

# Business Intelligence Guidebook From Data Integration To Analytics

“This book is a splendid and valuable addition to this subject. The whole book is well written and I have no hesitation to recommend that this can be adapted as a textbook for graduate courses in Business Intelligence and Data Mining.” Dr. Edi Shivaji, Des Moines, Iowa “As a complete novice to this area just starting out on a MBA course I found the book incredibly useful and very easy to follow and understand. The concepts are clearly explained and make it an easy task to gain an understanding of the subject matter.” -- Mr. Craig Domoney, South Africa. Business Intelligence and Data Mining is a conversational and informative book in the exploding area of Business Analytics. Using this book, one can easily gain the intuition about the area, along with a solid toolset of major data mining techniques and platforms. This book can thus be gainfully used as a textbook for a college course. It is also short and accessible enough for a busy executive to become a quasi-expert in this area in a couple of hours. Every chapter begins with a case-let from the real world, and ends with a case study that runs across the chapters.

2016 eLIT GOLD AWARD - BEST BUSINESS REFERENCE BOOK  
NOMINATED FOR 2016 SMALL BUSINESS BOOK AWARD  
Today, an organization's survival ultimately rests on how well (and fast!) it creates value. That's why decision-makers consistently rate business intelligence as one of their top investment priorities. They depend on information to help them compete in a world where disruption is a constant and speed an obsession. But recognizing the need for BI is one thing. Effectively using it to create value is an entirely different matter. Hyper is the essential quick-read guide for busy

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business and IT professionals struggling to make BI work. Packed with pragmatic advice, proven methods, and real-world tools, this book provides straight talk on how to finally deliver BI in a hyper-responsive, hyper-agile, and hyper-flexible way. Inside you will discover:

- \* Ways to overcome the 4 primary challenges associated with BI planning and execution
- \* Methods to create, validate, and communicate requirements that accelerate decision-making
- \* How to deliver quick wins that drive end-user adoption and long-lasting solutions

Plus, you'll find practical tips from years of hands-on field work. Hyper will change the way you think about, plan, and execute BI. For real results, real fast!

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Between the high-level concepts of business intelligence and the nitty-gritty instructions for using vendors' tools lies the essential, yet poorly-understood layer of architecture, design and process. Without this knowledge, Big Data is belittled – projects flounder, are late and go over budget. Business Intelligence Guidebook: From Data Integration to Analytics shines a bright light on an often neglected topic, arming you with the knowledge you need to design rock-solid business intelligence and data integration processes. Practicing consultant and adjunct BI professor Rick Sherman takes the guesswork out of creating systems that are cost-effective, reusable and essential for transforming raw data into valuable information for business decision-makers. After reading this book, you will be able to design the overall architecture for functioning business intelligence systems with the supporting data warehousing and data-integration applications. You will have the information you need to get a project launched, developed, managed and delivered on time and on budget – turning the deluge of data into actionable information that fuels business knowledge. Finally, you'll give your career a boost by demonstrating an essential knowledge that puts corporate BI projects on a fast-track to success. Provides practical guidelines for building successful BI, DW and data integration solutions. Explains underlying BI, DW and data integration design, architecture and processes in clear, accessible language. Includes the complete project development lifecycle that can be applied at large enterprises

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as well as at small to medium-sized businesses Describes best practices and pragmatic approaches so readers can put them into action. Companion website includes templates and examples, further discussion of key topics, instructor materials, and references to trusted industry sources.

Annotation Business Intelligence in the Digital Economy: Opportunities, Limitations and Risks describes business intelligence (BI), how it is being conducted and managed and its major opportunities, limitations, issues and risks. This book takes an in-depth look at the scope of global technological change and BI. During this transition to BI, information does not merely add efficiency to the transaction; it adds value.

This book brings together high quality expository discussions from experts in this field to identify, define, and explore BI methodologies, systems, and approaches in order to understand the opportunities, limitations and risks.

Annotation In this book, Rick van der Lans explains how data virtualization servers work, what techniques to use to optimize access to various data sources and how these products can be applied in different projects.

