



# The Data Warehouse Lifecycle Toolkit

**Second Edition**

**Practical Techniques  
for Building Data  
Warehouse and  
Business Intelligence  
Systems**

**Ralph Kimball**  
**Margy Ross**  
**Warren Thornthwaite**  
**Joy Mundy**  
**Bob Becker**



# The Data Warehouse Lifecycle Toolkit

**Ralph Kimball**



## **The Data Warehouse Lifecycle Toolkit:**

*The Data Warehouse Lifecycle Toolkit* Ralph Kimball, Margy Ross, Warren Thornthwaite, Joy Mundy, Bob Becker, 2008-01-10 A thorough update to the industry standard for designing developing and deploying data warehouse and business intelligence systems The world of data warehousing has changed remarkably since the first edition of The Data Warehouse Lifecycle Toolkit was published in 1998 In that time the data warehouse industry has reached full maturity and acceptance hardware and software have made staggering advances and the techniques promoted in the premiere edition of this book have been adopted by nearly all data warehouse vendors and practitioners In addition the term business intelligence emerged to reflect the mission of the data warehouse wrangling the data out of source systems cleaning it and delivering it to add value to the business Ralph Kimball and his colleagues have refined the original set of Lifecycle methods and techniques based on their consulting and training experience The authors understand first hand that a data warehousing business intelligence DW BI system needs to change as fast as its surrounding organization evolves To that end they walk you through the detailed steps of designing developing and deploying a DW BI system You ll learn to create adaptable systems that deliver data and analyses to business users so they can make better business decisions *Kimball's Data Warehouse Toolkit Classics, 3 Volume Set* Ralph Kimball, Margy Ross, Warren Thornthwaite, Joy Mundy, Bob Becker, Joe Caserta, 2014-02-24 Three books by the bestselling authors on Data Warehousing The most authoritative guides from the inventor of the technique all for a value price The Data Warehouse Toolkit 3rd Edition 9781118530801 Ralph Kimball invented a data warehousing technique called dimensional modeling and popularized it in his first Wiley book The Data Warehouse Toolkit Since this book was first published in 1996 dimensional modeling has become the most widely accepted technique for data warehouse design Over the past 10 years Kimball has improved on his earlier techniques and created many new ones In this 3rd edition he will provide a comprehensive collection of all of these techniques from basic to advanced The Data Warehouse Lifecycle Toolkit 2nd Edition 9780470149775 Complete coverage of best practices from data warehouse project inception through on going program management Updates industry best practices to be in sync with current recommendations of Kimball Group Streamlines the lifecycle methodology to be more efficient and user friendly The Data Warehouse ETL Toolkit 9780764567575 shows data warehouse developers how to effectively manage the ETL Extract Transform Load phase of the data warehouse development lifecycle The authors show developers the best methods for extracting data from scattered sources throughout the enterprise removing obsolete redundant and inaccurate data transforming the remaining data into correctly formatted data structures and then physically loading them into the data warehouse This book provides complete coverage of proven time saving ETL techniques It begins with a quick overview of ETL fundamentals and the role of the ETL development team It then quickly moves into an overview of the ETL data structures both relational and dimensional The authors show how to build useful dimensional structures providing practical

