

Challenges Of Managing Information Quality In Service Organizations

"Interest in e-government, both in industry and in academies, has grown rapidly over the past decade. This book provides helpful examples from practitioners and managers involving real-life applications; academics and researchers contribute theoretical insights"--Provided by publisher.

The Silver Market Phenomenon In the developed countries, the dominant factor in the next society will be something to which most people are only beginning to pay attention: the rapid growth in the older population and the rapid shrinking of the younger generation. Peter F. Drucker The current shift in demographics – aging and shrinking populations – in many countries around the world presents a major challenge to companies and societies alike. As a matter of fact, this is true both for a number of industrialized nations as well as for certain emerging economies. However, even though this crucial issue has recently started to attract the attention of scholars, business leaders, and politicians, research on the implications of the demographic change on businesses is still in its infancy. Most accounts of the so-called demographic “problem” deal, as the term already suggests, with the challenges and threats of the demographic development. These discussions feature, for example, the shrinking workforce, welfare effects, social conflicts, etc. At the same time, chances and opportunities are often neglected. The emergence of new markets, the potential for innovations, the integration of older people into jobs and work places, the joy of active aging, and their varied roles within society are just a few examples of how what at first sight appears to be a crisis could be turned into an opportunity. All in all, countries and industries are reacting very differently – from still neglecting to proactively looking for and developing solutions.

The issue of data quality is as old as data itself. However, the proliferation of diverse, large-scale and often publically available data on the Web has increased the risk of poor data quality and misleading data interpretations. On the other hand, data is now exposed at a much more strategic level e.g. through business intelligence systems, increasing manifold the stakes involved for individuals, corporations as well as government agencies. There, the lack of knowledge about data accuracy, currency or completeness can have erroneous and even catastrophic results. With these changes, traditional approaches to data management in general, and data quality control specifically, are challenged. There is an evident need to incorporate data quality considerations into the whole data cycle, encompassing managerial/governance as well as technical aspects. Data quality experts from research and industry agree that a unified framework for data quality management should bring together organizational, architectural and computational approaches. Accordingly, Sadiq structured this handbook in four parts: Part I is on organizational solutions, i.e. the development of data quality objectives for the organization, and the development of strategies to establish roles, processes, policies, and standards required to manage and ensure data quality. Part II, on architectural solutions, covers the technology landscape required to deploy developed data quality management processes, standards and policies. Part III, on computational solutions, presents effective and efficient tools and techniques related to record linkage, lineage and provenance, data uncertainty, and advanced integrity constraints. Finally, Part IV is devoted to case studies of successful data quality initiatives that highlight the various aspects of data quality in action. The individual chapters present both an overview of the respective topic in terms of historical research and/or practice and state of the art, as well as specific techniques, methodologies and frameworks developed by the individual contributors. Researchers and students of computer science, information systems, or business management as well as data professionals and practitioners will benefit most from this handbook by not only focusing on the various sections relevant to their research area or particular practical work, but by also studying chapters that they may initially consider not to be directly relevant to them, as there they will learn about new perspectives and approaches.

A guide for assessing an organization's data quality practice and a roadmap for implementing a viable data and information quality management program, based on rigorous research and drawing on real-world examples. All organizations today confront data quality problems, both systemic and structural. Neither ad hoc approaches nor fixes at the systems level--installing the latest software or developing an expensive data warehouse--solve the basic problem of bad data quality practices. Journey to Data Quality offers a roadmap that can be used by practitioners, executives, and students for planning and implementing a viable data and information quality management program. This practical guide, based on rigorous research and informed by real-world examples, describes the challenges of data management and provides the principles, strategies, tools, and techniques necessary to meet them. The authors, all leaders in the data quality field for many years, discuss how to make the economic case for data quality and the importance of getting an organization's leaders on board. They outline different approaches for assessing data, both subjectively (by users) and objectively (using sampling and other techniques). They describe real problems and solutions, including efforts to find the root causes of data quality problems at a healthcare organization and data quality initiatives taken by a large teaching hospital. They address setting company policy on data quality and, finally, they consider future challenges on the journey to data quality.

