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Module F7
ADM Guidelines and Techniques

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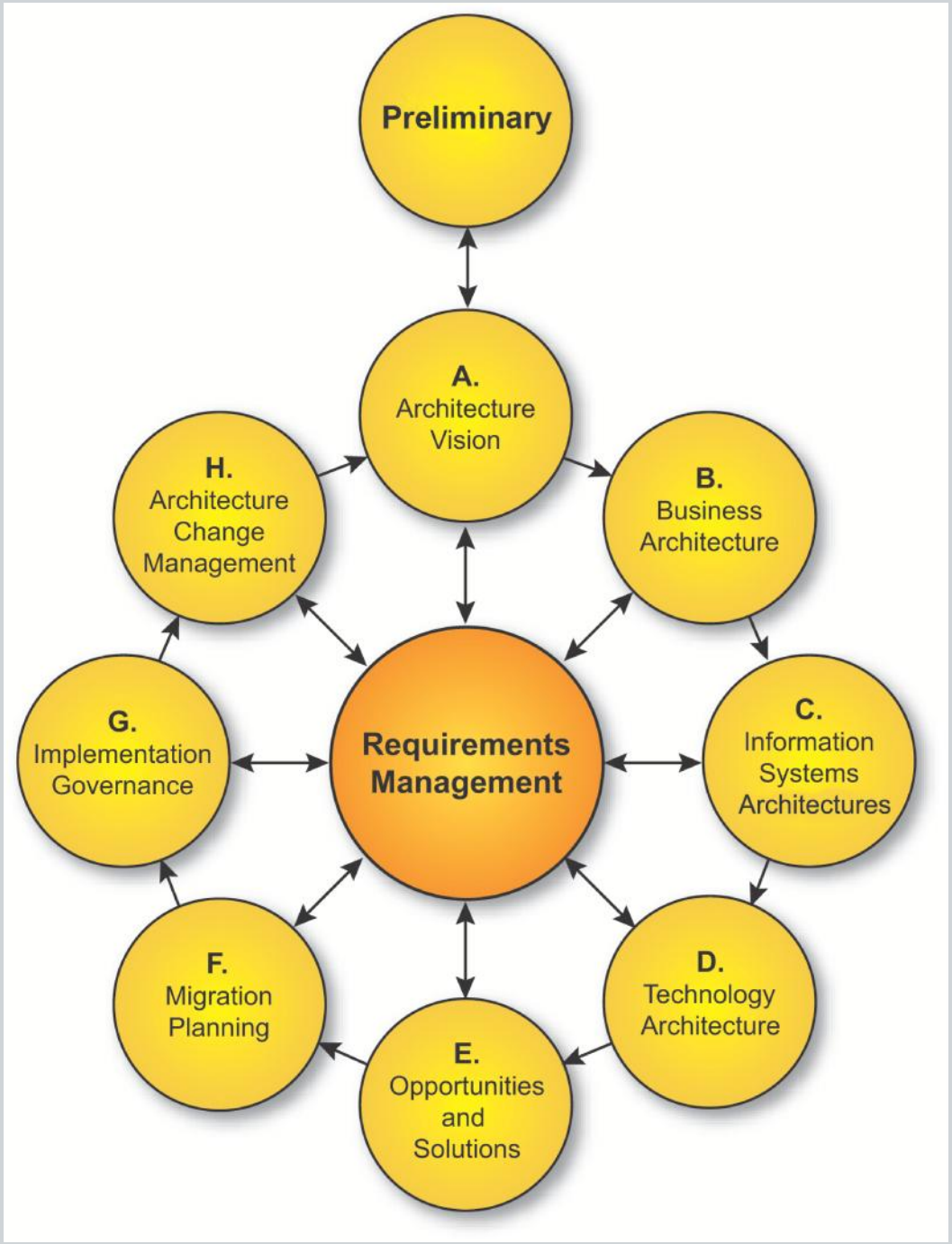

