Integrating TOGAF® and BABOK®

Building Business Capability 2015
Las Vegas, NV

Armstrong Process Group, Inc.
www.aprocessgroup.com
About APG

- APG’s mission is to
  "Align information technology and systems engineering capabilities with business strategy using proven, practical processes delivering world-class results."

- Industry thought leader in enterprise architecture, business modeling, process improvement, systems and software engineering, requirements management, and agile methods

- Member and contributor to
  - UML®, SysML®, SPEM, UPDM™ at the Object Management Group® (OMG®)
  - TOGAF, ArchiMate®, and IT4IT™ at The Open Group
  - Eclipse Process Framework (EPF) at the Eclipse Foundation

- Business partners with Sparx, HP, and IBM

- IIBA® Endorsed Education Provider (EEP™)
Different Perspectives

- What’s the difference between an Enterprise Architect and a Business Analyst?
  - Is an EA a “glorified” BA?
- Is BA “for the business” and EA “for IT”? 
- Are Business Analysts “junior” Business Architects and on Biz Arch career path?
  - Are Business Architects Enterprise Architects?
- EA: “Where are the non-functional requirements?”
- BA: “Architecture is too complicated and technical!”
- Can’t we just all get along?
What is BA and EA?

BABOK 3.0 (p. 2)
- Business analysis is the practice of enabling change in an enterprise by defining needs and recommending solutions that deliver value to stakeholders.
- Business analysis enables an enterprise to articulate needs and the rationale for change, and to design and describe solutions that can deliver value.

TOGAF 9.1 (p. 6)
- Purpose of enterprise architecture is to optimize the enterprise…
- …and create an integrated environment that is responsive to change and supportive of the delivery of the business strategy.
- …achieve the right balance between IT efficiency and business innovation.
TOGAF 9.1 Overview

I. Introduction
II. Architecture Development Method (ADM)
III. ADM Guidelines & Techniques
IV. Architecture Content Framework
V. Enterprise Continuum & Tools
VI. TOGAF Reference Models
VII. Architecture Capability Framework
EA in BABOK

- TOGAF referenced as “technique” in Business Architecture perspective
  - “Organizations following TOGAF may choose to tailor Phase B to adopt the business architecture blueprints, techniques, and references described in the BABOK® Guide.”
- “Architecture” mentioned 60+ times
- “Requirements Architecture” mentioned 52 times
  - Then “non-requirements” architecture mentioned 8 times
- “Enterprise Architecture” mentioned once (p. 304)
- “Business Architecture” mentioned 7 times
  - Outside of Business Architecture Perspective content
- “Model” mentioned 783 times
BABOK 3.0 Perspectives

Business Architecture
- 16 pages of content
- Introduces reference models and techniques for Biz Arch activities
  - ArchiMate, Capability Map, Project Portfolio Analysis, Roadmap, TOGAF
- Conceptually consistent with TOGAF/EA
- Discusses “business analysts working in the discipline of business architecture”

Information Technology
- 14 pages of content
- Identifies different kinds of outcomes that have synergy with TOGAF/EA
  - Create New Capability, Enhance Capability, Improve Operations, Update Existing IT System
- Briefly discusses different development methods
- Consistent with TOGAF ADM
- Discusses how BA activities might be performed by different roles and expected deliverables
BA in TOGAF

- Neither IIBA or BABOK referenced
- “Business Analysis” mentioned once (p. 207)
- “Requirement” mentioned 780 times
- “Requirements Management” is mentioned 61 times
- “Architecture Requirements Management” is center of ADM
- “Business Analyst” not mentioned in TOGAF Skills Framework
<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Analyst (BABOK pp. 2-3)</strong></td>
<td><strong>Enterprise Architect (TOGAF p. 612)</strong></td>
</tr>
<tr>
<td>• ...responsible for discovering, synthesizing, and analyzing information from a variety of sources within an enterprise, including tools, processes, documentation, and stakeholders.</td>
<td>• ...are visionaries, coaches, team leaders, business-to-technical liaisons, computer scientists, and industry experts.</td>
</tr>
<tr>
<td>• ...responsible for eliciting the actual needs of stakeholders – which frequently involves investigating and clarifying their expressed desires – in order to determine underlying issues and causes.</td>
<td>• ...has professional relationships with executives of the enterprise to gather and articulate the technical vision, and to produce the strategic plan for realizing it.</td>
</tr>
<tr>
<td>• ...play a role in aligning the designed and delivered solutions with the needs of stakeholders.</td>
<td>• Role of the architect can be summarized as to:</td>
</tr>
<tr>
<td></td>
<td>• Understand and interpret requirements</td>
</tr>
<tr>
<td></td>
<td>• Create useful models</td>
</tr>
<tr>
<td></td>
<td>• Validate, refine, and expand models</td>
</tr>
<tr>
<td></td>
<td>• Manage the architecture</td>
</tr>
</tbody>
</table>
EA Value Chain and Capability Map