Learn to get the most out of your business data to optimize your business About This Book This book will enable and empower you to break free of the shackles of spreadsheets Learn to make informed decisions using the data at hand with this highly practical, comprehensive guide This book includes real-world use cases that teach you how analytics can be put to work to optimize your business Using a fictional transactional dataset in raw form, you'll work your way up to ultimately creating a fully-functional warehouse and a fleshed-out BI platform Who This Book Is For This book is for anyone who has wrangled with data to try to perform automated data analysis through visualizations for themselves or their customers. This highly-customized guide is for developers who know a bit about analytics but don't know how to make

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use of it in the field of business intelligence. What You Will Learn Create a BI environment that enables self-service reporting Understand SQL and the aggregation of data Develop a data model suitable for analytical reporting Connect a data warehouse to the analytic reporting tools Understand the specific benefits behind visualizations with D3.js, R, Tableau, QlikView, and Python Get to know the best practices to develop various reports and applications when using BI tools Explore the field of data analysis with all the data we will use for reporting In Detail Business Intelligence (BI) is at the crux of revolutionizing enterprise. Everyone wants to minimize losses and maximize profits. Thanks to Big Data and improved methodologies to analyze data, Data Analysts and Data Scientists are increasingly using data to make informed decisions. Just knowing how to analyze data is not enough, you need to start thinking how to use data as a business asset and then perform the right analysis to build an insightful BI solution. Efficient BI strives to achieve the automation of data for ease of reporting and analysis. Through this book, you will develop the ability to think along the right lines and use more than one tool to perform analysis depending on the needs of your business. We start off by preparing you for data analytics. We then move on to teach you a range of techniques to fetch important information from various databases, which can be used to optimize your business. The book aims to provide a full end-to-end solution for an environment setup that can help you make informed business decisions and deliver efficient and automated BI solutions to any company. It is a complete guide for implementing Business intelligence with the help of the most powerful tools like D3.js, R, Tableau, Qlikview and Python that are available on the market. Style and approach Packed with real-world examples, this pragmatic guide helps you polish your data and make informed decisions for your

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business. We cover both business and data analysis perspectives, blending theory and practical hands-on work so that you perceive data as a business asset.

Praise for Successful Business Intelligence "If you want to be an analytical competitor, you've got to go well beyond business intelligence technology. Cindi Howson has wrapped up the needed advice on technology, organization, strategy, and even culture in a neat package. It's required reading for quantitatively oriented strategists and the technologists who support them." --Thomas H. Davenport, President's Distinguished Professor, Babson College and co-author, Competing on Analytics "When used strategically, business intelligence can help companies transform their organization to be more agile, more competitive, and more profitable.

Successful Business Intelligence offers valuable guidance for companies looking to embark upon their first BI project as well as those hoping to maximize their current deployments."

--John Schwarz, CEO, Business Objects "A thoughtful, clearly written, and carefully researched examination of all facets of business intelligence that your organization needs to know to run its business more intelligently and exploit information to its fullest extent." --Wayne Eckerson, Director, TDWI

Research "Using real-world examples, Cindi Howson shows you how to use business intelligence to improve the performance, and the quality, of your company." --Bill Baker, Distinguished Engineer & GM, Business Intelligence Applications, Microsoft Corporation

"This book outlines the key steps to make BI an integral part of your company's culture and demonstrates how your company can use BI as a competitive differentiator." --Robert VanHees, CFO, Corporate Express

"Given the trend to expand the business analytics user base, organizations are faced with a number of challenges that affect the success rate of these projects. This insightful book provides practical advice on improving that

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success rate." --Dan Vesset, Vice President, Business Analytics Solution Research, IDC

Learn Business Intelligence Markup Language (Biml) for automating much of the repetitive, manual labor involved in data integration. We teach you how to build frameworks and use advanced Biml features to get more out of SQL Server Integration Services (SSIS), Transact-SQL (T-SQL), and SQL Server Analysis Services (SSAS) than you ever thought possible. The first part of the book starts with the basics—getting your development environment configured, Biml syntax, and scripting essentials. Whether a beginner or a seasoned Biml expert, the next part of the book guides you through the process of using Biml to build a framework that captures both your design patterns and execution management. Design patterns are reusable code blocks that standardize the approach you use to perform certain types of data integration, logging, and other key data functions. Design patterns solve common problems encountered when developing data integration solutions. Because you do not have to build the code from scratch each time, design patterns improve your efficiency as a Biml developer. In addition to leveraging design patterns in your framework, you will learn how to build a robust metadata store and how to package your framework into Biml bundles for deployment within your enterprise. In the last part of the book, we teach you more advanced Biml features and capabilities, such as SSAS development, T-SQL recipes, documentation autogeneration, and Biml troubleshooting. The Biml Book: Provides practical and applicable examples Teaches you how to use Biml to reduce development time while improving quality Takes you through solutions to common data integration and BI challenges What You'll Learn Master the basics of Business Intelligence Markup Language (Biml) Study patterns for automating SSIS package generation Build

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a Biml Framework Import and transform database schemas  
Automate generation of scripts and projects Who This Book Is  
For BI developers wishing to quickly locate previously tested  
solutions, Microsoft BI specialists, those seeking more  
information about solution automation and code generation,  
and practitioners of Data Integration Lifecycle Management  
(DILM) in the DevOps enterprise

