



TOGAF 9 Foundation Part 2 Certification Exam Preparation: Course in a Book for Passing the TOGAF 9 Foundation Part 2 Exam: The How to Pass on Your First Try Certification Study Guide

by William Manning
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Chapter 13: Practice Exam

13.1 Refresher “Warm up Questions”

The following multiple-choice questions are a refresher from the Foundation level as a prelude.

Question 1

You are an Architect Lead with a major retailing organization. The company has recently made an effort to expand their product lines across the board and in so doing have made several agreements with new vendors. In an effort to save costs by streamlining processes, they have submitted a Request for Architecture Work. In the request, operations management has requested a IT solution, which connects the various vendors, old and new, to the company's procurement and processing system. Such a connection exists for one major vendor with the greatest level of satisfaction from all stakeholders and they were hoping to duplicate. As the Lead Architect, what is the most reasonable course of action to take?

- A. Following through with the ADM, the initial steps will consist of aligning the request with the current principles and goals of the enterprise architecture to create a Statement of Work. Since, the solution type request is already in place for one vendor, the information on that connection should be retrieved from the Enterprise Continuum. Working with the other vendors, common features in the different architectures to support a solution must be identified. Using a matrix, these common features should be analyzed for compliance to the existing solution and the ease of implementation. The Statement of Work and Architecture Design Document are updated and presented to the project stakeholders within the company and vendors to obtain agreement to move forward.
- B. Using the ADM, the Architect Lead ensures that the submitted request is scoped accurately and the appropriate stakeholders in the company and vendors are identified. The Statement of Architecture Work should be started and updated as more information is obtained. The Enterprise Continuum is reviewed to identify the architecture and solution supporting the existing company/vendor connection. An initial gap analysis should be performed with the other vendors to understand the requirements to replicate the connection to each new vendor, as well as a risk analysis to identify the associated risks involved with each connection. The Statement of Architecture Work should be updated, especially with an expected schedule for adding connections to the solution starting with the most number of common elements with specific vendors. This schedule is communicated to the stakeholders to set expectations.
- C. The Architect Lead represents the change request to the Architecture Board with supporting information from the Enterprise Continuum about the existing successful pattern and associated business goals, principles, and strategic drivers with the intention of obtaining consensus to move forward. Using the ADM, stakeholders for the project and additional concerns are identified. Gap analysis is performed with each vendor to identify the number of common architecture and solution elements with the accepted pattern and the associated risk s involved with replicated the pattern with the vendor. The Statement of Architecture Work is developed with the final architecture design and expected implementation requirements for each vendor. Each implementation with a vendor should be represented within an overall Transition and Migration Plan, which is overseen by the Architecture Board.
- D. The Architect Lead represents the change request to the Architecture Board with supporting information from the Solution Continuum about the existing successful solution and associated business goals, principles, and strategic drivers relevant to promote into the environment. Using the ADM, a solution is developed which incorporates the SBBs of the existing connection and supports the future connections with the additional vendors. A gap analysis is initiated with each vendor to identify the implementation requirements to apply the solution to each connection. A priority list provides the basis to establish a migration plan for adding connections to the overall architecture.

Question 2

A leading firm within the health care industry is looking at ways to expand their business into new markets. Some of these markets have different regulatory expectations specifically in the area of confidential patient information and availability of records. In addition to these new regulations, existing regulations that the firm already operates under are changing to provide more effective standards for interoperability between health care entities.

The CIO recognizes that the additional requirements may have a significant impact on the existing IT solution and is aware that the current solution is running at capacity. Any change may require sufficient capital expenditure to ensure that the requirements can be met. The Board of Directors have agreed with his assessment and granted him some space to get the work complete if the implemented solution also ensures that the IT capabilities remain flexible and adaptive to the changing environment of the health care industry in the next five to ten years.

He brings these new requirements and expectations to the Architecture Board and the effort is assigned to a Lead Architect. What is the best course of action to be taken given the general requirements stated?

