MODELING THE ENTERPRISE – A PRACTICAL APPROACH (PART 2)

BEST PRACTICES FOR IMPLEMENTING INFORMATION AND ENTERPRISE ARCHITECTURES

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MODELING: A PRACTICAL APPROACH

Best Practices for Implementing Information and Enterprise Architectures

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

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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**

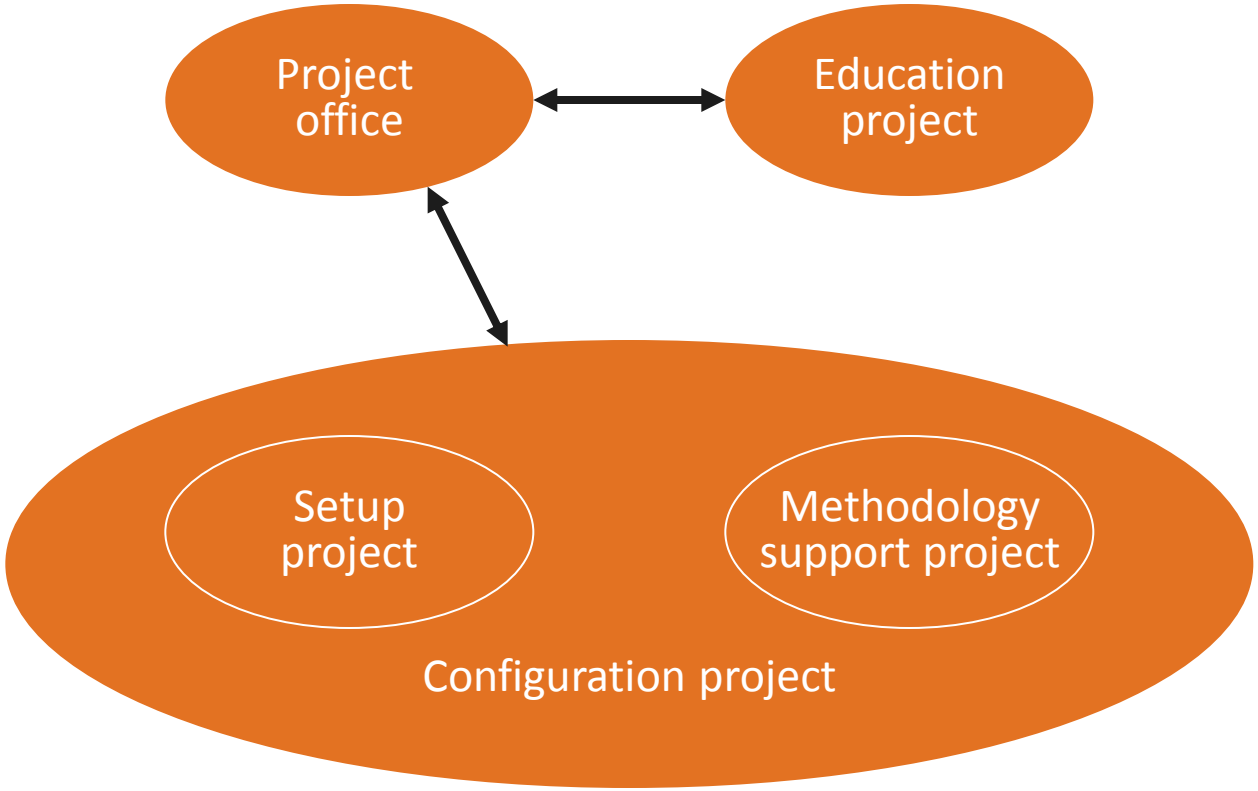
MODELING & METADATA MANAGEMENT

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



IMPLEMENTATION PRACTICES

Enterprise Architecture Initiatives are Successful when People are Responsible

- **Enterprise Architecure Initiative Managenent Office**
  - Project Methodology
  - Decision Maker
  - Project/Implementation Support
- **Manages the Intergration 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

