

Enterprise Architect Modeling for TOGAF Architects

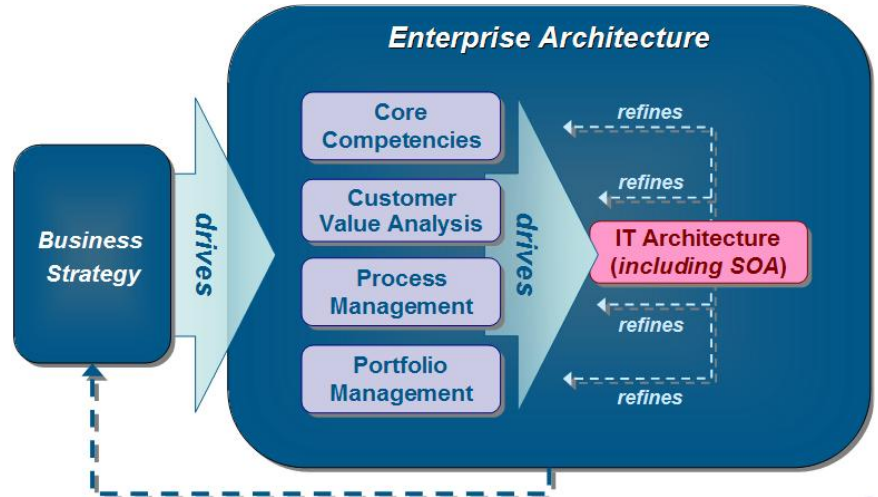
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Closing the Gap between Business and IT

According to The Open Group Business Executive's Guide to IT Architecture: "An effective enterprise architecture is critical to business survival and success and is the indispensable means to achieving competitive advantage through IT."

Today's CEOs know that the effective management and exploitation of information through IT is a key factor to business success, and an

indispensable means to achieving competitive advantage. An Enterprise architecture addresses this need, by providing a strategic context for the evolution of the IT system in response to the constantly changing needs of the business environment.



A Good Enterprise Architecture enables you to achieve the right balance between IT efficiency and business innovation. It allows individual business units to innovate safely in their pursuit of competitive advantage. At the same time, it ensures the needs of the organization for an integrated IT strategy are met, permitting the closest possible synergy across the extended enterprise. The advantages that result from a good enterprise architecture bring important business benefits, which are clearly visible in the net profit or loss of a company or organization:

- **A more efficient IT operation:**
 - Lower software development, support, and maintenance costs
 - Increased portability of applications
 - Improved interoperability and easier system and network management
 - Improved ability to address critical enterprise-wide issues like security
 - Easier upgrade and exchange of system components
- **Better return on existing investment, reduced risk for future investment:**
 - Reduced complexity in IT infrastructure
 - Maximum return on investment in existing IT infrastructure
 - The flexibility to make, buy, or out-source IT solutions
 - Reduced risk overall in new investment, and the costs of IT ownership
- **Faster, simpler, and cheaper procurement:**
 - Buying decisions are simpler, because the information governing procurement is readily available in a coherent plan.
 - The procurement process is faster - maximizing procurement speed and flexibility without sacrificing architectural coherence.
 - The ability to procure heterogeneous, multi-vendor open systems.

Find out why Fortune 100 Lead Architects who have done their research selected Sparx Systems Enterprise Architect in their RFP's when features per price points count.

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You are invited to register for the next "Enterprise Architect Modeling for TOGAF Architects. Our custom TOGAF Architecture Modeling Workshops are designed for leading edge Architects who need to practice more effective and economical ways to model complex Enterprise Architectures.

Learn how to discover opportunities and solutions using Architecture Gap Analysis and calculate benefits and ROI on planned Architectural changes to get immediate business buy-in in these areas:

- A more efficient IT operation
- Better return on existing investment, reduced risk for future investment
- Faster, simpler, and cheaper procurement

Learn how to "Close the Gaps" between Business requirements and robust Architecture models using TOGAF best practices and a leading edge productivity tool and repository like Enterprise Architect from Sparx Systems.



