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## Exam A

### QUESTION 1

Scenario: Armstrong Defense Industries

Please read this scenario prior to answering the question

Armstrong Defense Industries is the prime contractor for the Dreadnought Unmanned Aircraft System program.

Over the course of this contract, the company has grown rapidly by acquisition and has inherited numerous different procurement processes and related IT systems. Armstrong Defense is moving aggressively to consolidate and reduce redundant procurement processes and systems. The CEO has announced that the company will seek to leverage higher volume discounts and lower related IT support costs by instituting a preferred supplier program.

To achieve this goal, Armstrong Defense needs to define Baseline and Target Architectures. These architectures must address key stakeholders concerns such as:

- A. What groups of people should be involved in procurement-related business processes?
- B. What current applications do those groups use?
- C. Which procurement-related business processes are supported by zero, one, or many existing applications?
- D. What are the overall lifetimes of the Request for Proposal and Purchase Order business objects?
- E. What non-procurement applications will need to be integrated with any new procurement applications?
- F. What data will need to be shared?

At present, there are no particularly useful architectural assets related to this initiative. All assets need to be acquired and customized or created from scratch.

The company prefers to implement existing package applications from systems vendors with little customization.

The architecture development project has just completed its Architecture Context iteration cycle and is about to begin the Architecture Definition iteration cycle.

Armstrong Defense is using TOGAF for its internal Enterprise Architecture activities. It uses an iterative approach for executing Architecture Development Method (ADM) projects.

Refer to the Armstrong Defense Industries Scenario

You are serving as the Lead Architect.

You have been asked to identify the most appropriate architecture viewpoints for this situation.

Based on TOGAF 9, which of the following is the best answer?

- G. In the early iterations of the Architecture Definition:
  - Describe the Baseline Business Architecture with a Baseline Business Process catalog
  - Describe the Baseline Application Architecture with a Technology Portfolio catalog
  - Describe the Baseline Data Architecture with a Data diagramIn the later iterations of the Architecture Definition:
  - Describe the Target Business Architecture with an Actor/Process/Data catalog
  - Describe the Target Application Architecture with a System/Technology matrix
  - Describe the Target Data Architecture with a Data Dissemination diagram
- H. In the early iterations of the Architecture Definition:
  - Describe the Target Business Architecture with a Business Service/Function catalog and a Business Interaction matrix
  - Describe the key business objects with Product Lifecycle diagrams
  - Describe the Target Application Architecture with Application Communication diagrams and an Application Interaction matrix
  - Describe the Target Data Architecture with a Data Entity/Business Function matrix and a System/Data matrixIn the later iterations of the Architecture Definition:
  - Describe the Baseline Business Architecture with a Business Service/Function catalog and a Business Interaction matrix
  - Describe the Baseline Application Architecture with a System/Organization matrix and a System/Function matrix
  - Describe the Baseline Data Architecture with a Data Entity/Data Component catalog
- I. In the early iterations of the Architecture Definition:
  - Describe the Target Business Architecture with a Business Service/Function catalog and an Organization/Actor catalog
  - Describe the key business objects with Data Lifecycle diagrams

- Describe the Target Application Architecture with Application Communication diagrams and an Application Interaction matrix
- Describe the Target Data Architecture with a System/Data matrix

In the later iterations of the Architecture Definition:

- Describe the Baseline Business Architecture with a Business Service/Function catalog and a Business Interaction matrix
- Describe the Baseline Application Architecture with an Application and User Location diagram and a System/Function matrix
- Describe the Baseline Data Architecture with a Data Entity/Data Component catalog

J. In the early iterations of the Architecture Definition:

- Describe the Baseline Business Architecture with an Organization/Actor catalog
- Describe the Baseline Application Architecture with a System/Function matrix
- Describe the Baseline Data Architecture using a Data Entity/Data Component catalog

In the later iterations of the Architecture Definition:

- Describe the Target Business Architecture with an Organization/Actor catalog
- Describe the Target Application Architecture using Application Communication diagrams and an Application Interaction matrix
- Describe the Target Data Architecture with a System/Data matrix

**Correct Answer: B**

**Section:**

## QUESTION 2

Scenario: St. Croix Consulting

Please read this scenario prior to answering the question

St. Croix Consulting started as an accounting and financial services company. It has expanded over the years and is now a leading North American IT and Business Services provider.

With numerous practice areas and a multitude of diverse engagements underway at any given time, overall engagement management has become challenging.

The company does not want to risk its outstanding reputation or its international certifications and CMM ratings. Senior partners must become team players, working to support the broader needs of the company and its shareholders.

The Enterprise Architecture team has been working to create St. Croix's Enterprise Architecture framework to address these issues. The team has defined a preliminary framework and held workshops with key stakeholders to define a set of principles to govern the architecture work. They have completed an Architecture Vision at a strategic level and laid out Architecture Definitions for the four domains. They have set out an ambitious vision of the future of the company over a five-year period.

An Architecture Review Board has been formed comprised of IT staff executives and executives from the major practice areas.

The Enterprise Architecture framework is based on TOGAF 9.

The Chief Executive Officer and Chief Information Officer have co-sponsored the creation of the Enterprise Architecture program.

Refer to the St Croix Consulting Scenario:

You have been assigned to the role of Chief Enterprise Architect.

As the EA team prepares to formulate an Implementation plan, they have been asked by the CIO to assess the risks associated with the proposed architecture.

He has received concerns from senior management that the proposed architecture may be too ambitious and they are not sure it can produce sufficient value to warrant the attendant risks.

You have been asked to recommend an approach to satisfy these concerns.

Based on TOGAF 9, which of the following is the best answer?

- An interoperability analysis should be applied to evaluate any potential issues across the Solution Architecture. Once all of the concerns have been resolved, the EA team should finalize the Architecture Implementation Roadmap and the Migration Plan.
- The EA team should gather information about potential solutions from the appropriate sources. Once the Solution Architecture has been assembled, it should be analyzed using a state evolution table to determine the Transition Architectures.
- Prior to preparing the Implementation plan, the EA team should create a consolidated gap analysis to understand the transformations that are required to achieve the proposed Target Architecture. The EA team should gather information about potential solutions from the appropriate sources. Once the Solution Architecture has been assembled, it should be analyzed using a state evolution table to determine the Transition Architectures. An interoperability analysis should be applied to evaluate any potential issues across the Solution Architecture.
- Prior to preparing the Implementation plan, there are several techniques that should be applied to assess the risks and value of the proposed transformation. In particular, the EA team should pay attention to the Business Transformation Readiness Assessment and the Business Value Assessment.

**Correct Answer: C**

**Section:**

**QUESTION 3**

Scenario:

Please read this scenario prior to answering the question

Your role is consultant to the Lead Architect within a company that manufactures a variety of small electromechanical devices. The company is organized as independent operational divisions.

The company has a mature Enterprise Architecture practice and uses TOGAF standard for the basis of its architecture framework. In addition to the EA program, the company has a number of management frameworks in use, including business planning, portfolio/project management, and operations management. The EA program is sponsored by the CIO.

Each division has completed the Architecture Definition documentation required to tailor and configure the environment to meet its own specific manufacturing requirements.

The enterprise architects have analyzed the key corporate change attributes and implementation constraints. A consolidated gap analysis has been completed which has identified the gaps across the Business, Data, Application, and Technology domains. Based on the results of the gap analysis, the architects have reviewed the requirements, dependencies and interoperability requirements needed to integrate the new ERP environment into the existing environment. The architects have completed the Business Transformation Readiness

Assessment started in PhaseA. Based on all of these factors they have produced a risk assessment.

The implementation process is estimated to take four years. Because of the risks posed by the complexity of the current environment, a phased approach is needed to implement the target architectures. The implementation and Migration Plan v0 1, the draft Architecture Roadmap, and the Capability Assessment deliverables are now complete.

Refer to the Scenario

You have been asked to recommend the next steps to prepare the final Implementation and Migration Plan.

Based on TOGAF standard, which of the following is the best answer?

- A. You would apply the Business Value Assessment Technique to prioritize the implementation projects and project increments. The assessment should focus on return on investment and performance evaluation criteria that can be used to monitor the progress of the architecture transformation. You would confirm the Transition Architecture phases using an Architecture Definition Increments Table to list the projects. You would then document the lessons learned and generate the final plan.
- B. You would assess how the plan impacts the other frameworks in use in the organization. The plan should be coordinated with the business planning, portfolio/project management and operations management frameworks. You would then assign a business value to each project, considering available resources and priorities for the projects. Finally, you would generate the Implementation and Migration Plan.
- C. You would conduct a series of Compliance Assessments to ensure that the implementation team is implementing the architecture according to the contract. The Compliance Assessment should verify that the implementation team is using the proper development methodology. It should include deployment of monitoring tools and ensure that performance targets are being met. If they are not met, then changes to performance requirements should be identified and updated in the Implementation and Migration Plan.
- D. You would place the strategic Architecture Definition and Transition Architectures under configuration control as part of the ongoing architecture development cycle. This will ensure that the architecture remains relevant and responsive to the needs of the enterprise. You would then produce an Implementation Governance Model to manage the lessons learned prior to finalizing the plan. You recommend that lessons learned be accepted by the Architecture Board as changes to the architecture without review.

**Correct Answer: B**

**Section:**

**QUESTION 4**

Scenario:

Please read this scenario prior to answering the Question

You are serving as the Lead Architect for the enterprise architecture team at the prime contractor for the Dreadnought Unmanned Aircraft System program.

Over the course of this contract, the company has grown rapidly by acquisition and has inherited numerous different procurement processes and related IT systems. The decision has been made to consolidate and reduce redundant procurement processes and systems. The CEO has announced that the company will seek to leverage higher volume discounts and lower related IT support costs by instituting a preferred supplier program.

TOGAF 9 is used for internal Enterprise Architecture activities, with an iterative approach for executing Architecture Development Method (ADM) projects.

At present, there are no particularly useful architectural assets related to this initiative, so all assets need to be acquired and customized or created from scratch.

The company prefers to implement commercial off the shelf package applications with little customization. The CIO, who is the project sponsor, has stated that she is not concerned about preserving existing processes or systems.

The architect-re development project has put in place its Architecture Capability for this project and has started a number of iteration cycles to develop the Architecture. Some tasks to address concerns related to the Business Architecture have been completed. The next immediate task is to address the Information Systems Architectures. The Information Systems Architectures must address stakeholder concerns such as:

- A. Which procurement-related business processes are supported by zero, one, or many existing applications?
- B. What non-procurement applications will need to be integrated with any new procurement applications?

- C. What data will need to be shared?  
Refer to the Scenario  
[Note: You may need to refer to TOGAF 9 Chapter 35 in order to answer this question.]  
You have been asked to identify the most appropriate catalogs, matrices, and diagrams for this situation.  
Based on TOGAF 9, which of the following is the best answer?
- D. In the early iterations of Architecture development, you would describe the Baseline Application Architecture with a System/Function matrix, and describe the Baseline Data Architecture using a Data Entity/Data Component catalog. In the later iterations of the Architecture Definition, you would describe the Target Application Architecture using Application Communication diagrams and an Application Interaction matrix, and describe the Target Data Architecture with a System/Data matrix.
- E. In the early iterations of Architecture development, you would describe the Target Application Architecture with Application Communication diagrams and an Application Interaction matrix, and describe the Target Data Architecture with a System/Data matrix. In the later iterations of Architecture development, you would describe the Baseline Application Architecture with an Application and User Location diagram and a System/Function matrix, and describe the Baseline Data Architecture with a Data Entity/Data Component catalog.
- F. In the early iterations of Architecture development, you would describe the Target Application Architecture with Application Communication diagrams and an Application Interaction matrix, and describe the Target Data Architecture with a Data Entity/Business Function matrix and a System/Data matrix. In the later iterations of Architecture development, you would describe the Baseline Application Architecture with a System/Function matrix, and describe the Baseline Data Architecture with a Data Entity/Data Component catalog.
- G. In the early iterations of Architecture development, you would describe the Baseline Application Architecture with a Technology Portfolio catalog, and describe the Baseline Data Architecture with a Data diagram. In the later iterations of Architecture development, you would describe the Target Application Architecture with a System/Technology matrix, and describe the Target Data Architecture with a Data Dissemination diagram.

**Correct Answer: C**

**Section:**

#### QUESTION 5

Scenario:

Please read this scenario prior to answering the Question

You have been appointed as a consultant to the Lead Enterprise Architect of an international agricultural company that exports bulbs, flowers and seeds worldwide. The company has its headquarters in the Netherlands, and has sales and distribution centers in over 30 countries worldwide. Several of these centers include administrative, manufacturing, and research facilities.

To achieve full integration of their research capabilities with their development centers located in various climate zones, the company wants to develop strong self-directed teams in each location. It also wants to define new business models that are profitable while reducing their impact on the environment. The management team is deeply committed to ensuring that the company is a world leader in socially responsible seed development with a business strategy that focuses on profitability through environmentally friendly operating processes.

The international operations of the company are subject to legal and regulatory requirements for each country where they operate. The production of genetically modified seeds has governmental controls that are strictly enforced and compliance is critical. Recently a competitor was heavily fined for violating the regulations in a country where it was developing pest-resistant seeds.

The Governing Board is concerned about the risks posed in this complex global environment, and as a result has approved the expenditure of resources to establish an Enterprise Architecture program. They have requested to be informed about the status of projects that could impact regulatory compliance. They also want to enable the corporate legal staff and auditors to analyze proposed architectures to ensure that they are within the legal guidelines for a given location. In addition, the research organization should be able to see that the architecture is appropriate for its needs.

TOGAF 9 has been mandated as the framework for the development and evolution of the Enterprise Architecture practice. The Preliminary Phase has been completed to establish the enterprise architecture capability for this project.

Refer to the Scenario You have been asked to recommend an approach that would enable the development of an architecture that addresses the needs of the Governing Board, legal staff, auditors and the research organization. Based on TOGAF 9, which of the following is the best answer?

