MODELING THE ENTERPRISE — A PRACTICAL APPROACH (PART 2)

BEST PRACTICES FOR IMPLEMENTING INFORMATION AND ENTERPRISE ARCHITECTURES

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In this session, we will drill down into best practices required to start and implement an architecture initiative. In moving from project-centric management to enterprise-focused architecture management, there will be many new roles and techniques. We will discuss how best practice organizations worldwide have successfully adopted architecture as a unifying discipline to achieve better business intelligence, succeed with merger and acquisition or other integration initiatives, and prepare for business transformation and IT platform shifts to technologies like service architectures and cloud computing. Areas covered will include roles and responsibilities, frameworks (like Zachman, TOGAF and DoDAF), methodology and tools that are key to architecture initiative success.
WHO AM I?

• I have worked, consulted, and authored articles on application development, database design, and enterprise architecture for over 17 years.

• Clients
  – Fortune 500
  – OEM
  – Government Agencies

• Services
  – Modeling & Architecture
  – SDLC & Governance
  – Application Development
  – Database Design

• Certifications
  – Sybase Certified PowerDesigner Data Modeling Professional
  – Zachman Certified Enterprise Architect
ELEMENTS OF THE CHANGE LIFECYCLE
Changes Require Several Steps to Implement Within Business and IT Systems

• Business Requirements
  – Requirements Traceability & Change management

• Analysis
  – High-level abstraction models: Business/Architect level

• Design
  – Define detailed models for Construction/Builder level

• Develop, Test, Deploy
  – Code Construction and Configuration Management

• Maintenance
  – The “as-is” & “to-be”, Impact & Gap Analysis, Drive Change

• Team Work
  – Repository; version control
PREREQUISITES FOR IMPLEMENTATION

Before Beginning an Implementation, the Following Things Need to be in Place

• Method and Methodology
• Scope of Implementation (’As Is’ Or ???)
• Gap Analysis (Tool ↔ Methodology, New Tool ↔ Old Tool)
• Management Commitment and Involvement
• Project Organization and Method
• Project Goals and Measurements
  – Linked to Business Goals, i.e., Operational Excellence
• Success Measurement
PREREQUISITES: GAP ANALYSIS

Know Your Biggest Gaps and Blockers: Focus on Best Use of Enterprise Architecture

• Use Gap Analysis to Decide How the Architecture Initiative Can Best Support Methodology
• If the Architecture Initiative Includes Replacing Old Tools, Perform an Analysis to Determine Gaps
MODELING & METADATA MANAGEMENT

Integrated Modeling and Enterprise Repositories are Most Effective for EA

• A Business Intelligence Analogy
  – Best Results Come from a Natural Approach
  – Get More for Less – Integration is the Key

• Models Are the “Transactional” Metadata
  – Easy Creation, Visualization, and Maintenance
  – User Interface for Communicating With all Audiences
  – Graphical Tools to Define and Describe

• Repository is the “Warehouse” of Metadata
  – Analytics of Metadata
  – Reuse of Metadata
  – Control and Evaluation of Metadata
PROJECT COMPONENTS

Organization Elements of a Successful Enterprise Architecture Initiative

- Project office
- Education project
- Setup project
- Methodology support project
- Configuration project
IMPLEMENTATION PRACTICES

Enterprise Architecture Initiatives are Successful when People are Responsible

• **Enterprise Architecture Initiative Management Office**
  – Project Methodology
  – Decision Maker
  – Project/Implementation Support

• **Manages the Integration and Setup Project team**
  – Set up/install (Standardize Throughout Organization)
  – Integrate with Company’s Existing Environment
  – Customize Supporting Tools (Preferences, Defaults, and Other General Configurations)
  – Give Access to Users and Groups
IMPLEMENTATION PRACTICES (CONT’D)

Governance and Consistency Comes From Clear Guidance and Support

• Manages the Methodology Support Team
  – Customize Architecture Tooling to Support Method
    • Documentation Templates
    • Model Templates
    • Guidelines (Documentation, Best Practices)

• Manages The Education Team, And Support For:
  – The Configuration Team
    • Setup/Configuration
  – All Users
    • Method/Methodology
    • Basic Tool Knowledge
    • Tool With Methodology
IMPLEMENTATION ORGANIZATION

Overview of the Whole Organization by Role (One Person can have Many Roles)

Prerequisite of implementation:
Responsible for methodology, creating requirement spec, deciding scope, tool configuration, and education

Center of excellence

Methodology team

Configuration team

Education team

Power user team

Setup team

Methodology support config. team

Support team/s

Support during implementation (FAQs, documentation, etc.)