examples of beginning through advanced techniques Kimball's Data Warehouse Toolkit Classics Ralph Kimball, Margy Ross, Bob Becker, Joy Mundy, Warren Thornthwaite, 2009-04-06 Cowritten by Ralph Kimball the world's leading data warehousing authority Delivers real world solutions for the most time and labor intensive portion of data warehousing data staging or the extract transform load ETL process Delineates best practices for extracting data from scattered sources removing redundant and inaccurate data transforming the remaining data into correctly formatted data structures and then loading the end product into the data warehouse Offers proven time saving ETL techniques comprehensive guidance on building dimensional structures and crucial advice on ensuring data quality This book is also available as part of the Kimball's Data Warehouse Toolkit Classics Box Set ISBN 9780470479575 with the following 3 books The Data Warehouse Toolkit 2nd Edition 9780471200246 The Data Warehouse Lifecycle Toolkit 2nd Edition 9780470149775 The Data Warehouse ETL Toolkit 9780764567575 *The Data Warehouse Lifecycle Toolkit* Ralph Kimball, 1998-08-27 A comprehensive thoughtful and detailed book that will be of inestimable value to anyone struggling with the complex details of designing building and maintaining an enterprise wide decision support system Highly recommended Robert S Craig Vice President Application Architectures Hurwitz Group Inc In his bestselling book The Data Warehouse Toolkit Ralph Kimball showed you how to use dimensional modeling to design effective and usable data warehouses Now he carries these techniques to the larger issues of delivering complete data marts and data warehouses Drawing upon their experiences with numerous data warehouse implementations he and his coauthors show you all the practical details involved in planning designing developing deploying and growing data warehouses Important topics include The Business Dimensional Lifecycle™ approach to data warehouse project planning and management Techniques for gathering requirements more effectively and efficiently Advanced dimensional modeling techniques to capture the most complex business rules The Data Warehouse Bus Architecture and other approaches for integrating data marts into super flexible data warehouses A framework for creating your technical architecture Techniques for minimizing the risks involved with data staging Aggregations and other effective ways to boost data warehouse performance Cutting edge Internet based data warehouse security techniques The CD ROM supplies you with Complete data warehouse project plan tasks and responsibilities A set of sample models that demonstrate the Bus Architecture Blank versions of the templates and tools described in the book Checklists to use at key points in the project *The Data Warehouse Toolkit* Ralph Kimball, Margy Ross, 2011-08-08 This old edition was published in 2002 The current and final edition of this book is The Data Warehouse Toolkit The Definitive Guide to Dimensional Modeling 3rd Edition which was published in 2013 under ISBN 9781118530801 The authors begin with fundamental design recommendations and gradually progress step by step through increasingly complex scenarios Clear cut guidelines for designing dimensional models are illustrated using real world data warehouse case studies drawn from a variety of business application areas and industries including Retail sales and e commerce Inventory management Procurement Order management Customer

relationship management CRM Human resources management Accounting Financial services Telecommunications and utilities Education Transportation Health care and insurance By the end of the book you will have mastered the full range of powerful techniques for designing dimensional databases that are easy to understand and provide fast query response You will also learn how to create an architected framework that integrates the distributed data warehouse using standardized dimensions and facts

**The Data Warehouse Lifecycle Toolkit** Ralph Kimball,2008 *The Data Warehouse Lifecycle Toolkit* Ralph Kimball,Margy Ross,Warren Thornthwaite,Joy Mundy,Bob Becker,2008 The world of data warehousing has changed remarkably since the first edition of The Data Warehouse Lifecycle Toolkit was published in 1998 With this new edition Ralph Kimball and his colleagues have refined the original set of Lifecycle methods and techniques based on their consulting and training experience They walk you through the detailed steps of designing developing and deploying a data warehousing business intelligence system With substantial new and updated content this second edition again sets the standard in data warehousing for the next decade *The Data Warehouse Lifecycle Toolkit, 2nd Ed* Ralph Kimball,Margy Ross,Warren Thorthwaite,Bob Becker,Joy Mundy,2008-06 Market\_Desc Data warehouse Designers Data warehouse Architects Data warehouse Developers Data warehouse Managers Special Features The current first edition has sold more than 72 000 copies generating net revenue of more than 2 5 million The methods described in this book have been adopted by almost all leading data warehouse vendors Ralph Kimball and his co authors are recognized as the driving thought leaders in the data warehousing industry there is no direct competition The authors actively promote this methodology in training and consulting worldwide and in their writing in magazines and online About The Book The book covers best practices from data warehouse project inception through on going program management About 30 to 40% of the content in the book is updated and new This revised tutorial covers major lifecycle topics such as dimensional modeling tech architecture ETL BI etc It is targeted at both novice and experienced data warehouse professionals *Three Volume Set of Ralph Kimball's Toolkit Books* Ralph Kimball,2000-06-12 Ralph Kimball s three data warehousing books The Data Warehouse Toolkit The Data Warehouse Lifecycle Toolkit and The Data Webhouse Toolkit provide you with everything you will need to create manage and use your data warehouse His first book The Data Warehouse Toolkit is the definitive guide to building a data warehouse Kimball uses actual case studies of existing data warehouses developed for specific types of business applications such as retail manufacturing banking insurance subcriptions and airline reservations Using the techniques learned in Kimball s first book The Data Warehouse Lifecycle Toolkit carries them to the larger issues of delivering complete data marts and data warehouses The book shows you all the practical details involved in planning designing developing deploying and growing data warehouses The Data Webhouse Toolkit is a groundbreaking guide which introduces the Webhouse a powerful new way of capturing valuable information flowing into a Web site and ordering it in ways that are useful to managers strategic decision makers and customers *Studyguide for the Data Warehouse Lifecycle Toolkit by Kimball, Ralph*

