TDWI Business Intelligence and Analytics Architecture

Learn via: **Classroom / Virtual Classroom / Online**

Duration: **1 Day**

https://bilginc.com/en/training/tdwi-business-intelligence-and-analytics-architecture-23-training/

Overview

Business analytics and intelligence architecture is a set of frameworks to organize the data, management and technical components used to build BI systems and analytical capabilities. Architecture plays an important role in business analytics and intelligence programs and projects, ensuring that the development efforts of multiple projects and teams fit together to form a cohesive and valuable whole. Comprehensive architecture addresses business purposes, organizational structure and roles/responsibilities, integrated information resources, various types of key processes and a wide array of technology components.

Who Should Attend

- Business, data, integration and technology architects involved in business analytics and intelligence programs
- Business Analytics and Intelligence program and project managers that need a basic understanding of the fundamental components of successful analytics and BI programs
- Business Analytics and Intelligence team members that need a better understanding of the big picture of the systems they work with

What You Will Learn

- The full scope of architectural objectives – structural integrity, standardization, reusability, environmental fit, esthetics, and sustainability
- A framework to ensure overall architectural completeness and success - business purpose, organization, integrated information, process and technology platforms
- A framework to organize business components - performance, stakeholders, processes, rules and information
- A framework to organize the organization - people, purpose, process and structure
- A framework to organize information components and capabilities- collection, storage, operational data integration, data warehousing, big data integration, distribution/access/applications and data modeling/metadata management
- A framework to organize the processes associated with business analytics and intelligence - methodologies, data governance, data modeling/metadata management, data flow, business processes and operations/support
- A framework to organize technology platform components - servers, data sourcing, databases, storage, data integration, business analytics and data management

Outline

Module 1 - Business Intelligence and Analytics Architecture Concepts

- Architecture Defined
  - What is Architecture?
  - Zachman Framework
  - Why Architecture Matters to Analytics and BI
- Business Intelligence and Analytics Acrchitecture Defined
  - Architecture Defined
  - BI Defined
  - Business Analytics Defined
  - BI and Analytics Work Together
- Architecture Framework
  - A Components Framework

Module 2 - Architecting Business Capabilities

- Business Architecture Concepts
  - Framework for Business Architecture

- Business Performance
  - Definition and Concepts
  - Performance Management
  - Key Performance Indicators
- Business Stakeholders
  - Responsibilities, Roles, and Interest
- Business Processes
  - Process Concepts
- Business Rules
  - Assertions and Constraints
- Business Information
  - Information Uses
- How Business Architecture Fits In
  - Align Investments with Business Goals
  - Business Architecture Purpose

Module 3 - Architecting Organizations

- Organizational Architecture Concepts
  - Framework for Organizational Architecture
- Modeling Organizations
  - Organizational Charts
  - Strategic and Tactical Plans
- People
  - Roles and Capabilities
  - Challenges with BI/BA Teams
- Purpose
  - From Goals to Results
  - Balancing Centralization with Self-Service
- Process
  - Action and Information
  - Federated Development and Governance
- Structure
  - Connecting People
- How Organizational Architecture Fits In
  - Organizational Fit

Module 4 - Architecting Integrated Information

- Integrated Information Architecture Concepts
  - Framework for Integrated Information Architecture
- Modeling Data
  - Levels of Data Modeling
  - Data Structures
  - Data Taxonomy
  - Metadata
- Collection and Storage
  - Bringing Data into the Business
  - Structures, Locations, Technologies
- Data Integration
  - Integrating Data Sources
  - Data Integration Hubs
  - DW Architecture Options
  - Hybrid Architectures
  - Extending DW with Virtualization
  - Many Types and Levels of Integration
- Big Data Environment
  - Data Lakes
  - Analytics Sandboxes
  - Unifying the Enterprise Information Architecture
- Distribution, Access, and Applications
  - Retrieving Data
  - Data Consumers
- How Integrated Information Architecture Fits In
  - Integrated Information Fit

Module 5 - Architecting Process

- Process Architecture Concepts
  - Framework for Process Architecture
  - Generic Definition of Process
- BI Development

- Program Management and Iterations
  - SDLC
- BI Use
  - Data Flow
  - Enterprise and Ad Hoc Reporting
  - OLAP
  - Scorecards and Dashboards
  - BI Used Within Business Processes
- BI Operations
  - Supporting Data Integration
  - Running Production BI Systems
- Analytics Development
  - CRISP-DM
  - Ad Hoc or Program
  - Schema-on-Read Versus Schema-on-Write
  - Data Visualization
- Analytics Use
  - Learning about Our Business
- Analytics Operations
  - Supporting Business Analytics
- Data Governance
  - Data Governance Defined
  - Data Stewardship and Curation
  - Data Quality Management
- How Process Architecture Fits In
  - Process Fit

Module 6 - Architecting Technology Platforms

- Technology Architecture Concepts
  - Business Intelligence and Analytics Technology Stack
- Modeling Technology Platforms
  - Networks and Servers
  - Vendor-Centric Versus Best of Breed
- Servers
  - Many Options
- Data Sources
  - Batch, Event, Streaming
- Databases and Storage
  - RDBMS, Hadoop, Nonrelational
  - Direct Attached, Solid State, SAN, Cloud Storage
- Integration
  - Integration Tools
- Business Analytics Technology
  - A Variety of Tools
  - Data Preparation, Discovery, Blending
- Business Intelligence Technology
  - Variety of BI Tools
- Data Visualization
  - Presenting Compelling Data Stories
- Data Management
  - Profiling, Quality, Metadata, Governance
- How Technology Architecture Fits In
- Technology Fit

Module 7 - Summary and Conclusion

- Tying It All Together
  - Harmonizing the Viewpoints