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TOGAF™ 9 Capability Framework

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Document Control

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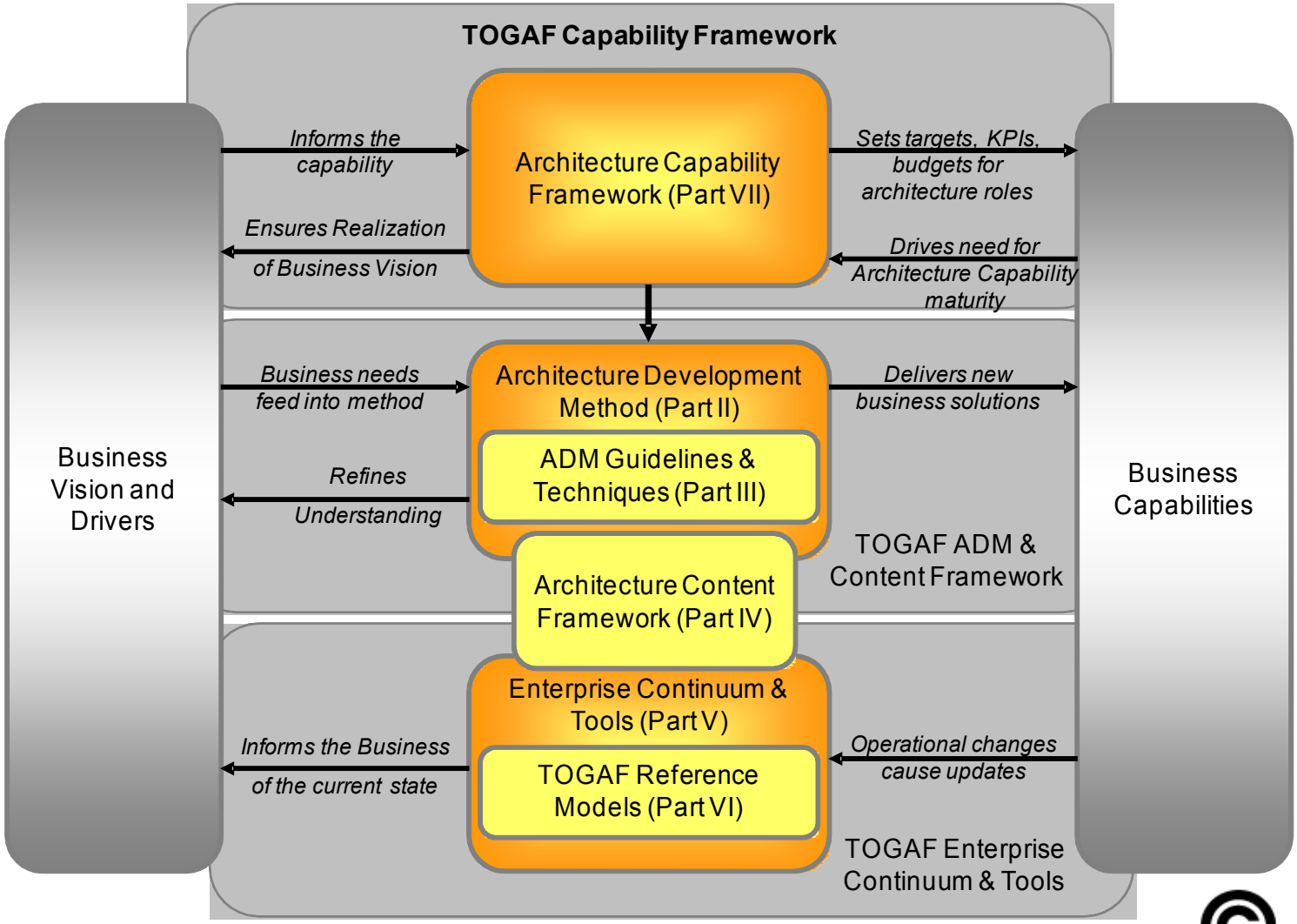
Key Focus Areas

- Enterprise Architecture
- Strategy
- Governance

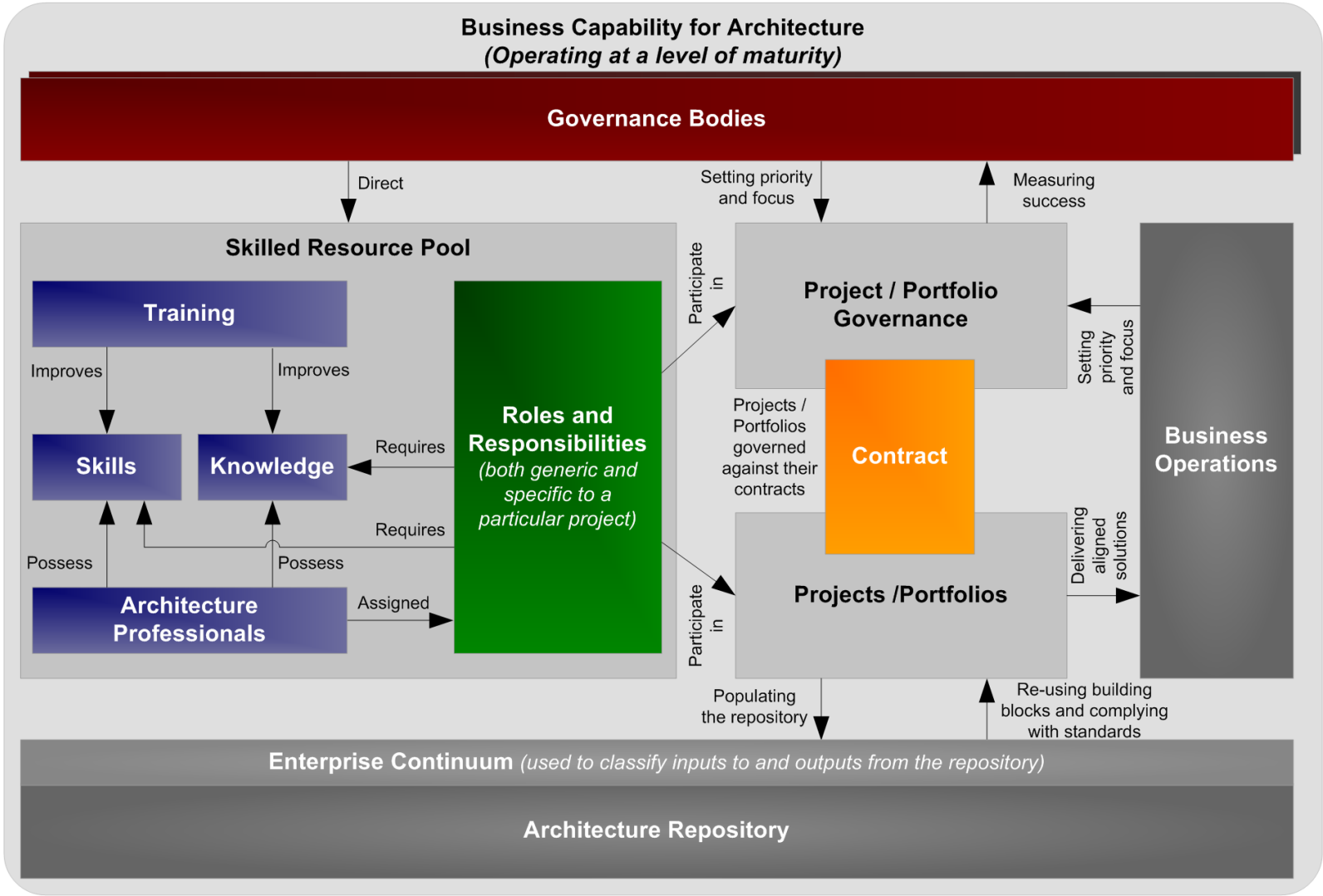
TOGAF 9 - Context



Purpose

- Introduce TOGAF 9 Capability Framework
- Understand purpose of a capability
- Overview on how to establish an EA capability using the ADM
- Practical examples

Capability Framework



Capability

A capability means
having all the desired qualities to do something,
available when required
for the full duration required.

