

TOGAFv9 Foundations Exam Review Sheet

Disclaimer: I have prepared this quick review sheet for any TOGAF foundation certification aspirants who are preparing for the exam. This review sheet is not an alternative to reading the relevant text for the foundations exam or an alternative to attending a course. I have prepared this review worksheet as a review of concepts before you take the exam. The review sheet covers some of the important topics you should know for the exam. If you are not able to recall some of the items in the review sheet, go back to the TOGAF text and make sure you understand the concepts.

Good luck and let me know if you have any comments on the worksheet.

Khalid Tariq
kmtariq@hotmail.com

TOGAFv9 Foundations Exam Review Sheet

TOGAF Certification Principles

Openness – Open to everyone

Fairness – Same amount of rigor required from all candidates

Market Relevance – Meets the needs of market

Learning Support – Courses and training available

Quality – Accreditation process available to providers

Best Practice – Program follows industry best practice

Structure of TOGAF Document

Part 1 – Introduction to TOGAF

Part 2 – Architectural Development Method

Part 3 – ADM Guidelines and Techniques

Part 4 – Architecture Content Framework

Part 5 – Enterprise Continuum and Tools

Part 6 – Architecture Capability Framework

Phases of ADM

Phase P – Preliminary Phase

Phase A – Architectural Vision

Phase B – Business Architecture

Phase C – Information Systems Architecture

Phase D – Technology Architecture

Phase E – Opportunities and Solutions

Phase F – Migration Planning

Phase G – (Architecture) Implementation Governance

Phase H – Architecture Change Management

Phase R – Requirements Management

Components of Architecture Library

1 – Architecture Metamodel

2 – Architecture Capability

3 – Architecture Landscape

4 – Standards Information Base

5 – Reference Library

6 – Governance Log

TOGAF Architecture Domains

Business Architecture

Data Architecture

Application Architecture

Technology Architecture

TOGAF Definition

TOGAF stands for “The Open Group Architecture Framework”

First version of TOGAF was released in 1995 and it was based on DoD TAFIM (Technical Architecture Framework for Information Management). TOGAF architecture framework used to assist in acceptance, production, usage, and maintenance of enterprise architectures.

Enterprise Definition

Enterprise is an organization or collection of organizations with a common set of goals. An extended enterprise can also include partners, suppliers, and customers as well as internal business units.

TOGAF Architecture Definitions

1 – Formal description or plan of a system at its components level to guide to its implementation.

2 – Structure of components and their inter-relationships and the principles governing their design and evolution.

Enterprise Architecture

The purpose of Enterprise Architecture is to optimize across the enterprise the often fragmented automated and manual processes into an integrated environment that is responsive to change and supportive of the delivery of business strategy and business values.

Regulatory Drivers for EA

1 – Clinger-Cohen Act

2 – Sarbanes-Oxley Act

3 – EU directives on award of public contracts

Advantages of using EA

1 – More efficient IT operations

2 – Better ROI

3 – Reduced risk for future investments

4 – Faster, simpler, and cheaper procurement

Relationship between Deliverable, Artifact, and Building Blocks

A deliverable is a work product that is contractually specified and then in turn formally reviewed, and signed off by stakeholders. An architecture deliverable is made up of several building blocks which are specified artifacts such as matrices or diagrams.

Architecture Landscape

Architecture Landscape is a collection of all artifacts structures as per the architecture meta-model. It shows all the building blocks that are in use at the enterprise today (live applications). Architecture Landscape is divided into three levels of granularity:

1 – Strategic Architecture

2 – Segment Architecture

3 – Capability Architecture

TOGAF Documents Categorization

Core – Fundamental concepts that form the core of TOGAF

Mandated – Normative parts of TOGAF

Recommended – Resources referred in TOGAF

Supporting – Resources not referred in TOGAF

Concerns vs. Requirements

Concerns are key interest areas that are important to the stakeholders. Addressing these concerns determine the acceptability of the system.

Requirements are derived from concerns. A requirement is a business need that must be met by a particular architecture/work product. All requirements must be SMART:

Specific

Measurable

Attainable

Realizable

Time-bound

Guidelines vs. Techniques

ADM guidelines are provided to be adapted to deal with specific architectures (e.g. Architecture principles).

Techniques are specific tasks with in ADM (e.g. Gap Analysis, Business Scenario, Risk Management, etc.)

TOGAFv9 Foundations Exam Review Sheet

View vs. Viewpoint

A view is a representation of related set of concerns. A view can be a graphic or diagram but it does not always have to be visual in nature.

A viewpoint is definition of a perspective from which a view is taken.

A view is what you see and a viewpoint is a vantage point where you are looking from. A view is an instance of a certain viewpoint template.

ADM Cycles

ADM supports three types of iterations:

1 - Cycling around ADM (A->B->C->D->E->F->G->H->A->B->C, etc.)

2 - Iterations between phases (B->C->D->B->C->D, etc.)

3 - Cycling in a phase (B->B->B, etc.)

Generic Steps for Architecture Phases (B,C,D)

1. Select reference models, viewpoints, tools
2. Develop baseline architecture
3. Develop target architecture
4. Perform gap analysis
5. Develop roadmap components
6. Resolve impacts across the architecture landscape
7. Conduct formal stakeholder review
8. Finalize architecture
9. Create architecture definition document

Governance Repository

TOGAF Governance Repository should have the following types of information:

- Reference Data
- Process Status
- Audit Information

Adapting ADM

Following are some of the scenarios mentioned in TOGAF to adapt the ADM:

1 - Order of ADM phases might be changes based on organization maturity or business/architecture principles.