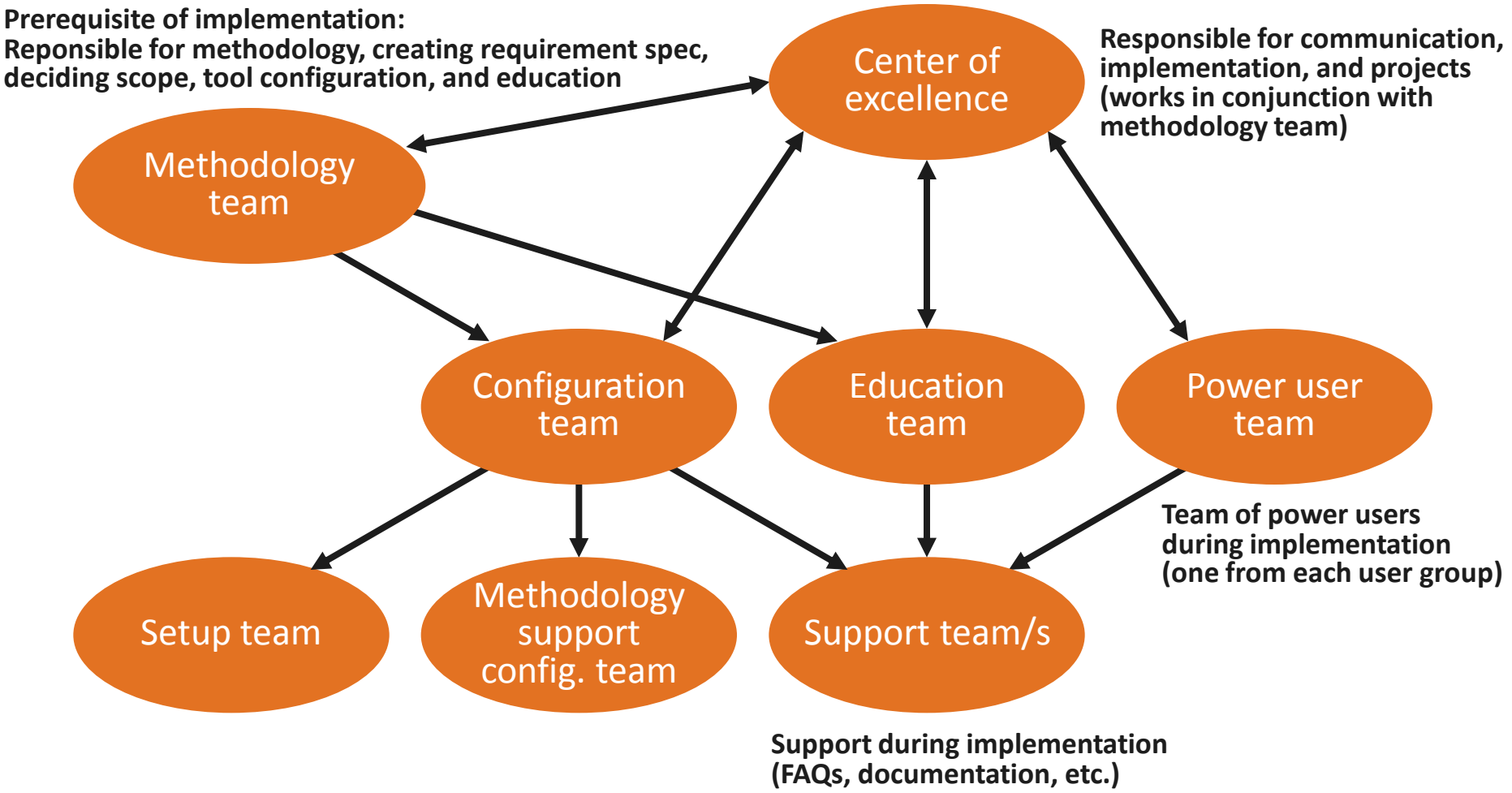
IMPLEMENTATION PRACTICES (CONT'D)

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)



