

1. Record Nr.	UNINA9910828871903321
Autore	Lemberger Pirmin
Titolo	Managing complexity of information systems : the value of simplicity / / Pirmin Lemberger, Mederic Morel
Pubbl/distr/stampa	London : , : ISTE Hoboken, NJ : , : Wiley, , 2012
ISBN	1-118-56201-1 1-299-18861-3 1-118-56615-7 1-118-56605-X
Edizione	[1st edition]
Descrizione fisica	1 online resource (245 p.)
Collana	Iste
Disciplina	658.4/038011
Soggetti	Management information systems Technological complexity Information technology
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 and index.
Nota di contenuto	Cover; Managing Complexity of Information Systems; Title Page; Copyright Page; Table of Contents; Foreword; Preface; Chapter 1. Why Simplicity?; 1.1. Solving conflicting requirements; 1.2. Three periods in IS management; 1.2.1. Management driven by technology; 1.2.2. Management through cost reduction; 1.2.3. Management through value creation; 1.3. And now ... simplicity!; 1.3.1. Technology, cost reduction, value creation ... So what's next?; 1.4. Plan of the book; Chapter 2. Complexity, Simplicity, and Abstraction; 2.1. What does information theory tell us?; 2.1.1. Shannon's entropy 2.1.2. Kolmogorov complexity2.1.2.1. Complexity of objects versus complexity of binary strings; 2.1.2.2. Relation to Shannon's entropy; 2.1.2.3. Can we compute K-complexity?; 2.1.3. Bennett's logical depth; 2.1.4. Abstraction in light of scale and depth; 2.1.5. Harvesting information theory; 2.2. What does the design tell us?; 2.2.1. Simplicity by reduction; 2.2.2. Simplicity by hiding complexity; 2.2.2.1. Customers; 2.2.2.2. Business analysts; 2.2.2.3. IT personnel; 2.2.3. Simplicity through organization; 2.2.4. Simplicity through learning

2.2.4.1. Learning obviates the need to hide complexity; 2.2.4.2. Learning allows complexity transformation; 2.2.5. Simplicity implies time saving; 2.2.5.1. Lack of time; 2.2.5.2. How simplicity saves time; 2.2.6. Simplicity needs trust; 2.2.7. What does software architecture tell us?; 2.2.7.1. The complexity of code and of IS architecture; 2.2.8. Abstraction in software engineering; 2.2.8.1. Abstraction is everywhere in software; 2.2.8.2. Depth and scale revisited; Chapter 3. Value or Values?; 3.1. Who is concerned?; 3.1.1. Internal stakeholders; 3.1.2. External stakeholders; 3.2. Concepts of value for an IS; 3.2.1. Book value; 3.2.2. Net worth; 3.2.3. Use value; 3.2.3.1. Functional criterion; 3.2.3.2. Non-functional criteria; 3.2.4. Strategic value; 3.2.5. Sustainability value; 3.3. Are these values sufficient and independent?; 3.3.1. IT chaos; 3.3.2. Tech academy; 3.3.3. Alignment trap; 3.3.4. Users are unimportant; 3.3.5. Business-user tyranny; 3.3.6. Wrong direction; 3.3.7. Architecture is a waste of money; 3.3.8. IS heaven; Chapter 4. Promoting Value Through Simplicity; 4.1. Growing technical heterogeneity; 4.1.1. Openness; 4.1.1.1. Why complexity increases; 4.1.1.2. Implementing simplicity; 4.1.2. Rapid obsolescence of IT; 4.1.2.1. Why complexity increases; 4.1.2.2. Implementing simplicity; 4.1.3. Absence of technological vision and leadership; 4.1.3.1. Why complexity increases; 4.1.3.2. Implementing simplicity; 4.2. Changing requirements; 4.2.1. Why complexity increases; 4.2.2. Implementing simplicity; 4.2.2.1. Technical answers; 4.2.2.2. Organizational answers; 4.3. Human factors; 4.3.1. Multidisciplinarity; 4.3.1.1. Why complexity increases; 4.3.1.2. Implementing simplicity; 4.3.2. Disempowerment of IT Skills; 4.3.2.1. Why complexity increases; 4.3.2.2. Implementing simplicity

Sommario/riassunto

This book is about complexity in Information Systems (IS). The subject is addressed from both conceptual and applied perspectives. Concepts are drawn from information theory, industrial design and software engineering. Its content capitalizes on experiences gathered by the authors during various contracting jobs involving software architecture, modeling and IS architecture that were conducted for large organizations in the banking and industry sectors, as well as in the public sector. The authors develop the point of view according to which mastering complexity involves two essential steps: