Module 19 : A Phase that manages post-implementation Changes and other Change Requests of simple to complex kinds

How to Proceed :

A. Part 1 : First read the immediate portion, which is a Summary portion : Part 1 is for reading right now

   This portion is important for

   1. Understanding TOGAF for practical purposes – Supplement class session understanding with this
   2. For Certification purposes, Level 1 and Level 2

B. Part 2 : Go through and workout the exercises in the Part 2 : Module19Questions&Answers. Very helpful for Certification preparation

C. Part 3 : Later when you find more time, do go through portion which says Part 3 : Detailed Courseware. That portion is useful for getting extra grades in Certification and for more proper understanding of TOGAF. Some sections of it are quoted from internet sources and from good authors as discovered by our Participants in earlier courses.

   In this Part 3, Case Study is for understanding purpose only. Not relevant for Certification.

   For a more deeper understanding, Refer to Case Study file :

   CompCasePhH

   Detailed portions under : TOGAF recommended Template format may be generally understood and skipped till you get to practice TOGAF in your job. Those practicing TOGAF in their Enterprise may like to tailor TOGAF documentation along with the Templates.

Part 1 : Summary portion

You may like to first read this Quick Look : Glossary and Acronym

Change Management : The goal of an architecture change management process is to ensure that the architecture achieves its original target business value. This includes managing changes to the architecture in a cohesive and architected way.

Value and change Management, considered together : The value and change management process, once established, will determine:

- The circumstances under which the Enterprise Architecture, or parts of it, will be permitted to change after deployment, and the process by which that will happen
- The circumstances under which the architecture development cycle will be initiated again to develop a new architecture

Why is this considered as a governance related Phase ?

Governance will have to handle the co-ordination of these Requests for Change, plus there needs to be a lessons-learned process to allow for problems with the recently delivered increments to be resolved and changes made to the Target Architectures being designed and planned.

ADM – Phase H : Architecture Change Management

Establishing procedures for managing change to the new architecture

 Change Management

When and how to effect change requests that are accepted

What stage to look at Change ?

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

How and why does Changes arise ?

Business driven ? Phase A triggered, Also in : Phase B, Phase E, Phase F

Technology advancement driven ? Mostly Phase A triggered

Who desires change ?

LOB

Capability Initiative that aligns to State-Of-Art

Internal reasons that triggered EA to look at change

To ensure that the architecture achieves its original target business value, by responding to the needs of the Enterprise -

Architectural Change is an activity of

responding to needs of the Enterprise

Which of these changes, when ?

Top Level and External Change Requests

During any one of Phase B, C, D, Or even E or F ?

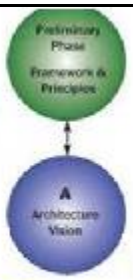
From a Phase onwards, like C onwards through D ,,,

Change Requests during B, D, A, T that most are familiar with

Last Minute Change Requests

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

Change Requests after Handing over



Top Level and External Change Requests

During any one of Phase B, C, D, Or even E or F ?

A change in a Domain Architecture needed after that version slice is completed : During any one of B, D A or T, but before the next version work in other B, D A or T Domains are not taken up yet

Say a change that affects TA 0.2 which was reviewed and taken as complete. But TA 0.2 needs a change and not any other version slices of BA, AA, DA or TA

From a Phase onwards, like C onwards through D ,,,

Change Requests during B, D, A, T that most are familiar with

Last Minute Change Requests

A change in Domain Architecture needed, say in completed version slice of B, for which version work is completed further in D, A, T already

Say BA 0.9 needs a change that involves revisiting one or more of DA, AA, TA work that is taken as complete

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

Change Requests after Handing over

Changes which are not allowed in the above two situations will be the majority lot. These Change Requests are to be accumulated in Requirement Repository and to be looked into only when Phase G for the originally intended Project Portfolios and the Charters considered in Phase E and F are fully implemented and handed over.

Think : Phase H ensures what ?

Ensures that the architecture responds to the needs of the enterprise

Answer : When there is a real need, whenever it is, EA Team will respond

Prepares organization for successful TOGAF architecture projects :
Grand Architecture Plan
– Preliminary Phase Develops Baseline and Target Architectures and analyzes the gaps
– All other Phases have a portfolio specific task in achieving the same

Phase H is not really the last Phase. It is a Phase that is always 'alive'

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

ABOVE QUESTION, IN LEVEL 1 :  1901

Q : Complete the sentence : Phase H

_____

A. Prepares the organization for successful TOGAF architecture projects
B. Develops Baseline and Target Architectures and analyzes the gaps
C. Prepares and issues Architecture Contracts
D. Ensures that the architecture responds to the needs of the enterprise
E. All of these

Answer : D When there is a real need, whenever it is, EA Team will respond

Explanation :

Prepares organization for successful TOGAF architecture projects – Preliminary Phase
Develops Baseline and Target Architectures and analyzes the gaps -Phases B, C, D
Prepares and issues Architecture Contracts - Phase G

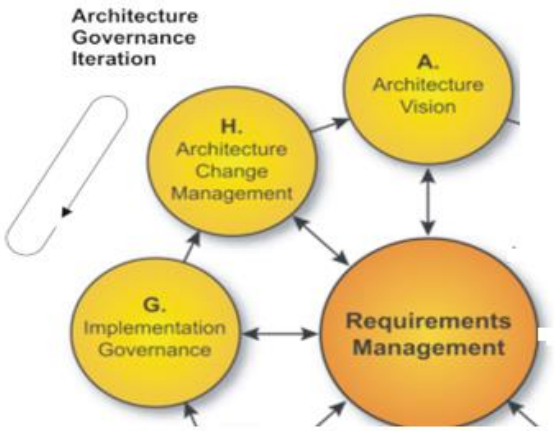
Objectives / techniques of Architecture Change Management, Phase H are to :

- Ensure that the Architecture Lifecycle is maintained

  When needed changes are not effected, Architectural path of Capability Improvement is broken

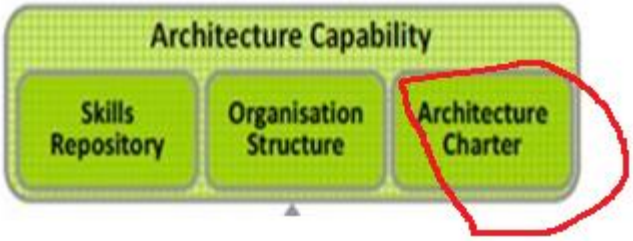
- Ensure that the Architecture Governance Framework is executed

  Because changes are accommodated as per Governance guidelines; not just because they arise



- Ensure that the Enterprise Architecture Capability meets current requirements

Really needed and accepted changes reflect current and important continuity and adds value to the Architecture Charter



Ensure – Lifecycle continuity

Ensure – Change Management as a Governance function

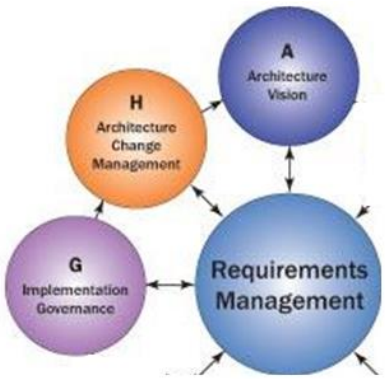
Ensure – Architecture is in tune with Requirements

Phase H Objectives

Maintain Architecture Lifecycle

Architecture Governance Framework is executed properly

Enterprise Architecture Capability enhanced regularly

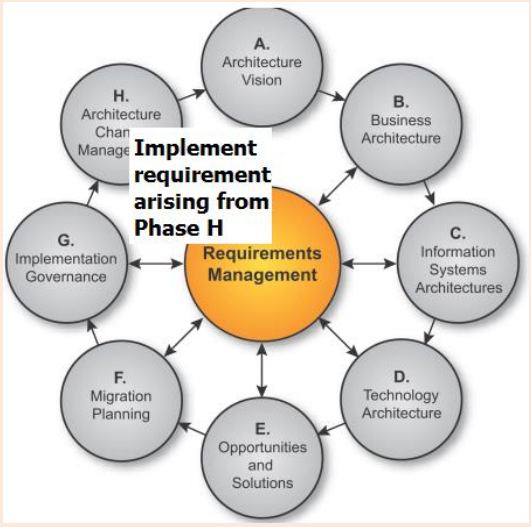


In Requirement Management Phase :

Identify changed requirements and record priorities :

when will these come up ?

Changed requirements can come in through any route.



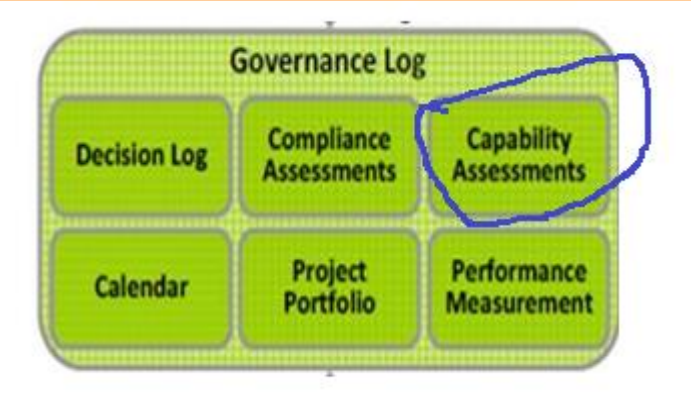
Requirement Documents for next Phase

Can trigger suddenly due to approved change request

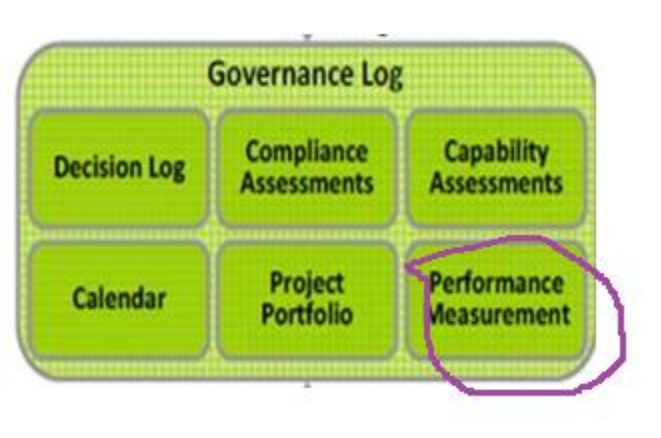
Impact Statement

Phase H Techniques and Objectives

Continue to be fit-for-purpose



Assessing performance and making recommendations for change



Assessing changes to framework and principles

Establishing change management process on completion of Phase G

Maximizing the business value

Operating Governance Framework

Simplification Change : Handled via local change management techniques

Often driven by a requirement to reduce investment, say by optimized use

Incremental Change : Handled via local change management techniques, or through partial re-architecting

Mostly driven by a requirement to derive additional value from existing investment

Re-architecting Change : ADM cycle, again

- **Simplification Change** : A simplification change **can normally be handled via local change management techniques**

During any one of Phase B, C, D, Or even E or F ?

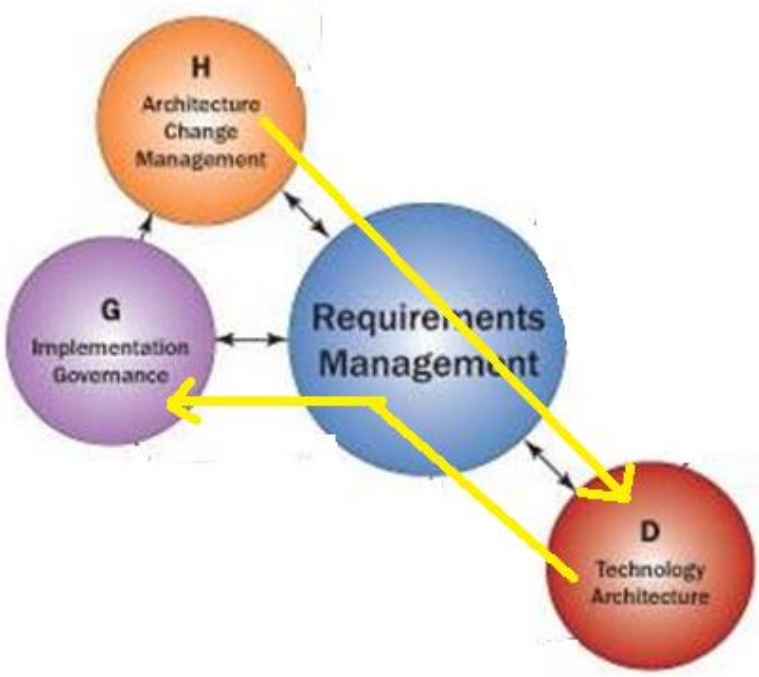
~~From a Phase onwards, like C onwards through D ,,,~~

~~Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?~~

Changing only RAM capacity of a Server

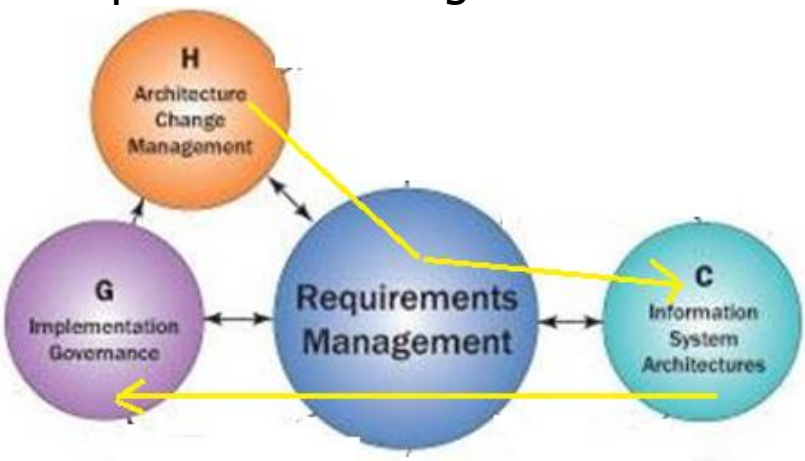
Changing a Server to higher configuration, without change of software

- Go to Phase D and come back via Requirement Management



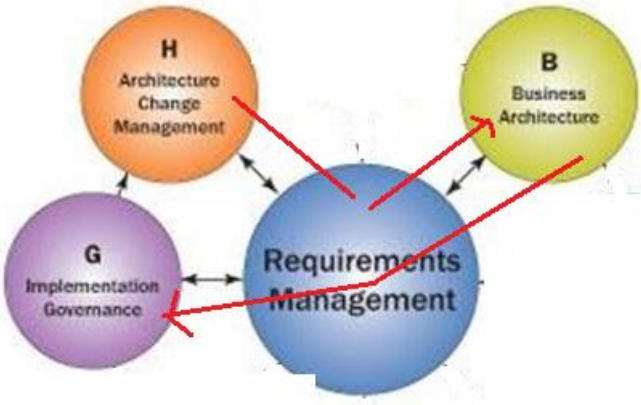
Changing a Micro Service : Say small part of Payment collection logic

- Go to Phase C and come back via Requirement Management



Changing the way data is acquired by end-user, without any change in screen or other parts of the software

- Go to Phase B and come back via Requirement Management



- **Incremental Change** : An incremental change may be capable of being handled via local change management techniques, or it may require partial re-architecting, depending on the nature of the change

EA can ask more than one Domain Segment Architect to accept the change and effect it immediately; May not go back to Phase A for change of scope but in only a re-architecting done within Phases B, C, D

~~During any one of Phase B, C, D, Or even E or F ?~~

From a Phase onwards, like C onwards through D ,,,

~~Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?~~

BA onward, minor change : Need one information to user which can easily be calculated by the application and shown on screen

Affects BA artifact and AA SBB

AA onward, minor change : Calculation logic needs different piece of data

Affects AA SBB and DA SBB

DA onward, minor change : Data volume needs a different server where database can be hosted

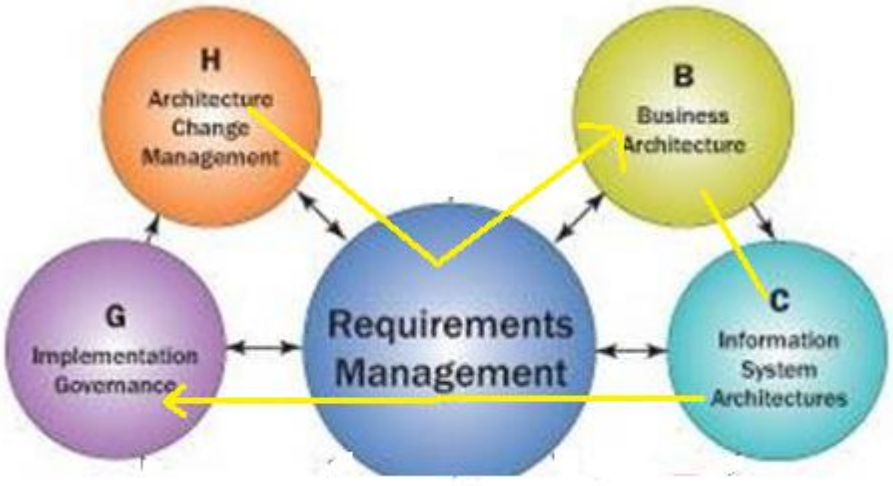
Affects DA SBB and TA SBB

EA can ask more than one Domain Segment Architect to accept the change and effect it immediately; May not go back to Phase A for change of scope but in only a re-architecting done within Phases B, C, D

An incremental change is driven by a requirement to derive additional value from existing investment

Changing the business Use Case Scenario such that it results in change of some application portion and some Data portion

- Go to Phase B, then to C and come back via Requirement Management



Say BA 0.9 needs a change that involves revisiting one or more of DA, AA, TA work that is taken as complete

Value based Change Management process

Leading to **Re-architecting Change –**

Say next release work, starting fresh from Phase A

The Architecture, or parts of it, will be permitted to change during or just after deployment. This is to support Value enhancement.

Innovative solution or RFC drives a change

Technology-related drivers :

New Technology, Retiring Technology,

Asset Cost Optimization, Standardization

Re-architecting Change : A re-architecting change requires putting the whole architecture through the architecture development cycle again – Go to Phase A and do a fresh start with the focus of these Change Requests as an Architectural Project by itself

ADM cycle, again

~~During any one of Phase B, C, D, Or even E or F ?~~

~~From a Phase onwards, like C onwards through D ,,,~~

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

Enterprise Mobility over many existing applications such that employees can access their work screens from anywhere

Vision itself changes for a portfolio of existing applications. A few Greenfield applications may also be added

Recollect key points in Phase A : Architecture Vision :

Business Value : Initial assigning of notional and relative levels of value for each project / portfolio of projects

Stakeholder Map Matrix – concerns

- High Level Business Scenarios - Business Case - KPIs

Risks : business risk for the portion covered in the Vision are identified

Business Capabilities of Enterprise in raising to level expected by

these enhanced projects

Assessing the Readiness for Business Transformation in the Enterprise

A re-architecting change is driven by a requirement to increase investment in order to create new value for exploitation.

Factors that relate to Change

Phase H involves

Continuous monitoring for :

new developments in technology

changes in the business environment

dynamic architecture

Aiming at : Flexibility to evolve rapidly

Monitoring business growth

Monitoring and decline

Maximizing Business Value :

Capacity measurement and recommendations for planning

Monitor Business and Technology Changes

Evolve dynamically – On Growth and Decline

Obtain optimum Business Value for the Enterprise

Three Ways to Change

Strategic, top-down (capital – capex)

Bottom-up (opex) for infrastructure : operations management

Project increments : ongoing projects

Change Management : Phase H : One Look Summary

Procedure to Mange Change is prescribed here

Actual change Request can arise from Phase A to any other Phase

This Phase only manages Change Requests in a controller manner

Focus is on Continuous Monitoring, looking for causes for change

Also on Capacity measure to insure against running into under-capacities

Change is again focused on Business Value increment

Focus is doubly on drivers for change – Technology, Business Environment

Steps include, not necessary in strict sequential order :

What is the Value and Outcome and is there a need for a change thereon ?

Establishing Value Realization Process

Change based Realization Process

Find out the outcomes

From **Case Study** :

Nice to Know Box

Influenced business projects to exploit the Enterprise Architecture for value realization (outcomes)

EAs take action to continually exploit value realization as outcomes

outcomes

Deploying Monitoring Tools

Make sure that right tools and techniques which can monitor the parameters that may lead to changes are deployed

How to monitor ?

Ensure monitoring tools are deployed : towards technology changes, business changes and more

From **Case Study** :

Nice to Know Box

With CD / CI, Cloud Native and other enabling techniques being in use for the e-Commerce project, the following are necessary :

Site Reliability Engineering (SRE) bridges the gap between development and operations, combining software and systems engineering to build large-scale and highly protected systems. It uses automation and orchestration capabilities to scale security and performance, ensuring sites are reliable and efficient.

Site reliability engineering is critical to many Cloud, DevOps and automation initiatives, and includes tactics like:

- Test coverage
- Load balance testing
- CI/CD best practices
- Modernizing legacy systems
- Executing integrations
- Platform configuration management

technology changes,

business changes,

capability maturity

Monitoring them

Changes may introduce fresh risks. Have the plan to manage them **Recommendations for Managing Risks**

Changes go with Risk

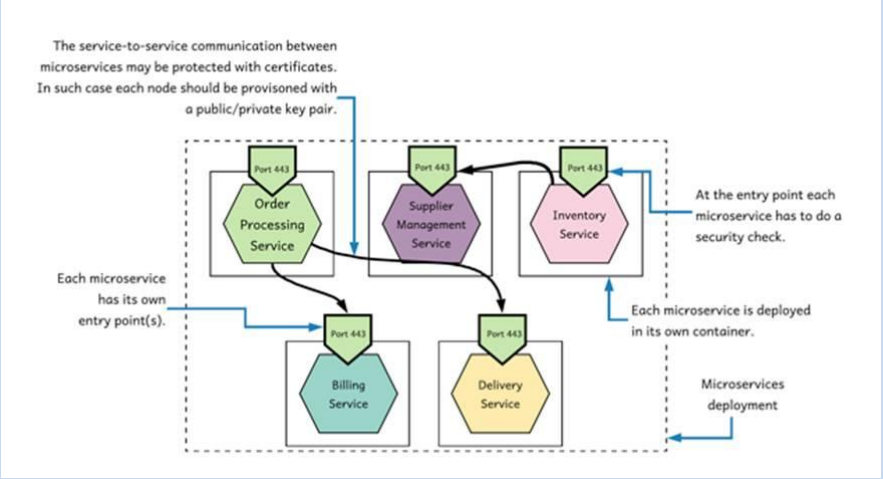
Enterprise Architecture risks that could arise due to Changes

From **Case Study** :

Nice to Know Box

Manage Enterprise Architecture risks and provide recommendations for IT strategy.

As the number of microservices increases, managing them gets more challenging. It is important that the management aspects are planned before or while they are being built. While the modularity helps, things can very quickly get out of hand if not managed well.



Have an analytical process to review and assess the change impact

Prescribing Analysis Process for Architecture Change Management

A Process that is analytical

Reviews, Assessments and so on

From **Case Study** :

Nice to Know Box

The EA Team, in coordination with the Operations Team, and on a continues basis :

Analyses performance

Conducts Enterprise Architecture performance reviews with service management

Assesses Change Requests and reporting to ensure that the expected value realization and Service-Level Agreement (SLA) expectations of the customers are met

Undertakes a gap analysis of the performance of the Enterprise Architecture

Ensures that change management requests adhere to t**he Enterprise** Architecture Governance and framework

Change proposals to be in tune with Performance Targets

Developing necessary Change Requirements to Meet Performance Targets

Change to drive performance

Actions to meet performance targets

From **Case Study** :

Nice to Know Box

The EA Team, from time to time, makes recommendations on change requirements to meet performance targets and development of position to act

Change Management and Governance go together

Manage Governance Process relating to Change

It is part of Governance

Interacting with the Architecture Governance Board

From **Case Study** :

Nice to Know Box

We do have a Governance Board. How come the EA Team is asked to do Governance ?

This step really means playing a role as part of the Change Management, which is a Governance function.

Arranging meeting of Architecture Board for considering major changes.

Hold periodical meetings with the Architecture Board with the aim to decide on handling changes (technology and business and dispensations)

Ensure that Change Requests that are accepted do get into the ADM at the right Phases (not necessarily a fresh Phase A always)

Activate the Architectural Process at appropriate Phase to Implement Change

Action taken all the time, but also for new Phase A

Action on changes implemented in this Phase and issuance of new Request for Architecture Work

From **Case Study** :

Nice to Know Box

EA Team produces a new Request for Architecture Work and request for investment before every fresh Phase A. It is planned for Year 2 and Year 3

EA Team further ensures that any changes implemented in this Change Management Phase at any time are captured and documented in the Architecture Repository

Recollect : What stage to look at Change ?

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

Documents Updated in this Phase :

Requirement Impact Statement

Architecture Change Request

A MUST READ Summary of the steps of Phase H : Change Management

What is the Value and Outcome and is there a need for a change thereon ?