Cram101 Textbook Reviews,2013-05 Never HIGHLIGHT a Book Again Virtually all testable terms concepts persons places and events are included Cram101 Textbook Outlines gives all of the outlines highlights notes for your textbook with optional online practice tests Only Cram101 Outlines are Textbook Specific Cram101 is NOT the Textbook Accompanys 9780521673761 [Outlines and Highlights for the Data Warehouse Lifecycle Toolkit by Ralph Kimball, Isbn](#) Cram101 Textbook Reviews,2011-04-01 Never HIGHLIGHT a Book Again Virtually all of the testable terms concepts persons places and events from the textbook are included Cram101 Just the FACTS101 studyguides give all of the outlines highlights notes and quizzes for your textbook with optional online comprehensive practice tests Only Cram101 is Textbook Specific Accompanys 9780470149775 **The Data Warehouse Toolkit** Ralph Kimball,Margy Ross,2013-07-01 Updated new edition of Ralph Kimball s groundbreaking book on dimensional modeling for data warehousing and business intelligence The first edition of Ralph Kimball s The Data Warehouse Toolkit introduced the industry to dimensional modeling and now his books are considered the most authoritative guides in this space This new third edition is a complete library of updated dimensional modeling techniques the most comprehensive collection ever It covers new and enhanced star schema dimensional modeling patterns adds two new chapters on ETL techniques includes new and expanded business matrices for 12 case studies and more Authored by Ralph Kimball and Margy Ross known worldwide as educators consultants and influential thought leaders in data warehousing and business intelligence Begins with fundamental design recommendations and progresses through increasingly complex scenarios Presents unique modeling techniques for business applications such 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 and provide fast query response with The Data Warehouse Toolkit The Definitive Guide to Dimensional Modeling 3rd Edition **A Manager's Guide to Data Warehousing** Laura Reeves,2009-05-26 Aimed at helping business and IT managers clearly communicate with each other this helpful book addresses concerns straight on and provides practical methods to building a collaborative data warehouse You ll get clear explanations of the goals and objectives of each stage of the data warehouse lifecycle while learning the roles that both business managers and technicians play at each stage Discussions of the most critical decision points for success at each phase of the data warehouse lifecycle help you understand ways in which both business and IT management can make decisions that best meet unified objectives **Building and Maintaining a Data Warehouse** Fon Silvers,2008-03-18 As it is with building a house most of the work necessary to build a data warehouse is neither visible nor obvious when looking at the completed product While it may be easy to plan for a data warehouse that incorporates all the right concepts taking the steps needed to create a warehouse that is as functional and user friendly as it is theoreti [Building a Scalable Data Warehouse with Data Vault 2.0](#) Daniel Linstedt,Michael Olschimke,2015-09-15 The Data Vault

was invented by Dan Linstedt at the U S Department of Defense and the standard has been successfully applied to data warehousing projects at organizations of different sizes from small to large size corporations Due to its simplified design which is adapted from nature the Data Vault 2 0 standard helps prevent typical data warehousing failures Building a Scalable Data Warehouse covers everything one needs to know to create a scalable data warehouse end to end including a presentation of the Data Vault modeling technique which provides the foundations to create a technical data warehouse layer The book discusses how to build the data warehouse incrementally using the agile Data Vault 2 0 methodology In addition readers will learn how to create the input layer the stage layer and the presentation layer data mart of the Data Vault 2 0 architecture including implementation best practices Drawing upon years of practical experience and using numerous examples and an easy to understand framework Dan Linstedt and Michael Olschimke discuss How to load each layer using SQL Server Integration Services SSIS including automation of the Data Vault loading processes Important data warehouse technologies and practices Data Quality Services DQS and Master Data Services MDS in the context of the Data Vault architecture Provides a complete introduction to data warehousing applications and the business context so readers can get up and running fast Explains theoretical concepts and provides hands on instruction on how to build and implement a data warehouse Demystifies data vault modeling with beginning intermediate and advanced techniques Discusses the advantages of the data vault approach over other techniques also including the latest updates to Data Vault 2 0 and multiple improvements to Data Vault 1 0

