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Module 9
Architecture Governance

THE Open GROUP

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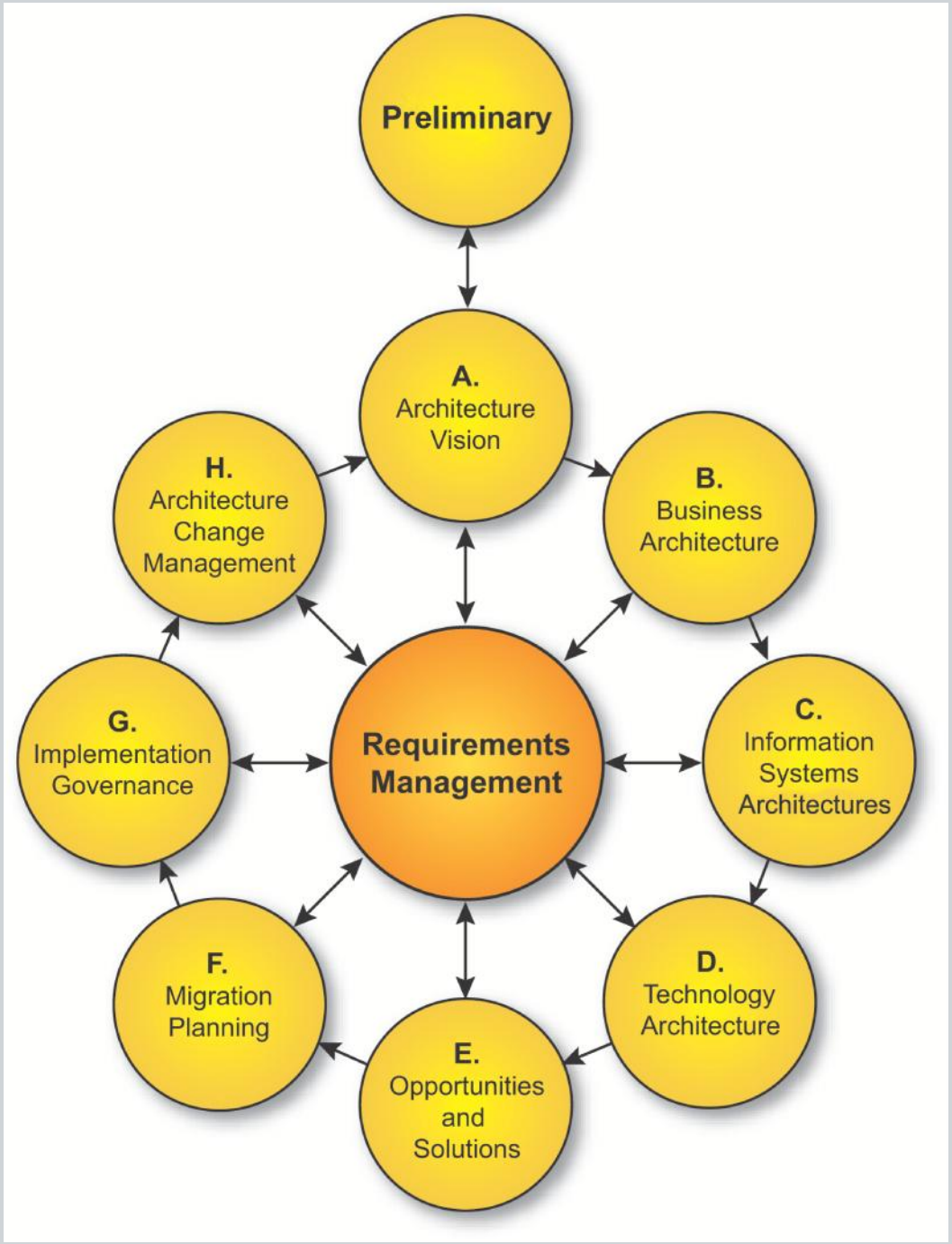

