An Overview of TOGAF® Version 9.1

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Agenda

• Background on TOGAF®
• TOGAF® Version 9.1
• TOGAF® 9 Certification
• Q&A
What is TOGAF®?

• TOGAF, an Open Group Standard:
  • A proven enterprise architecture methodology and framework used by the world's leading organizations to improve business efficiency
  • The most prominent and reliable enterprise architecture standard, ensuring consistent standards, methods, and communication among enterprise architecture professionals
  • Enterprise architecture professionals fluent in TOGAF standards enjoy greater industry credibility, job effectiveness, and career opportunities
  • TOGAF helps practitioners avoid being locked into proprietary methods, utilize resources more efficiently and effectively, and realize a greater return on investment
The Origins of TOGAF®

- A customer initiative
- A framework, not an architecture
  - A generic framework for developing architectures to meet different business needs
  - Not a “one-size-fits-all” architecture
- Originally based on TAFIM (U.S. DoD)
Member (End User) Driven

- Customer members demand architecture standards …
  - Customer members select TAFIM as preferred starting point…
  - DoD Information Systems Agency (DISA) donate TAFIM as base
- TOGAF first published
- TOGAF 7 – Technical Edition
- TOGAF 9 Enterprise Edition
- TOGAF 9.1
- TOGAF 8.1.1
- TOGAF 8 – Enterprise Edition
- First TOGAF Certification Program Launched

- The Interoperable Enterprise Business Scenario first published

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Why TOGAF®?

- A comprehensive general method
- Vendor, tool and technology neutral open standard
- Complementary to, not competing with, other frameworks
- Avoids re-inventing the wheel
- Widely adopted in the market
- Business IT alignment
- Tailorable to meet an organization and industry needs
- Based in best practices
- Available under a free perpetual license
- Possible to participate in the evolution of the framework
TOGAF® Momentum

- More than 100,000 downloads
- Over 16,000 certified practitioners
- More than 220 corporate members of The Open Group Architecture Forum
- Over 55,000 TOGAF series books shipped
- Association of Enterprise Architects membership at more that 20,000
TOGAF® Certification Statistics

- TOGAF® 9
  - Foundation (3100)
  - Certified (7200)
  - Total (10,300) since February 2009
- TOGAF® 8
  - 7564

Bar chart showing the number of certifications by country:
- UK
- Netherlands
- USA
- Australia
- India
- South Africa
- Canada
- Finland
- France
- Sweden
TOGAF® 9 Market Drivers

• Ongoing quest for Boundaryless Information Flow™
• In a survey of members, the three most prominent views:
  • The need for closer alignment with the business
  • The desire for simple implementation, greater usability
  • The next version of TOGAF should be an evolution rather than a revolution
• Consideration for different architectural styles, e.g. SOA
• Security is an increasing concern for CIOs and Enterprise Architects due to disappearance of traditional boundaries
• Need for greater detail on Architecture Development Method (ADM)
Introducing TOGAF® 9

- Developed, reviewed and approved by a collaborative of 300 members from some of the world’s leading IT customers and vendors
- An evolution from TOGAF 8.1.1 that preserves existing investments
  - The core Architecture Development Method
  - Existing investment in people - knowledge and skills
  - Existing investment in tools
- Expanded detail and clarification of existing proof points
- Restructured for better usability
- More focused on holistic enterprise change
- Clear links between business and IT objects
- Increased consistency of output
TOGAF® 9.1

- TOGAF 9.1 was released in December 2011
- It is the first maintenance update to TOGAF 9
- It is an upwards-compatible evolution from TOGAF 9, addressing usage feedback and comments raised
  - It addresses over 400 comments received
  - Contains over 450 changes
- TOGAF 9 Technical Corrigendum 1 (Document U112) is available describing each change in detail
# The TOGAF® 9.1 Standard

## Part I - Introduction
- Preface, Executive Overview, Core Concepts, Definitions and Release Notes

## Part II – Architecture Development Method
- Introduction to ADM
- ADM Phase Narratives

## Part III – ADM Guidelines and Techniques
- Guidelines for Adapting the ADM Process
- Techniques for Architecture Development

## Part IV – Architecture Content Framework
- Content Metamodel
- Architectural Artifacts
- Architecture Deliverables
- Building Blocks

## Part V – Enterprise Continuum and Tools
- Enterprise Continuum
- Architecture Partitioning
- Architecture Repository
- Tools for Architecture Development

