

TOGAF® Enterprise Architecture Training Course (Practitioner)

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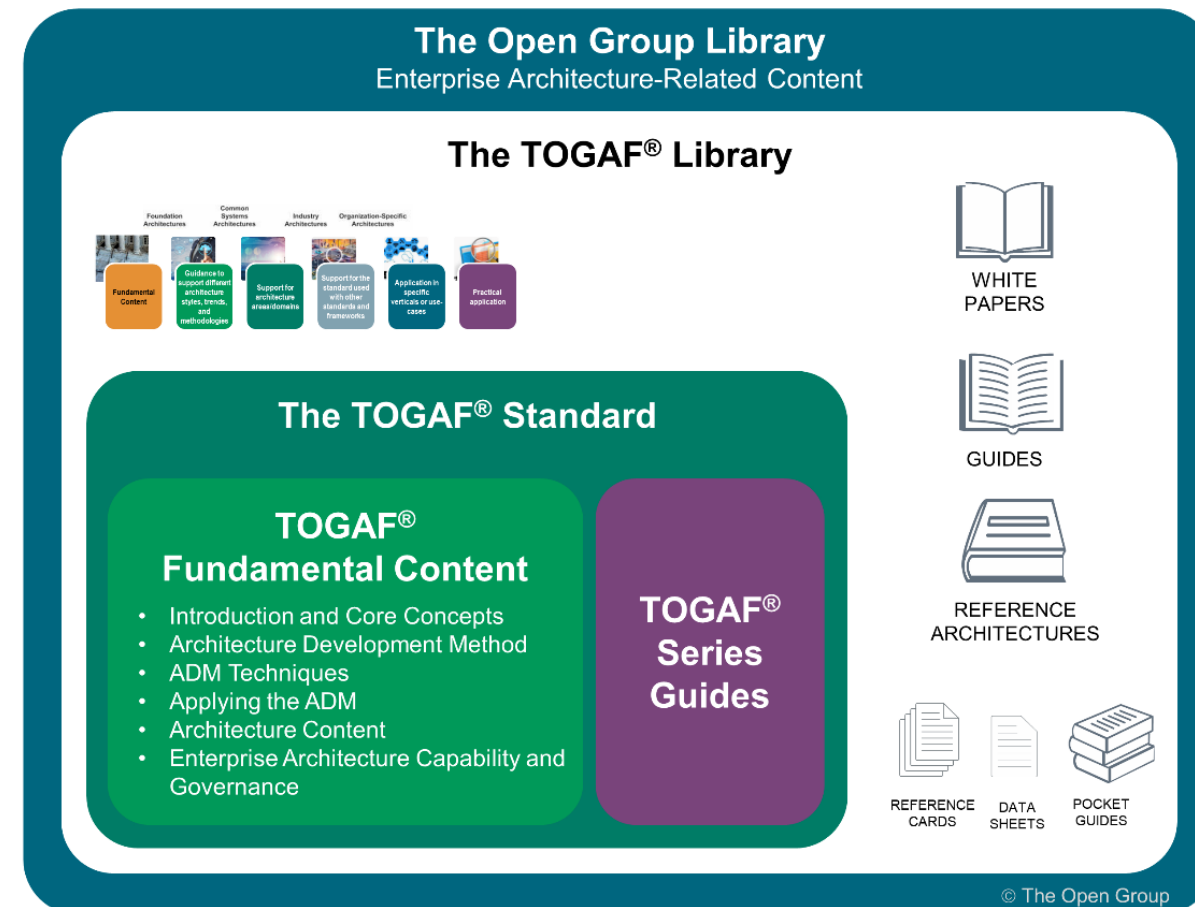
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Unit 8 – Supporting the ADM Work



8.1 How The Open Group TOGAF Library can be used to support the Practitioner's Work

TOGAF Library

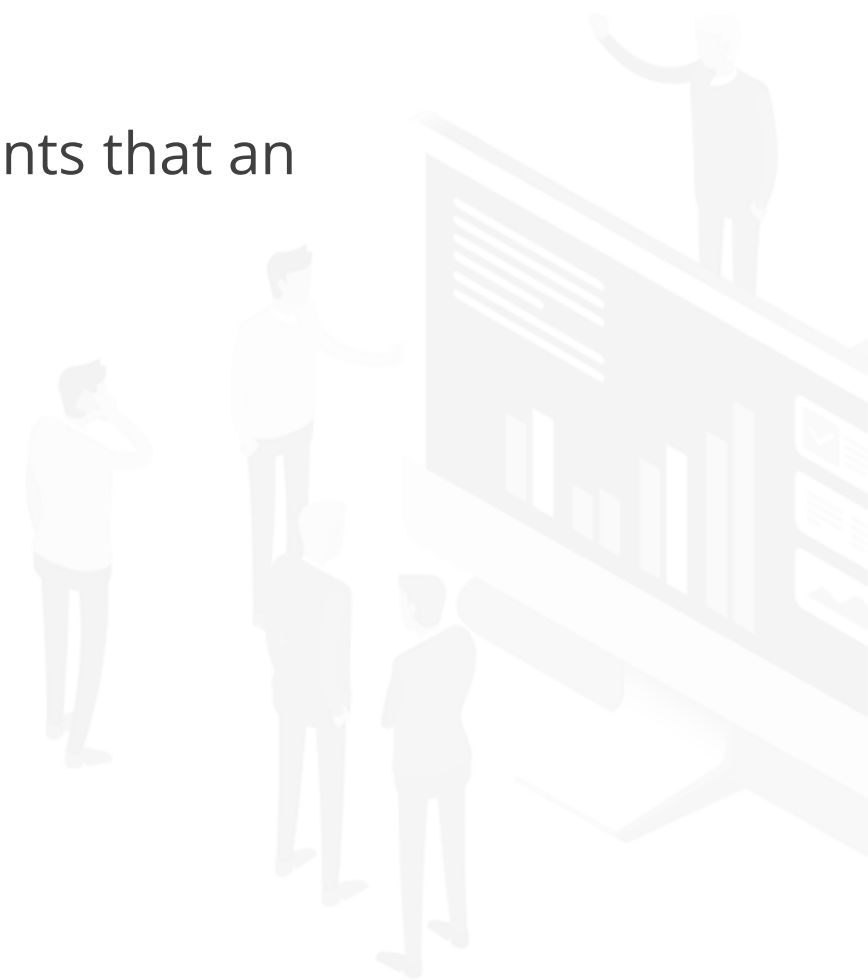


- Accompanying the standard are additional resources contained in the TOGAF Library.
- Whereas the TOGAF Series Guides are proven, stable, best practices, the TOGAF Library also provides emerging ideas, guidelines, templates, patterns, and other forms of reference material to accelerate the creation of new architectures for the enterprise.

8.2 Business Scenarios

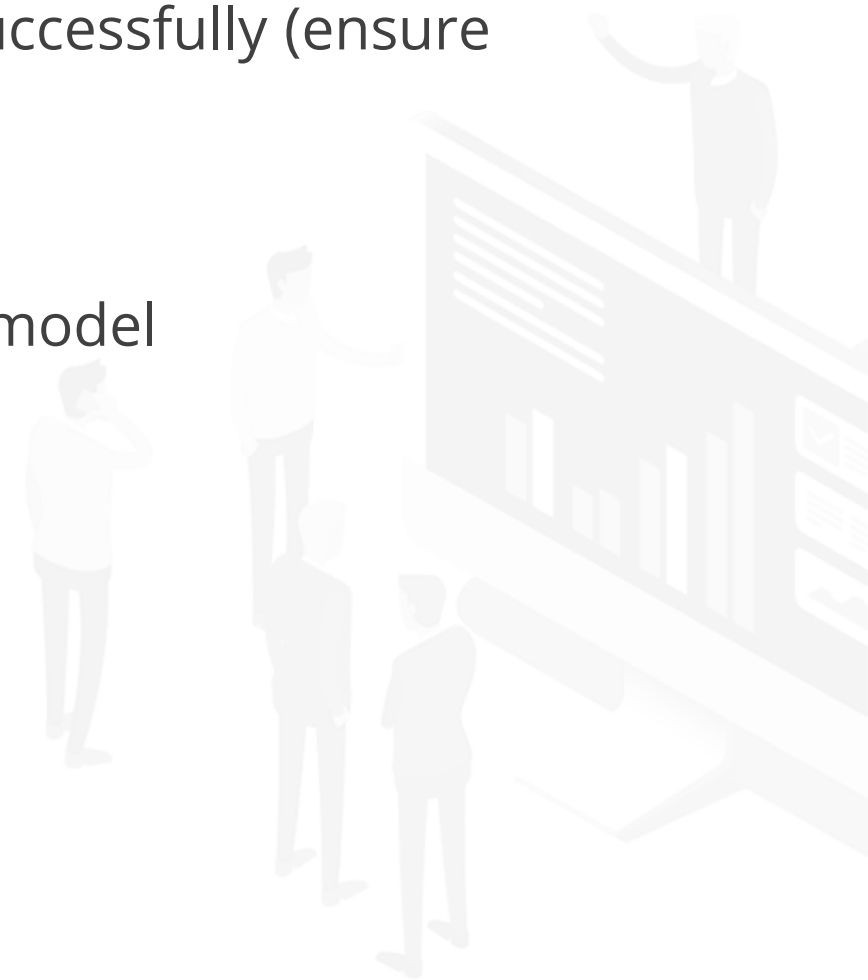
Business Scenario Purpose

It is a technique to help identify and understand the business requirements that an architecture must address.

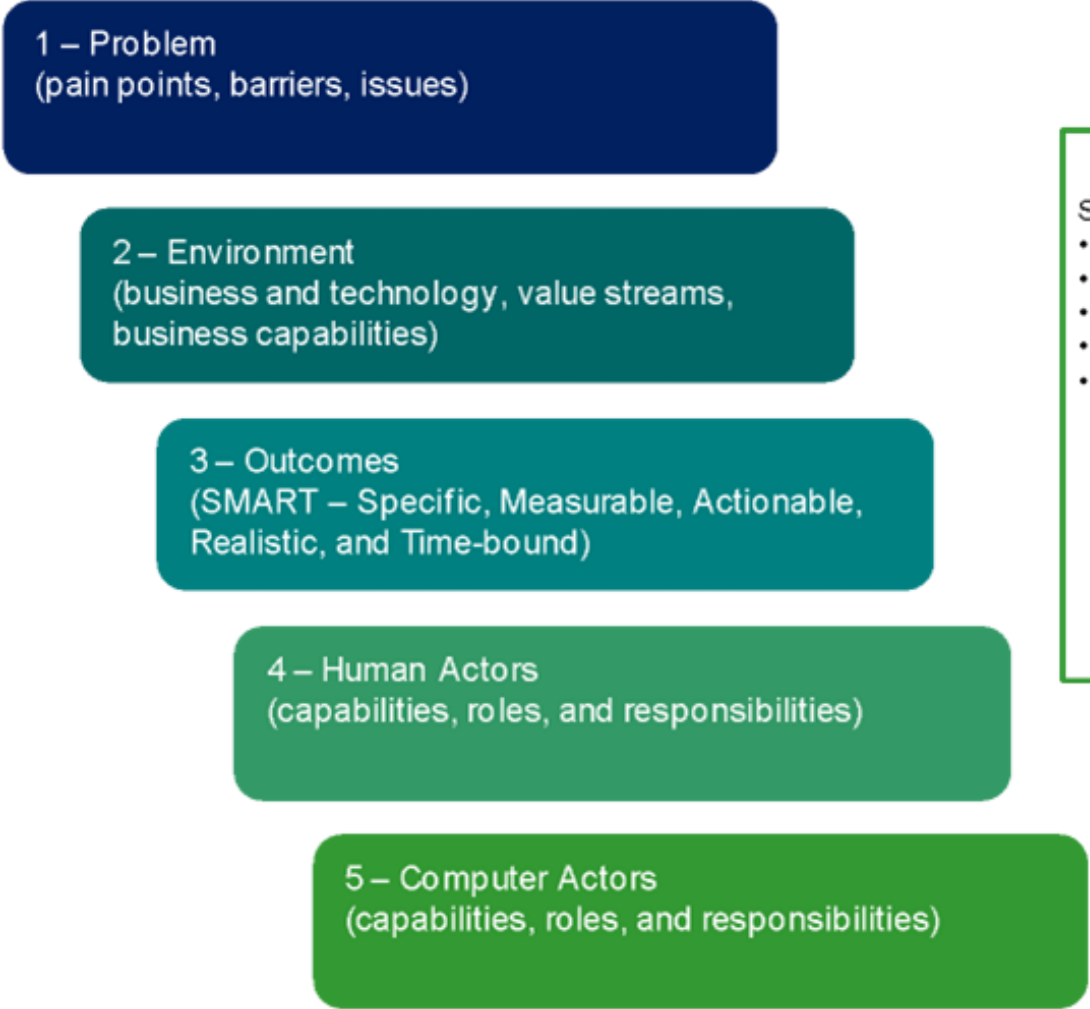


The Method

- Identify, document, and rank the problem that is driving the scenario
- Document, as high-level architecture models, the business and technical environments where the problem situation is occurring
- Identify and document desired objectives; the results of handling the problems successfully (ensure the objectives are SMART)
- Identify human actors (participants) and their place in the business model
- Identify computer actors (computing elements) and their place in the technology model
- Check for fitness-for-purpose, and refine only if necessary



Creating a Business Scenario



Premise Formulation Phase	Initial Verification Phase	Refinement Phase
Steps: <ul style="list-style-type: none">• Plan• Gather Information• Analyze/Process• Document• Review	Steps: <ul style="list-style-type: none">• Plan• Gather Information• Analyze/Process• Document• Review	Steps: <ul style="list-style-type: none">• Plan• Gather Information• Analyze/Process• Document• Review
1 - Problem	1 - Problem	1 - Problem
2 - Environment	2 - Environment	2 - Environment
3 - Outcomes	3 - Outcomes	3 - Outcomes
4 – Human Actors	4 – Human Actors	4 – Human Actors
5 – Computer Actors	5 – Computer Actors	5 – Computer Actors

8.3 The purpose of Compliance Assessments

The Purpose of Compliance Assessments in the TOGAF ADM

Best practice compliance assessments are tightly linked with the TOGAF concept of an Architecture Contract.

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.



Compliance Assessment Goals

- Catch errors in the project architecture early, and thereby reduce the cost and risk of changes required later in the lifecycle.
- Ensure the application of best practices to architecture work
- Provide an overview of the compliance of an architecture to mandated enterprise standards
- Communicate to management the status of the project



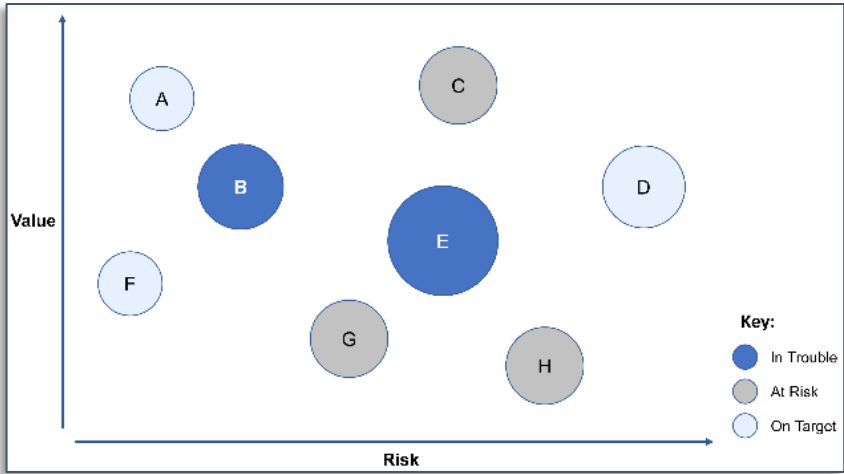
8.4 How Migration Planning techniques are used to review and consolidate the Gap Analysis results from earlier Phases

Migration Planning Techniques

Implementation Factor Catalog		
Factor	Description	Deduction
<Name of Factor>	<Description of Factor>	<Impact on Migration Plan>
Change in Technology	Shut down the message centers, saving 700 personnel, and have them replaced by email.	<ul style="list-style-type: none">• Need for personnel training, re-assignment• Email has major personnel savings and should be given priority
Consolidation of Services		
Introduction of New Customer Service		

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- Implementation Factor Catalog
- Consolidated Gaps, Solutions, & Dependencies Matrix
- Architecture Definition Increments Table
- Transition Architecture State Evolution Table
- Business Value Assessment Technique



Migration Planning Techniques

Implementation Factor Catalog

- This is used to document factors impacting the architecture Implementation and Migration Plan.

Consolidated Gaps, Solutions, & Dependencies Matrix

- This is used by the architect to group the gaps identified in the domain architecture gap analysis results and assess potential solutions and dependencies to one or more gaps.