- A. You recommend that each project architecture activity is developed using a consistent modeling approach that is uniform across all architecture projects.  
Each architecture should be defined based on this fixed set of models so that all concerned parties can examine the models to ensure that their issues and concerns have been addressed.
- B. You recommend that a special report be created for those groups that have sufficient power and level of interest. This report should summarize the key features of the architecture with respect to the particular location.  
Each of these reports should reflect the stakeholders' requirements.
- C. You recommend that a set of models be created for each project architecture that can be used to ensure that the system will be compliant with the local regulations. Stakeholders should then view the models to verify that their concerns have been properly addressed.
- D. You recommend that a stakeholder map be developed. This will allow the architects to define groups of stakeholders that share common concerns. A set of views should be defined to address the concerns for each group of stakeholders. Architecture models should then be created for each view to address the stakeholders' concerns.

**Correct Answer: D**

**Section:**

### QUESTION 6

Scenario:

Please read this scenario prior to answering the question

You are the Lead Enterprise Architect in a company that specializes in the development of wind turbine blades for use in large-scale commercial wind energy production systems. The company has manufacturing facilities located in Illinois, Nebraska, and Manitoba. Each of these plants supplies a different manufacturer that builds and sells complete systems. The turbine blades are custom engineered to meet each manufacturer's design specifications.

Until recently, most turbine blades were fabricated manually using molded fiber-reinforced plastics. However, recent improvements in composite materials, coupled with enhanced automated methods for precision application of materials during the molding process, have led to significant reduction in weight, increase in strength, and improved blade longevity. The company has pioneered the development of a proprietary automated process for continuous extrusion of the turbine blades. Patents have been filed to protect the process, but certain trade secrets must be closely guarded.

The company has a mature Enterprise Architecture organization that is supported by a cross-functional Architecture Board. The Chief Information Officer and the Chief Operating Officer co-sponsor the Enterprise Architecture program.

TOGAF 9 and its Architecture Development Method (ADM) are used to develop the automated manufacturing processes and systems that are used to design, manufacture, and test the blade assemblies.

Recently, a pilot architecture project was completed at a single location that defined a standard approach for controlling the Automated Test System that is used at each plant to perform final quality assurance tests on each completed blade assembly. The Architecture Board approved the plan for immediate implementation at each plant.

Architecture Contracts have been developed that detail the work needed to implement and deploy the new Automated Test System controller for each location.

The Chief Engineer, sponsor of the activity, has expressed concern that a uniform process be employed at each location to ensure consistency.

Refer to the Scenario You have been asked to recommend the best approach to address the Chief Engineer's concern. Based on TOGAF 9, which of the following is the best answer?

- A. You review the applicable Architecture Contract for each location, ensuring that it addresses the project objectives, effectiveness metrics, acceptance criteria, and risk management. In cases where the contract is issued to an external party, you ensure that it is a legally enforceable contract.  
You schedule compliance reviews at key points in the implementation process to ensure that the work is proceeding in accordance with the Architecture Definition. You ensure that the Architecture Board reviews all deviations from the Architecture Contract, and considers whether or not to grant a dispensation to allow the implementation organization to customize the process to meet their local needs.
- B. You create an Architecture Contract to manage and govern the implementation and migration process at each location. For internal development projects, you issue a memorandum of understanding between the Architecture Board and the implementation organization. For contracts issued to an external party, you ensure that it is a fully enforceable legal contract.  
You ensure that the Architecture Board reviews all deviations from the Architecture Contract, and considers whether or not to grant a dispensation to allow the implementation organization to customize the process to meet their local needs.
- C. You create an Architecture Contract to manage and govern the implementation and migration process. If the contract is issued to an external party, you ensure that it is a fully enforceable legal contract. For internal development projects, you decide it is adequate to utilize a memorandum of understanding between the Architecture Board and the implementation organization.  
You recommend that if a deviation from the Architecture Contract is detected, the Architecture Board grant a dispensation to allow the implementation organization the ability to customize the process to meet their local needs.
- D. You use the issued Architecture Contracts to manage the architecture governance processes for the project across the locations. You deploy monitoring tools to assess the performance of the completed blade assembly at each location and develop change requirements if necessary.  
You recommend that if a deviation from the contract is detected, the Architecture Board should modify the Architecture Contract to allow the implementation organization the ability to customize the process to meet their local needs. As a result, you then issue a new Request for Architecture Work to implement the modified Architecture Definition.

**Correct Answer: A**

**Section:**

### QUESTION 7

Scenario:

Please read this scenario prior to answering the Question

You are serving as the Chief Architect for a large, global commodities trading company which has been growing rapidly through a series of acquisitions.

Each business is performing well in its markets. However, the lack of integration between headquarters and the business units has increasingly caused problems in the handling of customer and financial information. The inability to share information across businesses has resulted in lost opportunities to "leverage the synergies" that had been intended when the businesses were acquired. At present, each business unit maintains its own applications. Despite an earlier initiative to install a common application to manage customer, products, supplier, and inventory information, each business unit has different ways of defining each of these core elements and has customized the common application to the point where the ability to exchange information is difficult, costly, and error-prone.

As a result, the company has made the decision to introduce a single enterprise-wide application to consolidate information from several applications that exist across the lines of business. The application will be used by all business units and accessed by suppliers through well defined interfaces.

The Corporate Board is concerned that the new application must be able to manage and safeguard confidential customer information in a secure manner that meets or exceeds the legal requirements of the countries in which the company operates. This will be an increasingly important capability as the company expands its online services in cooperation with its trading partners.

The CIO has formed an Enterprise Architecture department, and one of the primary goals in its charter is to coordinate efforts between the implementation team and the business unit personnel who will be involved in the migration process. The CIO has also formed a cross-functional Architecture Board to oversee and govern the architecture. The company has an existing team of security architects.

TOGAF 9 has been selected for use for the Enterprise Architecture program. The CIO has endorsed this choice with the full support of top management.

Refer to the Scenario In the Preliminary Phase you need to define suitable policies and ensure that the company has the appropriate capability to address the concerns of the Corporate Board. Based on TOGAF 9, which of the following is the best answer?

- A. You start by clarifying the intent that the Board has for raising these concerns. This enables you to understand the implications of the concern in terms of regulatory requirements and the potential impact on current business goals and objectives. You propose that a security architect or security architecture team be allocated to develop a comprehensive security architecture and that this be considered an additional domain architecture.
- B. You evaluate the implications of the Board's concerns by examining the security and regulatory impacts on business goals, business drivers and objectives. Based on your understanding, you then update the current security policy to include an emphasis on the concerns. You define architecture principles to form constraints on the architecture work to be undertaken in the project. You then allocate a security architect to ensure that security considerations are included in the architecture planning for all domains.
- C. You identify and document the security and regulatory requirements for the application and the data being collected. You ensure that written policies are put in place to address the requirements, and that they are communicated across the organization, together with appropriate training for key employees. You identify constraints on the architecture and communicate those to the architecture team. You establish an agreement with the security architects defining their role within the ongoing architecture project.
- D. You evaluate the implications of the concerns raised by the Corporate Board in terms of regulatory requirements and their impact on business goals and objectives. Based on this understanding, you then issue a Request for Architecture Work to commence an architecture development project to develop a solution that will address the concerns. You allocate a security architect to oversee the implementation of the new application that is being developed.

**Correct Answer: C**

**Section:**



#### QUESTION 8

Scenario:

Please read this scenario prior to answering the Question Your role is that of Lead Enterprise Architect within a vacation property management firm that has been growing through acquisition. The firm manages over 200 resort properties across North America. Many of the resort properties use the same internal IT systems that they used before they were acquired. Until recently, the only requirement that has been placed on each property is that they use a standard financial reporting system to report their financial results to the headquarters on a weekly basis.

The CEO has stated his concerns about the inefficiencies of the current approach and identified the need to change. He has defined a new strategic vision that will enhance the business by standardizing its operations across the network to provide consolidated financial, human resources, logistics, sales and marketing, and yield management. He has also stated that he expects results by the end of the current fiscal year.

These changes will provide the company with improved utilization of its capacity and more efficient operations. The addition of a corporate-wide data warehouse will provide analytics that will enable the marketing group to improve its ability to target advertising into key markets to improve yields.

The firm has a mature enterprise architecture practice and uses TOGAF 9 as the method and guiding framework. The CIO is the sponsor of the activity.

In planning this change, the Chief Architect engaged the services of a well-known consulting firm that specializes in business strategy. An initial study has been conducted to identify the strategic changes needed to implement the CEO's vision. This recently completed with approval of a strategic architecture encompassing the entire firm, including detailed requirements and recommendations.

Based on the recommendations from the initial study, the firm has taken the decision to adopt a packaged suite of integrated applications that is tailored to the needs of the hospitality industry.

Refer to the scenario You have been asked by the Chief Architect to justify the best approach for architecture development to realize the CEO's vision. Based on TOGAF 9, which of the following is the best answer?

- A. You recommend that the target architecture is defined first, followed by transition planning. This is because the vision is well understood and the strategic architecture agreed. This will ensure that the current problems and inefficiencies of the baseline architecture are not carried forward, and that the proposed solution addresses the requirements identified in the initial study.
- B. You recommend that the team focus on architecture definition, with a specific emphasis on understanding the strategic change parameters of the business strategy. Once understood, the team will be in the best position to identify the requirements, drivers, issues, and constraints for this engagement. You would ensure that the target architecture addresses non-functional requirements so as to ensure the target architecture is robust and secure.
- C. You recommend that the team focus on defining the target architecture by going through the architecture definition phases (B-D). This is because the initial study identified the need to change. This will ensure that the change can be defined in a structured manner and address the requirements needed to realize the vision.
- D. You recommend that this engagement define the baseline Technology Architecture first in order to assess the current infrastructure capacity and capability. Then the focus should be on transition planning and

architecture deployment. This will identify retirements to ensure that the projects are sequenced in an optimal fashion so as to realize the vision.

**Correct Answer: D**

**Section:**

#### QUESTION 9

Scenario:

Please read this scenario prior to answering the Question

You have been assigned the role of Chief Enterprise Architect within a leading North American information technology services company. The company has a number of service portfolios including infrastructure, applications, business process outsourcing, accounting, and financial services.

With numerous practice areas and a multitude of diverse engagements underway at any given time, overall engagement management within the company has become challenging. The company does not want to risk its outstanding reputation or its international certifications and CMM ratings.

The Chief Executive Officer and Chief Information Officer have co-sponsored the creation of an Enterprise Architecture program based on TOGAF 9. An Architecture Board has been formed comprised of IT staff executives and executives from the major practice areas.

The Enterprise Architecture team has been working with the Strategic Planning team to create a strategic enterprise architecture to address these issues. The team has defined a framework and held workshops with key stakeholders to define a set of architecture principles to govern the architecture work. They have completed an Architecture Vision at a strategic level and laid out Architecture Definitions for the four domains. They have set out an ambitious vision of the future of the company over a five-year period. This includes a solution architecture including three distinct transformations.

The CIO has made it clear that prior to the approval of the detailed Implementation and Migration plan, the EA team will need to assess the risks associated with the proposed architecture. He has received concerns from some of the senior partners that the proposed architecture may be too ambitious and they are not sure it can produce sufficient value to warrant the attendant risks.

Refer to the Scenario

You have been asked to recommend an approach to satisfy these concerns. Based on TOGAF 9, which of the following is the best answer?

- A. You recommend that before preparing the detailed Implementation and Migration plan, the EA team should review and consolidate the gap analysis results from Phases B to D to understand the transformations that are required to achieve the proposed Target Architecture. The EA team should assess the readiness of the organization to undergo change. Once the Solution Architecture has been assembled, it should be analyzed using a state evolution table to determine the Transition Architectures.
- B. You recommend that the EA team apply an interoperability analysis to evaluate any potential issues across the Solution Architecture. This should include the development of a matrix showing the interoperability retirements. Once all of the concerns have been resolved, the EA team should finalize the Architecture Roadmap and the Implementation and Migration Plan.
- C. You recommend that the EA team apply the Business Transformation Readiness Assessment technique which will allow the risks associated with the transformations to be identified and mitigated for, it will also identify improvement actions to be worked into the Implementation and Migration Plan. A Business Value Assessment should be used to determine the business value and associated risks for the transformation.
- D. You recommend that the EA team should gather information about potential solutions from the appropriate sources. Once the Solution Architecture has been assembled, it should be analyzed using a state evolution table to determine the Transition Architectures. A value realization process should then be established to ensure that the concerns raised are addressed.

**Correct Answer: C**

**Section:**

#### QUESTION 10

Scenario:

Please read this scenario prior to answering the question

You are serving as the Lead Enterprise Architect at a major supplier in the automotive industry. The company is headquartered in Cleveland, Ohio with manufacturing plants across the United States, Brazil, Germany, Japan and South Korea. Each of these plants has been operating its own planning and production scheduling systems, as well as custom developed applications that drive the automated production equipment at each plant.

The company is implementing lean manufacturing principles to minimize waste and improve the efficiency of all of its production operations. During a recent exercise held for internal quality improvement, it was determined that a significant reduction in process waste could be achieved by replacing the current planning and scheduling systems with a common Enterprise Resource Planning (ERP) system located in the Cleveland data center. This central system would provide support to each of the plants replacing the functionality in the existing systems. It would also eliminate the need for full data centers at each of the plant facilities. A reduced number of IT staff could support the remaining applications. In some cases, a third-party contractor could provide those staff.

The Enterprise Architecture department has been operating for several years and has mature, well-developed architecture governance and development processes that are strongly based on TOGAF 9.

At a recent meeting, the Architecture Board approved a Request for Architecture Work sponsored by the Chief Engineer of Global Manufacturing Operations.

The request covered the initial architectural investigations and the development of a comprehensive architecture to plan the transformation.

The Common ERP Deployment architecture project team has now been formed, and the project team has been asked to develop an Architecture Vision that will achieve the desired outcomes and benefits. Some of the plant managers have expressed concern about the security and reliability of moving their planning and production scheduling from a remote centralized system. The Chief Engineer wants to know how these concerns can be



addressed.