Facilitated by TOGAF Certified Practice Leader



Read the Dr. Dobbs interview "Closing the Gap"

An interview with Ramsay Millar"

<http://www.in2grateIT.com/DrDobbsInterview.pdf>

Ramsay Millar, TOGAF certified Architect spends his working days as close as anyone can get to applying emerging trends in Enterprise Architecture and Requirements management to real-world challenges. Millar travels the US and Internationally facilitating workshops for Architects, BA's, PM's and Software Engineers who are looking for dramatically better ways to deliver and evolve business-critical solutions as practiced by only the smart organizations.

To Learn more or Register

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Practice and learn TOGAF Modeling Techniques using Sparx Systems Enterprise Architect - (public, onsite, online)
For Aspirants wishing to learn TOGAF prior to / or after TOGAF Certification

Ask us about our TOGAF Certification and Exam Course

http://www.in2grateit.com/contact_us.php

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Application Development Method (ADM)

According to The Open Group Business Executive's Guide to IT Architecture: "An effective enterprise architecture is critical to business survival and success and is the indispensable means to achieving competitive advantage through IT." The TOGAF ADM is the result of continuous contributions, since 1995, from a large number of architecture practitioners. It describes a method for developing an enterprise architecture, and forms the core of TOGAF. It integrates elements of TOGAF as well as other available architectural assets, to meet the business and IT needs of an organization.

Objectives

- To understand how the ADM is used and organized
- To understand the Architecture Development Cycle
- To learn how to adapt the ADM to your Organization
- To understand why Architecture Governance is vital to success
- To understand that we need to take a Process Management approach to delivering an Enterprise Architecture over time
- To understand the issues and benefits for Scoping the Architecture
- To understand general methods to realize Architecture Integration
- Learn why we need to use a powerful Architecture Repository Tool like Sparx Systems Enterprise to manage complexity

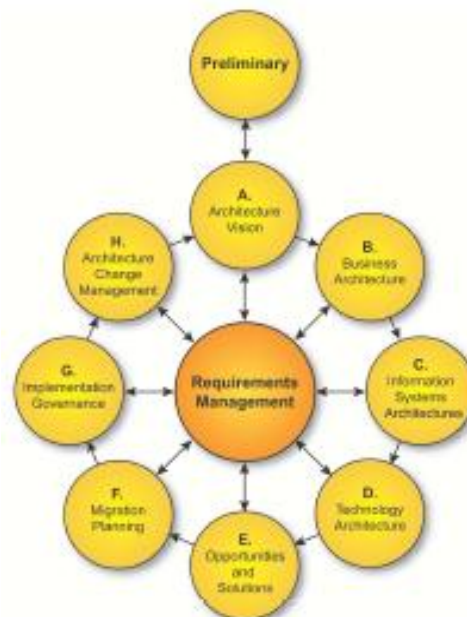


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Lesson Plans are based upon The
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Framework Version 9

Lesson Plans

- What is TOGAF?
- Why do I need TOGAF as an Enterprise Architecture Framework?
- What are the benefits of an Enterprise Architecture Framework
- ADM Overview
- Architecture Repository using Enterprise Architect
- Enterprise Continuum and Re-usable Building Blocks
- Architecture Development Cycle
- Adapting the ADM to your Enterprise
- Architecture Governance
- Scoping the Architecture
- Architecture Integration
- Review the Case Study using Enterprise Architect



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Getting Started using Enterprise Architect

Through a series of interactive Enterprise Architect hands-on workshops you learn and practice by building an evolving case study. Accelerate your next modeling project with this intense, interactive workshop emphasizes pragmatic modeling principles and techniques. With UML adoption now at 65% according to IBM and the recent entry of Microsoft support for UML it is now time to invest in learning the UML notation along with effective practices for communicating rigorous business and software requirements.