A capability is therefore:

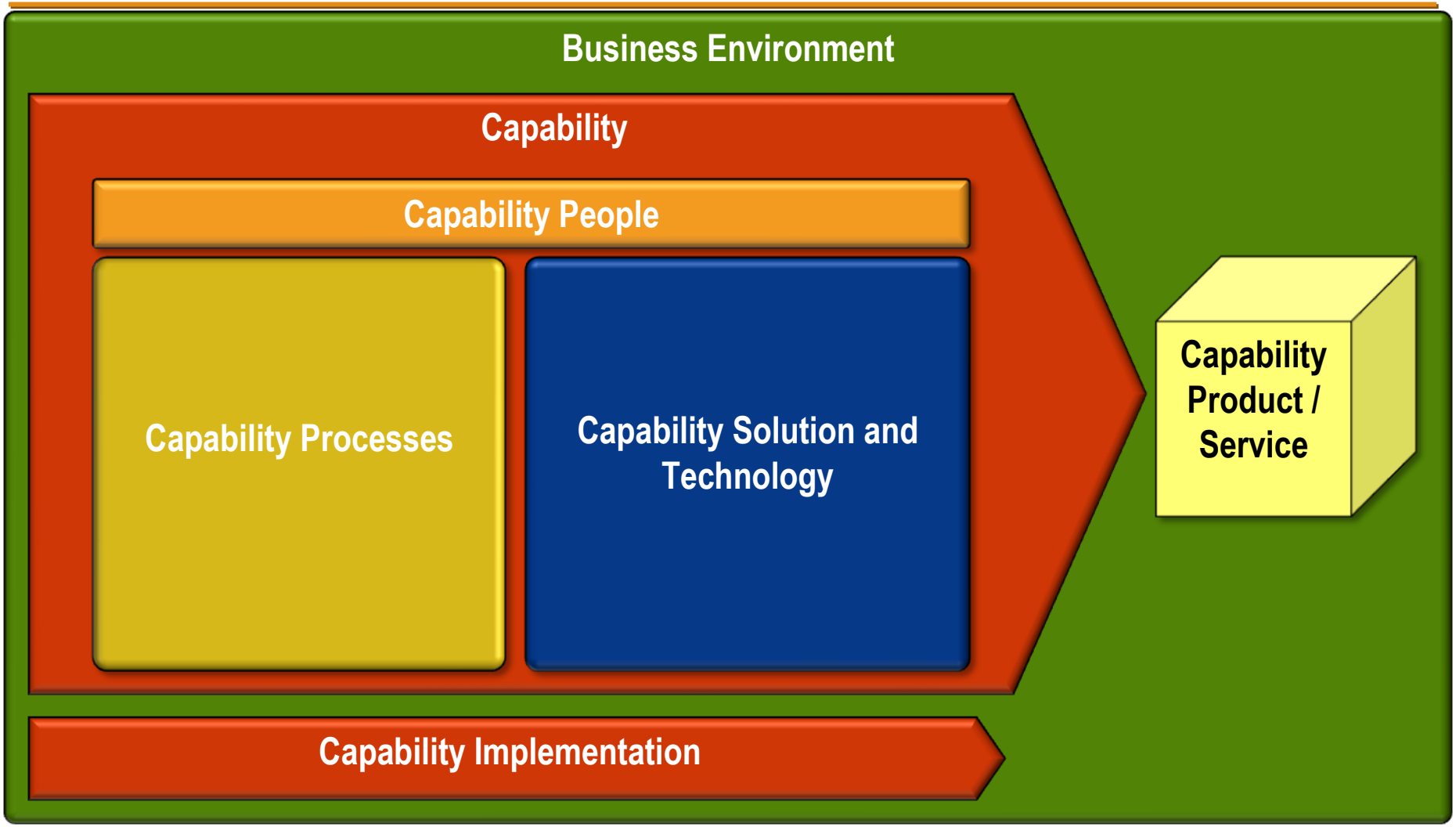
- not a project
- ongoing
- sustainable
- business-appropriate

Real IRM Approach

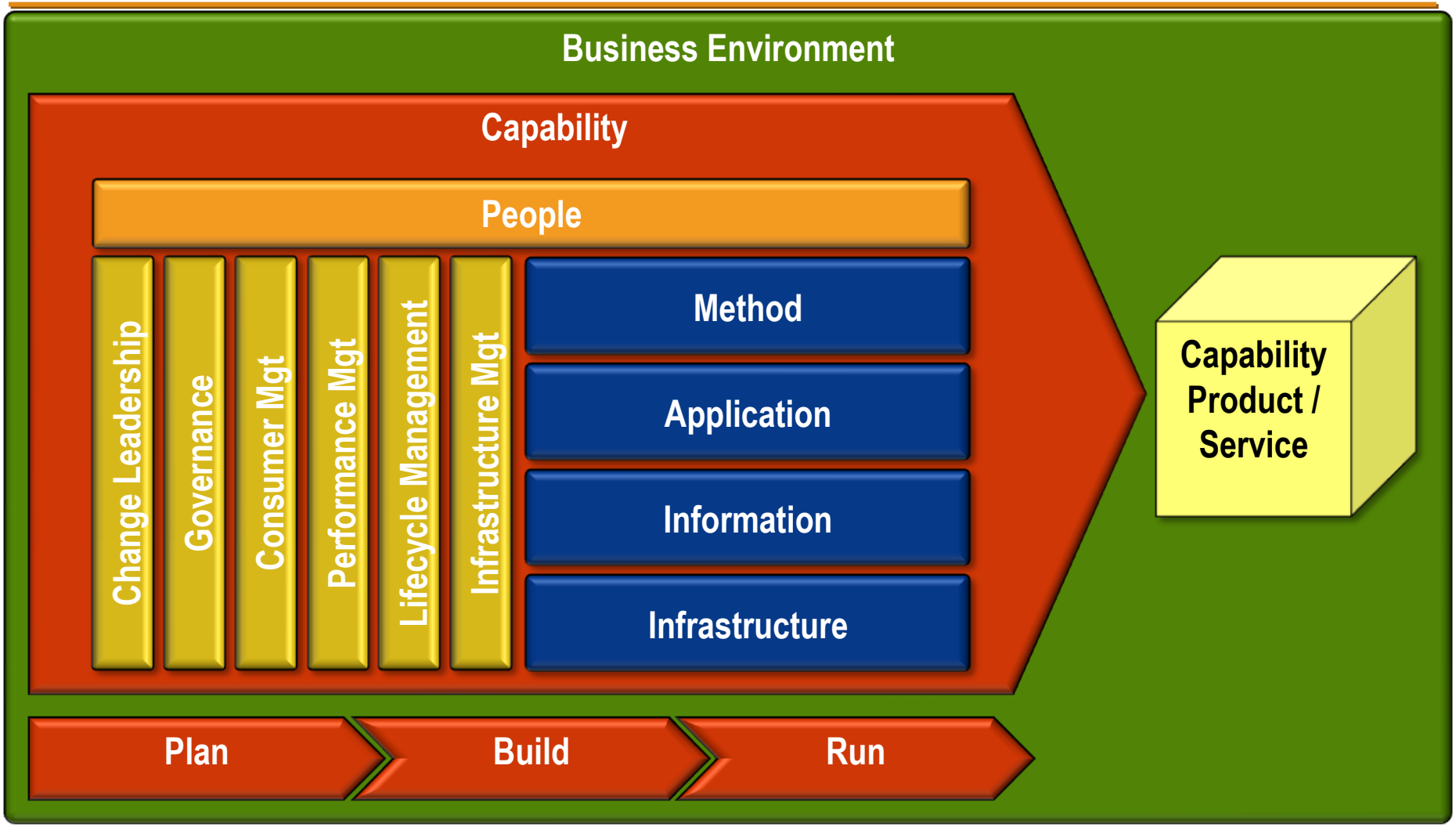
Real IRM implements capabilities within organisations based on the following principles:

- Directed by architectural principles
- Informed by industry best practices, frameworks and standards
- Enabled through a well-defined and managed architecture
- Transferred into a sustainable practice
- Empowered through knowledge transfer
- Guided by business requirements

Capability Framework



Capability Framework

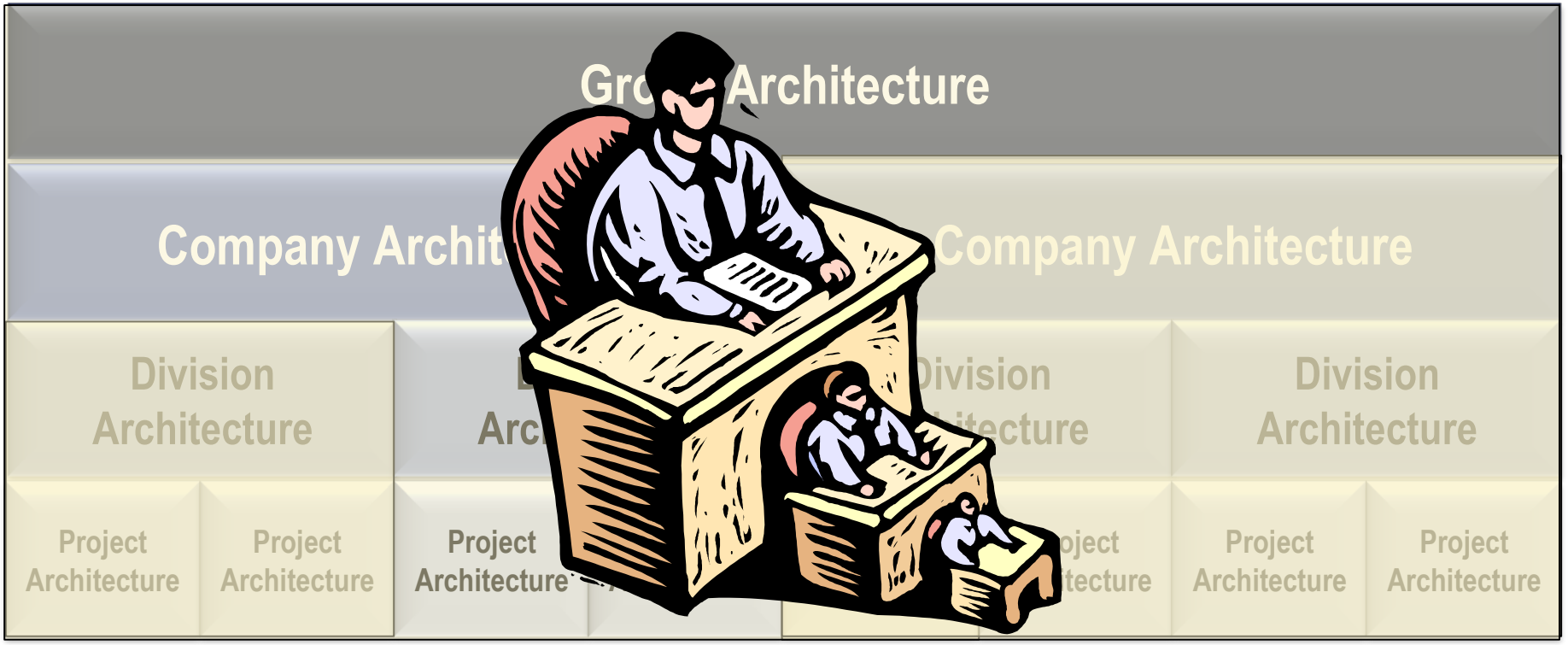


Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Architecture Scope

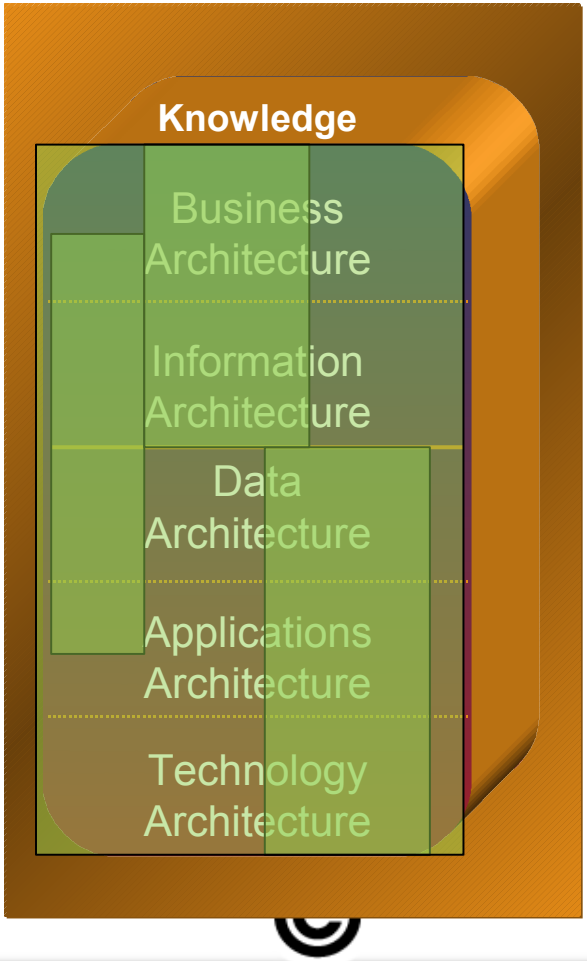
What is the breadth of the overall architecture effort?



Architecture Scope

What is the scope of the overall architecture effort?

- Align business and IT
- Application integration
- Information flow
- Technology deployment
- IT strategy
- Etc.