Refer to the Scenario

[Note: You should assume that the company has adopted the example set of principles that are listed and defined in TOGAF 9, Section 23.6.] One of the earliest initiatives in the Enterprise Architecture program was the definition of a set of architecture principles. These now need to be updated to address the concerns raised.

You have been asked to select a set of principles most appropriate for guiding the team to define a robust solution. Based on TOGAF 9, which of the following is the best answer?

- A. Common-use Applications, Control Technical Diversity, Ease of Use, Interoperability, Data is Shared, Data is Accessible, Data Security
- B. Business Continuity, Common-use Applications, Maximize Benefit to the Enterprise, Data is Shared, Data is Accessible, Data Security
- C. Technology Independence, Data Trustee, Information Management is Everybody's Business, IT Responsibility, Responsive Change Management
- D. Service-orientation, Responsive Change Management, Business Continuity, Data is Accessible, Data Security

**Correct Answer: B**

**Section:**

#### QUESTION 11

Scenario:

Please read this scenario prior to answering the Question

You have been assigned the role of Lead Enterprise Architect for a manufacturing firm that specializes in musical instruments. The firm has been established for over 100 years, operating in North America for most of that time. In the last ten years, the firm has expanded into European markets and will soon establish a market in Latin America. A future expansion into the Asia Pacific region is also planned.

The firm is organized into several business units that each focus on manufacturing particular families of instruments such as brass, woodwind, and percussion. Each business unit has acquired other producers to expand its manufacturing capacity. This has resulted in a complex environment with a high diversity of business and manufacturing systems.

The Enterprise Architecture (EA) program within the firm has been functioning for several years. It has made significant progress in consolidating the technology portfolio and establishing key standards. The CIO and the COO are joint sponsors of the EA program. The EA program is mature, with an active Architecture Board and a well-defined architecture process and standard content templates based on the TOGAF 9 Architecture Content Framework. The EA process framework is well coordinated with the PMO, Systems Development, and Operations functions.

The firm has completed a strategic plan to reorganize its Sales & Marketing organization according to the four target geographic markets. One of the goals of this reorganization is to improve the ability of Marketing to collect more meaningful market analytics that will enable each sector to better address market needs with effective marketing campaigns and global product presence.

A Request for Architecture Work to address the goals of the reorganization has been approved. As the architecture team commences its work, the CIO has expressed concerns about whether the firm will be able to adapt to the proposed architecture and how to manage the associated risks.

Refer to the Scenario

You have been asked how to address the concerns of the CIO. Based on TOGAF 9, which of the following is the best answer?

- A. In Phase B, the team should create a set of views that will enable them to identify the factors that will influence the successful introduction of the architecture into the organization. There should then be an assessment of each factor on a maturity scale that will allow the team to gauge the urgency, readiness, and degree of difficulty to fix. These factors can then be used to assess the initial risks associated with the proposed architecture.
- B. In Phase A the team should analyze their risk by completing an Implementation Factor Assessment and Deduction Matrix to identify the particular risks associated with the implementation and deployment. The matrix should include a list of factors to be considered, their descriptions, and constraints that should be taken into account. These factors can then be used to assess the initial risks associated with the proposed architecture.
- C. In Phase A, the team should use the Business Transformation Readiness Assessment technique to identify the factors that will influence the successful introduction of the architecture into the organization. The assessment should include determining the readiness rating for each factor based on a maturity scale that will allow the team to gauge the urgency, readiness, and degree of difficulty to fix. These factors can then be used to assess the initial risks associated with the proposed architecture.
- D. In Phase A, the team should conduct a Business Scenario to identify the stakeholders' concerns and the resulting retirements. Once the retirements have been identified, they can be assessed in terms of their risks. The risks should be evaluated in terms of how they could be avoided, transferred, or mitigated.  
Any risks that cannot be resolved should be identified as residual risks and their disposition should be decided by the Architecture Board.

**Correct Answer: C**

**Section:**

#### QUESTION 12

Scenario:

Please read this scenario prior to answering the Question

You are the Lead Architect for a firm that manufactures ball bearings used in industrial equipment applications. They have manufacturing operations in several cities in the United States, Germany, and the United Kingdom.

The firm has traditionally allowed each manufacturing plant to drive its own production planning systems. Each plant has its own custom Materials Requirements Planning, Master Production Scheduling, Bill of Materials, and Shop Floor Control systems.

"Just In Time" manufacturing techniques are used to minimize wastes caused by excessive inventory and work in process. The increasingly competitive business environment has compelled the firm to improve its business capability to be more responsive to the needs of industrial customers. To support this capability, the firm has decided to implement an Enterprise Resource Planning (ERP) solution that will enable it to better coordinate its manufacturing capacity to match the demands for its products across all plants. In addition, there are also new European regulations coming into force to which their manufacturing processes must conform in the next six months.

As part of the implementation process, the Enterprise Architecture (EA) department has begun to implement an architecture process based on TOGAF 9. The CIO is the sponsor of the activity. The Chief Architect has directed that the program should include formal modeling using the Architecture Content Framework and the TOGAF Content Metamodel. This will enable support for the architecture tooling that the firm uses for its EA program. The Chief Architect has stated that in order to model the complex manufacturing process it will be necessary to model processes that are event-driven. Also, in order to consolidate applications across several data centers it will be necessary to model the location of IT assets. In particular, the end goal is to have the single ERP application running in a single data center.

Currently the project is in the Preliminary Phase, and the architects are tailoring the Architecture Development Method (ADM) and Architecture Content Framework to fit into the corporate environment.

Refer to the Scenario

You have been asked to recommend a response to the Chief Architect's request to tailor the TOGAF Content Metamodel. Based on TOGAF 9, which of the following is the best answer?

- A. You recommend that the architecture team incorporate the Process Modeling and Infrastructure Consolidation extensions into their tailored Content Metamodel. As the environment is process-centric this will enable them to model the manufacturing processes and store information to support regulatory compliance. It also includes views useful for managing the consolidation of applications into a single data center.
- B. You recommend that the architecture team incorporate the Process Modeling and Governance extensions into their tailored Content Metamodel. This is suitable as this is a significant IT change that will impact its operational models. This will ensure that they include specific entities and attributes that will allow them to model the event-driven nature of the manufacturing processes more precisely.
- C. You recommend that the architecture team incorporate the Governance and Motivation Extensions into their tailored Content Metamodel. This would allow modeling of the target milestones they want to achieve with this consolidation of application to a single data center. These extensions will also enable demonstration of regulatory compliance for the manufacturing process.
- D. You recommend that the architecture team incorporate the Data and Services Extensions into their tailored Content Metamodel. This would allow modeling of the location of IT assets and ensure regulatory compliance for the manufacturing process. It will also allow for identification of redundant duplication of capability which will be needed for a successful consolidation to a single data center.

**Correct Answer: A**

**Section:**



### QUESTION 13

Scenario:

Please read this scenario prior to answering the Question

You are serving as the Lead Enterprise Architect at a major supplier in the automotive industry. The company is headquartered in Cleveland, Ohio with manufacturing plants across the United States, Brazil, Germany, Japan and South Korea. Each of these plants has been operating its own planning and production scheduling systems, as well as custom developed applications that drive the automated production equipment at each plant.

The company is implementing lean manufacturing principles to minimize waste and improve the efficiency of all of its production operations. During a recent exercise held for internal quality improvement, it was determined that a significant reduction in process waste could be achieved by replacing the current planning and scheduling systems with a common Enterprise Resource Planning (ERP) system located in the Cleveland data center. This central system would provide support to each of the plants replacing the functionality in the existing systems. It would also eliminate the need for full data centers at each of the plant facilities. A reduced number of IT staff could support the remaining applications. In some cases, a third-party contractor could provide those staff.

The Enterprise Architecture department has been operating for several years and has mature, well-developed architecture governance and development processes that are strongly based on TOGAF 9.

At a recent meeting, the Architecture Board approved a Request for Architecture Work sponsored by the Chief Engineer of Global Manufacturing Operations.

The request covered the initial architectural investigations and the development of a comprehensive architecture to plan the transformation.

The Common ERP Deployment architecture project team has now been formed, and the project team has been asked to develop an Architecture Vision that will achieve the desired outcomes and benefits. Some of the plant managers have expressed concern about the security and reliability of moving their planning and production scheduling from a remote centralized system. The Chief Engineer wants to know how these concerns can be addressed.

Refer to the Scenario

During the initial meeting of the Common ERP Deployment architecture project team, a number of alternative recommendations for how to proceed are put forward by members of the team.

You have been asked to select the most appropriate recommendation to ensure that the team evaluates different approaches to the problem and clarifies the requirements for the architecture. Based on TOGAF 9, which of the following is the best answer?

- A. The team should develop Baseline and Target Architectures for each of the manufacturing plants, ensuring that the views corresponding to selected viewpoints address key concerns of the stakeholders. A consolidated gap analysis between the architectures will then be used to validate the approach, and determine the capability increments needed to achieve the target state.
- B. The team should exercise due diligence and carefully research vendor literature and conduct a series of briefings with vendors that are on the current approved supplier list. Based on the findings from the research, the

team should define a preliminary Architecture Vision. The team should then use that model to build consensus among the key stakeholders.

- C. The team should use stakeholder analysis to understand who has concerns about the initiative. The team should then hold a series of interviews at each of the manufacturing plants using the business scenario technique. This will then enable them to identify and document the key high-level stakeholder requirements for the architecture.
- D. The team should conduct a pilot project that will enable vendors on the short list to demonstrate potential solutions that will address the concerns of the stakeholders. Based on the findings of that pilot project, a complete set of retirements will be developed that will drive the evolution of the architecture.

**Correct Answer: C**

**Section:**

#### QUESTION 14

Scenario: Glacier Ridge LLC

Please read this scenario prior to answering the question-Glacier Ridge LLC is a vacation property management firm that is growing through acquisition. It manages over 200 resort properties across North America. Many of the resort properties use the same internal IT systems that they used before they were acquired. Until recently, the only requirement that has been placed on each property is that they use a standard financial reporting system to report their financials to the headquarters on a weekly basis. The CEO has stated his concerns about the inefficiencies of the current approach and identified the need to change. He has defined a new strategic vision that will enhance the Glacier Ridge property business by standardizing its operations across the network to provide consolidated financial, human resources, logistics, sales and marketing, and yield management. He has also stated that he expects results by the end of the current fiscal year. These changes will provide the company with improved utilization of its capacity and more efficient operations. The addition of a corporate-wide data warehouse will provide analytics that will enable the marketing group to improve its ability to target advertising into key markets to improve yields. Glacier Ridge has mature enterprise architecture (EA) practice and uses TOGAF 9 as the method and guiding framework.

The CIO is the sponsor of the activity. In planning this change, the Chief Architect engaged the services of a well-known consulting firm that specializes in business strategy. An initial study has been conducted to identify the strategic changes needed to implement the CEO's vision. This recently completed with approval of a strategic architecture encompassing the entire firm, including detailed requirements and recommendations.

Based on the recommendations from the initial engagement, Glacier Ridge has embraced an Architecture Vision to adopt an enterprise application that is tailored to the needs of the hospitality industry.

Refer to the Glacier Ridge scenario Your role is that of Chief Architect. You have been asked to recommend the best approach to take in this architecture engagement to realize the CEO's vision. Based on TOGAF 9, which of the following is the best answer?

- A. Since the initial engagement has identified the need to change, you recommend that the team focus on defining the target architecture by going through the architecture definition phases (B-D). This will ensure that the change can be defined in a structured manner and address the requirements needed to realize the vision.
- B. Since the vision is well understood and the strategic architecture agreed, you recommend that the target architecture is defined first, followed by transition planning. This will ensure that the current inefficiencies of the baseline architecture are not carried forward, and that the proposed solution addresses the requirements identified in the initial architecture engagement.
- C. You recommend that this engagement define the Technology Architecture first in order to assess the current infrastructure capacity and capability. Then the focus should be on transition planning and architecture deployment. This will identify requirements to ensure that the projects are sequenced in an optimal fashion so as to realize the vision.
- D. You recommend that the team focus on architecture definition, with a specific emphasis on understanding the strategic change parameters of the business strategy. Once understood, the team will be in the best position to identify the requirements, drivers, issues, and constraints for this engagement. You would ensure that the target architecture addresses non-functional requirements so as to help forecast future impacts.

**Correct Answer: D**

**Section:**

#### QUESTION 15

Scenario: Summer Seeds BV

Please read this scenario prior to answering the question-Summer Seeds BV is an international agricultural company exporting bulbs, flowers and seeds worldwide. It is headquartered in Rotterdam in the Netherlands, and has sales and distribution centers in over 60 countries worldwide. Several of these centers include administrative, manufacturing, and research facilities. To achieve full integration of their research capabilities with their development centers located in various climate zones, the company wants to develop strong self directed teams in each location. It also wants to define new business models that are profitable while reducing their impact on the environment. The management is deeply committed to ensuring that the company is a world leader in socially responsible seed development with a business strategy that focuses on profitability through environmentally friendly operating processes. Summer Seed's international operations are subject to various legal and regulatory requirements. In areas such as genetically modified seeds, governmental controls are strictly enforced and compliance is critical. Recently a competitor was heavily fined for violating the regulations in a country where it was developing pest-resistant seeds. The Governing Board is concerned, and as a result has approved the expenditure of resources to establish an Enterprise Architecture program. They have requested information about the status of projects that could impact regulatory compliance. They also want to enable the corporate legal staff and auditors to analyze proposed architectures to ensure that they are within the legal guidelines for a given location. In addition, the research organization should be able to see that the architecture is appropriate for its needs. TOGAF 9 has been mandated as the guiding framework for the development and evolution of the Enterprise Architecture practice.

Refer to the Summer Seeds BV Scenario You have been appointed as the Lead Consultant. You have been asked to recommend an approach that would enable the development of an architecture that addresses the needs of all these parties. Based on TOGAF 9, which of the following is the best answer?