Organizations today have access to vast stores of data that come in a wide variety of forms and may be stored in places ranging from file cabinets to databases, and from library shelves to the Internet. The enormous growth in the quantity of data, however, has brought with it growing problems with the quality of information, further complicated by the struggles many organizations are experiencing as they try to improve their systems for knowledge management and organizational memory. Failure to manage information properly, or inaccurate data, costs businesses billions of dollars each year. This volume presents cutting-edge research on information quality. Part I seeks to understand how data can be measured and evaluated for quality. Part II deals with the problem of ensuring quality while processing data into information a company can use. Part III presents case studies, while Part IV explores organizational issues related to information quality. Part V addresses issues in information quality education.

Meeting the Challenges of Data Quality Management outlines the foundational concepts of data quality management and its challenges. The book introduces new and experienced DQ practitioners with the understanding they need to communicate with stakeholders in a consistent manner. Sections cover practical techniques for getting value from activities such as data profiling, DQ monitoring and DQ reporting. The book extends these ideas to the management of data quality within "big data" environments. It will appeal to data quality and data management professionals, especially those involved with data governance, across a wide range of industries, and in academia and government organizations. Users will find this to be a key reference for

graduate students in computer science programs which normally have a limited focus on the data itself and where data quality management is an often-overlooked aspect of data management courses. Outlines a set of challenges that are inherent in the process of managing the quality of data, including the rapid evolution of technology and the effort of organizations to take advantage of technological change Investigates approaches to meeting the challenges that get in the way of data quality management and enables professionals to build out the components that contribute to a successful data quality management program Combines a discussion of fundamentals with their practical application which should enable university students to see the direct connection between theory and practice Includes appendices that feature DQ maturity models as well as the Data Profiling Analysis Template (DATA PAT) for capturing results from executing data profiling

COVID-19 is profoundly affecting the ways in which we live, learn, plan, and develop. What does COVID-19 mean for the future of digital information use and delivery, and for more traditional forms of library provision? Libraries, Digital Information, and COVID gives immediate and long-term solutions for librarians responding to the challenge of COVID-19. The book helps library leaders prepare for a post-COVID-19 world, giving guidance on developing sustainable solutions. The need for sustainable digital access has now become acute, and while offering a physical space will remain important, current events are likely to trigger a shift toward off-site working and study, making online access to information more crucial. Libraries have already been providing access to digital information as a premium service. New forms and use of materials all serve to eliminate the need for direct contact in a physical space. Such spaces will come to be predicated on evolving systems of digital information, as critical needs are met by remote delivery of goods and services. Intensified financial pressure will also shape the future, with a reassessment of information and its commercial value. In response, there will be a massification of provision through increased cooperation and collaboration. These significant transitions are driving professionals to rethink and question their identities, values, and purpose. This book responds to these issues by examining the practicalities of running a library during and after the pandemic, answering questions such as: What do we know so far? How are institutions coping? Where are providers placing themselves on the digital/print and the remote/face-to-face continuums? This edited volume gives analysis and examples from around the globe on how libraries are managing to deliver access and services during COVID-19. This practical and thoughtful book provides a framework within which library directors and their staff can plan sustainable services and collections for an uncertain future. Focuses on the immediate practicalities of service provision under COVID-19 Considers longer-term strategic responses to emerging challenges Identifies key concerns and problems for librarians and library leaders Analyzes approaches to COVID-19 planning Presents and examines exemplars of best practice from around the world Offers practical models and a useful framework for the future

Technological Developments in Networking, Education and Automation includes a set of rigorously reviewed world-class manuscripts addressing and detailing state-of-the-art research projects in the following areas: Computer Networks: Access Technologies, Medium Access Control, Network architectures and Equipment, Optical Networks and Switching, Telecommunication Technology, and Ultra Wideband Communications. Engineering Education and Online Learning: including development of courses and systems for engineering, technical and liberal studies programs; online laboratories; intelligent testing using fuzzy logic; taxonomy of e-courses; and evaluation of online courses. Pedagogy: including benchmarking; group-learning; active learning; teaching of multiple subjects together; ontology; and knowledge management. Instruction Technology: including internet textbooks; virtual reality labs, instructional design, virtual models, pedagogy-oriented markup languages; graphic design possibilities; open source classroom management software; automatic email response systems; tablet-pcs; personalization using web mining technology; intelligent digital chalkboards; virtual room concepts for cooperative scientific work; and network technologies, management, and architecture. Coding and Modulation: Modeling and Simulation, OFDM technology , Space-time Coding, Spread Spectrum and CDMA Systems. Wireless technologies: Bluetooth , Cellular Wireless Networks, Cordless Systems and Wireless Local Loop, HIPERLAN, IEEE 802.11, Mobile Network Layer, Mobile Transport Layer, and Spread Spectrum. Network Security and applications: Authentication Applications, Block Ciphers Design Principles, Block Ciphers Modes of Operation, Electronic Mail Security, Encryption & Message Confidentiality, Firewalls, IP Security, Key Cryptography & Message Authentication, and Web Security. Robotics, Control Systems and Automation: Distributed Control Systems, Automation, Expert Systems, Robotics, Factory Automation, Intelligent Control Systems, Man Machine Interaction, Manufacturing Information System, Motion Control, and Process Automation. Vision Systems: for human action sensing, face recognition, and image processing algorithms for smoothing of high speed motion. Electronics and Power Systems: Actuators, Electro-Mechanical Systems, High Frequency Converters, Industrial Electronics, Motors and Drives, Power Converters, Power Devices and Components, and Power Electronics.