ADM Guidelines and Techniques

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Roadmap

Part I - Introduction
Preface, Executive Overview, Core Concepts, Definitions and Release Notes
Part II – Architecture Development Method
Introduction to ADM
ADM Phase Narratives
Part III – ADM Guidelines & Techniques
Guidelines for Adapting the ADM Process
Techniques for Architecture Development
Part IV – Architecture Content Framework
Content Metamodel
Architectural Artifacts
Architecture Deliverables
Building Blocks
Part V – Enterprise Continuum & Tools
Enterprise Continuum
Architecture Partitioning
Architecture Repository
Tools for Architecture Development
Part VI – Reference Models
Foundation Architecture: Technical Reference Model
Integrated Information Infrastructure Reference Model
Part VII – Architecture Capability Framework
Architecture Board
Architecture Compliance
Architecture Contracts
Architecture Governance
Architecture Maturity Models
Architecture Skills Framework

- Part III, ADM Guidelines and Techniques
- A collection of guidelines and techniques for use in applying TOGAF and the ADM

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Module Objectives

The objectives of this module are to describe:

- The contents of Part III: ADM Guidelines and Techniques
  - The difference between *guidelines* and *techniques*
- The use of Architecture Principles
- The use of Business scenarios in the ADM
- The gap analysis technique
- The use of interoperability requirements in the ADM
- The Business Transformation Readiness Program
- Risk Management in the ADM
- Capability based planning

Guidelines

- Guidelines for Adapting the ADM Process
  - Ways to apply iteration to the ADM,
  - Applying the ADM at different levels of the enterprise,
  - Security considerations for the different phases and
  - Supporting SOA

Techniques

- Techniques for Architecture Development,
  - Architecture Principles,
  - Stakeholder Management,
  - Architecture Patterns,
  - Business Scenarios,
  - Gap Analysis,
  - Migration Planning Techniques
  - Interoperability Requirements,
  - Business Transformation Readiness Assessment,
  - Risk Management,
  - Capability-Based Planning

Exercise

- Explain what the difference is between a *Guideline* and a *Technique* in TOGAF 9

Architecture Principles

- An initial output of the Preliminary Phase
- A set of general rules and guidelines for the architecture being developed
- TOGAF contains guidelines for developing principles and a detailed set of generic principles
- Principles are generally established in two key domains:
  - **Enterprise** principles provide a basis for decision-making throughout an enterprise and dictate how the organization fulfills its mission
  - **Architecture** principles are a set of principles that relate to architecture work.

The need for Architecture Principles

- They inform and support the way in which an organization sets about fulfilling its mission
- Often they are one element in a structured set of ideas that collectively define and guide the organization, from values through to actions and results

Template

Name	Should represent the essence of the rule and be easy to remember
Statement	Should be succinct and unambiguously communicate the rule
Rationale	Should highlight the business benefits of adhering to the principle using business terminology.
Implications	Should highlight the requirements, both for the business and IT for carrying out the principle, in terms of resources, costs, and activities/tasks.

Example: Primacy of Principles

Statement	Principles apply throughout the enterprise and override all other considerations when decisions are made
Rationale	The only way we can provide a recognized, consistent and measurable level of operations is if all parts of the enterprise abide by the principles when making decisions
Implications	Without this principle, short-term consideration, supposedly convenient exceptions, and inconsistencies would rapidly undermine the management of information. Information management initiatives will not be permitted to begin until they are examined for compliance with the principles. A conflict with a principle will be resolved by changing the conflicting initiative, which could delay or prevent the initiative.

Example: Self-Serve

Statement	Customers should be able to serve themselves
Rationale	Applying this principle will improve customer satisfaction, reduce administrative overhead, and potentially improve revenue.
Implications	There is an implication to improve ease-of-use and minimize training needs; for example, members should be able to update their contact details, etc. and be able to buy additional membership products online.

What makes a good set of Architecture Principles?

A good set of principles will be founded in the beliefs and values of the organization.