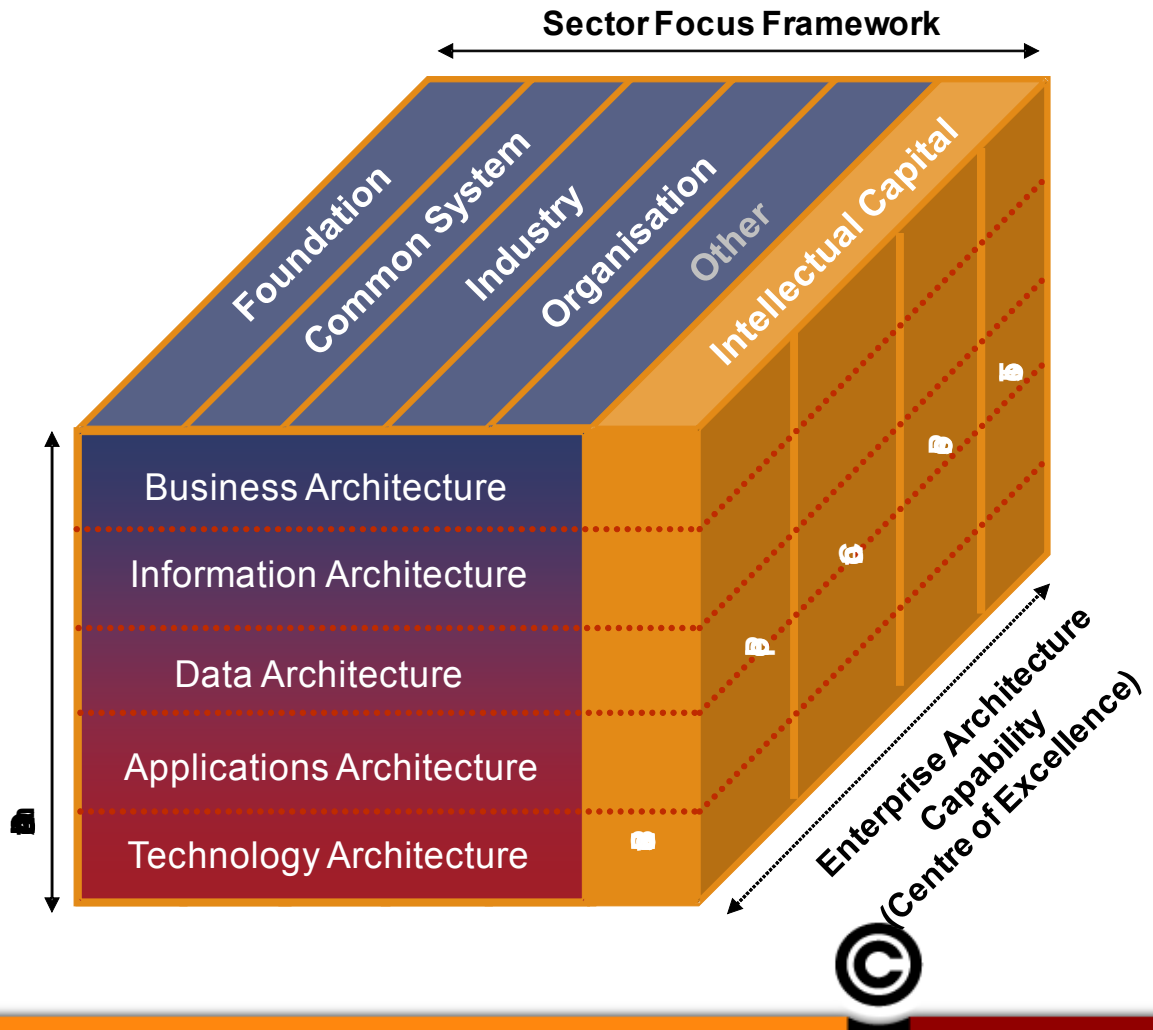
Architecture Stakeholders

Who are the architecture stakeholders?

- Executive Management
- CIO
- IT Management
- Business analysts
- Trainers
- Business managers
- Users
- Outsourced partners

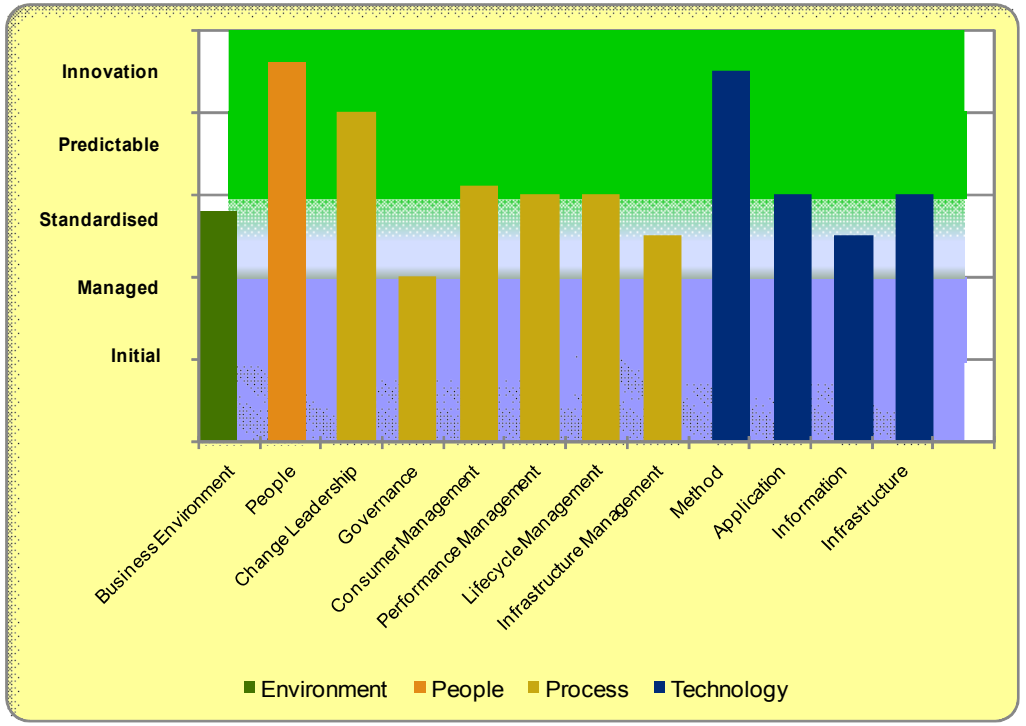
Architecture Definition

- Standardise the definition of architecture in the organisation
- Agree the architecture domains
- Agree where does **architecture** stop and where does **design** begin



Architecture Maturity Assessment

- Perform an architecture maturity assessment
- Assess maturity in terms of:
  - ✓ Current architecture maturity
  - ✓ Required architecture maturity in the short term (e.g. one year)
  - ✓ Ultimate required architecture maturity
- Refer to public domain architecture maturity models



Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Business Architecture

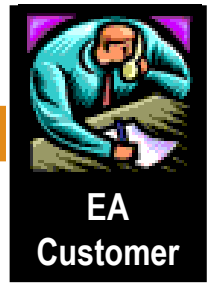
- Architecture principles that will define the architecture business rules
- Roles and responsibilities of the Architecture Function, including governance structures
- Architecture process, including the governance processes
- Architecture information requirements – i.e. the architecture classification framework that will be used
- Architecture performance metrics
- Architecture products and services

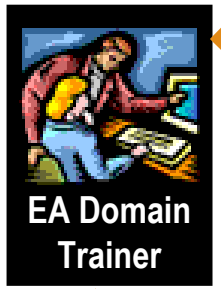
Architecture Principles

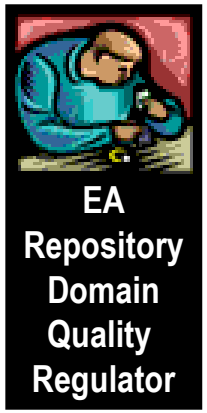
Develop principles that guide and direct the Architecture Function, for example:

- How would architecture be governed?
- What are the rules for architecture repositories?
- How would architects be employed?
- Etc.