**Building the Data Warehouse** W. H. Inmon, 2005-10-03 The new edition of the classic bestseller that launched the data warehousing industry covers new approaches and technologies many of which have been pioneered by Inmon himself In addition to explaining the fundamentals of data warehouse systems the book covers new topics such as methods for handling unstructured data in a data warehouse and storing data across multiple storage media Discusses the pros and cons of relational versus multidimensional design and how to measure return on investment in planning data warehouse projects Covers advanced topics including data monitoring and testing Although the book includes an extra 100 pages worth of valuable content the price has actually been reduced from 65 to 55

**The Microsoft Data Warehouse Toolkit** Joy Mundy, Warren Thornthwaite, 2007-03-22 This groundbreaking book is the first in the Kimball Toolkit series to be product specific Microsoft's BI toolset has undergone significant changes in the SQL Server 2005 development cycle SQL Server 2005 is the first viable full functioned data warehouse and business intelligence platform to be offered at a price that will make data warehousing and business intelligence available to a broad set of organizations This book is meant to offer practical techniques to guide those organizations through the myriad of challenges to true success as measured by contribution to business value Building a data warehousing and business intelligence system is a complex business and engineering effort While there are significant technical challenges to overcome in successfully deploying a data warehouse the authors find that the most common reason for data warehouse project failure is insufficient focus on the business users

and business problems In an effort to help people gain success this book takes the proven Business Dimensional Lifecycle approach first described in best selling The Data Warehouse Lifecycle Toolkit and applies it to the Microsoft SQL Server 2005 tool set Beginning with a thorough description of how to gather business requirements the book then works through the details of creating the target dimensional model setting up the data warehouse infrastructure creating the relational atomic database creating the analysis services databases designing and building the standard report set implementing security dealing with metadata managing ongoing maintenance and growing the DW BI system All of these steps tie back to the business requirements Each chapter describes the practical steps in the context of the SQL Server 2005 platform

**Intended Audience** The target audience for this book is the IT department or service provider consultant who is Planning a small to mid range data warehouse project Evaluating or planning to use Microsoft technologies as the primary or exclusive data warehouse server technology Familiar with the general concepts of data warehousing and business intelligence The book will be directed primarily at the project leader and the warehouse developers although everyone involved with a data warehouse project will find the book useful Some of the book s content will be more technical than the typical project leader will need other chapters and sections will focus on business issues that are interesting to a database administrator or programmer as guiding information The book is focused on the mass market where the volume of data in a single application or data mart is less than 500 GB of raw data While the book does discuss issues around handling larger warehouses in the Microsoft environment it is not exclusively or even primarily concerned with the unusual challenges of extremely large datasets

**About the Authors** JOY MUNDY has focused on data warehousing and business intelligence since the early 1990s specializing in business requirements analysis dimensional modeling and business intelligence systems architecture Joy co founded InfoDynamics LLC a data warehouse consulting firm then joined Microsoft WebTV to develop closed loop analytic applications and a packaged data warehouse Before returning to consulting with the Kimball Group in 2004 Joy worked in Microsoft SQL Server product development managing a team that developed the best practices for building business intelligence systems on the Microsoft platform Joy began her career as a business analyst in banking and finance She graduated from Tufts University with a BA in Economics and from Stanford with an MS in Engineering Economic Systems

WARREN THORNTHWAITE has been building data warehousing and business intelligence systems since 1980 Warren worked at Metaphor for eight years where he managed the consulting organization and implemented many major data warehouse systems After Metaphor Warren managed the enterprise wide data warehouse development at Stanford University He then co founded InfoDynamics LLC a data warehouse consulting firm with his co author Joy Mundy Warren joined up with WebTV to help build a world class multi terabyte customer focused data warehouse before returning to consulting with the Kimball Group In addition to designing data warehouses for a range of industries Warren speaks at major industry conferences and for leading vendors and is a long time instructor for Kimball University Warren holds an MBA in

