

Exercises

TOGAF™ 9 Certified

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Published by The Open Group, March 2010.

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Preface

This Document

This document contains a set of exercises from the TOGAF™ 9 Certified Study Guide.

Please note the Exercise numbers in this document follow those of the TOGAF 9 Certified Study Guide.

TOGAF 9 Architecture Development Method (ADM)

Preliminary Phase

Exercise 2-1

Compare and contrast TOGAF with two other Architecture Frameworks.

Exercise 2-2

Select seven principles at random from the *Example Set of Architecture Principles* in TOGAF 9 Part III, Chapter 23 (Architecture Principles). For each selected principle, state whether it applies to your organization or not, and give your reasons.

Exercise 2-3

Select two business goals from the list below and for each develop an architecture principle:

- Minimize time when people are not doing productive, profitable work
- Maximize availability of executives for decision-making
- Maximize competitive advantage by the timely availability of information
- Improve the quality of enterprise information

Exercise 2-4

Identify three or more sources of information within your organization that can be used for creating a statement of the business principles, goals, and drivers.

Phase A: Architecture Vision

Exercise 3-1

Write a Business Scenario describing how you would choose a new car. Include the following in your answer: (a) Problem description; (b) Detailed objectives; (c) Views of environments and processes; (d) Actors, their roles, and responsibilities; (e) Principles and constraints; (f) Requirements; (g) Next steps.

Make the objectives SMART.

Exercise 3-2

Consider the following objective: “The system’s security could be improved. This will reduce the loss of revenue when our system is accessed by unauthorized users”.

How could this be re-phrased to make it into a SMART objective?

Exercise 3-3

Match the most applicable Roles below to the following Computer actors:

1. Business applications
2. Enterprise computers
3. Information services
4. Network devices
5. User devices

Roles:

- A: User access to core technical activities; local application execution; local information store
- B: Operated by enterprises and service providers; supplies information to users
- C: Information transport; switching and routing of information in transit; security of information in transit; control of access to networks and systems; network quality of service; sessions management; bandwidth management
- D: Run on users’ devices and/or on servers; information processing and display

- E: Operated by enterprises and service providers; central application processing and information store; platform for information services; user identification, authentication, and access control

Exercise 3-4

Consider the Vehicle Licensing Bureau (or equivalent in your country), that handles car registrations, driving licenses, car taxes, and insurance records. Identify the stakeholders (human actors) and their place in the business model, the human participants and their roles. Identify computer actors and their place in the technology model. Also, identify the computing elements, and their roles. For each stakeholder, identify the stakeholder concerns.

Exercise 3-5

Select a business problem from your own organization. Identify the stakeholders and categorize them. Classify the stakeholder positions and determine the Stakeholder Management approach. Identify the engagement deliverables for each stakeholder. Finally, create a Stakeholder Map to summarize your findings.

Exercise 3-6

(Syllabus Reference: Unit 6, Learning Outcome 3)

Select three example views from TOGAF 9 Part IV, Section 35.15 (Developing a Business Architecture View) and on. For each selected view, use the example Stakeholder Map from TOGAF 9 Part III, Section 24.4 (Template Stakeholder Map) as a guideline to identify stakeholders and their concerns.

Exercise 3-7

Select a business problem from your own organization where there is a need for significant change. Rate your organization's readiness for change using the Business Factor Assessment Summary table from TOGAF 9 Part III, Section 30.4.2 (Readiness Factor Rating).

Exercise 3-8

Suppose your role is the Lead Architect for a program rolling out a potentially disruptive upgrade of new equipment to all your customers. How would you manage the risk?

Phase B: Business Architecture

Exercise 4-1

Identify five sources of information within your organization that could be used to draw up a Baseline Business Architecture Description.

Exercise 4-2

Which of the Phase B catalogs, matrices, and diagrams would be most suitable for addressing the following concerns?

- Identifying where the enterprise carries out its business operations
- Identifying all agreed service contracts
- Identifying relationships between organizations and business functions in the enterprise

Exercise 4-3

Which of the Phase B catalogs, matrices, and diagrams would be most suitable for addressing the following stakeholders?

- Human Resource Managers
- Chief Financial Officer

Phase C: Data Architecture

Exercise 6-1

Identify five sources of information within your organization that could be used to draw up a Baseline Data Architecture description.

Exercise 6-2

Which of the Phase C: Data Architecture catalogs, matrices, and diagrams would be most suitable to address the following concerns:

- Enabling development of data governance programs across the enterprise
- Identifying systems that access and update data
- Depicting critical relationships between data entities within the enterprise
- Determining who or what has access to enterprise data

Phase C: Application Architecture

Exercise 7-1

Identify five sources of information within your organization that could be used to draw up a Baseline Application Architecture Description.

Exercise 7-2

Which of the Phase C: Application Architecture catalogs, matrices, and diagrams would be most suitable for addressing the following concerns:

- Identifying which business functions use which applications within the enterprise
- Identifying all applications in the enterprise
- Identifying where the users of applications are located

Exercise 7-3

Which of the Phase C: Application Architecture catalogs, matrices, and diagrams would be most suitable for addressing the following stakeholders:

- External suppliers who need to exchange information

Phase D: Technology Architecture

Exercise 8-1

Identify five sources of information within your organization that could be used to draw up a Baseline Technology Architecture Description.