Architecture Governance

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Module Objectives

This module will help you to understand:

- Architecture Governance
- The main components that make up an Architecture Governance Framework
- The TOGAF Architecture Governance Framework
- Architecture Governance in Practice
- Why Architecture Governance is beneficial
- Guidelines for establishing an EA Capability

Introduction to Governance

Governance is the practice by which enterprise architectures are managed and controlled.
This includes:

- controls on the creation and monitoring of components and activities – ensuring introduction, implementation, and evolution of architectures
- ensuring compliance with internal and external standards and regulatory obligations
- supporting management of the above
- ensuring accountability to external and internal stakeholders

Governance and the ADM

- Governance should be established in the Preliminary Phase
  - Usually an adaptation of existing governance and support models
- The Architecture Board should ensure that the ADM is being applied correctly
  - Compliance to the ADM is fundamental to the governance of the Architecture
- Governance plays a key role in Phases G and H
  - The implementation and then change management activities

Nature of Governance

- Governance ensures business is conducted properly.
- It is about effective and equitable usage of resources to ensure sustainability of strategic objectives.

Continued

Nature of Governance

- Basic principles of corporate governance:
  - Focus on the rights, roles and equitable treatment of shareholders
  - Disclosure and transparency
  - Accountability of the Board to the shareholders

  - Responsibilities of the board:
    - Reviewing and guiding corporate strategy
    - Setting and monitoring management's performance objectives

Governance – Basic Principles

[Governance is] "... the system by which business corporations are **directed** and **controlled**.

The corporate governance structure specifies the distribution of rights and responsibilities among different participants […] and spells out the rules and procedures for making decisions on corporate affairs. […] it also provides the structure through which company objectives are set, and the means of attaining those objectives and monitoring performance" [OECD (1999)].

Levels of Governance

The hierarchy of governance domains includes:

- Technology Governance
- IT Governance
- Architecture Governance

Each domain may exist at multiple geographic levels:

