

AGILE DATA WAREHOUSE DESIGN EBOOK

AGILE DATA WAREHOUSE DESIGN EBOOK SERVES AS AN ESSENTIAL RESOURCE FOR PROFESSIONALS SEEKING TO UNDERSTAND THE PRINCIPLES AND BEST PRACTICES BEHIND CREATING FLEXIBLE, SCALABLE, AND EFFICIENT DATA WAREHOUSES. THIS COMPREHENSIVE GUIDE DELVES INTO METHODOLOGIES THAT MERGE TRADITIONAL DATA WAREHOUSING TECHNIQUES WITH AGILE DEVELOPMENT PROCESSES, ENABLING FASTER IMPLEMENTATION AND CONTINUOUS IMPROVEMENT. READERS WILL GAIN INSIGHTS INTO ITERATIVE DESIGN, STAKEHOLDER COLLABORATION, AND ADAPTIVE ARCHITECTURE THAT RESPOND EFFECTIVELY TO CHANGING BUSINESS REQUIREMENTS. THE EBOOK ALSO EXPLORES PRACTICAL APPROACHES TO DATA MODELING, INTEGRATION, AND TESTING WITHIN AN AGILE FRAMEWORK. EMPHASIZING REAL-WORLD CHALLENGES AND SOLUTIONS, IT SUPPORTS DATA ARCHITECTS, ANALYSTS, AND DEVELOPERS AIMING TO OPTIMIZE DATA WAREHOUSE PROJECTS. THE FOLLOWING SECTIONS OUTLINE THE KEY TOPICS COVERED IN THIS AUTHORITATIVE AGILE DATA WAREHOUSE DESIGN EBOOK.

- UNDERSTANDING AGILE DATA WAREHOUSE DESIGN
- CORE PRINCIPLES OF AGILE METHODOLOGY IN DATA WAREHOUSING
- ITERATIVE AND INCREMENTAL DATA WAREHOUSE DEVELOPMENT
- DATA MODELING TECHNIQUES FOR AGILE WAREHOUSES
- INTEGRATION AND ETL STRATEGIES IN AGILE ENVIRONMENTS
- TESTING AND QUALITY ASSURANCE IN AGILE DATA WAREHOUSING
- COLLABORATIVE PRACTICES AND STAKEHOLDER ENGAGEMENT
- TOOLS AND TECHNOLOGIES SUPPORTING AGILE DATA WAREHOUSE DESIGN

UNDERSTANDING AGILE DATA WAREHOUSE DESIGN

AGILE DATA WAREHOUSE DESIGN REPRESENTS A PARADIGM SHIFT FROM TRADITIONAL WATERFALL METHODOLOGIES TOWARD A MORE FLEXIBLE, ITERATIVE PROCESS. THIS APPROACH PRIORITIZES ADAPTABILITY, ENABLING TEAMS TO RESPOND QUICKLY TO EVOLVING DATA REQUIREMENTS AND BUSINESS OBJECTIVES. THE AGILE FRAMEWORK FOSTERS CONTINUOUS DELIVERY OF FUNCTIONAL DATA WAREHOUSE COMPONENTS, REDUCING TIME TO VALUE AND IMPROVING OVERALL PROJECT SUCCESS RATES.

THE DESIGN PHILOSOPHY FOCUSES ON BREAKING DOWN COMPLEX DATA WAREHOUSE PROJECTS INTO MANAGEABLE INCREMENTS. THIS MODULAR APPROACH ALLOWS FOR EARLY FEEDBACK AND REFINEMENT, ENSURING THE FINAL SOLUTION ALIGNS CLOSELY WITH USER NEEDS. AGILE DATA WAREHOUSE DESIGN EBOOK EMPHASIZES THE IMPORTANCE OF BALANCING RIGOROUS DATA GOVERNANCE WITH THE FLEXIBILITY NEEDED FOR RAPID DEVELOPMENT CYCLES.

