



***Beyond Business
Intelligence
by Barry Devlin***



Module 0. About the Course (12 min)

Module 1. Historical Perspective: Five Decades of Change (25 min)

- *Why This Series of Courses?*
- *Decision Making Support – History*
- *Prehistory and the Rise of DSS*
- *Evolution of BI Needs: 1985 – 2003*
- *Dawn and Classical Eras*
- *Evolution of Big Data Needs: 2003 – 2014*
- *Modern Era*
- *The Intercognitive World*
- *Emergent Era*
- *35-Years of Evolution of BI/Analytics Needs*
- *35-Years of Evolution of BI Tooling*
- *The World of Decision Making: Today and Into the Future*

Module 2. Modern Business Evolving (55 min)

- *Module Overview and Topics*
- *Business Needs and Information Usage*
 - Business Innovation Today is Built on IT
 - Retail: Extending the Supply Chain
 - Retail: Understand and Forecast Behavior
 - Travel: Optimize Profits in Real-time
 - Transport: Data Collection Reinvents Business
 - Medicine: Switch from Cure to Prevention
 - Content: Reinventing Creation and Retrieval
 - Information Technology Reinvents Business
- *The Biz-tech Ecosystem*
 - Three Key Business Trends Drive Rapid Change
 - Technology Addresses and Drives Business Needs
 - The Biz-Tech Ecosystem Is...
 - Biz-Tech Ecosystem at the Heart of Business
 - Characteristics of the Biz-Tech Ecosystem
- *The Simple Business Model*
 - The Simple Business Model (SBM)
 - Decision Making and the SBM
 - Characteristic Business Situations
 - The SBM Path for a Startup
 - Transport: Peer-to-Peer and Data Driven
 - Finance: Data Sharing and Collaboration
 - The SBM Path for a Business-as-Usual
 - The SBM Path for a Transform
 - Clothing & Accessories: Transform with Data
 - The SBM Path for a Repurpose
 - Agriculture: The Seeds of Reinvention
 - Data Needs of the SBM
 - Conversations Between Business and IT
- *Module Summary*



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Module 3. Information Technology Emerging (71 min)

- *Module Overview and Topics*
- *A Brief History of Decision Making Support*
 - First Data Warehouse Architecture 1986-88
 - Goal: Consolidated Reporting and Querying
 - A “Normalized” Data Model
 - RDBMS Performance Drive Layered DW
 - Inmon Data Warehouse Architecture
 - The Four Ancient Postulates of Data Warehousing
 - 1990’: The Solution Delivery Dilemma
 - Kimball Architecture: A Very Different Model
 - 1990s: Need for Data Speed
 - 1990s-2000s: Distributed Disruption
 - New Needs Complicate Original Architecture
 - From Structure Through Speed to Solution
 - 2000s: Social Media and Sentiment Analysis
 - 2010s: Big Data Impacts All Aspects of IT
 - 2014+: The Intercognitive World
 - From Exploration Through Agility to Solution
 - Is the Old Paradigm Still Valid?
- *Big Data and IoT: A Deeper Dive*
 - “Big Data” Wikipedia Definition
 - Origins of the Term Big Data
 - Big Data: Vendor/Consultant View
 - The Uneven Growth of Big Data
 - Traditional Data is Shrinking
 - The Reality of “Big Data”
 - Traditional Big Data Mostly Human-Sourced
 - Government Open Data: Still Only Getting Started
 - The IoT is Machine Generated
 - Human Sourced Vs. Machine Generated
 - IoT Growth Predicted: Rapid and Vast
 - IoT: By Far Greater Impact Than Big Data
 - By Some Measures, IoT Already Here
 - Ongoing Growth in Machine-generated Data
 - The Focus Shifts: From Big to Data
 - Big Data is Really A Vague Marketing Term
- *Cognitive Decision Making – a Brief Introduction*
 - Cognitive Computing and Decision Making
 - The Advance of Automation
 - The Algorithmic Journey – From BI to Cognitive
 - Comparing BI to Cognitive Computing
- *Module Summary*

Module 4. Business Unintelligence Architecture Overview (29 min)

- *Module Overview and Topics*
- *Conceptual Architecture*
 - Five Postulates for a New Architecture
 - IDEAL Architecture: 3 Conceptual “Thinking Spaces”
 - New, Holistic View: Information



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- New, Holistic View: Process
 - New, Holistic View: People
- *Advantages and Challenges*
 - Advantages of IDEAL Architecture: Parts 1 & 2
 - Challenges of IDEAL Architecture
 - Why Do It? Money, Money, Money...
- *Logical Architecture*
 - REAL Logical Architecture
 - REAL Logical Architecture Components
- *Module Summary*
- *Course Summary*
- *Course Follow-on*