

TOGAF 9 Foundation Study Guide

Summary Introduction chapters 2, 3 and 4

Paul van Tongeren, 10 July 2017

Basic Concepts

TOGAF Standard

Architecture framework

assisting in the acceptance, production, use, and maintenance of enterprise architectures, range of different architectures
iterative process model, best practices, re-usable set of existing architectural assets
complements, used in conjunction with other frameworks.
Key is ADM.

Structure of TOGAF document

- Part I
- Part II
- Part III
- Part IV
- Part V
- Part VI
- Part VII

Introduction
Architecture Development Method
Guidelines and Techniques
Architecture Content Framework
Enterprise Continuum and Tools
TOGAF Reference Models
Architecture Capability Framework
Collection, organizations, common goals

Enterprise Architecture

1. A formal description of a system, or a detailed plan of the system at a component level to guide its implementation.
2. The structure of components, their inter-relationships, and the principles and guidelines governing their design and evolution over time.

Purpose enterprise architecture

1. More efficient business operation
2. more efficient IT operation
3. better return on existing investment, reduced risk for future investments
4. faster, simpler and cheaper procurement

Architecture framework

Foundational structure, developing different architectures, target state, building blocks, fit, tools, vocabulary, standards, compliant products

Why framework

Speed up, simplify architecture development, more complete coverage, allows for future growth

Why suitable framework

30 Architecture Forum members, consistent, needs of stakeholders, best practice, current requirements, perceived future needs, many stakeholders and decision processes, standardizing, risk reduction, best practice framework, adding value, workable and economic solutions, address business issues and needs

Domains

1. Business Architecture
2. Data Architecture
3. Application Architecture
4. Technology Architecture

Structure TOGAF standard

The Architecture Development Method

Process, deriving, organization-specific enterprise architecture, addresses business requirements. Architecture phases (business, information systems, technology), cycle, architecture development activity. Per phase objectives, approach, inputs, steps, outputs. Inputs and outputs define architecture content structure and deliverables (see also Architecture Content Framework). Cross phase summaries for requirements management.

ADM Guidelines and Techniques

For different use of ADM (e.g. Iteration), speciality architectures (e.g. Security), tasks (defining principles, business scenarios, gap analysis, migration planning, risk management).

Architecture Content Framework

Architectural work products: deliverables, artifacts, Architecture Building Block's (ABB's)

The Enterprise Continuum

Virtual repository, classify architecture and solution artifacts. Evolve, leverage and re-use. Based on in enterprise and industry existing architectures and solutions (models, patterns, architecture descriptions).

TOGAF Reference Models

1. TRM: TOGAF Foundation Architecture Technical Reference model (generic services and functions) and 2. III-RM: Integrated Information Infrastructure Reference Model (Boundaryless Information Flow)

The Architecture Capability Framework

Establish an architecture practice within an organization

Core Concepts

ADM

ADM

Method for deriving organization-specific enterprise architecture
Tested, repeatable process for developing architectures.
Establishing an architecture framework
Developing an architecture content
Transitioning

	Governing the realization of architectures Iterative cycle of definition and realization Transform enterprise in controlled manner, in response to business goals and opportunities
Phases of ADM	
Preliminary phase	Prepare and initiate creation Architecture Capability Customize TOGAF framework Define Architecture Principles
Phase A: Architecture Vision	Define scope Identify stakeholders Create Architecture Vision Obtain approvals
Phase B: Business Architecture	Develop Business Architecture
Phase C: Information Systems Architecture	Develop Information Systems Architecture, including Data and Application Architectures
Phase D: Technology Architecture	Develop Technology Architecture
Phase E: Opportunities and Solutions	Identify implementation projects Group into work packages To deliver Target Architecture Define/design solution building blocks
Phase F: Migration Planning	Move how from Baseline to Architecture
Phase G: Implementation Governance	Architectural oversight of implementation
Phase H: Architecture Change Management	Managing change to new architecture
Requirements Management	Managing architecture requirements throughout ADM

Deliverables, Artifacts and Building Blocks

Deliverable	work product, contractually specified, formally reviewed, agreed, signed off by stakeholders
Artifact	work product that describes an aspect of architecture.
Catalog	Lists of things
Matrix	Relations between things
Diagram	Pictures of things
Building Block	Represents component of business, IT or architectural capability. Combine with other BB's to deliver architectures and solutions, re-usable Different levels of detail. Required capability
Architecture Building Block	Implementation of required capability
Solution Building Block	

Enterprise Continuum

How generic solutions can be leveraged and specialized
... is a view of the Architecture Repository
methods for classifying architecture and solution artifacts
from generic Foundation Architectures to Organization-Specific Architectures
Architecture Continuum and Solutions Continuum

Architecture Repository

	Store architectural output different classes, different levels of abstraction Created by ADM To facilitate understanding and co-operation between stakeholders and practitioners
Components	
Architecture Metamodel	architecture framework organizationally tailored including architecture content metamodel
Architecture Capability	parameters, structures and processes that support governance of the Architecture Repository
Architecture Landscape	In use today of building blocks in an architectural view at multiple levels of abstraction
Standards Information Base (SIB)	Industry standards, selected products and services, shared services
Reference Library	guidelines, templates, patterns, other forms of reference material can be leveraged to accelerate creation of new architecture
Governance Log	record of governance activity

Architecture Capability

Enterprise Architecture Capability		Part VII.
Establishing an Architecture Capability		Ch. 46
Architecture Board		Ch. 47
Architecture Compliance		Ch. 48
Architecture Contracts		Ch. 49
Architecture Governance		Ch. 50
Architecture Maturity Models		Ch. 51
Architecture Skills Frame		Ch. 52
Operational Architecture Capability	An enterprise architecture practice should establish capabilities in financial, performance, service, risk, resource, communications and stakeholder, quality, supplier, configuration and environment management	

Architecture Governance
Benefits

controlled and aligned
Transparency
Risk
Re-use
Pro-active
Value creation
Visibility of decisions
Shareholder value
Integration

TOGAF and other framework

Key elements of architecture framework
Tailor

Definition of deliverables and method for production
Deliverables may be replaced by other method
Other architecture Frameworks
ITIL, CMMI, COBIT, PRINCE2, PMBOK, MSP

Key Terminology

Application
Application Architecture
Architecture
Architecture Continuum
Architecture Building Block
Architecture Development Method
Architecture Domain
Architecture Framework
Architecture Principles
Architecture Vision

Business, Data, Application, Technology

Succinct description Target Architecture, business value, changes that will result, aspirational vision, boundary for detailed architecture development

Baseline
Building Block
Business Architecture

A description of the structure and interaction between the business strategy, organization, functions, business processes, and information needs
ensure, business outcomes and regulations

Business Governance
Capability
Concerns
Constraints
Data Architecture
Deliverable
Enterprise
Enterprise Continuum
Foundation Architecture
Gap
Governance
Information
Information Technology
Logical (Architecture)
Metadata
Metamodel
Method
Methodology
Model
Modeling
Objective
Physical
Reference Model
Repository
Requirement

implementation independent

Approach
Steps

Segment Architecture
Solution Architecture
Solution Building Block
Solutions Continuum
Stakeholder
Strategic Architecture

A statement of need that must be met by by a particular architecture or work package

Target Architecture
Technical Reference Model (TRM)
Technology Architecture
Transition Architecture
View
Viewpoint

Summary formal description of the enterprise, framework for activity, direction setting