CORE PRINCIPLES OF AGILE METHODOLOGY IN DATA WAREHOUSING

APPLYING AGILE PRINCIPLES TO DATA WAREHOUSE DESIGN INVOLVES EMBRACING COLLABORATION, ITERATIVE DEVELOPMENT, AND INCREMENTAL DELIVERY. THE CORE TENETS INCLUDE:

- **CUSTOMER COLLABORATION:** ENGAGING STAKEHOLDERS THROUGHOUT THE PROJECT ENSURES THE DATA WAREHOUSE MEETS EVOLVING BUSINESS DEMANDS.
- **RESPONDING TO CHANGE:** AGILE TEAMS ADAPT DESIGNS AND PRIORITIES BASED ON FEEDBACK AND SHIFTING REQUIREMENTS.
- **WORKING SOLUTIONS:** DELIVERING FUNCTIONAL COMPONENTS FREQUENTLY RATHER THAN WAITING FOR A COMPLETE

BUILD.

- **CONTINUOUS IMPROVEMENT:** REGULAR RETROSPECTIVES HELP TEAMS REFINE PROCESSES AND ENHANCE QUALITY.

THESE PRINCIPLES FOSTER TRANSPARENCY AND FLEXIBILITY, WHICH ARE CRITICAL IN MANAGING COMPLEX DATA ENVIRONMENTS.

ITERATIVE AND INCREMENTAL DATA WAREHOUSE DEVELOPMENT

ITERATIVE AND INCREMENTAL DEVELOPMENT IS FOUNDATIONAL TO AGILE DATA WAREHOUSE DESIGN. INSTEAD OF ATTEMPTING TO BUILD THE ENTIRE WAREHOUSE UPFRONT, TEAMS DELIVER SMALL, USABLE SECTIONS IN SUCCESSIVE ITERATIONS. EACH ITERATION INCLUDES PLANNING, DEVELOPMENT, TESTING, AND REVIEW PHASES, ALLOWING FOR CONTINUOUS VALIDATION AND ADJUSTMENT.

THIS APPROACH MITIGATES RISKS ASSOCIATED WITH LENGTHY PROJECTS BY IDENTIFYING ISSUES EARLY AND INCORPORATING STAKEHOLDER FEEDBACK PROMPTLY. ADDITIONALLY, IT SUPPORTS EVOLVING DATA SOURCES AND CHANGING ANALYTICS REQUIREMENTS, WHICH ARE COMMON IN DYNAMIC BUSINESS ENVIRONMENTS.

BENEFITS OF ITERATIVE DEVELOPMENT

IMPLEMENTING ITERATIVE DEVELOPMENT IN DATA WAREHOUSING OFFERS MULTIPLE ADVANTAGES:

- FASTER DELIVERY OF BUSINESS VALUE THROUGH EARLY DEPLOYMENT OF KEY FEATURES.
- IMPROVED ALIGNMENT BETWEEN IT AND BUSINESS UNITS DUE TO CONTINUOUS COLLABORATION.
- ENHANCED FLEXIBILITY TO ACCOMMODATE NEW DATA SOURCES AND ANALYTICS NEEDS.
- REDUCED PROJECT RISK BY ENABLING EARLY DETECTION OF DEFECTS AND DESIGN FLAWS.

DATA MODELING TECHNIQUES FOR AGILE WAREHOUSES

DATA MODELING IN AGILE DATA WAREHOUSE DESIGN FOCUSES ON SIMPLICITY, EXTENSIBILITY, AND EVOLVING STRUCTURES. RATHER THAN RIGID, UPFRONT SCHEMAS, AGILE PROJECTS UTILIZE ADAPTIVE MODELS THAT ACCOMMODATE INCREMENTAL CHANGES WITHOUT EXTENSIVE REWORK.

COMMON TECHNIQUES INCLUDE DIMENSIONAL MODELING WITH STAR SCHEMAS, DATA VAULT MODELING FOR FLEXIBILITY, AND SCHEMA-ON-READ APPROACHES IN BIG DATA CONTEXTS. THE CHOICE OF MODELING DEPENDS ON PROJECT GOALS, DATA COMPLEXITY, AND THE DESIRED BALANCE BETWEEN STRUCTURE AND AGILITY.