Exercise 8-2

Which of the Phase D: Technology Architecture catalogs, matrices, and diagrams would be most suitable for addressing the following concerns:

- Identifying the types of all hardware platforms in the enterprise
- Identifying which business applications execute on which systems in the enterprise
- Identifying which locations host which applications

Exercise 8-3

Which of the Phase D: Technology Architecture catalogs, matrices, and diagrams would be most suitable for addressing the following stakeholders:

- Network managers
- Project Managers

Phase E: Opportunities & Solutions

Exercise 9-1

Describe three or more migration options for phasing in a new business system while maintaining business continuity. You should describe the impact on services, users, and platforms in each option.

Phase F: Migration Planning

Exercise 10-1

A project has completed Phase E with delivery of the outline Implementation and Migration Plan. Your role is to lead the Migration Planning phase. Describe your approach to creating the detailed Implementation and Migration Plan, including who you would involve, the steps, and what you would deliver.

Phase G: Implementation Governance

Exercise 11-1

The CIO has asked you to organize a compliance review for an enterprise architecture project that is migrating the organization's customer information systems to a new platform (both hardware and software platform). She is concerned that the systems meet all applicable regulations for managing personal information. Summarize five key questions for the compliance checklist.

Phase H: Architecture Change Management

Exercise 12-1

There are three main categories of architecture change:

1. Simplification: This can be handled via change management techniques.
2. Incremental: This may be handled via change management techniques, or it may require partial re-architecting.
3. Re-architecting: This requires putting the whole architecture through the Architecture Development Cycle again.

Explain why each of these changes might occur.

Exercise 12-2

Describe the change impact of the following scenarios:

1. The required change is part of the business strategy and is substantial.
2. A new technology or standard emerges.
3. The change is at an infrastructure level; for example, ten systems are reduced to one system.
4. The Foundation Architecture needs to be re-aligned with the business strategy.
5. Substantial change is required to components and guidelines for use in deployment of the architecture.

ADM Architecture Requirements Management

Exercise 13-1

You have been asked to recommend candidate tools for Requirements Management. Identify three or more suitable tools, together with a rationale for why they would be suitable for use. (Hint: The Volere website has a useful list of tools.¹)

¹ Refer to www.volere.co.uk/tools.htm

Guidelines for Adapting the ADM

Iteration and Levels

Exercise 14-1

When applying iteration to the ADM it is sometimes best to produce the Baseline Architecture first. Give two examples of when a Baseline First approach to architecture development would be most appropriate.

Exercise 14-2

When applying iteration to the ADM it is sometimes best to produce the Target Architecture first. Give two examples of when a Target First approach to architecture development would be most appropriate.

Exercise 14-3

For the following example, identify a suitable class of architecture engagement, and describe the context and the approach you would take for the engagement:

- The CIO requests your advice on the following issues:
 - How to control the increasing IT operational costs
 - How to accurately forecast IT spend
 - How to remove the duplication of systems

Exercise 14-4

For the following example, identify a suitable class of architecture engagement, and describe the context and the approach you would take for the engagement:

- The CEO announces that the organization is merging with its number three competitor, and requests your advice on:
 - How to keep up with the major rivals in the industry
 - How to achieve the merger successfully in the shortest time

Security

Exercise 15-1

A new regulation regarding security compliance of e-commerce systems is being introduced. Describe the high-level approach you would take to manage its introduction using the TOGAF ADM.

The Architecture Content Framework

Architecture Content Framework

Exercise 17-1

You are establishing a Content Metamodel for your organization based on the TOGAF Content Framework. Which extensions would be most appropriate for the following scenarios:

- The organization has to comply with several statutory regulations on how it handles customer data.
- The organization is taking its first steps to develop an enterprise architecture.
- The organization is merging with a competitor and needs to consolidate its service offerings.

TOGAF Reference Models

The Technical Reference Model (TRM)

Exercise 20-1

Describe how you would adapt the TRM for your organization.

Architecture Capability

Architecture Governance

Exercise 22-1

You have been asked to establish an Architecture Board for your organization. Draw up a list of the candidates with explanation of why they should be included, and set the agenda for the first meeting.

Architecture Maturity Models

Exercise 23-1

Provide a list of questions which could be used to determine the maturity of the nine architecture characteristics within a particular enterprise architecture. Use the US Department of Commerce ACMM Version 1.2 document as a guide.

Exercise 23-2

Provide an assessment of your own organization's enterprise architecture process maturity, on a scale from Level 0 to Level 5 using the templates provided with the US Department of Commerce ACMM Version 1.2 document.

Architecture Skills Framework

Exercise 24-1

Place yourself within the Architecture Skills Framework and write a brief summary of your role, your skills, and proficiency level.

Exercise 24-2

The director of the human resources department has requested your assistance with recruitment for a new enterprise architecture project. She has asked you to write summary job descriptions for the following roles aligned with the Architecture Skills Framework:

- Enterprise Architecture Manager
- A Project Manager

Bridging from TOGAF 8 Certified to TOGAF 9 Certified

Bridging between TOGAF 8 and TOGAF 9

Exercise 25-1

Identify the likely stakeholders and their concerns for an organization with a mature enterprise architecture practice based on TOGAF 8.1.1 that is considering migrating to TOGAF 9.