## Part VI – TOGAF Reference Models
- Foundation Architecture: Technical Reference Model
- Integrated Information Infrastructure Reference Model

## Part VII – Architecture Capability Framework
- Architecture Board
- Architecture Compliance
- Architecture Contracts
- Architecture Governance
- Architecture Maturity Models
- Architecture Skills Framework
TOGAF Capability Framework

Architecture Capability Framework (Part VII)

Informs the capability

Ensures Realization of Business Vision

Sets targets, KPIs, budgets for architecture roles

Drives need for Architecture Capability maturity

TOGAF ADM & Content Framework

Delivers new business solutions

TOGAF ADM Guidelines & Techniques (Part III)

Architecture Development Method (Part II)

ADM Guidelines & Techniques (Part III)

Architecture Content Framework (Part IV)

Refines Understanding

Business needs feed into method

TOGAF Reference Models (Part VI)

Informs the Business of the current state

Operational changes cause updates

TOGAF Enterprise Continuum & Tools

Business Vision and Drivers

Sets targets, KPIs, budgets for architecture roles

Drives need for Architecture Capability maturity

TOGAF ADM & Content Framework

Modular Structure
Content Framework
Extended Guidance
Architectural Styles
Additional ADM detail
The Architecture Development Method

- The core of TOGAF
- A proven way of developing an architecture
- Specifically designed to address business requirements
- An iterative method
- A set of architecture views to ensure that a complex set of requirements are adequately addressed
ADM – Basic Principles

An iterative method, over the whole process, between phases and within phases
Each iteration = new decisions:
  Enterprise coverage
  Level of detail
  Time horizon
Architecture asset re-use:
  previous ADM iterations
  other frameworks, system models, industry models,…
Decisions based on:
  Competence / resource availability
  Value accruing to the enterprise.
Prepare the organization for a successful architecture project

Set the scope, constraints and expectations for a TOGAF project; create the Architecture Vision; validate the business context; create the Statement of Architecture Work

Provide continual monitoring and a change management process to ensure that the architecture responds to the needs of the enterprise

Develop Business Architecture
Develop baseline and target architectures and analyze the gaps

Provide architectural oversight for the implementation; ensure that the implementation project conforms to the architecture

Develop Information Systems Architectures
Develop baseline and target architectures and analyze the gaps

Analyze costs, benefits and risks; develop detailed Implementation and Migration Plan

Develop Technology Architecture
Develop baseline and target architectures and analyze the gaps

Ensure that every stage of a TOGAF project is based on and validates business requirements

Perform initial implementation planning; identify major implementation projects

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ADM Phase Steps Example

The order of the steps should be adapted to the situation.

In particular, you should determine whether it is appropriate to do the Baseline Business Architecture or Target Business Architecture development first.

Steps

1. Select reference models, viewpoints, and tools
2. Develop Baseline Business Architecture Description
3. Develop Target Business Architecture Description
4. Perform gap analysis
5. Define candidate roadmap components
6. Resolve impacts across the Architecture Landscape
7. Conduct formal stakeholder review
8. Finalize the Business Architecture
9. Create Architecture Definition Document
ADM Guidelines and Techniques

- A set of guidelines and techniques to support the application of the ADM
- The guidelines help to adapt the ADM to deal with different scenarios, including different process styles (e.g. the use of iteration) and also specific requirements (e.g. security).
- The techniques support specific tasks within the ADM (e.g. defining principles, business scenarios, gap analysis, migration planning, risk management, etc).
Applying Iteration to the ADM

Example Guideline
Applying the ADM Across the Architecture Landscape

Example Guideline

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Categories of Stakeholder

Corporate Functions
- CxO
- Enterprise Security
- Program Management Office
- QA/Standards Groups
- Procurement
- HR

End-user Organization
- Executives
- Line Management
- Business Domain Experts
- Data Owners

Project Organization
- Executives
- Line Management
- Business Process/Functional Experts
- Product Specialist
- Technical Specialist

System Operations
- IT Service Management
- Service Desk
- Application Management
- Infrastructure Management
- Data/Voice Communications

Suppliers
Regulatory Bodies
External
Architecture Content Framework

Provides a detailed model of architectural work products, including Deliverables, Artifacts within deliverables, and the Architecture Building Blocks (ABBs) that deliverables represent.