- Global
- Regional
- Locals

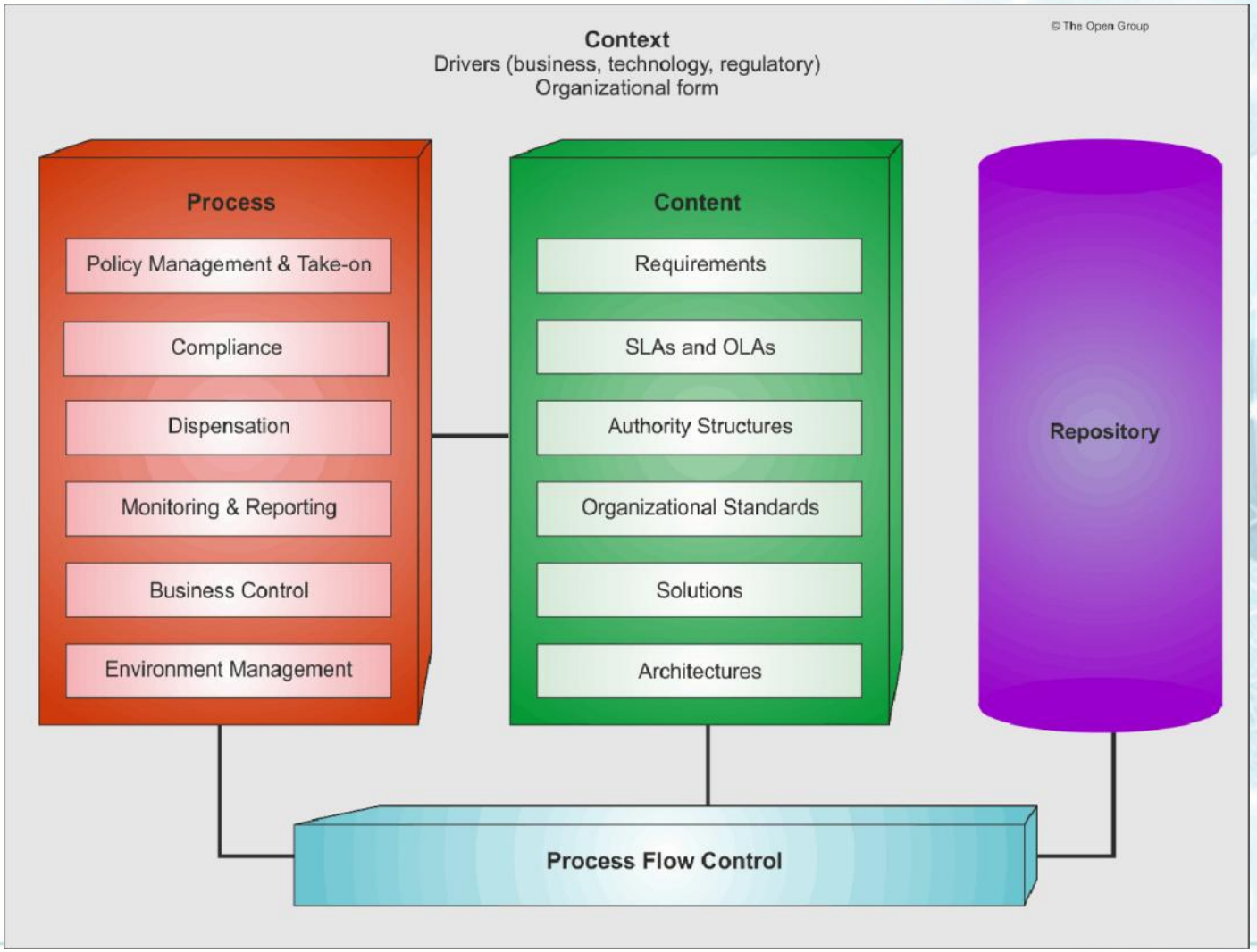
An IT Governance Framework - COBIT

- COBIT is an open standard for control of IT.
- It was developed and promoted by the IT Governance Institute.
- COBIT provides a generally accepted standard for good IT security and control practices
- There is also a set of Management Guidelines for COBIT, including Maturity Models, Critical Success Factors, Key Goal Indicators, and Key Performance Indicators.
- The framework can help managers to control and measure IT resources.

TOGAF Architecture Governance Framework

- Phase G of the *TOGAF ADM* is about *Implementation Governance* - the realization of architecture through change projects.
- Architecture Governance covers management and control of *all* aspects of the development and evolution of enterprise architectures
- The Architecture Governance Framework is generic and can be adapted to an existing governance environment. It helps to identify effective processes and organizational structures, so that the business responsibilities can be elucidated, communicated, and managed.

Conceptual Structure



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Architecture Governance Framework - Conceptual Structure