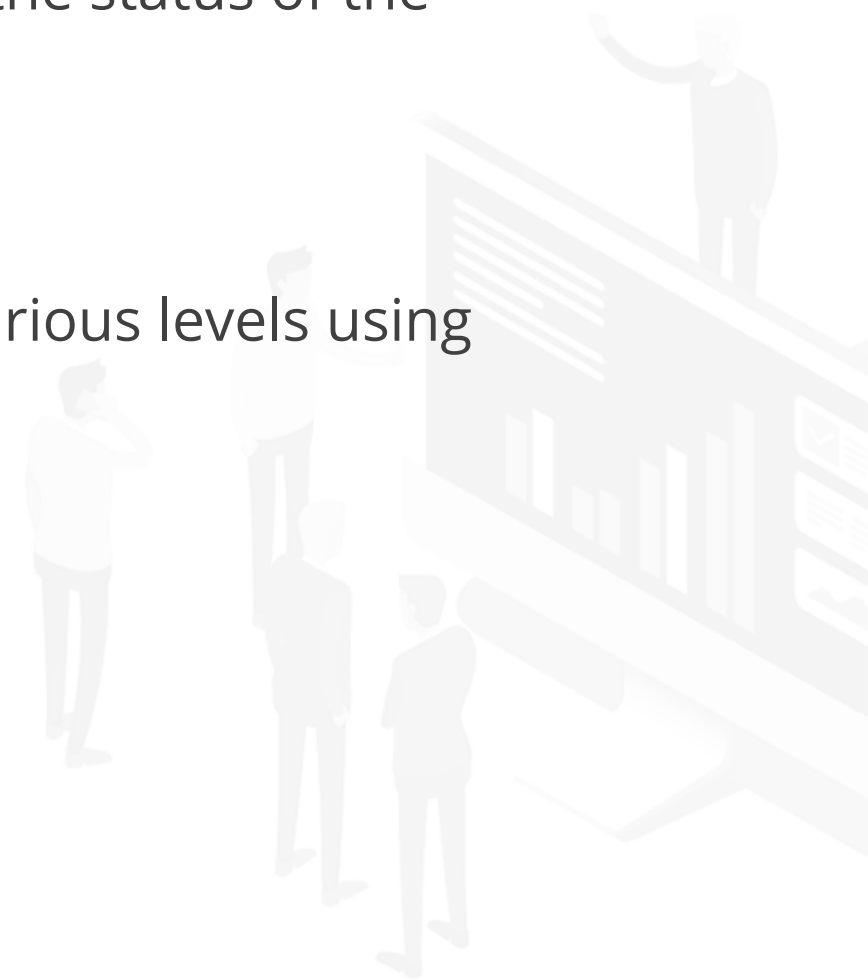
Migration Techniques

Architecture Definition Increments Table

- This is used by the architect to plan a series of Transition Architectures outlining the status of the Enterprise Architecture at specified times.

Transition Architecture State Evolution Table

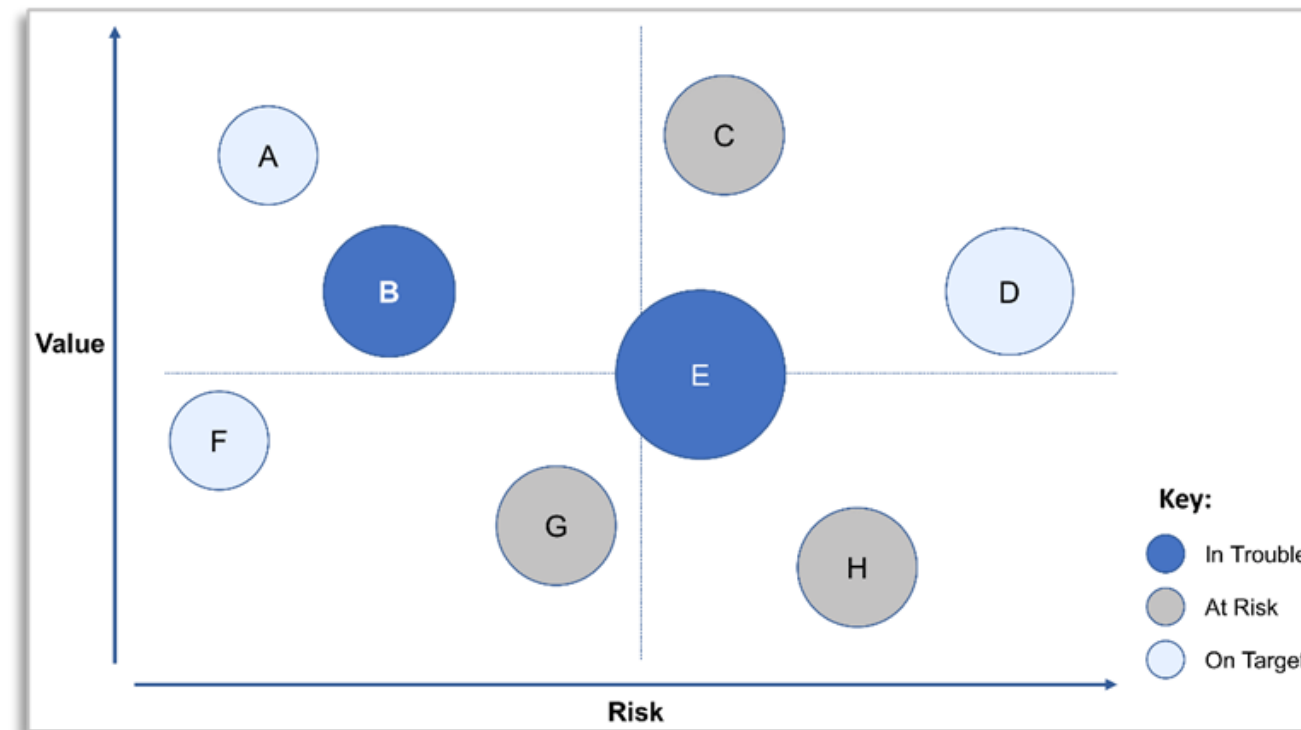
- This is used by the architect to show the proposed state of the architectures at various levels using the defined taxonomy (e.g., the TOGAF TRM).



Migration Techniques

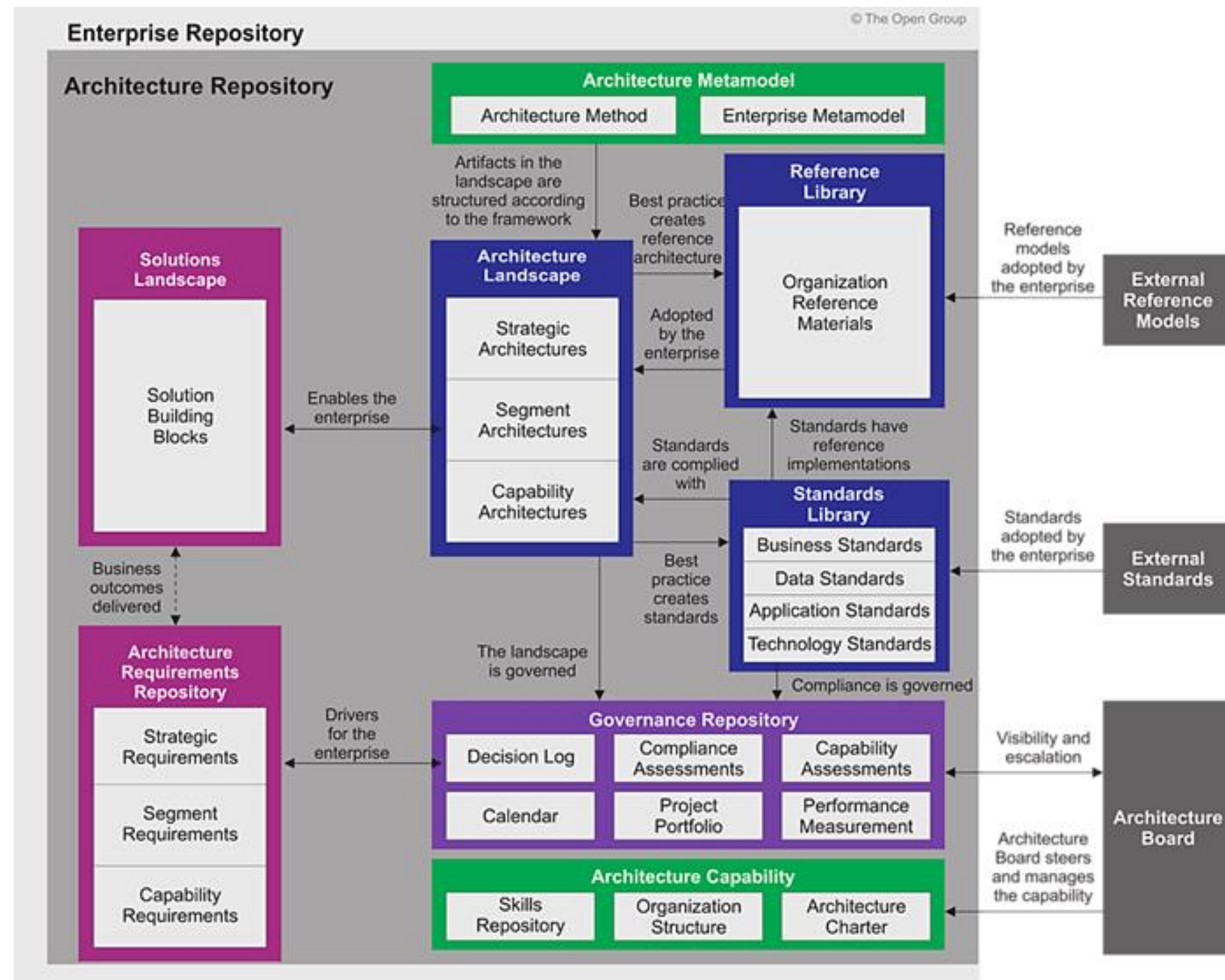
Business Value Assessment Technique

- This is used to assess business value by drawing up a matrix based on a value index dimension and a risk index dimension.

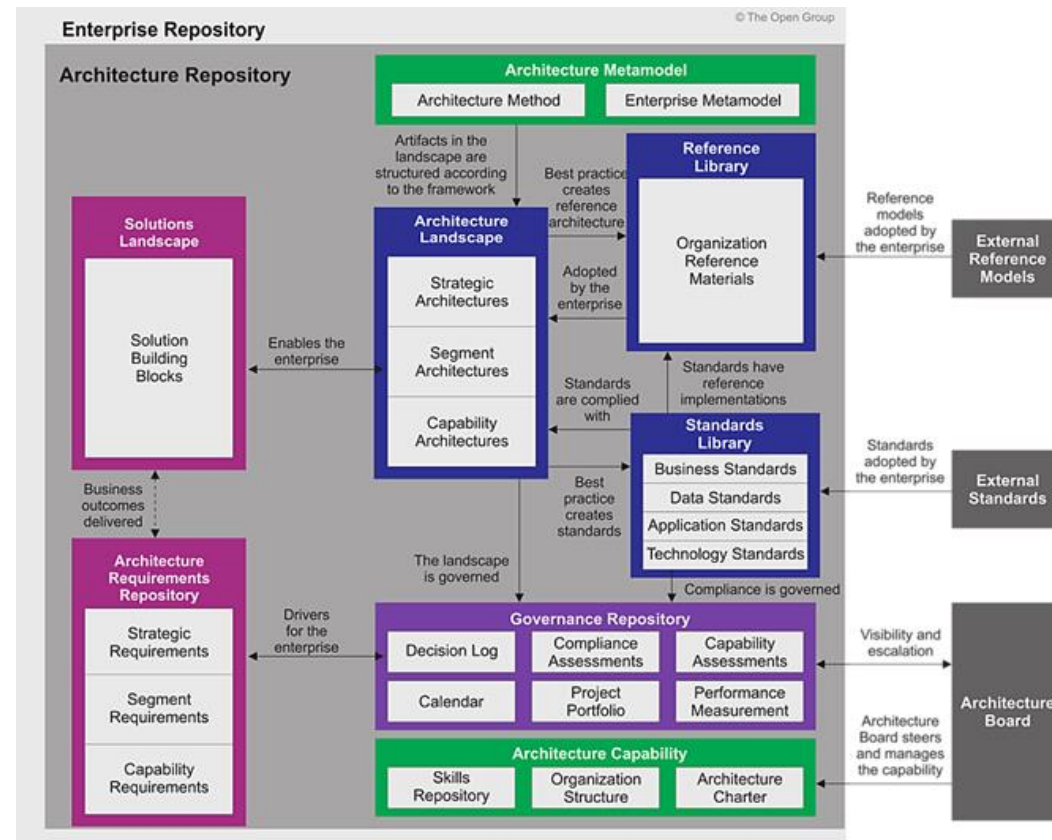


8.5 How a Repository can be structured using the TOGAF Architecture Repository as an example

The TOGAF Architecture Repository

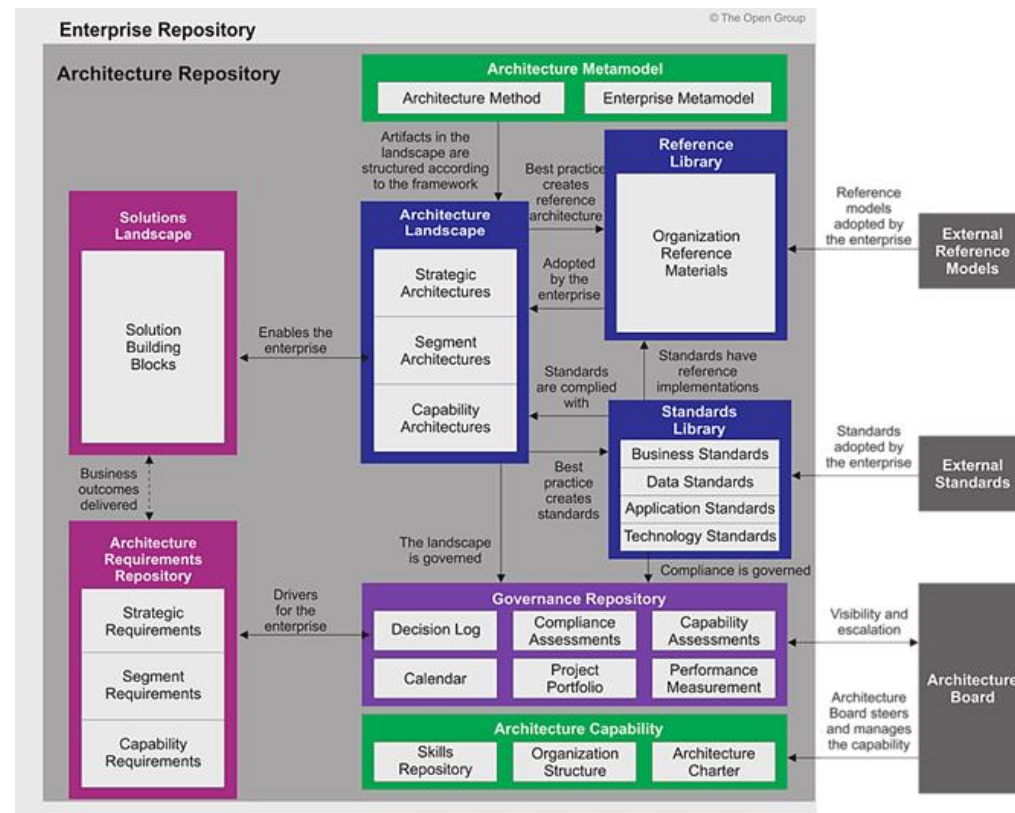


Classes of Architectural Information (1)



- The **Architecture Metamodel** describes the organizationally tailored application of an architecture framework, including a method for architecture development and a metamodel for architecture content
- The **Architecture Capability** defines the parameters, structures, and processes that support governance of the Architecture Repository
- The **Architecture Landscape** presents an architectural representation of assets in use, or planned, by the enterprise at particular points in time
- The **Standards Library** captures the standards with which new architectures must comply, which may include industry standards, selected products and services from suppliers, or shared services already deployed within the organization

Classes of Architectural Information (2)



- The **Reference Library** provides guidelines, templates, patterns, and other forms of reference material that can be leveraged in order to accelerate the creation of new architectures for the enterprise
- The **Governance Repository** provides a record of governance activity across the enterprise
- The **Architecture Requirements Repository** provides a view of all authorized architecture requirements which have been agreed with the Architecture Board
- The **Solutions Landscape** presents an architectural representation of the SBBs supporting the Architecture Landscape which have been planned or deployed by the enterprise

8.6 What to expect in a well-run Architecture Repository

Recommendations

Supporting Tool:

- A high-functioning team should be supported by modeling and analytic software, as well as a document management system
- A Practitioner requires linkage between any models and documentation, as well as a space to perform analysis.



Recommendations

Sufficient Detail:

- A well run repository will contain sufficient detail to demonstrate that views for stakeholders are derived from the architecture.
- All Stakeholders' concerns must be addressed.