Decision Sciences from the University of Pennsylvania's Wharton School and a BA in Communications Studies from the University of Michigan RALPH KIMBALL PH D has been a leading visionary in the data warehouse industry since 1982 and is one of today's most internationally well known authors speakers consultants and teachers on data warehousing He writes the Data Warehouse Architect column for Intelligent Enterprise formerly DBMS magazine [CD-ROM to Accompany The Data Warehouse Lifecycle Toolkit](#) Ralph Kimball,1998 [Enterprise Information Systems](#) Joaquim Filipe, José Cordeiro,2009-05-04 This book contains the collection of full papers accepted at the 11th International Conference on Enterprise Information Systems ICEIS 2009 organized by the Institute for Systems and Technologies of Information Control and Communication INSTICC in cooperation with the Association for Advancement of Artificial Intelligence AAAI and ACM SIGMIS SIG on Management Information Systems and technically co sponsored by the Japanese IEICE SWIM SIG on Software Enterprise Modeling and the Workflow Management Coalition WfMC ICEIS 2009 was held in Milan Italy This conference has grown to become a joint point of contact between research scientists engineers and practitioners in the area of business applications of information systems This year five simultaneous tracks were held covering different aspects related to enterprise computing including databases and Information Systems Integration Artificial Intelligence and Decision Support Systems Information Systems Analysis and Specification Software Agents and Internet Computing and Human Computer Interaction All tracks describe research work that is often oriented toward real world applications and highlight the benefits of information systems and technology for industry and services thus making a bridge between academia and enterprise ICEIS 2009 received 644 paper submissions from 70 countries in all continents 81 papers were published and presented as full papers i e completed research work 8 pages 30 minute oral presentation Additional papers accepted at ICEIS including short papers and posters were published in the regular conference proceedings [Agile Data Warehouse Design](#) Lawrence Corr, Jim Stagnitto,2011-11 Agile Data Warehouse Design is a step by step guide for capturing data warehousing business intelligence DW BI requirements and turning them into high performance dimensional models in the most direct way by modelstorming data modeling brainstorming with BI stakeholders This book describes BEAM an agile approach to dimensional modeling for improving communication between data warehouse designers BI stakeholders and the whole DW BI development team BEAM provides tools and techniques that will encourage DW BI designers and developers to move away from their keyboards and entity relationship based tools and model interactively with their colleagues The result is everyone thinks dimensionally from the outset Developers understand how to efficiently implement dimensional modeling solutions Business stakeholders feel ownership of the data warehouse they have created and can already imagine how they will use it to answer their business questions Within this book you will learn Agile dimensional modeling using Business Event Analysis using data story themes not crow's feet to describe detail Storyboarding the data warehouse to discover conformed dimensions and plan iterative development Visual modeling sketching timelines charts and grids to model complex process

measurement simply Agile design documentation enhancing star schemas with BEAM dimensional shorthand notation Solving difficult DW BI performance and usability problems with proven dimensional design patterns Lawrence Corr is a data warehouse designer and educator As Principal of DecisionOne Consulting he helps clients to review and simplify their data warehouse designs and advises vendors on visual data modeling techniques He regularly teaches agile dimensional modeling courses worldwide and has taught dimensional DW BI skills to thousands of students Jim Stagnitto is a data warehouse and master data management architect specializing in the healthcare financial services and information service industries He is the founder of the data warehousing and data mining consulting firm Llumino

## **The Data Warehouse Lifecycle Toolkit** Book Review: Unveiling the Power of Words

In a global driven by information and connectivity, the power of words has be much more evident than ever. They have the capacity to inspire, provoke, and ignite change. Such is the essence of the book **The Data Warehouse Lifecycle Toolkit**, a literary masterpiece that delves deep into the significance of words and their effect on our lives. Written by a renowned author, this captivating work takes readers on a transformative journey, unraveling the secrets and potential behind every word. In this review, we shall explore the book is key themes, examine its writing style, and analyze its overall effect on readers.

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### **The Data Warehouse Lifecycle Toolkit Introduction**

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