Updated new edition of Ralph Kimball's groundbreaking book  
ondimensional modeling for data warehousing and  
businessintelligence! The first edition of Ralph Kimball's The  
Data WarehouseToolkit introduced the industry to  
dimensional modeling,and now his books are considered the  
most authoritative guides inthis space. This new third edition  
is a complete library of updateddimensional modeling  
techniques, the most comprehensive collectionever. It covers  
new and enhanced star schema dimensional  
modelingpatterns, adds two new chapters on ETL techniques,  
includes new andexpanded business matrices for 12 case  
studies, and more. Authored by Ralph Kimball and Margy  
Ross, known worldwide aseducators, consultants, and  
influential thought leaders in datawarehousing and business  
intelligence Begins with fundamental design  
recommendations and progresses through increasingly  
complex scenarios Presents unique modeling techniques for  
business applicationssuch as inventory management,  
procurement, invoicing, accounting,customer relationship  
management, big data analytics, and more Draws real-world  
case studies from a variety of industries,including retail sales,  
financial services, telecommunications,education, health care,  
insurance, e-commerce, and more Design dimensional  
databases that are easy to understand andprovide fast query  
response with The Data WarehouseToolkit: The Definitive  
Guide to Dimensional Modeling, 3rdEdition.

Includes bibliographical references and index



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You're intelligent, right? So you've already figured out that Business Intelligence can be pretty valuable in making the right decisions about your business. But you've heard at least a dozen definitions of what it is, and heard of at least that many BI tools. Where do you start? Business Intelligence For Dummies makes BI understandable! It takes you step by step through the technologies and the alphabet soup, so you can choose the right technology and implement a successful BI environment. You'll see how the applications and technologies work together to access, analyze, and present data that you can use to make better decisions about your products, customers, competitors, and more. You'll find out how to:

- Understand the principles and practical elements of BI
- Determine what your business needs
- Compare different approaches to BI
- Build a solid BI architecture and roadmap
- Design, develop, and deploy your BI plan
- Relate BI to data warehousing, ERP, CRM, and e-commerce
- Analyze emerging trends and developing BI tools to see what else may be useful

Whether you're the business owner or the person charged with developing and implementing a BI strategy, checking out Business Intelligence For Dummies is a good business decision.

The twenty-first century is a time of intensifying competition and progressive digitization. Individual employees, managers, and entire organizations are under increasing pressure to succeed. The questions facing us today are: What does success mean? Is success a matter of chance and luck or perhaps is success a category that can be planned and properly supported? Business Intelligence and Big Data: Drivers of Organizational Success examines how the success of an organization largely depends on the ability to anticipate and quickly respond to challenges from the market, customers, and other stakeholders. Success is also associated with the potential to process and analyze a variety

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of information and the means to use modern information and communication technologies (ICTs). Success also requires creative behaviors and organizational cleverness from an organization. The book discusses business intelligence (BI) and Big Data (BD) issues in the context of modern management paradigms and organizational success. It presents a theoretically and empirically grounded investigation into BI and BD application in organizations and examines such issues as: Analysis and interpretation of the essence of BI and BD Decision support Potential areas of BI and BD utilization in organizations Factors determining success with using BI and BD The role of BI and BD in value creation for organizations Identifying barriers and constraints related to BI and BD design and implementation The book presents arguments and evidence confirming that BI and BD may be a trigger for making more effective decisions, improving business processes and business performance, and creating new business. The book proposes a comprehensive framework on how to design and use BI and BD to provide organizational success.

Leverage the integration of SQL Server and Office for more effective BI Applied Microsoft Business Intelligence shows you how to leverage the complete set of Microsoft tools—including Microsoft Office and SQL Server—to better analyze business data. This book provides best practices for building complete BI solutions using the full Microsoft toolset. You will learn how to effectively use SQL Server Analysis and Reporting Services, along with Excel, SharePoint, and other tools to provide effective and cohesive solutions for the enterprise. Coverage includes BI architecture, data queries, semantic models, multidimensional modeling, data analysis and visualization, performance monitoring, data mining, and more, to help you learn to perform practical business analysis and reporting. Written by an author team that includes a key

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member of the BI product team at Microsoft, this useful reference provides expert instruction for more effective use of the Microsoft BI toolset. Use Microsoft BI suite cohesively for more effective enterprise solutions Search, analyze, and visualize data more efficiently and completely Develop flexible and scalable tabular and multidimensional models Monitor performance, build a BI portal, and deploy and manage the BI Solution

Data analysis is an important part of modern business administration, as efficient compilation of information allows managers and business leaders to make the best decisions for the financial solvency of their organizations.