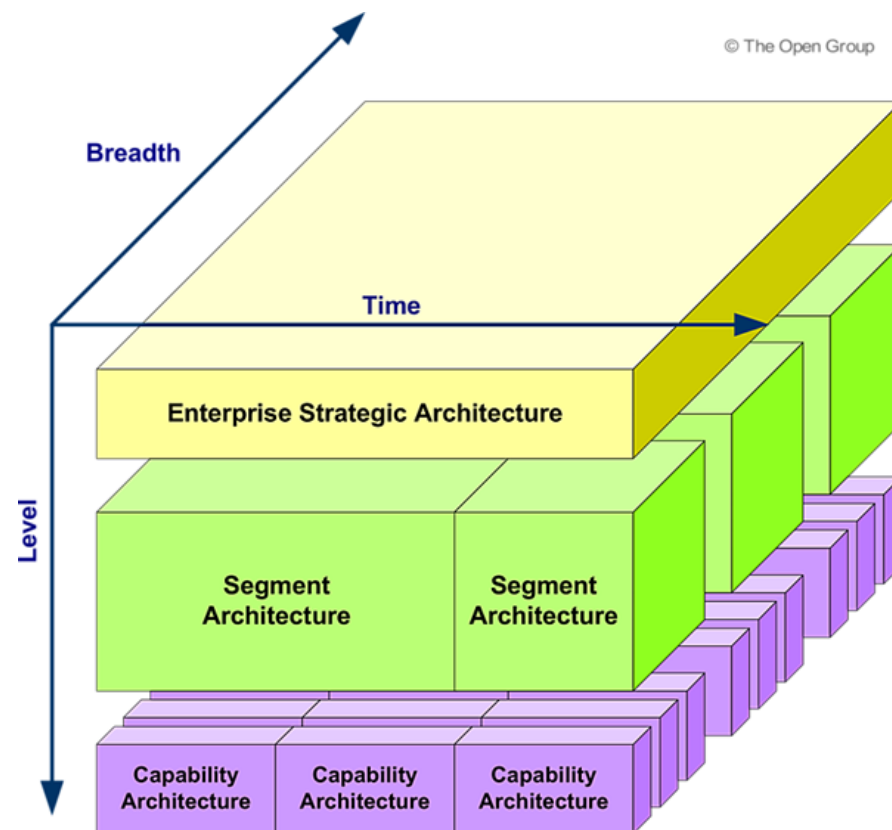
Recommendations

- Focus on the three most powerful components of an EA Repository, the Architecture Requirements Specification, controls, and gaps.
- Focus on good information management including good information presentation practice.



8.7 How the concepts of Architecture Levels are used to organize the Architecture Landscape

The Concepts



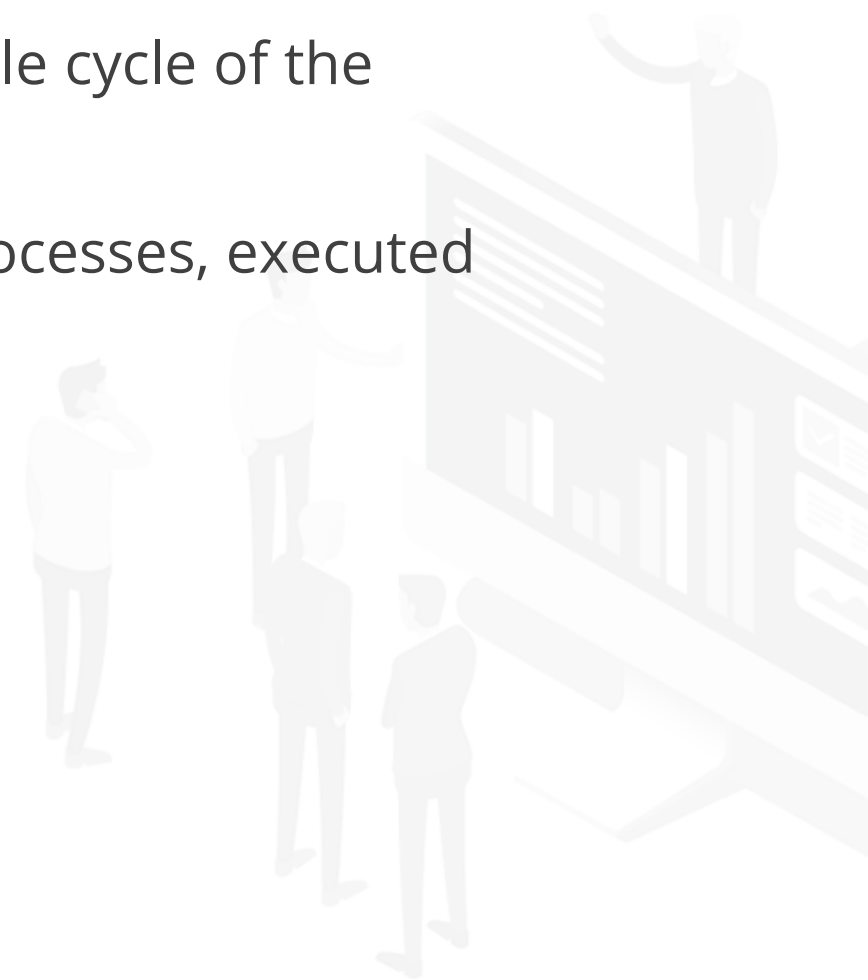
- In a typical enterprise, many architectures will be described in the Architecture Landscape at any point in time.
- To address this complexity, the TOGAF Standard uses the concepts of levels and the Enterprise Continuum to provide a conceptual framework for organizing the Architecture Landscape.
- Levels provide a framework for dividing the Architecture Landscape into three levels of granularity

Developing Architecture at Different Levels

Each architecture typically does not exist in isolation and must therefore sit within a governance hierarchy. Broad, summary architectures set the direction for narrow and detailed architectures.

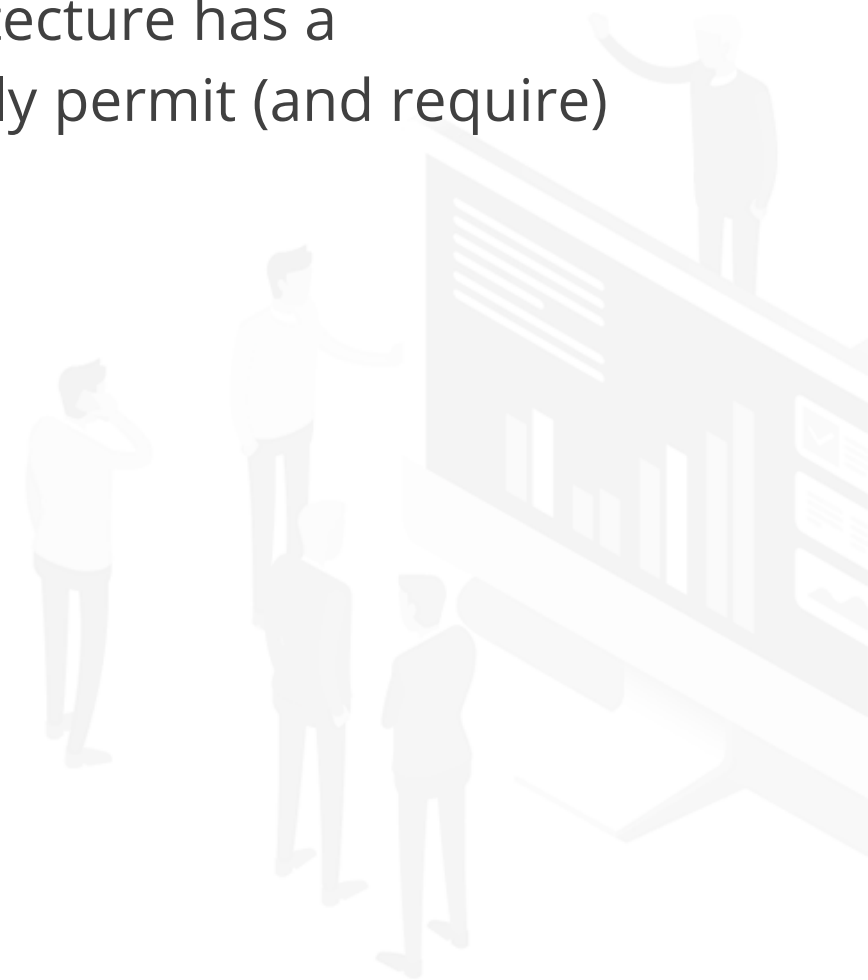
Two strategies can be applied:

- Architectures at different levels can be developed through iterations within a single cycle of the ADM process
- Architectures at different levels can be developed through a hierarchy of ADM processes, executed concurrently



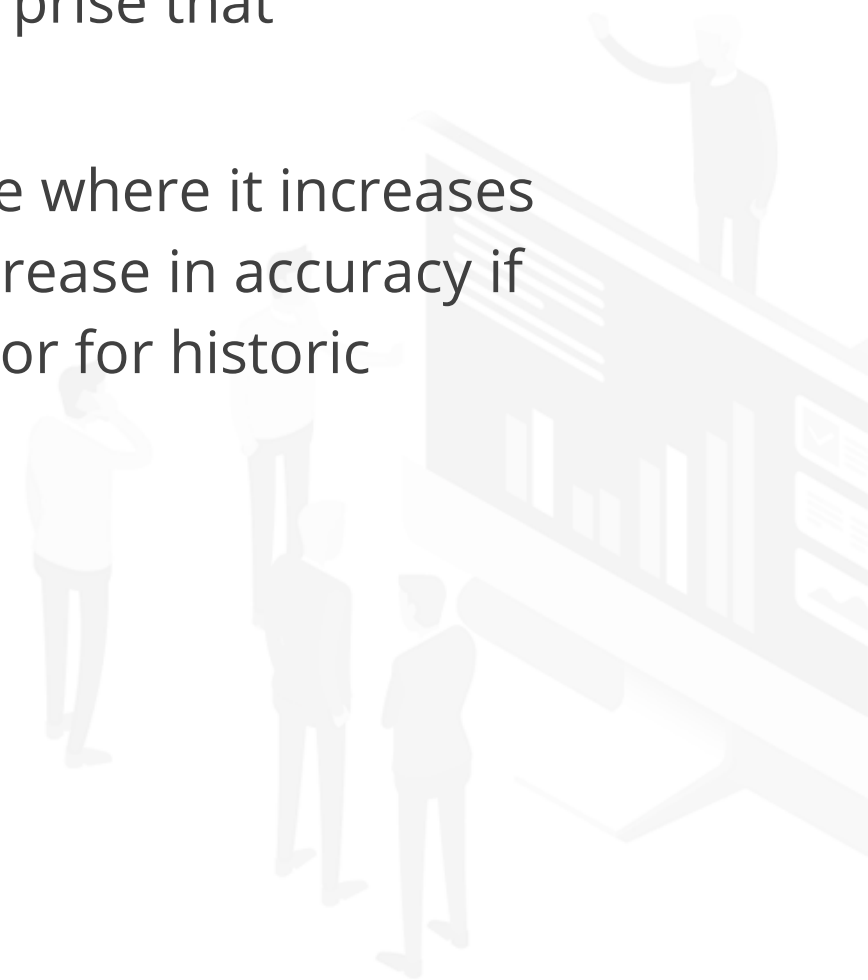
Organizing the Architecture Landscape (1)

- **Breadth:** the breadth (subject matter) area is generally the primary organizing characteristic for describing an Architecture Landscape. Architectures are functionally decomposed into a hierarchy of specific subject areas or segments.
- **Depth:** with broader subject areas, less detail is needed to ensure that the architecture has a manageable size and complexity. More specific subject matter areas will generally permit (and require) more detailed architectures.



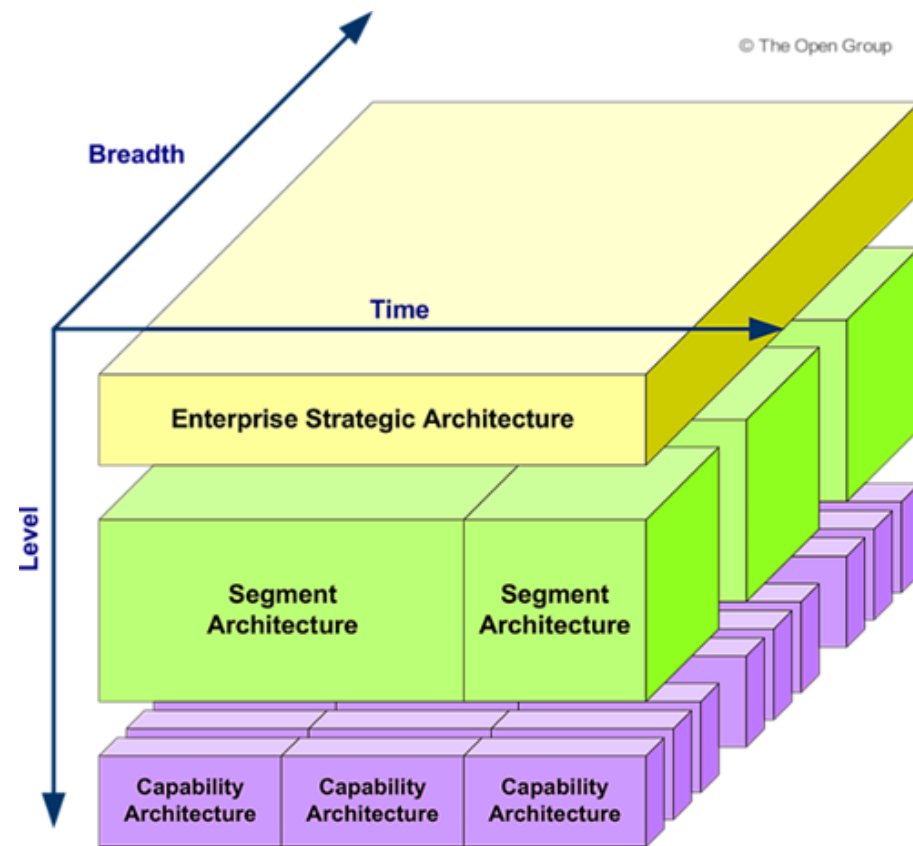
Organizing the Architecture Landscape (2)

- **Time:** for a specific breadth and depth an enterprise can create a Baseline Architecture and a set of Target Architectures that stretch into the future. Broader and less detailed architectures will generally be valid for longer periods of time and can provide a vision for the enterprise that stretches further into the future.
- **Recency:** finally, each architecture view will progress through a development cycle where it increases in accuracy until finally approved. After approval, an architecture will begin to decrease in accuracy if not actively maintained. In some cases recency may be used as an organizing factor for historic architectures.



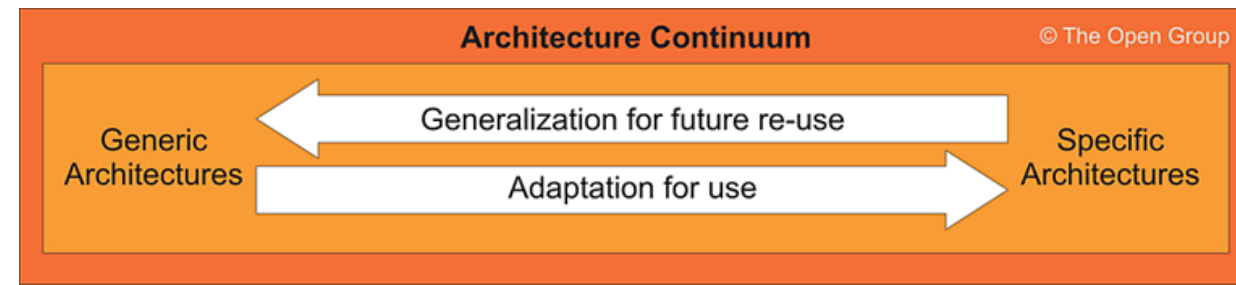
8.8 Different Levels of Architecture that exist in an Organization

Architecture Landscape



- **(Enterprise) Strategic Architecture** provides an organizing framework for operational and change activity and allows for direction setting at an executive level.
- **Segment Architecture** provides an organizing framework for operational and change activity and allows for direction setting and the development of effective architecture roadmaps at a program or portfolio level.
- **Capability Architecture** provides an organizing framework for change activity and the development of effective architecture roadmaps realizing capability increments.