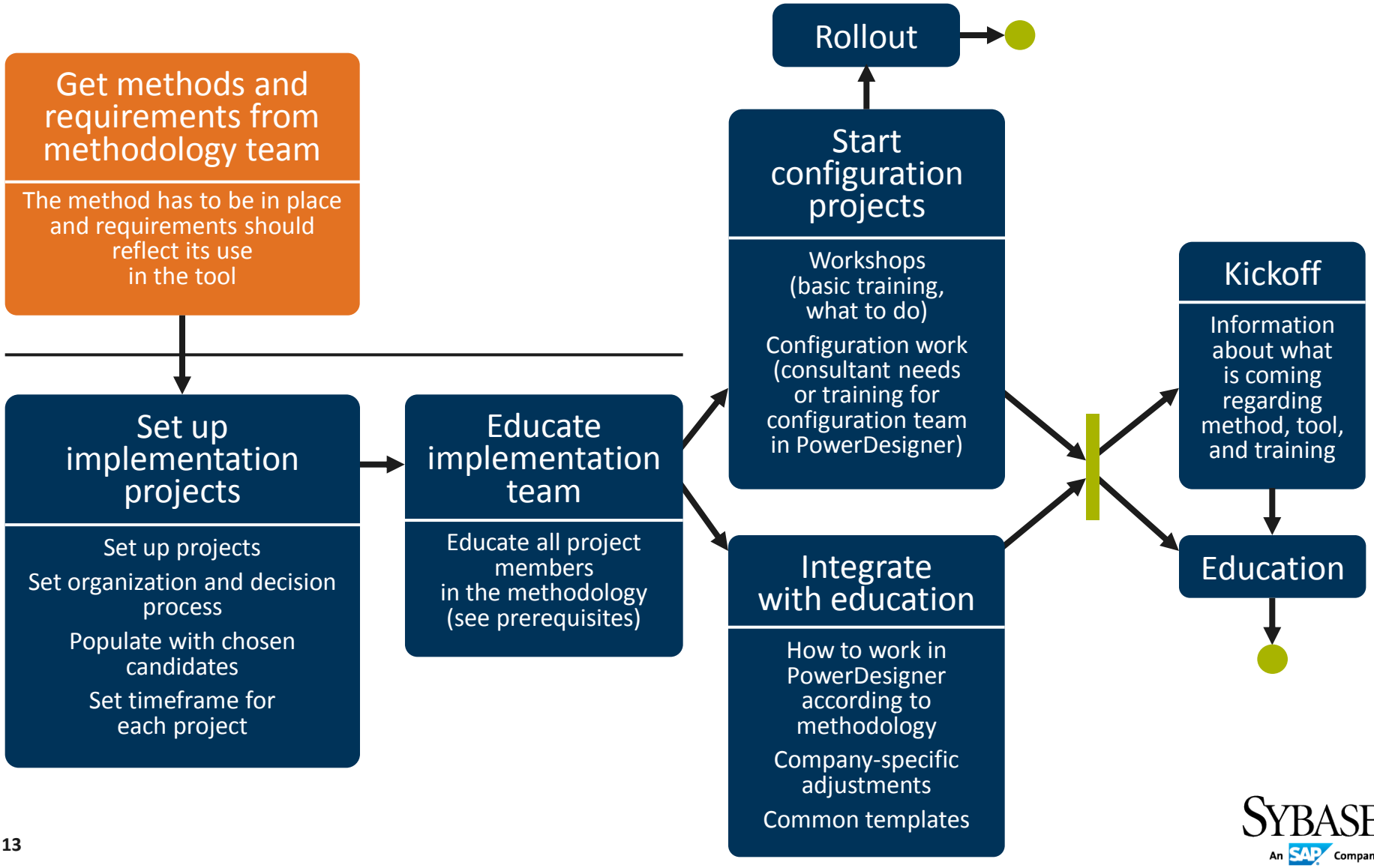
KEY SUPPORT: IMPLEMENTATION TOOLS

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



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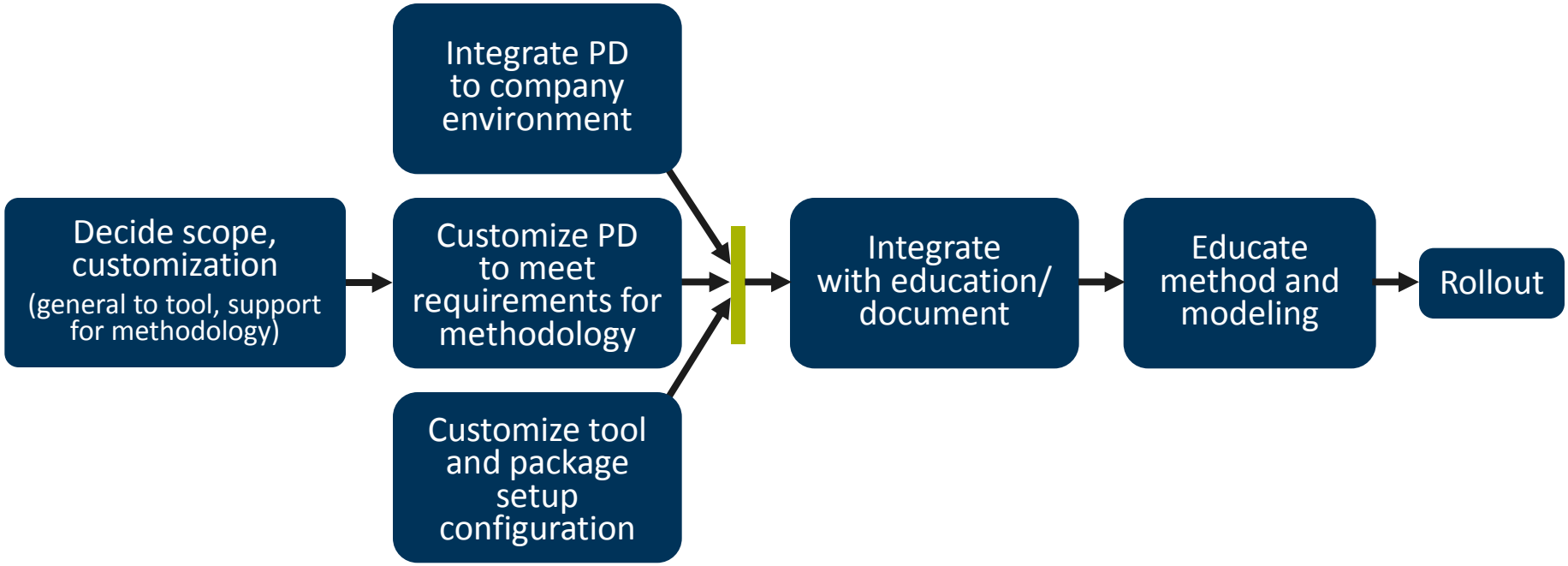
PROCESS FLOW: CONFIG & EDUCATE

After Rollout, EA Leadership Continues with Configuration and Education



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)

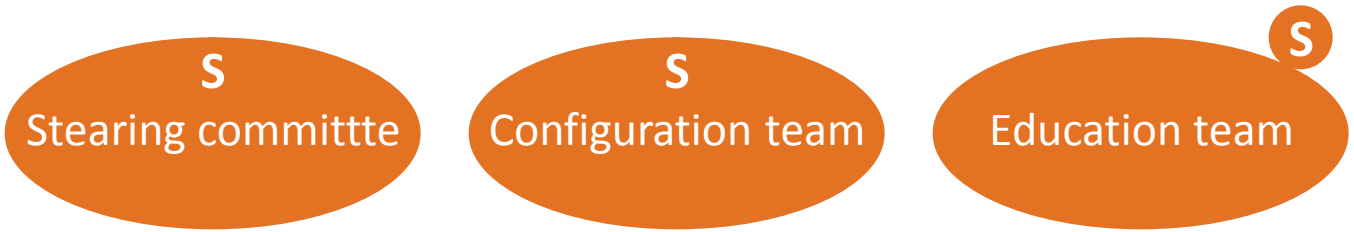
Checklist to Ensure a Successful Rollout and Adoption of the EA Initiative