Make sure that right tools and techniques which can monitor the parameters that may lead to changes are deployed

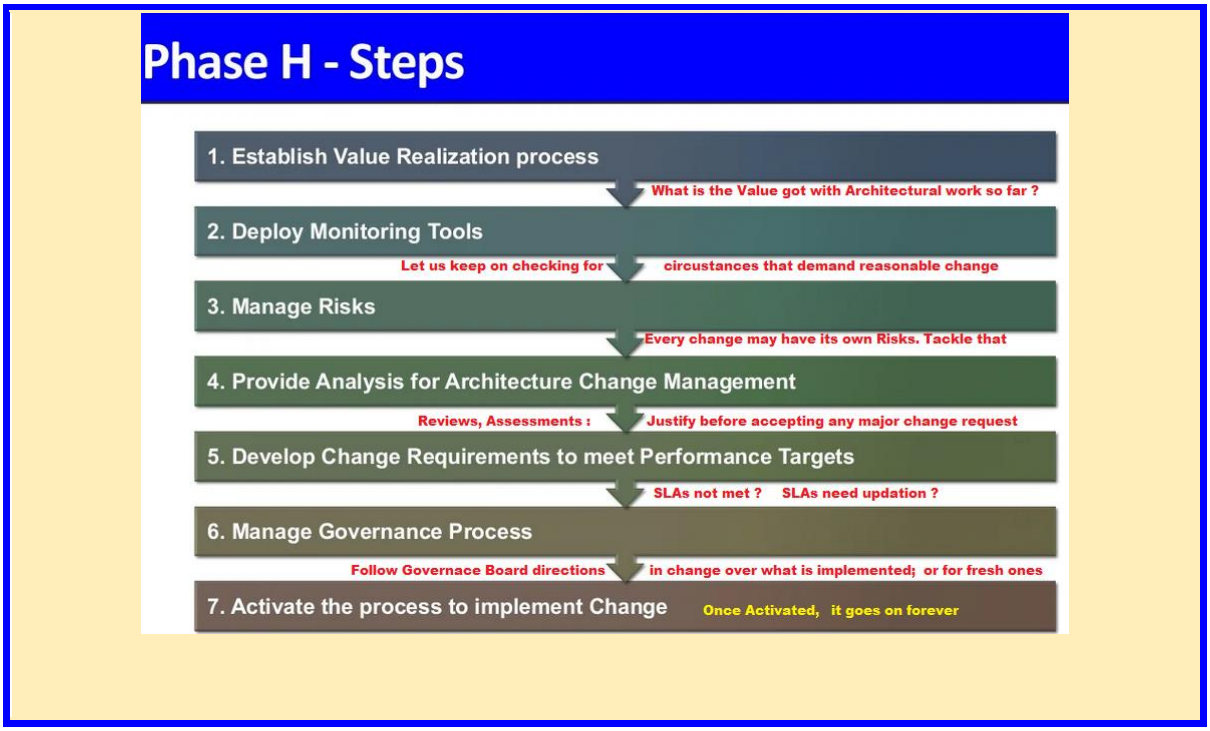
Changes may introduce fresh risks. Have the plan to manage them

Have an analytical process to review and assess the change impact

Change proposals to be in tune with Performance Targets

Change Management and Governance go together

Ensure that Change Requests that are accepted do get into the ADM at the right Phases (not necessarily a fresh Phase A always)



Part 2 : Module 19 Questions and Answers

(Also Explanations)

Please answer questions appearing below on a piece of paper and then check the answer and explanation appearing immediately below the questions. Some Questions may be on earlier modules too.

You can choose the ones you want to answer now and keep the rest for a workout on your own later on.

The pictures that appear next to the question is only to break the monotony and has no special meaning.

The star rating gives you a clue of the relative importance of questions, from Certification viewpoint. Three-star questions may appear more often than two star and so on

Think : Phase H ensures what ?

Answer :

Ensures that the architecture responds to the needs of the enterprise

When there is a real need, whenever it is, EA Team will respond

Prepares organization for successful TOGAF architecture projects :
Grand Architecture Plan
– Preliminary Phase Develops Baseline and Target Architectures and analyzes the gaps
– All other Phases have a portfolio specific task in achieving the same

Phase H is not really the last Phase. It is a Phase that is always 'alive'

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

1901 Complete the sentence : Phase H _____

A. Prepares the organization for successful TOGAF architecture projects
B. Develops Baseline and Target Architectures and analyzes the gaps
C. Prepares and issues Architecture Contracts
D. Ensures that the architecture responds to the needs of the enterprise
E. All of these

Answer : D

Explanation :

When there is a real need, whenever it is, EA Team will respond

Prepares organization for successful TOGAF architecture projects – Preliminary Phase
Develops Baseline and Target Architectures and analyzes the gaps -Phases B, C, D

Prepares and issues Architecture Contracts - Phase G

1902  Which one of the following is a change that can always be handled by change management techniques ?

A. Incremental change
B. Re-architecting change
C. Simplification change

Answer : C

Explanation :

Simplification change pertains to ones raised by a stakeholder during a Review or one discovered during the Impact Analysis in Phases B, c or D. If the change is accepted by EA, then the Domain Solution Architect is asked to effect the change immediately.

See : **15.5.2 Enterprise Architecture Change Management Process**

The approach is based on classifying required architectural changes into one of three categories :

■ **Simplification change**: a simplification change can normally be handled via change management techniques

■ **Incremental change**: an incremental change may be capable of being handled via change management techniques, or it may require partial re-architecting, depending on the nature of the change

■ **Re-architecting change**: a re-architecting change requires putting the whole architecture through the architecture development cycle again

1903  Which of the following would require an architecture redesign ?

A. Re-alignment of foundation architecture due to strategic change
B. Technology change that required refresh of technological architecture
C. New technology that can reduce the infrastructure
D. Bottom up change due to operation issues

Answer : A

Explanation :

Any strategic change would mean going back to Phase A for a full look of the Requirement. Sometimes it needs to go back to Preliminary Phase from Phase A.

See under : **15.5.1 Drivers for Change**

In addition, there are business drivers for architecture change, including :

■ Business-as-usual developments

■ Business exceptions

■ Business innovations

■ Business technology innovations

■ Strategic change

1904  What are the activities that need to be done to help classify an architectural change ?

A. All changes to be registered
B. Resource allocation for the changes
C. Impact analysis
D. All of the above

Answer : D

Explanation :

To determine whether a change is simplification, incremental, or re-architecting, the following activities are undertaken :

1. Registration of all events that may impact the architecture

2. Resource allocation and management for architecture tasks

3. The process or role responsible for architecture resources has to make an assessment of what should be done

4. Evaluation of impacts

1905  When architecture redesign is required according to good rule of thumb ?

A. If change affects only one stakeholder
B. If change affects more than one stakeholder
C. If change can be allowed under dispensation
D. If change can be managed by change management

Answer : B

Explanation :

The Rule of Thumb deals with situation where only one stakeholder (and may be just one of the concern) is demanding a change due to some point affecting a specific area. It also deals with situations here more than one stakeholder is affected.

See : **15.5.3 Guidelines for Maintenance versus Architecture Redesign**

A good guideline is :

■ If the change impacts two stakeholders or more, then it is likely to require an architecture redesign and re-entry to the ADM

■ If the change impacts only one stakeholder, then it is more likely to be a candidate for change management

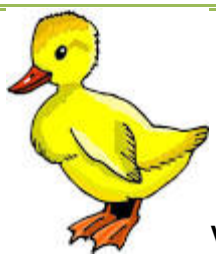
■ If the change can be allowed under a dispensation, then it is more likely to be a candidate for change management

For example :

■ If the impact is significant for the business strategy, then there may be a need to redo the whole Enterprise Architecture — thus a re-architecting approach

■ If a new technology or standards emerge, then there may be a need to refresh the Technology Architecture, but not the whole Enterprise Architecture — thus an incremental change

■ If the change is at an infrastructure level — for example, ten systems reduced or changed to one system — this may not change the architecture above the physical layer, but it will change the Baseline Description of the Technology Architecture; this would be a simplification change handled via change management techniques

1906  Value realization is

A. Based on future changes only
B. Is not based on changes
C. Is based on Outcome
D. Is not a topic related to Enterprise Architecture

Answer : C

Explanation :

Remember that as per TOGAF, Value Realization is based on outcome. The Enterprise gets the value only when the Transition Architecture becomes a realized project and the result is seen as incremental capability in its outcome

See : **15.3.1 Establish Value Realization Process**

Influence business projects to exploit the Enterprise Architecture for value realization (outcomes).

1907  Monitoring tools are needed under Change Management for all except

A. Monitoring progress of implementation project
B. Monitoring technology changes which could impact the Baseline Architecture
C. Monitoring business changes which could impact the Baseline Architecture
D. Monitoring Enterprise Architecture capability maturity

Answer : A

Explanation :

Monitoring and looking into progress till date on a project under implementation has nothing to do with Change Management

See : **15.3.2 Deploy Monitoring Tools**

Ensure monitoring tools are deployed and applied to enable the following :

■ Monitor technology changes which could impact the Baseline Architecture

■ Monitor business changes which could impact the Baseline Architecture

■ Business value tracking; e.g., investment appraisal method to determine value metrics for the business objectives

■ Monitor Enterprise Architecture Capability maturity

■ Track and assess asset management programs

■ Track the QoS performances and usage

■ Determine and track business continuity requirements

1908 Monitoring tools are also needed, under Change Management, for tracking all except

A. Business value tracking
B. Tracking asset management programs
C. Tracking expenses incurred on existing projects
D. Tracking the QoS performances and usage
E. Tracking business continuity requirements

Answer : C

Explanation :

Tracking expenses or even progress of a project is not same as "Monitoring Tool" as its function which is the focus of this question

1909  Analysis process for Architecture Change Management does not include

A. Performance Analysis
B. Gap Analysis of the Performance
C. Ensuring that change management requests adhere to most recent BADT Phases and Gap Analysis thereon
D. Ensure that the expected value realization and Service Level Agreement expectations of the customers are met

Answer : C

Explanation :

This Gap is to be tackled as part of Requirement Management process.

1910  The two points that are part of "Manage Governance Process relating to Change" are

A. Arranging meeting of Architecture Board
B. Appointing right persons in the Architecture Board, who will have knowledge of Change Management process
C. Holding meeting of the Architecture Board with the aim of the meeting to decide on handling changes
D. Holding meeting of the Architecture Board to review the Implementation Review
E. A and D
F. A and C
G. A and B

Answer : F

Explanation :

The tasks in Change Management can definitely include i) Arranging meeting of Architecture Board ii) taking up in the meeting the question of decision on handling changes

The composition of Members of the Architecture Board and Implementation Review are different Governance functions and are not part of "Manage Governance Process relating to Change"

1911  Activating the Architectural Process at appropriate Phase to Implement Change involves all except

A. Producing a new Request for Architecture Work and request for investment
B. Ensuring that any changes implemented in this phase are captured and documented in the Architecture Repository
C. Ensuring that the Enterprise Continuum has a section that points to Changes proposed
D. Monitoring business growth and decline, this being a critical aspect of this phase.

Answer : C

Explanation :

Enterprise Continuum holds contents on Architecture assets, processes etc., But activating the Architectural Process at appropriate Phase to Implement Change will not be one of them

See : **15.3.7 Activate the Process to Implement Change**

Activate the architecture process to implement change :

■ Produce a new Request for Architecture Work and request for investment

■ Ensure any changes implemented in this phase are captured and documented in the Architecture Repository

Also See : **15.5 Approach**

The goal of an architecture change management process is to ensure that the architecture achieves its original target business value. This includes managing changes to the architecture in a cohesive and architected way.

This process will typically provide for the continual monitoring of such things as governance requests, new developments in technology, and changes in the business environment.

When changes are identified, change management will determine whether to formally initiate a new architecture evolution cycle.

Additionally, the architecture change management process aims to establish and support the implemented Enterprise Architecture as a dynamic architecture; that is, one having the flexibility to evolve rapidly in response to changes in the technology and business environment.

Monitoring business growth and decline is a critical aspect of this phase. Usage of the Enterprise Architecture is the most important part of the architecture development cycle. All too often the business has been left with an Enterprise Architecture that works for the organization of yesterday but may not give back sufficient capability to meet the needs of the enterprise of today and tomorrow.

1912  Which one of the following is not an objective of Phase H : Architecture Change Management ?

A. Ensure that the architecture lifecycle is maintained
B. Ensure that the Architecture Governance Framework is executed
C. Ensure that the Enterprise Architecture Capability meets current requirements
D. Ensure conformance with the Target Architecture by implementation projects

Answer : D

Explanation :

Change Management is not involved with conformance of Architecture. Any ABB and SBB work start with high level in Phase A and culminates with releasing it for coding / testing / installation in Phase G.

Note, this is an objective from Phase G (not H)

1913  Three ways of looking at changes to the existing infrastructure that have to be integrated does not include

A. Strategic, top-down directed change to enhance or create new capability
B. Top down changes to correct or enhance capability for infrastructure under operations management
C. Bottom-up changes to correct or enhance capability for infrastructure under operations management
D. Experiences with the previously delivered project increments in the care of operations management, but still being delivered by ongoing projects

Answer : B

Explanation :

Top down change is a phenomenon that starts with concepts and come down to operations. Answer choice B clashes with this idea and combines both top Strategic level and Operations which are at the bottom level.

