

1. Record Nr.	UNINA9910466155703321
Titolo	How to do systems analysis : primer and casebook // John E. Gibson [and three others]
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2017 ©2017
ISBN	1-119-17958-0 1-119-17959-9
Descrizione fisica	1 online resource (307 p.)
Collana	Wiley Series in Systems Engineering and Management
Disciplina	658.4/032
Soggetti	System analysis Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	How to Do Systems Analysis: Primer and Casebook; Table of Contents; Preface; Original Preface from Jack Gibson; Acknowledgments; About the Companion Website; Part I: Primer; Chapter 1: Introduction; 1.1 What Is a System?; 1.2 Terminology Confusion; 1.3 Systems Analysis Equals Operations Research Plus Policy Analysis; 1.4 Attributes of Large-Scale Systems; 1.5 Transportation Systems: An Example of a Large-Scale System; 1.6 Systems Integration; 1.7 What Makes a ``Systems Analysis Different?; 1.8 Distant Roots of Systems Analysis; 1.9 Immediate Precursors to Systems Analysis 1.10 Development of Systems Analysis As a Distinct Discipline: the Influence of RandNotes; References; Chapter 2: Six Major Phases of Systems Analysis; 2.1 The Systems Analysis Method: Six Major Phases; 2.1.1 Determine Goals; 2.1.2 Establish Criteria for Ranking Alternative Candidates; 2.1.3 Develop Alternative Solutions; 2.1.4 Rank Alternatives; 2.1.5 Iterate; 2.1.6 Action; 2.2 The Goal-Centered or Top-Down Approach; 2.3 The Index of Performance Concept; 2.4 Developing Alternative Scenarios; 2.5 Ranking Alternatives; 2.6 Iteration and the ""Error-Embracing"" Approach 2.7 The Action Phase: The Life Cycle of a SystemNotes; References; Chapter 3: Goal Development; 3.1 Seven Steps in Goal Development; 3.2 On Generalizing the Question; 3.3 The Descriptive Scenario; 3.4

The Normative Scenario; 3.5 The Axiological Component; 3.6 Developing an Objectives Tree; 3.7 Validate; 3.8 Iterate; Notes; References; Chapter 4: The Index of Performance; 4.1 Introduction; 4.2 Desirable Characteristics for an Index of Performance; 4.3 Economic Criteria; 4.4 Four Common Criteria of Economic Efficiency; 4.5 Is there a Problem With Multiple Criteria? 4.6 What Is Wrong With the B--C Ratio? 4.7 Can IRR Be Fixed?; 4.8 Expected Monetary Value; 4.9 Nonmonetary Performance Indices; Notes; References; Chapter 5: Develop and Evaluate Alternative Candidate Solutions; 5.1 Introduction; 5.2 The Classical Approach to Creativity; 5.3 Concepts in Creativity; 5.4 Brainstorming; 5.5 Brainwriting; 5.6 Dynamic Confrontation; 5.7 Zwicky's Morphological Box; 5.8 The Options Field/Options Profile Approach; 5.9 Computer Creativity; 5.10 Trade Study Methods; 5.11 Trade Study Example; Notes; References; Chapter 6: The 10 Golden Rules of Systems Analysis 6.1 Introduction 6.2 Rule 1: There Always Is a Client; 6.3 Rule 2: Your Client Does Not Understand His Own Problem; 6.4 Rule 3: The Original Problem Statement Is Too Specific: You Must Generalize the Problem to Give It Contextual Integrity; 6.5 Rule 4: The Client Does Not Understand the Concept of the Index of Performance; 6.6 Rule 5: You Are the Analyst, Not the Decision Maker; 6.7 Rule 6: Meet the Time Deadline and the Cost Budget; 6.8 Rule 7: Take a Goal-Centered Approach to the Problem, Not a Technology-Centered or Chronological Approach 6.9 Rule 8: Non-Users Must Be Considered in the Analysis and in the Final Recommendations
