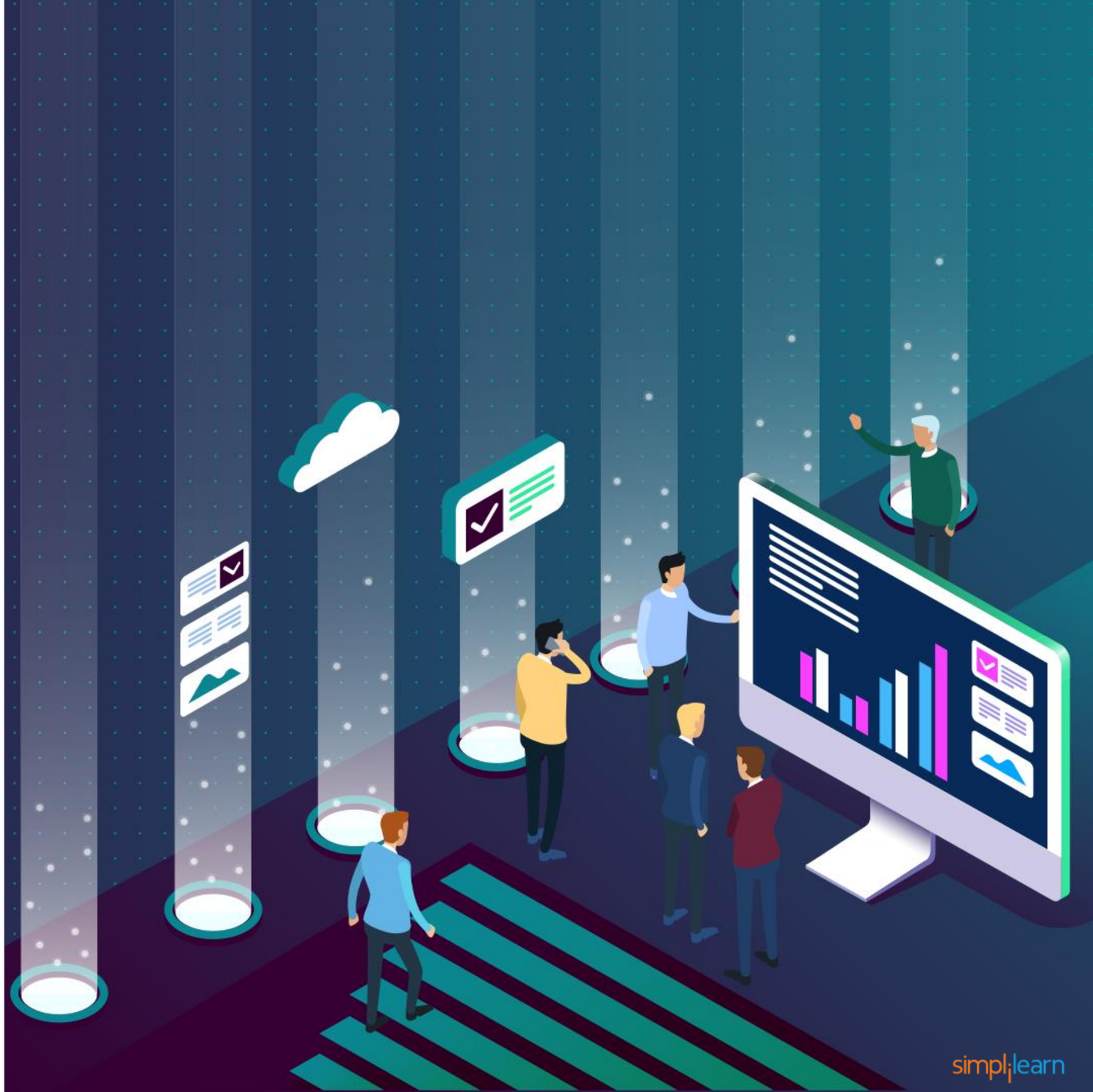
TOGAF® Enterprise Architecture Training Course (Foundation)



Unit 7 – Architecture Content

Unit Objectives

Understand which outputs can be produced while executing the ADM. Topics include:

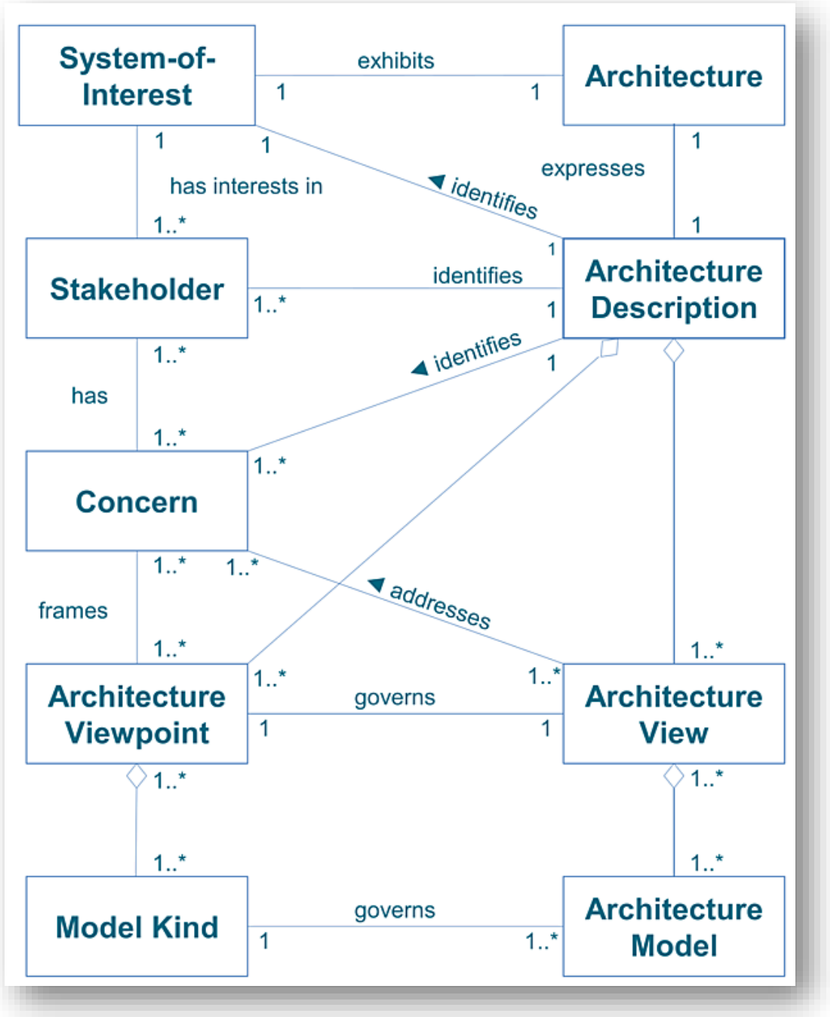
- The concepts of stakeholders, concerns, architecture views and architecture viewpoints
- Architecture Building Blocks (ABBs)
- Architecture deliverables