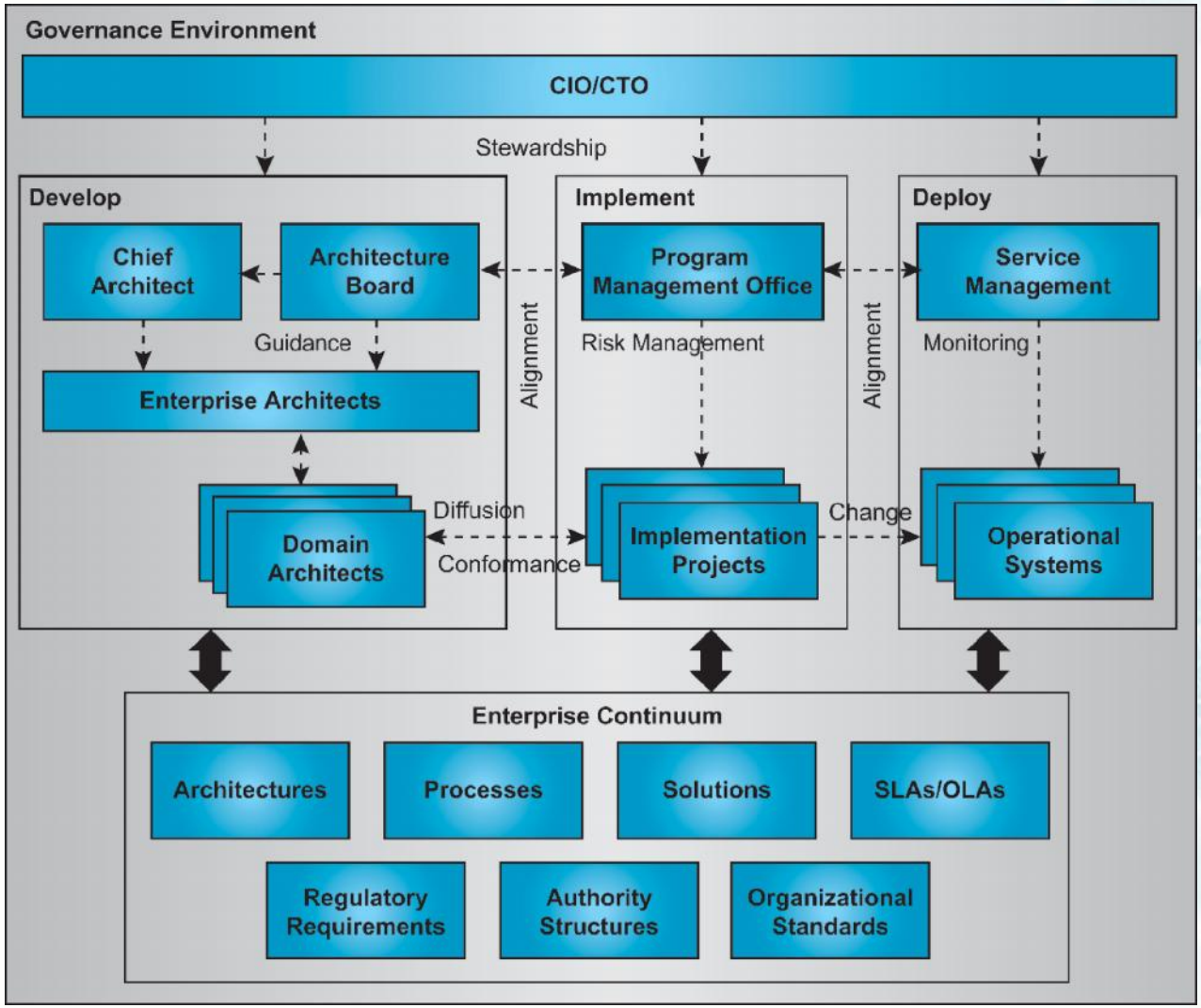
- Architecture Governance is an approach, a series of processes, a cultural orientation and a set of responsibilities that ensure the integrity and effectiveness of architectures.

- The split of **process**, **content** and **context** is key to supporting an architecture governance initiative. It allows introduction of new governance material without impacting the processes and ensures framework flexibility.

Conceptual Structure

- The *Architecture Governance Framework* is integral to the Enterprise Continuum, and manages all content for both the architecture and the architecture governance processes.