Saša Baškarada presents a capability maturity model for information quality management process assessment and improvement. The author employed six exploratory case studies and a four round Delphi study to gain a better understanding of the research problem and to build the preliminary model, which he then applied in seven international case studies for further enhancement and external validation.

Technologies such as the Internet and mobile commerce bring with them ubiquitous connectivity, real-time access, and overwhelming volumes of data and information. The growth of data warehouses and communication and information technologies has increased the need for high information quality management in organizations. Information Quality Management: Theory and Applications provides solutions to information quality problems becoming increasingly prevalent. Information Quality Management: Theory and Applications provides insights and support for professionals and researchers working in the field of information and knowledge management, information quality, practitioners and managers of manufacturing, and service industries concerned with the management of information.

This book constitutes the refereed proceedings of the 11th Extended Semantic Web Conference, ESWC 2014, held in Anissaras, Crete, Greece France, in May 2014. The 50 revised full papers presented together with three invited talks were carefully reviewed and selected from 204 submissions. They are organized in topical sections on mobile,

sensor and semantic streams; services, processes and cloud computing; social web and web science; data management; natural language processing; reasoning; machine learning, linked open data; cognition and semantic web; vocabularies, schemas, ontologies. The book also includes 11 papers presented at the PhD Symposium.

This unique volume presents a new approach OCo the general theory of information OCo to scientific understanding of information phenomena. Based on a thorough analysis of information processes in nature, technology, and society, as well as on the main directions in information theory, this theory synthesizes existing directions into a unified system. The book explains how this theory opens new kinds of possibilities for information technology, information sciences, computer science, knowledge engineering, psychology, linguistics, social sciences, and education. The book also gives a broad introduction to the main mathematically-based directions in information theory. The general theory of information provides a unified context for existing directions in information studies, making it possible to elaborate on a comprehensive definition of information; explain relations between information, data, and knowledge; and demonstrate how different mathematical models of information and information processes are related. Explanation of information essence and functioning is given, as well as answers to the following questions: how information is related to knowledge and data; how information is modeled by mathematical structures; how these models are used to better understand computers and the Internet, cognition and education, communication and computation. Sample Chapter(s). Chapter 1: Introduction (354 KB). Contents: General Theory of Information; Statistical Information Theory; Semantic Information Theory; Algorithm Information Theory; Pragmatic Information Theory; Dynamics of Information. Readership: Professionals in information processing, and general readers interested in information and information processes.

"This book presents cases on theory, research, and practice in the areas of technology transfer, innovation, and commercialization, offering illustrations and examples of entrepreneurial successes and pitfalls in university, industry, government, and international settings"--Provided by publisher.

Society, globally, has entered into what might be called the "service economy." Services now constitute the largest share of GDP in most countries and provide the major source of employment in both developed and developing countries. Services permeate all aspects of peoples' lives and are becoming inseparable from most aspects of economic activity. "Quality management" has been a dominating managerial practice since World War II. With quality management initially associated with manufacturing industries, one might assume the relevance of quality management might decrease with the emergence of the service economy. To the contrary, the emergence of the service economy strengthened the importance of quality issues, which no longer are associated only with manufacturing industries but are increasingly applied in all service sectors, as well.