Understanding the use of analytics, reporting, and data mining in everyday business environments is imperative to the success of modern businesses. *Business Intelligence: Concepts, Methodologies, Tools, and Applications* presents a comprehensive examination of business data analytics along with case studies and practical applications for businesses in a variety of fields and corporate arenas. Focusing on topics and issues such as critical success factors, technology adaptation, agile development approaches, fuzzy logic tools, and best practices in business process management, this multivolume reference is of particular use to business analysts, investors, corporate managers, and entrepreneurs in a variety of prominent industries.

Learn how to transition from Excel-based business intelligence (BI) analysis to enterprise stacks of open-source BI tools. Select and implement the best free and freemium open-source BI tools for your company's needs and design, implement, and integrate BI automation across the full stack using agile methodologies. *Business Intelligence Tools for Small Companies* provides hands-on demonstrations of open-source tools suitable for the BI requirements of small businesses. The authors draw on their deep experience as BI

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consultants, developers, and administrators to guide you through the extract-transform-load/data warehousing (ETL/DWH) sequence of extracting data from an enterprise resource planning (ERP) database freely available on the Internet, transforming the data, manipulating them, and loading them into a relational database. The authors demonstrate how to extract, report, and dashboard key performance indicators (KPIs) in a visually appealing format from the relational database management system (RDBMS). They model the selection and implementation of free and freemium tools such as Pentaho Data Integrator and Talend for ELT, Oracle XE and MySQL/MariaDB for RDBMS, and QlikSense, Power BI, and MicroStrategy Desktop for reporting. This richly illustrated guide models the deployment of a small company BI stack on an inexpensive cloud platform such as AWS. What You'll Learn You will learn how to manage, integrate, and automate the processes of BI by selecting and implementing tools to: Implement and manage the business intelligence/data warehousing (BI/DWH) infrastructure Extract data from any enterprise resource planning (ERP) tool Process and integrate BI data using open-source extract-transform-load (ETL) tools Query, report, and analyze BI data using open-source visualization and dashboard tools Use a MOLAP tool to define next year's budget, integrating real data with target scenarios Deploy BI solutions and big data experiments inexpensively on cloud platforms Who This Book Is For Engineers, DBAs, analysts, consultants, and managers at small companies with limited resources but whose BI requirements have outgrown the limitations of Excel spreadsheets; personnel in mid-sized companies with established BI systems who are exploring technological updates and more cost-efficient solutions In the modern business world, the pace of action continues to quicken. Businesses need to be able to get actionable

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insights from their data in order to make the right decisions to act rapidly and effectively.

This book presents a comprehensive and systematic introduction to transforming process-oriented data into information about the underlying business process, which is essential for all kinds of decision-making. To that end, the authors develop step-by-step models and analytical tools for obtaining high-quality data structured in such a way that complex analytical tools can be applied. The main emphasis is on process mining and data mining techniques and the combination of these methods for process-oriented data. After a general introduction to the business intelligence (BI) process and its constituent tasks in chapter 1, chapter 2 discusses different approaches to modeling in BI applications. Chapter 3 is an overview and provides details of data provisioning, including a section on big data. Chapter 4 tackles data description, visualization, and reporting. Chapter 5 introduces data mining techniques for cross-sectional data. Different techniques for the analysis of temporal data are then detailed in Chapter 6. Subsequently, chapter 7 explains techniques for the analysis of process data, followed by the introduction of analysis techniques for multiple BI perspectives in chapter 8. The book closes with a summary and discussion in chapter 9. Throughout the book, (mostly open source) tools are recommended, described and applied; a more detailed survey on tools can be found in the appendix, and a detailed code for the solutions together with instructions on how to install the software used can be found on the accompanying website. Also,

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all concepts presented are illustrated and selected examples and exercises are provided. The book is suitable for graduate students in computer science, and the dedicated website with examples and solutions makes the book ideal as a textbook for a first course in business intelligence in computer science or business information systems. Additionally, practitioners and industrial developers who are interested in the concepts behind business intelligence will benefit from the clear explanations and many examples.