Organizational Structure



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Organizational Structure

- Governance is the management and control of architectures.
- To ensure effective control, it is necessary to have the correct organizational structures to support all governance activities.
- Effective implementation requires IT governance processes, organizational structures, and capabilities including (e.g.):
  - Global governance board
  - Local governance board
  - Design authorities
  - Working parties

Benefits of Architecture Govenance

- Links processes, resources, and information to organizational strategies and objectives
- Integrates and institutionalizes best practices
- Aligns with industry frameworks
- Enables the organization to take full advantage of its assets
- Protects the underlying digital assets of the organization
- Supports regulatory and best practice requirements
- Promotes visible risk management

Architecture Governance in Practice

Key success factors include:

- Best practices for submission, adoption, reuse, reporting, and retirement of architecture policies, procedures, roles, skills, organizational structures, and support services
- Organizational responsibilities and structures to support the architecture governance processes and reporting requirements

Continued

Architecture Governance in Practice

- Tools and processes to procedurally and culturally promote take-up
- Management of criteria to control architecture governance processes, dispensations, compliance assessments, SLAs, and OLAs
- Meet internal and external requirements for effectiveness, efficiency, confidentiality, integrity, availability, compliance, and reliability of architecture governance-related information, services, and processes

Architecture Board

- The Board oversees implementation of the governance strategy
- Board comprises of representative stakeholders responsible for review and maintenance of architecture typically at 2 levels:
  - Local (domain experts, line responsibility)
  - Global (organization-wide responsibility)

  Board has identifiable and articulated:
  - Responsibilities and decision-making capabilities
  - Remit and authority limits

Architecture Board Value

- Cost is offset by preventing one-off solutions and unconstrained developments which lead to:
  - High costs of development, operation and support, due to numerous run-time environments, languages, interfaces, protocols ...
  - Lower quality
  - Higher risk
  - Difficulty in replicating and re-using solutions

Architecture Board Responsibilities

- Providing the basis for all decision-making with regard to changes to the architectures
- Ensuring consistency between sub-architectures
- Establishing targets for re-use of components
- Ensuring flexibility of enterprise architecture:
  - To meet changing business needs
  - To leverage new technologies
- Enforcement of Architecture Compliance
- Improving the architecture maturity level within the organization
- Ensuring that the discipline of architecture-based development is adopted
- Supporting a visible escalation capability for out-of-bounds decisions

Architecture Board Operations

- TOGAF provides guidance on operations of the Board
- These are primarily focused on best practice for meeting management
- For example:
  - Meetings should be conducted with clearly defined agendas
  - Each participant attending a meeting should be fully prepared
- TOGAF provides a sample outline agenda

Architecture Contracts

- Joint agreements between development partners and sponsors on the deliverables, quality and fitness-for-purpose of an architecture

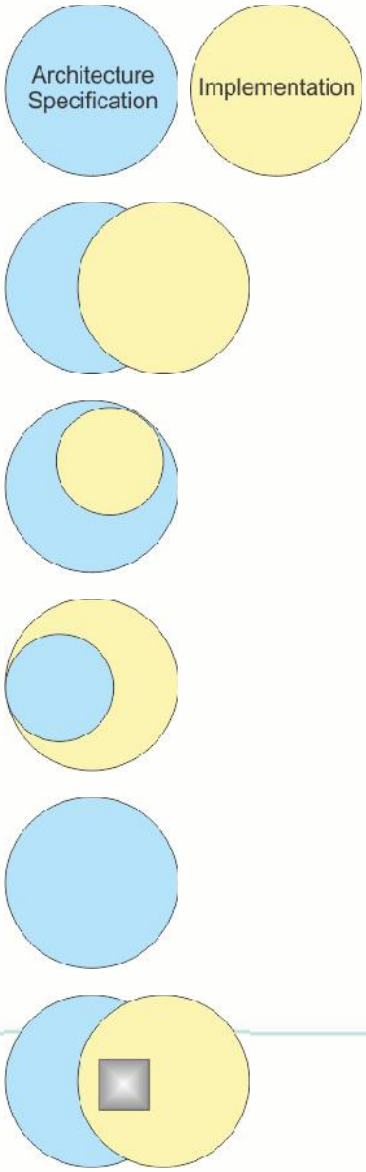
Architecture Contracts

- Use of Architecture Contracts ensures
  - Continuous monitoring to check integrity, changes, decision-making, and audit of all architecture-related activities
  - Adherence to the principles, standards, and requirements of the existing or developing architectures
  - Identification of risks
  - A set of processes and practices that ensure accountability, responsibility, and discipline with regard to the development and usage of all architectural artifacts
  - A formal understanding of the governance organization