Objectives

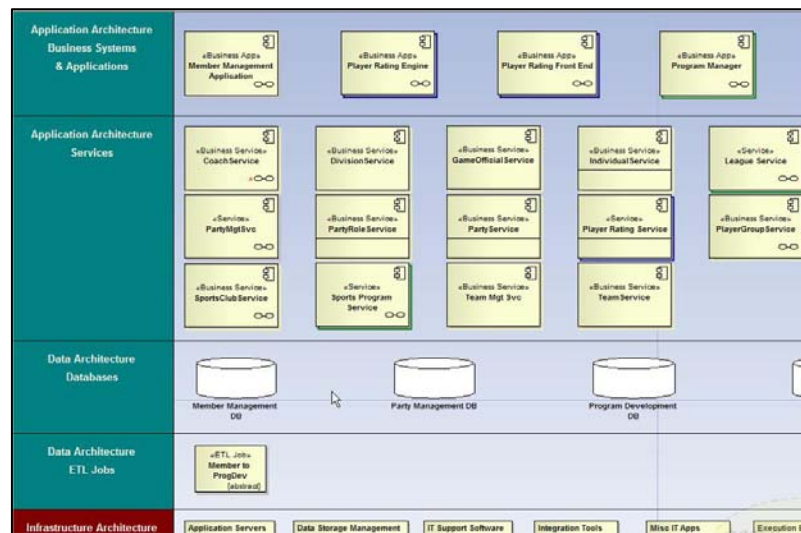
- Understand the major features of Enterprise Architect
- To organize your Architecture projects using the Project Browser
- Utilize UML models and their relationship to Zachman Rows & Columns
- Review Architecturally significant Views and Models
- Use the Enterprise Architect Toolbox effectively
- Use the Enterprise Architect Project Browser effectively
- How to deploy the Enterprise Architecture Add-in for TOGAF
- To Ensure TOGAF and Modeling Best Practices



Lesson Plans are based upon The Open Group Architecture Framework Version 9

Lesson Plans

- Using EA Help!
- UML and EA Modeling Basics
- Project Browser View
- Diagram View
- Searching the Model
- Model Traceability
- TOGAF Architecture Modeling
- Business Modeling
- Requirements Modeling
- Application Modeling
- Information Modeling
- Technology Infrastructure Models
- EA Major Functionality
- View Menu
- Diagram Menu
- Tools Menu
- Project Menu
- Generating Documents using EA
- Model Standards
- Baselines
- Security



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Preliminary Phase

The Preliminary Phase is about defining "how we do architecture" in the enterprise concerned. There are two main aspects: defining the framework to be used; and defining the architecture principles that will inform any architecture work. The enterprise's approach to re-use of architecture assets is a key part of both the framework definition and architecture principles. Typically the principles will state the policy on re-use; and the framework will explain how re-use is effected.

Objectives

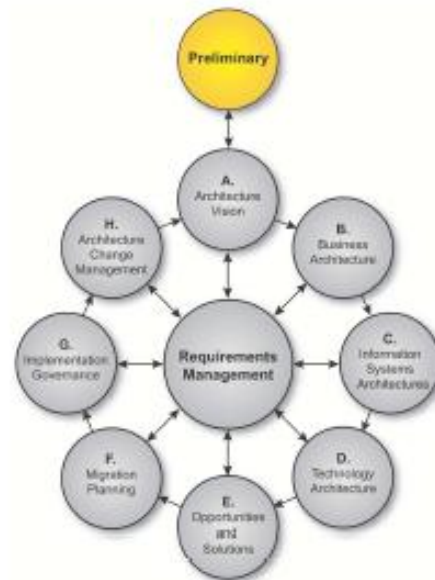
- Ensure that everyone is committed to the success of the architectural process
- Define the architecture principles that will inform any architecture work
- Define the "architecture footprint" for the organization
- Define the scope and assumptions
- Define the framework and detailed methodologies that are going to be used to develop enterprise architectures in the organization
- Set up and monitor a process (normally including a pilot project) to confirm the fitness-for-purpose of the defined framework
- Define a set of criteria for adopting architecture and repository management processes to be used to capture, publish, and maintain architecture artifact
- Ensure TOGAF and Modeling Best Practices



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Lesson Plans

- Determine Business strategy, business principles, business goals, and business drivers
- Determine IT governance strategy
- Determine Architecture Principles
- Determine Framework definition
- Define Architecture principles
- Restatement of and agreement on business principles, business goals, and business drivers
- Modeling the Case Study using Enterprise Architect



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Architecture Vision – Phase A

The Architecture Vision Phase A defines what is in and what is outside the scope of the architecture effort and the constraints that must be dealt with. Scoping decisions need to be made on the basis of a practical assessment of resource and competence availability, and the value that can realistically be expected to accrue to the enterprise from the chosen scope of architecture work.