Understand
- Domain Modeling
  - Business Architecture
  - Information Architecture
  - Data Architecture
  - Service Architecture
  - Application Architecture
  - Technology Architecture
- Requirements Elicitation
  - Architecture Project Scoping
  - Architecture Stakeholder Analysis
  - Architecture Envisioning

Analyze
- Architectural Analysis
  - Gap Analysis
  - Impact Analysis
  - Trade-off Analysis
  - Affinity Analysis
- Architecture Reporting
  - Business Intelligence Reporting
  - Tabular Reporting
  - Diagram Reporting

Decide
- Architecture Roadmapping
  - Capability Roadmapping
  - Operations Roadmapping
  - Application Roadmapping
  - Technology Roadmapping
- Architecture Planning
  - Migration Planning
  - Architecture Decision Making
  - Architecture Risk Assessment

Respond
- Architecture Governance
  - Architecture Risk Mgmt
  - Architecture Compliance Mgmt
  - Architecture Asset Mgmt
  - Architecture Process Mgmt
- Architecture Lifecycle Management
  - Business Architecture
  - Data Architecture
  - Application Architecture
  - Technology Architecture

Supporting Capabilities
- Architecture Knowledge Management
- Architecture Operations
- Architecture Delivery
- Architecture Integration
- Architecture Human Capital Management

Business Analysis overlap – particularly Requirements Elicitation and Requirements Mgmt (in Architecture Knowledge Management)
TOGAF Architecture Development Method (ADM)

- Provides **tested and repeatable** process for developing architectures
- Includes activities for
  - **Establishing** an architecture framework
  - **Developing** architecture content
  - **Transitioning and governing** the realization of architectures
- Carried out within an **iterative cycle** of continuous architecture definition and realization
- Allows organizations to **transform** their enterprises in a controlled manner in response to business goals and opportunities
BABOK vs ADM Scope

- BABOK is particularly (but not exclusively) project-scoped
  - Adds ADM-like activities to beginning and ending of solution delivery lifecycle
- In ADM, projects are identified in Phases E-F after doing architecture work
ADM Guidelines and Techniques

**Techniques**
- Architecture principles
- **Stakeholder management**
- Architecture patterns
- **Business scenarios**
- Gap analysis
- Migration planning
- Interoperability requirements
- **Business transformation readiness assessment**

**Guidelines**
- Risk management
- Capability-based planning
- Applying iteration to ADM
- Applying ADM at different enterprise levels
- Security architecture
- TOGAF and SOA

*Bold, italicized items are referenced in BABOK*
# BABOK Techniques

- Acceptance and Evaluation Criteria
- Backlog Management
- Balanced Scorecard
- Benchmarking and Market Analysis
- Brainstorming
- **Business Capability Analysis**
  - Business Cases
  - Business Model Canvas
  - Business Rules Analysis
  - Collaborative Games
  - Concept Modelling
  - Data Dictionary
  - Data Flow Diagrams
  - Data Mining
  - Data Modelling
  - Decision Analysis
  - Decision Modelling
- Document Analysis
- Estimation
- Financial Analysis
- Focus Groups
- Functional Decomposition
- Glossary
- Interface Analysis
- Interviews
- Item Tracking
- Lessons Learned
- Metrics and Key Performance Indicators (KPIs)
- Mind Mapping
- Non-Functional Requirements Analysis
- Observation
- Organizational Modelling
- Prioritization
- Process Analysis
- Process Modelling
- Prototyping
- Reviews
- **Risk Analysis and Management**
  - Roles and Permissions Matrix
  - Root Cause Analysis
  - Scope Modelling
  - Sequence Diagrams
  - **Stakeholder List, Map, or Personas**
  - State Modelling
  - Survey or Questionnaire
  - SWOT Analysis
  - **Use Cases and Scenarios**
  - User Stories
  - Vendor Assessment
  - Workshops

---

BBC 2015 – Integrating TOGAF and BABOK
Copyright © 1998-2015, Armstrong Process Group, Inc., All rights reserved
• Both represent the different types of things that are of concerns to each BOK
• Some coarse-grained similarities
  • BABOK more general
  • TOGAF more specific
• BABOK also has BA Info Arch and Req Arch
• TOGAF ACM could be reference
TOGAF Enterprise Repositories

- Need a place to store and manage architecture work products
- TOGAF provides a structural framework
  - Catalogs of existing applications and technologies
  - Metamodel should incorporate BA Info Arch and Req Arch
  - Distinguish between different types of architectural assets
  - Part of wider enterprise IT repository
  - SIB includes standards and specifications that may be constraints

- EA and BA should share same Req Repository

BBC 2015 – Integrating TOGAF and BABOK
Copyright © 1998-2015, Armstrong Process Group, Inc., All rights reserved
What Are Requirements?