KEY MODELING STRATEGIES

- **DIMENSIONAL MODELING:** SUPPORTS FAST QUERYING AND REPORTING BY ORGANIZING DATA INTO FACTS AND DIMENSIONS.
- **DATA VAULT MODELING:** ENABLES SCALABLE AND AUDITABLE DATA INTEGRATION WITH A MODULAR ARCHITECTURE.
- **SCHEMA-ON-READ:** ALLOWS FLEXIBILITY BY APPLYING SCHEMA DEFINITIONS DURING QUERY TIME, OFTEN USED IN DATA LAKES.

INTEGRATION AND ETL STRATEGIES IN AGILE ENVIRONMENTS

EFFICIENT INTEGRATION AND ETL (EXTRACT, TRANSFORM, LOAD) PROCESSES ARE VITAL TO AGILE DATA WAREHOUSE DESIGN. AGILE PROJECTS OFTEN LEVERAGE AUTOMATION, PARALLEL PROCESSING, AND MODULAR ETL PIPELINES TO KEEP PACE WITH RAPID DEVELOPMENT CYCLES.

INCREMENTAL DATA LOADING, REAL-TIME INGESTION, AND METADATA-DRIVEN ETL FRAMEWORKS SUPPORT CONTINUOUS UPDATES AND REDUCE DOWNTIME. AGILE TEAMS PRIORITIZE REUSABLE COMPONENTS AND STANDARDIZED INTERFACES TO STREAMLINE INTEGRATION EFFORTS ACROSS DIVERSE DATA SOURCES.

BEST PRACTICES FOR AGILE ETL

- DESIGN MODULAR ETL WORKFLOWS THAT CAN BE INDEPENDENTLY DEVELOPED AND TESTED.
- IMPLEMENT AUTOMATION FOR DATA VALIDATION AND ERROR HANDLING.
- USE METADATA REPOSITORIES TO MANAGE TRANSFORMATIONS AND LINEAGE.
- INCORPORATE REAL-TIME OR NEAR REAL-TIME DATA FEEDS WHERE APPLICABLE.

TESTING AND QUALITY ASSURANCE IN AGILE DATA WAREHOUSING

MAINTAINING DATA QUALITY AND SYSTEM RELIABILITY REQUIRES RIGOROUS TESTING THROUGHOUT THE AGILE DATA WAREHOUSE DEVELOPMENT LIFECYCLE. TESTING STRATEGIES MUST ACCOMMODATE FREQUENT CHANGES AND ITERATIVE RELEASES WITHOUT SACRIFICING ACCURACY OR PERFORMANCE.

AUTOMATED TESTING FRAMEWORKS, INCLUDING UNIT TESTS FOR ETL COMPONENTS AND INTEGRATION TESTS FOR DATA FLOWS, ARE ESSENTIAL. ADDITIONALLY, DATA PROFILING AND VALIDATION TECHNIQUES ENSURE DATA CONSISTENCY AND COMPLETENESS AFTER EACH ITERATION.

TYPES OF TESTING IN AGILE DATA WAREHOUSES

- **UNIT TESTING:** VERIFIES INDIVIDUAL COMPONENTS SUCH AS ETL SCRIPTS OR DATA TRANSFORMATIONS.
- **INTEGRATION TESTING:** CONFIRMS THAT COMBINED COMPONENTS FUNCTION CORRECTLY TOGETHER.
- **REGRESSION TESTING:** ENSURES NEW CHANGES DO NOT ADVERSELY AFFECT EXISTING FUNCTIONALITY.
- **PERFORMANCE TESTING:** ASSESSES SYSTEM RESPONSIVENESS AND SCALABILITY UNDER LOAD.

COLLABORATIVE PRACTICES AND STAKEHOLDER ENGAGEMENT

EFFECTIVE COLLABORATION BETWEEN TECHNICAL TEAMS AND BUSINESS STAKEHOLDERS IS A HALLMARK OF AGILE DATA WAREHOUSE DESIGN. CONTINUOUS COMMUNICATION HELPS CLARIFY REQUIREMENTS, PRIORITIZE FEATURES, AND VALIDATE DELIVERABLES.

AGILE FRAMEWORKS ENCOURAGE CROSS-FUNCTIONAL TEAMS, INCLUDING DATA ARCHITECTS, DEVELOPERS, ANALYSTS, AND END-USERS, TO PARTICIPATE ACTIVELY THROUGHOUT THE PROJECT. REGULAR MEETINGS, DEMONSTRATIONS, AND FEEDBACK LOOPS FOSTER SHARED UNDERSTANDING AND ALIGNMENT.