- **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

CONSUTING 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

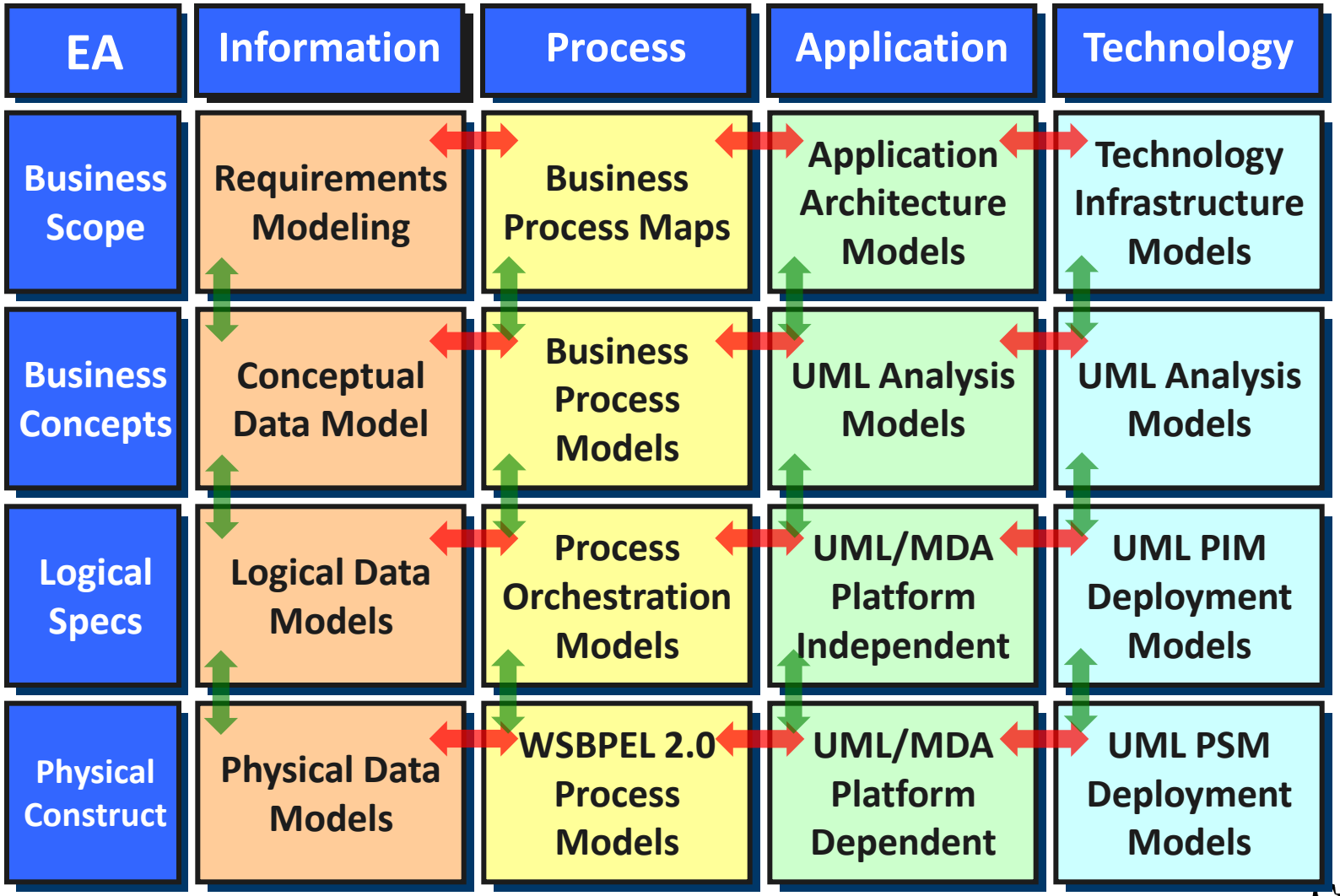
HOW DO I GET THE MOST FROM MODELS?

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 PERSEPCTIVES

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.)