Today, we talk not only about product or service quality but have even expanded the framework of quality to quality of life and quality of environment. Thus, quality and services have emerged in parallel as closely interrelated fields. The Encyclopedia of Quality and the Service Economy explores such relevant questions as: What are the characteristics, nature, and definitions of quality and services? How do we define quality of products, quality of services, or quality of life? How are services distinguished from goods? How do we measure various aspects of quality and services? How can products and service quality be managed most effectively and efficiently? What is the role of customers in creation of values? These questions and more are explored within the pages of this two-volume, A-to-Z reference work.

th The 4 edition of the InternationalSymposium on BioinformaticsResearchand Applications (ISBRA 2008) was held on May 6-9, 2008 at Georgia State U- versity in Atlanta, Georgia. The symposium provides a forum for the exchange of ideas and results among researchers, developers, and practitioners working on all aspects of bioinformatics and computational biology and their applications. The technical program of the symposium included 35 contributed papers, selected by the Program Committee from a number of 94 full submissions - ceived in response to the call for papers. The technical program also included six papers contributed to the First International Workshop on Optimal Data Mining in Gene Expression Analysis (ODGEA 2008), which was held in c- junction with ISBRA 2008. In addition to the contributed papers, the sym- sium included tutorials and poster sessions and featured invited keynote talks by six distinguished speakers. Andrew Scott Allen from Duke University and Dan Nicolae from the University of Chicago spoke on novel analysis methods for genome-wide association studies; Kenneth Buetow, director of the National Cancer Institute Center for Bioinformatics, spoke on the cancer Biomedical - formatics Grid; Andrey Gorin from Oak Ridge National Laboratory spoke on peptide identi?cation from mass spectrometry data; Yury Khudyakov from the Center for Disease Control and Prevention spoke on integrative viral molecular epidemiology; and Kwok Tsui from Georgia Institute of Technology spoke on data mining and statistical methods for analyzing microarray experiments.

"Incorrect and misleading information associated with an enterprise's production and service jeopardize both customer relationships and customer satisfaction, and ultimately have a negative effect on revenue. This book provides insight and support for academic professionals as well as for practitioners concerned with the management of information"--Provided by publisher.

What makes information useful? This seemingly simple and yet intriguing and complicated question is discussed in this book. It examines ways in which the quality of information can be improved in knowledge-intensive processes (such as on-line communication, strategy, product development, or consulting). Based on existing information quality literature, the book proposes a conceptual framework to manage information quality for knowledge-based content. It presents four proven principles to apply the framework to a variety of information products. Five in-depth company case studies show how information quality can be managed systematically. The book uses frequent diagrams and tables, as well as diagnostic questions and summary boxes to make its content actionable.

Health Information Exchange (HIE): Navigating and Managing a Network of Health Information Systems allows health professionals to appropriately access, and securely share, patients' vital medical information electronically, thus improving the speed, quality, safety, and cost of patient care. The book presents foundational knowledge on HIE, covering the broad areas of technology, governance, and policy, providing a concise, yet in-depth, look at HIE that can be used as a teaching tool for universities, healthcare organizations with a training component, certification institutions, and as a tool for self-study for independent learners who want to know more about HIE when studying for certification exams. In addition, it not only provides coverage

of the technical, policy, and organizational aspects of HIE, but also touches on HIE as a growing profession. In Part One, the book defines HIE, describing it as an emerging profession within HIT/Informatics. In Part Two, the book provides key information on the policy and governance of HIE, including stakeholder engagement, strategic planning, sustainability, etc. Part Three focuses on the technology behind HIE, defining and describing master person indexes, information infrastructure, interfacing, and messaging, etc. In Part Four, the authors discuss the value of HIE, and how to create and measure it. Finally, in Part Five, the book provides perspectives on the future of HIE, including emerging trends, unresolved challenges, etc. Offers foundational knowledge on Health Information Exchange (HIE), covering the broad areas of technology, governance, and policy Focuses on explaining HIE and its complexities in the context of U.S. health reform, as well as emerging health IT activities in foreign nations Provides a number of in-depth case studies to connect learners to real-world application of the content and lessons from the field Offers didactic content organization and an increasing complexity through five parts

The fundamental motivation of this book is to contribute to the future advancement of Asset Management in the context of industrial plants and infrastructures. The book aims to foster a future perspective that takes advantage of value-based and intelligent asset management in order to make a step forward with respect to the evolution observed nowadays. Indeed, the current understanding of asset management is primarily supported by well-known standards. Nonetheless, asset management is still a young discipline and the knowledge developed by industry and academia is not set in stone yet. Furthermore, current trends in new organizational concepts and technologies lead to an evolutionary path in the field. Therefore, this book aims to discuss this evolutionary path, starting first of all from the consolidated theory, then moving forward to discuss:

- The strategic understanding of value-based asset management in a company;
- An operational definition of value, as a concept on the background of value-based asset management;
- The identification of intelligent asset management, with the aim to frame a set of “tools” recommended to support the asset-related decision-making process over the asset lifecycle;
- The emergence of new technologies such as cyber physical systems and digital twins, and the implications of this on asset management.