FACILITATING COLLABORATION

- CONDUCT REGULAR SPRINT PLANNING AND REVIEW SESSIONS TO SET GOALS AND ASSESS PROGRESS.
- UTILIZE VISUAL TOOLS SUCH AS USER STORIES AND DATA FLOW DIAGRAMS FOR CLARITY.
- ENCOURAGE OPEN CHANNELS FOR FEEDBACK AND ISSUE RESOLUTION.
- PROMOTE A CULTURE OF TRANSPARENCY AND CONTINUOUS LEARNING.

TOOLS AND TECHNOLOGIES SUPPORTING AGILE DATA WAREHOUSE DESIGN

MODERN AGILE DATA WAREHOUSE PROJECTS BENEFIT FROM A RANGE OF TOOLS DESIGNED TO ENHANCE AUTOMATION, COLLABORATION, AND SCALABILITY. THESE INCLUDE ETL AUTOMATION PLATFORMS, CLOUD-BASED DATA WAREHOUSING SOLUTIONS, AND AGILE PROJECT MANAGEMENT SOFTWARE.

TECHNOLOGIES SUCH AS CONTAINERIZATION, ORCHESTRATION FRAMEWORKS, AND METADATA MANAGEMENT SYSTEMS FURTHER FACILITATE RAPID DEPLOYMENT AND MAINTAINABILITY. CHOOSING THE RIGHT TOOLS DEPENDS ON ORGANIZATIONAL NEEDS, EXISTING INFRASTRUCTURE, AND PROJECT COMPLEXITY.

POPULAR TOOLS FOR AGILE DATA WAREHOUSING

- CLOUD DATA WAREHOUSES: PLATFORMS LIKE SNOWFLAKE, AMAZON REDSHIFT, AND GOOGLE BIGQUERY PROVIDE SCALABLE INFRASTRUCTURE.
- ETL AND DATA INTEGRATION TOOLS: SOLUTIONS SUCH AS APACHE NIFI, TALEND, AND INFORMATICA SUPPORT AGILE ETL PROCESSES.
- PROJECT MANAGEMENT SOFTWARE: TOOLS LIKE JIRA AND AZURE DEVOPS HELP COORDINATE AGILE WORKFLOWS AND TRACK PROGRESS.
- AUTOMATION AND TESTING FRAMEWORKS: JENKINS, APACHE AIRFLOW, AND DBT ENABLE CONTINUOUS INTEGRATION AND TESTING.

FREQUENTLY ASKED QUESTIONS

WHAT IS AN AGILE DATA WAREHOUSE DESIGN EBOOK?

AN AGILE DATA WAREHOUSE DESIGN EBOOK IS A DIGITAL PUBLICATION THAT GUIDES READERS THROUGH THE PRINCIPLES AND PRACTICES OF BUILDING DATA WAREHOUSES USING AGILE METHODOLOGIES, FOCUSING ON FLEXIBILITY, ITERATIVE DEVELOPMENT, AND COLLABORATION.

WHY SHOULD I USE AGILE METHODS FOR DATA WAREHOUSE DESIGN?

USING AGILE METHODS FOR DATA WAREHOUSE DESIGN ALLOWS TEAMS TO ADAPT TO CHANGING BUSINESS REQUIREMENTS QUICKLY, DELIVER INCREMENTAL VALUE, IMPROVE COLLABORATION BETWEEN STAKEHOLDERS, AND REDUCE THE RISK OF LONG DEVELOPMENT CYCLES TYPICAL IN TRADITIONAL APPROACHES.

WHAT TOPICS ARE TYPICALLY COVERED IN AN AGILE DATA WAREHOUSE DESIGN EBOOK?

SUCH EBOOKS COMMONLY COVER AGILE PRINCIPLES, ITERATIVE DEVELOPMENT CYCLES, DATA MODELING TECHNIQUES, INTEGRATION STRATEGIES, TESTING APPROACHES, DEPLOYMENT PRACTICES, AND CASE STUDIES RELATED TO AGILE DATA WAREHOUSING PROJECTS.