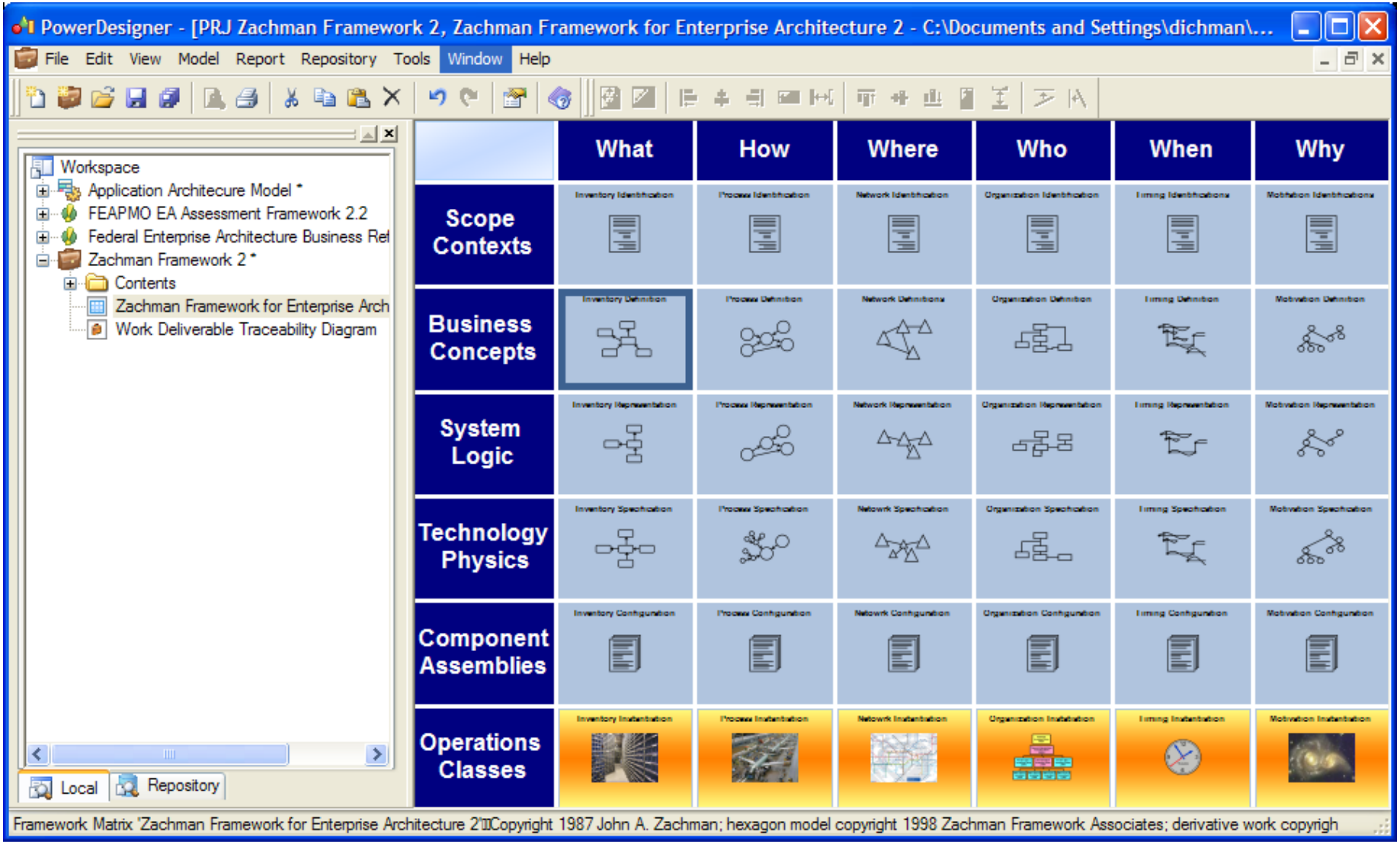
ENTERPRISE ARCHITECURE FRAMEWORKS

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.