Provides an important framework for data analysts in assessing the quality of data and its potential to provide meaningful insights through analysis Analytics and statistical analysis have become pervasive topics, mainly due to the growing availability of data and analytic tools. Technology, however, fails to deliver insights with added value if the quality of the information it generates is not assured. Information Quality (InfoQ) is a tool developed by the authors to assess the potential of a dataset to achieve a goal of interest, using data analysis. Whether the information quality of a dataset is sufficient is of practical importance at many stages of the data analytics journey, from the pre-data collection stage to the post-data collection and post-analysis stages. It is also critical to various stakeholders: data collection agencies, analysts, data scientists, and management. This book: Explains how to integrate the notions of goal, data, analysis and utility that are the main building blocks of data analysis within any domain. Presents a framework for integrating domain knowledge with data analysis. Provides a combination of both methodological and practical aspects of data analysis. Discusses issues surrounding the implementation and integration of InfoQ in both academic programmes and business / industrial projects. Showcases numerous case studies in a variety of application areas such as education, healthcare, official statistics, risk management and marketing surveys. Presents a review of software tools from the InfoQ perspective along with example datasets on an accompanying website. This book will be beneficial for researchers in academia and in industry, analysts, consultants, and agencies that collect and analyse data as well as undergraduate and postgraduate courses involving data analysis.

New core text for Managing Information modules examining the issue of information management from both a business and an IT perspective. Grounded in the theory, it takes a practical, problem-solving approach that provides students with tools and insights to understand how to formulate and implement information management strategies.

Executing Data Quality Projects, Second Edition presents a structured yet flexible approach for creating, improving, sustaining and managing the quality of data and information within any organization. Studies show that data quality problems are costing businesses billions of dollars each year, with poor data linked to waste and inefficiency, damaged credibility among customers and suppliers, and an organizational inability to make sound decisions. Help is here! This book describes a proven Ten Step approach that combines a conceptual framework for understanding information quality with techniques, tools, and instructions for practically putting the approach to work – with the end result of high-quality trusted data and information, so critical to today’s data-dependent organizations. The Ten Steps approach applies to all types of data and all types of organizations – for-profit in any industry, non-profit, government, education, healthcare, science, research, and medicine. This book includes numerous templates, detailed examples, and practical advice for executing every step. At the same time, readers are advised on how to select relevant steps and apply them in different ways to best address the many situations they will face. The layout allows for quick reference with an easy-to-use format highlighting key concepts and definitions, important checkpoints, communication activities, best practices, and warnings. The experience of actual clients and users of the Ten Steps provide real examples of outputs for the steps plus highlighted, sidebar case studies called Ten Steps in Action. This book uses projects as the vehicle for data quality work and the word broadly to include: 1) focused data quality improvement projects, such as improving data used in supply chain management, 2) data quality activities in other projects such as building new applications and migrating data from legacy systems, integrating data because of mergers and acquisitions, or untangling data due to organizational breakups, and 3) ad hoc use of data quality steps, techniques, or activities in the course of daily work. The Ten Steps approach can also be used to enrich an organization’s standard SDLC (whether sequential or Agile) and it complements general improvement methodologies such as six sigma or lean. No two data quality projects are the same but the flexible nature of the Ten Steps means the methodology can be applied to all. The new Second Edition highlights topics such as artificial intelligence and machine learning, Internet of Things, security and privacy, analytics, legal and regulatory requirements, data science, big data, data lakes, and cloud computing, among others, to show their dependence on data and information and why data quality is more relevant and critical now than ever before. Includes concrete instructions, numerous templates, and practical advice for executing every step of The Ten Steps approach Contains real examples from around the world, gleaned from the author’s consulting practice and from those who implemented based on her training courses and the earlier edition of the book Allows for quick reference with an easy-to-use format highlighting key concepts and definitions, important checkpoints, communication activities, and best practices A companion Web site includes links to numerous data quality resources, including many of the templates featured in the text, quick summaries of key ideas from the Ten Steps methodology, and other tools and information that are available online