WHO CAN BENEFIT FROM READING AN AGILE DATA WAREHOUSE DESIGN EBOOK?

DATA ARCHITECTS, DATA ENGINEERS, BUSINESS ANALYSTS, PROJECT MANAGERS, AND IT PROFESSIONALS INVOLVED IN DATA WAREHOUSE PROJECTS CAN BENEFIT FROM UNDERSTANDING AGILE APPROACHES TO IMPROVE PROJECT OUTCOMES AND RESPONSIVENESS.

HOW DOES AGILE DATA WAREHOUSE DESIGN DIFFER FROM TRADITIONAL APPROACHES?

AGILE DATA WAREHOUSE DESIGN EMPHASIZES ITERATIVE DEVELOPMENT, FREQUENT DELIVERY, AND CLOSE COLLABORATION, WHEREAS TRADITIONAL METHODS OFTEN FOLLOW A LINEAR, UPFRONT DESIGN WITH LESS FLEXIBILITY TO ACCOMMODATE CHANGES DURING THE PROJECT LIFECYCLE.

ARE THERE RECOMMENDED TOOLS OR FRAMEWORKS MENTIONED IN AGILE DATA WAREHOUSE DESIGN EBOOKS?

YES, MANY EBOOKS RECOMMEND TOOLS AND FRAMEWORKS THAT SUPPORT AGILE WORKFLOWS, SUCH AS VERSION CONTROL SYSTEMS, CONTINUOUS INTEGRATION PIPELINES, DATA MODELING TOOLS, AND AGILE PROJECT MANAGEMENT SOFTWARE LIKE JIRA OR AZURE DEVOPS.

CAN AGILE DATA WAREHOUSE DESIGN IMPROVE DATA QUALITY?

YES, BY INCORPORATING CONTINUOUS TESTING, VALIDATION, AND FEEDBACK LOOPS THROUGHOUT THE DEVELOPMENT PROCESS, AGILE DATA WAREHOUSE DESIGN HELPS IDENTIFY AND RESOLVE DATA QUALITY ISSUES EARLY, LEADING TO MORE RELIABLE AND ACCURATE DATA.

IS AGILE DATA WAREHOUSE DESIGN SUITABLE FOR LARGE ENTERPRISE PROJECTS?

ABSOLUTELY. AGILE METHODOLOGIES CAN SCALE TO LARGE ENTERPRISE PROJECTS BY BREAKING DOWN THE WORK INTO MANAGEABLE INCREMENTS, ENABLING BETTER RISK MANAGEMENT AND ENSURING ALIGNMENT WITH EVOLVING BUSINESS NEEDS.

WHERE CAN I FIND A REPUTABLE AGILE DATA WAREHOUSE DESIGN EBOOK?

REPUTABLE AGILE DATA WAREHOUSE DESIGN EBOOKS CAN BE FOUND ON PLATFORMS LIKE AMAZON, O'REILLY MEDIA, OR THROUGH PROFESSIONAL ORGANIZATIONS SUCH AS TDWI, AS WELL AS FROM AUTHORS SPECIALIZING IN DATA WAREHOUSING AND AGILE DEVELOPMENT.

ADDITIONAL RESOURCES

1. *AGILE DATA WAREHOUSE DESIGN: COLLABORATIVE DIMENSIONAL MODELING, FROM WHITEBOARD TO STAR SCHEMA*
THIS BOOK BY LAWRENCE CORR PROVIDES A PRACTICAL APPROACH TO DESIGNING DATA WAREHOUSES USING AGILE METHODOLOGIES. IT EMPHASIZES COLLABORATION BETWEEN BUSINESS STAKEHOLDERS AND DEVELOPERS TO CREATE DIMENSIONAL MODELS THAT MEET ACTUAL BUSINESS NEEDS. THE BOOK INCLUDES REAL-WORLD EXAMPLES, BEST PRACTICES, AND TECHNIQUES FOR ITERATIVE DEVELOPMENT AND CONTINUOUS IMPROVEMENT OF DATA WAREHOUSE DESIGNS.

