

# BUSINESS AND IT ARCHITECTURE

## DEFINING THE STRUCTURE OF BUSINESS

### LEARNING OUTCOMES

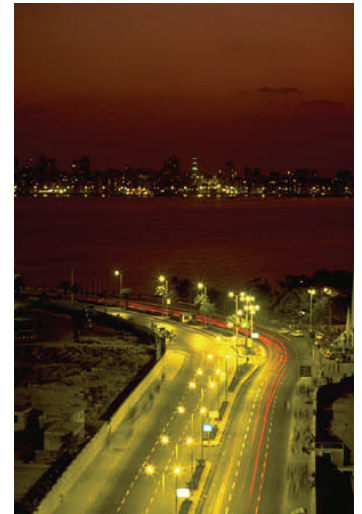
- Explain differences between a business architecture and an IT architecture
- Build models that represent both types of architectures
- Identify what analytics would be useful for solving business problems in the organization
- Explain the difference of the various business and IT architectures that an organization can use
- Select the most appropriate suite of architectures for the organization
- Choose tools that will effectively and efficiently support an architecture effort
- Plan and execute an architecture project

Competing today requires a business to be agile and adaptable. Organizations especially large entities such as: governments, global enterprises, large non-profits and educational institutions have a need to understand their structure.

Understanding the structure of an organization today means understanding all the relationships between the various components of the organization or business. The key approach to this understanding is the development and use of business architecture.

The interoperability of organizational components depends on how well the architecture is known, documented, and communicated.

In the past, this depended on the corporate knowledge in people's heads. The economic situation today has pressured organizations to merge operations, consolidate, divest and re-arrange their basic components. Loss of staff also means loss of knowledge of how the organization works. Assessing impact of changes depends on the preparation of models used to describe the organization and the analytics available to conduct an assessment of changes. A lack of architecture documentation means that re-structuring decisions are made with limited knowledge of the impact of change and therefore have greater uncertainty for success.



## THE BUSINESS AND IT CONNECTION

The business architecture includes the (1) product architecture, (2) process architecture for delivery of products or services and (3) the enabler architectures to make the processes efficient and effective. The largest of the enabling

architectures, the Information Technology (IT) architecture, is critical for the business. IT has a common set of technology components that interact with the business to enable processes. Processes in turn support the products and

services. Changes in either organization direction or IT architecture can therefore impact the enterprise in both positive and negative ways.

## BUSINESS ARCHITECTURES

### Who Should Attend?

- Business and Strategy Analysts
- Executives
- Financial Analysts
- Planners
- Process Analysts
- Operational Analysts
- Auditors doing operational analysis for mergers and acquisitions
- Managers involved with re-structuring decision making

### Introduction – What are Business and IT Architectures?

- The digital enterprise
- The need for business architecture today
- Approaches to architecture
- Architecture representation – layers of specifications (models)

*Exercise – The one page business architecture*

### Linking Strategy to Performance through Architecture

- Types of architectures in the business
- Management disciplines

- Architecture connection points
  - Descriptive models and the business problems they solve
  - Strategic Response architecture
  - Product architecture
  - Process architecture
  - Enabler architectures
- Exercise – Linking Strategy and Architecture*

### Methodologies used for documenting Architecture(s)

- An essential business architecture methodology
- A simple standard for business architecture

- Business architecture components
  - Describing the architecture - architecture artifacts (documents, reports, etc.)
  - Gathering architecture material
  - The Zachman Approach for business and systems
  - Architecture models using architecture primitives
  - Composite architecture models
  - Components of the architecture project plan
- Exercise – Preparing the core artifacts (deliverables)*

## TYPES OF BUSINESS ARCHITECTURE

### Strategic Response Architecture

- Modeling the environment
- The customer or market view
- The legislative and regulatory view
- The social view
- The technology view
- The economic view
- Competitors and partners

*Exercise – Preparing a Strategic Architecture*

### Process Architecture for Organization Execution

- The process structure using decompositions
- The process structure using flows
- Analyzing flow models for performance
- Comparative analysis of flows
- The context or touchpoints of flows
- Linking flows to enablers

*Exercise – Developing a Process Architecture*

### Product Architecture

- Products, Product Groups and Brands
- Using the platform idea in services and products
- Issues with changing product structure and the impact on operations
- Linking to operation support
- Managing the product structure
- Controlling the scope of analysis

*Exercise – Developing a Product Architecture*

This seminar is intended for people who want insight into the issues involving the impact of business change

## IT ARCHITECTURE BASICS

### Common Components in IT – The primitives

- Applications and Functions
- Communications
- Data
- Databases
- Platforms
- Systems