Business principles, business goals, and strategic drivers of the organization are already defined elsewhere in the enterprise. Phase A is involved with ensuring that existing definitions are current, and clarifying any areas of ambiguity.

Objectives

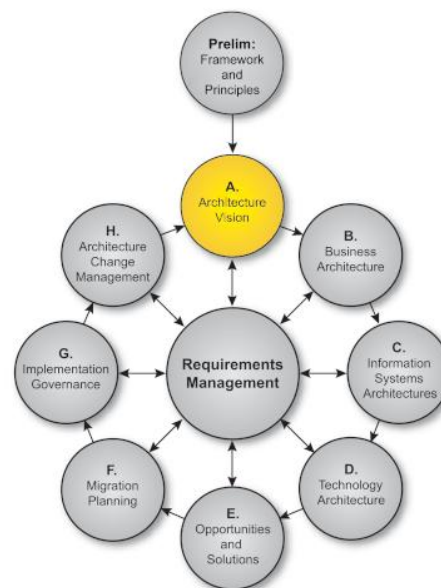
- Ensure that the evolution of the architecture development cycle has proper recognition and endorsement from corporate management
- Validate the business principles, business goals, and strategic business drivers
- Define the scope and prioritize the components of, the Baseline Architecture effort
- Define the relevant stakeholders, and their concerns and objectives
- Define the key business requirements to be addressed in this architecture effort
- Articulate an Architecture Vision
- Secure formal approval to proceed Version 0 Architecture Iteration
- Understand the impact on, and of, other enterprise architecture development cycles ongoing in parallel
- Ensure TOGAF and Modeling Best Practices



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Lesson Plans

- The Statement of Architecture Work
- Determine Scope and constraints
- Plan for the architectural work
- Review statements of business principles, goals and strategic drivers
- Determine Architecture principles
- Create Architecture Vision
- Baseline Business Architecture
- Baseline Applications Architecture
- Baseline Data Architecture
- Baseline Technology Architecture
- Target Business Architecture
- Target Applications Architecture
- Target Data Architecture
- Target Technology Architecture
- Modeling the Case Study using Enterprise Architect



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Business Architecture – Phase B

A knowledge of the Business Architecture (enterprise planning, strategic business planning, business process re-engineering, etc.) is a prerequisite for architecture work in any other domain (Applications, Data, Technology), and is therefore the first architecture activity that needs to be undertaken. The extent of the work in Phase B will depend to a large extent on the enterprise environment. In some cases, key elements of the Business Architecture may be done in other activities.

The Business Architecture is necessary as a means of demonstrating the business value of subsequent Technical Architecture work to key stakeholders, and the return on investment to those stakeholders from supporting and participating in the subsequent work.

Objectives

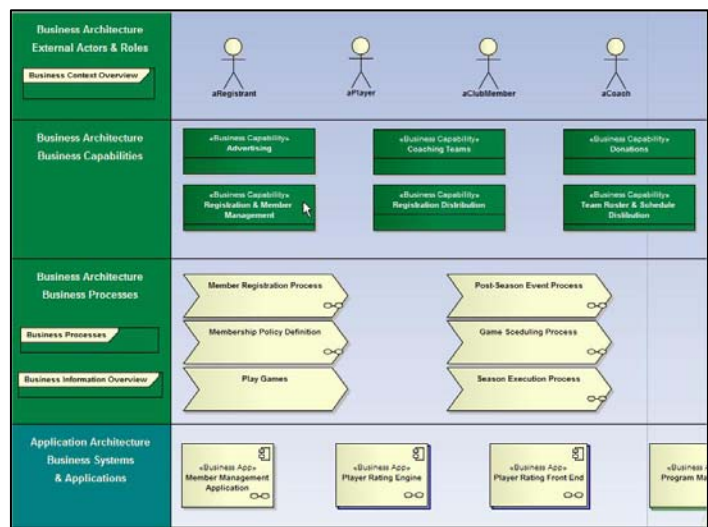
- Describe the Baseline Business Architecture
- Develop a Target Business Architecture, describing the product and/or service strategy, and the organizational, functional, process, information, and geographic aspects of the business environment, based on the business principles, business goals, and strategic drivers
- Analyze the gaps between the Baseline and Target Business Architectures
- Select the relevant architecture viewpoints that will enable the architect to demonstrate how the stakeholder concerns are addressed in the Business Architecture
- Select the relevant tools and techniques to be used in association with the selected viewpoints
- To Ensure TOGAF and Modeling Best Practices