Top-down directed change Strategic, to enhance or create new capability – capex

Bottom-up changes, to correct or enhance capability – opex - for infrastructure under operations management

1914  Which of the drivers for architectural change is top down ?

A. Enhance a technology capability
B. Strategic
C. Changes identified during the ongoing projects
D. Incremental change

Answer : B

Explanation :

Anything strategic is not only a long term initiative, but also drive the action top (Strategic) to down (to Capac ability increment transitions, via Segment – Solution Architecture in Phases B to D).

See under : **15.5.1 Drivers for Change :** There are three ways to change the existing infrastructure that have to be integrated :

■ Strategic, top-down directed change to enhance or create new capability (capital)

■ Bottom-up changes to correct or enhance capability (operations and maintenance) for infrastructure under operations management

■ Experiences with the previously delivered project increments in the care of operations management, but still being delivered by ongoing projects

1915  Circumstances that may call for fresh ADM cycle does not include

A. Innovative Solution
B. Reports of new Technology or Withdrawal of existing Technology
C. Failure of a software solution
D. Cost Reduction and Asset Management exercise
E. Standardization and rationalization initiatives

Answer : C

Explanation :

When a software solution fails, it may mostly involve re-look at Phase C only. There will not be a need for starting from Phase A again.

See under : **15.5.1 Drivers for Change**

In addition, there are business drivers for architecture change, including :

■ Business-as-usual developments

■ Business exceptions

■ Business innovations

■ Business technology innovations

■ Strategic change

1916  Phase H involves

A. Continuous monitoring for technology improvements
B. Intermittent monitoring for technology innovations
C. Regular monitoring for changes in business environment
D. Does not involve any monitoring
E. A and B is correct
F. A and C are correct
G. D is correct

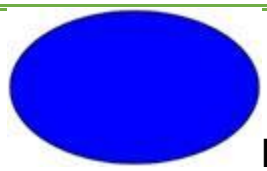
Answer : F

Explanation :

Phase H, Change Management involves regular and continuous monitoring of both business environment and improvements in technology so that change requests can be triggered in right time.

See under : **15.5 Approach**

This process will typically provide for the continual monitoring of such things as governance requests, new developments in technology, and changes in the business environment. When changes are identified, change management will determine whether to formally initiate a new architecture evolution cycle.

1917  Phase H has all as key activities except

A. Providing for continual monitoring and a change management process
B. Ensuring that changes to the architecture are managed in a cohesive and architected way
C. Providing flexibility to evolve rapidly in response to changes in the technology or business environment
D. Monitoring the capacity in the industry

Answer : D

Explanation :

Measuring and monitoring capacity in the industry and the competition is part of Business activity, may be by the Marketing department

See : **15.5 Approach**

The goal of an architecture change management process is to ensure that the architecture achieves its original target business value. This includes managing changes to the architecture in a cohesive and architected way.

This process will typically provide for the continual monitoring of such things as governance requests, new developments in technology, and changes in the business environment. When changes are identified, change management will determine whether to formally initiate a new architecture evolution cycle.

Additionally, the architecture change management process aims to establish and support the implemented Enterprise Architecture as a dynamic architecture; that is, one having the flexibility to evolve rapidly in response to changes in the technology and business environment.


1918 Which ADM Phase is responsible for assessing the performance of the architecture and making recommendations for change ?

A. Phase A
B. Phase E
C. Phase F
D. Phase G
E. Phase H

Answer : E

Explanation :

Phase H : Change management is tasked with assessing the performance of the architecture on a regular on-going basis and making recommendations for change when needed.

See both sections of :

15.3.3 Manage Risks

Manage Enterprise Architecture risks and provide recommendations for IT strategy.

15.3.4 Provide Analysis for Architecture Change Management

Provide analysis for architecture change management :

■ Analyze performance

■ Conduct Enterprise Architecture performance reviews with service management

■ Assess Change Requests and reporting to ensure that the expected value realization and Service-Level Agreement (SLA) expectations of the customers are met

■ Undertake a gap analysis of the performance of the Enterprise Architecture

■ Ensure change management requests adhere to the Enterprise Architecture Governance and framework

There is a Phase which assesses what is implemented, before looking at further changes to the Architectural Landscape.

1919  Which of the statement does not apply to Phase H ?

A. Monitors continuously the changes to the architecture
B. Governance of Implementation Project.
C. Monitor business and capacity Management
D. Provide flexibility for evolution of the architecture

Answer : B

Explanation :

Once a project is implemented and handed over, the Governance of its day to day operation is done by Operations Management. Frameworks like ITIL and COBIT suggest is Governance.

1920  Which of the ADM phase provide flexibility to evolution of the architecture ?

A. Phase E
B. Phase F
C. Phase G
D. Phase H

Answer : D

Explanation :

Key activities of Phase H include :

• Provide continual monitoring and a change management process

• Ensure that changes to the architecture are managed in a cohesive and architected way

• Provide flexibility to evolve rapidly in response to changes in the technology or business environment

• Monitor the business and capacity management

1921  Complete the sentence. A server consolidation project that does not change the operating characteristics of the applications would require _____.

A. a complete ADM cycle
B. a complete re-architecting change
C. a full revision of the enterprise architecture
D. an incremental change
E. a simplification change

Answer : E

Explanation :

It is a simplification change, since change can normally be handled via change management techniques. Only Technology Architecture Phase may need a small change.

Need to get to know different kinds of change as defined by TOGAF.

1922  Which of the following describes the Phase H classification for an Incremental change ?

A. A change driven by a requirement to derive additional value from the existing investment
B. A change driven by a requirement to increase investment in order to create new value for exploitation
C. A change driven by a requirement to reduce investment
D. A change driven by a requirement to re-align with the business strategy

Answer : A

We need to get to know different kinds of change as defined by TOGAF.

Explanation :

A simplification change to an architecture is often driven by a **requirement to reduce investment.**

An incremental change is driven by a requirement to **derive additional value from existing investment.**

A re-architecting change is driven by a **requirement to increase investment in order to create new value for exploitation.**

1923  According to TOGAF, which of the following best describes the classification of architectural change in the case where multiple server systems are being consolidated to a single system ?

A. A bottom-up change to enhance operational capability
B. An incremental change handled via change management techniques
C. A re-architecting change that puts the whole architecture through an ADM cycle
D. A revision change of the enterprise architecture
E. A simplification change handled via change management techniques

Answer : E

Explanation :

It is a simplification change, since change can normally be handled via change management techniques. Only Technology Architecture Phase may need a small change.

Need to get to know different kinds of change that arise under different circumstances.

1924  Complete the sentence: All of the following are technology-related drivers for architecture Change Requests, except _____

A. asset management cost reductions
B. new technology reports
C. standards initiatives
D. strategic change
E. technology withdrawal

Answer : D

Explanation :

Strategic change is a business driver.

When assessing project or solution fit into the architecture, there may also be the case when an innovative solution or RFC drives a change in the architecture.

In addition, there are many technology-related drivers for architecture Change Requests.

For example :

- New technology reports
- Asset management cost reductions
- Technology withdrawal
- Standards initiatives

This type of Change Request is normally manageable primarily through an enterprise's change management and architecture governance processes.

In addition, there are business drivers for architecture change, including :

- Business-as-usual developments
- Business exceptions
- Business innovations
- Business technology innovations
- Strategic change

This type of Change Request often results in a complete re-development of the architecture, or at least in an iteration of a part of the architecture development cycle.

1925  Which TOGAF deliverable identifies changes that are needed to the current architecture requirements and specification, and also documents the implications of change ?

A. Requirements Impact Assessment
B. Architecture Vision
C. Gap Analysis Results
D. Architecture Landscape
E. Architecture Roadmap

Answer : A

Explanation :

Throughout the ADM, new information is collected relating to an architecture. As this information is gathered, new facts may come to light that invalidate existing aspects of the architecture. A Requirements Impact Assessment assesses the current architecture requirements and specification to identify changes that should be made and the implications of those changes.

1926  Which of the following statements is true about risk management in the ADM ?

A. Risk analysis is best conducted in the Architecture Vision phase so that the risk is eliminated in subsequent phases
B. Risk analysis should be carried out first in the Migration Planning phase
C. Risk analysis is outside the scope of Enterprise Architecture projects
D. Risk is pervasive in all Enterprise Architecture activity and should be managed in all phases of the ADM
E. The only risks that are within the scope of Enterprise Architecture are technological risks

Answer : D

Explanation :

Risk is pervasive in any Enterprise Architecture activity and present in all phases within the ADM.

Part III: ADM Guidelines & Techniques > Risk Management :
Introduction

There will always be risk with any architecture/business transformation effort. It is important to identify, classify, and mitigate these risks before starting so that they can be tracked throughout the transformation effort.

Mitigation is an ongoing effort and often the risk triggers may be outside the scope of the transformation planners (e.g., merger, acquisition) so planners must monitor the transformation context constantly.

It is also important to note that the enterprise architect may identify the risks and mitigate certain ones, but it is within the governance framework that risks have to be first accepted and then managed.

It is important to identify, classify, and mitigate risks associated with the transformation effort. Risks should be documented in the Consolidated Gaps, Solutions, and Dependencies matrix.

Phase A: Business Transformation Readiness Assessment

Phase E: Documenting Risk
: In Consolidated Gaps, Solutions, and Dependencies Matrix

Phase F: Cost Benefit and Risk Evaluation

Phase G: Perception and Plan for mitigation

Also note :

- **Initial Level of Risk** : Risk categorization prior to determining and mitigating actions.

- **Residual Level of Risk** : Risk categorization after implementation of mitigating actions (if any).

A project may have initial risk (before identification and mitigation) and residual risk (even after attempt at mitigation).

Phase A : Recognizes the risks. Attempts to mitigate Initial Risks early.

Phases E, F and G : Again focus on risks, more so for Residual Risks.

In the Implementation Governance. Phase G, ensure that a residual risk assessment is conducted to determine the best way to manage risks that cannot be mitigated.

1927  In which of the TOGAF ADM Phase Risk identification and mitigation assessment worksheets are maintained and kept up to date ?

A. Phase E
B. Phase F
C. Phase G
D. Phase A

Answer : C

Explanation :

It is in Phase G that Risk related assessments take a final shape and are updated with facts discovered of late in that Implantation Governance Phase also.

See under : **27.7 Risk Monitoring and Governance (Phase G)**

The residual risks have to be approved by the IT governance framework and potentially in corporate governance where business acceptance of the residual risks is required.

Once the residual risks have been accepted, then the execution of the mitigating actions has to be carefully monitored to ensure that the enterprise is dealing with residual rather than initial risk.

The risk identification and mitigation assessment worksheets are maintained as governance artifacts and are kept up-to-date in Phase G (Implementation Governance) where risk monitoring is conducted.

Better get to know ADM deliverable, for each Phase separately.

Risk ID	Risk	Preliminary Risk			Mitigation	Residual Risk		
		Effect	Frequency	Impact		Effect	Frequency	Impact

Sample Risk Identification and Mitigation Assessment Worksheet

This worksheet may be generated in Phase A but is finally updated in Phase G

1928  Which of the following are statements apply to Risk management ?

A. Risk Management is a technique used in ADM
B. Risk management is a guideline in ADM
C. Risk Management is used to only to identify risk not to mitigate risk
D. Risk Management does not deal with residual risks
E. A and B
F. B and C
G. C and D
H. A and D

Answer : E

Explanation :

Risk Management is used in ADM for identification and mitigation of risk.

See under : **Chapter 27 : Risk Management**

This chapter describes risk management, which is a technique used to mitigate risk when implementing an architecture project.

1929  In which ADM phase Architecture Roadmap is finalized ?

A. Phase E
B. Phase F
C. Phase G
D. Phase H
E. Phase A

Answer : B

Explanation :

The Architecture RoadMap, including schedule of completion of each Transition Architecture in focus by Implementing agencies (coding / testing, installation, training etc.,) get full details at Phase F and so get finalized.

Notable Objectives / techniques of Phase F includes :

- Finalize the Architecture Roadmap and the supporting Implementation and Migration Plan
- Ensure that the Implementation and Migration Plan is coordinated with the enterprise's approach to managing and implementing change in the enterprise's overall change portfolio
- Ensure that the business value and cost of work packages and Transition Architectures is understood by key stakeholders


1930 
In which ADM phase Lessons learned from Architecture development cycle is documented ?

A. Phase E
B. Phase F
C. Phase G
D. Phase H

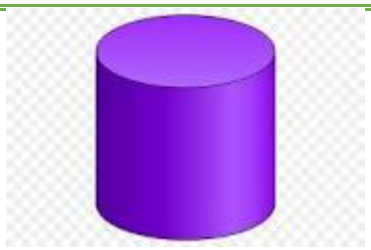
Answer : B

Explanation :

Last few steps of Phase G are :

Prioritize the Migration Projects : Cost / Benefit Assessment and Risk Validation
Confirm Transition Architecture Increments / Phases
Update Architecture Definition Document
Generate the Architecture Implementation Roadmap (Time-Lined) and Migration Plan
Establish the Architecture Evolution Cycle
Document Lessons Learned

1931 Complete the sentence.



During the implementation of an architecture, if the original Architecture Definition and requirements are not suitable, a _____ may be submitted to initiate further architecture work.