Architecture Roles







supports

directs

requires

standardises

guides

trains

administers

trains

communicates

quality assures

trains

manages

communicates

Please note that:

- this diagram only indicates the primary relationships between the roles and doesn't depict all the relationships
- domain refers to at least the five primary domains, i.e. Business, Information, Data, Application and Technology. A role with domain as part of the role name would therefore be five different roles, one for each domain

Architecture Skills Framework

Category	Examples
Generic Skills	Leadership, team working, inter-personal skills
Business Skills and Methods	Business cases, business process, strategic planning
Enterprise Architecture Skills	Modelling, building block design, applications and role design, systems integration
Program or Project Management Skills	Managing business change, project management methods and tools
IT General Knowledge Skills	Brokering applications, asset management, migration planning, SLAs
Technical IT Skills	Software engineering, security, data interchange, data management
Legal Environment	Data protection laws, contract law, procurement law, fraud

Skill Proficiency Levels

Level	Achievement	Description
1	**Background**	Not a required skill though should be able to define and manage skill if required.
2	**Awareness**	Understands the background, issues and implications sufficiently to be able to understand how to proceed further and advise client accordingly.
3	**Knowledge**	Detailed knowledge of the subject area and capable of providing professional advice and guidance. Ability to integrate capability into architecture design.
4	**Expert**	Extensive and substantial practical experience and applied knowledge on the subject.

Architecture Skills Matrix

Technical IT Skills

IT Architect Roles	Architecture Board Member	Architecture Sponsor	IT Architecture Manager	IT Architecture Technology	IT Architecture Data	IT Architecture Application	IT Architecture Business	Program or Project Manager	IT Designer
Technical IT Skills									
Software Engineering	1	1	3	3	4	4	3	2	3
Security	1	1	3	4	3	4	3	2	3
Systems & Network Managment	1	1	3	4	3	3	3	2	3
Transaction Processing	1	1	3	4	3	4	3	2	3
Location & Directory	1	1	3	4	4	3	3	2	3
User Interface	1	1	3	4	4	4	3	2	3
International Operations	1	1	3	4	3	3	2	2	2
Data Interchange	1	1	3	4	4	3	2	2	3
Data Management	1	1	3	4	4	3	2	2	3
Graphics and Image	1	1	3	4	3	3	2	2	3
Operating Systems Services	1	1	3	4	3	3	2	2	3
Network Services	1	1	3	4	3	3	2	2	3
Communications Infrastructure	1	1	3	4	3	3	2	2	3

Legal Environment

IT Architect Roles	Architecture Board Member	Architecture Sponsor	IT Architecture Manager	IT Architecture Technology	IT Architecture Data	IT Architecture Application	IT Architecture Business	Program or Project Manager	IT Designer
Legal Environment									
Contract Law	2	2	2	2	2	2	2	3	1
Data Protection Laws	3	3	4	3	3	3	3	2	2
Procurement Law	3	2	2	2	2	2	2	4	1
Fraud	3	3	3	3	3	3	3	3	1
Commercial Law	3	3	2	2	2	2	3	3	1

Levels of Governance

Hierarchy of governance structures:

- Corporate Governance
- Technology Governance
- Information Technology (IT) Governance
- Architecture Governance

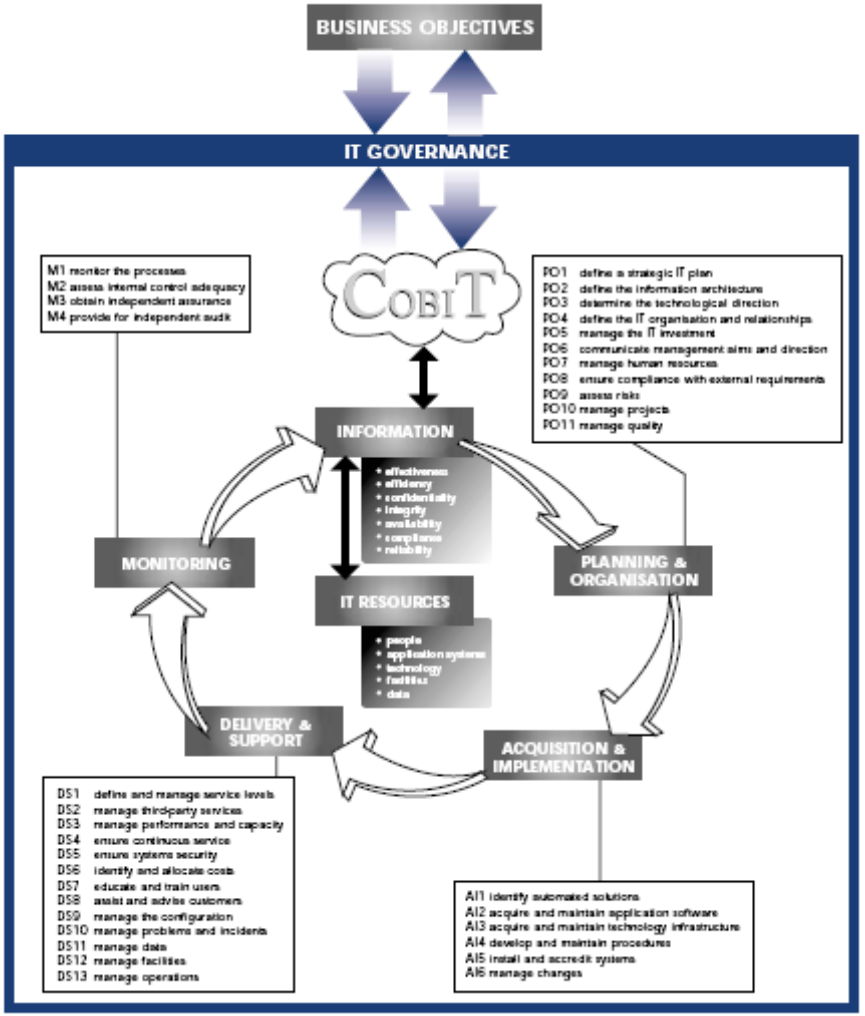
Domains of governance:

- Global
- Regional
- Local

IT Governance

IT Governance is a structure of relationships and processes to direct and control the enterprise in order to achieve the enterprise's goals by adding value while balancing risk versus return over IT and its processes.

CobiT is the industry standard IT governance framework.



IT Governance

CobiT 4.1 recognises the role of Chief Architect

RACI Chart

Activities	CEO	CFO	Business Executive	CIO	Business Process Owner	Head Operations	Chief Architect	Head Development	Head IT Administration	PMO	Compliance, Audit, Risk and Security
Create and maintain corporate/enterprise information model.		C	I	A	C		R	C	C		C
Create and maintain corporate data dictionary(ies).				I	C		A/R	R			C
Establish and maintain a data classification scheme.	I	C	A	C	C	I	C	C			R
Provide data owners with procedures and tools for classifying information systems.	I	C	A	C	C	I	C	C			R
Utilise the information model, data dictionary and classification scheme to plan optimised business systems.	C	C	I	A	C		R	C			I

Functions

A **RACI** chart identifies who is **R**esponsible, **A**ccountable, **C**onsulted and/or **I**nformed.