Lesson Plans are based upon The Open Group Architecture Framework Version 9

Lesson Plans

- Determine Views and Viewpoints
- Strategic Business Modeling (BMM)
- Determine Business Architecture
- Process Value Chain Analysis
- Process Modeling
- Determine Scope
- Analyze Business Value & Risk
- Modeling the Process using BPMN
- Relationship Matrix
- Root Cause Problem Analysis
- AS-IS and TO-BE Gap Analysis
- Applying UML Business Patterns
- Conceptual Domain Modeling
- Modeling the Case Study using Enterprise Architect



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Information Systems Architecture – Phase C

Phase C involves the combinations of Application and Data Architecture. Major applications systems - such as those for Enterprise Resource Planning (ERP), customer relationship management, etc. - often provide a combination of technology infrastructure and business application logic, and some organizations take an application-driven approach. Organize the core underpinning of the mission-critical business processes, and take the implementation and integration of core applications as the primary focus of architecture effort (the integration issues often constituting a major challenge).

Objectives

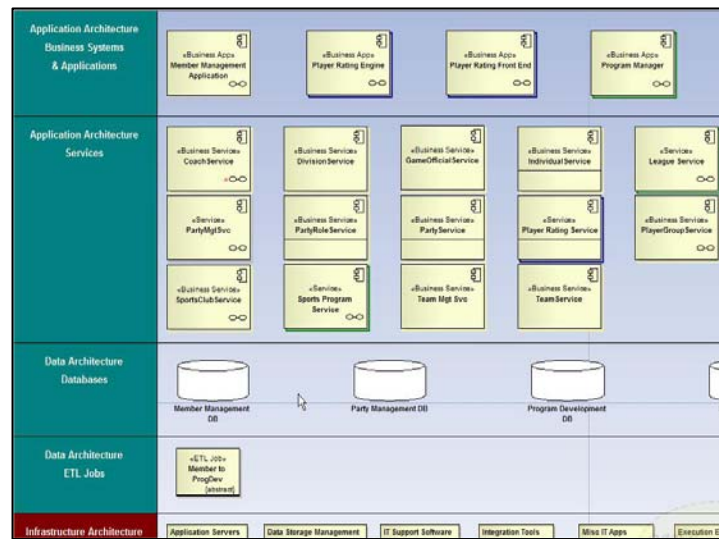
- Select the architecture viewpoints to enable the architect to demonstrate how the stakeholder concerns are addressed in the Information Systems Architecture
- Describe the Baseline Application Architecture
- Develop a Target Application Architecture, the product and/or service strategy
- Describe the Baseline Data Architecture
- Develop a Target Data Architecture, describing the information assets
- Show Alignment between Application and Data Architectures and Business Architectures
- Analyze gaps between the Baseline and Target Information Systems Architectures
- Ensure TOGAF and Modeling Best Practices



Lesson Plans are based upon The Open Group Architecture Framework Version 9

Lesson Plans

- Determine Views and Viewpoints
- Baseline Applications Architecture
- Target Applications Architecture
- Application Architecture Report
- Baseline Data Architecture
- Target Data Architecture
- Data Architecture Report
- Show Alignment of Information Systems Architecture with Business Architecture
- Perform Gap analysis
- Create Impact Analysis
- Modeling the Case Study using Enterprise Architect



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Technology Architecture – Phase D

Phase D describes the operating software and physical hardware capabilities that are required to support the deployment of business, application and data services. This includes IT infrastructure, middleware, networks, communications, hardware inventory, processing, standards, etc

An organization creating or adapting a Technology Architecture may already mandate the use of a list of approved suppliers/products for that organization. The list will be an input to the definition of the organization-specific architecture framework. The architectures can then be used as procurement tools to govern the future growth and development of the organization's IT infrastructure.