Architecture Contracts and the ADM

- The Statement of Architecture Work created in Phase A
- Architectures Domains (Business, Data, Application, Technology)
- Phase G
- Implementation projects

Architecture Compliance: Terminology



Irrelevant:
The implementation has no features in common with the architecture specification (so the question of conformance does not arise).

Consistent:
The implementation has some features in common with the architecture specification, and those common features are implemented in accordance with the specification. However, some features in the architecture specification are not implemented, and the implementation has other features that are not covered by the specification.

Compliant:
Some features in the architecture specification are not implemented, but all features implemented are covered by the specification, and in accordance with it.

Conformant:
All the features in the architecture specification are implemented in accordance with the specification, but some more features are implemented that are not in accordance with it.

Fully Conformant:
There is full correspondence between architecture specification and implementation. All specified features are implemented in accordance with the specification, and there are no features implemented that are not covered by the specification.

Non-conformant:
Any of the above in which some features in the architecture specification are implemented not in accordance with the specification.

Architecture Compliance

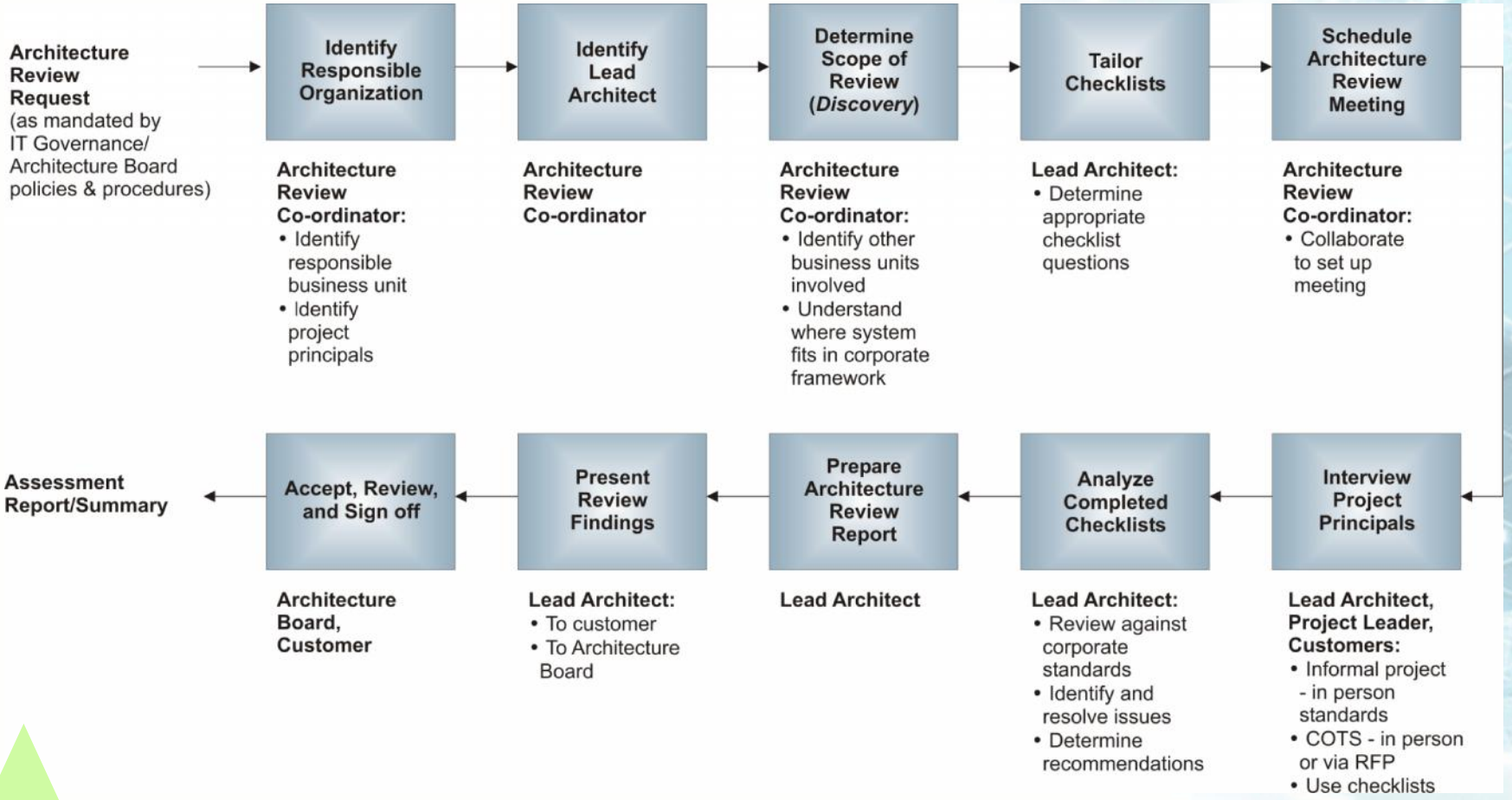
Two processes are defined to ensure compliance of projects with the Enterprise Architecture:

1. Prepare *Project Impact Assessments* - project-specific views that illustrate how the *Enterprise Architecture* impacts a project
2. Perform an *Architecture Compliance Review*

Architecture Compliance Reviews

- Catch errors in the project architecture early,
- Ensure the application of best practices to architecture work.
- Provide an overview of the compliance to mandated standards.
- Identify where the standards themselves may require modification.
- Identify services that are currently application-specific but might be provided as part of the enterprise infrastructure.
- Document strategies for collaboration, resource sharing, and other synergies across multiple architecture teams.
- Take advantage of advances in technology.
- Communicate to management the status of technical readiness of the project.
- Identify key criteria for procurement activities
- Identify and communicate significant architectural gaps to product and service providers.

Architecture Compliance Review Process



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Establishing an Architecture Capability

- TOGAF provides guidelines to establish an EA capability
  - Use of the ADM
  - Treat an ongoing practice
  - Address the four domain architectures
    - **Business Architecture** : the architecture governance, architecture processes, architecture organizational structure, architecture information requirements, architecture products, etc.
    - **Data Architecture** : the structure of the organization's Enterprise Continuum and Architecture Repository
    - **Application Architecture:** the functionality and/or applications services required to enable the architecture practice
    - **Technology Architecture**: infrastructure requirements and deployment in support of the architecture applications and Enterprise Continuum

Summary

Architecture governance is the practice and orientation by which enterprise architectures and other architectures are managed and controlled at an enterprise-wide level. It includes:

- Implementing a system of controls over the creation and monitoring of all architecture components and activities, to ensure the effective introduction, implementation, and evolution of architectures within the organization.
- Implementing a system to ensure compliance with internal and external standards and regulatory obligations.
- Establishing processes that support effective management of these processes.
- Developing practices that ensure accountability to identified stakeholders, inside and outside the organization.

Test Yourself Question

Which of the following are NOT included in Architecture Governance?