7.1 Key Concepts: Stakeholders, Concerns, Architecture Views, Architecture Viewpoints, and their Relationships

Concepts and Definitions

- Stakeholder
- Concern
- Architecture View
- Architecture Viewpoint

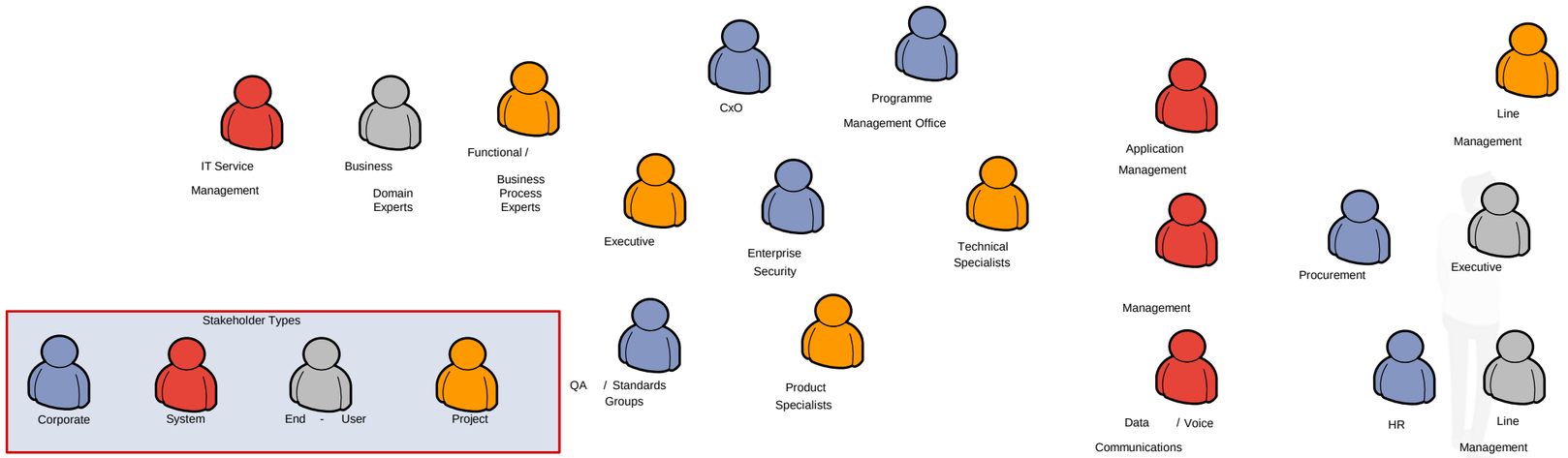
Basic Architectural Concepts



Source: : ISO/IEC/IEEE Std 42010-2011. Used with permission.

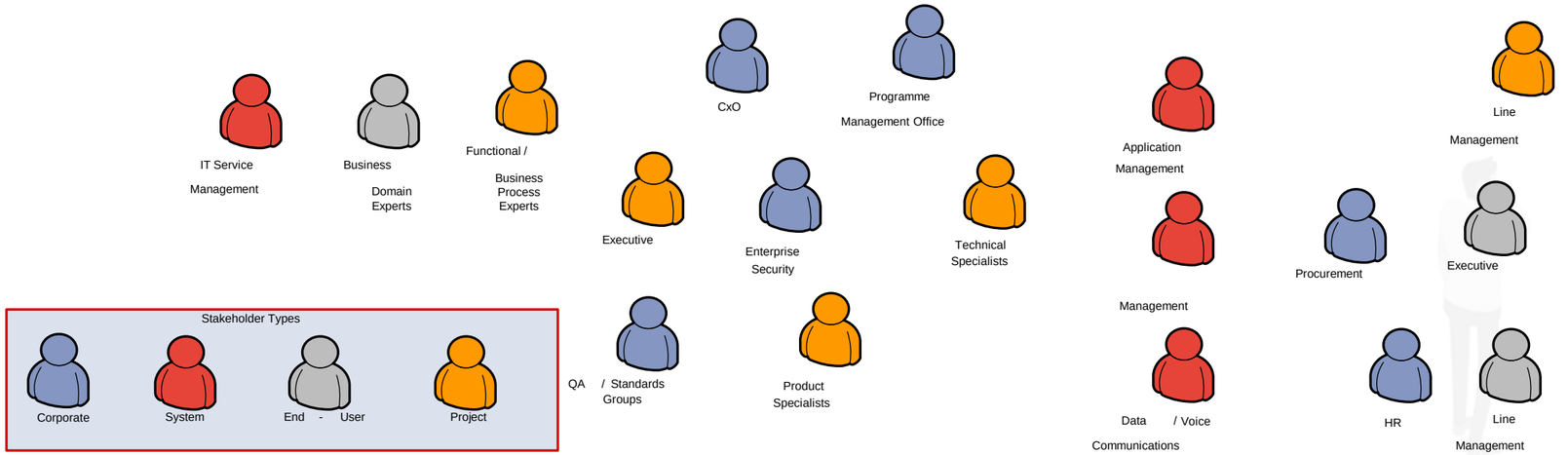
Stakeholders

Stakeholders are individuals, teams, organizations, or classes thereof, having an interest in a system. They are people who have key roles in, or concerns about, the system; for example, users, developers, etc.