- A. Depending on the nature of the architecture, a set of models should be created that can be used to ensure that the system will be compliant with the local regulations. Stakeholders should be able to view the models to see that their concerns have been properly addressed.
- B. Each architecture activity should be developed using a consistent modeling approach that is uniform across all architecture projects. Each architecture should be defined based on this fixed set of models so that all concerned parties can examine the models to ensure that their issues and concerns have been addressed,
- C. A stakeholder map should be developed that allows the architects to define groups of stakeholders sharing common concerns. A set of views should then be defined that addresses the concerns for each group- Architecture models can then be created for each view to address the stakeholders' concerns.
- D. For those groups that have sufficient power and level of interest, a special report should be created that summarizes the key features of the architecture with respect to the particular location. Each of these reports should reflect the stakeholders' requirements.

**Correct Answer: C**

**Section:**

#### QUESTION 16

Scenario:

Please read this scenario prior to answering the Question You are serving as the Chief Architect for a large, global commodities trading company which has been growing rapidly through a series of acquisitions. Each business is performing well in its markets. However, the lack of integration between headquarters and the business units has increasingly caused problems in the handling of customer and financial information. The inability to share information across businesses has resulted in lost opportunities to "leverage the synergies" that had been intended when the businesses were acquired. At present, each business unit maintains its own applications. Despite an earlier initiative to install a common application to manage customer, products, supplier, and inventory information, each business unit has different ways of defining each of these core elements and has customized the common application to the point where the ability to exchange information is difficult, costly, and error-prone. As a result, the company has made the decision to introduce a single enterprise-wide application to consolidate information from several applications that exist across the lines of business. The application will be used by all business units and accessed by suppliers through well defined interfaces.

Refer to the Scenario As part of the process for establishing the Enterprise Architecture department, you are developing a set of architecture principles to guide the activities. You need to specify the best approach for this work. Based on TOGAF 9, which of the following is the best answer?

- A. You gather information from credible industry sources in the commodities business. Based on that, you assess current trends and apply that to defining a set of principles that embody best practices. You select architecture principles that do not conflict with each other and that should be stable. You ensure that all the principles are realistic and avoid including principles that are obvious.
- B. You examine the mission statements for the company and each of its businesses, together with the corporate value statements. Based on that, you define a set of principles and review with the CIO. When developing the principles you ensure that they actively promote the alignment of IT with the business strategies and initiatives of the company. You then seek the endorsement of the CIO and senior management.
- C. You define a set of principles that support the preferred best practices embodied in the Enterprise Architecture department charter. You publish the principles on the corporate intranet to ensure widespread acceptance and compliance. You then schedule regular periodic Compliance Assessments with individual business units to check that they have made satisfactory progress toward meeting the objectives and conditions embodied in the principles.
- D. You examine the mission statements for the company and each of its businesses, together with the corporate value statements. Based on that, you work with the Architecture Board to define the principles. When developing the principles you ensure that they actively promote the alignment of IT with the corporate business strategies. You then hold a series of review meetings with all the relevant stakeholders, including senior management, ensuring their support.

**Correct Answer: D**

**Section:**

#### QUESTION 17

Scenario: Sollace Manufacturing

Please read this scenario prior to answering the question- Sollace Manufacturing is a major supplier in the automotive industry, headquartered in Cleveland, Ohio with manufacturing plants in Chicago, Sao Paulo, Stuttgart, Yokohama, and Seoul. Each of these plants has been operating its own planning and production scheduling systems, as well as custom developed applications that drive the automated production equipment at each plant. Sollace Manufacturing is implementing lean manufacturing principles to minimize waste and improve the efficiency of all of its production operations. During a recent exercise held for internal quality improvement, it was determined that a significant reduction in process waste could be achieved by replacing the current planning and scheduling systems with a common Enterprise Resource Planning (ERP) system located in the Cleveland data center. This central system would provide support to each of the plants replacing the functionality in the existing systems. It would also eliminate the need for full data centers at each of the plant facilities. A reduced number of IT staff could support the remaining applications. In some cases, a third-party contractor could provide those staff. The Sollace Manufacturing Enterprise Architecture department has been operating for several years and has mature, well-developed architecture governance and development processes that are strongly based on TOGAF 9. At a recent meeting, the Architecture Review Board approved a Request for Architecture Work from the Chief Engineer of Global Manufacturing Operations who is the project sponsor. The request covered the initial architectural investigations and the development of a comprehensive architecture to plan the transformation. The Common ERP Deployment architecture project team has now been formed, and the project team has been asked to develop an Architecture Vision that will achieve the desired outcomes and benefits. Some of the plant

managers have expressed concern about the security and reliability of driving their planning and production scheduling from a central system located in Cleveland. The Chief Engineer wants to know how these concerns can be addressed.

Refer to the Sollace Manufacturing Scenario You are serving as the Lead Enterprise Architect for the Common ERP Deployment architecture project. One of the earliest initiatives in the Enterprise Architecture program at Sollace Manufacturing was the definition of a set of IT principles and architecture principles that are well aligned with the overall enterprise principles. These now need to be updated to address the concerns raised. You have been asked to select a set of principles most appropriate for guiding the team to define a robust solution. [Note: You should assume that Sollace Manufacturing has adopted the example set of principles that are listed and defined in TOGAF 9, Section 23.6.] Based on TOGAF 9, which of the following is the best answer?

- A. Common-use Applications, Data is Shared, Data is Accessible, Data Security, Interoperability, Control Technical Diversity
- B. Business Continuity, Service-orientation, Data is Accessible, Data Security, Responsive Change Management
- C. Maximize Benefit to the Enterprise, Business Continuity, Common-use Applications, Data is Shared, Data is Accessible, Data Security
- D. Information Management is Everybody's Business, IT Responsibility, Data Trustee, Technology Independence, Responsive Change Management

**Correct Answer: C**

**Section:**

### QUESTION 18

Scenario: Raxlon Inc.

Case Study Title (Case Study):

Raxlon Inc. is a Fortune 500 Company dealing in high value drugs and pharma products. Its annual turnover is over 120 billion \$. It has more than 100,000 employees all over the globe in its R&D, Manufacturing and Marketing Units. Raxlon's CEO, Dr Peter Fowles, is a pharmacology expert and has over 72 patents on various types of drugs mainly used for treating patients with genetic disorders. Raxlon is now moving into a suite of high end critical drug products used for Genetic Repair of congenital Diseases like Alzhmeir's disease and Epilepsy. Rexlon has a well developed EA practice and in 2009 the EA practice has adopted TOGAF 9 as the primary Framework for Enterprise Architectural Change Agent.

Dr Fowles' main concerns are:

Security of the critical data which they have gained over the years after painstaking research. Although Rexlon had an adequate security system Dr Fowles feels it may not be adequate to deal with the new order of things, especially with data which is highly confidential and if leaked would have major financial impact on the Company.

Dr Fowles calls his CIO and explains his position to him and entrusts him with the responsibility of evaluating the current security system, operation and governance and determine which are the gaps which need to be addressed during the fresh architectural work. Assume that a new Security Framework would be used in the ADM life cycle. To protect Rexlon's valuable IP. The CIO apprises the Lead Architect of the sensitive nature of the work he has to complete within the next 2 months.

Identify which of the following processes would be most appropriate for the Lead Architect to adopt in this situation.

- A. Identify the sources of threat, review the relevant security statutes, see how disaster recovery can be achieved, find who are the actors vis vis the system and design suitable access control mechanisms, identify critical data and applications and ensure that they are given the highest level of security
- B. First revisit the Preliminary Phase to determine the tailoring of ADM vis a vis Security. Identify any change in the Principles or additions to be carried out. Engage with all Stakeholders to finalize the Vision. Then in Business, Information systems and Technology Architectures ensure the Security Framework adopted to the ADM addresses all critical security issues. Finally conduct an overall review to assess how effective the security ecosystem designed is and whether it meets the security level desired
- C. Invoke Preliminary Phase and Vision Phase Identify Sources of threat, review and determine revised regulatory, security and assumptions, document them get management buy in , develop business continuity plans especially for critical data operations, assure data, application and technological component security.
- D. Determine who are the people who are hacking into similar organizations, ensure that highly secure measures are taken when external people enter the R&D and manufacturing locations, ensure that there is a very strong firewall so that people cannot get illicit entry into the system, periodically check the effectiveness of the security measures

**Correct Answer: A**

**Section:**

### QUESTION 19

Scenario: MegaMart

Case Study Title (Case Study):

MegaMart is a Retail Chain which has expanded throughout India and the Far East.

The CEO and CIO decide that there is a crying need to put an Enterprise Architecture in place to realize MegaMart's strategy to expand its revenue and diversify. The CIO has evaluated and decided to go in for TOGAF9 and adapt it to his enterprise requirements.

The Preliminary and Vision Phase have been completed.

As such very few architectural artifacts exist and the target architecture as of now is not very clear. As the Lead Architect how would you guide your team of architects for the Business Architecture definition?

- A. In the first iteration start with the definition of the Target Business Architecture using a Top down Approach. Then keep on iterating in Phase B till the Target Business Architecture is refined before going to Phase C and PhaseD. After Phase C and Phase D are over, iterate again to Phase B and define the baseline Business Architecture, analyze the gaps finalize the Architecture Definitions documents and proceed to Phase C and Phase D.
- B. In the first iteration start with the definition of the Baseline Business Architecture using a Top Down approach. Define the Architecture Definition document after analyzing the impacts and reviewing with the stakeholders. Then proceed toPhase C and PhaseD. In the next iteration finalize the Target Business Architecture and proceed to Phase C and Phase D.
- C. In the first iteration start with the definition of the Baseline Business Architecture using a Bottom Up approach. Define the Architecture Definition document after analyzing the impacts and reviewing with the stakeholders'. Proceed to Phase C and PhaseD. In the next iteration finalize the Target Business Architecture, determine the gaps and the roadmap, and the impact and update the Architecture Definition document. after analyzing the impacts and reviewing with the stakeholders. Then proceed with the iteration.
- D. In the first iteration start with the definition of the Target Business Architecture using a Top Down approach. Define the Architecture Definition document after analyzing the impacts and reviewing with the stakeholders proceed to Phase Cand PhaseD. In the next iteration finalize the Baseline Business Architecture, determine the gaps and the roadmap, and the impact and update the Architecture Definition document. After analyzing the impacts and reviewing with the stakeholders. Then proceed with the iteration.

**Correct Answer: C**

**Section:**

#### QUESTION 20

Scenario: AutoComp Corporation

AutoComp Corporation produces components for the Car industry. Driven by the global financial downturn they are looking to reduce IT costs. They believe there is a cost saving opportunity within IT but this is not quantified in terms of potential savings nor is there agreed target architecture.

Final decisions on the solutions are not yet fully agreed. They have completed their Vision Phase and first pass of the three architecture definition phases and now they want to finalize and plan their solutions. You are the Chief Architect from a consulting organization brought into review the work to date by AutoComp Corporation and to make recommendations to the CIO and the board on this.

Which of the following answers best describes how TOGAF recommends in this context?

- A. I would determine the business value of each solution, prioritize accordingly each set of solutions, conduct detailed Risk Assessment and Mitigation, do Compliance reviews and then implement the solutions. I would present myrecommendations to the board for agreement. Once this is done, I would update the architectures reflecting any changes resulting from the board discussion.
- B. I would after confirming Enterprise Change Attributes and constraints, do a Consolidated Gap Analysis then dependencies, then group and allocate the transitions. I would also assess Enterprise readiness and risks.Then I would also assess the business value of the solutions, do risk analysis with mitigation and then schedule the work products.
- C. I would do a Consolidated Gap Analysis by considering then dependencies, then group and allocate the transitions. I would then look to produce artifacts that describe the recommended projects, the risk, issues and dependencies. Thiswould also include transition architects to move us from current architecture to the recommended target architectures. I would present my recommendations to the board for agreement. Once this is done, I would update the architectures reflecting any changes resulting from the board discussion.
- D. I would look at the corporate culture and attitude to change, understand the constraints such as cost and the required time horizons. I would then look at the architecture work to ensure it is complete and seek to address any gaps. I wouldreview the functional requirements and ensure there are complete interoperability requirements. I would then validate any dependencies and risks. Then formulate an implementation and migration strategy identifies major work packages and the transition architecture required. Finally, once agreement is reached with the board I will create project charters and re-factor any changes needed from the board discussion into the architecture.

**Correct Answer: D**

**Section:**

#### QUESTION 21

Scenario: Eight Twelve

Eight Twelve has retail outlets throughout North America. An Enterprise Architecture practice already exists in Eight Twelve. Now the CEO and CIO decide that they want to use TOGAF9 to re-architect their Enterprise Architecture to cater to the changing strategies of Eight Twelve to better respond to the changes in the economic and technology environments.

Some of the key issues which need to be addressed in this re-architecting work are:

- A. Since Eight Twelve's retail chain operate 24 hours a day and are expanding to South America and Europe, the retail chain business ecosystem should be able to withstand any unforeseen disruptions which might affect the chain's day today operations. This is highly critical to ensure high levels of customer satisfaction and thus maintaining and enhancing Eight Twelve's revenue chain.
- B. Dependency between the application components, which are the nerve centers to Eight Twelve's sophisticated range of services both external and internal, and the application platform and technology infrastructure should be minimal. This would facilitate scalability and ease of enhancement of the service offerings.
- C. Eight Twelve uses the ARTS Data Model and the quality of data is of utmost importance for its operation.
- D. Users of the Enterprise Information ecosystem should have an environment which is able to cater to their needs without any undue delays.  
Which one of the following set of Architecture Principles do you feel is the most appropriate for these guidelines stated above for the TOGAF 9 architecting work which Eight Twelve is embarking on?
- E.
  - a) Maximize Benefit to the Enterprise
  - b) Data Trustee
  - c) Service Orientation
  - d) Responsive Change Management
- F.
  - a) Business Continuity
  - b) Data is an Asset
  - c) Data is Shared
  - d) Requirements Based Change
- G.
  - a) Maximize Benefit to the Enterprise
  - b) Data is an Asset
  - c) Data is Shared
  - d) Requirements Based Change
- H.
  - a) Business Continuity
  - b) Data Trustee
  - c) Technology Independence
  - d) Responsive Change Management

**Correct Answer: D**

**Section:**



**QUESTION 22**

Scenario: Marona Inc.