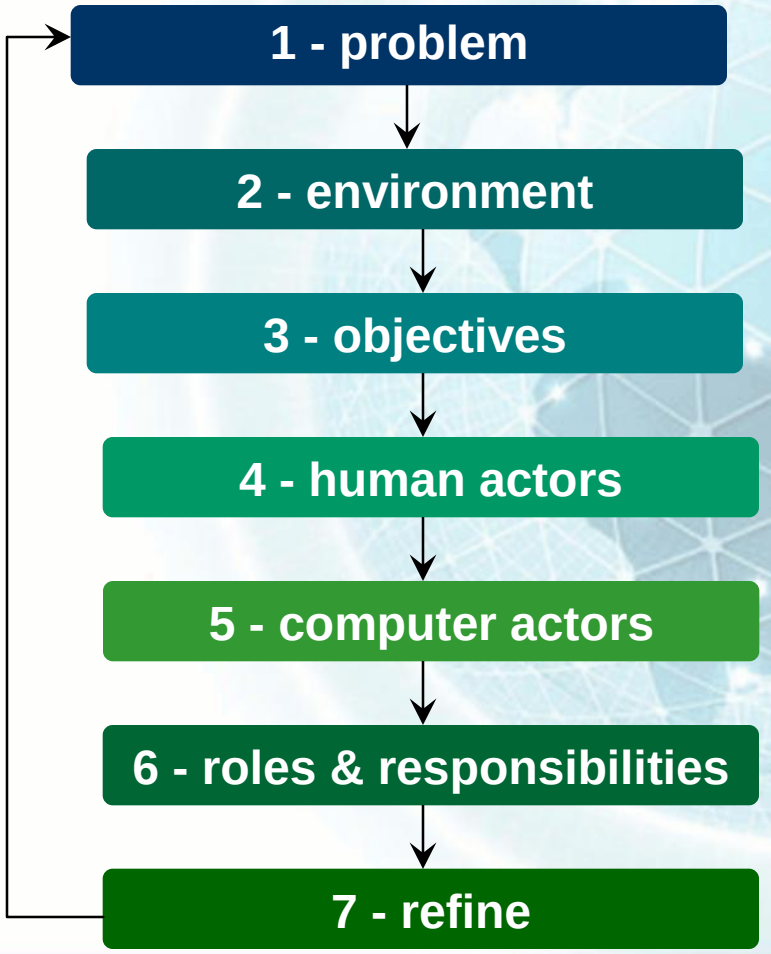
It must be:

- **Understandable**: the underlying tenets can be quickly grasped
- **Robust**: principles must be definitive and precise to support consistent decision-making
- **Complete**: principles must cover every situation perceived
- **Consistent**: principles should not be contradictory
- **Stable**: principles should be enduring, yet able to accommodate change

What is a business scenario?

Business scenarios are a method used to help identify and understand the business requirements that the architecture must address. A business scenario describes:

- A business process, application, or set of applications
- The business and technology environment
- The people and computing components (‘‘actors’’) who execute the scenario
- The desired outcome of proper execution



What is a good business scenario?

A good business scenario represents a significant business need or problem, and enables vendors to understand the value of a solution to the customer.

A good business scenario is also ‘‘SMART’’:

- Specific, by defining what needs to be done
- Measurable, through clear metrics for success
- Actionable, by clearly segmenting the problem and providing the basis for a solution
- Realistic, in that the problem can be solved within the bounds of physical reality, time, and cost constraints
- Time-bound, in that there is a clear statement of when the opportunity expires

The use of business scenarios in the ADM

- Business scenarios figure most prominently in the initial phase of the ADM, Architecture Vision,
  - when they are used to define relevant business requirements
  - and to build consensus with business management and other stakeholders
- They may also be used in other phases, particularly during Business Architecture
  - to derive the characteristics of the architecture directly from the high-level requirements of the business

Gap Analysis

Gap analysis is widely used in the ADM to validate an architecture that is being developed. The basic idea is to spot gaps between the Baseline Architecture and the Target Architecture; that is, items that have been deliberately omitted, accidentally left out, or not yet defined.

- Gap Analysis is used in Phases B,C,D and E

Example

Target → Architecture / Baseline Architecture ↓	Video Conferencing Services	Enhanced Telephony Services	Mailing List Services	Eliminated Services ↓
Broadcast Services				Intentionally eliminated
Video Conferencing Services	Included			
Enhanced Telephony Services		Potential match		
Shared Screen Services				Unintentionally excluded - a gap in Target Architecture
New →		Gap: Enhanced services to be developed or produced	Gap: To be developed or produced	

Interoperability

- Interoperability is ‘‘the ability to share information and services’’.
- Defining the degree to which information and services are to be shared is very important, especially in a complex organization and/or extended enterprise.