Concerns

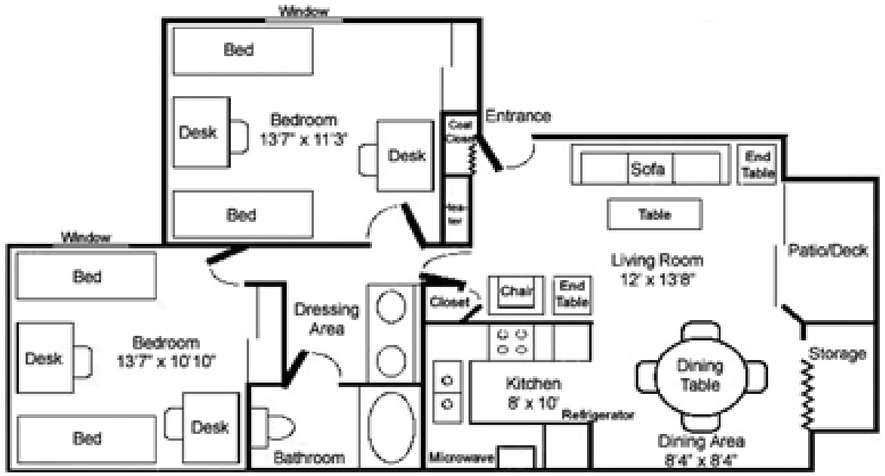
Concerns are interests in a system relevant to one or more of its stakeholders. They may pertain to any aspect of the system's functioning, development, or operation, including performance, reliability, security, distribution, and evolvability, and may determine acceptability of the system

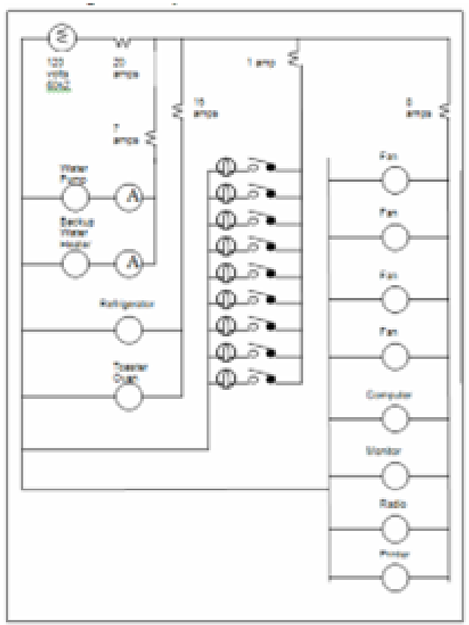


Architecture View

An *Architecture View* is a representation of a system from the perspective of a related set of concerns.

- An architect creates architecture models. An architecture view consists of parts of these, chosen to show stakeholders that their concerns are being met.





Architecture Viewpoint

- An *Architecture Viewpoint* defines the perspective from which an architecture view is taken.

- It defines how to construct and use an architecture view, the information needed, the modeling techniques for expressing and analyzing it, and a rationale for these choices (e.g., by describing the purpose and intended audience of the view).

7.2 Building Blocks and the ADM

Building Block Characteristics

- A package of functionality defined to meet the business needs across an organization.
- Normally has a type that corresponds to the metamodel (such as actor, business service, application, or data entity).
- Has a defined boundary and is generally recognizable as “a thing” by domain experts.
- May interoperate with other, inter-dependent building blocks.

Building Blocks

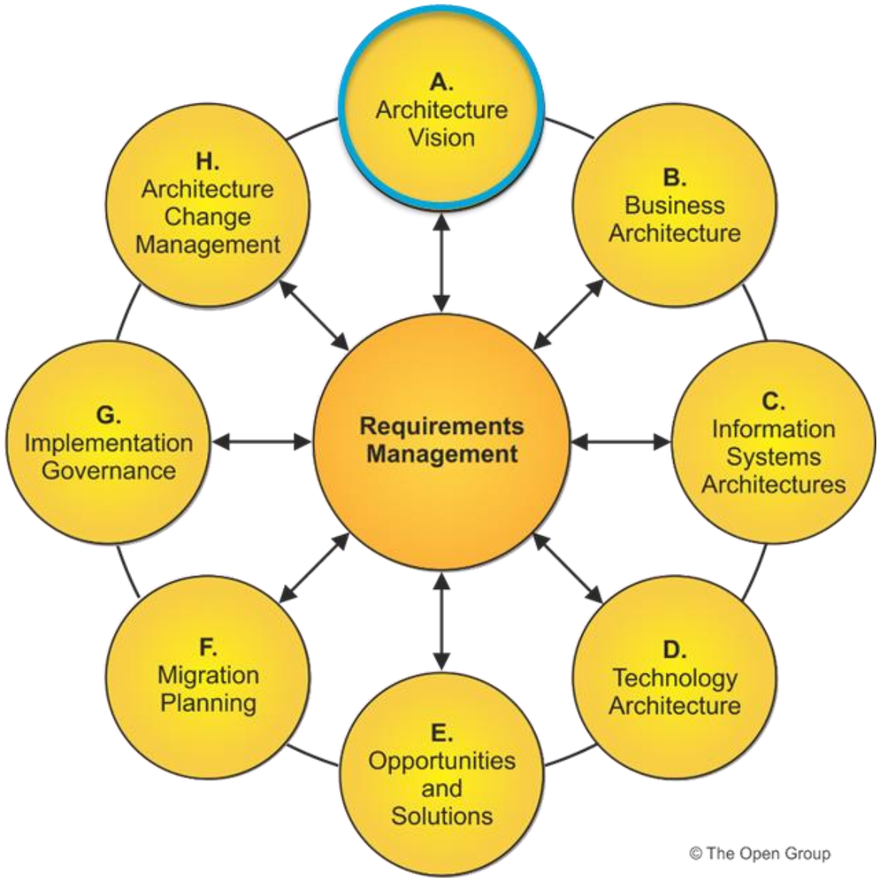
Systems are built from collections of building blocks.

