition to Utilisation: Operational Readiness -- 6.4.1 Asset Acquisition Phases -- 6.4.2 Operational Readiness -- 6.5 Summary of the Chapter -- 6.6 Exercises -- References and Additional Reading -- 7 Asset Utilisation Stage -- Abstract -- 7.1 Operational Readiness to Utilisation -- 7.1.1 Operating Philosophy -- 7.1.2 Operational Planning and Scheduling -- 7.2 Maintenance -- 7.2.1 Maintenance Philosophy -- 7.2.2 Maintenance Conventions -- 7.2.3 Maintenance Planning, Scheduling, and Execution -- 7.3 Condition Monitoring, Diagnostics and Prognostics -- 7.4 Condition and Performance Assessments -- 7.4.1 Asset Condition and Value. 7.4.2 Condition Assessment Dimensions -- 7.4.3 Performance Assessment -- 7.4.4 Performance Reporting -- 7.5 Asset Management Decisions -- 7.6 Summary of the Chapter -- 7.7 Exercises -- References and Additional Reading -- 8 Asset Retirement Stage -- Abstract -- 8.1 Asset 'End-of-Life' Definitions -- 8.2 Asset 'End-of-Life' Considerations -- 8.3 Asset Retirement Options -- 8.3.1 Mothballing an Asset -- 8.3.2 Replace, Upgrade, Overhaul and Repair -- 8.3.3 Rebuild, Renew, Renovate, Revamp, Etc -- 8.3.4 Disposal and Divestment -- 8.4 Summary of the Chapter -- 8.5 Exercises -- References and Additional Reading -- 9 SAMP & EAMBoK -- Abstract -- 9.1 Engineering Asset Management Strategy and Policy -- 9.1.1 Asset Management Strategy -- 9.1.2 Strategic Asset Management Plan -- 9.2 Engineering Asset Management Body of Knowledge (EAMBoK) Issues -- 9.3 Summary of the Chapter -- 9.4 Exercises -- References and Additional Reading.