Interoperability and the ADM

The determination of interoperability occurs throughout the ADM:

- Architecture Vision: the nature and security considerations of information and service exchanges are found using business scenarios.
- Business Architecture: information and service exchanges are defined in business terms.
- Data Architecture: the content of information exchanges is detailed using the corporate data and/or information exchange model.
- Application Architecture: the way applications are to share information and services is specified.
- Technology Architecture: appropriate technical mechanisms to permit information and service exchanges are specified.
- Opportunities & Solutions: actual solutions are selected.
- Migration Planning: interoperability is implemented logically.

Examples

Phase B: Inter-stakeholder Information Interoperability Requirements (Using degrees of information interoperability)							
Stakeholders	A	B	C	D	E	F	G
A		2	3	2	3	3	3
B	2		3	2	3	2	2
C	3	3		2	2	2	3
D	2	2	2		3	3	3
E	4	4	2	3		3	3
F	4	4	2	3	3		2
G	2	2	3	3	3	3	

Phase C: Inter-system Interoperability Requirements							
	System A	System B	System C	System D	System E	System F	System G
System A		2A	3D	2B	3A	3A	3B
System B	2E		3F	2C	3A	2B	2C
System C	3E	3F		2B	2A	2A	3B
System D	2B	2B	2B		3A	3A	3B
System E	4A	4B	2B	3A		3B	3B
System F	4A	4A	2B	3B	3A		2D
System G	2B	2B	3A	3A	3B	3B	

The Business Transformation Readiness Program

- Enterprise architecture often involves considerable change.
- Understanding the readiness of an organization to accept change, identifying the issues, and dealing with them in the Implementation and Migration Plans is key to successful architecture transformation in Phases E and F. An initial assessment is carried out in Phase A.
- This is a joint effort between corporate (especially human resources) staff, lines of business and IT planners.

Business Transformation Readiness and the ADM

Recommended activities when assessing readiness for business transformation are:

- Determine the readiness factors
- Present the readiness factors using maturity models
- Assess the readiness factors, and determine the readiness factor ratings
- Assess the risks for each readiness factor and identify mitigating actions
- Work these actions into Phase E and F Implementation and Migration Plan

Example

Business Transformation Readiness Assessment - Maturity Model					
Factor 2: Need for Enterprise Information Architecture			**Class**	Organizational Context	
			BTEP Readiness Factor	YES	
Definition	There is recognition by the organization that information is a strategic corporate asset requiring stewardship. There is also recognition that the data is not universally understandable, of requisite quality, and accessible.				
Maturity Model Levels					
0 Not defined	**1 Ad Hoc**	**2 Repeatable**	**3 Defined**	**4 Managed**	**5 Optimized**
Information is not recognized as an asset. There is no clear stewardship of data.	Data Management (DM) concepts are intuitively understood and practiced on an *ad hoc* basis. Stewardship of the data is informal. Data is recognized by certain internal experts and senior management as being of strategic importance to the organization. Focus is primarily on technically managing redundant data at the applications level.	Many parts of the organization value information/data as a strategic asset. Internal DM experts maintain clear lines of responsibility and stewardship of the data, organized along lines of business and at all senior levels. Staff put into practice DM principles and standards in their daily activities.	Data is recognized as a strategic asset in most parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the lower management and information expert levels.	Data is recognized as a strategic asset in all parts of the organization, and throughout most levels from operations to senior management. Resources are committed to ensuring strong stewardship of data at the senior management and information expert levels.	Data is treated in all levels throughout the organization as a strategic asset to be exploited and re-used. Data products and services are strongly integrated with the management practice of the organization. All staff are empowered and equipped to take stewardship of information, and are seen as "knowledge workers".
				Recommended Target State	

Risk Management in the ADM

There are two levels of risk that should be considered:

1. **Initial Level of Risk**: Risk categorization prior to determining and implementing mitigating actions.
2. **Residual Level of Risk**: Risk categorization after implementation of mitigating actions

The process for risk management is:

- Risk classification
- Risk identification
- Initial risk assessment
- Risk mitigation and residual risk assessment
- Risk monitoring

Risk Management in the ADM

- Risks are identified in Phase A as part of the initial Business Transformation Readiness Assessment
- 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
- Implementation governance can identify critical risks that are not being mitigated and might require another full or partial ADM cycle