DATA ENGINEERING: Mining, Information, and Intelligence describes applied research aimed at the task of collecting data and distilling useful information from that data. Most of the work presented emanates from research completed through collaborations between Acxiom Corporation and its academic research partners under the aegis of the Acxiom Laboratory for Applied Research (ALAR). Chapters are roughly ordered to follow the logical sequence of the transformation of data from raw input data streams to refined information. Four discrete sections cover Data Integration and Information Quality; Grid Computing; Data Mining; and Visualization. Additionally, there are exercises at the end of each chapter. The primary audience for this book is the broad base of anyone interested in data engineering, whether from academia, market research firms, or business-intelligence companies. The volume is ideally suited for researchers, practitioners, and postgraduate students alike. With its focus on problems arising from industry rather than a basic research perspective, combined with its intelligent organization, extensive references, and subject and author indices, it can serve the academic, research, and industrial audiences.

This book includes a selection of articles from The 2019 World Conference on Information Systems and Technologies (WorldCIST'19), held from April 16 to 19, at La Toja, Spain. WorldCIST is a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences and challenges in modern information systems and technologies research, together with their technological development and applications. The book covers a number of topics, including A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Applications and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human-Computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; and N) Technologies for Biomedical Applications.

As technology continues to advance, it is critical for businesses to implement systems that can support the transformation of data into information that is crucial for the success of the company. Without the integration of data (both structured and unstructured) mining in business intelligence systems, invaluable knowledge is lost. However, there are currently many different models and approaches that must be explored to determine the best method of integration. *Integration Challenges for Analytics, Business Intelligence, and Data Mining* is a relevant academic book that provides empirical research findings on increasing the understanding of using data mining in the context of business intelligence and analytics systems. Covering topics that include big data, artificial intelligence, and decision making, this book is an ideal reference source for professionals working in the areas of data mining, business intelligence, and analytics; data scientists; IT specialists; managers; researchers; academicians; practitioners; and graduate students.

The power of modern information systems and information technology (IS/IT) offers new opportunities to rethink, at the broadest levels, existing business strategies, approaches and practices. Over the past decade, IT has opened up new business opportunities, led to the development of new strategic IS and challenged all managers and users of IS/IT to devise new ways to make better use of information. Yet this era which began with much confidence and optimism is now suffering under a legacy of systems that are increasingly failing to meet business needs, and lasting fixes are proving costly and difficult to implement. General management is experiencing a crisis of confidence in their IS functions and in the chief information systems officers who lead them (Earl and Feeney, 1994:11). The concern for chief executive officers is that they are confronting a situation that is seemingly out of control. They are asking, 'What is the best way to rein in these problems and effectively assess IS performance? Further, how can we be certain that IS is adequately adding value to the organisational bottom line?' On the other hand, IS executives and professionals who are responsible for creating, managing and maintaining the organisation's systems are worried about the preparedness of general managers to cope with the growth in new technologies and systems. They see IT having a polarising effect on general managers; it either bedazzles or frightens them (Davenport, 1994: 119).

The main scope of this book is to show how IT has created a mandate to management to develop new business models and frameworks based on the important role of IT. The chapters within *IT-Based Management: Challenges and Solutions* tackle the role and impact of IT on strategy and resulting new models to be used in this context. In addition, the book proposes new models based on the pervasive role IT exercises in the current business arena.

Business intelligence initiatives have been dominating the technology priority list of many organizations. However, the lack of effective information quality and governance strategies and policies has been meeting these initiatives with some challenges. *Information Quality and Governance for Business Intelligence* presents the latest exchange of academic research on all aspects of practicing and managing information using a multidisciplinary approach that examines its quality for organizational growth. This book is an essential reference tool for researchers, practitioners, and university students specializing in business intelligence, information quality, and information systems.

This book presents a contemporary view of the role of information quality in information fusion and decision making, and provides a formal foundation and the implementation strategies required for dealing with insufficient information quality in building fusion systems for decision making. Information fusion is the process of gathering, processing, and combining large amounts of information from multiple and diverse sources, including physical sensors to human intelligence reports and social media. That data and information may be unreliable, of low fidelity, insufficient resolution, contradictory, fake and/or redundant. Sources may provide unverified reports obtained from other sources resulting in correlations and biases. The success of the fusion processing depends on how well knowledge produced by the processing chain represents reality, which in turn depends on how adequate data are, how good and adequate are the models used, and how accurate, appropriate or applicable prior and contextual knowledge is. By offering contributions by leading experts, this book provides an unparalleled understanding of the problem of information quality in information fusion and decision-making for researchers and professionals in the field.

