

## Introduction to the BI Roadmap

- Business Intelligence Framework
- DW role in BI
- From Chaos to Architecture
- Engineering Stages
- Spiral DW Methodologies
- Development Steps
- Business Integration Activities
- Cross-Organizational Development
- Project Team Structure
  - Core Team
  - Extended Team
- Roles and Responsibilities

## Step 1: Business Case Assessment

- Things to Consider:
  - Business Drivers
  - Business Justification (ROI)
  - Executive Sponsorship
  - Business Information Needs
  - Cost-Benefit Analysis
  - Risk Assessment
  - Organizational Readiness
- Business Case Assessment Activities
- Deliverable Resulting from These Activities
- Roles Involved in These Activities

## Step 2: Enterprise Infrastructure Evaluation

### ***A: Technical Infrastructure Evaluation***

- Things to Consider:
  - The Hardware Platform
  - The Middleware Platform
  - The DBMS Platform
  - Tools and Utilities
- Technical Infrastructure Evaluation Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

### ***B: Non-Technical Infrastructure Evaluation***

- Things to Consider:
  - Standards, Guidelines, Procedures
  - Enterprise Data Model
  - Meta Data Repository
  - Methodology
  - Quality Assurance
- Non-Technical Infrastructure Evaluation Activities
- Deliverable Resulting from These Activities
- Roles Involved in These Activities

**Step 3: Project Planning**

Things to Consider:

- Business Involvement
  - Infrastructure Requirements
  - Project Scope and Deliverables
  - Staffing and Skills
- Project Charter  
Project Planning Activities  
Deliverables Resulting from These Activities  
Roles Involved in These Activities

**Step 4: Project Requirements Definition**

Things to Consider:

- Functional Requirements
  - Data Requirements
  - Infrastructure Requirements
  - Historical Requirements
  - Security Requirements
  - Performance Requirements
- General Business Requirements  
Project-Specific Requirements  
Project Requirements Definition Activities  
Deliverable Resulting from These Activities  
Roles Involved in These Activities

**Step 5: Data Analysis**

Things to Consider:

- Logical Data Modeling
  - Source Data Analysis
  - Data Quality Improvement
  - Data Cleansing Specifications
  - Data Governance
- Business-Focused Data Analysis  
Top-Down Logical Data Modeling  
Enterprise Logical Data Model  
Bottom-Up Source Data Analysis  
Data Quality Maturity  
Data Analysis Activities  
Deliverables Resulting from These Activities  
Roles Involved in These Activities

**Step 6: Application Prototyping**

Things to Consider:

- Prototype Objectives
  - Scope and Schedule
  - Tools and Methods
  - Business Participation
  - Finalize Requirements
- Purposes of Prototyping  
Types of Prototypes  
Best Practices for Prototyping  
Application Prototyping Activities  
Deliverables Resulting from These Activities

## Roles Involved in These Activities

**Step 7: Meta Data Repository Analysis**

Things to Consider:

- Meta Data Requirements
- Meta Data Capture
- Meta Data Integration
- Meta Data Delivery and Usage
- Meta Data Repository Staffing
- Meta Data Classifications
- Logical Meta Model and Meta Meta Data
- Meta Data Repository Analysis Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 8: Database Design**

Things to Consider:

- Logical Database Design
- Access Patterns
- BI Tool Requirements
- Performance Considerations
- Physical Database Design
- Database Security
- Database Design Philosophies
- Logical Database Design
- Physical Database Design
- Database Design Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 9: ETL Design**

Things to Consider:

- Source to Target Mapping
- Staging Area
- ETL Window
- ETL Tools and Utilities
- ETL Performance Considerations
- ETL Process Flow
- Load Statistics
- Reconciliation Totals
- Data Error Statistics
- Design the Extract Programs
- Design the Transformation Programs
- Design the Load Programs
- Source-to-Target Mapping
- ETL Process Flow Diagram
- ETL Design Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 10: Meta Data Repository Design**

Things to Consider:

- Meta Data Repository (MDR) Solutions

- MDR Sources
- Buying vs. Building a MDR
- MDR Product Capabilities
- MDR Interfaces
- MDR Design Alternatives
- Centralized, Decentralized, Distributed
- Designing a Meta Data Repository
- Meta Data Repository Design Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 11: ETL Development**

Things to Consider:

- Initial Load Process
- Historical Load Process
- Incremental Load Process
- Source Data Dependencies
- ETL Process Dependencies
- Database Load Dependencies
- ETL Testing
- Platform Considerations
- ETL Testing and Formal Test Plan
- ETL Development Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 12: Application Development**

Things to Consider:

- Prototyping Results
- Development Considerations
- Business User Skills (Training)
- Application Testing
- Online Analytical Processing Tools
- Business Analytics
- Application Development Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 13: Data Mining**

Things to Consider:

- Data Considerations
- Data Mining Tool
- Analytical Models
- Staffing Considerations
- Defining Data Mining
- Data Mining Techniques
- Applications of Data Mining
- Data Mining Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 14: Meta Data Repository Development**

Things to Consider:

- MDR Database or Product
- MDR Product Support
- MDR Maintenance
- MDR Testing
- Preparation for Production
- Populating the Meta Data Repository
- Meta Data Repository Interface Processes
- Meta Data Repository Testing
- Meta Data Repository Development Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 15: Implementation**

- Things to Consider:
  - Production Rollout
  - Security Considerations
  - User Training and Support
  - Database Maintenance
- Monitoring the Utilization of Resources
- Growth Management
- Implementation Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Step 16: Release Evaluation**

- Things to Consider:
  - Post-Implementation Review (PIR) Preparation
  - Measures of Success
  - Plans for The Next Release
  - Improvements to Development Approach
- Post-Implementation Review Topics
- Post-Implementation Review Session Flow
- Release Evaluation Activities
- Deliverables Resulting from These Activities
- Roles Involved in These Activities

**Applying the BI Roadmap Methodology**

- Parallel Development Tracks
- Parallel Development Activities
- Example of Creating a Customized Work Breakdown Structure