- “A quantitative statement of business need that must be met by a particular architecture or work package.”
  – TOGAF 9

- “A usable representation of need.”
  – BABOK 3

- “Statement which translates or expresses a need and its associated constraints and conditions.”
  – ISO 29148:2011
ADM Requirements Management – Objectives

- Ensure that the Requirements Management process is sustained and operates for all relevant ADM phases
- Manage architecture requirements identified during any execution of the ADM cycle or a phase
- Ensure that relevant architecture requirements are available for use by each phase as the phase is executed
What are “Architecture Requirements” Really?

- Requirements that initiate the ADM (Phase H)
- Requirements that describe expected outcomes (Phase A)
- Requirements that represent what transition/target architectures (and associated reference architectures/models) will deliver
- Requirements that represent what solution delivery projects must implement to achieve transition/target architectures
  - Also includes business and IT operational requirements once solutions are delivered
- Architecture/solution building blocks (ABB/SBB) and associated standards may represent constraints
- Types of requirements of particular interest to architects
  - Interoperability, security, non-functional
BABOK Knowledge Areas and ADM

- Maps to different parts of the ADM when used for same scope (Define Change Strategy)
- Also supports Architecture Requirements Management
- Could also be used in Implementation Governance as a part of solution delivery method
Requirements Management Process – Steps
Framework and Principles – Steps

Understand impact between EA and BA

Define interaction between EA and BA

• Integrate modeling and requirements tools
  • Harmonize usage across EA/BA teams

Scope the Enterprise Organizations Impacted

Confirm Governance and Support Frameworks

Define and Establish Enterprise Architecture Team and Organization

Identify and Establish Architecture Principles

Tailor TOGAF and, if any, Other Selected Architecture Framework(s)

Implement Architecture Tools
BAs should perform requirements management activities

Architecture Vision is high-level requirements spec

Organization change activities referenced in BABOK

BABOK has KPI technique
**Business Scenarios**

- Technique that may be used at **various stages** of the ADM
  - Architecture Vision and Business Architecture
- Derive **business requirements** that architecture development has to address
- A business scenario describes
  - Business process, application, or set of applications that can be **enabled** by the architecture
  - Business and technology **environment**
  - **People** and computing **components** (called “actors”) who execute scenario
  - Desired **outcome** of proper execution
Architecture Description Steps

This step is really about eliciting stakeholder requirements for modeling

Capture architecture requirements while building architecture descriptions

BABOK has Review technique

Also create Architecture Requirements Specification
**Architecture Definition Document – Concept**

- Provides *qualitative* view of solution and aims to communicate intent
- **Container** for core architectural artifacts created during project
- **Spans** all architecture domains (business, data, application, and technology)
- Examines all *relevant states* of architecture (baseline, transition, and target)
- **Companion** to the architecture requirements specification
Architecture Requirements Specification – Concept

- Provides set of *quantitative* statements that outline what implementation projects must do in order to comply with architecture
- Typically forms major component of implementation *contract* or contract for more detailed architecture definition
- *Companion* to architecture definition document
BAs should perform requirements management activities
Migration Planning – Steps

- Define interaction between EA and solution-delivery level BA
- BABOK has Prioritization and Estimation techniques
- BABOK has Business Case technique
- And update Architecture Requirements Specification
- BABOK has Lessons Learned technique
Understand architecture requirements and constraints to implement

Discuss how EA and BA are going to work together on this project

Business and IT operational requirements
New requirements are often the trigger for starting ADM

Request for Architecture Work should include initial stakeholder needs and requirements

Need to develop change requirements
Conclusions

- BABOK recognizes TOGAF/EA more comprehensively than TOGAF recognizes BABOK/BA
- BABOK provides best practices for ADM Requirements Management
  - Business analysts could be key contributors to EA projects
- BABOK provides best practices for solution delivery projects during Phase G: Implementation Governance
- BABOK and TOGAF share some similar techniques and models
  - BABOK has more techniques, many which could be exploited by EA
  - TOGAF has more specific models, some which could be used by BA
- BABOK Strategy Analysis could be strengthened by ADM Phases A through F
- Enterprise architecture initiatives could be strengthened by involving business analysts
- Business analysis activities can be performed in context of EA
Thanks for your attention and participation!