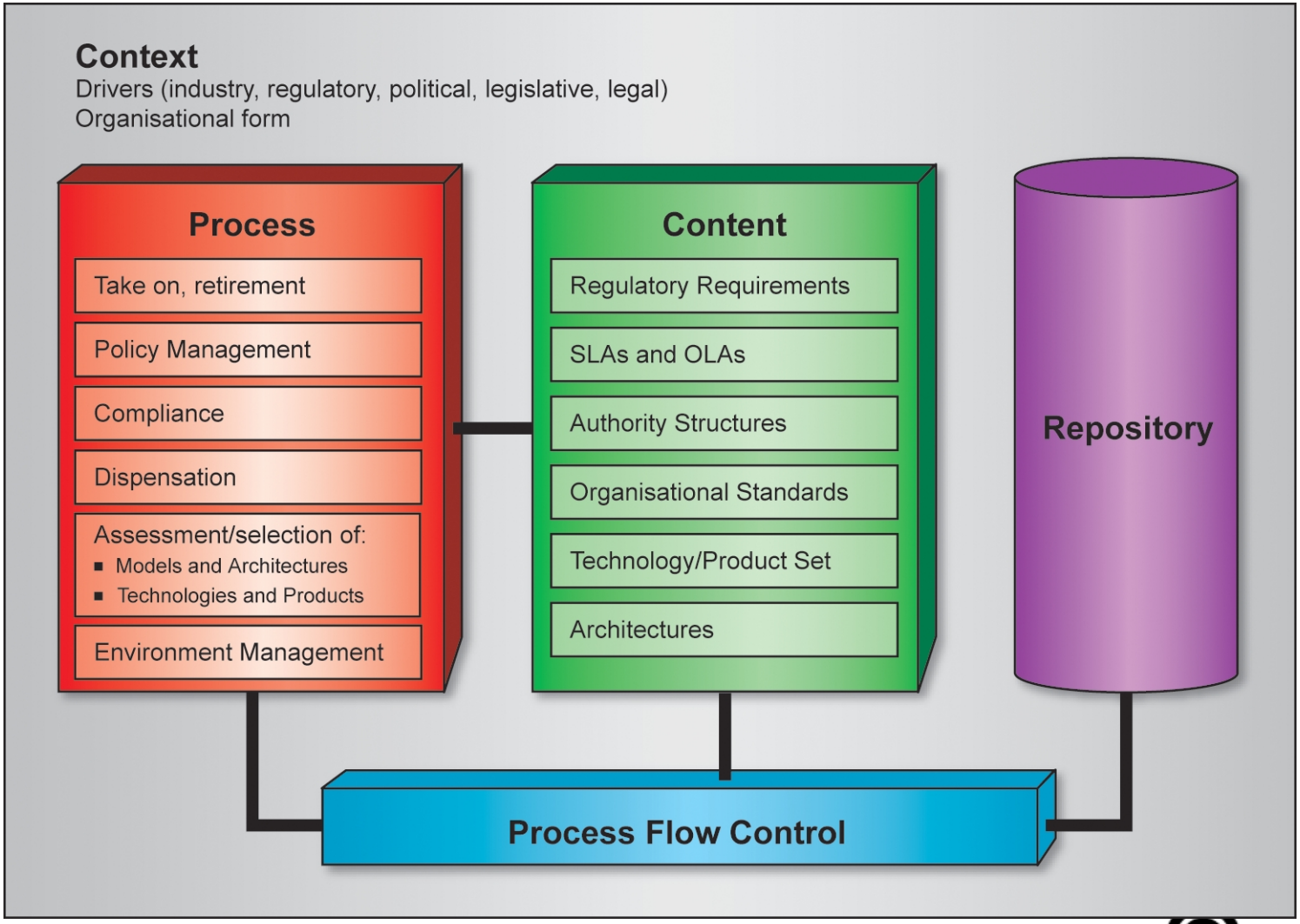
TOGAF – CobiT Mapping

Figure 8—Mapping of TOGAF 8.1 With CobiT 4.0					
Part I—Introduction		**Domain**			
		PO	AI	DS	ME
Chapter 1	Introduction	6			
Chapter 2	TOGAF as an Enterprise Architecture Framework	See chapter 4, TOGAF Overview			
Part II—Architecture Development Method		PO	AI	DS	ME
Chapter 3	Introduction to the ADM	17	5	1	1
Chapter 4	Preliminary Phase—Framework and Principles	29	1	1	7
Chapter 5	Phase A—Architecture Vision	60	10	1	14
Chapter 6	Phase B—Business Architecture	47	35	5	5
Chapter 7	Phase C—Information System Architectures	30	4		
Chapter 8	Phase C—Information System Architectures—Data Architecture	84	77	49	43
Chapter 9	Phase C—Information System Architectures—Applications Architecture	44	55	10	1
Chapter 10	Phase D—Technology Architecture	14			
Chapter 11	Phase E—Opportunities and Solutions	21	12		2
Chapter 12	Phase F—Migration Planning	17	11		
Chapter 13	Phase G—Implementation Governance	14	8		4
Chapter 14	Phase H—Architecture Change Management	13	11		3
Chapter 15	ADM Architecture Requirements Management	2	12		