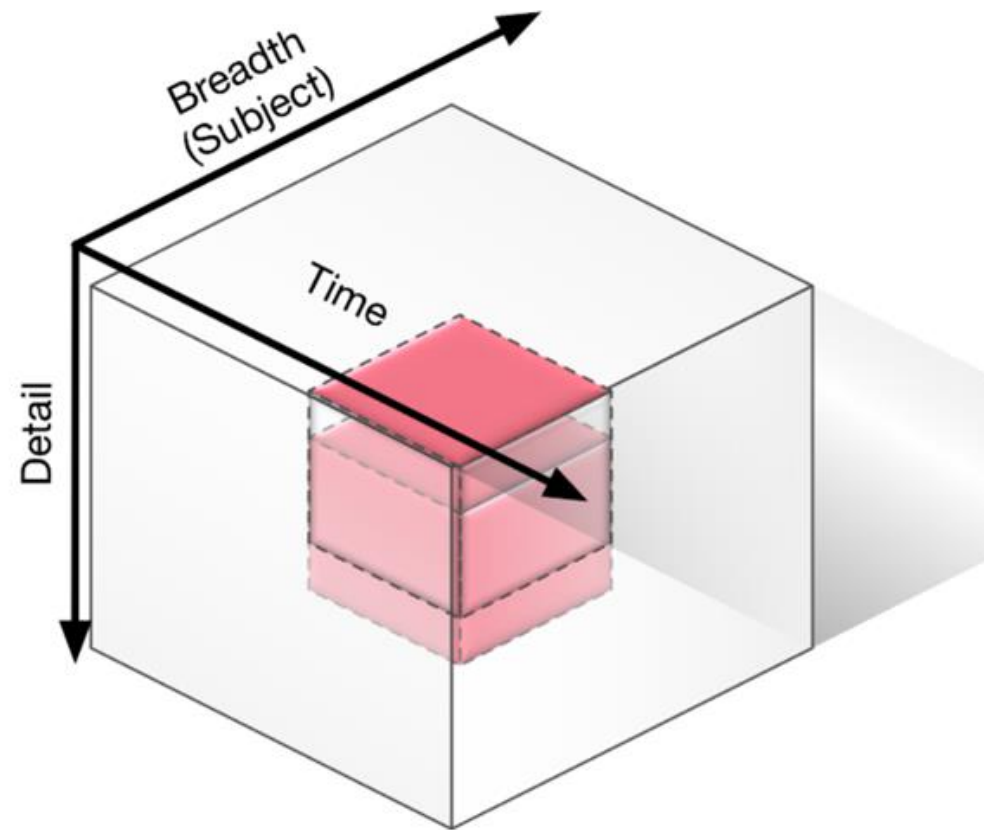
The Architecture Continuum



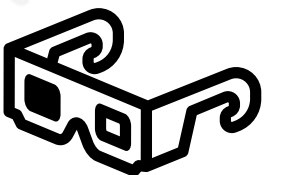
- Provides a method of dividing each level of the Architecture Landscape by abstraction.
- Offers a consistent way to define and understand the generic rules, representations, and relationships in an architecture, including traceability and derivation relationships
- Shows the relationships from foundation elements to organization-specific architecture.

8.9 Determining the Level that an Architecture is being Developed at

EA Landscape with an Architecture Project



Looking at the figure, the essential point is that the Architecture Project covers a specific portion of the EA Landscape – the portion defined regarding breadth, planning horizon, and detail. Prior work may already exist within the scope...



8.10 The Role of Architecture Building Blocks (ABBs)

Architecture Building Blocks

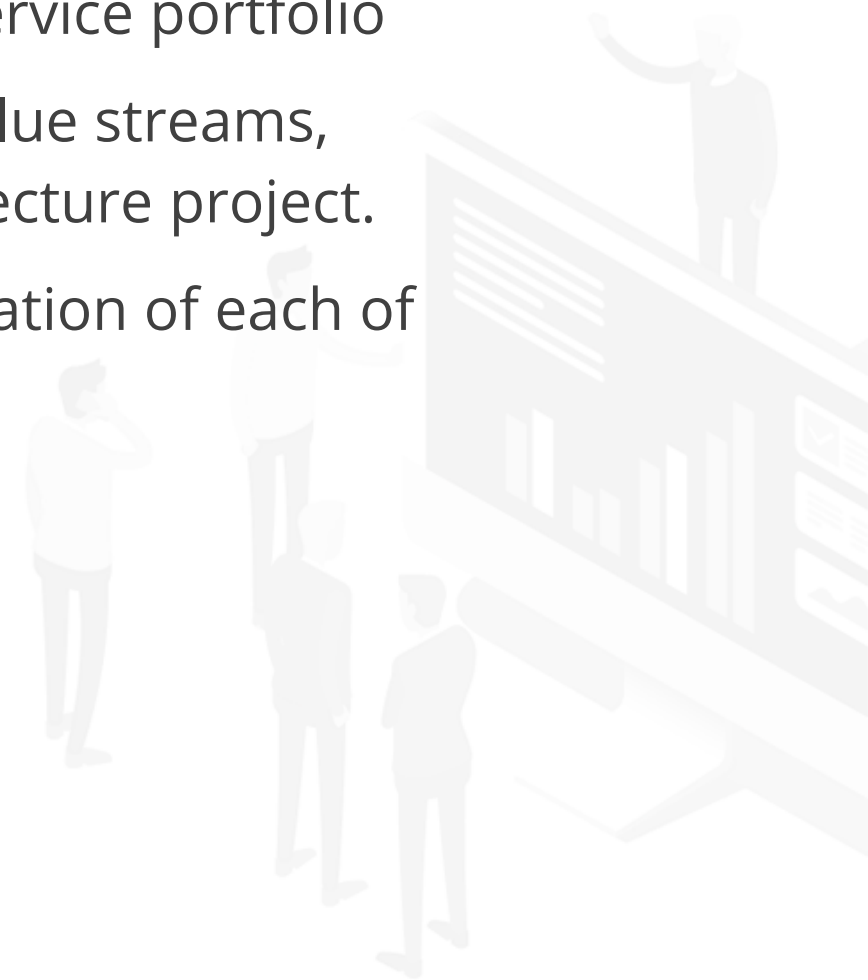
- Architecture Building Blocks (ABBs) relate to the Architecture Continuum and are defined or selected as a result of the application of the ADM.
- They are used to architecture requirements; e.g., Business, Data, Application, and Technology requirements
- They direct and guide the development of SBBs



8.11 Guidelines and Techniques for Business Architecture

Applying Business Capabilities

- The business capability map found or developed in the Architecture Vision phase provides a self-contained view of the business that is independent of the current organizational structure, business processes, information systems and applications, and the rest of the product or service portfolio
- Those business capabilities should be mapped back to the organizational units, value streams, information systems, and strategic plans within the scope of the Enterprise Architecture project.
- This relationship mapping provides greater insight into the alignment and optimization of each of those domains



Example: Business Capability Map

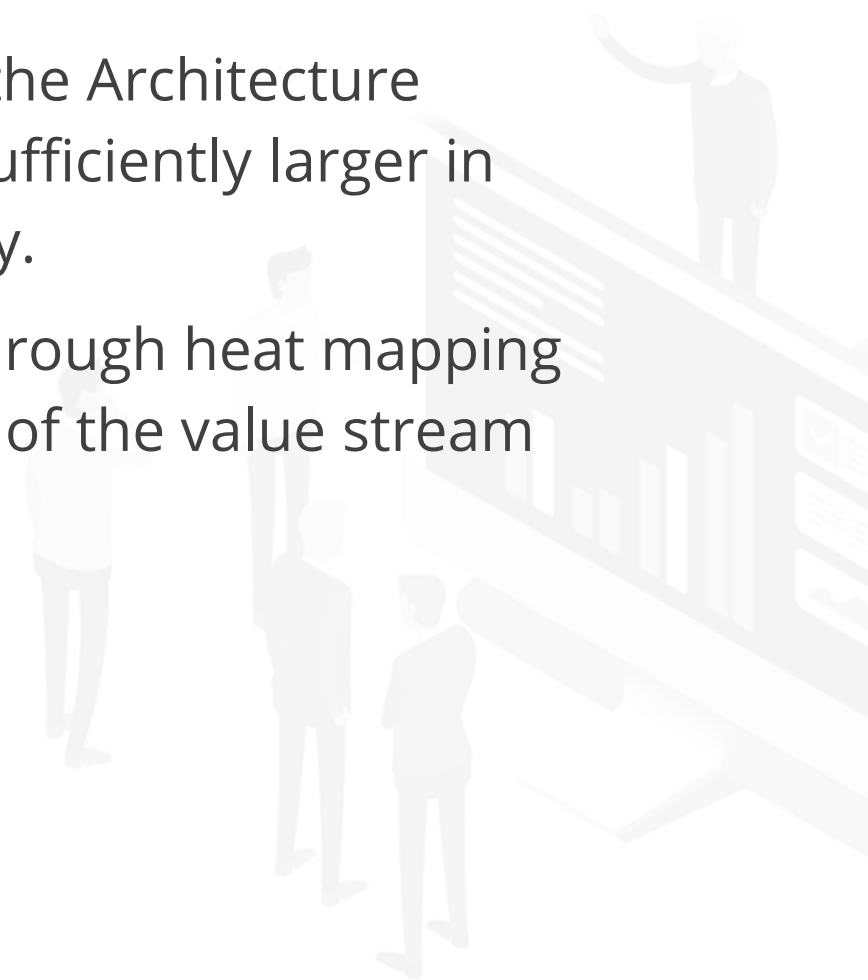
Strategic	Business Planning	Market Planning	Partner Management
	Capital Management	Policy Management	Government Relations Management
Core	Account Management	Product Management	Distribution Management
	Customer Management	Channel Management	Agent Management
Supporting	Financial Management	HR Management	Procurement Management
	Information Management	Training Management	Operations Management

Example: Business Capabilities Heat Map

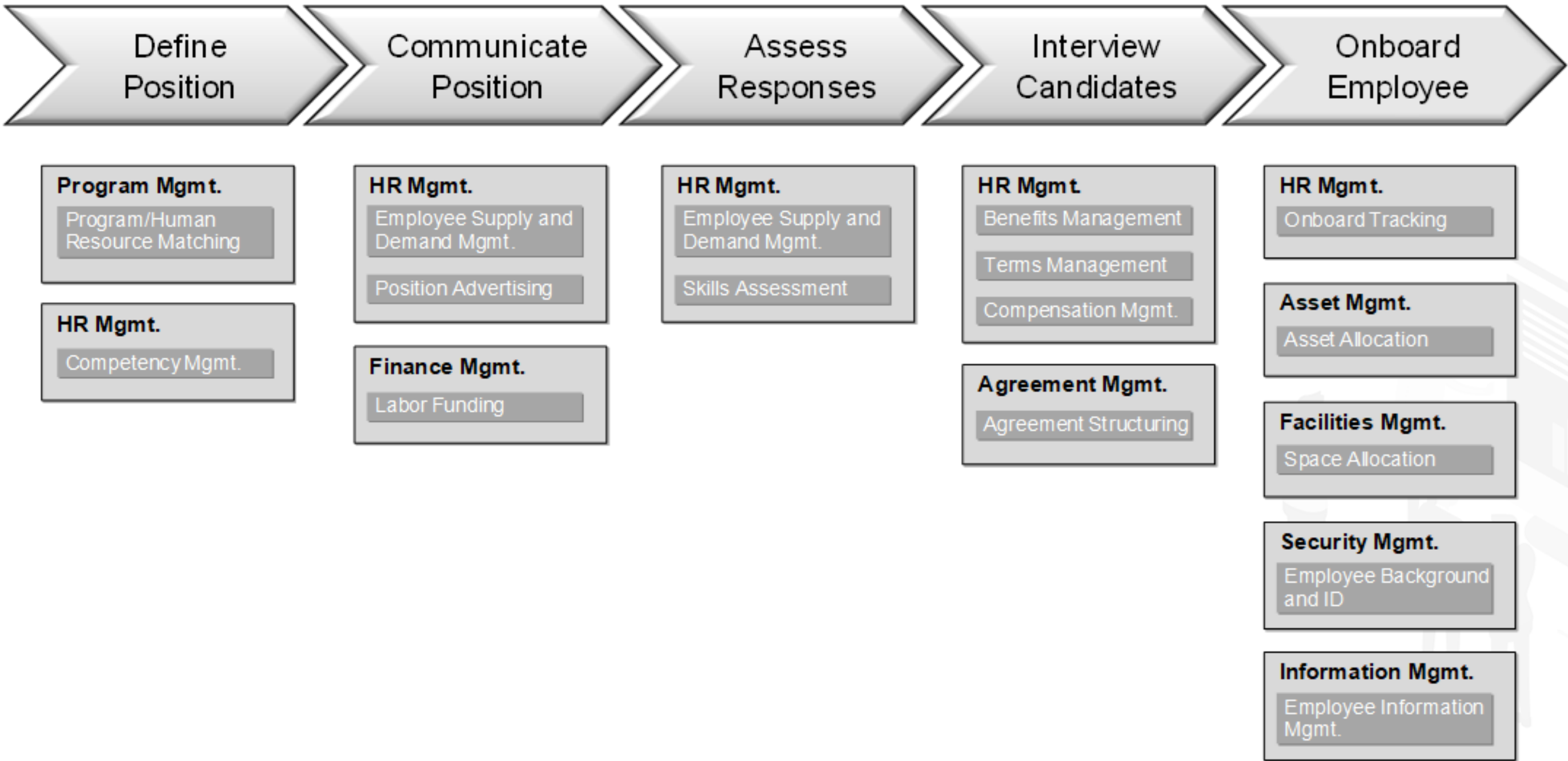
Strategic	Business Planning (L)	Market Planning (H)	Partner Management (M)
	Capital Management (L)	Policy Management (L)	Government Relations Management (H)
Core	Account Management (L)	Product Management (L)	Distribution Management (L)
	Customer Management (Y)	Channel Management (L)	Agent Management (N)
Supporting	Financial Management (L)	HR Management (H)	Procurement Management (L)
	Information Management (M)	Training Management (M)	Operations Management (L)

Applying Value Streams

- Value streams provide valuable stakeholder context into why the organization needs business capabilities, while business capabilities provide what the organization needs for a particular value stage to be successful.
- Start with the initial set of value stream models for the business documented in the Architecture Vision phase. Within the scope of the specific Enterprise Architecture project, if sufficiently larger in breadth, there may be a need for new value streams not already in the repository.
- A new or existing value stream can be analyzed within the scope of the project through heat mapping (by value stream stage) or by developing use-cases around a complete definition of the value stream



Example: Mapping Capabilities to Value Stream Stages

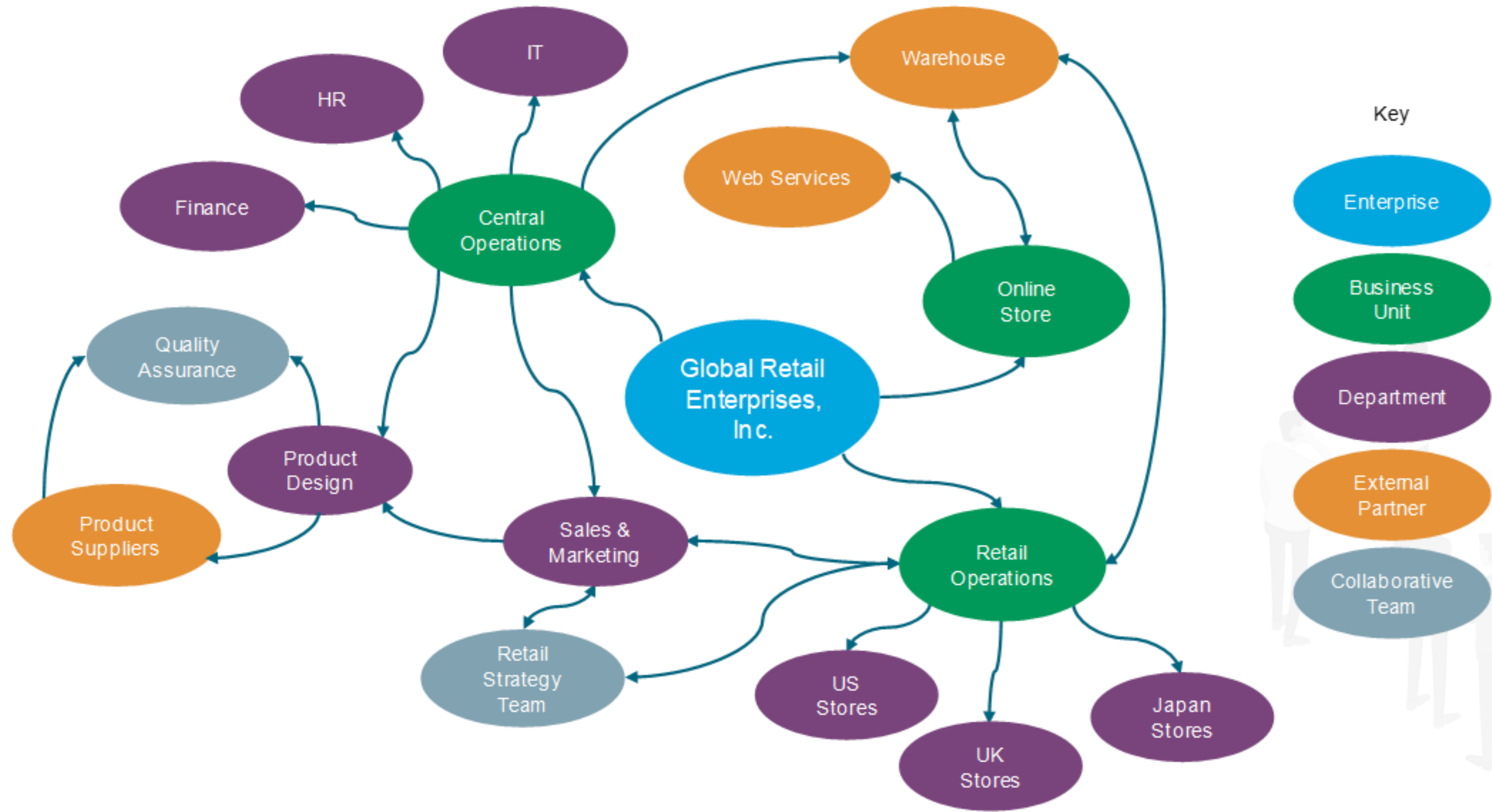


Applying Organization Mapping

- An organization map shows the key organizational units, partners, and stakeholder groups that make up the enterprise ecosystem.
- The map should depict the working relationship between those entities, as distinct from an organizational chart that only shows hierarchical reporting relationships.
- The business unit is the main concept used to establish organization maps.
- This map is a key element of Business Architecture because it provides the organizational context for the whole Enterprise Architecture effort.