Example

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

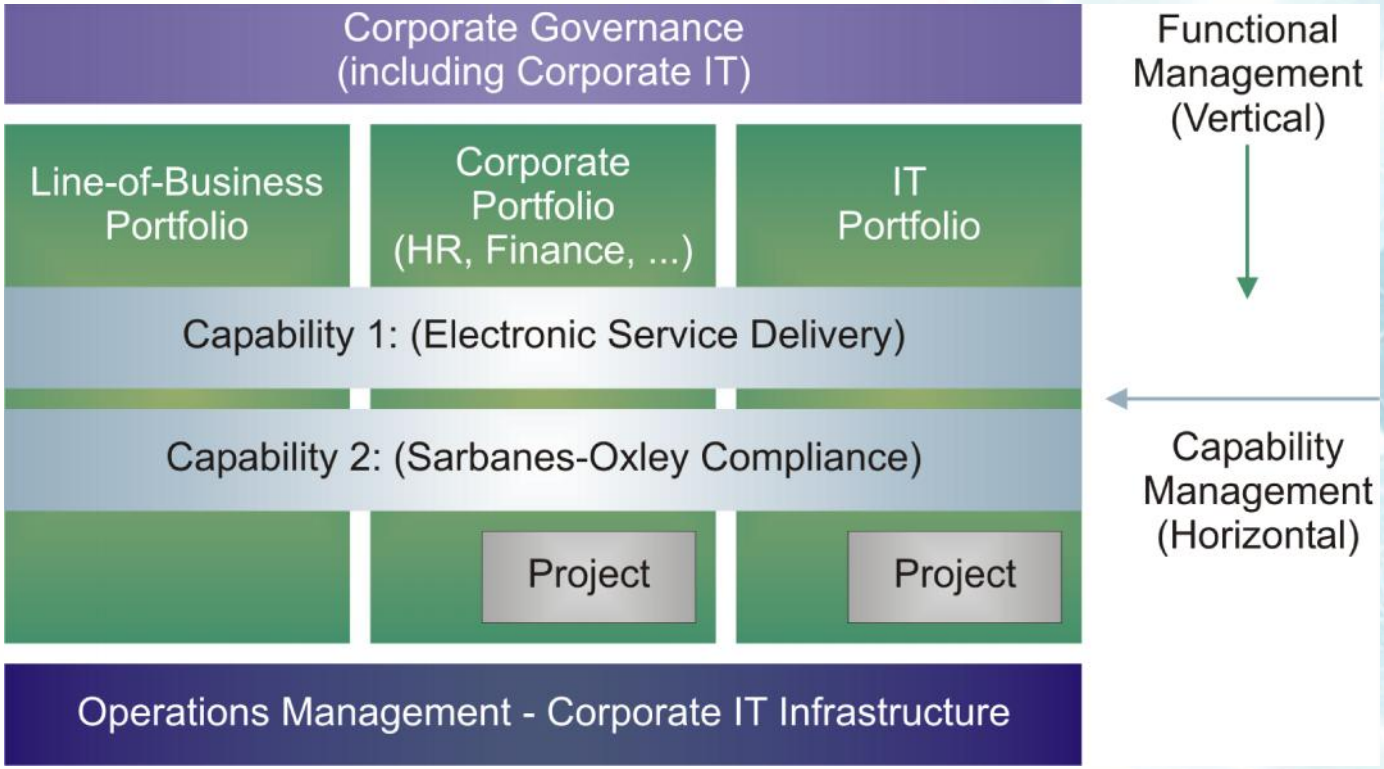
Risk ID	Risk	Preliminary Risk			Mitigation	Residual Risk		
		Effect	Frequency	Impact		Effect	Frequency	Impact

Capability based planning

Capability-based planning is a technique that focuses on the planning, engineering and delivery of strategic business capabilities

It frames all phases of the architecture development in the context of business outcomes, clearly linking the IT vision, architectures (ABBs and SBBs), and the Implementation and Migration Plans with the corporate strategic, business, and line of business plans