A. Capability Assessment
B. Change Request
C. Requirements Impact Analysis
D. Statement of Architecture Work

Answer : B

Explanation :

One of the reasons for changed request is when Architecture Definition Document that has reached Phase G is found to have a major suitability issue. If ADM has been followed properly, this is a rare thing to happen.

See : **32.2.11 Change Request : Purpose :**

During implementation of an architecture, as more facts become known, it is possible that the original Architecture Definition and requirements are not suitable or are not sufficient to complete the implementation of a solution. In these circumstances, it is necessary for implementation projects to either deviate from the suggested architectural approach or to request scope extensions.

Additionally, external factors — such as market factors, changes in business strategy, and new technology opportunities — may open up opportunities to extend and refine the architecture.

In these circumstances, a Change Request may be submitted in order to kick-start a further cycle of architecture work.

1932 Which of the following best describes the TOGAF classification in Phase H for a re-architecting change ?

A. A change driven by a requirement to derive additional value from the existing investment
B. A change driven by a requirement to increase investment in order to create new value for exploitation
C. A change driven by a requirement to reduce costs
D. A change driven by a requirement to reduce investment
E. A change driven by a requirement to re-align with the business strategy

Answer : B

Explanation :

These are ideally needs for an Enterprise Project, meaning getting into Preliminary Phase, may be from Phase A instead of proceeding to Phase B onwards from Phase A

A change driven by a requirement to reduce costs

A change driven by a requirement to reduce investment

A change driven by a requirement to re-align with the business strategy

1933  Which of the following describes the TOGAF classification in Phase H for a simplification change ?

A. A change driven by a requirement to derive additional value from the existing investment
B. A change driven by a requirement to increase investment in order to create new value for exploitation
C. A change driven by a requirement to reduce investment
D. A change driven by a requirement to re-align with the business strategy
E. A change driven by a requirement to simplify communication between stakeholders

Answer : C

Explanation :

A change driven by a requirement to reduce investment is generally (not always) considered a simplification change (from angle of architectural work, not budget) since often it will be in Technology Domain (capacity enhancement by addition or replacement of hardware) or in Application Domain (change runtime configuration) or Data Domain (again configuration changes). It can be in Business Domain when a training of business people can result in better efficiency or reduction in consequential investment.

See under : **15.5.2 Enterprise Architecture Change Management Process**

Another way of looking at these three choices is to say that a simplification change to an architecture is often driven by a requirement to reduce investment; an incremental change is driven by a requirement to derive additional value from existing investment; and a rearchitecting change is driven by a requirement to increase investment in order to create new value for exploitation.

Very important to get to know parts of TOGAF documentation

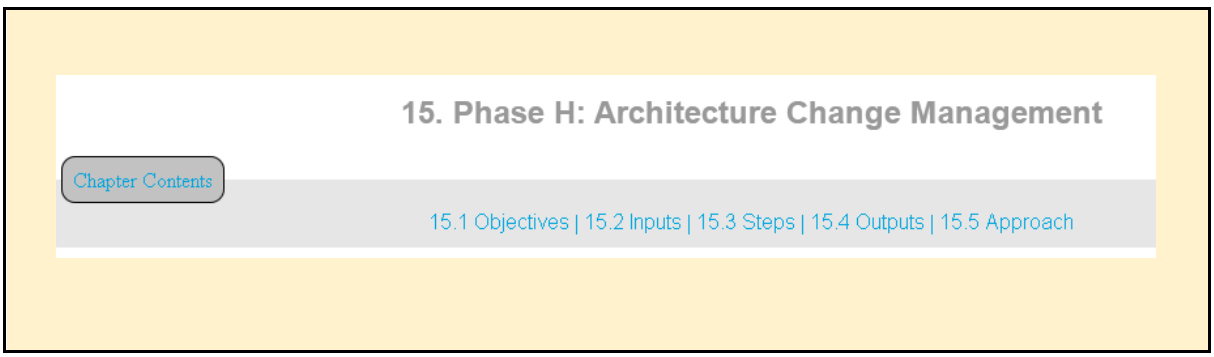
https://pubs.opengroup.org/architecture/togaf9-doc/arch/

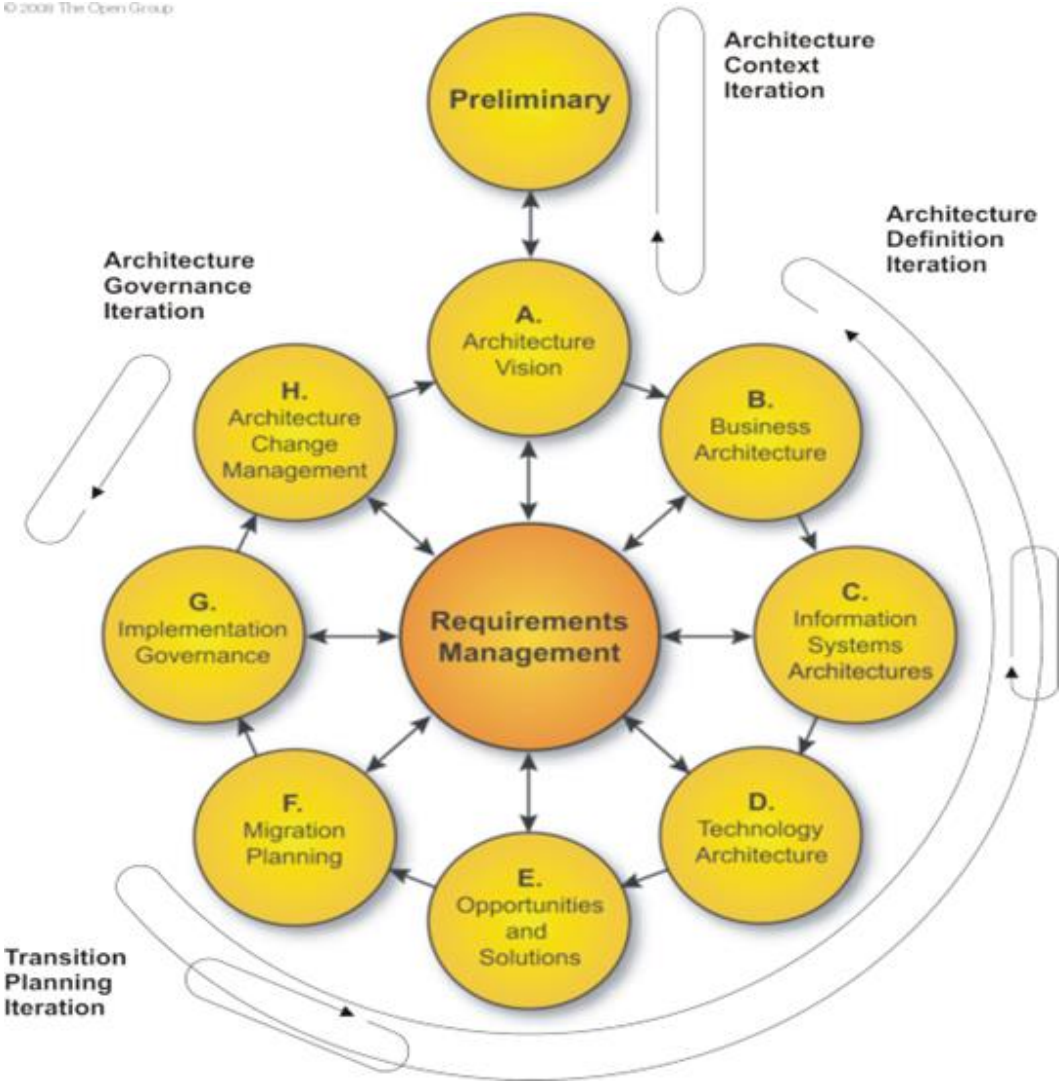
You will need this link to be open most of the time in this course

Similar content will **open during your Level 2 Exam**.

Sorry, not during Level 1 Exam

Change requests can occur at any Phase. What is shown below, though termed as a Phase, is more than one. It is a continuous activity monitored by the Requirements Management, the central phase. Nevertheless, this is placed as the last Phase in ADM cycle because major change triggering happens towards end of a project / portfolio in that cycle. Also note that Change Management is bracketed as a Governance related activity rather than a development related one in the ADM cycle.





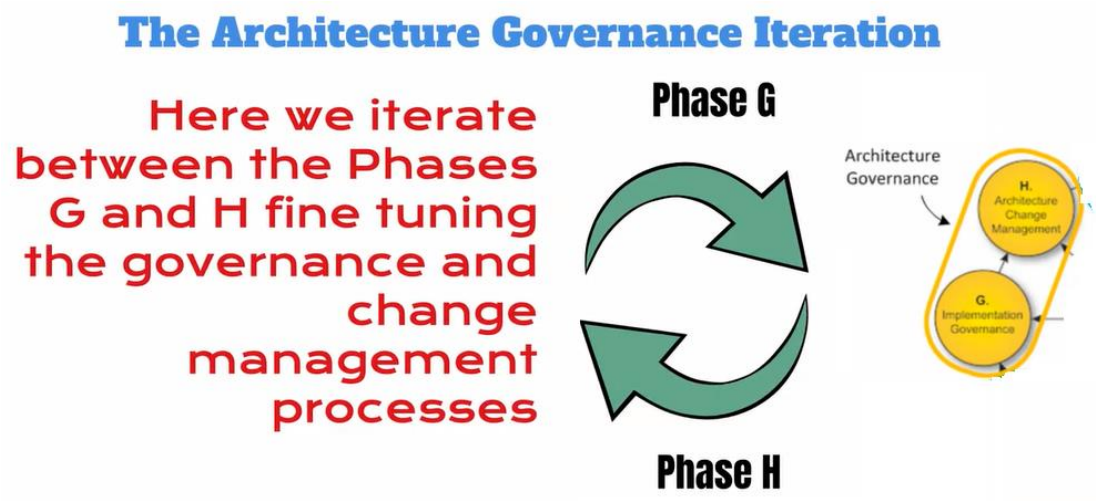
Part 3 : Detailed Courseware

Video on this Phase from Orbus Software :

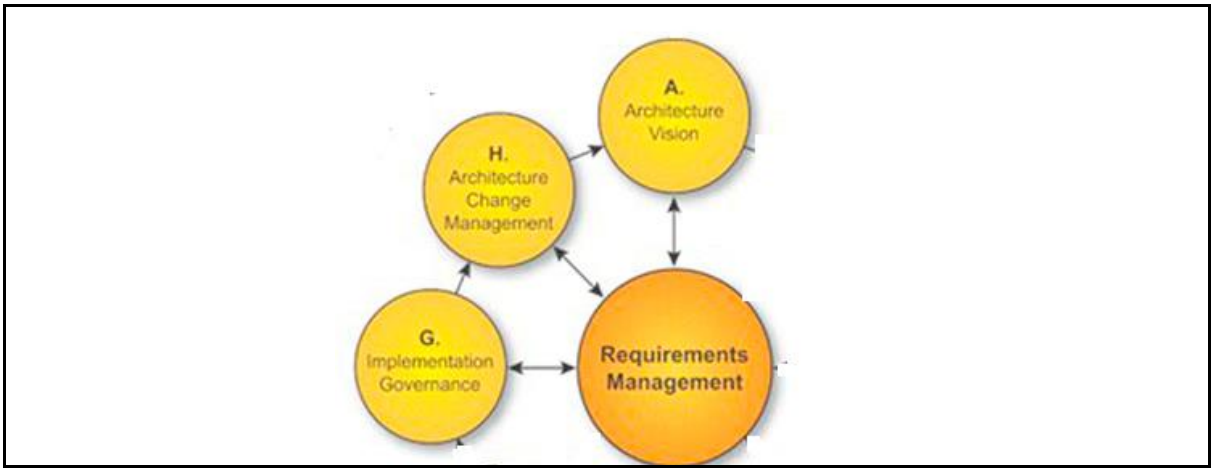
https://www.youtube.com/watch?v=oAb2tmFmj-8&t=38s

Nice to Know Box

Why are Phase G and Phase H bracketed as Governance related activities ?



Any requirement or change in requirement that is outside of the scope defined in the Statement of Architecture Work must be submitted to the Requirements Repository for management through the governed Requirements Management process.


A.
Architecture
Vision
H.
Architecture
Change
Management
G.
Implementation
Governance
Requirements
Management

Nice to Know Box

An EA is developed for one very simple reason : to guide effective change.

The change can be materialized only when it is adequately supported with resources. Every Enterprise has a business cycle that plans and allocates resources, normally one fiscal year. The fiscal year dates are inflexible and decisions will be made with the data available and reasonable judgment.

Phase H demands the Practitioner to identify the bottom-up drivers for change; change due to improvements in available technologies or conditions controlling the operations or environment of the Enterprise; and initiate the architecture work for the next target transition state (top-down driver). This does not mean that the Practitioner need to flesh out everything that is covered by the charter for the EA Capability or the budget.