- A. The Lead Architect should engage the stakeholders of the current IT implementation to review the new requirements and identify any additional concerns specific to the performance, capacity, and security of the future architecture. Next, the security architect should be engaged to assist in translating the new requirements and concerns into realistic architecture requirements. The new architecture should be compared to the baseline architecture to identify gaps and determine the necessary steps to implement and migrate the target architecture. A risk analysis and threat analysis should be performed in the environment against the security measures required to comply with the new regulations. The output of these efforts should be incorporated into the Architecture Design. The final deliverables, including an Implementation and Migration Plan, should be reviewed and accepted by the stakeholders and the Architecture Board.
- B. The Lead Architect should engage the stakeholders of the current IT implementation as soon as possible, to review the new requirements and identify any concerns with those requirements as well as concerns with the current IT implementation in terms of

capacity and performance. Using the original requirements and additional concerns as acceptance criteria for a target architecture, the baseline architecture should be assessed and a gap analysis performed to identify the effort required to make a architectural change. A viable Target Architecture, Implementation and Migration Plan, and supporting documentation should be created and reviewed by the stakeholders and Architecture Board for acceptance.

- C. The Lead Architect should engage the stakeholders of the current IT implementation as soon as possible to review the new requirements and identify any concerns with those requirements as well as any performance and capacity concerns with the current IT implementation. The original requirements and stakeholder concerns are translated into architectural requirements, which are compared with the baseline architecture to identify which are currently being fulfilled by the existing infrastructure. A target architecture is developed with a proposed migration plan. These deliverables are presented to the stakeholders for acceptance and then assigned a project manager to implement.
- D. The Lead Architect should engage the stakeholders of the current IT implementation to review the new requirements and identify any additional concerns specific to the performance and capacity of the future iteration of the IT implementation. The original requirements and concerns are translated into architecture requirements. The security architect is engaged to review the architecture requirements and supply any compliance elements needed because of the new direction. The final architecture requirements with security focus is compared to the baseline to identify the gaps required to meet the target architecture. These gaps are translated into implementation tasks and prioritize under a Migration Plan. The final deliverables representing the architecture and plan for implementation are presented to the stakeholder for acceptance.

Question 3

You have been hired as an Enterprise Architect for a established company that has done a major transformation of their services support based on the principles of Service Oriented Architecture. The reasons for their services approach stemmed from a need to improve customer service and position the company strongly in the competitive market. Though some positive results have occurred in these areas, the operating costs of the company has increased and several issues have been identified concerning difficulties in communications between new business services. A recent business study has identified a severe disconnect between business operations and the IT infrastructure

As the new Enterprise Architect, you have been tasked with identifying improvements to the current situation and presenting a viable plan to align IT solutions with business goals. What is the best approach using TOGAF to support the SOA initiative?

- A. Identify the stakeholders in each of the service and discuss the situation to identify concerns and possible improvements that they feel need to be done within their service line. Perform an assessment of the services to identify those services directly and indirectly supporting critical business functions. Design and build IT solutions that will promote communication within and between the service lines supporting these business functions.
- B. Identify the technological functions and their criticality to business services currently in existence in the environment. With the assistance of the stakeholders, create an architecture model that represents the technological capability to meet the business' core mission. Assess the maturity of each service to meet the conditions set by the model and create a plan for improvement to raise the maturity within each service.
- C. Identify the business functions supported by the technology and their criticality to the overall business strategy and goals. Create an hierarchical model of business services to represent the business strategy and the relationships between the various services in the company. Ensure that the various stakeholders within each service line has input and are in agreement with the model. Identify the information systems and technological requirements needed to support the model consistently and assess each service line to identify their capability against those requirements. Defined a general set of shared performance measures to identify how the IT infrastructure is supporting business functions and create a plan for improvement to raise the capabilities of the architecture, specifically starting with the most critical business functions. Store all assessment, measurements, and planning information in a central database, which is assessable by all key stakeholders.
- D. Identify the business functions supported by the technology and their criticality as they relate to the overall business strategy and goals. Work with the stakeholders in each business function to identify and define the principles, constraints, standards, and patterns and store this information with a central database shared between the different service lines. Create an hierarchical model of the business services, which represents the relationships between the various services relative to strategy and goals of the company. Define a set of performance measures for each service line to identify their capability to effectively support the business and work with other services lines in the organization. Perform maturity assessments on each service line to establish their baseline effectiveness. With input from the stakeholders, create a series of improvement proposals for information systems and technology to raise the maturity of the service lines, with the primary intent to adopt re-usable architecture and solution components across the business to reduce cost and increase interoperability.