Capabilities



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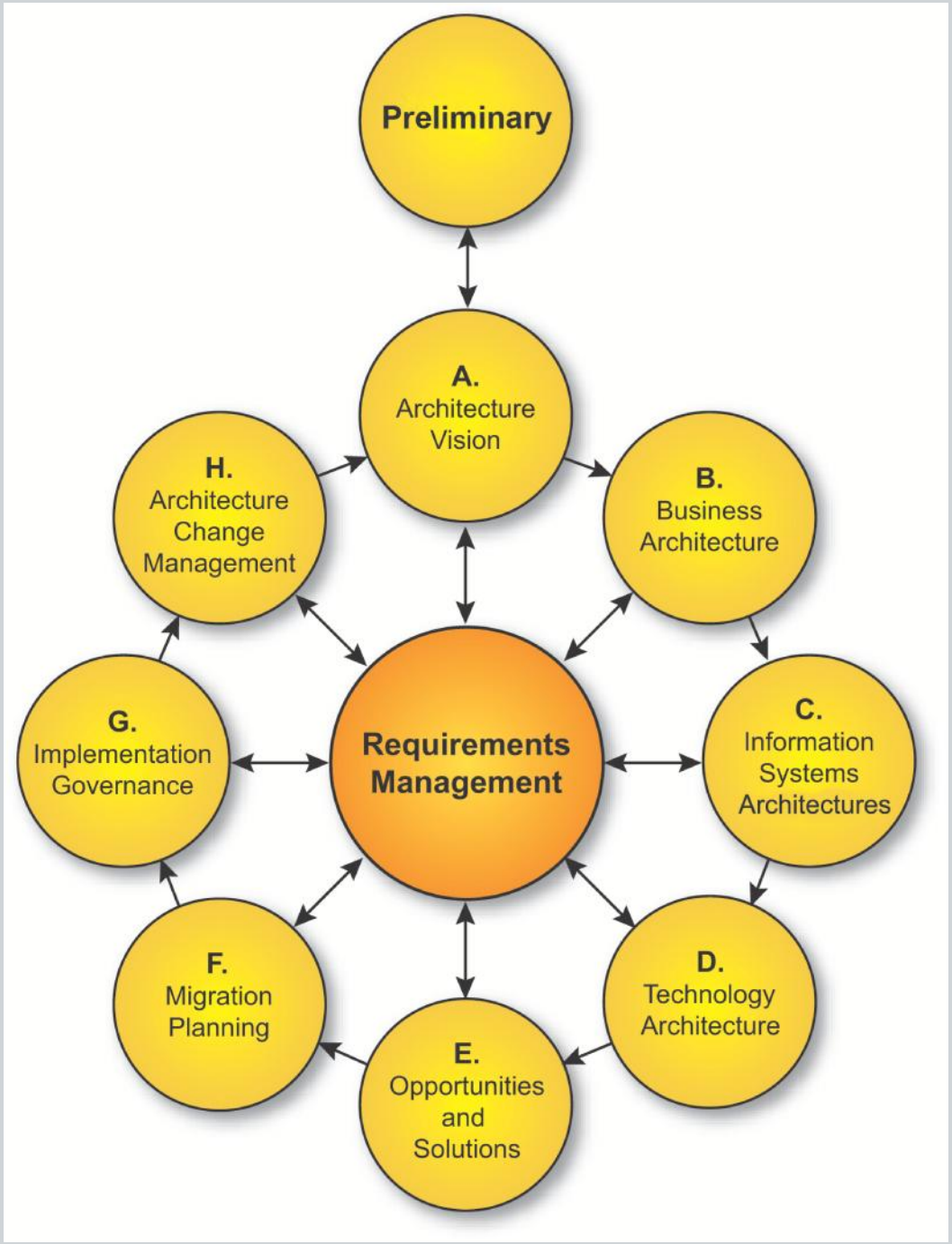
Summary

There are 2 parts to Part III: Guidelines for Adapting the ADM Process and Techniques for Architecture Development.

- This module has looked at:
  - Architecture Principles
  - Business Scenarios
  - Gap Analysis
  - Interoperability
  - Business Transformation Readiness
  - Risk Management
  - Capability-Based Planning

Exercise

- Select 7 principles at random from the *Example Set of Architecture Principles* in TOGAF Chapter 23
- For each selected principle state whether it applies to your organization or not, and give your reasons.



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