Define and distribute the work packages in proportion to the capability and readiness of the Enterprise. All of these are aimed at one thing – influencing and garnering the resources in the next cycle.

(From TOGAF 10 documentation, Relevant for TOGAF 9.2 also)

Nice to Know Box

Change Control

A process whereby changes to requirements are handled in a controlled fashion.

The change control process defines the process steps to be carried out when dealing with a proposed change.

These steps include

documenting the change,

analyzing the impact of the change,

evaluating the impact of the change in order to decide upon the course of action to take, and

deciding whether or not to apply the change.

The analysis and decisions should be documented in order to provide an audit trail relating to the proposed change.

Change Management is closely related to Requirements Management. Requirements management is also a governance approach that aims to ensure that each requirement is tracked from inception to implementation (or withdrawal) through all of the changes that have been applied to it.

Nice to Know Box

Phases G and H : Implementation and Change Governance

Remember Phase G is not implementation, it is governance of implementation projects carried out in parallel.

"In parallel with Phase G, there is the execution of an organizational-specific development process, where the actual development happens."

Not all Building Blocks have been defined till the start of Phase G.

"In Phase E, the **specific SBBs** required [to fill gaps] will be the identified by the **solutions architects."**

These SBBs are still coarse-grained – they even may be project-sized.

"These Solution Building Blocks and Architecture Building Blocks may have a one-to-one or many-to-one relationship with the projects."

Architects monitor the projects that implement new / changed business systems.

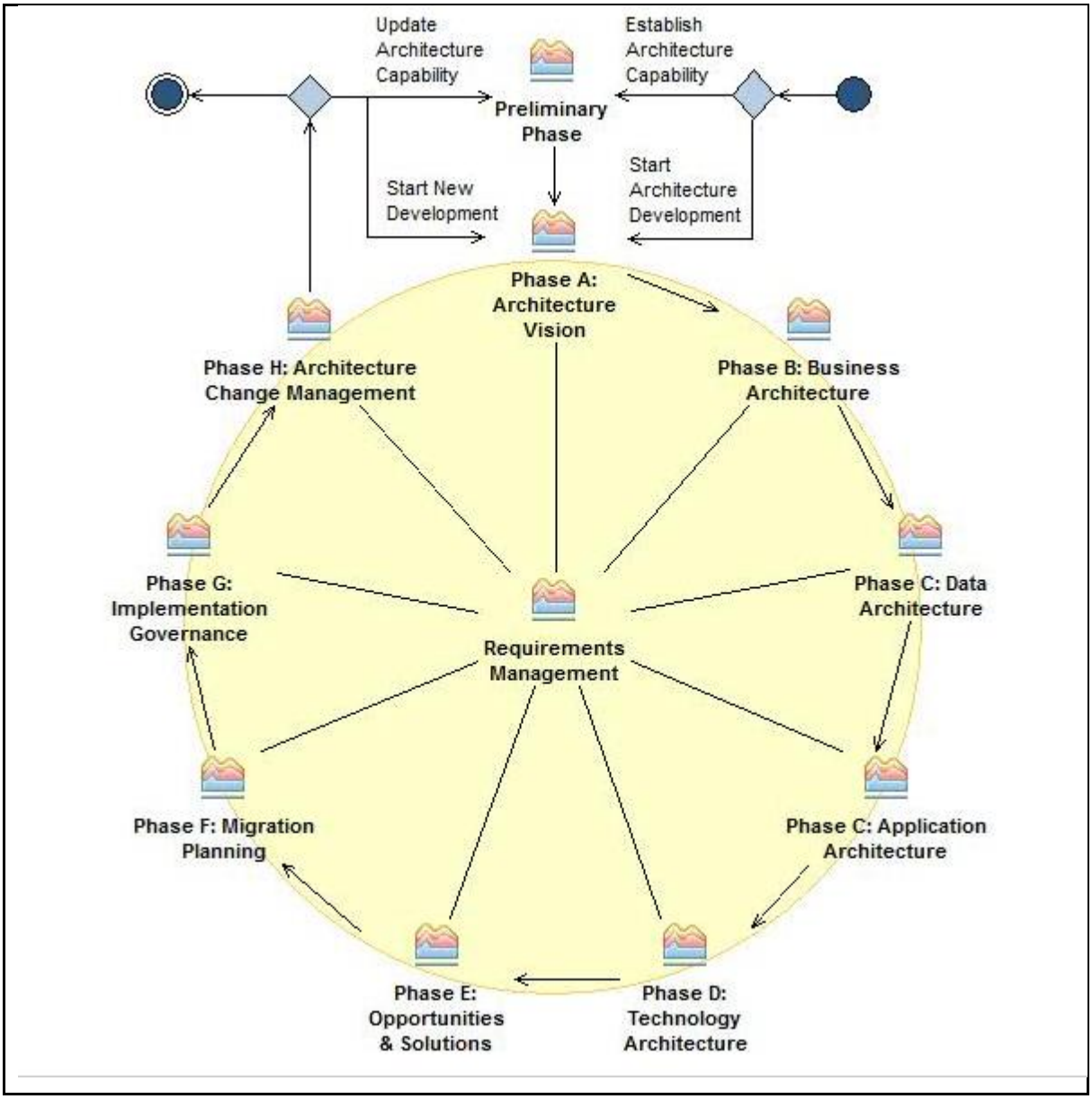
"The solutions architects need to define exactly how [reuse of software components] will be done.

There may be other projects working on these same capabilities [here meaning SBBs] and the solutions architects need to ensure that they can leverage best value from these investments."

Architects ensure compliance of deployed systems with ABBs / SBBs, changing them if need be.

Later, under change management, maintainers maintain concrete elements of the implemented systems.

Architects continue to ensure the compliance of deployed / operational systems with ABBs, changing them if need be. This is where Phase H comes in.



Nice to Know Box

The goal of an architecture change management process is to ensure that the architecture achieves its original target business value.

This can be done by:

1. ensuring that changes to the architecture are managed properly
2. supporting a dynamic architecture

Listen and act

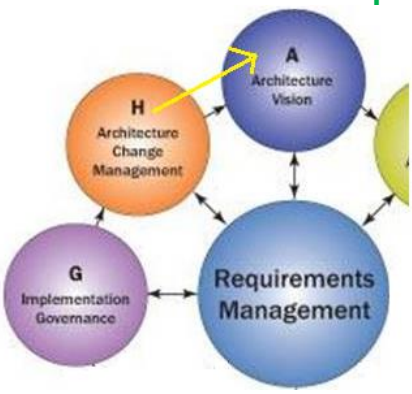
Proactive, look for

The process will determine the circumstances under which:

1. The architecture will be permitted to change after deployment, and the process for this.
2. The ADM will be used again.

The Happening Story

When the current portfolio of projects : handed over



(Charters completed and handed over to LOB) – major work in this Phase

The EA team has to initiate the next "Release" of these projects, taking all change requests into consideration.

Governance Body has laid out the conditions where such requests can be made as Requirements for next ADM cycle

EA also is proactively looking always for 'change situations' on handed over projects (and all earlier projects which are running). These situations include Business need or for Technology reasons.

Governance Body direction also provide for accommodating Change Requests when the project is in Phases A to F, or even during actual implementation work

: When a small change that involves just one Phase and when accepted can be "implemented" after minor Architectural changes

: When a small change that involves just two Phases or so and when accepted can be "implemented" after minor Architectural changes that is added by these Phases

When a change is not accepted under above two points, then it is a deferred Change Request and will be considered only after the project is handed over

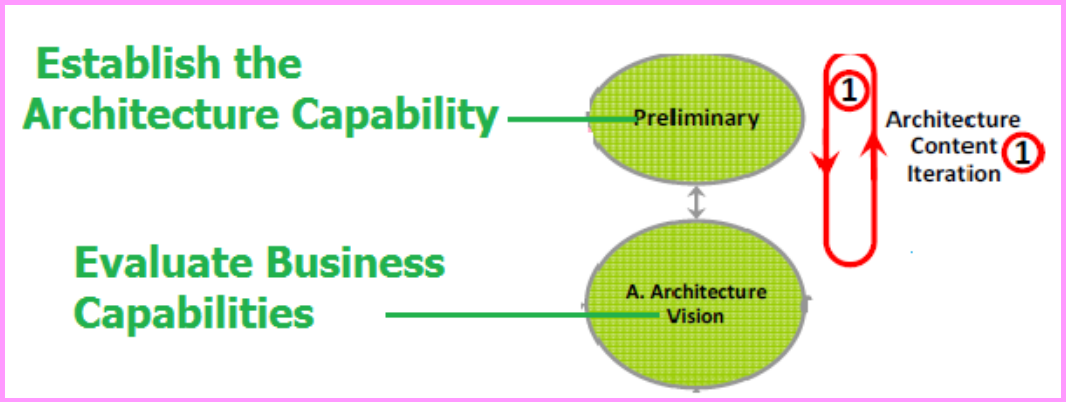
While Phase H, Change Management is more about the deferred Change, it does cover the other two "small change" situations also

Interaction Point : For Practical purposes beyond Certification

Under Modern Practices, Change Requests may be more within a User Story, at various Scrum / Dev Ops / Other Agile practices including SAFe Agile.

Other Change Requests may come from next run, next epoch and so on.

Every EA who wants to be with Modern Trend will have to customize ADM, in the Preliminary Phase so that it stays alive for next few years. Every Fresh ADM cycle starting in Phase A may demand some content iterative changes relating to Preliminary Phase



Nice to Know Box

What is going to happen in Phase H ?

Phase H of the ADM is concerned with managing changes mainly in the business environment and their impact on the Enterprise Architecture.

The drivers for change may be manifold and at different levels, e.g., change of business strategy, new technology or customer demands.

Business driven ? Customer driven ?

Technology advancement driven ?

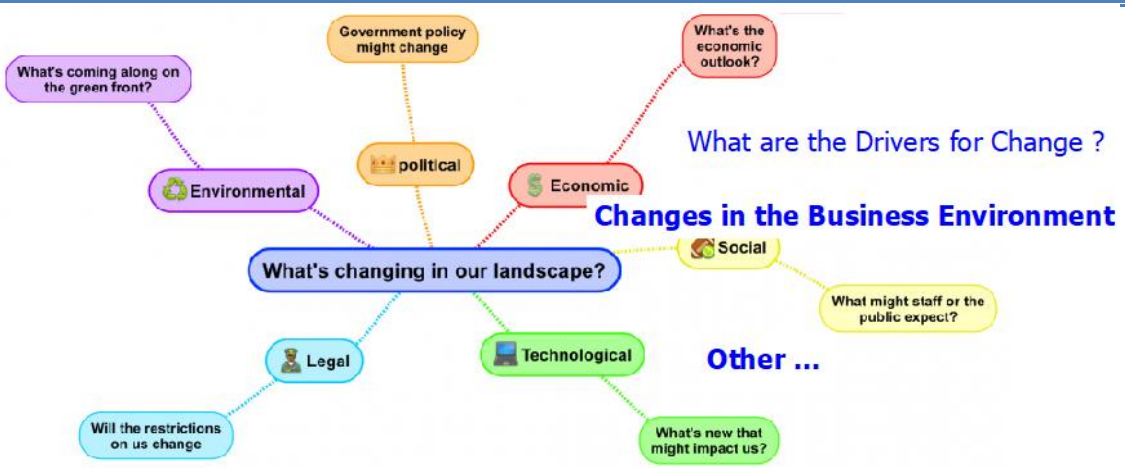
The drivers for change are input for the requirements engineering cycle : Means, in the right place in the ADM :

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

Which is the right place in the ADM ?



Drivers, Stakeholder concerns Analyzed

Alternative Business Requirements derived

Impact of the requirements Analyzed

Leading to practice of Change Management Techniques

When a change is to be accommodated :

First, the drivers and related stakeholder concerns are analyzed in the problem investigation step, which may lead to new or adapted stakeholder goals.

Changes in the Viewpoint concerns ?

Second, alternative business requirements are derived to realize these goals and checked for conformance with existing requirements and principles.

Same View Building Blocks or new or replaced ones ?

In the third step, the impact of the requirements is analyzed to assess whether the change can be handled via normal change management techniques or a (partial) redesign of the architecture is needed. The latter requires a new iteration of the ADM cycle.

Quiz Time

What do we mean by "Maintain Lifecycle" ?

How does Arch Governance come in here ?

What is Arch Capability doing in this Phase ?

Nice to Know Box

Say a change that affects TA 0.2 which was reviewed and taken as complete. But TA 0.2 needs a change and not any other version slices of BA, AA, DA or TA

EA can ask one such Domain Segment Architect to accept the change and effect it immediately

During any one of Phase B, C, D, Or even E or F ?

From a Phase onwards, like C onwards through D ,,,

Only at the end of Phase G, as a trigger for fresh ADM from Phase A ?