*Exercise – Develop the IT Component Inventories*

### Methodology for documenting IT Architecture

- Where are the standards for IT architecture?
- The Zachman approach and IT architecture Framework

- Developing core artifacts for IT
  - Core Architecture models
  - Key models – Data, Systems, Platforms, etc.
  - (TOGAF) - A Methodology
- Exercise – Converting Primitives to Composite Models*



## IT ARCHITECTURE BASICS (CONTINUED)

- Building relationships across common components
- IT Architecture presentation

*Example-Object Group Architecture Framework*

### Organizational Analysis using the IT Architecture

- Components of IT and what they support
- Architecture and data governance
- Portfolio management
- The business linkage through architecture

- Assessing IT as an enabler
  - Architecture and IT requirements
- Exercise – Creating a Process to Application Matrix*



## IT ARCHITECTURE BASICS

### Data, Information, Content and Knowledge Architecture

- Core data architecture concepts – Data is more than numbers
- Data models as we know them today
- Uses of the data architecture – expanding the view to include other data
- Information architecture – Relating sets of data
- Content architecture – Managing and manipulating business objects

- Knowledge architecture – Creating, managing and using knowledge
- Relating architectures or architectures of architectures

*Exercise – The One Page Data Architecture*

### Application Architecture

- Core or mission critical applications
- Developing an application architecture
- Horizontal suites of applications – SCM, CRM, ERP

- Vertical architectures – BI, EPM, Dashboards, Reporting
  - Relating architectures – the one page diagram
- Exercise – The One Page Application Architecture*

### Architecture Tools

Key features of Business and IT Architecture tools  
A tool selection framework  
Examples of key tools  
The architecture suite  
Architecture tools today  
*Demonstration – An Enterprise Architecture Tool*

## ARCHITECTURE ANALYTICS

### Comparative Analytics

- Why analytics on architectures?
- The variety of architecture analytics - business and IT focus
- Semantic comparisons of various model types
- Semantic ranking techniques
- Architecture model attribute ranking techniques
- Interpreting the results

*Exercise: Impact Analysis Part I*

### Impact Analytics

- What defines impact?
- *Business environment, strategy, operations, enablement*
- Gathering and organizing impact material
- Describing the problem
- Selecting the appropriate models
- Inferencing across matrices
- Interpreting results

*Exercise – Impact Analysis*

### Touchpoint Analytics

- Frequency analysis and touchpoints
  - Composite touchpoint analysis using multiple matrices
  - Ranking based on touchpoints
  - Combining techniques
  - The risk – yield analysis technique
  - Interpreting results
- Demonstration – Touchpoint Analysis*

**Wrap – Final Questions and Answers**

## Expected Benefits

- Demonstrate the differences between a business architecture and an Information Technology architecture
- Show models that represent both types of architectures
- Make choices of what analytics would be useful for solving business problems
- Show how the deliverables of these suite of architectures for the organization solve complex problems
- Understand trade-offs of tools that support an architecture effort
- Develop your organization's plan and implementation of an architecture project target for your organization

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## MEET THE EXPERT—FRANK KOWALKOWSKI

Frank Kowalkowski is President and CEO of Knowledge Consultants Inc., a professional services firm founded in 1984 with practice areas in knowledge management, business intelligence, and performance, business and system architectures, supply chain management, and application design and development.

With more than three decades of management consulting and industry experience under his belt, Frank's spectrum of expertise mainly lies in manufacturing, distribution, insurance, financial services and the public sector. He has also played key roles in a wide range of projects, including e-Commerce, Application Integration, ERP

and Supply Chain Management, Benchmarking, Knowledge Management, Artificial Intelligence, Business Performance Measurement, Business and Competitive Intelligence, Technology Deployment, Data Warehousing, and Process Improvement.

Prior to his presidential post at Knowledge Consultants, Inc., Frank was the Director of Consulting for the Spectrum Group, responsible for reengineering consulting, process improvement and operational systems consulting. His engagements also included senior management presentations, audits, assessments, organizational studies, and methodology development and implementation.

In addition to being a keynote speaker at international conferences as well as a conference chair, he has written numerous papers and spoken at conferences on a variety of subjects such as technology forecasting, process analytics and management, business analysis, management disciplines, and enterprise performance management. Frank is also the author of a 1996 book on Enterprise Analysis and over 70 papers. He is currently working on a BPM book for managers and a new edition of the enterprise analysis book.

Frank focuses on training and consulting efforts internationally in regions such as North America, Europe, Southeast Asia and the Middle East. He has an