2. *BUILDING A SCALABLE DATA WAREHOUSE WITH DATA VAULT 2.0*
DAN LINSTEDT AND MICHAEL OLSCHIMKE PRESENT A COMPREHENSIVE GUIDE TO IMPLEMENTING DATA VAULT 2.0, AN AGILE AND SCALABLE METHODOLOGY FOR DATA WAREHOUSE DESIGN. THE BOOK EXPLAINS HOW TO BUILD ADAPTABLE AND AUDITABLE DATA WAREHOUSES THAT SUPPORT RAPID CHANGES AND GROWTH. READERS WILL LEARN ABOUT MODELING, ARCHITECTURE, AND

AUTOMATION TECHNIQUES THAT ALIGN WELL WITH AGILE DEVELOPMENT PRINCIPLES.

3. *AGILE ANALYTICS: A VALUE-DRIVEN APPROACH TO BUSINESS INTELLIGENCE AND DATA WAREHOUSING*

KEN COLLIER EXPLORES HOW TO APPLY AGILE PRINCIPLES SPECIFICALLY TO ANALYTICS, BUSINESS INTELLIGENCE, AND DATA WAREHOUSING PROJECTS. THE BOOK GUIDES READERS THROUGH ITERATIVE DELIVERY, PRIORITIZATION, AND STAKEHOLDER ENGAGEMENT TO MAXIMIZE BUSINESS VALUE. IT ALSO ADDRESSES CHALLENGES UNIQUE TO DATA PROJECTS AND OFFERS SOLUTIONS TO IMPROVE RESPONSIVENESS AND QUALITY.

4. *DATA WAREHOUSE DESIGN SOLUTIONS*

CHRISTOPHER ADAMSON OFFERS DETAILED METHODOLOGIES FOR DESIGNING DATA WAREHOUSES THAT ARE EFFECTIVE AND MAINTAINABLE. WHILE NOT EXCLUSIVELY FOCUSED ON AGILE, THE BOOK'S PRINCIPLES SUPPORT ITERATIVE DESIGN AND ADAPTABILITY. IT INCLUDES CASE STUDIES AND PRACTICAL TIPS FOR DIMENSIONAL MODELING, ETL PROCESSES, AND ARCHITECTURE TO HELP TEAMS BUILD ROBUST DATA WAREHOUSES.

5. *AGILE DATA SCIENCE 2.0: BUILDING FULL-STACK DATA ANALYTICS APPLICATIONS WITH SPARK*

RUSSELL JUNEY DISCUSSES AGILE APPROACHES FOR DEVELOPING DATA SCIENCE APPLICATIONS THAT INTEGRATE WITH DATA WAREHOUSES. THE BOOK COVERS END-TO-END WORKFLOWS INCLUDING DATA INGESTION, PROCESSING, ANALYSIS, AND VISUALIZATION USING APACHE SPARK. IT'S VALUABLE FOR TEAMS AIMING TO INCORPORATE AGILE DATA SCIENCE PRACTICES ALONGSIDE DATA WAREHOUSE DESIGN.

6. *LEAN ANALYTICS: USE DATA TO BUILD A BETTER STARTUP FASTER*

ALISTAIR CROLL AND BENJAMIN YOSKOVITZ FOCUS ON HOW TO USE DATA EFFECTIVELY IN FAST-MOVING ENVIRONMENTS, WHICH ALIGNS WITH AGILE DATA WAREHOUSING GOALS. THE BOOK TEACHES HOW TO IDENTIFY KEY METRICS, VALIDATE HYPOTHESES QUICKLY, AND ITERATE BASED ON DATA INSIGHTS. THOUGH STARTUP-ORIENTED, THE PRINCIPLES ARE APPLICABLE TO AGILE DATA WAREHOUSE AND BI PROJECTS.

7. *DATA MODELING MADE SIMPLE: A PRACTICAL GUIDE FOR BUSINESS & IT PROFESSIONALS*

STEVE HOBERMAN PROVIDES FOUNDATIONAL KNOWLEDGE ON DATA MODELING THAT SUPPORTS AGILE PRACTICES IN DATA WAREHOUSE DESIGN. THE BOOK BREAKS DOWN COMPLEX CONCEPTS INTO CLEAR, ACTIONABLE STEPS SUITABLE FOR ITERATIVE DEVELOPMENT. IT HELPS READERS UNDERSTAND HOW TO CREATE FLEXIBLE MODELS THAT EVOLVE WITH BUSINESS REQUIREMENTS.