Team of power users during implementation (one from each user group)

Responsible for communication, implementation, and projects (works in conjunction with methodology team)
KEY SUPPORT: IMPLEMENTATION TOOLS

Effective Tools are Tools that Assist in Implementation Tasks

• Tools to Prepare for Adoption
  – Enterprise Repository
  – Model Templates
  – Architecture Frameworks and Methodology

• Tools to Provide Governance and Standards
  – Custom Checks and Event Handlers
  – User Profiles and Role-based User Configuration

• Tools to Provide Immediate Value and ROI
  – Reverse Engineering and Metadata Import
  – Automatic Dependency Derivations and Tracking
  – Business Layer Rollup and Architecture Layer Connections
PROCESS FLOW: ROLLOUT

Process for Rolling Out an Enterprise Architecture Initiative

- **Get methods and requirements from methodology team**
  - The method has to be in place and requirements should reflect its use in the tool

- **Set up implementation projects**
  - Set up projects
  - Set organization and decision process
  - Populate with chosen candidates
  - Set timeframe for each project

- **Educate implementation team**
  - Educate all project members in the methodology (see prerequisites)

- **Start configuration projects**
  - Workshops (basic training, what to do)
  - Configuration work (consultant needs or training for configuration team in PowerDesigner)

- **Integrate with education**
  - How to work in PowerDesigner according to methodology
  - Company-specific adjustments
  - Common templates

- **Kickoff**
  - Information about what is coming regarding method, tool, and training

- **Education**
  - How to work in PowerDesigner according to methodology
  - Company-specific adjustments
  - Common templates
PROCESS FLOW: CONFIG & EDUCATE

After Rollout, EA Leadership Continues with Configuration and Education

1. Decide scope, customization (general to tool, support for methodology)
2. Customize PD to meet requirements for methodology
3. Customize tool and package setup configuration
4. Integrate PD to company environment
5. Integrate with education/document
6. Educate method and modeling
7. Rollout
IMPLEMENTATION RISKS

Checklist to Ensure a Successful Rollout and Adoption of the EA Initiative

• Management Commitment
  – Ensure that Management is Committed
  – Agree on Measurement
  – Include Management on Steering Committee

• Success Criteria
  – Agree on Clear Success Criteria

• Prerequisites
  – Make Sure All Prerequisites are in Place
IMPLEMENTATION RISKS (CONT’D)

Checklist to Ensure a Successful Rollout and Adoption of the EA Initiative

• **Time**
  – Avoid New Methods
  – Always Implement Tool Using Existing Methods

• **Adoption**
  – Ensure Method & Customization are Part of Training
    • Get it Right From the Beginning
  – Use Templates, Customizations, and Documentation To Support ’Best Practice’
  – Support Team and Superusers for the Method ↔ Tool
CONSULTING SERVICES ROLES

Services can Provide Best Practice Support and Training to Streamline Process

• **Services provide:**
  – Training for Trainers and the Configuration Team
  – Advice/Knowledge of Combining Method and Tool
  – Competence and Support During the Configuration Phase

• **Service Consultants Should be Part of the Steering Committee and Configuration Team**

• **Service Consultants Should Act as Advisors to the Education Team**
IMPLEMENTATION SUCCESS CRITERIA

Achieving Increased Productivity with Architecture Initiatives Requires:

- **A Well-defined Decision Process**
  - Management Team with Full Authority to Make Necessary Decisions

- **A Clear And Efficient Methodology**
  - Create Method/Methodology Team with the Necessary Authority

- **A Well-defined And Flexible Project Scope With**
  - Well-informed, Cooperative, and Efficient Management
  - Supporting Methodology Teams
IMPLEMENTATION SUCCESS CRITERIA (CONT’D)

Achieving Increased Productivity Requires:

• **End-user Confidence in Outcome**
  – Methodology Team Completes
    • Customization
    • Templates
    • Documentation
  – Prior To End-user Training

• **User-oriented Training**
  – Methodology Team Clearly Documents how Method Tool are Meant to Work

• **Clear Support Structure Both For Projects And End Users**
  – Contact Persons’ Scope and Authority Clearly Communicated and Support Structure in Place
HOW DO I GET THE MOST FROM MODELS?