Marona Inc is a Fortune 500 Enterprise in the retail industry with retail store components manufacturing units and marketing outlets spanning the globe and having an annual turnover of 20 billion\$ with more than 100, 000 employees world wide.

The CEO, CIO and the stakeholders of the ongoing EA projects are concerned about rising costs and as one measure want to do an investigation into the operational aspects of the realized Enterprise Architecture using TOGAF9.

The CIO approaches you as the Lead Enterprise Architect to carry out this exercise the stakeholder had voiced to him the following concerns:

They want to analyze the roles of the top management for each revenue earning service. Moreover, many of the HR related critical Search application component have become extremely slow. This needs to be diagnosed and rectified. Moreover there is no proper tracking of revenue from retail store component products over time. There has also been a lot of unauthorized or unwanted access to many of the critical information.

Hence the mode of access needs to be strengthened and made much more secure. Another additional concern is the new launches and the progress of each of the launches over time. Determine which of the following set of viewpoints are most appropriate to analyze and view in order to address this concern of the stakeholders.

- A.
  - (i) System/Functions Matrix
  - (ii) Actor/Role Matrix
  - (iii) Data Entity/Business Function Matrix
  - (iv) Technology Portfolio Catalog
  - (v) Data Security Diagram
- B.
  - (i) Goal/Objective/Service Diagram
  - (ii) Contract Measure Catalog
  - (iii) Data Dissemination Diagram
  - (iv) Application Communication Diagram
  - (v) Data Life Cycle Diagram

- C. (i) Location Catalog  
(ii) Service/Function Catalog  
(iii) Data Entity/Business Function Matrix  
(iv) Application Communication Diagram
- D. (i) System/Functions Catalog  
(ii) System/Technology Matrix  
(iii) Goal/Objective/Service Diagram  
(iv) Product Life Cycle Diagram  
(v) Data Security Diagram

**Correct Answer: D**

**Section:**

#### QUESTION 23

Magic Wand Corporation manufactures a range of equipment used by magician worldwide. The global popularity of a series of children's books describing the formative years of a budding wizard and his various escapades at wizard school has driven unprecedented sales growth in the magical equipment market.

The current IT systems at Magic Wand are struggling to cope with the high volumes in this growth market. The CIO wants to persuade the board of Magic Wand Corporation to make a greater investment in the IT systems to cope with the new higher transaction volumes. On of the key components the CIOs wants to include when he approaches the board is a description of the current problems and how they may be addressed from an architectural point of view.

As the High Architect of Magic Wand Corporation, the CIO has delegated the task of creating a vision for the future Architecture to you. Which of the following answers best describes how TOGAF recommends delivering an Architecture Vision for the CIO?

- A. Firstly, I ensure there is a Request for Architecture Work from the CIO. Then I ensure that there is recognition for the architecture vision project by following any project management and programmed management frameworks used within the organization. I would identify the key stakeholders and engage with them to understand and document their concerns and high-level requirements. This would result in a stakeholder map used to support other deliverables such as the Architecture Vision, a Communications plan and a Statement of Architecture Work. I would then identify the business goals and strategic drivers of the organization and define any enterprise or project specific constraints such as time and resources. I would then define the business capabilities of the organization needed to fulfill those business goals and drivers and their readiness for change. Once complete, I would define the scope, confirm the architecture and business principles and develop the Architecture Vision. Following this, I would define the business case for the architecture project, assess the business risks and produce a risk mitigation plan. I would then define a plan of enterprise architecture work to meet the scope in the desired time line and the resources required and secure the support of stakeholders.
- B. I would start by ensuring there is a Request for Architecture Work from the sponsor (the CIO). I would then create a project to define and deliver the architecture vision and the necessary outputs. The outputs include an approved Statement of Architecture Work, refined statements of Businesses Principles, Business Goals and Business Drivers, Architecture Principles, a Capability Assessment, a Tailored Architecture Framework, an Architecture vision, a Communications plan. The Statement of Architecture Work needs to be clear on the scope of architectural work, the resources needed to complete the work and amount of time it would take to complete the work assuming the scope of architectural work is agreed and that all the resources required are available. The final step would be to agree the Statement of Architectural Work with stakeholders confirming the scope, schedule and confirming the availability of the necessary resources.
- C. I would start by establishing the architecture project and follow the appropriate project management method. I would identify stakeholders their concerns and business requirements then confirm and elaborate the business goals, business drivers and constraints. I would then evaluate the business capabilities and readiness for business transformation and define the scope. I would then develop the architecture vision, define the target architecture value proposition, KPIs and identify and mitigate all risks associated with the transformation effort. Finally, I would develop an Enterprise Architecture Plan and Statement of Work and secure approval from the relevant stakeholders.
- D. I would approach this by defining and establishing the architecture team and governance. This would be followed by agreeing and establishing the architecture principles. I would select and customize an architecture framework changing any terminology and selecting the right phases and customizing the structure of content and outputs from the chosen method. Finally I would select and implement and architecture tools. The outputs from this work would include an Organization Model for Enterprise Architecture, a Tailored Architecture Framework including method and content, the Architecture Principles, an initial architecture repository, restatement or references to business principles, business goals and business driver, a request for architecture work and the governance framework.

**Correct Answer: A**

**Section:**

#### QUESTION 24

An international Insurance company has grown with little consideration for rationalization and consolidation. There is no coordination between business unit and every one have managed its own applications. The CIO decided to establish an

Enterprise Architecture program within the enterprise to enable the company to expand to other markets in the next two years. The company has not any Enterprise Architecture Capability in place and the he CIO has set up



an Architecture

Board and called its first meeting. Refer to the scenario above

As Lead Architect you will establish a TOGAF 9 Enterprise Architecture program. Identify the best way to do this among the answers below.

Choose one of the following answers

- A. You tailor TOGAF 9 with the help of the Architecture Board to integrate it with the legacy procedures established by the PMO. You also examine the relationship of TOGAF with other processes and frameworks for governance, systems development and operations management. You then define the footprint of the enterprise architecture.
- B. As Lead Architect you create a Request for Architecture Work to allocate resources to work on the Architecture Vision. Based on the outcome of the Business Scenario technique you apply, you create the Common Systems Architecture to guide the choice of Solutions Building Blocks. These will be then used for integrating the systems across business units.
- C. You clarify the agreement on key business drivers and the scope of the enterprise architecture. You then clarify the requirements for architecture work. You define the architecture principles together with the help of the Architecture Board order to lead the architecture work. You consider how to tailor TOGAF 9 for this enterprise.
- D. You conduct an Architecture Maturity Assessment. You then use the TOGAF ADM to state the requirements for the integration of a new company information management system into the organization. You then list a set of business goals together with the Architecture Board that will be a reference to the enterprise architecture program.

**Correct Answer: C**

**Section:**

#### QUESTION 25

ARTI Dimensioning is a multinational that operates production facilities in 29 countries and sells its products in over 120 countries.

A consultancy firm has recommended a realignment that will enhance sharing of product information across business units. The implementation of this strategic realignment will require the development of integrated customer information systems and product information systems.

ARTI has a mature enterprise architecture practice and uses TOGAF 9 for the basis of the ARTI Architecture Framework (method and deliverables). The CIO is sponsoring an architecture development program that is going to start. The CIO is concerned about a potential disruptive result to the business of this activity and before proceeding with the architecture development he asked to evaluate the impacts on the company business. Refer to the scenario above You are the Lead Architect and you have been asked to recommend an approach to address the concerns raised. Based on TOGAF 9 recommend which of the following is the best answer.

Choose one of the following answers.

- A. A Risk Aversion Assessment should be conducted during the Implementation Governance phase to determine the degree of risk aversion of the proposed business transformation. After sharing the residual level of risk with the company chairman and the residual risk is not accepted, a set of parallel systems will be implemented to mitigate the risks.
- B. Your recommendation is to use risk management techniques to assess the risks associated with the proposed business transformation and ensure the existence of business continuity plans. During the Implementation Governance phase you conduct a residual risk assessment to manage risks that cannot be mitigated.
- C. During the Architecture Vision phase a risk assessment is conducted to mitigate initial risks and address those in the Architecture Contract signed in the Implementation Governance phase.
- D. Your proposal is to utilize a risk management framework during the Implementation Governance phase to verify the risks associated with the proposed transformation of the business. You then share with the concerned stakeholders the residual level on risk before the Architecture Contracts are released.

**Correct Answer: B**

**Section:**

#### QUESTION 26

FreshFruit Int. is an online American grocer. The Executive Board decided to implement a new strategy to expand the business to other markets.

The CIO is sponsoring an enterprise activity to support the expanded operations.

A new solution is rolled-out to replace the legacy online sales platform. A compliance review was performed to assess the solution implementation.

The result of the review highlighted a complaint from the development team stating that the new system is difficult to integrate with the existing warehouse automation systems. The Chief Architect is concerned that the complaint is not related to a real problem of the solution but is based on personal preferences of the development teams. Another interview with the project team is scheduled.

Refer to the scenario above You are the Lead Architect and an architect from your team leads the review team. You have to answer how, based on TOGAF 9, you should enable the review team to conduct the reviews successfully. Choose one of the following answers

- A. Meeting with the project architect you clarify the purpose of the review. You ask to perform an objective and fair review using the checklists to frame the review and clarify that you want them to identify the issues behind the implementation team complaints.

- B. You organize a meeting with the review team and state the importance to identify any non-compliance that may have come from the implemented solution.
- C. You organize a meeting with the review team and stress the importance of a high degree of compliance without any exception. The review should cover every aspect of the implementation and should criticize the implementation techniques.
- D. You verify that criteria for the program and the business objectives are mapped in the checklists that the project team prepared for the interviews. You confirm the checklist content to the project architect and stress the need to be objective and fair during the review process.

**Correct Answer: D**

**Section:**

#### QUESTION 27

TotalComms is a telecommunications company formed from the merging of other 2 telecommunication companies. The business operating model has been unified, the TOGAF 9 Architecture Board approved the outline Implementation and Migration Plan the detailed migration planning must now be approved. Your help is needed to work on the migration planning with all the key stakeholders to achieve an agreement.

Refer to the scenario above You are the Lead Architect asked to describe accordingly to TOGAF 9 the best way to address the following activities: The way the migration planning is conducted.

What is going to be implemented.

The stakeholders involved in the implementation.

The definition of the deliverables to use Choose one of the following answers

- A. The Chief Architect will conduct the Migration planning and then share it with the other domain architects.  
The migration plan will be formed by a list of projects, their priority, their costs and a recommendation on how to proceed. After the plan is shared with the Architectural Board members and any observation that may raise incorporated in the plan, any individual project will go in front of the board for the approval for resources for the next project increment. A GANT chart will be included to be used as a roadmap.
- B. The Migration planning will be conducted as a series of steps: confirming and then coordinating the corporate management frameworks involved; establishing clear business value for the deliverables; creating detailed resource estimates for the work to do; define priority of the work, sequence and then the Transition Architectures. After this, an Implementation and Migration Plan can be confirmed. The Portfolio Management, Operations Management and Business Planning teams should be involved in the implementation of the major deliverables. Once these have been completed, regular meetings will be done to enable the architecture to be kept up-to-date.
- C. Implementation and Migration Strategy will be used to define project plans focusing on scope, time and budget. The business value of each project is assessed and Project Managers will prepare submissions to the IT governance Board to ask for their funding and the Lead Architect will be active part of the board. The collection of project roadmaps and plans will be used to detail the EA Implementation and Migration Plan.
- D. This step will be conducted by the Enterprise Architecture team involving Business, Application, Data, Technology, and Security architects. They will implement the Transition Architectures and together will prioritize a list of activities and include the Architecture Building Blocks in an Implementation and Migration Plan and Roadmap. After this, the comments on the deliverables shared with lines of business and the members of the Executive Board are integrated, this to enable the funding on the Enterprise Architecture work.

**Correct Answer: B**

**Section:**

#### QUESTION 28

Scenario: Zephyr Enterprises

Please read this scenario prior to answering the question

Zephyr Enterprises specializes in the development of wind turbine blades for use in large-scale commercial wind energy production systems. Zephyr has manufacturing facilities located in Palm Springs, California, Omaha, Nebraska, and Winnipeg, Ontario. Each of these plants supplies a different manufacturer that builds and sells complete systems. The turbine blades are custom engineered to meet each manufacturer's design specifications. Until recently, most turbine blades were fabricated manually using molded fiber-reinforced plastics. However, recent improvements in composite materials, coupled with enhanced automated methods for precision application of materials during the molding process, have led to significant reduction in weight, increase in strength, and greatly improved blade longevity. Zephyr has pioneered the development of a proprietary automated process for continuous extrusion of the turbine blades. Patents have been filed to protect the process, but certain trade secrets must be closely guarded.

Zephyr has a mature Enterprise Architecture organization that is supported by a cross-functional Architecture Review Board. The Chief Information Officer and the Chief Operating Officer co-sponsor the Enterprise Architecture program.

Zephyr has used TOGAF and its Architecture Development Method (ADM) to develop its automated manufacturing processes and systems that are used to design, manufacture, and test the blade assemblies. They have recently updated to TOGAF 9 and have adapted the Zephyr Enterprise Architecture to closely follow the TOGAF 9 framework. All of Zephyr's IT architects have been trained and certified on TOGAF 9. Recently, an architecture project was completed that defined a standard approach for controlling the Automated Test System that is used at each plant to perform final quality assurance tests on each completed blade assembly. The Manufacturing Architecture Board approved the plan for immediate implementation at each plant.

An Architecture Contract was developed that detailed the work needed to implement and deploy the new Automated Test System controller. The Chief Engineer, sponsor of the activity, has expressed concern that a uniform process be employed at each site to ensure consistency.