BA only change : Like slight change in Training need

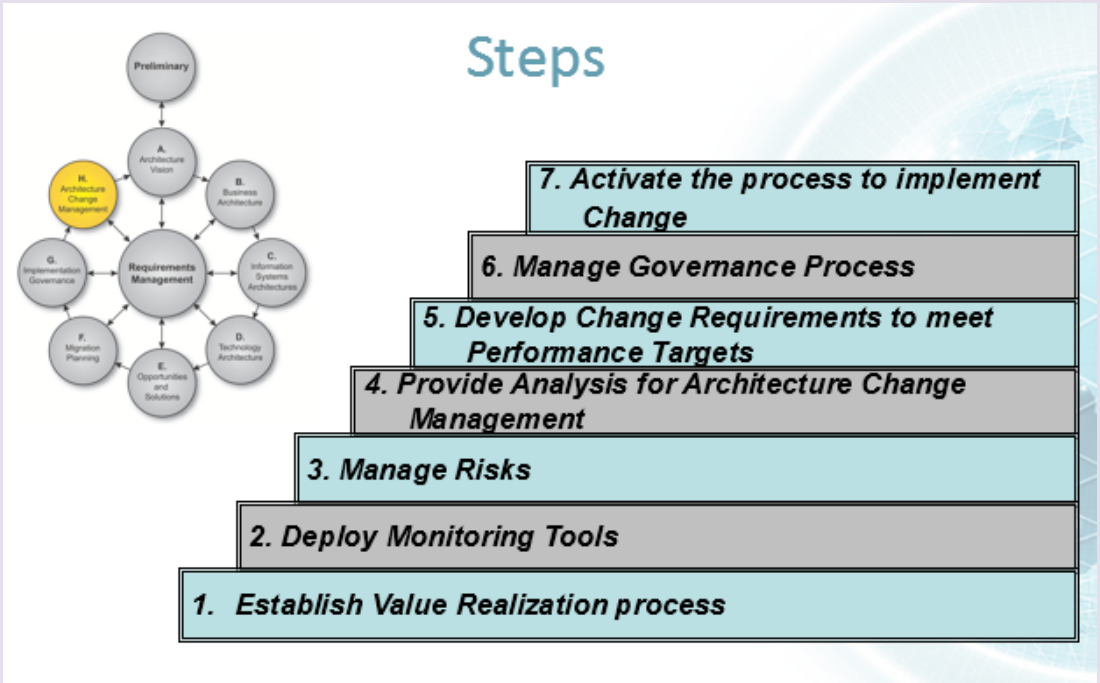
AA only change : Like slight change UI Screen look and feel

DA only change : Like change inside database, say a Stored Procedure logic altered without affecting its net outcome

TA only change: Like slight change in Server configuration

Simplification change pertains to ones raised by a stakeholder during a Review or one discovered during the Impact Analysis in Phases B, c or D. If the change is accepted by EA, then the Domain Segment Architect is asked to effect the change immediately.

A simplification change to an architecture is often driven by a requirement to reduce investment.



Nice to Know Box

Look back at ADM in full perspective :

- TOGAF deals with following architecture.
  - Business Architecture
  - Data Architecture
  - Application Architecture
  - Technology Architecture.

Information System Architecture

- ADM (Architecture development method)

Preliminary Phase
A – Architecture Vision
B – Business Architecture
C - information system Architecture
D - Technology architecture
E - Opportunity & Solutions
F – Migration Planning
G – Implementation Governance
H – Architecture Change Management
Requirement Management

Initiation (Preli , A)
Planning (B,C,D, E,F, Req Mngt)
Execution
Monitor & Control (G , H)
Closure

Points to Ponder

Scenario Approach : Where would it fit ?

What is the need for a Phase dedicated to managing the way changes are accepted or even anticipated and planned ?

Nothing ever goes exactly to plan – and there will always be new demands and requests to change the architecture. Phase H describes the change management process to manage changes to the architecture in a cohesive and architected way.

Typically this requires continual monitoring of governance requests, new technologies, or changes in the business environment.

On the approach and actions of Phase H

The process should support the implemented Enterprise Architecture as a dynamic environment that has the flexibility to evolve rapidly in response to these changes.

In Phase H it is critical that the governance body sets up criteria to judge whether a Change Request warrants a simple architecture update or whether it requires starting a new cycle of the Architecture Development Method (ADM). It is important to avoid "creeping elegance", so changes must relate directly to business value.

The Enterprise Architecture being used properly is the most important part of the architecture development cycle, so monitoring business growth and decline is critical in Phase H. Eventually the Enterprise Architecture that worked for the organization yesterday ceases to support the capabilities of today or tomorrow.

Change requests output from Phase H can be classified as Simplification - often driven by a requirement to reduce investment; Incremental change - driven by a requirement to derive additional value from existing investment; or Re-architecting change which is driven by a requirement to increase investment and create new value.

Phase H ensures that the architecture achieves its original target business value, by managing changes to the architecture in a cohesive and architected way.

Nice to Know Box

What to Expect in a Well-Run EA Repository: Compliance Assessments

Most EA Repositories are missing the most important component of a compliance assessment : gaps, Architecture Requirements Specifications, controls, and views that address concerns stakeholders find interesting. A well-run EA Repository will contain all of the components necessary to perform effective compliance assessments as well as the compliance assessments.

The first step of compliance assessment is clarity on what compliance will be assessed against. Best practice compliance assessments are tightly linked with the TOGAF concept of an Architecture Contract. The Architecture Contract identifies what an Implementation Project is expected to deliver and the set of constraints the project operates under. Without clearly documented expectations and constraints the Practitioner has failed the implementation team.

A well-run EA Repository will contain the equivalent of an Architecture Contract for every Implementation Project. With clarity on expectation and constraint, compliance may be assessed.

TOGAF Phase G identifies two areas where compliance is assessed. The **first is the scope of the project**. **Second is the actual implementation**, whether designed or the performance change. Phase H contains a further value-based compliance assessment.

The first assessment in Phase G considers the scope of the Implementation Project compared to the gap, or work package, expected to be filled. The work package identifies which gaps are going to be filled. The singular purpose of the work package is clarifying the work necessary to address the gaps in the architecture.

Good roadmaps developed as part of an Architecture Project support portfolio will house well described work packages. Well described work packages are clear about gaps being filled, and the implementation strategy, or approach, of how the gap will be addressed. Where there is no architectural significance, no good Practitioner will bother constraining an Implementation Project with unnecessary guidance or constraint through the implementation strategy. Where the approach to addressing the gap is significant, a good Practitioner will always provide the appropriate guidance of constraint.

Performing scope, and implementation approach, compliance is the first step in protecting value. A good EA will provide clarity about the best path to maximized value for the Enterprise. Typically, maximized value to the Enterprise will not align with parochial preferences of the Implementation Project sponsor, or the implementation team. Frankly, if there was alignment, there would not be a need for an EA team.

It follows that assessing the scope of an Implementation Project is the first place to protect value. Waiting until the project is funded and underway is indistinct from developing architecture after the decision.

The **Phase G compliance assessment** confirms whether specific Architecture Requirements Specifications have been followed. The TOGAF concept of an Architecture Requirements Specification identifies what must be, what must be done, and what is prohibited. It provides the set of constraints on more detailed architecture development, design, and implementation.

Phase H's compliance assessment is based on value realization. Typically, expected value will not be realized for a significant period of time after an Implementation Project has declared victory.

Using the linkage provided by the Architecture Contract, recurrent value realization assessments can be performed. Maintaining the linkage from specification to stakeholder expectation facilitates consistent review.

Although a well-run EA Repository will be focused on demonstration of realizing value, traditionally most attention is placed on rule-following compliance. While rule-following is important, it tends to struggle with a consistent demonstration of value, unless it is assumed the value of following the rule is self-evident. Rule-following compliance assessment is common where the Architecture Requirements Specification eliminates all design and implementation choice. Focusing assessment on rule-following is also most likely to be tied to requests for relief from the rule because the total cost of the rule is not in alignment with available value.

Best practice is to go beyond simple compliance with the statement, to include compliance with intent. The purpose is again to protect the expected value of the Target Architecture. When a constraint is connected to a stakeholder requirement, the compliance assessment is able to assess how well the design and implementation choices deliver on expected value. Compliance assessments that indicate the implementation will fail to enable expected value are key inputs to future architecture development.

(From TOGAF 10 documentation, Relevant for TOGAF 9.2 also)

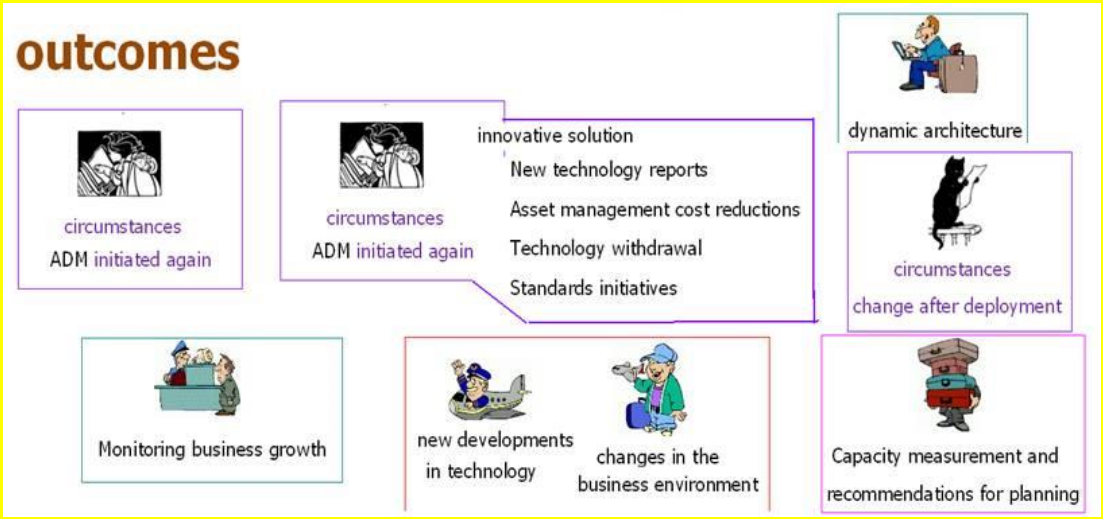
Nice to Know Box

Step : Establishing Value Realization Process

What is the Value and Outcome and is there a need for a change thereon ?

Change based Realization Process

Find out the outcomes : Exploit value realization as **outcomes**



Influence business projects to exploit the Enterprise Architecture

for value realization (**outcomes**)

The value and change management process, once established, will determine :

circumstances

change after deployment

- The circumstances under which the Enterprise Architecture, or parts of it, will be permitted to change after deployment, and the process by which that will happen.

circumstances

ADM initiated again

- The circumstances under which the architecture development cycle will be initiated again to develop a new architecture.

When assessing project or solution fit into the architecture, there may also be the case when an innovative solution or RFC drives a change in the architecture.

In addition, there are many **technology-related drivers** for

Architecture Change Requests.

This type of Change Request is normally manageable primarily through an enterprise's change management and architecture governance processes.

After Phase G and project handover

In addition, there are business drivers for architecture change.

The order of the steps in Phase H, as well as the time at which they are formally started and completed should be **adapted to the situation** at hand in accordance with the established Architecture Governance.

new developments in technology

changes in the business environment

dynamic architecture : Always

Monitoring business growth : Always

Nice to Know Box

Step : Deploy Monitoring Tools

Make sure that right tools and techniques which can monitor the parameters that may lead to changes are deployed

How to monitor ?

Ensure monitoring tools are deployed : towards technology changes, business changes and more

Monitor technology changes, business changes, capability maturity, asset management , QoS performances and usage and so on

Monitoring them

Nice to Know Box

Step : Managing Risks

(Risks of effecting the change)

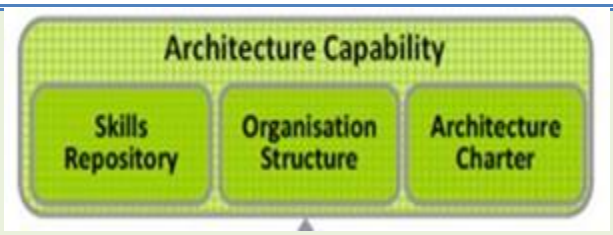
Changes may introduce fresh risks. Have the plan to manage them

Changes go with Risk

Enterprise Architecture risks that could arise due to Changes that would be implemented

: Seen from change Management angle

Before next ADM cycle starts, it is wiser to recommend, based on lessons learned so for, how to manage Enterprise Architecture risks and provide suitable recommendations for IT strategy.