Data Quality provides an exposé of research and practice in the data quality field for technically oriented readers. It is based on the research conducted at the MIT Total Data Quality Management (TDQM) program and work from other leading research institutions. This book is intended primarily for researchers, practitioners, educators and graduate students in the fields of Computer Science, Information Technology, and other interdisciplinary areas. It forms a theoretical foundation that is both rigorous and relevant for dealing with advanced issues related to data quality. Written with the goal to provide an overview of the cumulated research results from the MIT TDQM research perspective as it relates to database research, this book is an

excellent introduction to Ph.D. who wish to further pursue their research in the data quality area. It is also an excellent theoretical introduction to IT professionals who wish to gain insight into theoretical results in the technically-oriented data quality area, and apply some of the key concepts to their practice.

Entity Resolution and Information Quality presents topics and definitions, and clarifies confusing terminologies regarding entity resolution and information quality. It takes a very wide view of IQ, including its six-domain framework and the skills formed by the International Association for Information and Data Quality (IAIDQ). The book includes chapters that cover the principles of entity resolution and the principles of Information Quality, in addition to their concepts and terminology. It also discusses the Fellegi-Sunter theory of record linkage, the Stanford Entity Resolution Framework, and the Algebraic Model for Entity Resolution, which are the major theoretical models that support Entity Resolution. In relation to this, the book briefly discusses entity-based data integration (EBDI) and its model, which serve as an extension of the Algebraic Model for Entity Resolution. There is also an explanation of how the three commercial ER systems operate and a description of the non-commercial open-source system known as OYSTER. The book concludes by discussing trends in entity resolution research and practice. Students taking IT courses and IT professionals will find this book invaluable. First authoritative reference explaining entity resolution and how to use it effectively Provides practical system design advice to help you get a competitive advantage Includes a companion site with synthetic customer data for applicatory exercises, and access to a Java-based Entity Resolution program.

As the 21st century begins, we are faced with opportunities and challenges of available technology as well as pressured to create strategic and tactical plans for future technology. Worldwide, IT professionals are sharing and trading concepts and ideas for effective IT management, and this co-operation is what leads to solid IT management practices. This volume is a collection of papers that present IT management perspectives from professionals around the world. The papers seek to offer new ideas, refine old ones, and pose interesting scenarios to help the reader develop company-sensitive management strategies.

Engineering Asset Management 2010 represents state-of-the art trends and developments in the emerging field of engineering asset management as presented at the Fifth World Congress on Engineering Asset Management (WCEAM). The proceedings of the WCEAM 2010 is an excellent reference for practitioners, researchers and students in the multidisciplinary field of asset management, covering topics such as: Asset condition monitoring and intelligent maintenance Asset data warehousing, data mining and fusion Asset performance and level-of-service models Design and life-cycle integrity of physical assets Education and training in asset management Engineering standards in asset management Fault diagnosis and prognostics Financial analysis methods for physical assets Human dimensions in integrated asset management Information quality management Information systems and knowledge management Intelligent sensors and devices Maintenance strategies in asset management Optimisation decisions in asset management Risk management in asset management Strategic asset management Sustainability in asset management

All organizations today confront data quality problems, both systemic and structural. Neither ad hoc approaches nor fixes at the systems level—installing the latest software or developing an expensive data warehouse—solve the basic problem of bad data quality practices. Journey to Data Quality offers a roadmap that can be used by practitioners, executives, and students for planning and implementing a viable data and information quality management program. This practical guide, based on rigorous research and informed by real-world examples, describes the challenges of data management and provides the principles, strategies, tools, and techniques necessary to meet them. The authors, all leaders in the data quality field for many years, discuss how to make the economic case for data quality and the importance of getting an organization's leaders on board. They outline different approaches for assessing data, both subjectively (by users) and objectively (using sampling and other techniques). They describe real problems and solutions, including efforts to find the root causes of data quality problems at a healthcare organization and data quality initiatives taken by a large teaching hospital. They address setting company policy on data quality and, finally, they consider future challenges on the journey to data quality.

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