Refer to the Zephyr Enterprises Scenario:

You have been assigned by the Lead Architect for the Automated Test System controller project to conduct Compliance Assessments at each manufacturing plant.

During the course of the assessment at the Omaha plant, you discover that the Distributed Data Acquisition System they have purchased uses a proprietary Remote Procedure Call (RPC) that utilizes kernel mode threads instead of the user mode threads that are specified in the Architecture Definition Document. In all other respects, the system meets the requirements stated in the Architecture Definition Document and seems to perform correctly.

You have been asked to describe the compliance of this system for the final report.

Based on TOGAF 9, which of the following is the best answer?

- A. You observe that all of the features in the Architecture Definition Document have been implemented in accordance with the specification, except for the RPC mechanism. Your recommendation is that the system be described as conformant.
- B. You observe that the system has many features in common with the Architecture Definition Document, and those features have been implemented in accordance with the specification. However, you note that the RPC mechanism has been implemented using features that are not covered by the specification. Your recommendation is that the system be described as consistent.
- C. You observe that the implementation of the RPC mechanism has no features in common with the Architecture Definition Document, therefore the question of its conformance should not be considered. Your recommendation is that the system be described as consistent.
- D. You observe that the system meets most of the requirements stated in the Architecture Definition Document and appears to work correctly. However, you note that the RPC mechanism has not been implemented according to the specification. Your recommendation is that the system be described as non-conformant.

**Correct Answer: D**

**Section:**

#### QUESTION 29

Scenario: Rollins Manufacturing

Please read this scenario prior to answering the question

Rollins Manufacturing is a major supplier in the automotive industry, headquartered in Cleveland, Ohio with manufacturing plants in Chicago, Sao Paulo, Stuttgart, Yokohama, and Seoul. Each of these plants has been operating its own Manufacturing Requirements Planning (MRPII) system, production scheduling, and custom developed applications that drive the automated production equipment at each plant.

Rollins is implementing lean manufacturing principles to minimize waste and improve the efficiency of all of its production operations. During a recent exercise held for internal quality improvement, it was determined that a significant reduction in process waste could be achieved by replacing the current MRPII and scheduling systems with a common Enterprise Resource Planning (ERP) system located in the Cleveland data center. This central system would provide support to each of the plants replacing the functionality in the existing systems. It would also eliminate the need for full data centers at each of the plant facilities. A reduced number of IT staff could support the remaining applications. In some cases, a third-party contractor could provide those staff.

The Rollins Enterprise Architecture department has been operating for several years and has mature, well-developed architecture governance and development processes that are strongly based on TOGAF 9. At a recent meeting, the Architecture Review Board approved a Request for Architecture Work from the Chief Engineer of Global Manufacturing Operations who is the project sponsor. The request covered the initial architectural investigations and the development of a comprehensive architecture to plan the transformation.

The Common ERP Deployment architecture project team has now been formed, and the project team has been asked to develop an Architecture Vision that will achieve the desired outcomes and benefits. Some of the plant managers have expressed concern about the security and reliability of driving their MRPII and production scheduling from a central system located in Cleveland. The Chief Engineer wants to know how these concerns can be addressed.

Refer to the Rollins Manufacturing Scenario

You are serving as the Lead Enterprise Architect of the newly-formed Common ERP Deployment architecture project team.

As the Common ERP Deployment architecture project team assembles for its initial meeting, many of the participants have voiced concerns about the sweeping scope of the initiative. Others are confident that they know a solution that will work. During the meeting, a number of alternative recommendations for how to proceed are put forward by members of the team.

You have been asked to select the most appropriate recommendation to ensure that the team evaluates different approaches to the problem and clarifies the requirements for the architecture.

Based on TOGAF 9, which of the following is the best answer?

- A. The team should hold a series of interviews at each of the manufacturing plants using the business scenario technique. This will then enable them to identify and document the characteristics of the architecture from the business requirements.
- B. The team should exercise due diligence and carefully research vendor literature and conduct a series of briefings with vendors that are on the current approved supplier list. Based on the findings from the research, the team should define a preliminary target Architecture Vision. The team should then use that model to build consensus among the key stakeholders.
- C. The team should create Baseline and Target Architectures for each of the manufacturing plants. A gap analysis between the architectures will then validate the approach, and determine the Transition Architecture needed to achieve the target state.
- D. The team should conduct a pilot project that will enable vendors on the short list to demonstrate potential solutions that will address the concerns of the stakeholders. Based on the findings of that pilot project, a complete

set of requirements can be developed that will arrive the evolution of the architecture.

**Correct Answer: A**

**Section:**

### QUESTION 30

Scenario: Vittronics Ltd.

Please read this scenario prior to answering the question

Vittronics Ltd. is a leading medical device manufacturer in the highly competitive market for Migraine Headache Pain Management (MHPM) devices. These tiny wireless devices are implanted in the brain and can deliver a precise electric shock when the wearable Pain Control Unit (PCU) detects an increase in stress induced by the onset of a migraine headache.

This technology will be a breakthrough in the treatment of this condition, and several competitors are striving to be the first to introduce a product into the market. However, all of them must demonstrate the effectiveness and safety of their products in a set of clinical trials that will satisfy the regulatory requirements of the countries in the target markets.

The Enterprise Architecture group at Vittronics has been engaged in an architecture development project to create a Secure Private Immersive Collaborative Environment (SPICE) that will allow researchers at its product development laboratories worldwide to share information about their independent clinical trials. The Vittronics Enterprise Architecture group is a mature organization that has been utilizing TOGAF for several years. They have recently upgraded to TOGAF

A. The Vittronics Architecture Development Method (VADM) is strictly based on the TOGAF 9 Architecture Development Method (ADM) with extensions required to support current good manufacturing practices and good laboratory practices in their target markets.

The SPICE project team has now completed the Business, Information Systems, and Technology Architecture phases and has produced a complete set of deliverables for each phase. Due to the highly sensitive nature of the information that is managed in SPICE, special care was taken to ensure that each architecture domain included an examination of the security and privacy issues that are relevant for each domain. A corresponding SPICE Security Architecture has been defined.

The Executive Vice President for Clinical Research is the sponsor of the Enterprise Architecture activity. He has stated that the changes to the SPICE architecture will need to be rolled out on a geographic basis that will minimize disruptions to ongoing clinical trials. The work will need to be done in stages and rolled out in geographical regions.

Refer to the Vittronics Ltd Scenario

You are serving as the Lead Architect for the SPICE project team.

You have been asked to recommend the approach to identify the work packages that will be included in the Transition Architecture(s).

Based on TOGAF 9, which of the following is the best answer?

B. Create an Implementation Factor Assessment and Deduction Matrix and a Consolidated Gaps, Solutions and Dependencies Matrix. For each gap, identify a proposed solution and classify it as new development, purchased solution, or based on an existing product. Group similar solutions together to form work packages. Identify dependencies between work packages factoring in the clinical trial schedules. Regroup the packages into a set of Capability Increments scheduled into a series of Transition Architectures and documented in an Architecture Definition Increments Table.

C. Determine the set of Solution Building Blocks required by identifying which Solution Building Blocks need to be developed and which need to be procured. Eliminate any duplicate building blocks. Group the remaining Solution Building

Blocks together to create the work packages using a CRLO matrix. Rank the work packages in terms of cost and select the most cost-effective options for inclusion in a series of Transition Architectures. Schedule the roll out of the work packages to be sequential across the geographic regions.

D. Use a Consolidated Gaps, Solutions and Dependencies Matrix as a planning tool. For each gap classify whether the solution is either a new development, purchased solution, or based on an existing product. Group the similar solutions together to define the work packages. Regroup the work packages into a set of Capability Increments to transition to the Target Architecture taking into account the schedule for clinical trials.

E. Group the Solution Building Blocks from a Consolidated Gaps, Solutions and Dependencies Matrix into a set of work packages. Using the matrix as a planning tool, regroup the work packages to account for dependencies. Sequence the work packages into the Capability Increments needed to achieve the Target Architecture. Schedule the rollout one region at a time. Document the progression of the enterprise architecture using an Enterprise Architecture State Evolution table.

**Correct Answer: A**

**Section:**

### QUESTION 31

Please read this scenario prior to answering the question

Worldwide Mobile is a mobile telecommunications company formed through a series of mergers and acquisitions. They are yet to fully integrate the customer service systems for the most recent acquisitions, and as result, customer service has been a major concern for the Chief Technology Officer.

Results for the last two quarters have shown that Average Revenue Per User (ARPU) and the customer retention (Churn) rate have fallen below the industry average. The Corporate Marketing group has published some new

finding about customer satisfaction. The customers appear to be switching to Air Light, a competitor, because of superior customer service. WorldwideMobile actually has better coverage in nearly all markets than Air Light, and good roaming agreement that keep rates low for business travellers. But customer satisfaction has remained low.

The Business Strategy group and the Enterprise Architecture group have conducted a high-level project to develop the enterprise-wide strategic plan. They have developed a business scenario which contains a good conceptual model of what needs to be done and also identifies the key requirements. This was used in preparing the proposal presented to the Executive Council and the Corporate Board.

The planning for the program has been underway for several months. WorldwideMobile has selected TOGAF 9 as the basis for its Enterprise Architecture.

The Corporate Board has approved funding for a multi-million Euro conversion to transition to a packaged Customer Service System. It is anticipated that the overall program will take five years to complete, but there are some tactical projects that can commence immediately to address the situation. The Executive Council has stated that the program should define specific initiatives to enable each regional business units to create an implementation of the Customer Service System. The implementation must meet the needs of the business unit and still provide the information needed to enable major improvements to the customer.

Refer to WorldwideMobile-2 Scenario

You are serving as the Lead Architect for the Performance and Integrity project of the Customer Service System program.

The project has been chartered to address the architecture(s) required to support the Customer Service System from an infrastructure perspective. At present time, the project team is conducting an architecture development project that is focused on the customer self service capability, which was defined as part of the earlier strategic planning activities. This capability will enable customers to access their accounts, pay bills, request account reviews, and provision services from any web-enabled device.

The project team has gathered information about the self-service capability, developed a business scenario, and used the results to define an Architecture Vision for achieving the capability. You have been asked to recommend the course of action to complete the project. Based on TOGAF 9, which of the following is best answer?

- A. In the remaining architecture definition phases, the project team should map out the capability in the Technology domain. In the Phases E and F, the capability should be broken down into a set of Solution Building Blocks that define the Target Architecture. Where possible, the Solution Building Blocks should be drawn from the Architecture Repository. The completed Architecture Definition Document and the Implementation and Migration Plan will be submitted for approval. Upon approval, the architecture team will conduct Compliance Assessments to ensure that the Target Architecture is properly implemented.
- B. In the remaining architecture definition phases, the project team should map out the capability across the Business, Information System and Technology domains. In the Phases E and F, the capability should be broken down into a set of increments that are sequenced into Transition Architectures that will lead to the realization of the Target Architecture. The resulting Solution Building Blocks will then provide the basis for the capability increment solutions. The complete Architecture Definition Document and the Implementation and Migration Plan will be submitted for approval. Upon approval, the architecture team will oversee the implementation process through monitoring Architecture Contracts and by conducting Compliance Assessments.
- C. In the remaining architecture definition phases, the project team should map out the capability across the Business, Information System and Technology domains. In the Phases E and F, the capability should be broken down into a set of increments that defines the Target Architecture. The Solution Building Blocks will provide the basis for the capability increment solutions. The complete Architecture Definition Document and the Implementation and Migration Plan will be submitted for approval. Upon approval, the architecture team will oversee the implementation process through monitoring Architecture Contracts and by conducting Compliance Assessments.
- D. The remaining architecture definition work should be focused on mapping out the technology and infrastructure capability in the Technology domain. In Phases E and F, the capability should be broken down into a set of Solution Building Blocks that will be implemented to realize the Target Architecture. The Solution Building Blocks will provide the basis for the completed Architecture Definition Document that will be submitted for approval. Upon approval, the implementation team will conduct Compliance Assessments to ensure that the self-service capability is compliant with the overall Enterprise Architecture.

**Correct Answer: B**

**Section:**

### QUESTION 32

Scenario: AGEX Inc.

Please read this scenario prior to answering the question

AGEX is a large, global commodities trading company which has been growing rapidly through a series of acquisitions.

Each new business is performing well in its markets. However, the lack of integration between headquarters and the business units has increasingly caused problems in the handling of customer and financial information. The inability to share information across businesses has resulted in lost opportunities to "leverage the synergies" that had been intended when the businesses were acquired. At present, each business unit maintains its own applications. Despite an earlier initiative to install a common application to manage customer, products, supplier, and inventory information, each business unit has different ways of defining each of these core elements and has customized the common application to the point where the ability to exchange information is difficult, costly, and error-prone.

As a result, AGEX has begun implementing a single Enterprise Resource Planning (ERP) system to consolidate information from several applications that exist across the lines of business. The Corporate Board is concerned that the new ERP system must be able to manage and safeguard customer information in a manner that meets or exceeds the legal requirements of the countries in which the company operates. This will be an increasingly important capability as the company expands its online services offered to clients and trading partners.

The CIO has formed an Enterprise Architecture department, and one of the primary goals in its charter is to coordinate efforts between the ERP implementation team and the business unit personnel who will be involved in the migration process. The CIO has also formed a cross-functional Architecture Review Board to oversee and govern the architecture.

After reviewing the available alternatives, and based on recommendations from the ERP vendor, AGEX has selected TOGAF 9 as the basis for its Enterprise Architecture program.

The CIO has endorsed this choice with the full support of top management.

Refer to the AGEX Inc. Scenario

You are serving as the Chief Architect.

As part of the process for establishing the Enterprise Architecture department, you have decided to create a set of principles to guide the activities.

You have been asked to recommend the best approach for this work.

Based on TOGAF 9, which of the following is the best answer?