Example: Organization Map

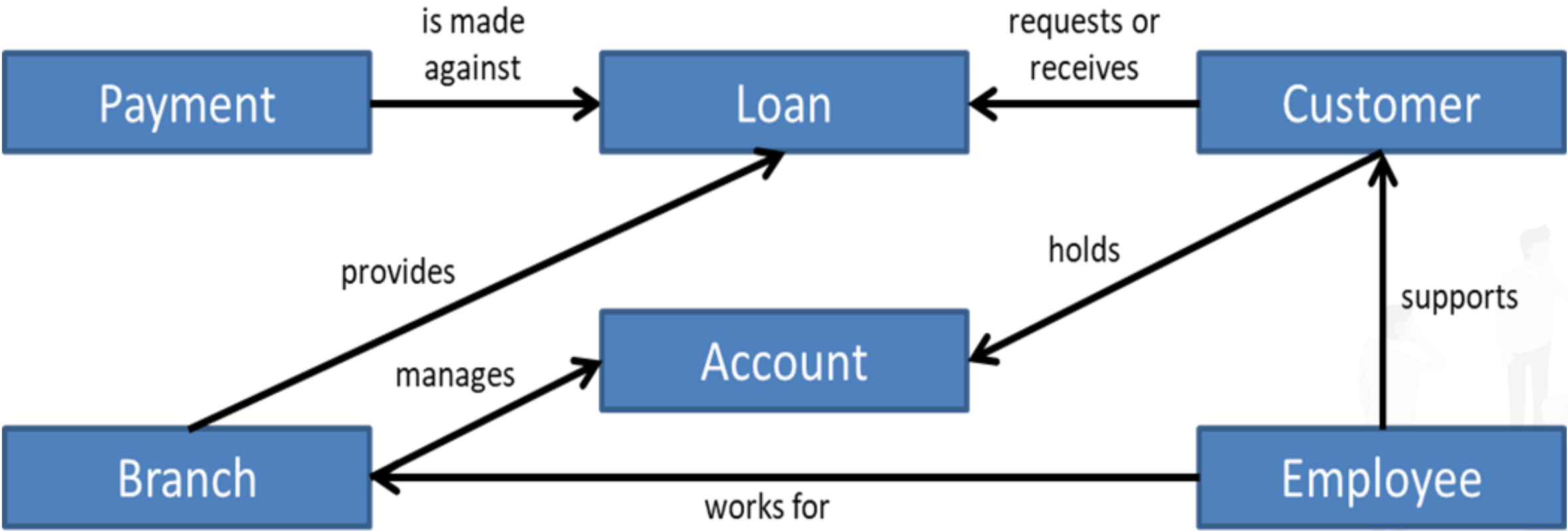


Architecture Building Blocks

- Characterizing information in the Business Architecture phase starts with the elements that matter most to the business, such as product, customer, factory, etc.
- Relationships among the information domains can then be added to the map as the next level of understanding for a good baseline information map.
- The most significant benefit then comes with building matrices between information and business capabilities.
- These information maps and relationships to business capabilities will then apply in later architecture phases on data characterization, applications, and infrastructure.



Example: Simple Information Map



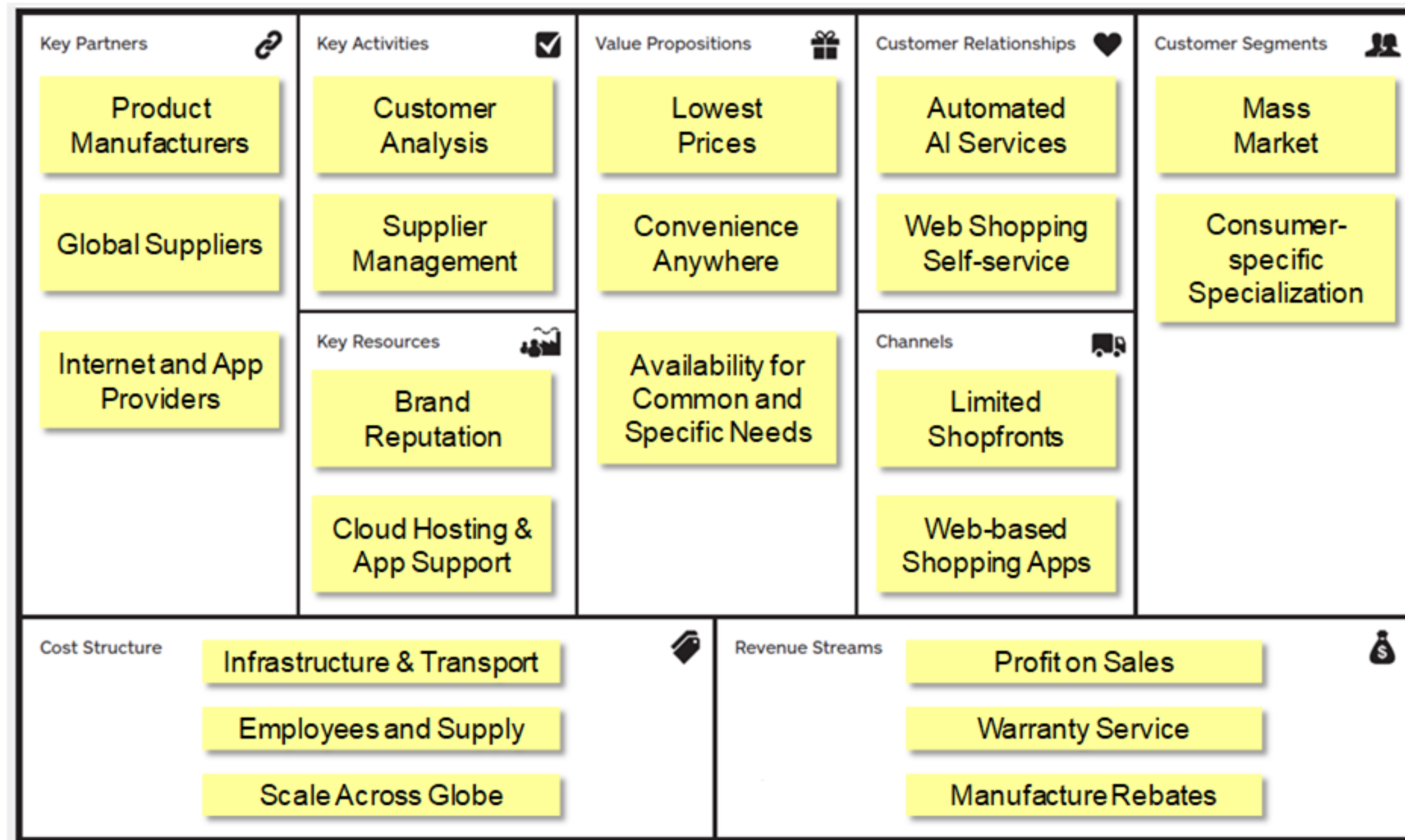
This example: A financial institution

Applying Modeling Techniques

The modeling and mapping techniques are extensions that implement the business capabilities, value streams, and organization maps.

- **Activity Models** (also called **Business Process Models**) describe the enterprise's business activities, the data and/or information exchanged between activities (internal exchanges), and the data and/or information exchanged with other activities that are outside the scope of the model (external exchanges)
- **Use-Case Models** describe the business process of an enterprise in terms of use-cases and actors corresponding to business processes and organizational participants (people, organizations, etc.)
- **Logical Data Model** (or **Class Model**) Logical data models describe the entities, their attributes, and the acceptable values for these attributes as well as the relationships between the various entities.
- **Business Models** Business models provide a powerful construct to help focus and align an organization around its strategic vision and execution

Example: Business Model Canvas



8.12 Applying Gap Analysis

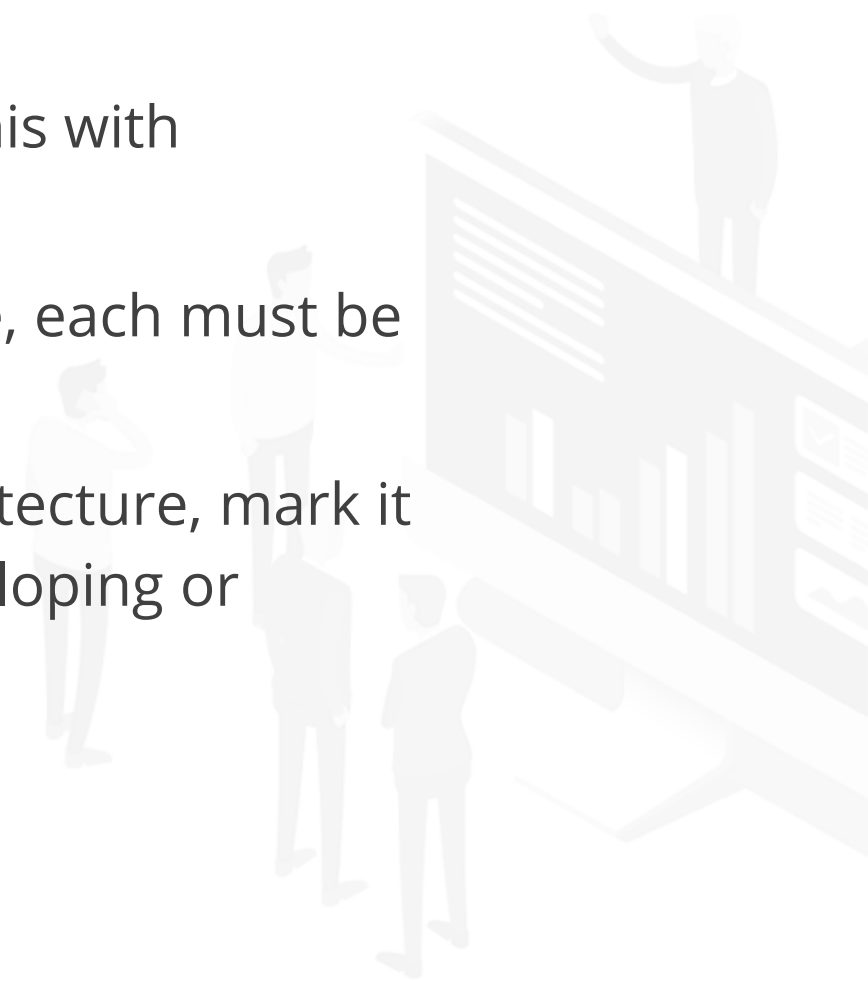
Gap Analysis

- A key step in developing an architecture is to identify changes between the baseline and target architectures using Gap Analysis.
- The Gap Analysis technique is used to consider what may have been forgotten or missed, as well as what is needed.
- A gap is simply everything that changes.



Steps

- Draw up a matrix with all the ABBs of the Baseline Architecture on the vertical axis, and all the ABBs of the Target Architecture on the horizontal axis
- Add to the Baseline Architecture axis a final row labeled "New", and to the Target Architecture axis a final column labeled "Eliminated"
- Where an ABB is available in both the Baseline and Target Architectures, record this with "Included" at the intersecting cell
- Where an ABB from the Baseline Architecture is missing in the Target Architecture, each must be reviewed
- Where an ABB from the Target Architecture cannot be found in the Baseline Architecture, mark it at the intersection with the "New" row as a gap that needs to be filled, either by developing or procuring the building block



ADM Phases B, C and D Develop Target, Baseline, and Gap

- Just enough for the purpose.
- If the current state is accepted, the only reason to describe the baseline is to develop gaps.
- Consider the limitation of restricting description to where there is a gap.
- Description using the same technique at the same level of detail enables identification of gaps: a gap is everything that changes.



8.13 How Iteration can be used in Architecture Practices

Iteration in Practice

Iteration can be used in two different ways:

1. Iteration of the ADM

Described in terms of activity, re-sequencing and looping the ADM

2. Iteration in terms of Information Flow

By exploring the EA Landscape based on information required. If the information required is available move on, else produce the material by exercising an ADM phase



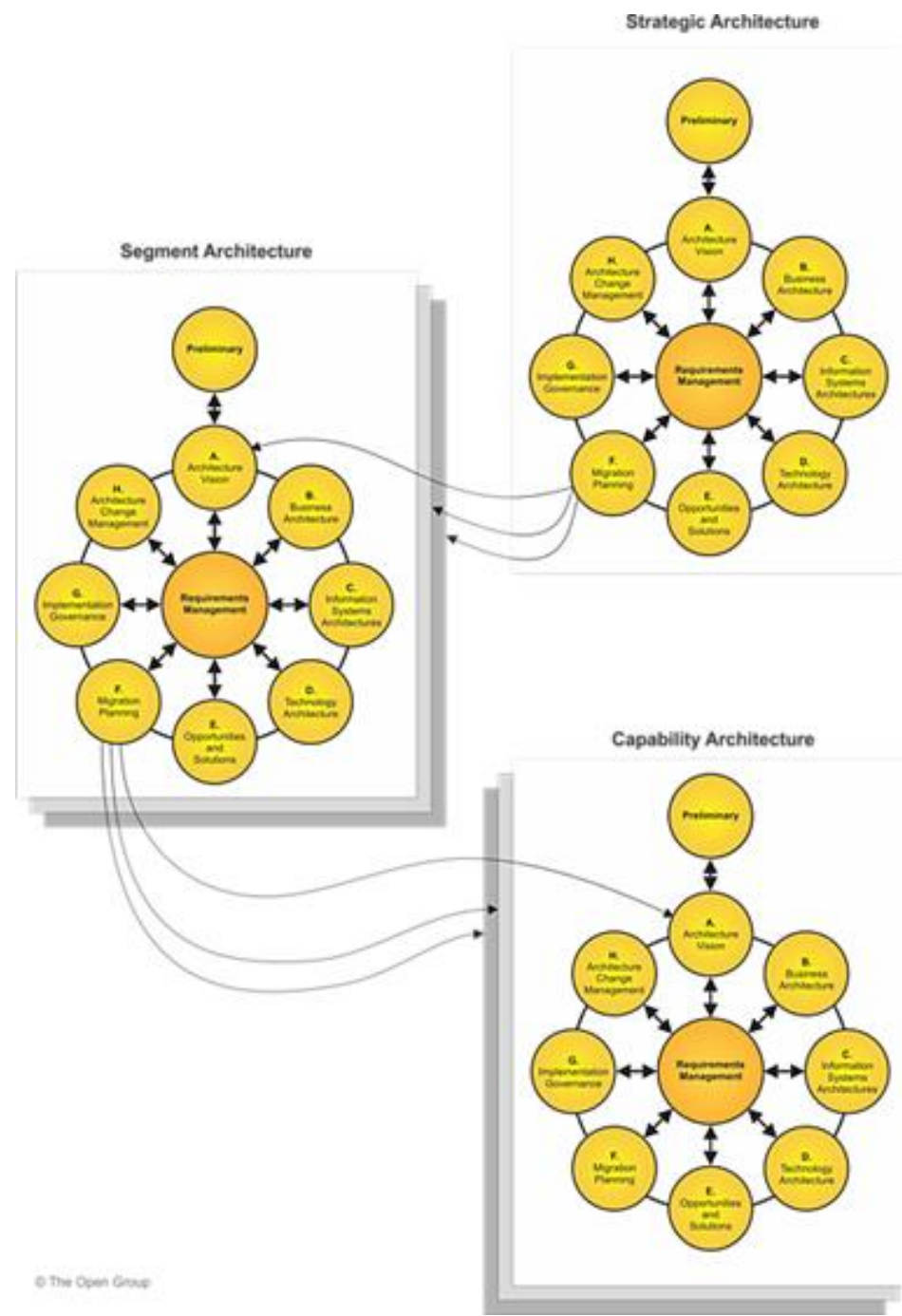
Iteration of the ADM

The ADM supports iteration in a number of ways.