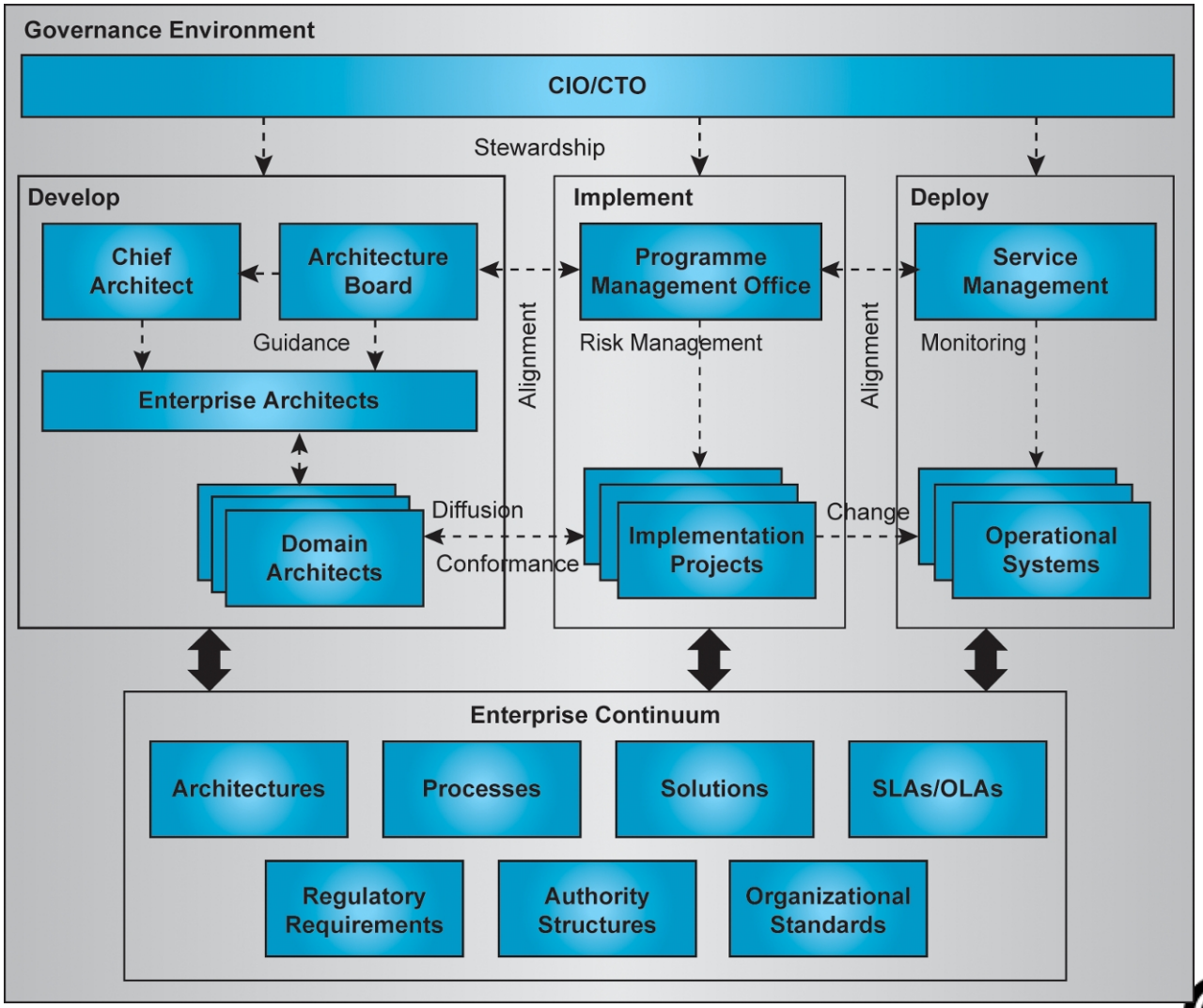
Architecture Governance Framework

- **Phase G** of TOGAF Architecture Development Method concerns **Implementation Governance**
  - Management and control of development and evolution of enterprise architectures
  - Only one aspect of architecture governance
- Generic framework that can adapt to existing governance
- Identify effective processes and organisational structures, so that the business responsibilities can be elucidated, communicated, and managed

Architecture Governance Framework



Organisational Structure



Architecture Board

Architecture Board oversees strategy implementation.

Board comprises:

- Representative key stakeholders
- Executives responsible for review and maintenance of architecture
- Combination of
  - Local (domain experts, line responsibility)
  - Global (organisation-wide responsibility)
- Established with identifiable and articulated:
  - Responsibilities and decision-making capabilities
  - Remit and authority limits

Architecture Process

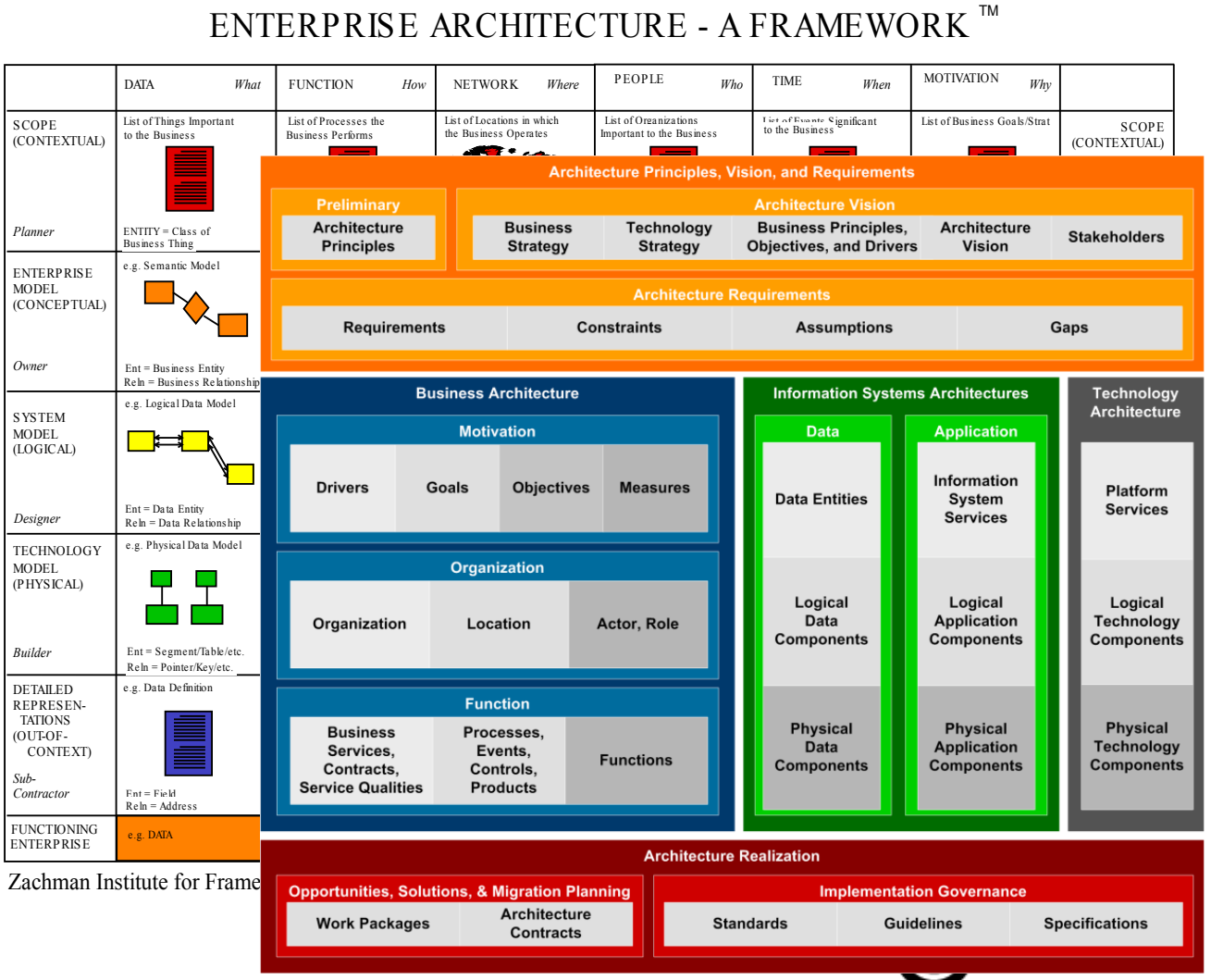
Customise ADM to integrate with:

- Programme / portfolio / project management processes
- Product development lifecycle
- System development lifecycle
- Corporate and IT governance processes and structures
- Change management processes