- A. You define a set of principles that support the preferred best practices embodied in the Enterprise Architecture department charter. You publish the principles on the corporate intranet to ensure widespread acceptance and compliance.  
You then schedule regular periodic Compliance Assessments with individual business units to check that they have made satisfactory progress toward meeting the objectives and conditions embodied in the principles.
- B. You gather information from credible industry sources in the commodities business. Based on that, you assess current trends and apply that to defining a set of principles that embody best practices.  
You select architecture principles that do not conflict with each other and that should be stable. You ensure that all the principles are realistic and avoid including principles that are obvious.
- C. You examine the mission statements for AGEX and each of its businesses, together with the corporate value statements. Based on that, you define a set of principles and review with the CIO.  
When developing the principles you ensure that they actively promote the alignment of IT with the business strategies and initiatives of AGEX. You then seek the endorsement of the CIO and senior management.
- D. You examine the mission statements for AGEX and each of its businesses, together with the corporate value statements. Based on that, you work with the Architecture Review Board to define the principles.  
When developing the principles you ensure that they actively promote the alignment of IT with the AGEX business strategies. You then run a series of reviews with all the relevant stakeholders, including senior management, ensuring their support.

**Correct Answer: D**

**Section:**

### QUESTION 33

TP Banking is a strong financial institute with a well-known acquisition history with an internal IT department managing over 100 projects related to infrastructure and services.

The CIO has decided to create an Enterprise Architecture based on TOGAF 9 as reaction to the difficult market conditions. An Architecture Vision and a set of domain architectures were approved. The CIO is asking you (the Lead Architect) to define an Implementation and Migration Plan that realizes the vision already agreed with the stakeholders involved.

Refer to the scenario above You are leading a group of domain architects and you are working with the corporate PMO, the business strategy team and service operations. You are meeting the stakeholders to clarify how you want to proceed with the Implementation and Migration Plan.

Choose one of the following answers

- A. You propose to start collecting the existing deliverables describing the different domains in order to enable the Enterprise Architecture team to integrate them with the support of the operation management. Every domain architect will then evaluate the impact on the projects already planned for the domain. The single revised plans will be integrated together and consolidated into a strategic implementation and migration strategy defining an IT roadmap.
- B. You communicate the need for urgency. The projects already planned will be cancelled and the implementation of the new architecture vision will be set as first priority. A set of new projects will be defined to implement the new strategy. You will use the requirements from Phases B through D and define new projects for each one of the requirements. The use of defined interoperability architecture guidelines will then enable the project teams to work together and define a set of new point-to-point interfaces.
- C. You describe the concept of Transition Architectures and clarify that the business value can be achieved by all the projects delivering their increments in a coordinated approach. Capability gaps and project dependencies are analyzed for each domain this will then enable the projects to be organized in work packages. You will then agree on the roadmap for the implementation and migration strategy meeting with all the key stakeholders.
- D. You communicate the CIO's will to transform the corporation and then that he's seeking help from the domain architects to do that. The requirements are managed in order to enable every Architect to participate to the planning that will result in a detailed list of work activities with impact on the IT portfolio of projects. A five year Target Architecture will then be defined and a report will keep track of dependencies and factors assessment.

**Correct Answer: C**

**Section:**

### QUESTION 34

Carter Woods, a global furniture firm, wants to improve the efficiency of its sales force by replacing their legacy configuration and ordering systems based on manual and paper based processes with an online ordering platform. Carter Woods uses the Architecture Delivery Method from TOGAF 9. The CIO sponsored this activity and the Baseline Architecture was defined on the initial iteration defining: approach, scope and architectural vision including a set of architecture principles related to the Data domain:

Data is an asset.

Data is shared.

Data is accessible.

A set of aspects to clarify arose from the business analysis from the assumption to replace the legacy systems with an online centralized one. These main concerns are:

- To identify the changes to existing business processes.
- To identify the data entities that can be shared among the sales agents.
- To clarify how to keep the data secured.
- To identify the list of non-sales application to be integrated with the sales applications

Refer to the scenario above

You, as Lead Enterprise Architect, need to identify the most appropriate architecture viewpoints to address the concerns above mentioned.

Choose one of the following answers

- Depict the Business Architecture using a Role catalog and a Process/Event/Control/Product catalog. Depict the Data Architecture using a System/Data matrix, a Data Entity/Data Component catalog and Data Security diagram. Depict the Application Architecture using an Interface catalog. Define the Technology Architecture via a Network Computing/Hardware diagram.
- Depict the Business Architecture using a Business Interaction matrix and a Location catalog. Depict the Data Architecture using a Data Lifecycle diagram and a Data Migration diagram. Depict the Application Architecture using a Software Engineering diagram. Depict the Technology Architecture using a Communications Engineering diagram.
- Depict the Business Architecture using a Business Footprint diagram and a Location catalog. Depict the Data Architecture using a Data Migration diagram, System/Data matrix and Data Lifecycle diagram. Depict the Application Architecture using an Application Communication diagram. Depict the Technology Architecture using a Network Computing/Hardware diagram.
- Depict the Business Architecture using a Role catalog and Location catalog. Depict the Data Architecture using a System/Data matrix, Data Entity/Business Function matrix and Data Security diagram. Depict the Application Architecture using an Application Interaction matrix. Define the Technology Architecture via a Network Computing/Hardware diagram.

**Correct Answer: A**

**Section:**

#### QUESTION 35

Patterns & Co. is introducing a Commercial Off-the-Shelf (COTS) Market Analytics solution in order to improve its new delivery service.

Patterns & Co. has a mature enterprise architecture capability and the CIO is the sponsor of the enterprise architecture team. The business vision and requirements for the new system are defined. It includes a detailed business process analysis. The supplier has proposed a solution but the Architecture Board identified some of the project requirements not consistent with the adopted infrastructure standards. The CIO considered the risks and approved the implementation. The CIO has asked the EA team to execute the Phase G ensuring that the system performance KPIs are respected, the project remains within budget and security guidelines are met.

Refer to the scenario above As Lead Enterprise Architect you have to recommend a plan to implement the CIO decision. Choose the best answer according to TOGAF 9.

Choose one of the following answers

- You ask the supplier to modify the web server hardware and software components so they can meet the current infrastructure standards. You advise to execute a proof of concept to anticipate any coding issue. Then, after the agreement with the development leads for supporting the development, you will provide the project plan to the project manager and develop an Architecture Contract. A set of frequent operational reviews to monitor the solution's performance is then scheduled after the implementation is completed.
- You recommend the co-existence of a second web server standard and modify the company Standards Information Base adding this new technology. You ask the project architects to create an Architecture Contract with the development teams. You identify the need of a performance testing and a compliance review. You agree with the business on SLA and delivery dates. You identify re-usable procedures and objects.
- You eliminate the non-standard web server from the solution as recommended by the Architecture Board. You create a revised plan and Architecture Contract for the development stressing the re-use of standard technologies. You share the budget implication of this solution with a finance committee and inform the CIO of the long term cost benefits of this choice. You define periodical project management meetings to monitor compliance.
- You execute a risk analysis and set deliverables and timing requirements with the development team. You implement a detailed impact analysis of the chosen solution. You create an Architecture Contract and ask for the CIO's approval before implementing it. You test the solution just prior to implementation and deliver the project artifacts and store after the completion of the implementation.

**Correct Answer: B**

**Section:**

#### QUESTION 36

SureFlight Air Carrier has received approval for the acquisition of a regional carrier.

To integrate the new acquisition, a TOGAF based enterprise architecture program has been initiated. The CIO sponsors the activity supported by the Chief Architect. In Phase A within the initial iteration the CIO wants to ensure that the architecture activities are recognized among the various stakeholders of the enterprise.

Refer to the scenario above

You are a consultant supporting the Chief Architect that should explain how to identify and engage the stakeholders at this stage of the program. Identify the best answer accordingly to the TOGAF 9 guidelines. Choose one of the following answers

- A. Using the business scenarios technique you would identify supporting and not supporting stakeholders. Then you would list the set of viewpoints that are addressing the stakeholder concerns and share these with them.
- B. You first priority is to communicate with the regional carrier stakeholders developing a CommunicationsPlan to share main features and discuss opportunities with them.
- C. You conduct a pilot proof of concept during Phase A to demonstrate the technical feasibility to the stakeholders explaining the approach available from your preferred suppliers.
- D. You identify all the main stakeholders on both the acquired carrier and the rest of the enterprise. Using a stakeholder map, you classify and record their power in relation to this activity. You then focus on implementing the relevantviewpoints that can address the concerns of every main stakeholder identified in the stakeholders map.

**Correct Answer: D**

**Section:**

### QUESTION 37

McKinley Rockets is an enterprise that employs 20,000 men and women in five countries: UK, Italy, France, Spain and the Netherlands and its mission is to guarantee access to space offering space transportation, launch and management of satellite systems at low cost.

A TOGAF 9 mature Enterprise Architecture program is already established within the enterprise. McKinley Rockets strategy is to leverage in the USA shortage of satellite launches availability - that NASA created because of the Shuttle program shutdown - by acquiring an important merican space agency. This will ultimately allow McKinley Rockets to offer its services to the US market. The new acquired company NovaSpace is very successful but with outdated satellite monitoring systems. The CIO is sponsoring an activity to extend the McKinley Rockets' satellite monitoring applications to include the NovaSpace's satellites flock.

A task force of enterprise architects prepared an Architecture Vision and secured the approval. The Architecture Board decided to approve the vision, provided that the Design Definition Document is presented for review at phase D conclusion.

Refer to the scenario above

The Chief Architect asked you as Lead Integration Architect to use TOGAF 9 to recommend the best approach to design the Full Architecture and present it to the Architecture Board. Identify the best answer accordingly to the TOGAF 9 guidelines.

Choose one of the following answers

- A. You start with the Business Architecture and then address Technology, Application and Data domains. For every domain you select the relevant reference models, viewpoints, and tools. You develop a Target and Baseline Architecture Descriptions. Then perform Gap Analysis, resolve impacts across the Architecture Landscape and update the roadmap. Finally update the Architecture Definition Document.
- B. You start with the Business Architecture and then address Data, Application and Technology domains. You then Confirm management framework interactions for the Implementation and Migration Plan, Prioritize the migration projectsthrough the conduct of a cost/benefit assessment and risk validation. Then perform Gap Analysis and update the Architecture Definition Document.
- C. You start with the Business Architecture and then address Data, Application and Technology domains. For every domain you select the relevant reference models, viewpoints, and tools. You develop a Baseline and Target Architecture. Then perform Gap Analysis, assess the roadmap impacts and finally update the Architecture Definition Document.
- D. You start with the Business Architecture and then address Data, Application and Technology domains. For every domain you develop a Baseline and Target Architecture. Then perform Gap Analysis and update the Architecture DefinitionDocument.

**Correct Answer: C**

**Section:**

### QUESTION 38

Scenario: Global Mobile 1

Please read this scenario prior to answering the question

Global Mobile is a mobile telecommunications company formed through a series of mergers and acquisitions. They are yet to fully integrate the customer service systems for the most recent acquisitions, and as result, customer service has been a major concern for the Chief Technology Officer.

Results for the last two quarters have shown that Average Revenue Per User (ARPU) and the customer retention (Churn) rate have fallen below the industry average. The Corporate Marketing group has published some new findings about customer satisfaction. The customers appear to be switching to Air Light, a competitor, because of superior customer service. Global Mobile actually has better coverage in nearly all markets than Air Light, and good roaming agreements that keep rates low for business travelers. But, customer satisfaction has remained low.

The Business Strategy group and the Enterprise Architecture group have conducted a high-level project to develop the enterprise-wide strategic plan. They have developed a business scenario which contains a good conceptual model of what needs to be done, and also identifies the key requirements. This was used in preparing the proposal presented to the Executive Council and the Corporate Board.



The planning for the program has been underway for several months. Global Mobile has selected TOGAF 9 as the basis for its Enterprise Architecture.

The Corporate Board has approved funding for a multi-million Euro conversion to transition to a packaged Customer Service System. It is anticipated that the overall program will take five years to complete, but there are some tactical projects that can commence immediately to address the situation. The Corporate Board has placed one additional major constraint on the program. In addition to achieving the business outcomes directly related to improving overall customer service within each business unit, the Corporate Board expects the Target Architecture to produce an additional saving of at least 30% over current operating costs through energy efficiency initiatives, virtualization of servers and workstations, and expanded telecommuting and desk-sharing. This Green initiative is intended to become a model for future investments at all company facilities worldwide.

Refer to Global Mobile scenario

You have been engaged as a consultant to advise the Chief Architect on the best ways to approach to the implementation planning activities for this significant business transformation.

Based on TOGAF 9, which of the following is the best answer? (Is this the right answers to choose?)

- A. You recommend using conventional implementation planning techniques. The horizontal scope of the Green initiative would make the Capability-Based Planning approach used in the organization's TOGAF-based Enterprise Architecture framework difficult to manage and govern. This approach to planning was better applied within the vertical scope of a business unit.
- B. You recommend that the implementation planning activities be conducted using Capability-Based Planning. This is appropriate because the Green initiative is an enterprise-wide plan with a horizontal scope. Its metrics are aggregated at the enterprise level. It is crucial to gain business unit support and cooperation to achieve the broader business outcomes which will benefit all.
- C. The Capability-Based Planning approach used in the organization's TOGAF-based Enterprise Architecture framework is focused on business outcomes. The Green initiative is an infrastructure program that is technical in nature; therefore, it would not be appropriate to use the Capability-Based Planning approach. Instead, the Global Mobile systems development lifecycle approach should be utilized to develop the Solution Architecture.
- D. You recommend using conventional implementation planning techniques. The Capability-Based Planning approach is normally only used in public sector, defense-related programs. This approach is not appropriate for a private sector company.

**Correct Answer: B**

**Section:**

### QUESTION 39

Scenario: AGEX Inc.

Please read this scenario prior to answering the question

AGEX is a large, global commodities trading company which has been growing rapidly through a series of acquisitions.

