1. Business Intelligence and Analytics Principles

1.1 Introduction to BI and Analytics
- Definitions
- Components
- Perspectives
- The BI and Analytics Roadmap
- BI and Analytics Maturity
- Mistakes to Avoid

1.2 Business Metrics and Analytics
- Business Capabilities
- Performance Management
- Business Analytics
- Data Analytics
- The BI and Analytics Roadmap
- Mistakes to Avoid

1.3 OLAP and Other Information Services
- OLAP Services
- BI Reporting
- Visualization and Storytelling
- Data Access and Delivery
- Self-Service
- The BI and Analytics Roadmap
- Mistakes to Avoid

1.4 Data Integration
- Data Integration Architecture
- Data Types and Sources
- Data Warehousing
- Data Stores
- Implementation
- Operation
- The BI and Analytics Roadmap
- Mistakes to Avoid

1.5 Data Management
- Data Governance
- Data Quality
Essential Skills for BI and Analytics Professionals

Course Outline

• Data Profiling
• The BI and Analytics Roadmap
• Mistakes to Avoid

1.6 BI and Analytics Technology
• The Technology Stack
• Technology Architecture
• Technology Management
• The BI and Analytics Roadmap
• Mistakes to Avoid

2. Data Integration

2.1 Data Integration Concepts
• The Need for Data Integration
• The Challenges of Data Integration
• Data Integration Architectures
• Data Integration Projects
• Data Integration Technologies

2.2 Requirements Analysis for Data Integration
• Integration Requirements Concepts
• Source Data Requirements
• Data Unification Requirements
• Data Aggregation and Summary Requirements
• Data Quality Requirements
• Data Capture Requirements
• Audit, Balance, and Control Requirements
• Metadata Capture Requirements
• Service Level Requirements

2.3 Data Integration Functional Design
• Functional Design Concepts
• Source/Target Mapping
• Data Capture Design and Specification
• Data Transformation Design and Specification
• Data Cleansing Design and Specification
• Identity and Key Management
• Design for Integrated Data Delivery
• Data Integration Process Design

2.4 Data Integration Technical Design
• Technical Design Concepts
3. Performance Management

3.1 Performance Management Concepts
- Defining Performance Management
- Performance Management Processes
- The Balanced Scorecard
- Strategy Mapping
- Performance Indicators
- Business Impact

3.2 Business-Aligned Performance Management
- Multiple Paths
- Engineered Dashboard Development
- Dashboard Requirements
- Dashboard Design
- Dashboard Examples
- Self-Service Dashboard Development

4. Analytics

4.1 Analytics Concepts
- Analytics Defined
- Data Analytics and Business Analytics
- Why Analytics?
- Analytics Processes
- Analytics Foundations

4.2 Analytics Architecture
- The Big Picture
- Data Architecture
- Process Architecture
- Technology Architecture

4.3 Analytic Modeling
- The Roles of Models
- Kinds of Models
• Problem Modeling
• Solution Modeling

4.4 Applied Analytics
• Five Kinds of Analytics
• Analytics Use Cases

5. Big Data

5.1 Big Data Concepts
• What Is Big Data?
• What Is Big Data Analytics?
• Big Data Use Cases
• Why Big Data Now?
• Kinds of Big Data
• Sources of Big Data
• Working with Big Data

5.2 Big Data Processes
• Business Case
• Technical Case
• Data Sourcing
• Data Preparation and Storage
• Big Data Analytics
• Consumption and Application

5.3 Big Data Architecture
• The Role of Architecture
• Data Architecture
• Process Architecture
• Analytics Architecture
• Technology Architecture
• Big Data ... Big Architecture

5.4 Big Data Technology
• The Technology Landscape
• Infrastructure
• Analytics
• Data Sources
• The Core Technologies: MapReduce
• The Core Technologies: Hadoop
Workshop

- Working with Your People, Projects, Processes and Data

- Choose from the following list of topics for a tailored workshop:
  *(It is recommended that you select two topics for approximately 4.5 hours of workshop activity.)*
  - Program Planning
  - BI and Analytics Maturity
  - Roadmapping
  - Data Integration
  - Balanced Scorecard, Strategy Map and KPIs
  - Scorecard/Dashboard Design
  - Analytic Modeling (Spreadsheet Engineering Approach)
  - Big Data Business/Technical Case and Big Data Maturity