Models are Best When They Span the Entire Enterprise – But How Can We Do That?

• The “Big Picture” Goes Beyond A Project
• How To Achieve:
  – Consistency of Use and Purpose?
  – Reuse and Reduced Redundancy?
  – Clear Impact Analysis Across the Enterprise?
  – Business and IT Infrastructure Decision Consensus?
  – In a Limited Amount of Time?
  – Traceability Between All Projects and Programs?
• Enterprise Architecture Covers The Enterprise
  – But How do I Manage That Without Adding a Lot of Work?
• Build Within Enterprise Architecture Framework
ENTERPRISE FOCUS, PROJECT SCOPE

Enterprise Models are Abstract while Project Models are Concrete Representations
LAYERS AND PERSEPECTIVES

Moving Up and Down Between Layers of Abstraction and Implementation Domains

• The Value is in the Intersections
  – How does Business Concept Relate to IT Systems?
  – How are Process, Data & Business Logic Interdependent?

• Different Layers Of Abstraction
  – Transform Up and Down -> Remember the Heritage

• Different Perspectives
  – Relating Data to Process to Application to People to ...
  – Relate Between Perspectives -> Remember the “Joins”

• The Value Is In Remembering:
  – How Something Was Defined/Refined & Related to Others
  – Complete Cross-enterprise Analysis (Impact, Change, Etc.)
ENTERPRISE ARCHITECTURE FRAMEWORKS

Purpose & Examples of Frameworks for Enterprise Architecture

• “Perspectives” and “Layers” and “Rows” and “Columns”
  – All Sound Familiar?
  – Foundation for All Modern EA Frameworks

• The Zachman Enterprise Framework
  – Provides Industry Leading Classification System
  – Ensures Business Abstraction and Technology Align

• The Open Group Arch. Framework (TOGAF/DoDAF/MoDAF)
  – Provides Process/Method for EA Initiatives
  – Ensures EA Efforts Follow TOGAF Best Practices

• Open, Customizable Framework Editor
  – Methods, Reference Models, Templates, etc.
ZACHMAN FRAMEWORK

PowerDesigner’s Elaboration of the Zachman Framework
THE TOGAF 9 FRAMEWORK

PowerDesigner TOGAF 9 Framework Implementation
<table>
<thead>
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<th>Enterprise Scope</th>
<th>Information Architecture</th>
<th>Business Architecture</th>
<th>Application Architecture</th>
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INTEGRATED MODELS AND REPOSITORY

Link and Sync Combined with Central Repository: Effective Metadata Management

• Link & Sync Technology Ensures Dependencies are Tracked
  – Integration Across the Different Architecture Elements
  – Transformation from Abstraction to Detailed View

• Frameworks Provide Mechanism To Organize Work
  – Provides Containers for Different Work Deliverables
  – Provides Method to Go from One Stage to the Next

• We Want Enterprise Scope And Centralized Control
  – Integrated Metadata Repository

• Modeling And Repository Together Ensures
  – Consistent Integration of Metadata for All Participants
  – Enterprise Scope can be Achieved Without Extra Work
MODEL DRIVEN ENTERPRISE ARCHITECTURE

Practical and Applied Best Practices with Effective Tooling Provide ROI with Modeling

• Modeling and Metadata Management are Mainstream
  – Convergence Has Occurred, Integration is Essential
• Powerdesigner Leads The Way In Integrated Modeling
  – Modeling & Metadata Management for EA
• Best Practices for Modeling Projects
  – Organization and Support from Management are Key
  – Effective Tooling and Tool Consistent Use Empowers EA
  – Increase Productivity – Not Add New Work to Front End
• Enterprise Focus With Project Implementation
  – Enterprise Focused Abstractions With Project Details
  – Frameworks Help Keep Enterprise “Connected”
POWERDESIGNER ARCHITECTURE

Analysis of Change Impact took “minutes in what used to take days”
QUESTIONS & ANSWERS
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THANK YOU

MODELING THE ENTERPRISE
– A PRACTICAL APPROACH (PART 1)