1. Iteration to describe a comprehensive Architecture Landscape through multiple ADM cycles based upon individual initiatives bound to the scope of the Request for Architecture Work
2. Iteration to describe the integrated process of developing an architecture where the activities described in different ADM phases interact to produce an integrated architecture
3. Iteration to describe the process of managing change to the organization's Architecture Capability



1. Iteration to Develop a Comprehensive Architecture Landscape

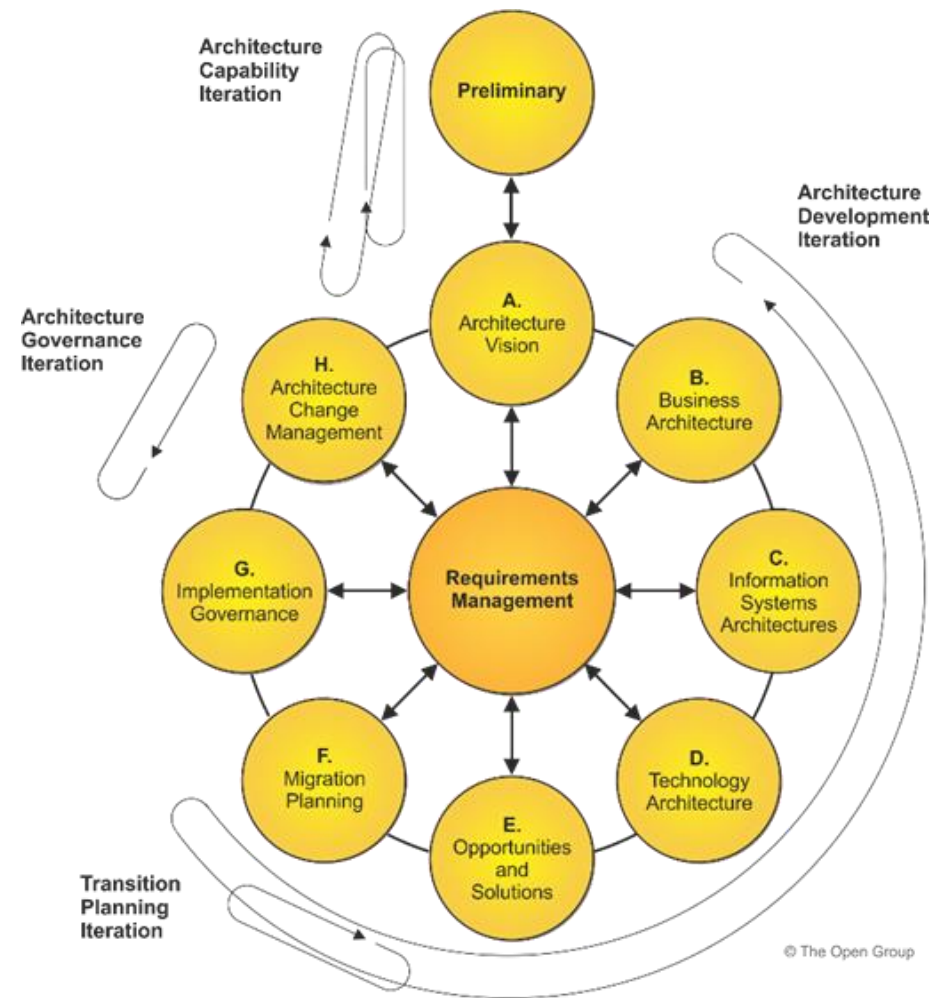


Projects will exercise through the entire ADM cycle, commencing with Phase A.

- Each cycle of the ADM will be bound by a Request for Architecture Work
- The architecture output will populate the Architecture Landscape, either extending the landscape described, or changing the landscape where required

Separate projects may operate their own ADM cycles concurrently, with relationships between the different projects. One project may trigger the initiation of another project.

2. Iteration within an ADM Cycle (Architecture Development Iteration)



Projects may:

- Operate multiple ADM phases concurrently
- Cycle between ADM phases, in planned cycles covering multiple phases
- Return to previous phases to update work products with new information

Suggested Iteration Cycles (Target First)

		Architecture Development			Transition Planning		Architecture Governance	
TOGAF Phase		Iteration 1	Iteration 2	Iteration <i>n</i>	Iteration 1	Iteration <i>n</i>	Iteration 1	Iteration <i>n</i>
Preliminary		Informal	Informal	Informal				Light
Architecture Vision		Informal	Informal	Informal	Informal	Informal		Light
Business Architecture	Baseline	Informal	Core	Core	Informal	Informal		Light
	Target	Core	Light	Core	Informal	Informal		Light
Application Architecture	Baseline	Informal	Core	Core	Informal	Informal		Light
	Target	Core	Light	Core	Informal	Informal		Light
Data Architecture	Baseline	Informal	Core	Core	Informal	Informal		Light
	Target	Core	Light	Core	Informal	Informal		Light
Technology Architecture	Baseline	Informal	Core	Core	Informal	Informal		Light
	Target	Core	Light	Core	Informal	Informal		Light
Opportunities and Solutions		Light	Light	Light	Core	Core	Informal	Informal
Migration Planning		Light	Light	Light	Core	Core	Informal	Informal
Implementation Governance					Informal	Informal	Core	Core
Change Management		Informal	Informal	Informal	Informal	Informal	Core	Core

- Core: primary focus activity for the iteration
- Light: secondary focus activity for the iteration
- Informal: potential activity for the iteration, not formally mentioned in the method

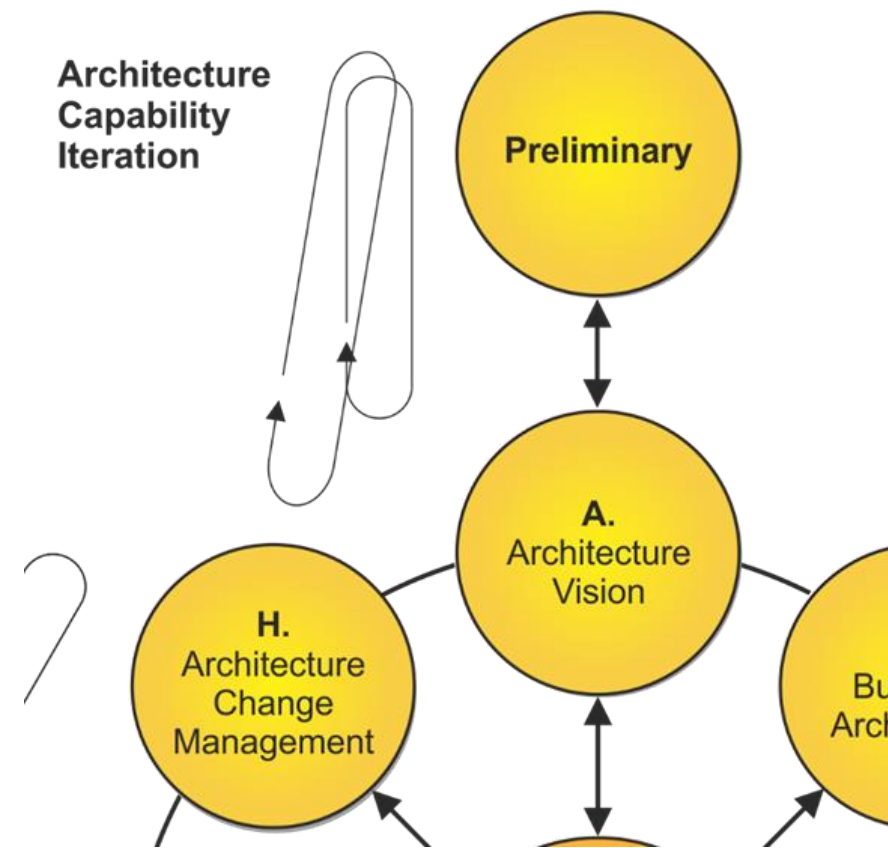
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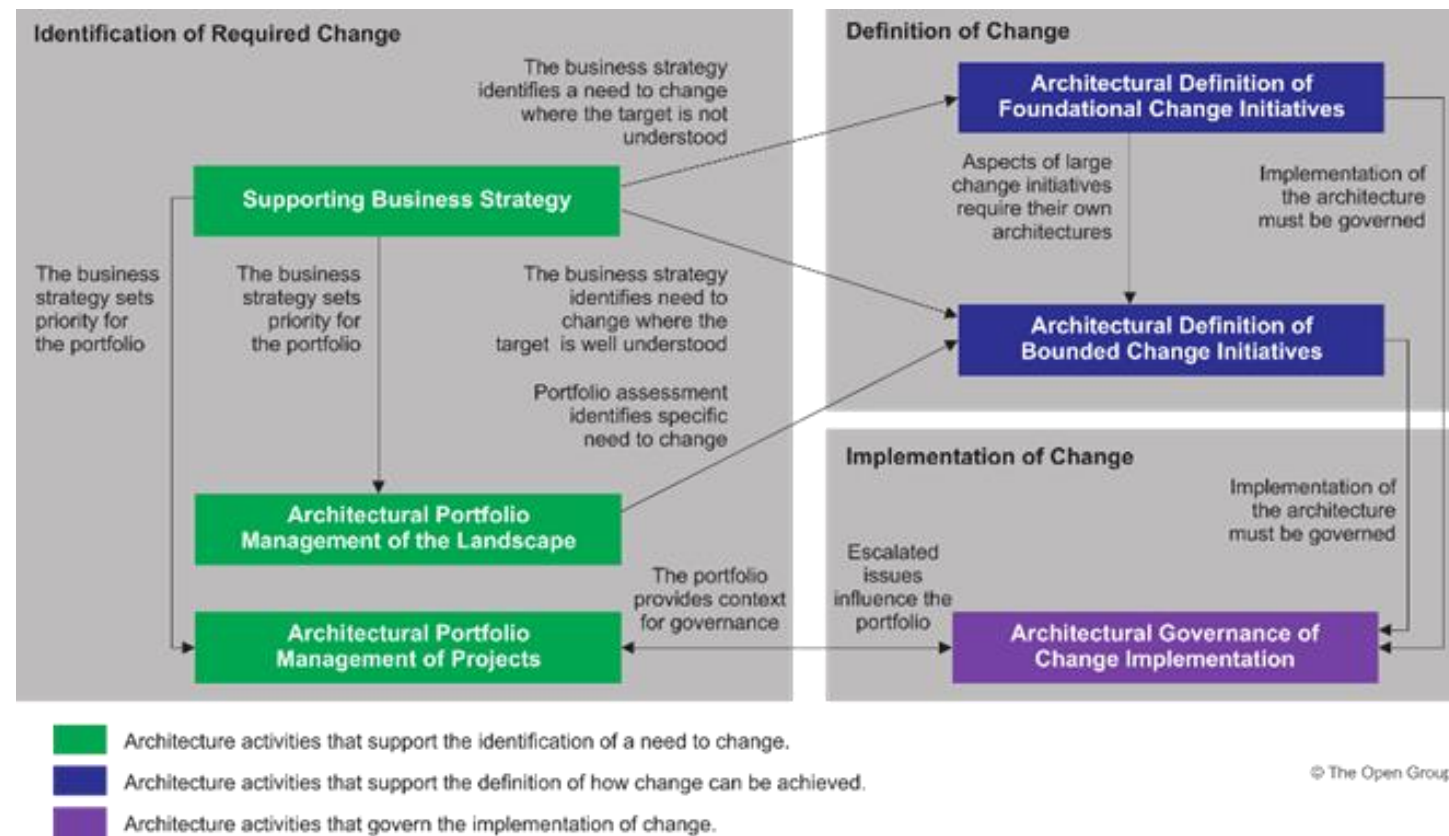
3. Iteration to manage the Architecture Capability (Architecture Capability Iteration)

Projects may require:

- a new iteration of the Preliminary Phase to (re-) establish aspects of the Architecture Capability identified in Phase A to address a Request for Architecture Work
- a new iteration of the Preliminary Phase to adjust the organization's Architecture Capability as a result of identifying new or changed requirements for Architecture Capability as a result of a Change Request in Phase H



Classes of Architecture Engagement



The standard defines approaches for three areas of engagement for architects:

- Identification of Change Required
- Definition of Change
- Implementation of Change

Iteration Focus for Classes of Architecture Engagement (Extract)

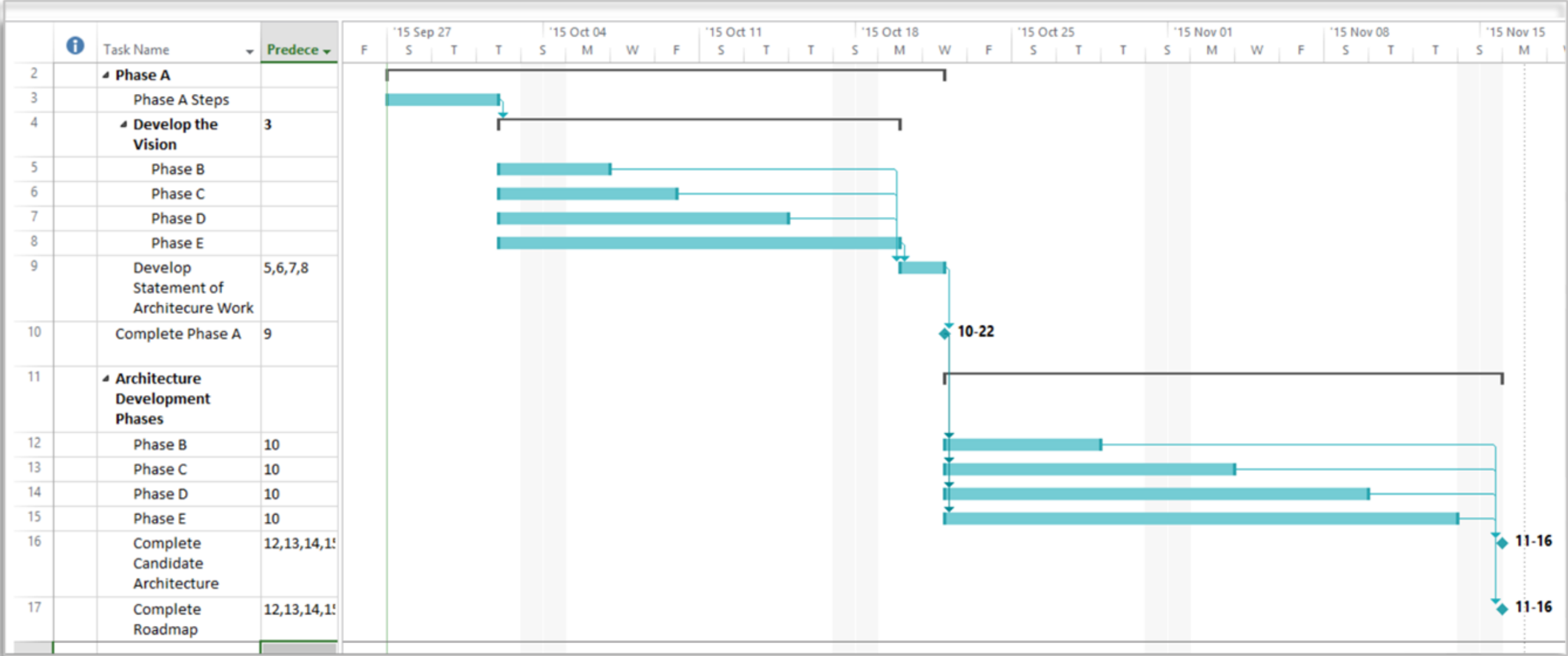
Engagement	Iteration Focus	Scope
Supporting Business Strategy	Architecture Capability Architecture Development (Baseline First)	Broad, shallow consideration given to the Architecture Landscape in order to address a specific strategic question and define terms for more detailed architecture efforts to address strategy realization.
Architectural Portfolio Management of the Landscape	Architecture Capability Architecture Development (Baseline First)	Focus on physical assessment of baseline applications and technology infrastructure to identify improvement opportunities, typically within the constraints of maintaining business as usual.
Architectural Portfolio Management of Projects	Transition Planning Architecture Governance	Focus on projects, project dependencies, and landscape impacts to align project sequencing in a way that is architecturally optimized.

Iteration in Terms of Information Flow

- Iteration within the TOGAF ADM is often in terms of re-sequencing and looping.
- Iteration can also be done in terms of information flow, where iteration is driven by the information needs of the project.
- If the information required is not available then it is produced by exercising a TOGAF ADM phase.



Example



8.14 How the Implementation Factor Catalog can be used

Implementation Factor Catalog

Implementation Factor Catalog		
Factor	Description	Deduction
<Name of Factor>	<Description of Factor>	<Impact on Migration Plan>
Change in Technology	Shut down the message centers, saving 700 personnel, and have them replaced by email.	<ul style="list-style-type: none">• Need for personnel training, re-assignment• Email has major personnel savings and should be given priority
Consolidation of Services		
Introduction of New Customer Service		

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- This catalog is used to document the factors impacting the Implementation and Migration Plan.
- This is created at the start of Phase E to act as a repository for implementation and migration decisions.
- This catalog is revisited during Phase E as further information is found.