They can be defined at many levels of detail:

- Groupings at the fundamental functional level capturing architecture requirements are known as Architecture Building Blocks (ABBs)

- Real products that can be procured or specific custom developments are known as Solution Building Blocks (SBBs)

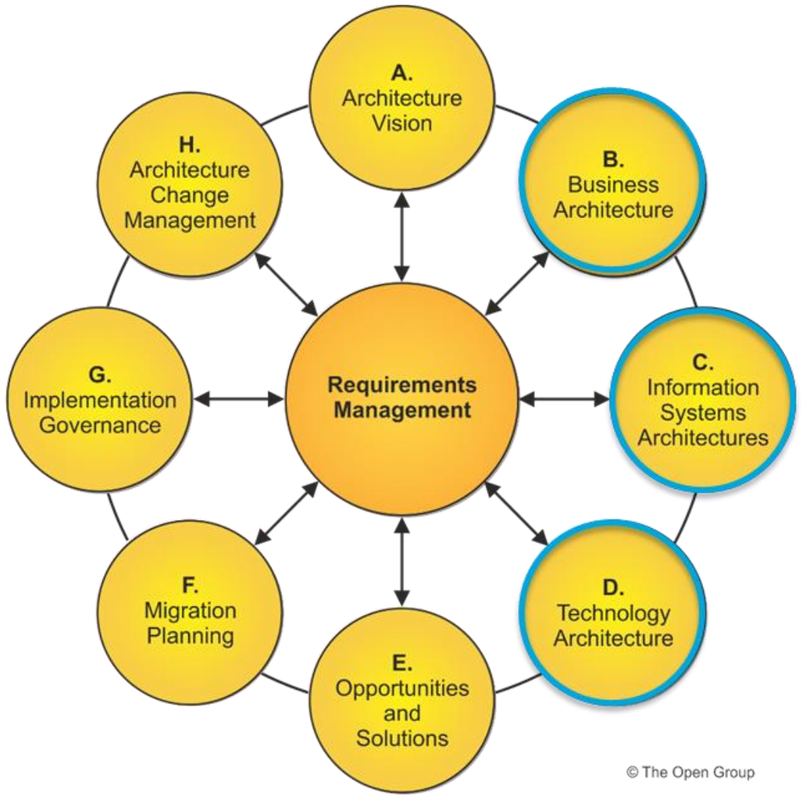
Building Blocks and the ADM: Phase A



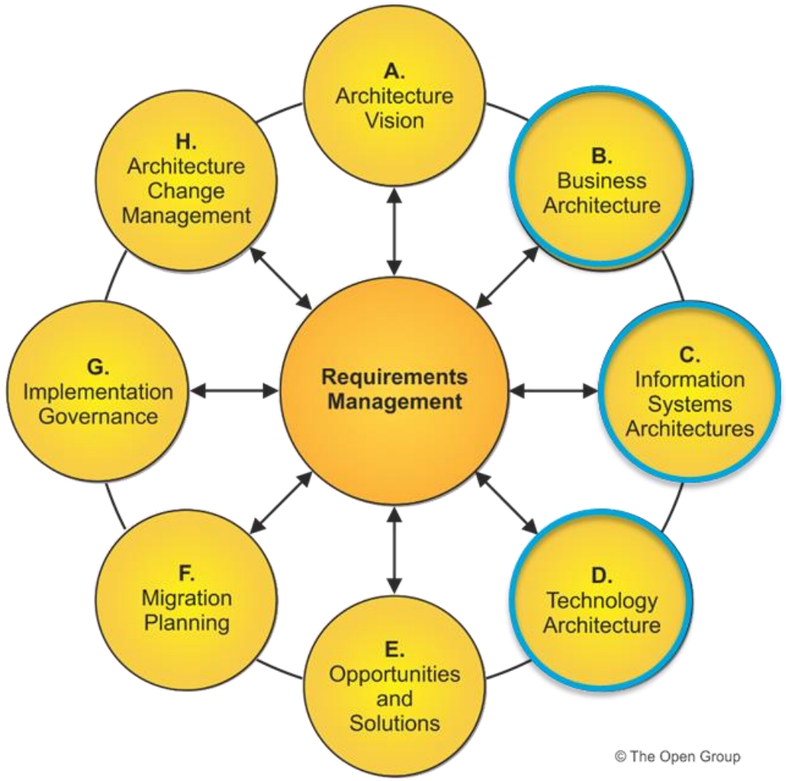
- The specification of building blocks using the ADM is an evolutionary and iterative process.
- In Phase A we start with abstract entities

Building Blocks and the ADM: Phases B, C, D

Building blocks within the Business, Data, Applications and Technology Architectures are evolved to a common pattern of steps