- It drives for greater consistency in the outputs of TOGAF
- It provides a comprehensive checklist of architecture outputs
- It promotes better integration of work products
- It provides a detailed open standard for how architectures should be described
- It includes a detailed metamodel
Deliverables, Artifacts and Building Blocks

Architecture Deliverables

Artifacts and Building Blocks

- Artifacts
- Catalogs
- Matrices
- Diagrams

Which are Describing Building Blocks

Other Deliverables

Architecture Repository

Re-Usable Building Blocks

- Catalogs
- Matrices
- Diagrams

Describing Building Blocks

Architecture Deliverables
The Enterprise Continuum

Enterprise Continuum

Architecture Context and Requirements

External factors provide context

Contextual factors shape architectures

Enterprise Continuum

Architecture Continuum

Generic Architectures

Specific Architectures

Generic Solutions

Specific Solutions

Solutions Continuum

Guides and supports

Guides and supports

Guides and supports

Guides and supports

Generalization for future re-use

Adaptation for use

Solutions are instantiated within a deployment

Deployed Solutions

Deployed solutions become Architecture Context

Enterprise Repositories (including Requirements Repository, Architecture Repository, Design Stores, and CMDB)

The Enterprise Continuum provides structure and classification for assets in Enterprise Repositories.

Enterprise Repositories provide resources to be classified within the Enterprise Continuum.
TOGAF® Reference Models

• Two Reference Models are provided
  • The TOGAF Technical Reference Model (TRM)
    • A Foundation Architecture
    • A model and a taxonomy of generic platform services
  • The Integrated Information Infrastructure Model (III-RM).
    • A model for business applications and infrastructure applications
    • Specifically aimed to support the vision of Boundaryless Information Flow™
High-Level TRM
Detailed TRM
The Integrated Information Infrastructure Reference Model (III-RM)
Stand-alone or Complementary

Zachman Framework

DoD Architecture Framework

Support or Guidance

Federal Enterprise Architecture Framework

TOGAF 9

Other Frameworks

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Complementary

**ITIL**

**IT Service Management**

**Best Practice**

**COBIT**

**Governance and control**

**TOGAF 9**

Framework, method and resources

Modeling languages and notation
Value of TOGAF® Certification

- A globally recognized standard, backed by certification
- Certified professionals
  - Demonstrable knowledge of TOGAF
  - Minimizes employers' hiring time and improves quality of hires
- Vendors of TOGAF Certified Products or Services
  - Warrant conformance to the TOGAF product standard throughout the lifetime of certification
  - Customers who procure are assured of compliance
- Certification credentials can readily be verified
<table>
<thead>
<tr>
<th>Certification Level</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOGAF 9 Foundation</td>
<td>To provide validation that the candidate has gained knowledge of the terminology and basic concepts of TOGAF 9 and understands the core principles of Enterprise Architecture and TOGAF</td>
</tr>
<tr>
<td>TOGAF 9 Certified</td>
<td>To provide validation that in addition to knowledge and comprehension, the candidate is able to analyze and apply knowledge of TOGAF</td>
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TOGAF® 9 Certification

Yes

TOGAF 8-9 Advanced Bridge Exam

No

Stepwise Development?

Yes

TOGAF 9 Part 1 Exam

No

TOGAF 9 Combined Part 1 & Part 2 Exam

To

TOGAF 9 Foundation

To

TOGAF 9 Part 2 Exam

To

TOGAF 9 Certified

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Summary

TOGAF®, an Open Group Standard, is…

• An effective, industry standard framework and method for enterprise architecture.
• Complementary to, not competing with, other enterprise frameworks
• A repository of best practice
• Vendor, tool, and technology neutral
• A framework and method for achieving the “Boundaryless Information Flow” vision
Questions?

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For More Information . . .

- The TOGAF Web Site
  - http://www.opengroup.org/togaf/

- The Architecture Forum
  - http://www.opengroup.org/architecture/

- TOGAF Version 9.1 on-line

- TOGAF Version 9.1 licensing and downloads
  - http://www.opengroup.org/togaf/
TOGAF® Version 9.1

- TOGAF Version 9.1, “The Book”
  - Document No. G116
  - www.opengroup.org
  - www.vanharen.net
TOGAF® Version 9.1 Pocket Guide

- TOGAF Version 9, The Pocket Guide
  - Document No. G117
  - www.opengroup.org
  - www.vanharen.net
TOGAF® 9 Certification Self Study Pack

- Preparation for the TOGAF 9 Part 1 and Part 2 Examinations
- Includes Study Guides, Practice tests, Pocket Guide, Reference Cards and more…
  - Document No. B097
  - www.opengroup.org