A. Implementing a system of controls over expenditure within the enterprise
B. Implementing a system of controls over the creation and monitoring of all architecture components and activities
C. Implementing a system to ensure compliance with internal and external standards and regulatory obligations
D. Establishing processes that support effective management of the architecture governance process
E. Developing practices that ensure accountability to stakeholders

Test Yourself Question

Q. Which of the following is an example of an IT governance framework?

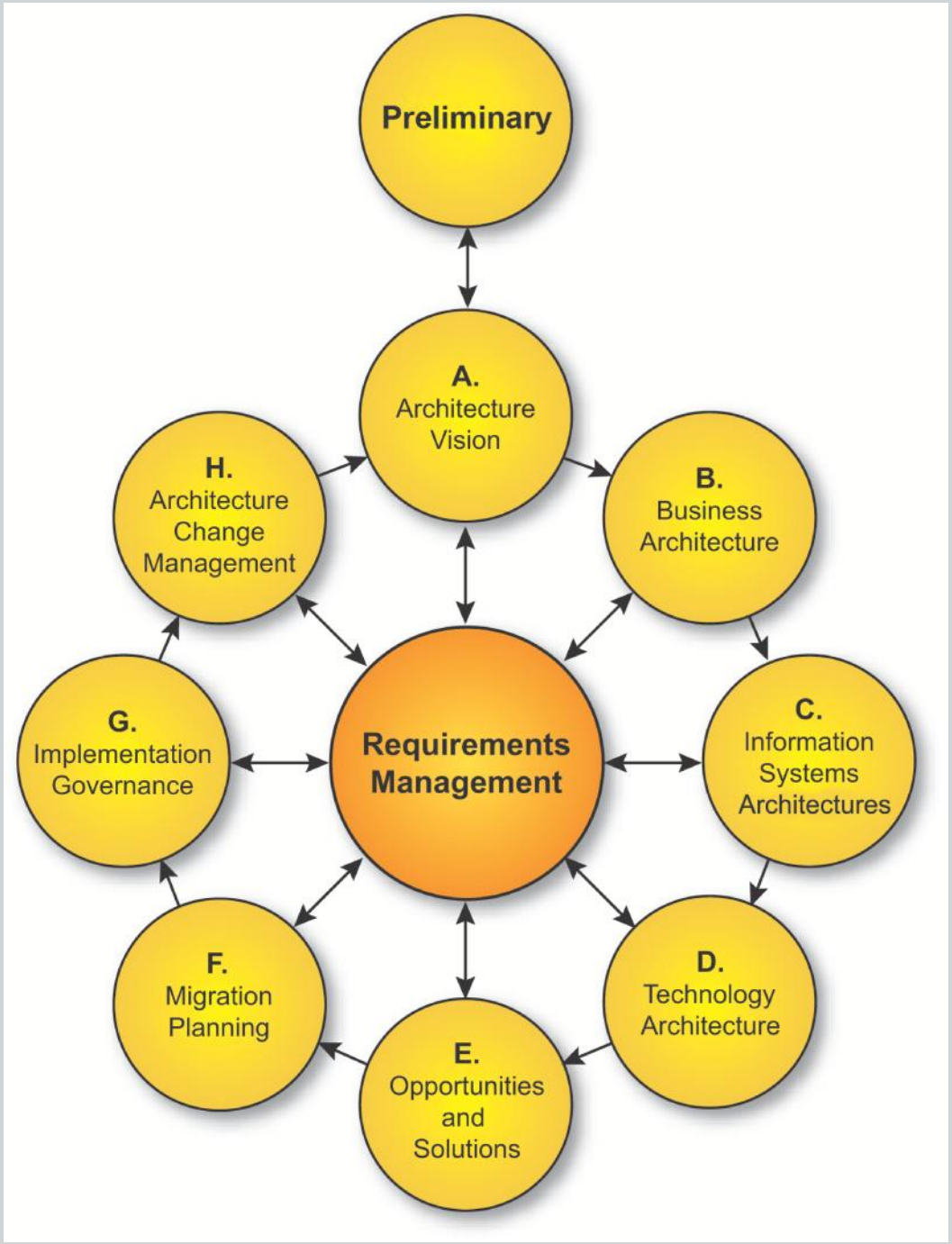
A. ITIL

B. Prince 2

C. COBIT

D. TOGAF

E. ATAM



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