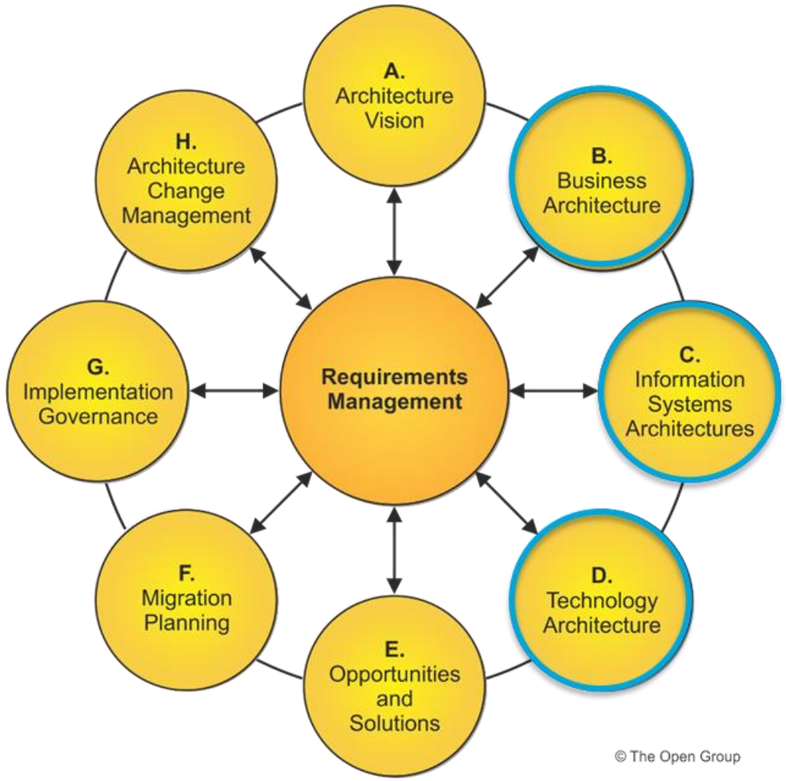


Phases B, C, D — Step 3: Develop Target Architecture Description



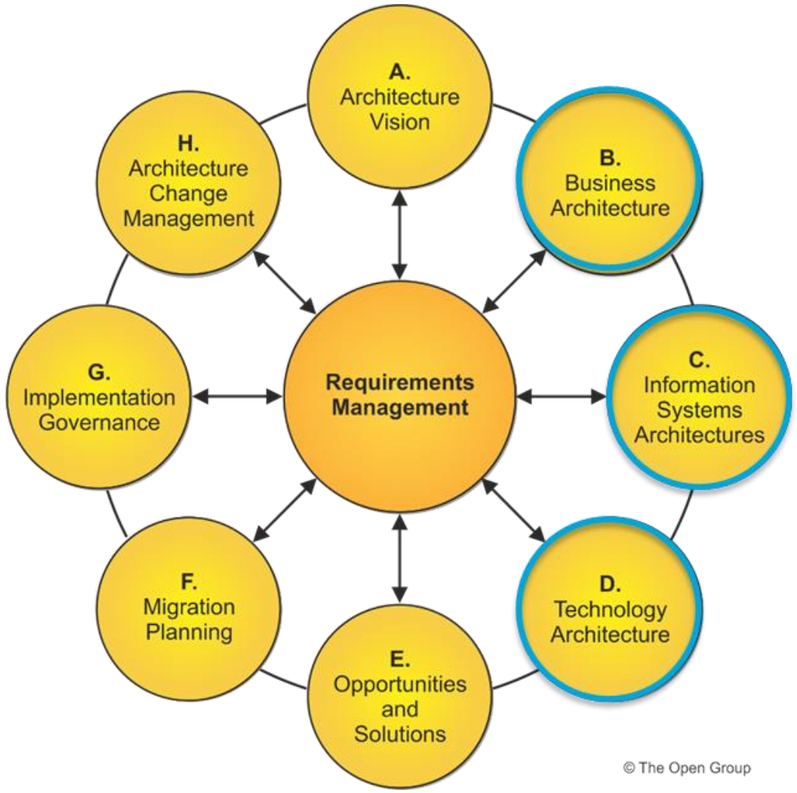
- Develop view of required building blocks through the creation of catalogs, matrices, and diagrams of the architecture
- Fully document each building block
- Document rationale for building block decisions in architecture document
- Identify the impacted building blocks, checking against a library of building blocks within the Architecture Repository and re-using where appropriate

Phases B, C, D — Step 3: Develop Target Architecture Description



- Where necessary, define new building blocks
- Select standards for each building block, re-using as much as possible from reference models selected from the Architecture Continuum
- Document final mapping of the building blocks to the Architecture Landscape
- From selected building blocks, identify those that might be re-used, and publish as standards or reference models via the Architecture Repository

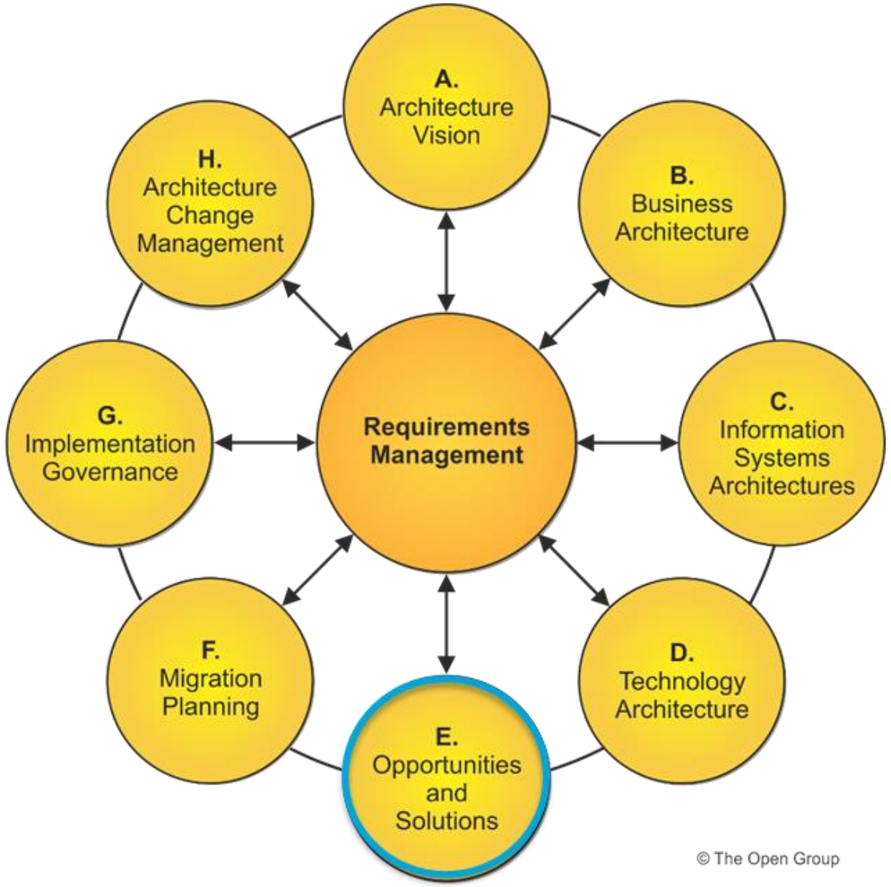
Phases B, C, D — Step 4: Perform Gap Analysis



- Identify building blocks carried over
- Identify eliminated building blocks
- Identify new building blocks
- Identify gaps and determine realization approach (e.g., to be developed or to be procured)

Building Blocks and the ADM: Phase E

Associate building blocks with work packages that will address the gaps



7.3 The TOGAF® Standard Deliverables Created and Consumed in the TOGAF ADM Phases

The Role of Architecture Deliverables

- Architectural deliverables are the contractual or formal work products of an Architecture Project.
- The definition of deliverable provided by the TOGAF Standard is a baseline.
- It is thus a starting point for tailoring.