Objectives

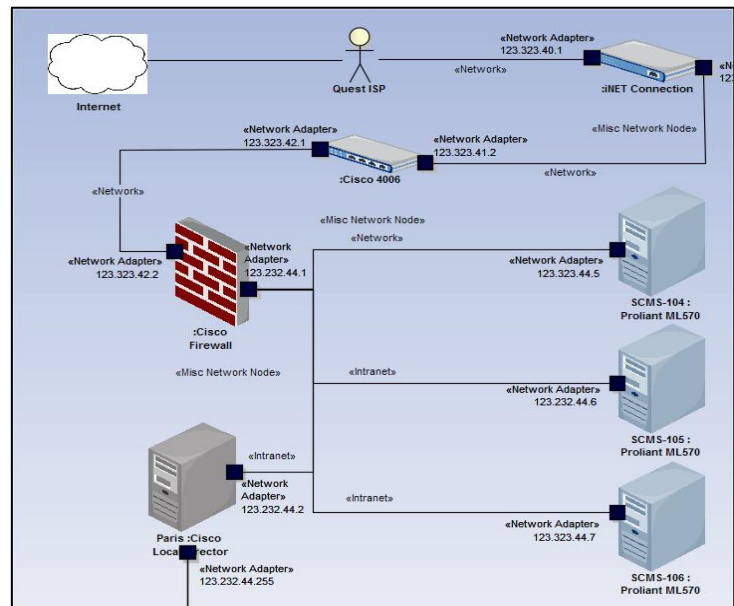
- Convert the description of the existing system into services terminology using the organization's Foundation Architecture (e.g., the TOGAF Foundation Architecture's TRM, ITIL).
- Structure the existing system description in a way which makes it compatible with the breakdown of standards used within your Foundation Architecture.
- Ensure TOGAF and Modeling Best Practices



Lesson Plans are based upon The Open Group Architecture Framework Version 9

Lesson Plans

- Determine Views and Viewpoints
- Determine Inventory
- Baseline Technology Architecture
- Target Technology Architecture
- Show Alignment of Technology between Information Systems Architecture and Business Architecture
- Perform Gap analysis
- Create Impact Analysis
- Modeling the Case Study using Enterprise Architect



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Opportunities and Solutions – Phase E

Phase E attempts to identify new business opportunities arising from the architecture work in previous phases. This phase identifies the parameters of change, the major phases along the way, and the top-level projects to be undertaken in moving from the current environment to the target. The output of Phase E will form the basis of the Implementation Plan required to move to the Target Architecture.

Sometimes the process of identifying implementation opportunities allows a business to identify new applications, and in this case it may be necessary to iterate between Phase E and previous phases. Iteration must be limited by time or money to avoid wasting effort in the search for a perfect architecture.

Objectives

- Identify key business drivers constraining sequencing of Implementation
- Identify cost reduction, consolidation, customer services and new technology
- Review Gap Analysis from Technology Architecture - Phase D
- Brainstorm technical requirements from a functional perspective
- Brainstorm Co-existence and Interoperability Requirements
- Perform Architecture Assessment and Gap Analysis
- Identify Project Portfolios and Major Work Packages
- Determine as new development, purchase opportunity, or re-use of existing system
- Ensure TOGAF and Modeling Best Practices