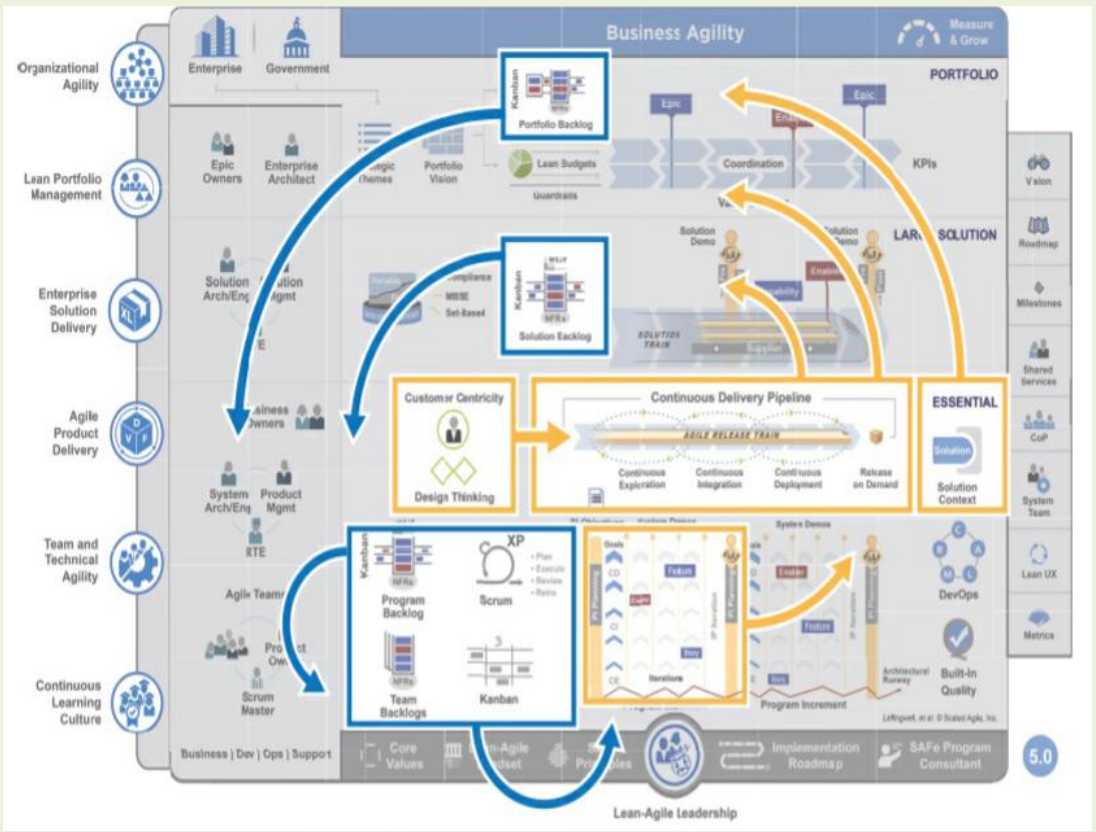
Nice to Know Box

Step : Providing Analysis Process for Architecture Change Management

Have an analytical process to review and assess the change impact

A Process that is analytical

Reviews, Assessments and so on


Business Agility
Measure & Grow
Organizational Agility
Lean Portfolio Management
Enterprise Solution Delivery
Agile Product Delivery
Team and Technical Agility
Continuous Learning Culture
Enterprise
Government
PORTFOLIO
Portfolio Backlog
Epic Owners
Enterprise Architect
Portfolio Vision
Lean Budgets
Coordination
KPIs
Solution Backlog
Customer Centricity
Design Thinking
Continuous Delivery Pipeline
Continuous Exploration
Continuous Integration
Continuous Deployment
Release on Demand
ESSENTIAL
Solution Context
System Arch/Eng
Product Mgmt
RTE
Scrum Master
Program Backlog
Team Backlogs
Scrum
Kanban
DevOps
Built-In Quality
Program Increment
Vision
Roadmap
Milestones
Shared Services
CoP
System Team
Lean UX
Metrics
Business | Dev | Ops | Support
Core Values
Implementation Roadmap
SAFe Program Consultant
5.0
Lean-Agile Leadership

Nice to Know Box

Step : Develop necessary Change Requirements to meet Performance Targets

Change proposals to be in tune with Performance Targets

Change to drive performance

Performance of Architecture and its outcome

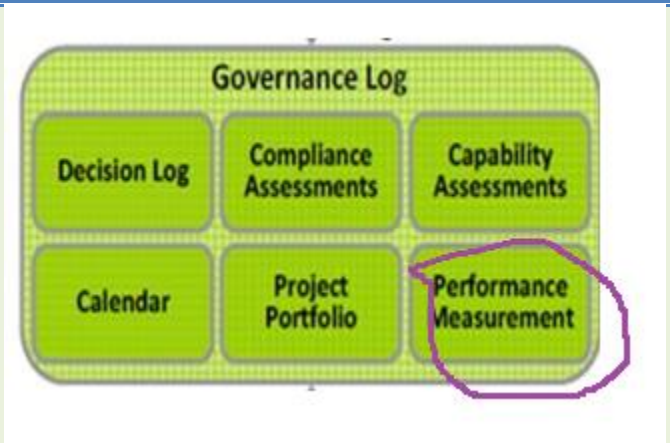
Actions to meet performance targets

Plan change requirements to **meet performance targets**

These are changes to be carried forward

Requests get into Requirement Repository,
through Requirement Management Process

Make recommendations on
change requirements to **meet performance targets**
and development of position to act.


Governance Log
Decision Log
Compliance Assessments
Capability Assessments
Calendar
Project Portfolio
Performance Measurement

Nice to Know Box

Step : Manage Governance Process relating to Change

Change Management and Governance go together

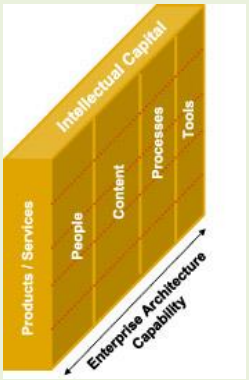
It is part of Governance

Interacting with the Architecture Governance Board

Through governance process : Architecture Board

Manage **governance process** and framework for architecture :

- Arrange meeting of Architecture Board (or other Governing Council)
- Hold meeting of the Architecture Board with the aim of the meeting **to decide on handling changes (technology and business and dispensations)**



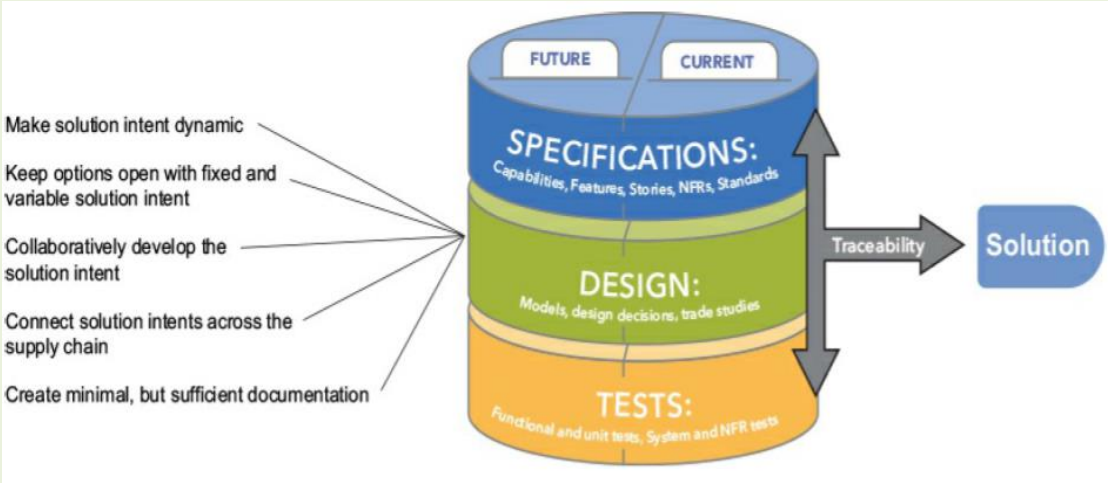
Nice to Know Box

Activate the Architectural Process at appropriate Phase to Implement Change

Ensure that Change Requests that are accepted do get into the ADM at the right Phases (not necessarily a fresh Phase A always)

Action taken all the time, but also for new Phase A

Action on changes implemented in this Phase and issuance of new Request for Architecture Work



Based on the above,

Activate Architecture **process to implement change**

- Produce a **new** Request for Architecture Work and request for investment

- Ensure any changes implemented in this Phase are captured and documented in the Architecture Repository

  Document updated in this Phase but one that is related to more Requirement Management – the central Phase

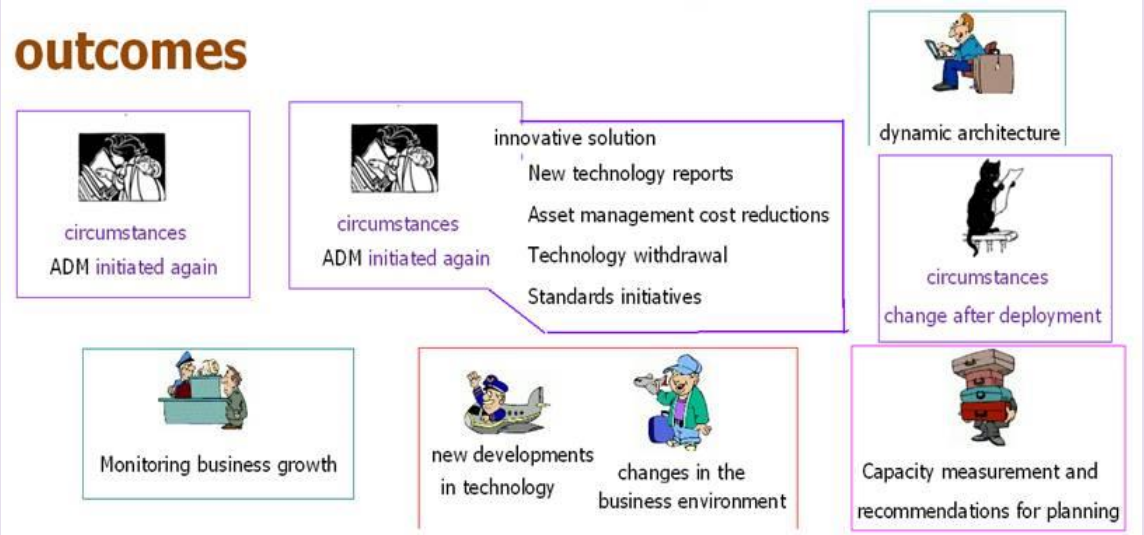
Documents Updated in this Phase :

Requirement Impact Statement

Architecture Change Request

Nice to Know Box

Role of EA in one or more of following :



TOGAF recommended Template format for this deliverable :

Architecture Change Request

- **Purpose of this Document**

This document is an Architecture Change Request for the <<XXX project>>.

The goal of an architecture change management process is to ensure that the architecture achieves its original target business value. This includes managing changes to the architecture in a cohesive and architected way. The change management process will determine:

- The circumstances under which the enterprise architecture, or parts of it, will be permitted to change after deployment, and the process by which that will happen

- The circumstances under which the architecture development cycle will be initiated again to develop a new architecture

The Architecture Board assesses and approves Architecture Change Requests.

- **Basic Details**

Change ID	<<ID to uniquely identify this change request>>
Change Title	<<One-line summary title for the change>>
Change Requestor	<<Name>> <<Position>>

	<<Organizations>> <<Email>> <<Tel>>
Change Sponsor(s)	<<Details of business sponsors for this change>>
Deadline	<<Any deadline for implementing the change, including reason>>

- **Change Description**

<<Describe the change that is proposed. (Other documents may be referenced where necessary.)>>

- **Change Rationale and Impacts**

  - **Drivers for Change**

The following drivers for change are relevant (provide notes on all that apply).

Business Drivers	
Business-as-usual developments	
Business exceptions	
Business innovations	
Business technology innovations	
Strategic change	
Technology Drivers	
New technology reports	
Asset management cost reductions	
Technology withdrawal	
Standards initiatives	
Operational Drivers	

Improvements based on operational experience	
Capacity planning	

- **Change Rationale**

<<Any further rationale to justify the change. Include an analysis of the implications of no change.>>

- **Anticipated Impacts**

<<Provide, as far as possible, a brief initial view on the likely impacts of the change. For example, anticipated architecture rework required, system changes likely to result, affected business areas.>>

<<An initial indication only is required here – a full Requirements Impact Assessment may be done as a follow-up activity if further investigation is deemed necessary.>>

TOGAF recommended Template format for this deliverable :

Requirements Impact Assessment

1 Purpose of this Document

This document details the Requirements Impact Assessment for <<insert>>.

Throughout the ADM, new information is collected relating to an architecture. As this information is gathered, new facts may come to light that invalidate existing aspects of the architecture. A Requirements Impact Assessment assesses the current architecture requirements and specification to identify changes that should be made and the implications of those changes.

This template shows "typical" contents of a Requirements Impact Assessment and can be adapted to align with any TOGAF adaptation being implemented.

2 Basic Details

2.1 Reference to Specific Requirements

2.2 Stakeholder Priority of the Requirements To-Date

3 Impact Assessment

3.1 Phases to be Revisited