Consolidated Gaps, Solutions, & Dependencies Matrix

Consolidated Gaps, Solutions, and Dependencies Matrix				
No.	Architecture	Gap	Potential Solutions	Dependencies
1	Business	New Order Processing Process	Use COTS software tool process Implement custom solution	Drives applications (2)
2	Application	New Order Processing Application	COTS software tool X Develop in-house	
3	Information	Consolidated Customer Information Base	Use COTS customer base Develop customer data mart	

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- This matrix is used as a planning tool when creating work packages.
- It allows the architect to group the gaps identified in the domain architecture gap analysis results and assess potential solutions and dependencies to one or more gaps.

Architecture Definition Increments Table

Architecture Definition - Project Objectives by Increment (Example Only)				
Project	April 2018/2019	April 2019/2020	April 2020/2021	Comments
	Transition Architecture 1: Preparation	Transition Architecture 2: Initial Operational Capability	Transition Architecture 3: Benefits	
Enterprise e-Services Capability	Training and Business Process	e-Licensing Capability	e-Employment Benefits	
IT e-Forms	Design and Build			
IT e-Information Environment	Design and Build Information Environment	Client Common Data Web Content Design and Build	Enterprise Common Data Component Management Design and Build	
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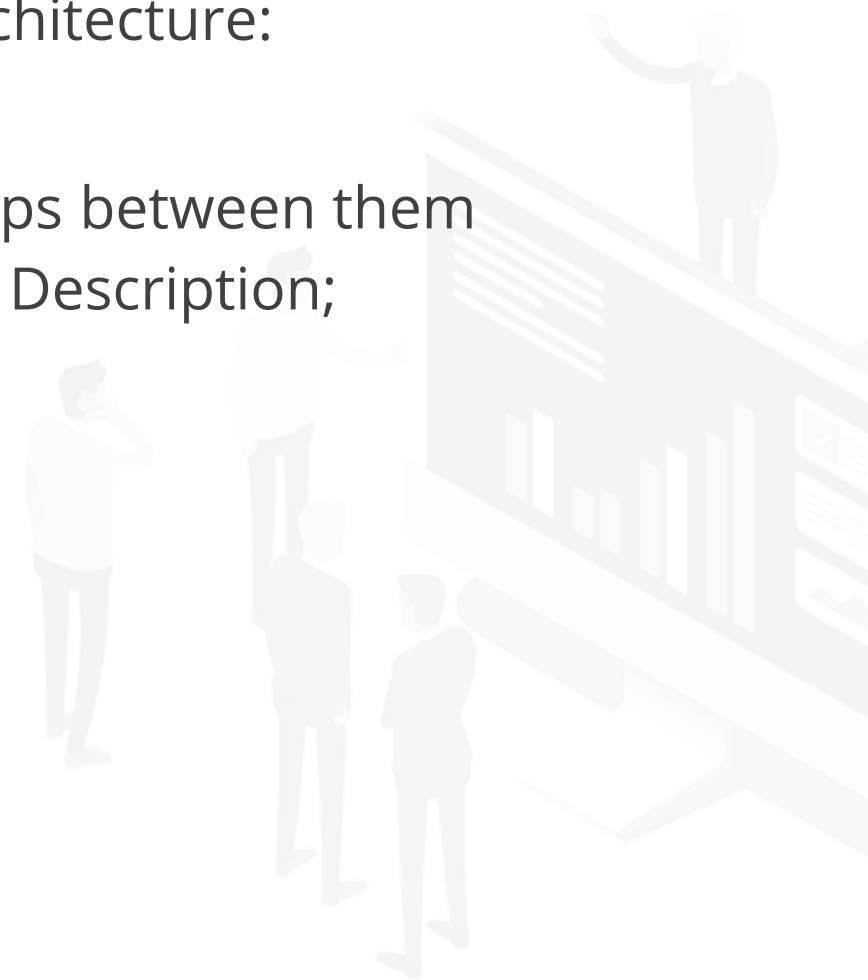
- This table is used to plan a series of Transition Architectures outlining the status of the Enterprise Architecture at specified times.
- This can be used to assign incremental project deliverables across the Transition Architectures

8.15 The Content Framework and the Enterprise Metamodel

The Need for the Content Framework and the Enterprise Metamodel

An essential task when establishing the enterprise-specific Enterprise Architecture Capability in the Preliminary Phase of the ADM is to define:

- A categorization framework to be used to structure the Architecture Descriptions, the work products used to express an architecture, and the collection of models that describe the architecture: the Content Framework
- An understanding of the types of entities within the enterprise and the relationships between them that need to be captured, stored, and analyzed in order to create the Architecture Description; this Enterprise Metamodel depicts this information as a formal model



The Value of an Enterprise Metamodel

- It gives architects a starter set of the types of thing to investigate and to cover in their models
- It provides a form of completeness-check for any architecture modeling language, or architecture metamodel, that is proposed for use in an enterprise
- It can help ensure:
 - Consistency
 - Completeness
 - Traceability



Modelling Approaches

- A list of example modeling approaches is included in the handout.
These examples are provided as a starting point for a Practitioner who needs to consistently describe some part of an Enterprise.
- It is useful to describe something consistently.
- The approaches may have a formal or informal metamodel, notation, or supporting method.



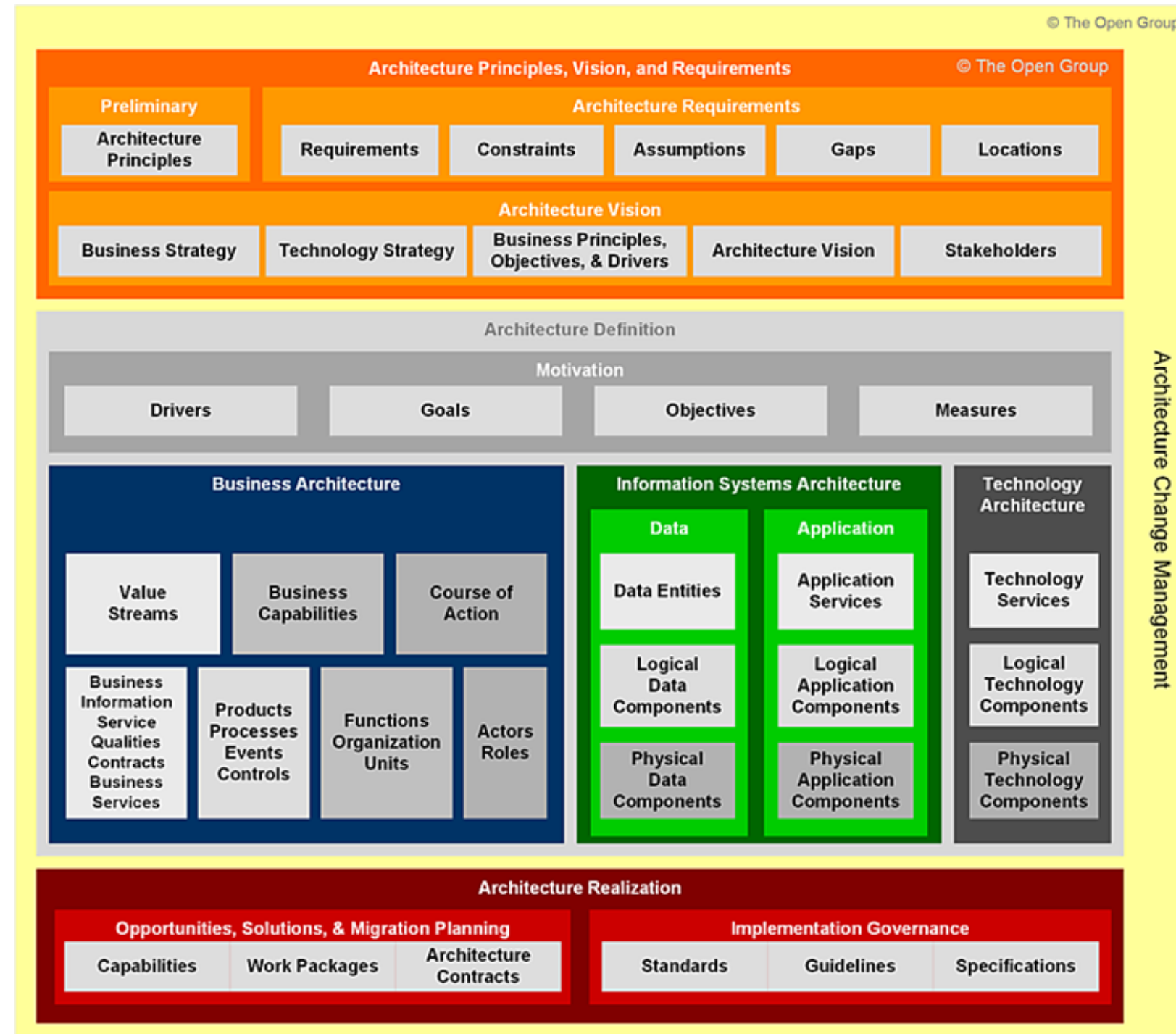
8.16 When the Architecture Content Framework (ACF) needs to be filled throughout the ADM Cycles

Filling the ACF throughout the ADM cycles

- At each stage, the ADM requires information as inputs and will create outputs as a result of executing a number of steps.
- The Content Framework provides an underlying structure for the ADM that defines inputs and outputs in more detail and puts each deliverable into the context of the holistic architecture view of the enterprise.

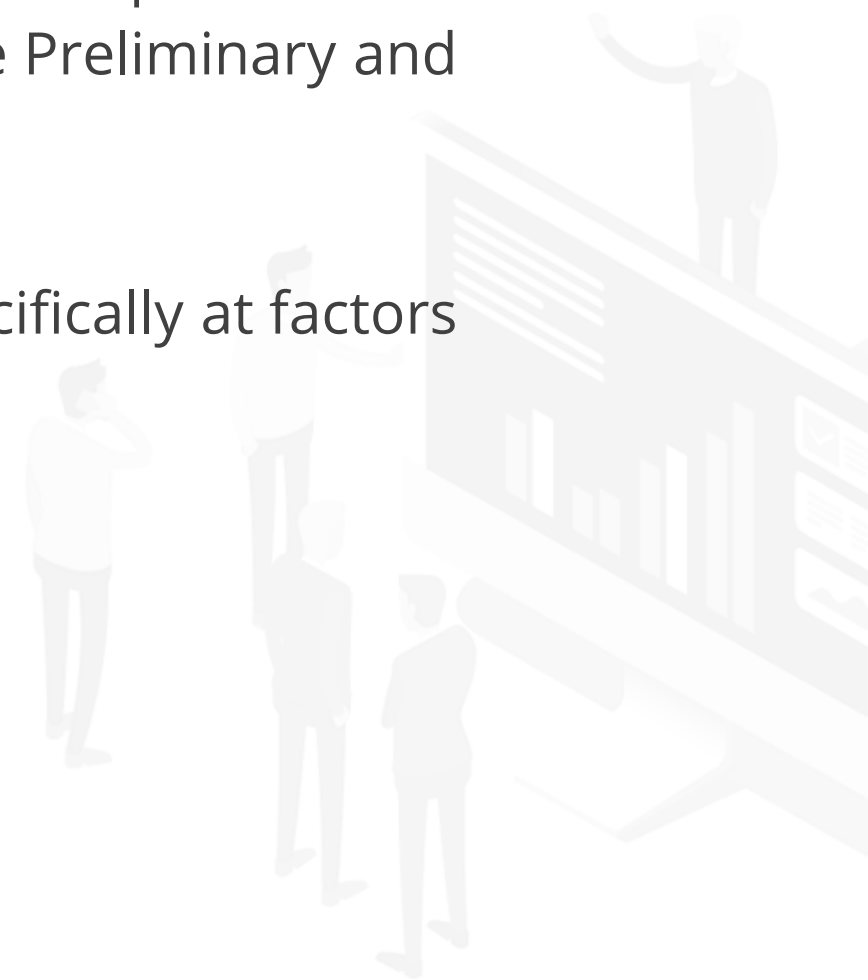


The TOGAF Content Framework



TOGAF Content Framework

- **Architecture Principles, Vision, Motivation, and Requirements** models are intended to capture the surrounding context of formal architecture models, including general Architecture Principles, strategic context that forms input for architecture modeling, and requirements generated from the architecture. The relevant aspects of the business context that have given rise to the Request for Architecture work are typically investigated, refined, validated, and recorded in the Preliminary and Architecture Vision phases.
- **Business Architecture** captures architecture models of the business, looking specifically at factors that motivate the enterprise, its structure, and its capabilities



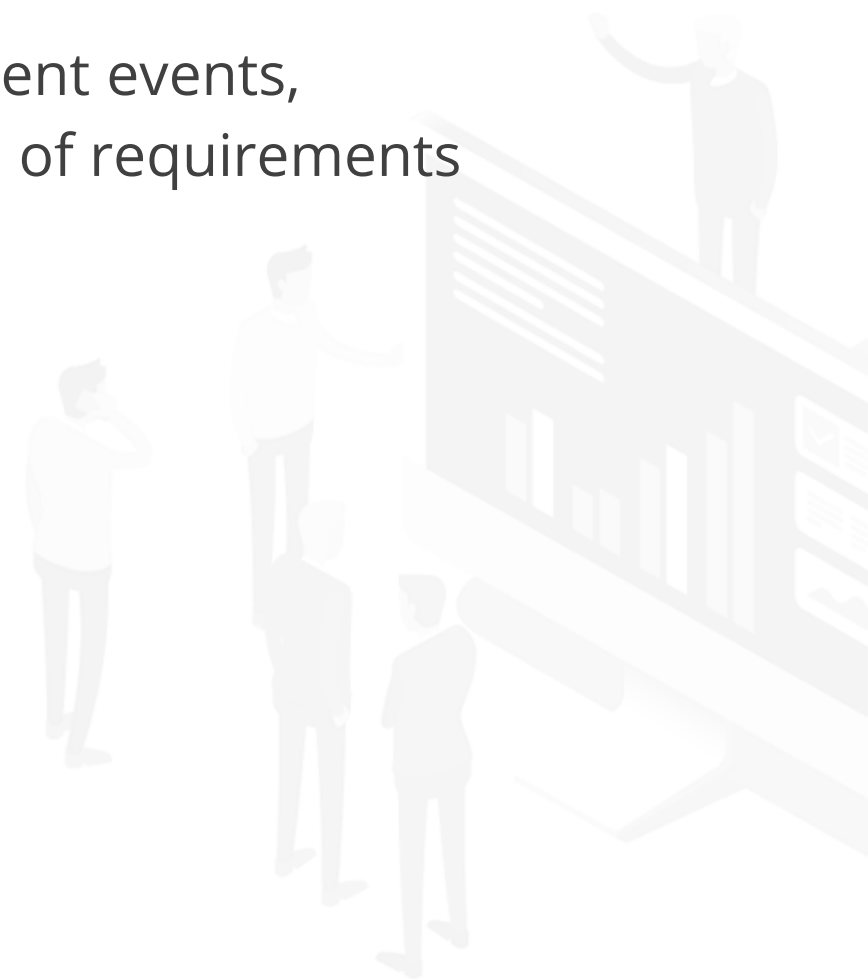
TOGAF Content Framework

- **Information Systems Architecture** models capture architecture models of IT systems, looking at applications and data in line with the TOGAF ADM phases
- **Technology Architecture** models capture technology assets that are used to implement and realize information system solutions



TOGAF Content Framework

- **Architecture Realization/Transformation** models capture change roadmaps showing transition between architecture states and binding statements that are used to steer and govern an implementation of the architecture
- **Architecture Change Management** models capture value realization management events, internal and external, that impact the Enterprise Architecture and the generation of requirements for action