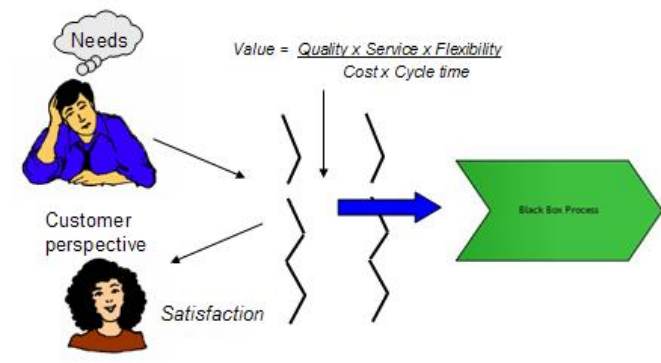


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Lesson Plans

- Finalize Key Business drivers
- Review Gap Analysis
- Brainstorm Technical Opportunities
- Brainstorm Business Process Reengineering opportunities
- Perform high level Opportunities Gap Analysis
- Identify Portfolios and Project Work plans
- Organize as Buy, Build or Re-use
- Modeling the Case Study using Enterprise Architect



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Migration Planning – Phase F

The objective of Phase F is to sort the various implementation projects into priority order. Activities include assessing the dependencies, costs, and benefits of the various migration projects. The prioritized list of projects will go on to form the basis of the detailed Implementation Plan and Migration Plan.

Most organizations find that a change of architecture has too much impact on the organization to be undertaken in a single phase. Migration often requires consideration of a number of technical issues, not the least of which are those associated with the means of introducing change to operational systems.

Objectives

- Understand the implications of this project on other projects?
- Show the dependencies between this migration projects?
- Determine products needed?
- Determine what components must be developed?
- Discover standards for new products or components to built on?
- Analyze products to stand the test of time?
- Review what is the likely cultural impact on the user community, and how can it be controlled?
- Show the total cost of the migration, and what benefits will it deliver?
- Determine if the migration is viable?
- Ensure TOGAF and Modeling Best Practices

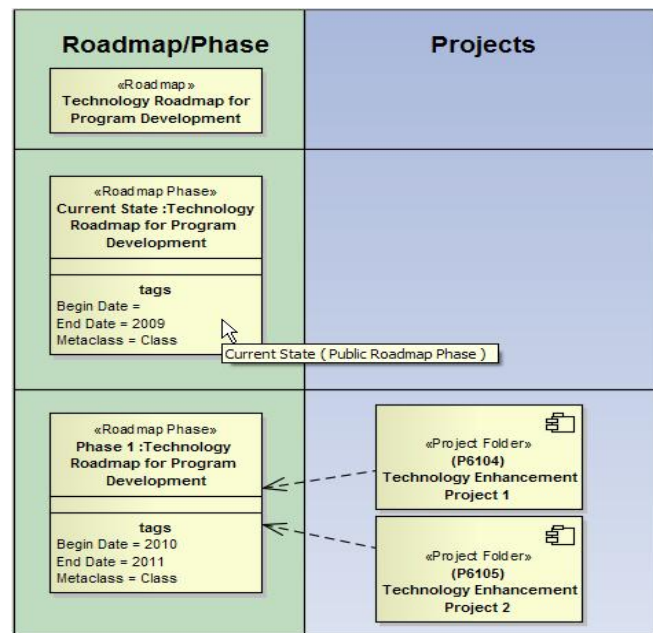


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Lesson Plans

- Prioritize Projects according to business principles, business goals, and business drivers
- Determine Dependencies between Projects
- Determine future disposition of current systems
- Estimate resource requirements and availability
- Develop detailed Gap Analysis
- Perform cost/benefit assessment of the various migration projects
- Perform risk assessment
- Generate implementation roadmap and timeline
- Document the Migration Plan
- Modeling the Case Study using Enterprise Architect



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Implementation Governance – Phase G

Phase G establishes the connection between architecture and implementation organization, through the Architecture Contract. Implementation Governance is the discipline of Corporate Governance focused on information technology (IT) systems and their performance and risk management. The rising interest in IT Governance is partly due to compliance initiatives (e.g. Sarbanes-Oxley (USA) and other audit regulations, Basel II (Europe)), as well as the acknowledgment that IT projects can easily get out of control and profoundly affect the performance of an organization.

“A board needs to understand the overall architecture of its company's IT applications portfolio ... The board must ensure that management knows what information resources are out there, what condition they are in, and what role they play in generating revenue...”