Architecture Deliverables

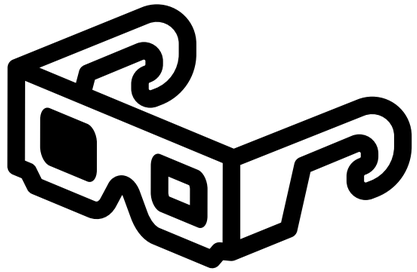
- Architecture Building Blocks
- Architecture Contract
- Architecture Definition Document
- Architecture Principles
- Architecture Repository
- Architecture Requirements
- Architecture Roadmap
- Architecture Vision
- Business Principles, Business Goals, and Business Drivers
- Capability Assessment
- Change Request

Architecture Deliverables

- Communications Plan
- Compliance Assessment
- Implementation and Migration Plan
- Implementation Governance Model
- Organizational Model for Enterprise Architecture
- Request for Architecture Work
- Requirements Impact Assessment
- Solution Building Blocks
- Statement of Architecture Work
- Tailored Architecture Framework

Deliverables

Deliverables produced by executing the ADM are shown in a table in the handouts.



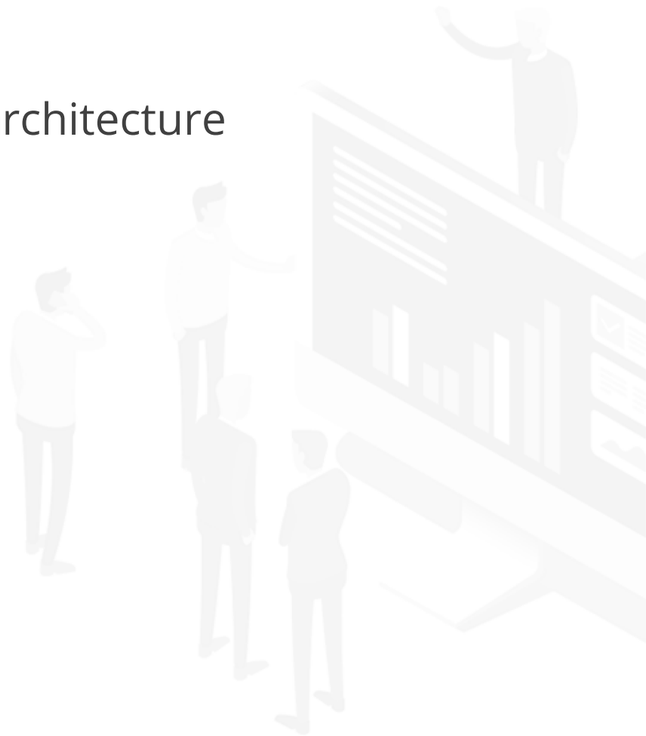
Request for Architecture Work

- Sent from the sponsoring organization to the architecture organization to trigger the start of an architecture development cycle

- Created as an output of the Preliminary Phase, a result of approved architecture Change Requests, or terms of reference for architecture work originating from migration planning

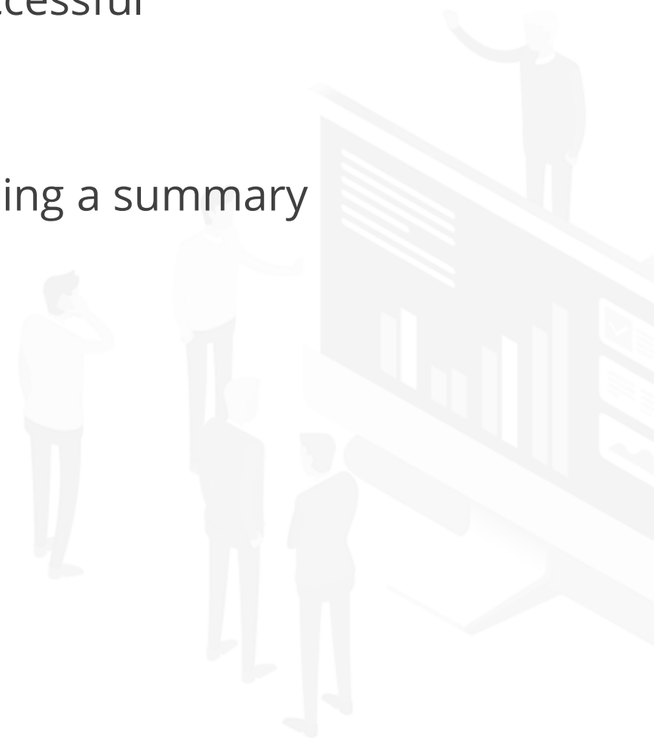
Statement of Architecture Work

- A deliverable output from Phase A
- A response to the Request for Architecture Work
- A plan for the architecture work defining the scope and approach to complete an architecture development cycle



Architecture Vision

- The Architecture Vision is created early on in the ADM cycle.
- It provides a summary of the changes to the enterprise that will accrue from successful deployment of the Target Architecture.
- Providing an Architecture Vision supports stakeholder communication by providing a summary version of the full Architecture Definition.



Communications Plan

- Enterprise Architectures contain large volumes of complex and inter-dependent information.
- Effective communication of targeted information to the right stakeholders at the right time is a Critical Success Factor (CSF) for Enterprise Architecture.
- Development of a Communications Plan for architecture allows for this communication to be carried out within a planned and managed process.