Question 4

A rapidly growing company has recently performed an internal evaluation of its operations in respect to technology and its alignment to business goals. The evaluation had some encouraging discoveries about the commitment to a positive business image and to increasing the marketability of the business to the customer base. Unfortunately, the evaluation also showed that very little control was in place for technology use or guidance in decision-making, making the costs of operation extremely high and the solutions in place being implemented in isolations within specific business lines.

The CIO has asked you to provide a proposal for addressing the issues identified in the evaluation from the perspective of TOGAF. What are your recommendations?

- A. Review the business strategy, goals, and objectives of the company and ensure they have been communicated and accepted by key decision makers within the organization. Identify the key drivers for business decisions about technology and information systems, current and future. Assess the current technological solutions in place to identify their capabilities relative to the new driver's on the business and how the solutions fulfill business objectives. Work with stakeholders in each of the business lines to identify areas of improvements, specifically consolidation of redundant or similar systems, inexpensive solutions with better flexibility and adaptive properties, and non-critical legacy systems. Establish a governance body and procedure in the form of an Architecture Board to review all proposed changes to the technological environment in terms of meeting business objectives.
- B. Review the business strategy, goals, and objectives with key stakeholders and the Architecture Board to create a set of governing principles for each of the architecture domains. Using these principles as the basis for evaluation, assess the current technology infrastructure in its capability to meet business objectives. Prioritize the areas that do not comply with these principles based on their critical nature to the business, current operating cost, and difficulty in resolving compliance. Create a plan with the key stakeholders for transitioning the architecture to support these principles and the business objectives behind them. Establish a governance procedure to allow the Architecture Board to review and approve any major change to the technology information to ensure the proposed change adheres to the principles and supports business objectives.
- C. Though the commitment of the workforce and management is encouraging, the lack of control in technology decisions must be reigned in. The establishment of an Architecture Board will allow changes to the technological infrastructure to be reviewed and approved in a systematic and structured way to ensure the technology change is truly required and financially viable. Assessments of the current technology solutions should be conducted to identify areas of consolidation or improvements geared to reducing costs and promoting interoperability between business lines.
- D. Review the business strategy, goals, and objectives of the company and ensure they have been communicated and accepted by key decision makers within the organization. Identify the key drivers in the business relevant to the decisions made around information systems and technology use across the organization. Assess the current technological solutions in place to identify their capabilities to fulfill business goals and the relevant drivers for using the implemented technologies. Establish a governance procedure for future changes to the technology, which requires all proposals to be reviewed and approved by an Architecture Board based on business strategy and drivers. Identify areas of improvement to reduce costs and increase interoperability in the company.

Question 5

A medium sized company with offices in five U.S. cities has made a recent decision to cut costs in several major areas of the business. The decisions for where to cut costs have been placed primarily on the managers and their respective areas or function they control. Though some savings have been realized, the total reduction in operating costs has not been significant enough. Some transformation of business processes has also occurred at individual offices or common functions, such as human resources, which has led to another reduction of operating costs.

The CIO believes that the area with the greatest potential of cost reduction is within the architecture, specifically identifying and promoting the use of re-usable solutions between office sites. He believes that having similar architectures and solutions will not only reduce cost, but also promote cooperation and business opportunities between different departments. Unfortunately, not everyone agrees especially those managers who are very attached to their current way of doing business.

You have been brought in to assist the CIO in identifying the most appropriate architecture for the company. How would you accomplish this?