8. *AGILE PROJECT MANAGEMENT FOR DATA WAREHOUSES*

THIS BOOK FOCUSES ON APPLYING AGILE PROJECT MANAGEMENT TECHNIQUES SPECIFICALLY TO DATA WAREHOUSE AND BI INITIATIVES. IT COVERS FRAMEWORKS LIKE SCRUM AND KANBAN TAILORED TO THE UNIQUE CHALLENGES OF DATA PROJECTS. READERS GAIN INSIGHTS ON MANAGING SCOPE, QUALITY, AND STAKEHOLDER EXPECTATIONS IN AN AGILE ENVIRONMENT.

9. *SUCCESSFUL DATA WAREHOUSING: TECHNIQUES AND TECHNOLOGIES*

C. D. BATINI AND M. SCANNAPIECO PROVIDE A BROAD OVERVIEW OF DATA WAREHOUSING CONCEPTS WITH AN EMPHASIS ON ADAPTABILITY AND ITERATIVE IMPROVEMENT. THE BOOK DISCUSSES ARCHITECTURAL CHOICES, DATA INTEGRATION, AND QUALITY MANAGEMENT THAT SUPPORT AGILE DEVELOPMENT CYCLES. IT IS USEFUL FOR TEAMS SEEKING TO IMPLEMENT FLEXIBLE AND MAINTAINABLE DATA WAREHOUSE SOLUTIONS.

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agile data warehouse design ebook: *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 & Modeling (BEAM[®])
- Modelstorming: data modeling that is quicker, more inclusive, more productive, and frankly more fun!
- Telling dimensional data stories using the 7Ws (who, what, when, where, how many, why and how)
- Modeling by example not abstraction; 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.

agile data warehouse design ebook: Modeling the Agile Data Warehouse with Data Vault Hans Hultgren, 2012-11-16 Data Modeling for Agile Data Warehouse using Data Vault Modeling Approach. Includes Enterprise Data Warehouse Architecture. This is a complete guide to the data vault data modeling approach. The book also includes business and program considerations for the agile data warehousing and business intelligence program. There are over 200 diagrams and figures concerning modeling, core business concepts, architecture, business alignment, semantics, and modeling comparisons with 3NF and Dimensional modeling.

agile data warehouse design ebook: Handbook of Research on Big Data Storage and Visualization Techniques Segall, Richard S., Cook, Jeffrey S., 2018-01-05 The digital age has presented an exponential growth in the amount of data available to individuals looking to draw conclusions based on given or collected information across industries. Challenges associated with the analysis, security, sharing, storage, and visualization of large and complex data sets continue to plague data scientists and analysts alike as traditional data processing applications struggle to adequately manage big data. The Handbook of Research on Big Data Storage and Visualization Techniques is a critical scholarly resource that explores big data analytics and technologies and their role in developing a broad understanding of issues pertaining to the use of big data in multidisciplinary fields. Featuring coverage on a broad range of topics, such as architecture patterns, programming systems, and computational energy, this publication is geared towards professionals, researchers, and students seeking current research and application topics on the subject.

agile data warehouse design ebook: Agile Data Warehouse Design Michael Blaha, 2015 In this Agile Data Warehouse Design training course, expert author Michael Blaha will teach you how to model and design a data warehouse. This course is designed for users that are already familiar with data warehouses. You will start with a data warehouse overview, then jump into learning about data sources, such as customer order, customer account, and vendor procurement. From there, Michael teaches you about staging tables, basic data warehouse modeling, recurrent dimensions, and advanced dimension data warehouse modeling. This video tutorial also covers data warehouse design, data warehouse data, and end user access. Finally, you will learn about metadata

management. Once you have completed this computer based training course, you will be fully capable of modeling and designing your own data warehouse.--Resource description page.