Business Principles, Business Goals, and Business Drivers

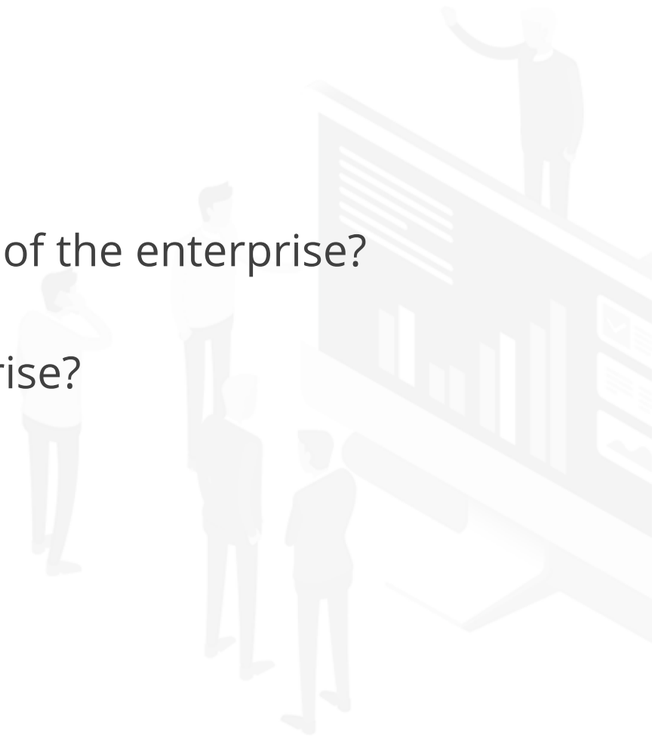
Business Principles, Business Goals, and Business Drivers provide context for architecture work, by describing the needs and ways of working employed by the enterprise.

Capability Assessment

Before embarking upon a detailed Architecture Definition, it is valuable to understand the baseline and target capability level of the enterprise.

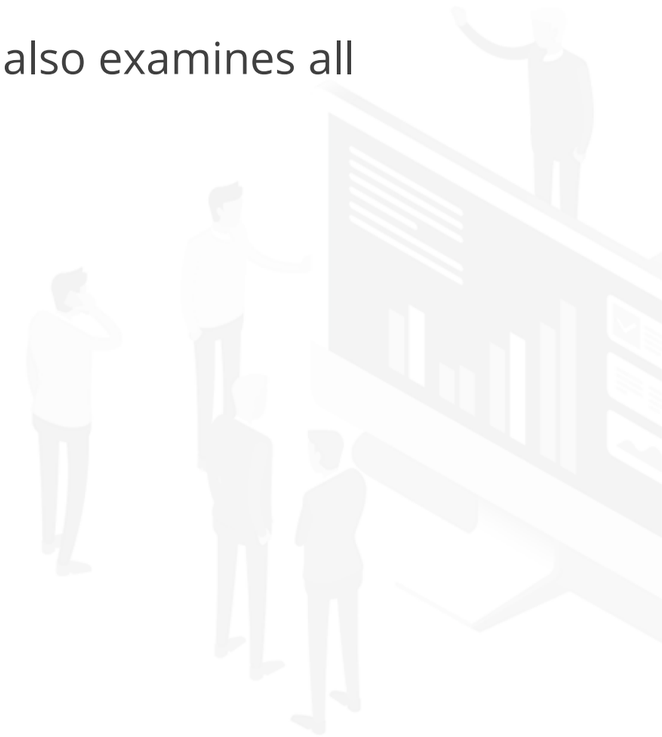
This Capability Assessment can be examined on several levels:

- What is the capability level of the enterprise as a whole?
- Where does the enterprise wish to increase or optimize capability?
- What are the architectural focus areas that will support the desired development of the enterprise?
- What is the capability or maturity level of the IT function within the enterprise?
- What is the capability and maturity of the architecture function within the enterprise?



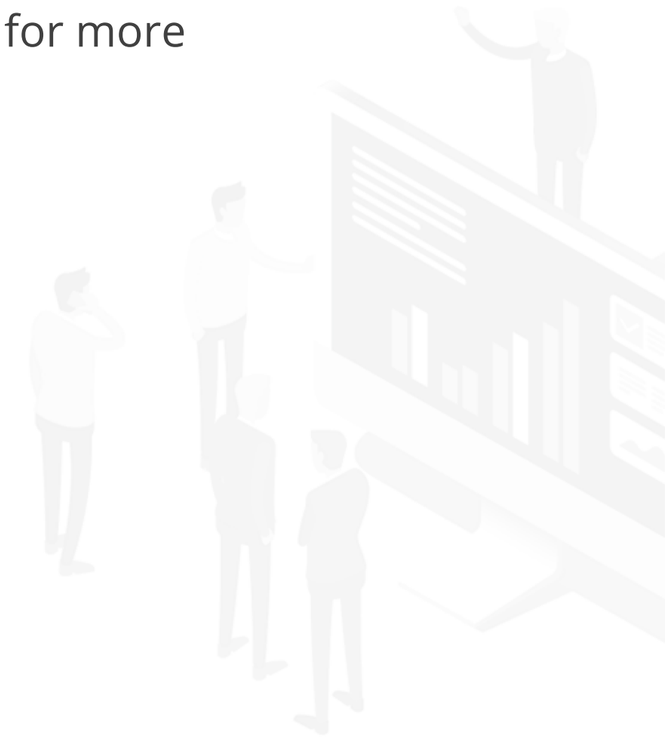
Architecture Definition Document

- The deliverable container for the core architectural artifacts created during a project and for important related information
- Spans all architecture domains (Business, Data, Application, and Technology) and also examines all relevant states of the architecture (Baseline, Transition, and Target)