- A. Using the ADM as a guide for developing the architecture, identify the business goals, principles, and objectives that will be used to define the requirements for the business, information systems, and technical architectures for the company. Based on these requirements and input from key stakeholders, identify the Baseline and Target Architectures for each company site. Perform maturity assessments and gap analysis to identify the effort required to implement the target architecture and bring similar functions at different locations into a consistent operating mode. Identify the several viewpoints for communicating the Target Architecture to the various stakeholders, including the timelines and resources required to reach the desired state. Ensure that stakeholders are informed and accept the Implementation and Migration Plan.
- B. Identify the current architectures and solutions utilized in the environment at each of the location. Perform a cost/benefit analysis to determine the value proposition of each implemented solution, specifically starting with those systems critical to business operations. Prioritize the assessed solutions showing the most critical/least value of the systems first. Use the ADM to design improvements to the architecture using the priority list for guidance and develop a model to show the benefits of the new target architecture. Create an implementation and migration plan with an identified critical path and schedule. With aid from the CIO, present the model and plan to executive management and representatives for each site with the intent to inform and obtain agreement to move forward.
- C. Identify the major stakeholders within the company who would be impacted by any architectural effort, specifically identifying those stakeholders whose involvement is critical to the success of the effort. Make an analysis of each stakeholder's commitment to a change in the overall enterprise architecture. Based on this analysis, determine the level of engagement to be taken during the development of the architecture. Using the ADM, obtain the concerns and requirements of the business and each stakeholder. Create Baseline and Target Architectures to identify the desired architecture model and the effort required to reach it. Create specific viewpoints and views that focus on showing the key stakeholder's concerns being clearly addressed by the target architecture. At each major milestone within the ADM, engage the stakeholders appropriately and make a new assessment of their commitment to the effort, adjusting appropriately based on any changes in attitude.
- D. Identify the major stakeholders within the company, specifically those with the greatest influence on the decision to move forward and those affected the most by any architectural effort. Work with each of the stakeholders' concerns about the current business and how it is being supported by the enterprise architecture. Develop a model of the baseline architecture and determine how it currently meets the

concerns of the various stakeholders and new business requirements. Develop a Target Architecture, which does meet the requirements and concerns presented and identify the appropriate viewpoints for presenting the new architecture and its benefits. With the stakeholders input, identify the most critical areas for moving forward and develop a plan for migrating to the new architecture.

Question 6

You work for a major service company, which is growing quickly and moving into several new markets. Until recently, little focus was placed on creating a viable technology plan or unified solution across the enterprise. In last quarter's planning meeting, it was recognized that for the business objectives to be fulfilled now, and in the future, the IT infrastructure will have to undergo a transformation and applied governance.

Your new responsibility is to project manage an effort to determine the future architecture for the company and provide a proposed Implementation plan. You already have full support of the effort from the key stakeholders and a Target Architecture in each of the four domains that has been accepted by these stakeholders. The only problem is a concern that the implementation of the architecture may not meet expectations within the transitional period without the proper guidance or planning.

What is the best approach to resolve these concerns related to the implementation and migration of the new architecture?

- A. To address the stakeholders concern around the success of the implementation, two major actions must be performed. First, the Implementation Factor Assessment and Deduction Matrix must be completed to identify the existing factors that can affect the implementation and all actions or constraints identified in the matrix incorporated into the Implementation and Migration Plan. The second action is to aid the stakeholder in understanding the expected outcomes at different stages of the implementation, especially on business and technical services. This can be done through the Enterprise Architecture State Evolution Table.
- B. To ensure that the planning of the implementation is successful, all the architecture work packages required must be clearly defined and prioritized. The best course of action is to complete the Consolidated Gaps, Solutions, and Dependencies Matrix to identify what is required to approach the target architecture in the most efficient and effective manner.
- C. To address the stakeholders concern around the success of the implementation, two major actions must be performed. First, the Implementation Factor Assessment and Deduction Matrix must be completed to identify the existing factors that can affect the implementation and all actions or constraints identified in the matrix incorporated into the Implementation and Migration Plan. The second action is to have a clear and incremental plan in place to move forward and allow go/no go decisions to be made on smaller aspects of the implementation without affecting the entire effort. This can be done using an Architecture Definition increments Table.
- D. The stakeholders have a concern about the success of the implementation, so the best course of action is identify those factors, which can affect the implementation effort. To do this, complete the Implementation Factor Assessment and Deduction Matrix. Incorporate the actions and constraints identified into the Implementation and Migration Plan.