agile data warehouse design ebook: Agile Data Warehousing for the Enterprise Ralph Hughes, 2015-09-19 Building upon his earlier book that detailed agile data warehousing programming techniques for the Scrum master, Ralph's latest work illustrates the agile interpretations of the remaining software engineering disciplines: - Requirements management benefits from streamlined templates that not only define projects quickly, but ensure nothing essential is overlooked. - Data engineering receives two new hyper modeling techniques, yielding data warehouses that can be easily adapted when requirements change without having to invest in ruinously expensive data-conversion programs. - Quality assurance advances with not only a stereoscopic top-down and bottom-up planning method, but also the incorporation of the latest in automated test engines. Use this step-by-step guide to deepen your own application development skills through self-study, show your teammates the world's fastest and most reliable techniques for creating business intelligence systems, or ensure that the IT department working for you is building your next decision support system the right way. - Learn how to quickly define scope and architecture before programming starts - Includes techniques of process and data engineering that enable iterative and incremental delivery - Demonstrates how to plan and execute quality assurance plans and includes a guide to continuous integration and automated regression testing - Presents program management strategies for coordinating multiple agile data mart projects so that over time an enterprise data warehouse emerges - Use the provided 120-day road map to establish a robust, agile data warehousing program

agile data warehouse design ebook: An Introduction to Agile Data Engineering Using Data Vault 2.0 Kent Graziano, 2015-11-22 The world of data warehousing is changing. Big Data & Agile are hot topics. But companies still need to collect, report, and analyze their data. Usually this requires some form of data warehousing or business intelligence system. So how do we do that in the modern IT landscape in a way that allows us to be agile and either deal directly or indirectly with unstructured and semi structured data?The Data Vault System of Business Intelligence provides a method and approach to modeling your enterprise data warehouse (EDW) that is agile, flexible, and scalable. This book will give you a short introduction to Agile Data Engineering for Data Warehousing and Data Vault 2.0. I will explain why you should be trying to become Agile, some of the history and rationale for Data Vault 2.0, and then show you the basics for how to build a data warehouse model using the Data Vault 2.0 standards.In addition, I will cover some details about the Business Data Vault (what it is) and then how to build a virtual Information Mart off your Data Vault and Business Vault using the Data Vault 2.0 architecture.So if you want to start learning about Agile Data Engineering with Data Vault 2.0, this book is for you.

agile data warehouse design ebook: Rapid Data Warehouse Design Lawrence Corr, Jim Stagnitto, 2010-05-13 An exciting new approach to dimensional data warehouse design, invented by the author This how-to guide shows you how a revolutionary new approach to dimensional modeling invented by the author can be used throughout the data warehouse analysis and design phases to improve communication between IT and business users-and consequently-produce better results. Featuring proven techniques devised by the author, this book introduces Business Event Analysis and Modeling (BEAM), a powerful, yet simple, technique for modeling directly with business users. You'll learn how to run facilitated BEAM sessions with users to create consensus on data definitions and a sense of business ownership of the data warehouse design. Demonstrates how to use Business Event Analysis and Modeling (BEAM) to readily capture the 5W1H combinations that represent the unique business events of any organization Presents common reusable modeling techniques for handling the complexities of people and groups (the who), products and services (the what), geography (the where) for each dimension type Offers extensive, detailed examples for translating each BEAM model into a dimensional (star schema) model The companion website will include all sample models, document templates, and SQL code examples These proven techniques will help you accomplish your end goal: ensuring that the data warehouse design meet the real needs of users.

agile data warehouse design ebook: *Agile Data Warehousing Project Management* Ralph Hughes, 2012-12-28 You have to make sense of enormous amounts of data, and while the notion of agile data warehousing might sound tricky, it can yield as much as a 3-to-1 speed advantage while cutting project costs in half. Bring this highly effective technique to your organization with the wisdom of agile data warehousing expert Ralph Hughes. *Agile Data Warehousing Project Management* will give you a thorough introduction to the method as you would practice it in the project room to build a serious data mart. Regardless of where you are today, this step-by-step implementation guide will prepare you to join or even lead a team in visualizing, building, and validating a single component to an enterprise data warehouse. - Provides a thorough grounding on the mechanics of Scrum as well as practical advice on keeping your team on track - Includes strategies for getting accurate and actionable requirements from a team's business partner - Revolutionary estimating techniques that make forecasting labor far more understandable and accurate - Demonstrates a blends of Agile methods to simplify team management and synchronize inputs across IT specialties - Enables you and your teams to start simple and progress steadily to world-class performance levels

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