

DW/BI Lifecycle: Kimball Methods for Launch, Requirements & Modeling

Why Attend

The data warehouse and business intelligence (DW/BI) system continues to be one of the most organizationally complex and technically interesting IT projects. This course prepares you to successfully implement your DW/BI environment by distilling the essential upfront elements of the popular Kimball approach as described in the bestselling book, *The Data Warehouse Lifecycle Toolkit, Second Edition*.

This course is packed with specific techniques, guidance and advice from initial project planning through business requirements and dimensional modeling. It is taught through a combination of lectures, class exercises, small group workshops, and individual problem solving.

The DW/BI Lifecycle course is appropriate for anyone who is new to DW/BI and wants to learn a holistic set of best practices from the beginning, or for anyone who has been through a couple projects and wants to refine their methods to better align with the proven, broadly-accepted Kimball approach.

Who Should Attend

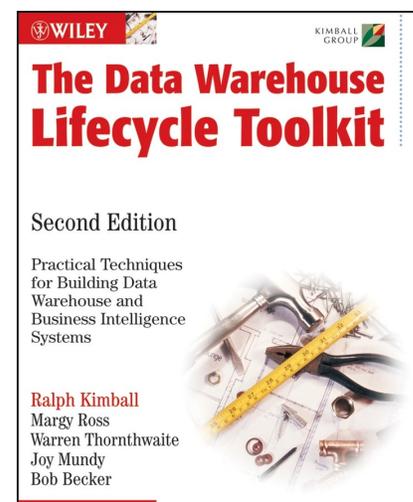
This course is designed for all major roles on a DW/BI project, including project managers, business analysts, data modelers and database administrators, architects, and ETL or BI application designers/developers.

Instructor

Margy Ross, co-author of *The Data Warehouse Lifecycle Toolkit, 2nd Edition*. She taught Kimball University's DW/BI Lifecycle course for over 15 years. The legacy lives on!

Course Overview

- Day 1 • Introduction to the Kimball Lifecycle
- Program/Project Planning and Management
 - Business Requirements Analysis
 - Dimensional Modeling Introduction
- Day 2 • Dimensional Modeling continued



DW/BI Lifecycle: Kimball Methods for Launch, Requirements & Modeling

DAY 1

Introduction to the Kimball Lifecycle

- Roadmap for creating the DW/BI system

Project Planning and Management

- Readiness factors
- Risk assessment and mitigation plans
- Scoping and business justification
- Team roles and responsibilities
- Program management
- Project plan development and maintenance

Business Requirements Definition

- Program versus project requirements preparation
- Requirements gathering participants
- Techniques for gathering requirements and handling obstacles
- Program/project requirements deliverables
- Requirements prioritization

Dimensional Modeling

- Role of dimensional modeling in the Kimball, Corporate Information Factory (CIF) and hybrid architectures
- Fact and dimension table characteristics
- 4-step process for designing dimensional models
- Transaction fact tables
- Fact table granularity
- Denormalizing dimension table hierarchies
- Degenerate dimensions
- Date and time-of-day dimension considerations
- Dealing with nulls
- Surrogate key for dimensions
- Star versus snowflake schemas
- Centipede fact tables with too many dimensions
- Factless fact tables
- Additive, semi-additive, and non-additive facts
- Workshop: Converting requirements and source data realities into dimensional model
- Consolidated fact tables
- Dimension table role-playing
- Allocated facts at different levels of detail
- Complications with operational header/line data
- Multiple currencies

DAY 2

Dimensional Modeling Continued

- Junk dimensions for misc. transaction indicators
- Periodic and accumulating snapshot fact tables
- Implications of business processes on data architecture
- Enterprise Data Warehouse Bus Architecture and matrix for master data and integration
- Conformed dimensions - identical and shrunken roll-ups
- Exercise: Translate requirements into DW Bus Matrix
- Slowly changing dimensions - type 1, 2, 3 and hybrid techniques for current and point-in-time attribute values
- Mini-dimensions for large, rapidly changing dimensions
- Exercise: Design review to identify common dimensional modeling flaws
- Design review dos and don'ts and mistakes to avoid
- Dimensional modeling process, tasks, and deliverables
- Exercise: Design enhancements to embellish existing design