Architecture Requirements Specification

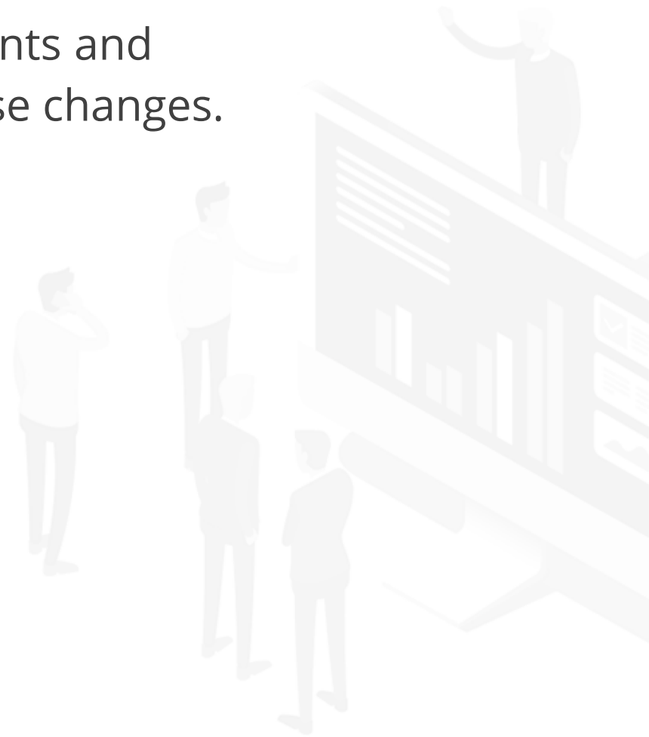
- Provides a set of quantitative statements that outline what an Implementation Project must do in order to comply with the architecture
- Will typically form a major component of an implementation contract or contract for more detailed Architecture Definition



Requirements Impact Assessment

- Throughout the ADM, new information is collected relating to an architecture; 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.

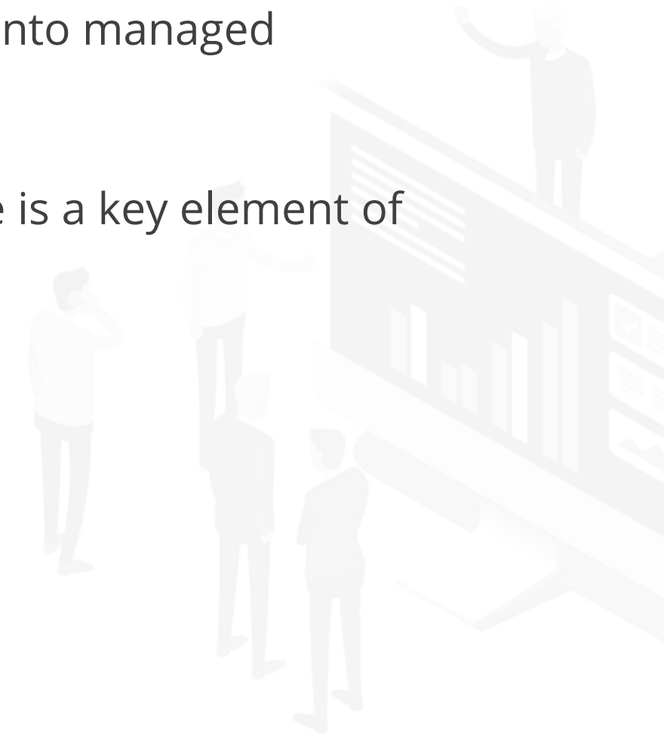


Architecture Roadmap

- Lists individual work packages that will realize the Target Architecture and lays them out on a timeline to show progression from the Baseline Architecture to the Target Architecture
- Incrementally developed throughout Phases E and F, and informed by readily identifiable roadmap components from Phase B, C, and D within the ADM

Implementation and Migration Plan

- The Implementation and Migration Plan provides a schedule of the projects that will realize the Target Architecture.
- The Implementation and Migration Plan includes executable projects grouped into managed portfolios and programs.
- The Implementation and Migration Strategy identifying the approach to change is a key element of the Implementation and Migration Plan.

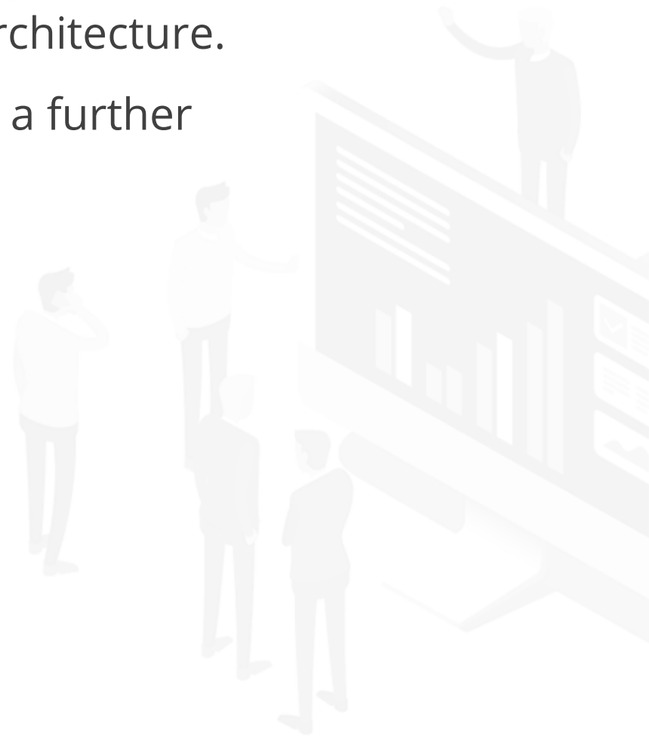


Implementation Governance Model

The Implementation Governance Model ensures that a project transitioning into implementation also smoothly transitions into appropriate Architecture Governance.

Change Request

- In some 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.



Summary

Learning Units Completed

Unit 1 – Concepts
Unit 2 – Definitions
Unit 3 – Introduction to the ADM
Unit 4 – Introduction to ADM Techniques
Unit 5 – Introduction to Applying the ADM
Unit 6 – Introduction to Architecture Governance
Unit 7 – Architecture Content
Unit 8 – TOGAF® Certification Program (not examinable – covered in Module 0)

Thank You