2 - ADM may be tailored if enterprise is also using another enterprise architecture framework like DODAF.

3- ADM might be tailored based on other management processes used by the enterprise such as program/portfolio management.

4- ADM might be tailored to match a contractor's existing practices.

5- Small and Medium Enterprises (SMEs) might cut down some of ADM to a simpler method.

6- For large and complex federated and interlinked enterprises, ADM may be tailored as necessary.

Dimensions of Limiting the Scope of Architecture Activity

- Enterprise scope/focus
- Architecture domains
- Vertical scope/level of detail
- Time period

Enterprise Continuum

Enterprise Continuum is a view of architecture repository that provides methods for classifying architecture and solution artifacts as they evolve from:

- generic architecture to organization-specific architecture
- generic solution to organization-specific solution

Enterprise Continuum provides a consistent language to effectively communicate the differences between architectures. Enterprise Continuum promotes the reuse of architecture. It consists of two continua:

- Architecture Continuum
- Solution Continuum

The Need of Software Tool to Implement Enterprise Continuum

1. to promote reuse
2. to enable sharing of architecture
3. to make architecture maintenance easier
4. to ensure common terms are used
5. to provide stakeholders with relevant models

Architecture/Solution Continuum

Architecture Continuum is composed of a number of architecture Building Blocks (ABBs). The following are four types of ABBs with Foundations ABB being the left-most and most generic ABB and organization-specific ABB being the right most and most-specific ABB:

- Foundations ABB (TOGAF TRM)
- Common Systems ABB (III-RM)
- Industry ABB (Active Store, POSC)
- Organization-specific ABB

A populated Solution Continuum can be regarded as a reuse library. Solution Continuum is made up of following Solution Building Blocks (SBBs) with Foundations being the left-most and most generic SBB on the continuum and Organization-specific being the right-most and most specific SBB:

- Foundations SBB
- Common Systems SBB
- Industry SBB
- Organization-specific SBB

Contents of Organization Specific Solution

- Specific SLAs
- Key operating parameters
- Quality Metrics

Relationship of ABBs and SBBs

- ABBs guide the relevant SBBs. For example, Foundation ABB guides the Foundation SBB.
- SBBs support the relevant ABB. For example, Foundation SBB supports the Foundation ABB.

TOGAFv9 Foundations Exam Review Sheet

Preliminary Phase (P)

The main deliverables:

- Organization Model
- Tailored Architecture Framework including architecture principles.
- Request for architecture work
- Governance Framework
- Initial Architecture repository
- Business Goals, Business Drivers, and Business Principles

Architecture Vision Phase (A)

The main deliverables:

- Approved statement of architecture work
- Refined statements of business goals, drivers, and principles
- Architecture principles
- Capability assessment
- Tailored architecture framework
- Communications plan
- Architecture Vision (by using business scenarios technique)

Business, Information Systems, Technology Architecture Phases (B,C,D)

The main deliverables:

- Business, Data, Application, Technology Architecture Definition documents
- Business, Data, Application, Technology Architecture components of an Architecture Roadmap

Key Considerations for Data Architecture

- Data Management
- Data Migration
- Data Governance

Baseline vs. Target Architecture

- Baseline Architecture is the existing defined system architecture before entering a cycle of architecture review and redesign.
- Target Architecture is a description of future state of architecture being developed for an organization.
- Gap analysis identifies the difference between Baseline and Target Architectures.
- The normal approach for Target Architecture development is top-down. In contrast, baseline architecture is usually described using bottom-up approach.

Business Modeling

Following Models can be used to represent Business Models using Unified Markup Language (UML):

- Activity Models (Business Process Models)
- Use-Case Models
- Class Models

Categories of Change

- **Simplification Change** - Can be handled via change management techniques
- **Incremental Change** - Can be handled via change management techniques or may require partial re-architecting
- **Re-architecting Change** - Requires putting the entire architecture through Architecture Development Cycle again.

Criteria for Quality Architecture Principles

- Understandability
- Robustness
- Completeness
- Consistency
- Stability

Architecture Principles

According to TOGAF, following are the key components of an Architecture Principle:

- **Statement** - Should be unambiguous statement about the principle
- **Rationale** - Should highlight the business benefits of adhering to the principle. It should also provide guidance on which principles should be given priority over other principles
- **Implications** - Should highlight the cost, resources, and activities required to carrying out the principle

Techniques used in ADM phases

- Gap Analysis technique is used in Phases B, C, D, E
- Capability base Planning Technique is used in Phases E and F
- Risk first determined in phase A and closely monitored in phase C.
- Business Transformation Readiness Assessment is used in phases A, E, F
- Interoperability is the ability to share information and services. It is used in phases A --> F

Risk Management Activities

- Risk Classification
- Risk Identification
- Initial Risk Assessment
- Risk Mitigation and Residual Risk Assessment
- Risk Monitoring

Note: Initial Level of Risk is before any mitigation actions are taken. Residual Level of Risk is after the mitigation actions.

Levels of Architecture Conformance

- Irrelevant
- Consistent
- Compliant
- Conformant
- Fully-Conformant
- Non-Conformant