The Fundamental Importance of an Integrated Meta Model to EA Success

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Abstract

This talk covers the fundamental importance and role of comprehensive meta models in supporting frameworks for EA, including Zachman, DODAF, TOGAF and IAF. Graham discusses this against the background of implementing multiple concurrent frameworks and architecture notations sharing a single repository and meta model. He relates the experience of Inspired in extending its meta models to support multiple frameworks (especially TOGAF) as well as notations (including TOGAF viewpoints and Archimate). He shows how the meta model is the unifying force to unite the perspectives of business and IT as well as to manage architecture at the conceptual, logical and physical levels. Finally, he shows how user extensibility can allow the support of advanced uses such as integration of risk management, quality management and governance elements (such as controls, cost and responsibility).
We Will Look At

- Meta Model
  - Concept
  - Coverage
  - Usefulness
  - Role in Supporting Collaboration and Achieving Integration
- How Meta Model can support multiple frameworks and perspectives simultaneously
- A Case Study / Examples
- Some meta model extensions that enhance the relevance and profile of EA in the business
What is a meta model?

- Identifies concepts, relationships and properties of the things that we want to model
- May include the way in which we want the concept to be represented (notation, symbol, style etc.)
- Technically: A class model

Example

<table>
<thead>
<tr>
<th>Meta Model</th>
<th>Content Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Type</td>
<td>Transactional</td>
</tr>
<tr>
<td>Application Function</td>
<td>Retail Banking</td>
</tr>
<tr>
<td>Application</td>
<td>Logical</td>
</tr>
<tr>
<td>Scenario</td>
<td>Physical</td>
</tr>
<tr>
<td>Framework Provides</td>
<td></td>
</tr>
<tr>
<td>Part of</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>Upgrade to Rel 3</td>
<td></td>
</tr>
<tr>
<td>BankMaster</td>
<td>2006 Optimistic</td>
</tr>
</tbody>
</table>
Coverage of Meta Model for EA

- Domains
  - Business
  - Process
  - Application
  - Information
  - Technology

- Cross Cutting Concerns
  - Risk
  - Cost
  - Quality

- Housekeeping
  - Security and Permissions
  - Timeframe and Status

- Model Types / Viewpoints
  - Audience
  - Content
  - Notation
Usefulness of Meta Model

- Scope our efforts
- Generate Questions
- Provide Navigation
- Provide the Pigeon holes or Frame for our puzzle
- Shared Vocabulary and Glossary to aid collaboration
- Configure Tooling
- Provide Semantics Under the Framework
  - Regardless of notation or medium of capture or display
- Improve the Quality of Models
  - connect rather than naming
- Unifies Perspectives
VITAL Role of Meta Model

- **Architect = Conductor**
- **Meta Modeler = Arranger**
Meta Model supports multiple representations, frameworks.

Frameworks can co-exist. Content can be captured or viewed via various "lenses"
Case Study

- Adapting the Inspired Frameworks to support TOGAF
- Done in Q2/3 last year

**Process**
- Thoroughly study TOGAF to define a meta model
- Cross map concepts to existing Inspired Meta Model ones
- Identify gaps and differences
  - Extend some types (new properties or relationships)
  - Add new types (few) [e.g. Building Block; Requirement Type; Categories]
  - Add new relationships
- Populate types with content [consistent with categorisation scheme]
- Define spatial maps [e.g. Crop Circle; IIIRM; TRM; Ent. Continuum]
- Define mappings between Meta Model and Viewpoints
  - Define Model Types

**Result**
- Deep support for TOGAF
- Coexistence of Inspired, Zachman, IAF, TOGAF and other frameworks
- Ability to share content across these perspectives and communities
- Certification!
Governance, Risk and Improvement have become major topics for organizations

Meta Models can be extended to cater for these

- Additional types for things like:
  - Risk Categories; Risk Zones to which architecture elements can be related
  - Controls
  - Guidelines

- Additional properties for things like:
  - Risk score (current; desired)
  - Cost (now, future)
  - Quality (now, future)

- Additional relationships for things like:
  - Business Unit / Stakeholder responsible

Having these aspects can really make business executives notice and get involved in EA
Turns out that most of the cost elements are already in the architecture models! We need to add attributes to individual items to record the various relevant costs; then implement a mechanism to accumulate them. This adds a model element for Cost Centre. Costs accumulated there can, in turn, be apportioned across business units. This is a flexible approach that allows various cost categories to be monitored - various models can be simultaneously implemented.
Multiple Frameworks

- Drill into same content
Graham McLeod is widely recognized as a thought leader in the Enterprise Architecture space. He has been delivering EA benefits in organizations via consulting, training, models, methods and frameworks since 1990.

He has taught strategy, enterprise architecture, process modeling, system delivery techniques and project management to hundreds of practitioners while at Comcon, Q Data, University of Cape Town and Inspired.

He is the author of the extremely comprehensive Inspired Enterprise Architecture frameworks (1994 to present) and the architect of the Archi/EA Webmodeler tool recognised by the Association of Enterprise Architects, Gartner and Forrester as one of the leading tools worldwide.

He was recently appointed CTO and chief architect of Promis Solutions AG group in Switzerland. Promis Solutions is a leading European provider of EA and Process tools and services. Graham has spoken at previous Open Group Conferences in Ireland and Cape Town, as well as at IRM Conferences in the UK. He is a certified TOGAF Architect and trainer. He has personally been involved in the strategy and EA efforts of over 20 major organizations worldwide including assurance, retail, banking, telecommunications, information technology, energy, healthcare, education, government and hospitality. He has authored several books and consults at board level via Inspired, Promis and Gartner.