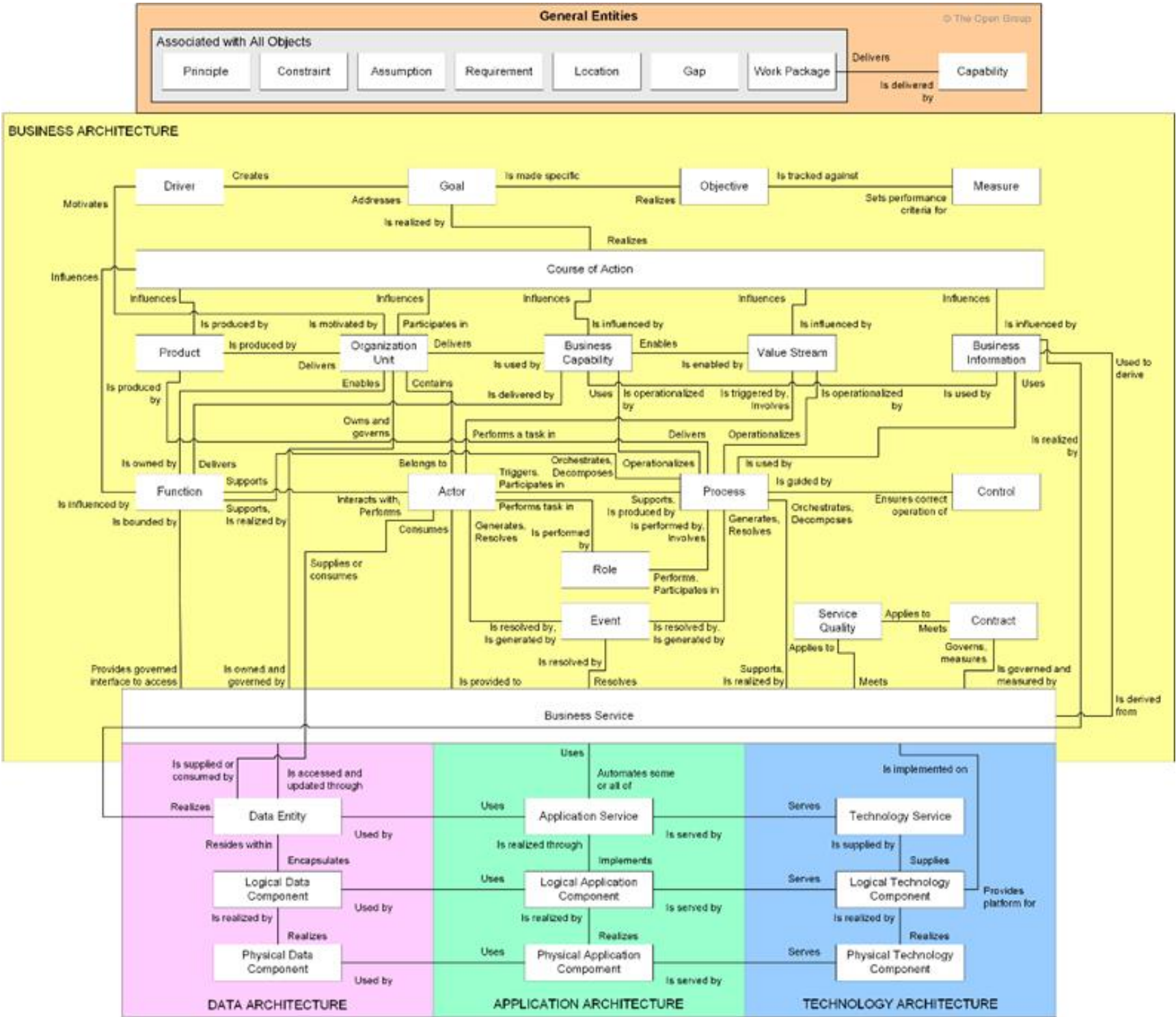
Mapping EA Capability Development with ADM Phases

Topic	Mapping to TOGAF ADM Phase
Enterprise Context and EA Context	<p>Partial Strategic Level Phase B</p> <p>Enterprise context:</p> <ul style="list-style-type: none">■ Goals, objectives, initiatives, competitive, and tactic analysis■ Operating model (partners, suppliers)■ Explore what-if scenarios and scorecards <p>EA context specific for the EA Capability:</p> <ul style="list-style-type: none">■ Goals
Business Objectives for the EA Capability	<p>Capability Level Phase A</p> <p>For the EA Capability:</p> <ul style="list-style-type: none">■ Provide initial goals and objectives■ Select a reference EA Capability and maturity model■ Candidate EA Capability■ Candidate operating model■ EA Capability gap and priority roadmap
Architecture Governance	<p>Partial Segment/Capability Level Phase B</p> <p>For the Enterprise:</p> <ul style="list-style-type: none">■ Enterprise Risk Management Model■ Governance Model <p>For the EA Capability:</p> <ul style="list-style-type: none">■ Risk Management Model■ Governance Model■ Extend candidate operating model to include EA governance



8.17 Using an Enterprise Metamodel

The TOGAF Enterprise Metamodel



Enterprise Metamodel – Entities (Extract)

Metamodel Entity	Description
Actor	A person, organization, or system that has a role that initiates or interacts with activities; for example, a sales representative who travels to visit customers. Actors may be internal or external to an organization. In the automotive industry, an original equipment manufacturer would be considered an actor by an automotive dealership that interacts with its supply chain activities.
Application Service	The automated elements of a business service. An application service may deliver or support part or all of one or more business services.
Assumption	A statement of probable fact that has not been fully validated at this stage, due to external constraints. For example, it may be assumed that an existing application will support a certain set of functional requirements, although those requirements may not yet have been individually validated.



Enterprise Metamodel – Attributes (Extract)

Metamodel Entity	Attribute	Description
All Metamodel Entities	ID	Unique identifier for the architecture entity.
	Name	Brief name of the architecture entity.
	Description	Textual description of the architecture entity.
	Category	User-definable categorization taxonomy for each metamodel entity.
	Source	Location from where the information was collected.
Capability	Owner	Owner of the architecture entity.
	Business value	Describes how this capability provides value to the enterprise.
	Increments	Lists possible maturity/quality levels for the capability.



Enterprise Metamodel – Relationships (Extract)

Source Entity	Target Entity	Name
Actor	Actor	Decomposes
Actor	Business Service	Consumes
Actor	Data Entity	Supplies or consumes
Actor	Event	Generates
Actor	Event	Resolves
Actor	Function	Interacts with
Actor	Function	Performs



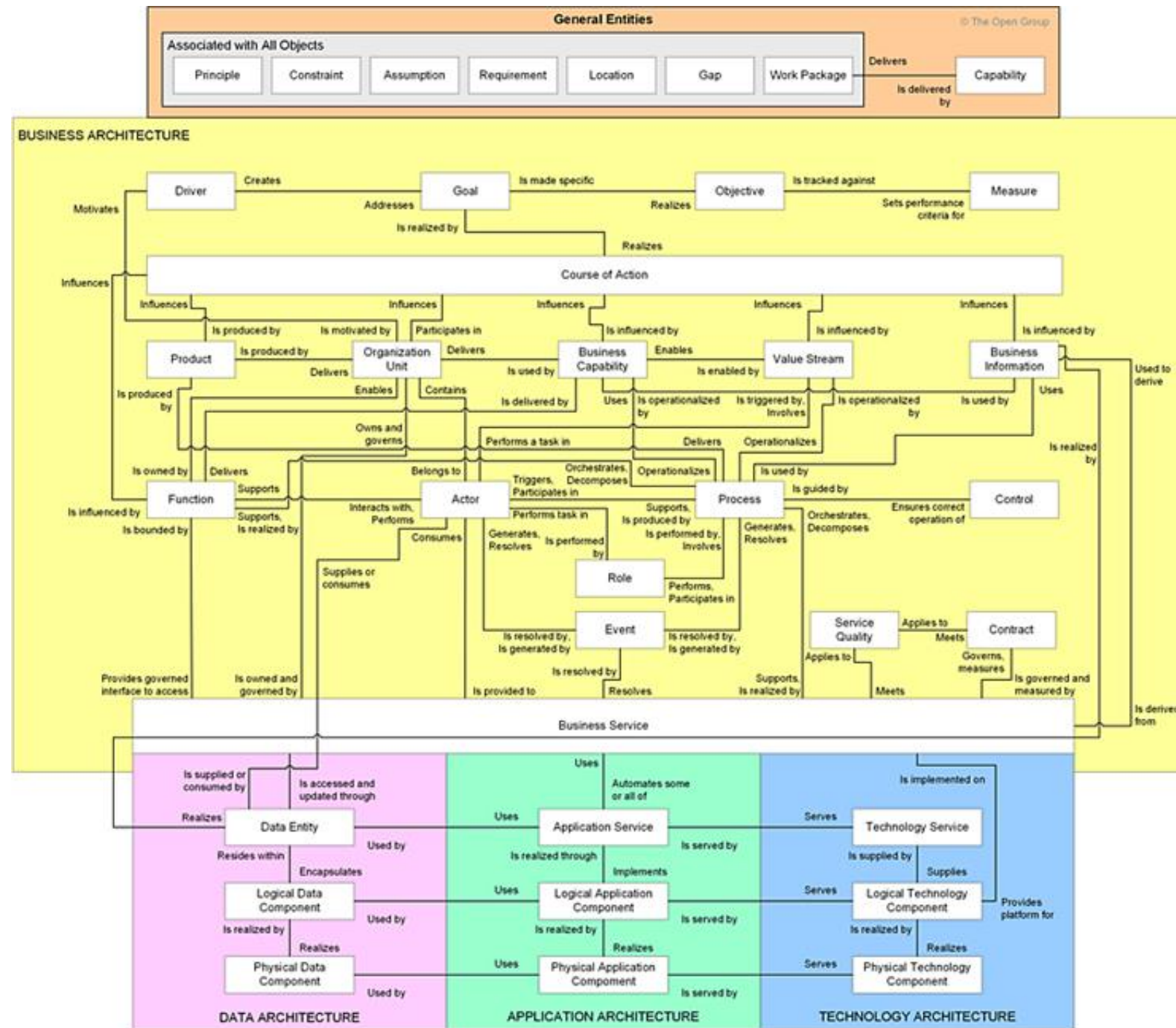
8.18 Using a Taxonomy

TOGAF Enterprise Metamodel Taxonomy

- The TOGAF Enterprise Metamodel provides a good starting point for a taxonomy for the majority of enterprises.
- It defines a list of common components and common possible relationships the enterprise may want to keep track of (motivation, role, event, activity, location, resource, platform services) and a set of relationships.



Entities, Attributes and Relationships



The TOGAF Enterprise Metamodel describes Entities, Attributes and Relationships

8.19 How Risk Assessment can be used

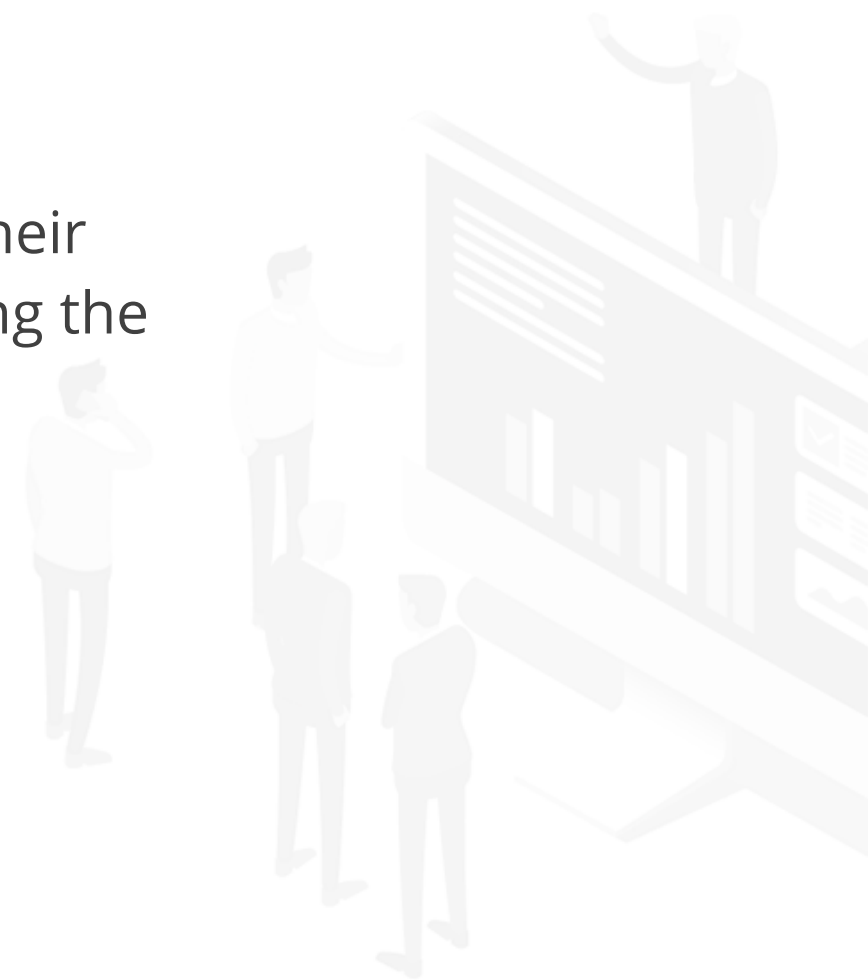
Generally Accepted Areas of Concern for the Security Architect

- Asset Protection
- **Risk Assessment**
- Access Control
- Audit
- Availability



Definition: Risk Assessment

Determining what risks we face, measuring them to determine their likelihood and impact, and then accepting, mitigating, or transferring the risk according to the organization's risk appetite



Source: TOGAF Series Guide: Integrating Risk and Security within a TOGAF® Enterprise Architecture, §3.2.1

Risk Classification Scheme

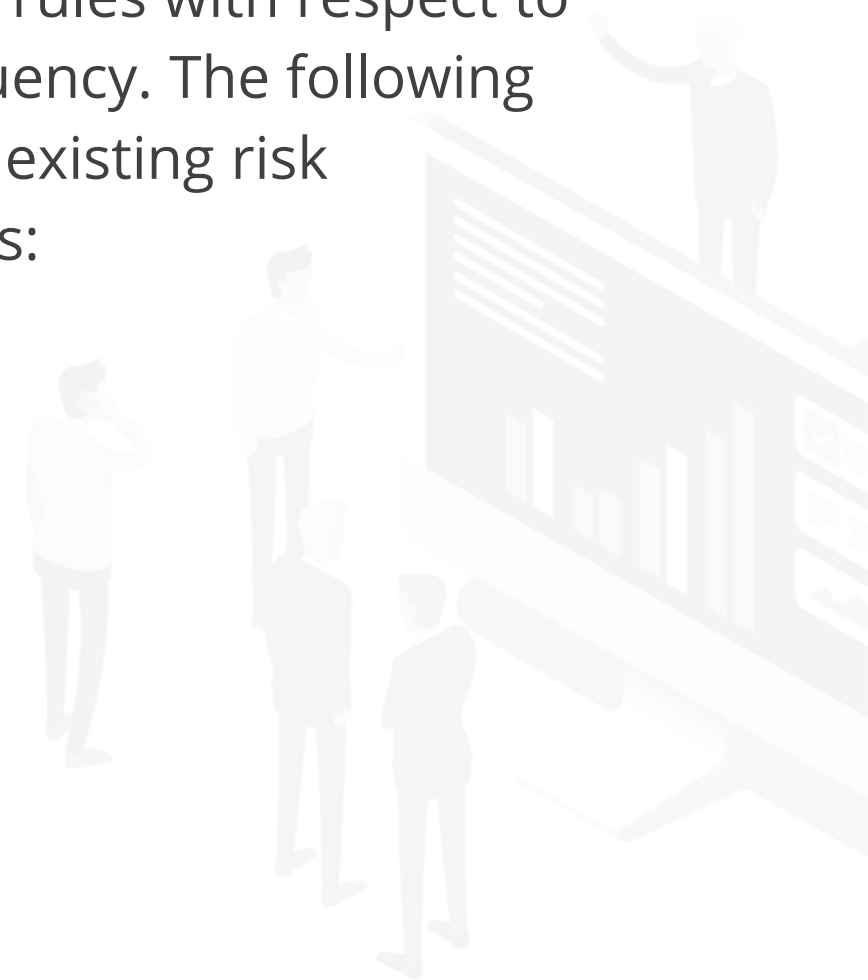
Corporate Risk Impact Assessment					
Effect	Frequency				
	Frequent	Likely	Occasional	Seldom	Unlikely
Catastrophic	E	E	H	H	M
Critical	E	H	H	M	L
Marginal	H	M	M	L	L
Negligible	M	L	L	L	L

© The Open Group

E= Extremely High Risk, H = High Risk,
M = Moderate Risk, L = Low Risk

There are no hard and fast rules with respect to measuring effect and frequency. The following guidelines are based upon existing risk management best practices:

- Effect
- Frequency
- Classification scheme



The Act of Assessing Risk

- A risk assessment is the activity of determining the risks that are relevant to an asset or objective
- A qualitative risk assessment delivers a listing of relevant risk scenarios with a high-level prioritization (high-medium-low), whereas a quantitative approach seeks for numeric determination of the risk.
- A deliverable of a risk assessment is the Business Risk Model.



Source: TOGAF Series Guide: Integrating Risk and Security within a TOGAF® Enterprise Architecture, §5.3.4

Risk Mitigation Plan

- The Risk Mitigation Plan contains activities to mitigate risks. It is the implementation of the risk mitigation strategy, which could aim to increase the level of control, transfer the risk to another party, avoid the risk by changing the business activity, delay the risk, compensate for the risk, etc.
- The broader sense of risk is addressed by the Enterprise Risk Management (ERM) process in phase E.
- The scope includes the latest information security risks as identified during the risk assessments that are done earlier in Phase B.



Phase F: Migration Planning

- Migration is itself a business process that needs to be secured
- The migration strategy should include a risk assessment and a Risk Mitigation Plan.
- In Phase F, the Risk Mitigation Plan is limited to the transition.
- In addition, migration planning should include a security impact analysis to understand any security impacts of the target state of the change.



Summary

Learning Units Completed

- Unit 1 – The Context for Enterprise Architecture
- Unit 2 – Stakeholder Management
- Unit 3 – Phase A, the Starting Point
- Unit 4 – Architecture Development
- Unit 5 – Implementing the Architecture
- Unit 6 – Architecture Change Management
- Unit 7 – Requirements Management
- Unit 8 – Supporting the ADM Work



Thank You