Architecture governance implies a system in which all stakeholders, including the board, internal customers and related areas such as finance, have the necessary input into the decision making process. This prevents a single stakeholder being blamed for poor decisions. It also prevents users from later complaining that the system does not behave or perform as expected.

Objectives

- Formulate recommendations for each implementation project
- Construct an Architecture Contract to govern the overall implementation and deployment process
- Perform appropriate governance functions while the system is being implemented and deployed
- Ensure conformance with the defined architecture
- Ensure TOGAF and Modeling Best Practices



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- Document scope of individual projects in Impact Analysis
- Document strategic requirements (from the architectural perspective) in Impact Analysis
- Document change requests (such as support for a standard interface) in Impact Analysis
- Document rules for conformance in Impact Analysis
- Document timeline requirements from roadmap in Impact Analysis
- Produce the Architecture Contract organization



Modeling Enterprise Architect case study

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Architecture Change Management – Phase H

In Phase H it is critical that the governance body establish criteria to judge whether a change request warrants just an architecture update or whether it warrants starting a new cycle of the Architecture Development Method (ADM). It is especially important to avoid "creeping elegance", and the governance body must continue to look for changes that relate directly to business value.

Architecture change management process is to ensure that changes to the architecture are managed in a cohesive and architected way, and to establish and support the implemented enterprise architecture as a dynamic architecture; that is, one having the flexibility to evolve rapidly in response to changes in the technology and business environment. Phase H also provides for changes to the framework and principles set up in the Preliminary Phase.

Objectives

- Monitor Technology Changes
- Monitor Business Changes
- Assess Changes and Development of Position to Act
- Publish Architecture updates
- Publish Changes to architecture framework and principles
- Manage New Request for Architecture Work to move to another cycle
- Ensure TOGAF and Modeling Best Practices

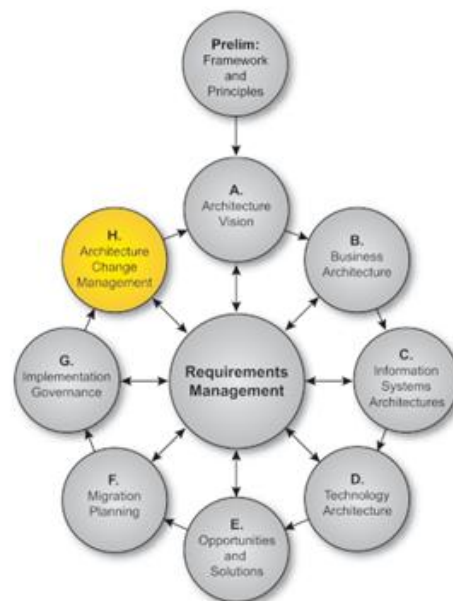


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Lesson Plans

- Determine Business Changes
- Determine Technology Changes
- Assess Gaps Analysis for proposed Change
- Publish Changes to Architecture framework and principles
- Manage New Architecture Change Requests
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Requirements Management

It is important to note that the Requirements Management denotes, not a static set of requirements, but a dynamic process whereby requirements for enterprise architecture and subsequent changes to those requirements are identified, stored, and fed into and out of the relevant ADM phases.

The ability to deal with changes in requirements is crucial. Architecture is an activity that by its very nature deals with uncertainty and change - the "grey area" between what stakeholders aspire to and what can be specified and engineered as a solution. Architecture requirements are therefore invariably subject to change in practice. Architecture often deals with drivers and constraints, many of which by their nature are beyond the control of the enterprise (changing market conditions, new legislation, etc.), and which can produce changes in requirements in an unforeseen manner.

Objectives

- Understand the highly important Requirements Management Process
- Understand Requirements Elaboration and Quality Assurance
- Review Business Process Scenarios from Business Architecture
- Understand impact of Requirements change on Architecture
- Ensure TOGAF and Modeling Best Practices



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Lesson Plans

- Requirements Management Process
- Requirements Elaboration Steps
- Use Case Scenarios including Business Rules
- Functional Requirements
- User and System Interfaces
- Data Model and data Requirements
- Quality of Service Requirements
- Baseline Requirements
- Generate Requirements Impact Statement
- Modeling the Case Study using Enterprise Architect