Question 7

You work for a consulting firm, which specializes in building enterprise architectures using a variety of methods including TOGAF. You have been assigned to a new account for a company that is looking to restructure its entire organization. Your involvement is to provide recommendations specific to the IT architecture supporting the business.

In the initial meeting with the company representatives, you receive a fair amount of information related to the business strategy, plans, and objectives of the company, as well as the reasons behind the restructuring. The major issues mentioned include:

- 1. A number of application and technical solutions current in place are legacy products that are maintained in isolation of the distributed environment. As a result, this is a lack in consistency in the support for these solutions leading to high cost in maintenance and support.
- 2. A number of unauthorized changes are prevalent in the environment.
- 3. Communications between departments and from IT to business is confusing and heavy with explanation due to the varying uses in terminology.

The company would like to have immediate results in addressing these issues. You will be working with the Lead Architect and his architecture team to provide recommendations and direction using TOGAF distinctions. The success with these issues will determine if the company will continue their partnership with the firm.

What direction would you give to the architecture team to immediately address the issues?

- A. Develop Service Contracts for each of the application and technical solutions to ensure that all support is provided through centralized technical services, which will provide greater consistency in support and decrease operational costs. As part of the Service Contract, a provision to adopt and utilize a change management process is inserted. The Service Contract will provide the foundation for defining common terms within the business as they relate to IT.
- B. Working within Preliminary Phase of the ADM, focus on the immediate concerns of governance, communication and adoption of a common language, and identifying the impact of changes to legacy products and their support on the business. This can be accomplished through the development or documentation of the governance framework supporting change management, the architecture framework including the Architecture Repository, and scoping the architectural work.
- C. Define a governance and support framework for the architecture, which covers the required change management oversight for the organization. In addition, define the architecture framework to establish a common set of processes, terminologies, and architectural content. Ensure that all stakeholders understand and agree on adopting the frameworks defined

- D. Working within the Preliminary Phase of the ADM, identify and establish the architecture principles. Evaluate the legacy products against those principles to identify the context of their implementation in the new architecture and potential improvements required. Establish and promote a governance framework to ensure changes in the environment are managed properly. Tailor the existing architecture framework to identify and potentially resolve any conflicts in language, processes, and architectural content.

Question 8

You have been hired by a startup company with a strong value proposition for their business. Executive management recognizes that the enterprise architecture is a key success factor for the business. You have an Greenfield opportunity to develop and implement the architecture. You have identified the key stakeholders and worked with them to identify the business principles, goals, and requirements relevant to the architecture. You have been given the task to recommend any solution within this context. What are your next steps?

- A. Develop an architecture model using common architectural components showing the linkages between IT and critical business functions. In connection to the model, create the various viewpoints and views to understand and manage the architecture, as well as the key performance indicators supporting the business. Identify the risks and benefits for each architecture component. Ensure the model is understood and acceptable to the key stakeholders.
- B. A baseline assessment of the current environment must be conducted to identify the current problem areas and opportunities for improvement already present. From this assessment, the weakest areas should be prioritized according to their impact to the critical business practices. Target solutions to strengthen and mature these areas should be identified and applied to the architecture model. These solutions should be reviewed and approved by the key stakeholders before
- C. Identify the Architecture and Solution Building Blocks appropriate to addressing the agreed upon business requirements. At first, the ABBs should be as organization specific as possible while the SBBs remain as common systems or industry specific solutions: this is to allows for the greatest level of addressing the enterprise needs of the new business. The core building blocks should be combined and documented to address critical business functions. The key stakeholders should review and accept the recommended architectures and solutions.
- D. Evaluate the current business capabilities and the business' readiness to undertake architectural change. Develop a series of business scenarios supported by an Architecture Vision. Clearly define the initial risks of transforming the business and creating any relevant mitigation plans. Develop the work products necessary to build an appropriate architecture, ensuring that they match the business performance requirements. The information obtained should be documented in a Statement of Architecture Work and accepted by the stakeholders.