Business Intelligence Strategy and Big Data Analytics is written for business leaders, managers, and analysts - people who are involved with advancing the use of BI at their companies or who need to better understand what BI is and how it can be used to improve profitability. It is written from a general management perspective, and it draws on observations at 12 companies whose annual revenues range between \$500 million and \$20 billion. Over the past 15 years, my company has formulated vendor-neutral business-focused BI strategies and program execution plans in collaboration with manufacturers, distributors, retailers, logistics companies, insurers, investment companies, credit unions, and utilities, among others. It is through these experiences that we have validated business-driven BI strategy formulation methods and identified common enterprise BI program execution challenges. In recent years, terms like “big data” and “big data analytics” have been introduced into the business and technical lexicon. Upon close examination, the newer terminology is about the same thing that BI has always been about:

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analyzing the vast amounts of data that companies generate and/or purchase in the course of business as a means of improving profitability and competitiveness. Accordingly, we will use the terms BI and business intelligence throughout the book, and we will discuss the newer concepts like big data as appropriate. More broadly, the goal of this book is to share methods and observations that will help companies achieve BI success and thereby increase revenues, reduce costs, or both. Provides ideas for improving the business performance of one's company or business functions Emphasizes proven, practical, step-by-step methods that readers can readily apply in their companies Includes exercises and case studies with road-tested advice about formulating BI strategies and program plans Annotation Provides an overview of data mining technology and how it is applied in a business environment. Material is not written in a technical style, but rather addresses the applied methodology behind implementing data mining techniques in the corporate environment. Explains how the technology evolved, overviews the methodologies that comprise the data mining spectrum, and looks at everyday business applications for data mining, in areas such as marketing and advertising promotions and pricing policies using econometric-based modeling, and using the Internet to help improve an organization's performance. Kudyba is an economic consultant. Hoptroff is an independent consultant with experience in data mining software. Annotation c. Book News, Inc., Portland, OR (booknews.com).

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For courses on Business Intelligence or Decision Support Systems. A managerial approach to understanding business intelligence systems. To help future managers use and understand analytics, Business Intelligence provides students with a solid foundation of BI that is reinforced with hands-on practice.

This comprehensive and authoritative guide will teach you the DAX language for business intelligence, data modeling, and analytics. Leading Microsoft BI consultants Marco Russo and Alberto Ferrari help you master everything from table functions through advanced code and model optimization. You'll learn exactly what happens under the hood when you run a DAX expression, how DAX behaves differently from other languages, and how to use this knowledge to write fast, robust code. If you want to leverage all of DAX's remarkable power and flexibility, this no-compromise "deep dive" is exactly what you need. Perform powerful data analysis with DAX for Microsoft SQL Server Analysis Services, Excel, and Power BI Master core DAX concepts, including calculated columns, measures, and error handling Understand evaluation contexts and the CALCULATE and CALCULATETABLE functions Perform time-based calculations: YTD, MTD, previous year, working days, and more Work with expanded tables, complex functions, and elaborate DAX expressions Perform calculations over hierarchies, including parent/child hierarchies Use DAX to express diverse and unusual relationships Measure DAX query performance with SQL Server Profiler and DAX Studio

This book examines the managerial dimensions of



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business intelligence (BI) systems. It develops a set of guidelines for value creation by implementing business intelligence systems and technologies. In particular the book looks at BI as a process - driven by a mix of human and technological capabilities - to serve complex information needs in building insights and providing aid in decision making. After an introduction to the key concepts of BI and neighboring areas of information processing, the book looks at the complexity and multidimensionality of BI. It tackles both data integration and information integration issues. Bodies of knowledge and other widely accepted collections of experience are presented and turned into lessons learned. Following a straightforward introduction to the processes and technologies of BI the book embarks on BI maturity and agility, the components, drivers and inhibitors of BI culture and soft BI factors like attention, sense and trust. Eventually the book attempts to provide a holistic view on business intelligence, possible structures and tradeoffs and embarks to provide an outlook on possible developments in BI and analytics. .

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

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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.

One day a man walked into Asgard Inc. and changed the company forever. Unlike anyone who came before, he remembered and understood data as naturally as a fish swims in water. The CEO was shocked at how well the man knew the company. He started posing questions to this man. Who are my best customers? Why is this product struggling? Where is my greatest growth happening? The man answered these and more. Using his understanding of data, he identified key new markets, he discovered the best places to invest capital, and he even predicted the future. Overnight Asgard Inc. changed. Where before the CEO relied on limited information and gut feelings, now true knowledge guided his actions. The CEO took the man's hand in gratitude and asked, "Who are you?" and he replied, "I am Business Intelligence." Business Intelligence(BI) is shrouded in mystery for a lot of us but it doesn't need to stay that way. Business Intelligence in Plain Language is a systematic exploration of this complicated tool. I'll teach you about what it does, how it works, and most importantly how you can benefit from it. In this book you

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will learn about: Business Intelligence Data Mining Data Warehousing Data Discovery Big Data Outlier Detection Pattern Recognition Predictive Modeling Data Transformation and much more This book is your practical guide to understanding and implementing Business Intelligence.