Each new business is performing well in its markets. However, the lack of integration between headquarters and the business units has increasingly caused problems in the handling of customer and financial information. The inability to share information across businesses has resulted in lost opportunities to "leverage the synergies" that had been intended when the businesses were acquired. At present, each business unit maintains its own applications. Despite an earlier initiative to install a common application to manage customer, products, supplier, and inventory information, each business unit has different ways of defining each of these core elements and has customized the common application to the point where the ability to exchange information is difficult, costly, and error-prone.

As a result, AGEX has begun implementing a single Enterprise Resource Planning (ERP) system to consolidate information from several applications that exist across the lines of business. The Corporate Board is concerned that the new ERP system must be able to manage and safeguard customer information in a manner that meets or exceeds the legal requirements of the countries in which the company operates. This will be an increasingly important capability as the company expands its online services offered to clients and trading partners.

The CIO has formed an Enterprise Architecture department, and one of the primary goals in its charter is to coordinate efforts between the ERP implementation team and the business unit personnel who will be involved in the migration process. The CIO has also formed a cross-functional Architecture Review Board to oversee and govern the architecture.

After reviewing the available alternatives, and based on recommendations from the ERP vendor, AGEX has selected TOGAF 9 as the basis for its Enterprise Architecture program.

The CIO has endorsed this choice with the full support of top management.

Refer to the AGEX Inc. Scenario

You are serving as the Chief Architect.

You have been asked to recommend the approach to take in the Preliminary Phase to ensure that the Corporate Board's concern is addressed.

Based on TOGAF 9, which of the following is the best answer?

- A. You evaluate the implications of the Board's concern in terms of regulatory and security policy requirements. You then update the AGEX security policy to reflect the concern, ensuring that this policy is communicated across the organization. You allocate a security architecture team to ensure that security considerations are included in ongoing architecture planning. You then assess the security implications and agreements within the AGEX businesses and their suppliers.
- B. You evaluate the implications of the Board's concern in terms of regulatory requirements and their impact on business goals and objectives. Based on this understanding, you then issue a Request for Architecture Work to commence an architecture development project to develop a solution that will address the Board's concern.

You allocate a security architect to oversee the implementation of the solution in the ERP system that is being developed.

C. You start by clarifying the intent that the Board has for raising this concern. This enables you to understand the implications of the concern in terms of regulatory requirements and the potential impact on current business goals and objectives.

You propose that a security architect or security architecture team be allocated to develop comprehensive security architecture.

D. You evaluate the implications of the Board's concern by examining the potential impacts on business goals and objectives. Based on your understanding, you then update the current AGEX security policy to include an emphasis on the Board's concern.

In addition, you allocate a security architect to ensure that security considerations are included in the architecture planning for all domains.

**Correct Answer: A**

**Section:**

#### QUESTION 40

Scenario: Zephyr Enterprises

Please read this scenario prior to answering the question

Zephyr Enterprises specializes in the development of wind turbine blades for use in large-scale commercial wind energy production systems. Zephyr has manufacturing facilities located in Palm Springs, California, Omaha, Nebraska, and Winnipeg, Ontario. Each of these plants supplies a different manufacturer that builds and sells complete systems. The turbine blades are custom engineered to meet each manufacturer's design specifications. Until recently, most turbine blades were fabricated manually using molded fiber-reinforced plastics. However, recent improvements in composite materials, coupled with enhanced automated methods for precision application of materials during the molding process, have led to significant reduction in weight, increase in strength, and greatly improved blade longevity. Zephyr has pioneered the development of a proprietary automated process for continuous extrusion of the turbine blades. Patents have been filed to protect the process, but certain trade secrets must be closely guarded.

Zephyr has a mature Enterprise Architecture organization that is supported by a cross-functional Architecture Review Board. The Chief Information Officer and the Chief Operating Officer co-sponsor the Enterprise Architecture program.

Zephyr has used TOGAF and its Architecture Development Method (ADM) to develop its automated manufacturing processes and systems that are used to design, manufacture, and test the blade assemblies. They have recently updated to TOGAF 9 and have adapted the Zephyr Enterprise Architecture to closely follow the TOGAF 9 framework. All of Zephyr's IT architects have been trained and certified on TOGAF 9. Recently, an architecture project was completed that defined a standard approach for controlling the Automated Test System that is used at each plant to perform final quality assurance tests on each completed blade assembly. The Manufacturing Architecture Board approved the plan for immediate implementation at each plant.

An Architecture Contract was developed that detailed the work needed to implement and deploy the new Automated Test System controller. The Chief Engineer, sponsor of the activity, has expressed concern that a uniform process be employed at each site to ensure consistency.

Refer to the Zephyr Enterprises Scenario

You are the Lead Architect for this activity.

You have been asked to recommend the best approach to adopt to address the Chief Engineer's concern.

Based on TOGAF 9, which of the following is the best answer?

A. You create an Architecture Contract to manage and govern the implementation and migration process. If the contract is issued to an external party, you ensure that it is a fully enforceable legal contract. For internal development projects, you decide it is adequate to utilize a memorandum of understanding between the Manufacturing Architecture Board and the implementation organization.

You recommend that if a deviation from the contract is detected, the Manufacturing Architecture Board should modify the Architecture Contract to allow the implementation organization the ability to customize the process to meet their local needs. As a result, you then issue a new Request for Architecture Work to implement the modified Architecture Definition.

B. You create an Architecture Contract to manage and govern the implementation and migration process. If the contract is issued to an external party, you ensure that it is a fully enforceable legal contract. For internal development projects, you decide it is adequate to utilize a memorandum of understanding between the Manufacturing Architecture Board and the implementation organization.

You recommend that if a deviation from the Architecture Contract is detected, the Manufacturing Architecture Board grant a dispensation to allow the implementation organization the ability to customize the process to meet their local needs.

C. You create an Architecture Contract to manage and govern the implementation and migration process. If the contract is issued to an external party, you ensure that it is a fully enforceable legal contract. For internal development projects, you decide it is adequate to utilize a memorandum of understanding between the Manufacturing Architecture Board and the implementation organization.

You ensure that the Manufacturing Architecture Board reviews all deviations from the Architecture Contract, and considers whether or not to grant a dispensation to allow the implementation organization to customize the process to meet their local needs.

D. You create an Architecture Contract to govern the implementation and migration process at each site. If the contract is issued to an external party, you ensure that it is a fully enforceable legal contract. You ensure that the contract addresses the project objectives, effectiveness metrics, acceptance criteria, and risk management.

You then schedule compliance reviews at key points in the implementation process to ensure that the work is proceeding in accordance with the Architecture Definition. Based on the results, you ensure that the Manufacturing Architecture Board reviews all deviations from the Architecture Contract, and considers whether or not to grant a dispensation to allow the implementation organization to customize the process to meet their local needs.

**Correct Answer: C**

**Section:**

**QUESTION 41**

Scenario: Vittronics Ltd.

Please read this scenario prior to answering the question

Vittronics Ltd. is a leading medical device manufacturer in the highly competitive market for Migraine Headache Pain Management (MHPM) devices. These tiny wireless devices are implanted in the brain and can deliver a precise electric shock when the wearable Pain Control Unit (PCU) detects an increase in stress induced by the onset of a migraine headache.

This technology will be a breakthrough in the treatment of this condition, and several competitors are striving to be the first to introduce a product into the market. However, all of them must demonstrate the effectiveness and safety of their products in a set of clinical trials that will satisfy the regulatory requirements of the countries in the target markets.

The Enterprise Architecture group at Vittronics has been engaged in an architecture development project to create a Secure Private Immersive Collaborative Environment (SPICE) that will allow researchers at its product development laboratories worldwide to share information about their independent clinical trials.

The Vittronics Enterprise Architecture group is a mature organization that has been utilizing TOGAF for several years. They have recently upgraded to TOGAF

A. The Vittronics Architecture Development Method (VADM) is strictly based on the TOGAF 9 Architecture Development Method (ADM) with extensions required to support current good manufacturing practices and good laboratory practices in their target markets.

The SPICE project team has now completed the Business, Information Systems, and Technology Architecture phases and has produced a complete set of deliverables for each phase. Due to the highly sensitive nature of the information that is managed in SPICE, special care was taken to ensure that each architecture domain included an examination of the security and privacy issues that are relevant for each domain. A corresponding SPICE Security Architecture has been defined.

The Executive Vice President for Clinical Research is the sponsor of the Enterprise Architecture activity.

Refer to the Vittronics Ltd Scenario:

You are serving as the Lead Architect for the SPICE project team.

As required by TOGAF, the SPICE project team recently completed a Business Transformation Readiness Assessment in Phase A (Architecture Vision). In that assessment, it was determined that there are risks associated with the adoption of the Immersive Collaborative Environment. Despite a clear expression of the vision and the business need for utilizing SPICE to accelerate the clinical trials, the researchers have been resisting the change because of concerns about safeguarding individually identifiable information about the subjects who were participating in the trials.

You have been asked to recommend how this situation be managed in the implementation planning phases.

Based on TOGAF 9, which of the following is the best answer?

B. You decide that in Phase E, the team creates an overall solutions strategy that can guide the Target Architecture implementation and structure the Transition Architectures. You check that there is consensus before proceeding.

C. You decide to return to Phase A, where the team should brainstorm a technical solution that mitigates the residual risks presented by the privacy issue. Then, during Phase D, you will direct the team to develop an Architecture BuildingBlock to manage the security risks. After that, the team should select Solution Building Blocks that mitigate all of the identified risks and revise the Requirements Impact Statement to reflect the changes to the high-level solutions strategy and migration plan.

D. You decide that in Phase E, the team review the Business Transformation Readiness Assessment and identify, classify, and mitigate the risks associated with the identified readiness factors. If the risks can be satisfactorily mitigated, then you would continue to define a high-level solutions strategy that includes the Transition Architectures needed to make the change culturally and technically feasible.

E. You decide that in Phase E, the team determines an approach to implementing an overall strategic direction that will address and mitigate the risks identified.

**Correct Answer: B**

**Section:**

**QUESTION 42**

Scenario: Florian Flowers BV

Please read this scenario prior to answering the question

Florian Flowers BV is an international agricultural company exporting flowers and seeds worldwide. Florian is headquartered in Rotterdam in the Netherlands, and has sales and distribution centers in over 60 countries worldwide. Several of these centers include administrative, manufacturing, and research facilities.

To achieve full integration of their research capabilities with their development centers located in various climate zones, Florian wants to develop strong self-directed teams in each location. Florian also wants to define new business models that are profitable while reducing their impact on the environment. Florian management is deeply committed to ensuring that the company is a world leader in socially responsible seed development with a business strategy that focuses on profitability through environmentally friendly operating processes.

Florian's international operations are subject to various legal and regulatory requirements. In areas such as genetically modified seeds, governmental controls are strictly enforced and compliance is critical. Recently a competitor was heavily fined for violating the regulations in a country where it was developing pest-resistant seeds.

The Governing Board is concerned, and as a result has approved the expenditure of resources to establish an Enterprise Architecture program. They have requested to be informed about the status of projects that could impact regulatory compliance. They also want to enable the corporate legal staff and auditors to analyze proposed architectures to ensure that they are within the legal guidelines for a given location. In addition, the research organization should be able to see that the architecture is appropriate for its needs.

TOGAF 9 has been mandated as the guiding framework for the development and evolution of the Enterprise Architecture practice.

Refer to the Florian Flowers BV Scenario

Florian management has engaged you as the Lead Consultant to assess the current situation.

You have been asked to recommend an approach that would enable the development of an architecture that addresses the needs of all these parties.

Based on TOGAF 9, which of the following is the best answer?

- A. Depending on the nature of the architecture, a set of models should be created that can be used to ensure that the system will be compliant with the local regulations. Stakeholders should be able to view the models to see that their concerns have been properly addressed.
- B. Each architecture activity should be developed using a consistent modeling approach that is uniform across all architecture projects. Each architecture should be defined based on this fixed set of models so that all concerned parties can examine the models to ensure that their issues and concerns have been addressed.
- C. For those groups that have sufficient power and level of interest, a special report should be created that summarizes the key features of the architecture with respect to the particular location. Each of these reports should reflect the stakeholders' requirements.
- D. It would be beneficial to develop a stakeholder map that allows the architects to define groups of stakeholders that share common concerns. A set of views should be defined that addresses the concerns each group. Architecture models can then be created for each view to address the stakeholders' concerns.

**Correct Answer: A**

**Section:**

#### QUESTION 43

Chiamin Metals is a leading world-wide manufacturer for continuous casting and bottom pouring powders. In addition to mould powders, the company also produces cored wire for secondary metallurgy. Chiamin Metals offers a variety of products and uses a paper-based catalog to sponsor them. A new CIO has joined the enterprise and has set up a team of Enterprise Architects following the TOGAF 9 practice. The main challenge is now to offer to Chiamin Metals customers a centralized and reliable entry point for their request via the implementation of a global online portal. This will allow the management of new marketing activities and will enable the new Chiamin Metals' ecommerce service.

Refer to the scenario above

You are the Chief Architect and the CIO asked you to present an Architecture Vision to address the above business problem. Identify the best answer accordingly to the TOGAF 9.

Choose one of the following answers

- A. You identify key stakeholders, their concerns, and define the key business requirements to be addressed in the architecture engagement and generate a Stakeholder Map. You Evaluate business capabilities and execute a Business Transformation Readiness Assessment. You apply the Business Scenarios technique to create a high-level view of the Baseline and Target Architectures also based on the stakeholder concerns, business capability requirements, scope, constraints, and principles.
- B. As requested by the CIO you focus on the Architecture Vision documentation and apply the Business Scenarios technique to create a high-level view of the Baseline and Target Architectures also based on the stakeholder concerns, business capability requirements, scope, constraints, and principles.
- C. You create a high-level view of the Target Architectures and then present them to the CIO.
- D. As requested by the CIO you focus on the Architecture Vision and create a detailed view of the Baseline Architectures. This is done for Business, Data, Application and Technology domains and then presented to the CIO using the Architecture Definition Document.

**Correct Answer: A**

**Section:**