



Fundamentals of Business Intelligence

by Mark Peco



Module 0. About the Course (9 min)

Module 1. Introductory Concepts (73 min)

- *Definitions*
 - Business
 - Intelligence
 - Business Intelligence – Early Days
 - Business Intelligence – Modern View
 - Data Warehouse – Early Days
 - Data Warehouse – Late 90's
 - Data Warehouse – Modern View
- *System*
 - Definition
 - Properties
 - General Structure
 - Example
 - Systems Thinking
 - Thinking Styles
- *Architecture*
 - Definition
 - Purpose
 - Business Intelligence Architecture
 - From Architectures to Systems
- *Systems View of Business Intelligence*
 - BI System Components
 - The Business System
 - The Decision Making System
 - The Work Execution System
 - The Participation System
 - The Information System
 - The Measurement System
 - The Analytics System
 - The Technology System
 - The Stakeholder System
 - The Governance System
 - Example

Module 2. Generating Business Value (70 min)

- *Introduction*
 - Setting the Context
 - Defining Value
 - The Basic Idea of Value Generation
 - Extending the Basic Idea of Value Generation
 - Completing the Basic Idea of Value Generation
 - Components of the Business Intelligence System
- *The Business System*
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Mission



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- Input 2 – External Drivers
 - Input 3 – Resources
 - Input 4 – Capabilities
 - Output 1 – Results
 - Output 2 – Value
- *The Decision Making System*
 - Context
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Problems
 - Input 2 – Opportunities
 - Input 3 – Options
 - Input 4 – Constraints
 - Output 1 – Decisions
 - Output 2 – Recommendations
- *The Participation System*
 - Context
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Understanding
 - Input 2 – Skills
 - Input 3 – Capabilities
 - Input 4 – Motivation
 - Output 1 – Roles
 - Output 1 – Roles
- *The Work Execution System*
 - Context
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Decisions
 - Input 2 – Roles
 - Input 3 – Responsibilities
 - Output 1 – Assets
 - Output 2 – Services
 - Output 3 – Completion Results
- *Case Study*
 - *Background and Context*
 - *Solution Overview*
 - *The Business System*
 - *Inputs*
 - *Outputs*
 - *Throughput*
 - *The Decision Making System*
 - *Inputs*
 - *Outputs, Constraints, and Feedback*
 - *The Work Execution System*
 - *Inputs*
 - *Outputs*



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- *Throughput*
- *The Participation System*
 - *Inputs*
 - *Outputs*
 - *Throughput*
- *Case Study Summary*

Module 3a. Monitoring and Learning—Part 1 (60 min)

- *Introduction*
 - Context
 - Monitoring
 - Learning
 - Information Building Blocks
 - Generating Information
 - Generating Insights
- *The Information System*
 - Context
 - Purpose
 - Components
 - Component Details
 - Inputs and Outputs
 - Input 1 – Event and Reference Data
 - Input 2 – Unstructured Data
 - Input 3 – Business Rules
 - Input 4 – Business Context and Objectives
 - Output 1 – Integrated Data
 - Output 2 – Information
- *The Measurement System*
 - Context
 - Purpose
 - Components
 - Components – Functional View
 - Inputs and Outputs
 - Input 1 – Qualitative Data
 - Input 2 – Quantitative Data
 - Input 3 – Usage Profile
 - Input 4 – Measurement Rules
 - Output 1 – Measures
 - Output 2 – Metrics and Indicators
 - Output 3 – Business Metrics and KPI's

Module 3b. Monitoring and Learning—Part 2 (53 min)

- *The Analytics System*
 - Context
 - Purpose
 - Components
 - Components – Functional View
 - Inputs and Outputs
 - Input 1 – Integrated Data
 - Input 2 – Measures and Metrics
 - Input 3 – Business Objectives



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- Output 1 – Insights
 - Output 2 – Enhanced Information
- *The Technology System*
 - Context
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Raw Data
 - Input 2 – Technology Objectives
 - Input 3 – Business Objectives
 - Input 4 – Capabilities and Skills
 - Output 1 – Integrated Data Storage
 - Output 2 – Information/Metrics Delivery and Presentation
 - Output 3 – Insight Delivery and Presentation
 - Output 4 – Automation
- *Case Study Continued*
 - The Information System
 - Inputs
 - Outputs
 - Throughput
 - The Measurement System
 - Inputs
 - Outputs
 - Throughput
 - The Analytics System
 - Inputs
 - Outputs
 - Throughput
 - The Technology System
 - Inputs
 - Outputs
 - Throughput
 - Case Study Summary
 - Review

Module 4. Leadership and Control (39 min)

- *Introduction*
 - Setting the Context
 - Leadership
 - Control
- *The Stakeholder System*
 - Context
 - Purpose
 - Stakeholder Roles
 - Components
 - Inputs and Outputs
 - Input 1 – Expectations
 - Input 2 – Understanding
 - Input 3 – Priorities
 - Input 4 – Education and Experience
 - Output 1 – Satisfaction



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- Output 2 – Maturity
- Output 3 – Investment and Sponsorship
- *The Governance System*
 - Context
 - The Building Blocks
 - Definition
 - Concepts
 - Purpose
 - Components
 - Inputs and Outputs
 - Input 1 – Investment
 - Input 2 – Capability
 - Input 3 – Objectives and Constraints
 - Output 1 – Vision
 - Output 2 – Strategy
 - Output 3 – Standards
- *The Case Study Continued*
 - The Stakeholder System
 - Inputs
 - Outputs
 - Throughput
 - The Governance System
 - Inputs
 - Outputs
 - Throughput
 - Case Study Summary

Module 5. Putting the Pieces Together (34 min)

- *The Business Intelligence System*
 - BI Perspective and Alignment
 - Stakeholder Perspective and Alignment
 - Governance Perspective and Alignment
 - BI System Review
 - Leadership and Control
 - Value Generation
 - Monitoring and Learning
 - Maintaining a Balance
 - Managing Alignment Gaps
 - Components and Alignment
- *Summary*
 - Key Concepts
 - BI is Often Misunderstood
 - Components and Alignment
 - Value Creating Systems
 - Monitoring and Learning Systems
 - Leadership and Control Systems