This software will enable the user to learn about business intelligence roadmap.

Corporations and governmental agencies of all sizes are embracing a new generation of enterprise-scale business intelligence (BI) and data warehousing (DW), and very often appoint a single senior-level individual to serve as the Enterprise BI/DW Program Manager. This book is the essential guide to the incremental and iterative build-out of a successful enterprise-scale BI/DW program comprised of multiple underlying projects, and what the Enterprise Program Manager must successfully accomplish to orchestrate the many moving parts in the quest for true enterprise-scale business intelligence and data warehousing. Author Alan Simon has served as an enterprise business intelligence and data warehousing program management advisor to many of his clients, and spent an entire year with a single client as the adjunct consulting director for a \$10 million enterprise data warehousing (EDW) initiative. He brings a wealth of knowledge about best practices, risk management, organizational culture alignment, and other Critical Success Factors

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(CSFs) to the discipline of enterprise-scale business intelligence and data warehousing.

In this IBM Redbooks publication we describe and demonstrate dimensional data modeling techniques and technology, specifically focused on business intelligence and data warehousing. It is to help the reader understand how to design, maintain, and use a dimensional model for data warehousing that can provide the data access and performance required for business intelligence. Business intelligence is comprised of a data warehousing infrastructure, and a query, analysis, and reporting environment. Here we focus on the data warehousing infrastructure. But only a specific element of it, the data model - which we consider the base building block of the data warehouse. Or, more precisely, the topic of data modeling and its impact on the business and business applications. The objective is not to provide a treatise on dimensional modeling techniques, but to focus at a more practical level. There is technical content for designing and maintaining such an environment, but also business content. For example, we use case studies to demonstrate how dimensional modeling can impact the business intelligence requirements for your business initiatives. In addition, we provide a detailed discussion on the query aspects of BI and data modeling. For example, we discuss query optimization and how you can determine

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performance of the data model prior to implementation. You need a solid base for your data warehousing infrastructure . . . . a solid data model. The objective of this book is to teach what IoT is, how it works, and how it can be successfully utilized in business. This book helps to develop and implement a powerful IoT strategy for business transformation as well as project execution. Digital change, business creation/change and upgrades in the ways and manners in which we work, live, and engage with our clients and customers, are all enveloped by the Internet of Things which is now named “Industry 5.0” or “Industrial Internet of Things. The sheer number of IoT(a billion+), demonstrates the advent of an advanced business society led by sustainable robotics and business intelligence. This book will be an indispensable asset in helping businesses to understand the new technology and thrive.

Solid business intelligence guidance uniquely designed for healthcare organizations Increasing regulatory pressures on healthcare organizations have created a national conversation on data, reporting and analytics in healthcare. Behind the scenes, business intelligence (BI) and data warehousing (DW) capabilities are key drivers that empower these functions. Healthcare Business Intelligence is designed as a guidebook for healthcare organizations dipping their toes into the

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areas of business intelligence and data warehousing. This volume is essential in how a BI capability can ease the increasing regulatory reporting pressures on all healthcare organizations. Explores the five tenets of healthcare business intelligence Offers tips for creating a BI team Identifies what healthcare organizations should focus on first Shows you how to gain support for your BI program Provides tools and techniques that will jump start your BI Program Explains how to market and maintain your BI Program The risk associated with doing BI/DW wrong is high, and failures are well documented. Healthcare Business Intelligence helps you get it right, with expert guidance on getting your BI program started and successfully keep it going. Global Business Intelligence refers to an organization's ability to gather, process and analyze pertinent international information in order to make optimal business decisions in a timely manner. With a challenging economic and geopolitical environment, companies and executives need to be adept at information gathering in order to manage emerging challenges and gain competitive advantages. This book Global Business Intelligence assembles a cast of international experts and thought leaders and explores the implications of business intelligence on contemporary management. Global Business Intelligence will be a key resource for researchers, academics, students and policy

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makers alike in the fields of International Business & Management, Business Strategy, and Geopolitics as well as related disciplines like Political Science, Economics, and Geography.