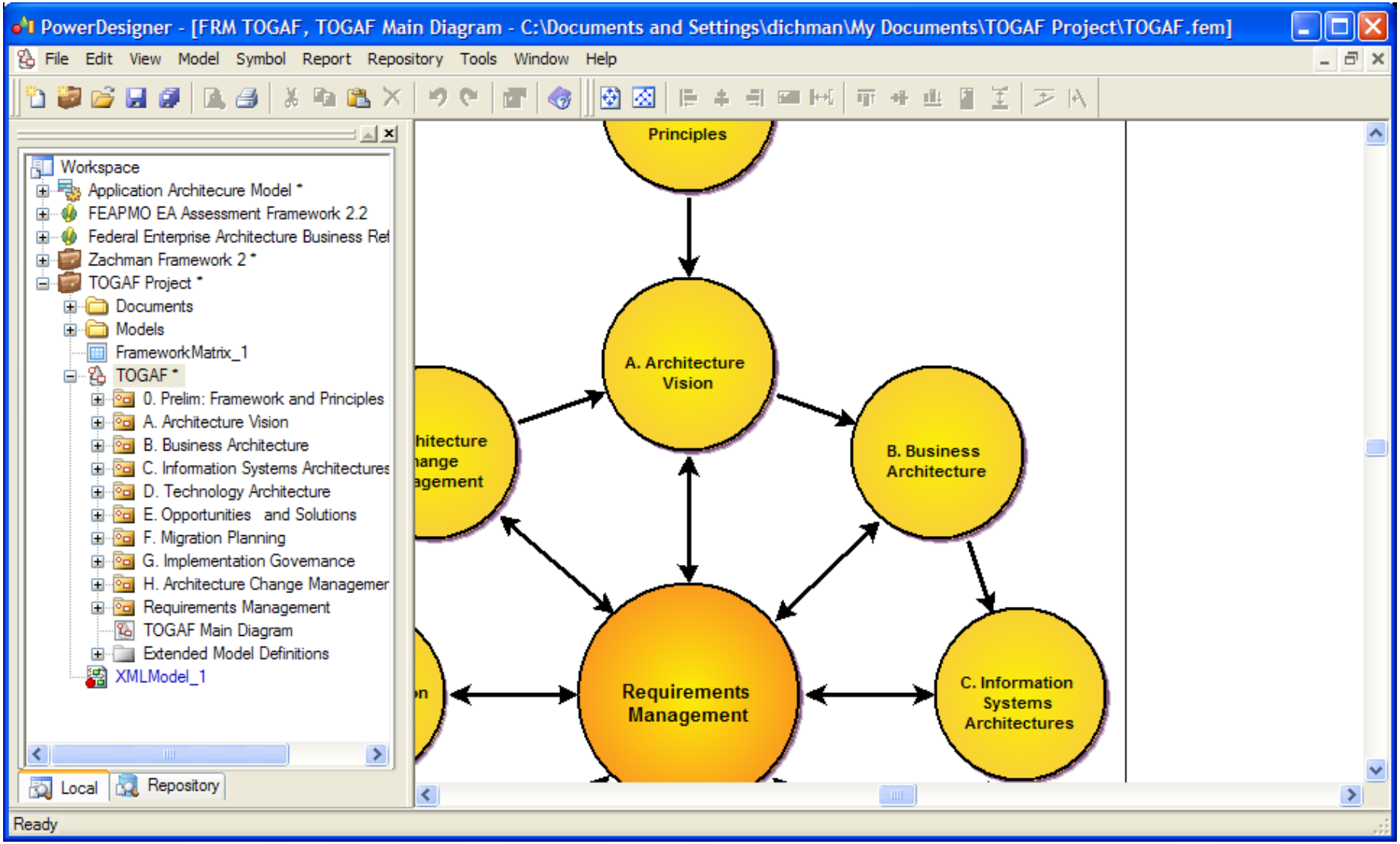
ZACHMAN FRAMEWORK

PowerDesigner's Elaboration of the Zachman Framework



THE TOGAF 9 FRAMEWORK

PowerDesigner TOGAF 9 Framework Implementation



PRJ Full Demo, Business Framework for Enterprise Architecture - C:\Documents and Settings\dichman\My Do...

	Information Architecure	Business Architecture	Application Architecure	Technology Architecure
Enterprise Scope	Informaiton Scope 	Business Scope 	Applicaiton Scope 	Technology Scope 
Enterprsie Conceptual	Information Conceptual Model 	Business Conceptual Model 	Application Conceptual Model 	Technology Conceptual Model 
Logical Representation	Information Logical Model 	Business Logical Model 	Application Logical Model 	Technology Logical Model 
Physical Implementation	Information Physical Model 	Business Physical Model 	Application Physical Model 	Technology Physical Model 

