

# Business Intelligence and Analytics Principles and Practices: Charting the Course to BI and Analytic Success

Learn via: **Classroom**

Duration: **1 Day**

## **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.

## **Prerequisites**

There is no prerequisites for this course.

## **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 - BI and Analytics—Then and Now**

- Definitions
  - Data Warehousing
  - Business Intelligence
  - Business Analytics
- Evolution
  - Achieving Business goals
  - Emphasis
- Components
  - People and Applications
  - Systems and Processes
  - Data and Technology

- Perspectives
  - Points of View
- Program Orientation
  - BI and Analytics Lifecycle
  - Evolving Environment
  - Parallel Paths
- Assessment
  - Purpose and Approach
  - Maturity Models
- Roadmap
  - Continuous Planning
- Mistakes to Avoid
  - When Validating Direction
  - When Delivering Business-Driven BI
- Summary and Discussion
  - Key Points
  - Discussion

## **Module 2 - Supporting the Organization**

- BI and Analytics Stages
  - Purpose
- Descriptive BI and Analytics
  - Definitions and Benefits
  - Query Services
  - Data Feeds and Downloads
  - On-Demand Reporting
  - Scheduled Reporting
  - Basic Data Visualization
- Diagnostic BI and Analytics
  - Definition and Benefits
  - Online Analytical Processing
  - Dimensional Data Marts and Star Schema
  - The OLAP Cube
  - Performance Management: Definitions and Concepts
  - Performance Management
  - Scorecards and Dashboards
  - Continuum
  - Casual Analysis
  - Analysis Types
- Discovery BI and Analytics
  - Definitions and Benefits
  - Analytic Modeling
  - Advanced Data Visualization
  - Data Mining
  - Geospatial Analytics
  - Text Analytics
  - Storytelling
- Predictive BI and Analytics
  - Definition and Benefits
  - Forecasting and Prediction
- Prescriptive BI and Analytics
  - Definitions and Benefits
  - Simulation and Optimization
  - Decision Management
- Roadmap
  - Expanding Your Roadmap
- Mistakes to Avoid
  - In Predictive Analytics Efforts
  - In Data Storytelling
- Summary and Discussion
  - Key Points
  - Discussion

## **Module 3 - Architecture and Methodology**

- Data Integration Architecture
  - Integration Strategy
  - The Purpose of Architecture
  - Architecture and Data
  - Components and Structures
  - Integration Techniques and Technologies

- Data Types
  - Data Properties
  - Data Characteristics
  - Data Structure
  - Big Data Defined
  - Big Data Sources
  - Big Data Characteristics
  - Physical Storage
- Ecosystem
  - Building Blocks
  - Traditional Architecture
  - Data Lakes
  - Analytics Sandboxes
  - Expanded Architecture
- Data Warehouse Implementation
  - Agile Development
  - Data Warehouse Automation
  - What Can You Automate?
  - Data Warehouse Operation
  - Components
- Evolution
  - Project Selection
- Roadmap
  - Expanding Your Roadmap
- Mistakes to Avoid
  - When Using Data Federation
  - In Your Big Data Implementation
- Summary and Discussion
  - Key Points
  - Discussion

#### **Module 4 - Data Management**

- Data Governance
  - Data Governance Concepts
  - Data Governance Roles and Responsibilities
  - Data Stewardship
- Data Quality
  - Data Quality Concepts
  - Data Quality Assessment
  - Data Quality Improvement
- Data Profiling
  - Purpose and Processes
  - Profiling Techniques
  - Analyzing Data Profiles
  - Tools and Technology
  - Application
- Roadmap
  - Continuous Planning
- Mistakes to Avoid
  - When Creating Your Data Strategy
  - When Building a Data Quality Program
- Summary and Discussion
  - Key Points
  - Discussion

#### **Module 5 - BI Technology**

- The Technology Stack
- Technology Layers
  - Functions and Services
- Technology Architecture
  - The Right Technology-Present and Future
  - Technology Management
  - Reliable Platforms
- Roadmap
  - Continuous Planning
- Mistakes to Avoid
  - When Adopting New Technologies in BI
  - In Hadoop Implementations
- Summary and Discussion
  - Key Points

- Discussion

## **Module 6 – Summary**

- Summary
  - Key Points