Business intelligence (BI) used to be so simple—in theory anyway. Integrate and copy data from your transactional systems into a specialized relational database, apply BI reporting and query tools and add business users. Job done. No longer. Analytics, big data and an array of diverse technologies have changed everything. More importantly, business is insisting on ever more value, ever faster from information and from IT in general. An emerging biz-tech ecosystem demands that business and IT work together. Business unIntelligence reflects the new reality that in today's socially complex and rapidly changing world, business decisions must be based on a combination of rational and intuitive thinking. Integrating cues from diverse information sources and tacit knowledge, decision makers create unique meaning to innovate heuristically at the speed of thought. This book provides a wealth of new models that business and IT can use together to design support systems for tomorrow's successful organizations. Dr. Barry Devlin, one of the earliest proponents of data warehousing, goes back to basics to explore how the modern trinity of information, process and people must be reinvented and restructured to deliver the value, insight and

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innovation required by modern businesses. From here, he develops a series of novel architectural models that provide a new foundation for holistic information use across the entire business. From discovery to analysis and from decision making to action taking, he defines a fully integrated, closed-loop business environment. Covering every aspect of business analytics, big data, collaborative working and more, this book takes over where BI ends to deliver the definitive framework for information use in the coming years. As the person who defined the conceptual framework and physical architecture for data warehousing in the 1980s, Barry Devlin has been an astute observer of the movement he initiated ever since. Now, in *Business unIntelligence*, Devlin provides a sweeping view of the past, present, and future of business intelligence, while delivering new conceptual and physical models for how to turn information into insights and action. Reading Devlin's prose and vision of BI are comparable to reading Carl Sagan's view of the cosmos. The book is truly illuminating and inspiring.

--Wayne Eckerson, President, BI Leader Consulting  
Author, "Secrets of Analytical Leaders: Insights from Information Insiders"

Between the high-level concepts of business intelligence and the nitty-gritty instructions for using vendors' tools lies the essential, yet poorly-understood layer of architecture, design and



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process. Without this knowledge, Big Data is belittled - projects flounder, are late and go over budget.

Business Intelligence Guidebook: From Data Integration to Analytics shines a bright light on an often neglected topic, arming you with the knowledge you need to design rock-solid business intelligence and data integration processes.

Practicing consultant and adjunct BI professor Rick Sherman takes the guesswork out of creating systems that are cost-effective, reusable and essential for transforming raw data into valuable information for business decision-makers. After reading this book, you will be able to design the overall architecture for functioning business intelligence systems with the supporting data warehousing and data-integration applications. You will have the information you need to get a project launched, developed, managed and delivered on time and on budget - turning the deluge of data into actionable information that fuels business knowledge. Finally, you'll give your career a boost by demonstrating an essential knowledge that puts corporate BI projects on a fast-track to success.

Provides practical guidelines for building successful BI, DW and data integration solutions. Explains underlying BI, DW and data integration design, architecture and processes in clear, accessible language. Includes the complete project development lifecycle that can be applied at large

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enterprises as well as at small to medium-sized businesses Describes best practices and pragmatic approaches so readers can put them into action. Companion website includes templates and examples, further discussion of key topics, instructor materials, and references to trusted industry sources.

Uncovering and analyzing data associated with the current business environment is essential in maintaining a competitive edge. As such, making informed decisions based on this data is crucial to managers across industries. Integration of Data Mining in Business Intelligence Systems investigates the incorporation of data mining into business technologies used in the decision making process. Emphasizing cutting-edge research and relevant concepts in data discovery and analysis, this book is a comprehensive reference source for policymakers, academicians, researchers, students, technology developers, and professionals interested in the application of data mining techniques and practices in business information systems.

Aligning business intelligence (BI) infrastructure with strategy processes not only improves your organization's ability to respond to change, but also adds significant value to your BI infrastructure and development investments. Until now, there has been a need for a comprehensive book on business analysis for BI that starts with a macro view and Business Intelligence: The Savvy Managers Guide, Second Edition, discusses the objectives and practices

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for designing and deploying a business intelligence (BI) program. It looks at the basics of a BI program, from the value of information and the mechanics of planning for success to data model infrastructure, data preparation, data analysis, integration, knowledge discovery, and the actual use of discovered knowledge. Organized into 21 chapters, this book begins with an overview of the kind of knowledge that can be exposed and exploited through the use of BI. It then proceeds with a discussion of information use in the context of how value is created within an organization, how BI can improve the ways of doing business, and organizational preparedness for exploiting the results of a BI program. It also looks at some of the critical factors to be taken into account in the planning and execution of a successful BI program. In addition, the reader is introduced to considerations for developing the BI roadmap, the platforms for analysis such as data warehouses, and the concepts of business metadata. Other chapters focus on data preparation and data discovery, the business rules approach, and data mining techniques and predictive analytics. Finally, emerging technologies such as text analytics and sentiment analysis are considered. This book will be valuable to data management and BI professionals, including senior and middle-level managers, Chief Information Officers and Chief Data Officers, senior business executives and business staff members, database or software engineers, and business analysts. Guides managers through developing, administering, or simply understanding business intelligence technology Keeps pace with the changes in best practices, tools,