INTEGRATED MODELS AND REPOSITORY

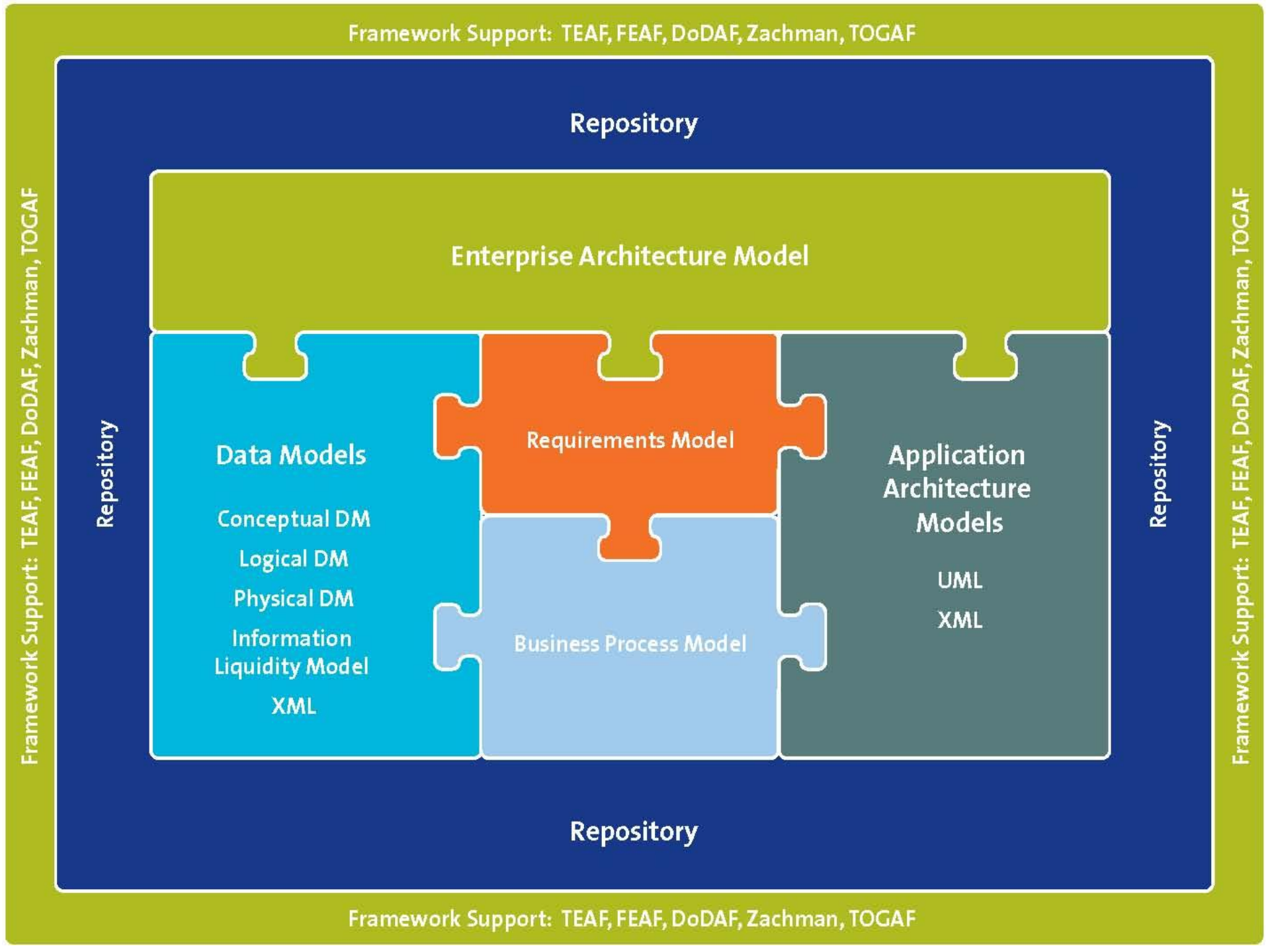
Link and Sync Combined with Central Repository: Effective Metadata Management

- **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”


Framework Support: TEAF, FEAF, DoDAF, Zachman, TOGAF
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Repository
Repository
Repository
Repository
Enterprise Architecture Model
Data Models
Conceptual DM
Logical DM
Physical DM
Information Liquidity Model
XML
Requirements Model
Business Process Model
Application Architecture Models
UML
XML

QUESTIONS & ANSWERS

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THANK YOU

MODELING THE ENTERPRISE
– A PRACTICAL APPROACH (PART 1)