

TDWI Business Intelligence and Analytics Architecture

Course Outline

Module 1 - Business Intelligence and Analytics Architecture Concepts

- Architecture Defined
 - What is Architecture?
- BI and Analytics Defined
 - Business Intelligence
 - Business Analytics
 - Shared Goals and Resources
- Architecture in the BI and Analytics Lifecycle
 - Iterative Implementation
 - Incremental Delivery
 - The Role of Architecture
- Architecture Frameworks
 - Zachman Framework
 - Framework for BI and Analytics Architecture

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
- People
 - Aligning with the Business
 - Organizational Models

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- Roles and Capabilities
- Challenges
- Purpose
 - From Goals to Results
 - Balancing Centralization with Self-Service
- Process
 - Action and Information
 - Self-Service Development and Governance
- Structure
 - Connecting People
- How Organizational Architecture Fits In
 - Organizational Fit

Module 4 - Architecting Data and Integration

- Data and Integration Architecture Concepts
 - Framework for Data and Integration Architecture
- Describing Data
 - Data Abstraction
 - Data Taxonomy
 - Data Structures
 - Metadata
- Collection and Storage
 - Diversity of Sources
 - Bringing Data into the Business
 - Structures, Locations, Technologies
 - Data Lakes
- Data Integration
 - Integrating Information
 - Data Integration Hubs
 - Data Warehouse Architecture
 - Hybrid Architectures
 - Virtual Integration
 - Analytics Sandboxes
- Access and Delivery
 - Retrieving Data
 - Data Consumers
- How Data & Integration Architecture Fits In
 - Integrated Information Fit

Module 5 - Architecting Process

- Process Architecture Concepts
 - Framework for Process Architecture
- Planning
 - Priorities and Resources
- Development

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- Repeatable Processes
- Matching Method to Product
- Matching Control to Scope
- Matching Process to Knowledge
- Operations
 - Production Data Management
 - Running Production Systems
- Products and Services
 - Consumers and Applications
 - Enterprise and Ad-Hoc Reporting
 - OLAP
 - Scorecards and Dashboards
 - Analytic Models
 - Data Visualization
 - Embedded Solutions
- 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
- 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

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- 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