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methods and processes used to transform an organization's data into actionable knowledge Contains a handy, quick-reference to technologies and terminology

Business intelligence is a broad category of applications and technologies for gathering, providing access to, and analyzing data for the purpose of helping enterprise users make better business decisions. The term implies having a comprehensive knowledge of all factors that affect a business, such as customers, competitors, business partners, economic environment, and internal operations, therefore enabling optimal decisions to be made. Business Intelligence provides readers with an introduction and practical guide to the mathematical models and analysis methodologies vital to business intelligence. This book: Combines detailed coverage with a practical guide to the mathematical models and analysis methodologies of business intelligence. Covers all the hot topics such as data warehousing, data mining and its applications, machine learning, classification, supply optimization models, decision support systems, and analytical methods for performance evaluation. Is made accessible to readers through the careful definition and introduction of each concept, followed by the extensive use of examples and numerous real-life case studies. Explains how to utilise mathematical models and analysis models to make effective and good quality business decisions. This book is aimed at postgraduate students following data analysis and data mining courses. Researchers looking for a systematic and broad coverage of topics in operations research and

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mathematical models for decision-making will find this an invaluable guide.

Business Intelligence Guidebook From Data Integration to Analytics Morgan Kaufmann

Learn how to leverage the power of R for Business Intelligence About This Book Use this easy-to-follow guide to leverage the power of R analytics and make your business data more insightful. This highly practical guide teaches you how to develop dashboards that help you make informed decisions using R. Learn the A to Z of working with data for Business Intelligence with the help of this comprehensive guide. Who This Book Is For This book is for data analysts, business analysts, data science professionals or anyone who wants to learn analytic approaches to business problems. Basic familiarity with R is expected. What You Will Learn Extract, clean, and transform data Validate the quality of the data and variables in datasets Learn exploratory data analysis Build regression models Implement popular data-mining algorithms Visualize results using popular graphs Publish the results as a dashboard through Interactive Web Application frameworks In Detail Explore the world of Business Intelligence through the eyes of an analyst working in a successful and growing company. Learn R through use cases supporting different functions within that company. This book provides data-driven and analytically focused approaches to help you answer questions in operations, marketing, and finance. In Part 1, you will learn about extracting data from different sources, cleaning that data, and exploring its structure. In Part 2, you will explore predictive models and cluster

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analysis for Business Intelligence and analyze financial times series. Finally, in Part 3, you will learn to communicate results with sharp visualizations and interactive, web-based dashboards. After completing the use cases, you will be able to work with business data in the R programming environment and realize how data science helps make informed decisions and develops business strategy. Along the way, you will find helpful tips about R and Business Intelligence. Style and approach This book will take a step-by-step approach and instruct you in how you can achieve Business Intelligence from scratch using R. We will start with extracting data and then move towards exploring, analyzing, and visualizing it. Eventually, you will learn how to create insightful dashboards that help you make informed decisions—and all of this with the help of real-life examples.

Learn how to embed data science, Big Data and AI in your organization's decision-making process and make your organization more data-driven, profitable, and intelligent in 10 steps. Book description This book covers every aspect of the implementation of data science, from the algorithms that make your decisions more refined, effective and faster to the people, skills, culture, and mindset required to make it happen. How do you set the right KPIs and targets? How are the best data-driven organizations structured? Why do you need a data warehouse or data lake? How do you manage a data science project? This book tackles every question relevant to implementing data science. Many organizations start by collecting data without a goal, but

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that data science approach is doomed to fail. This book takes you through the process of implementing data science from the ground floor all the way to the top. It all starts with the question: what do we want to achieve? It covers all the subsequent steps on a macro and micro level, from the process of registering data, to processing it, to the organization's response. All the relevant data science techniques and technologies are discussed, from algorithms and AI to the right management strategies. Based on many practical case studies and best practices, this book reveals what works and what doesn't. Benefit from the author's many years of experience in making organizations more intelligent and data-driven as a consultant and an educator. What you will learn - The most important benefits of data science. - The essential aspects of decision making and the role of data science. - How to determine the right KPIs and use them to manage effectively. - How to turn data into knowledge and information. - How to make your organization more agile. - The many types of algorithms that can be used to make more effective decisions on every level. - How to manage data science projects - who and what do you need to effectively implement data science? - How to design a data science roadmap. - And much, much more. Who is this book for This book is for every manager or professional, and all those who want to learn how to embed the effective use of data science in every facet of the organization. This comprehensive management handbook is a must-read for (business) consultants, business managers, Chief Data Officers (CDOs), CIOs, and other executives, project managers,

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Data Science consultants, Data Scientists, AI consultants, (business) controllers, quality managers, and BI consultants.

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