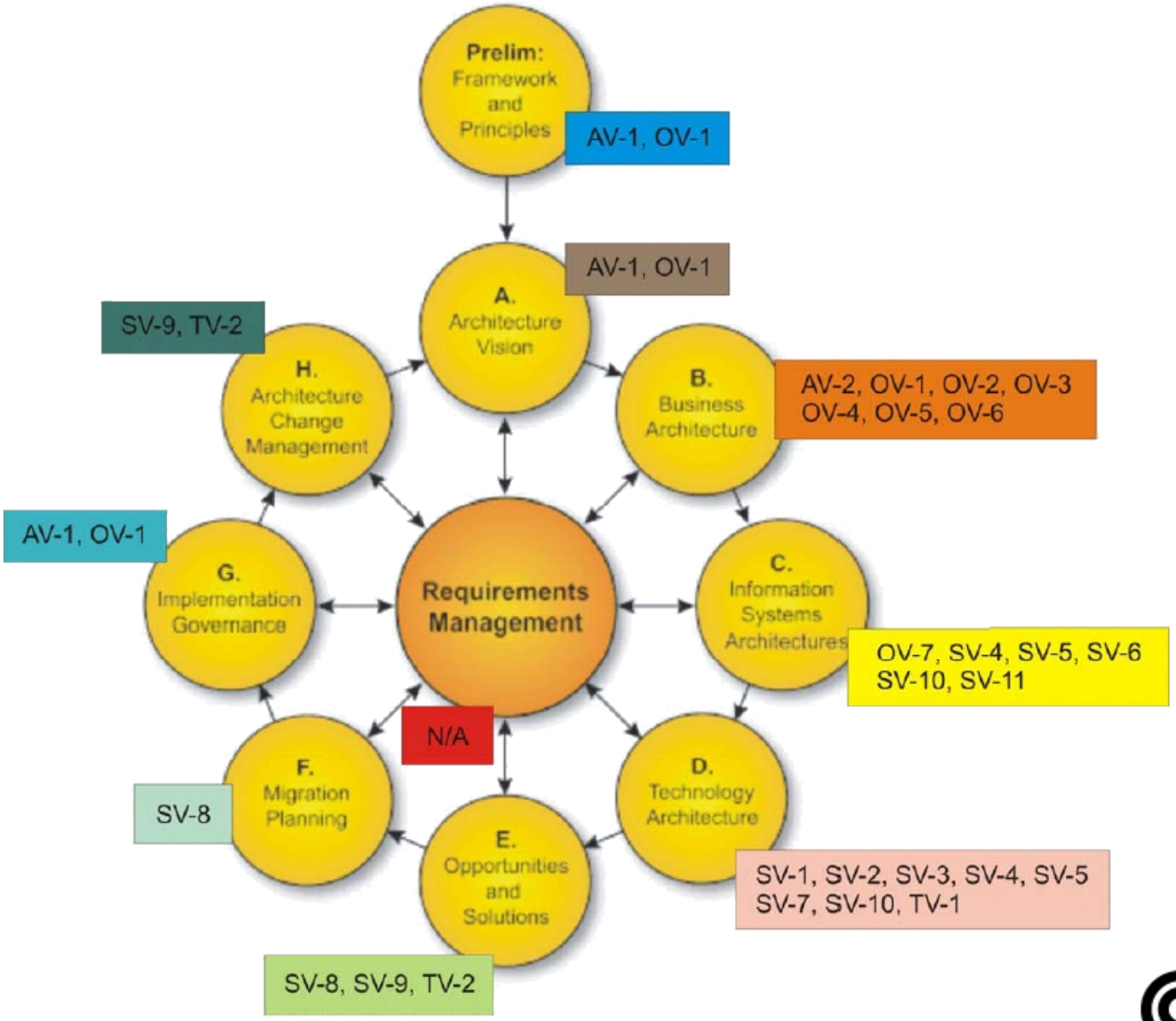
Architecture Framework

Develop an Architecture Framework mapped to the architecture deliverables.

E.g. What models/elements would constitute the Business Architecture?

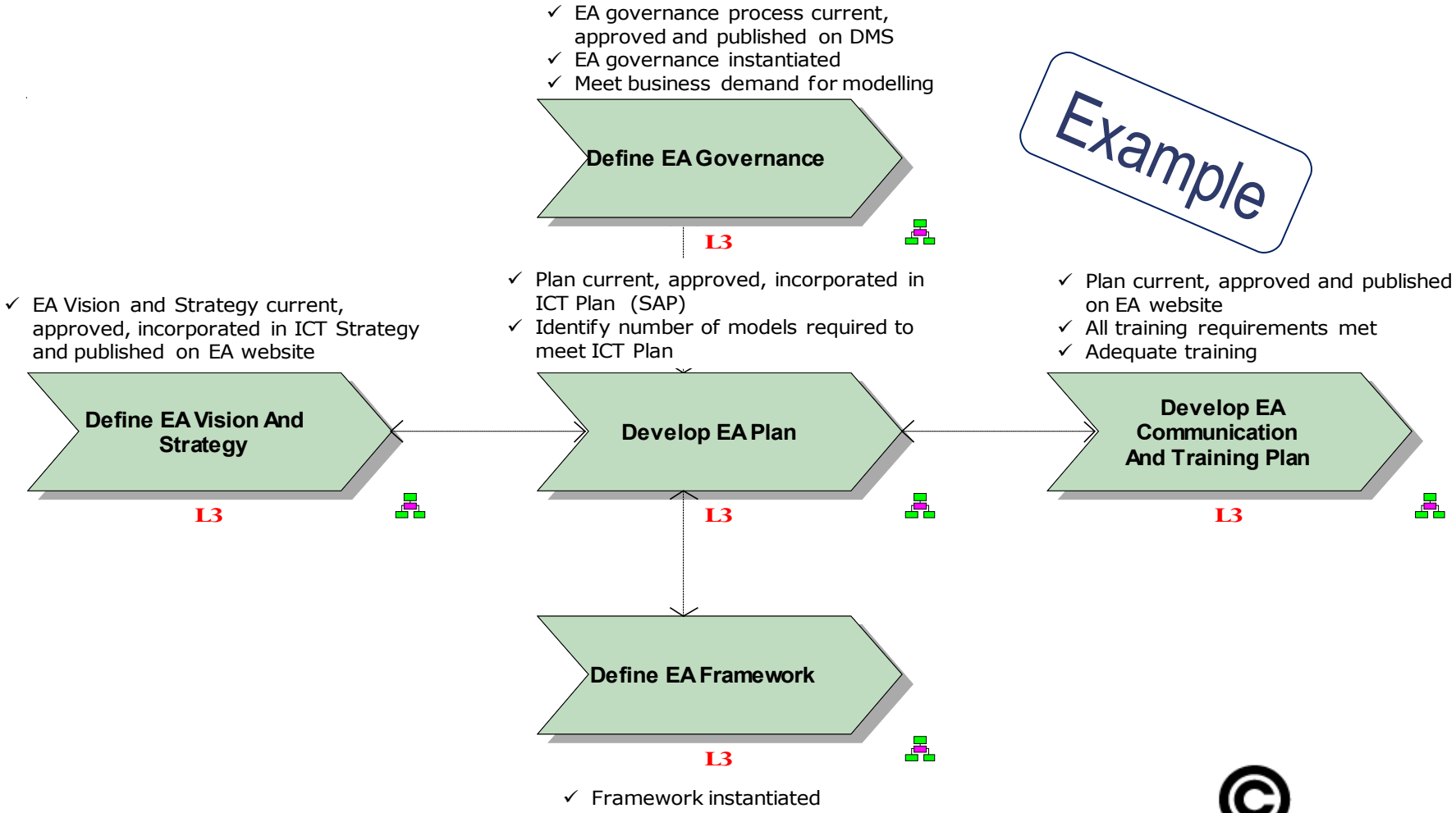


TOGAF and DODAF



Source: A White Paper Published by The Open Group

Architecture Performance Metrics



Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Applications Architecture

- What functionality is required to enable the architecture process?
- What functionality is required to populate architecture models?
- What functionality is required to generate architecture views?
- How much of that can be automated?
- Which solutions are available to satisfy these requirements?
- What is the integration requirements between the various toolsets?
- How is this implemented?

Data Architecture

- What is the logical data requirement for architecture based on the architecture classification framework? This might result in a logical meta-model.
- What is the physical structure of the architecture repositories?
- What is the integration requirement to move architecture data between repositories?
- How is this implemented?

Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Technology Architecture

- Where must architecture functionality and be delivered?
- What is the processing requirement?
- What is the infrastructure requirement?

Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Opportunities & Solutions

- Select the most appropriate architecture toolset
- Apply architecture principles in the selection
- Attempt to consolidate architecture artifacts into one architecture repository

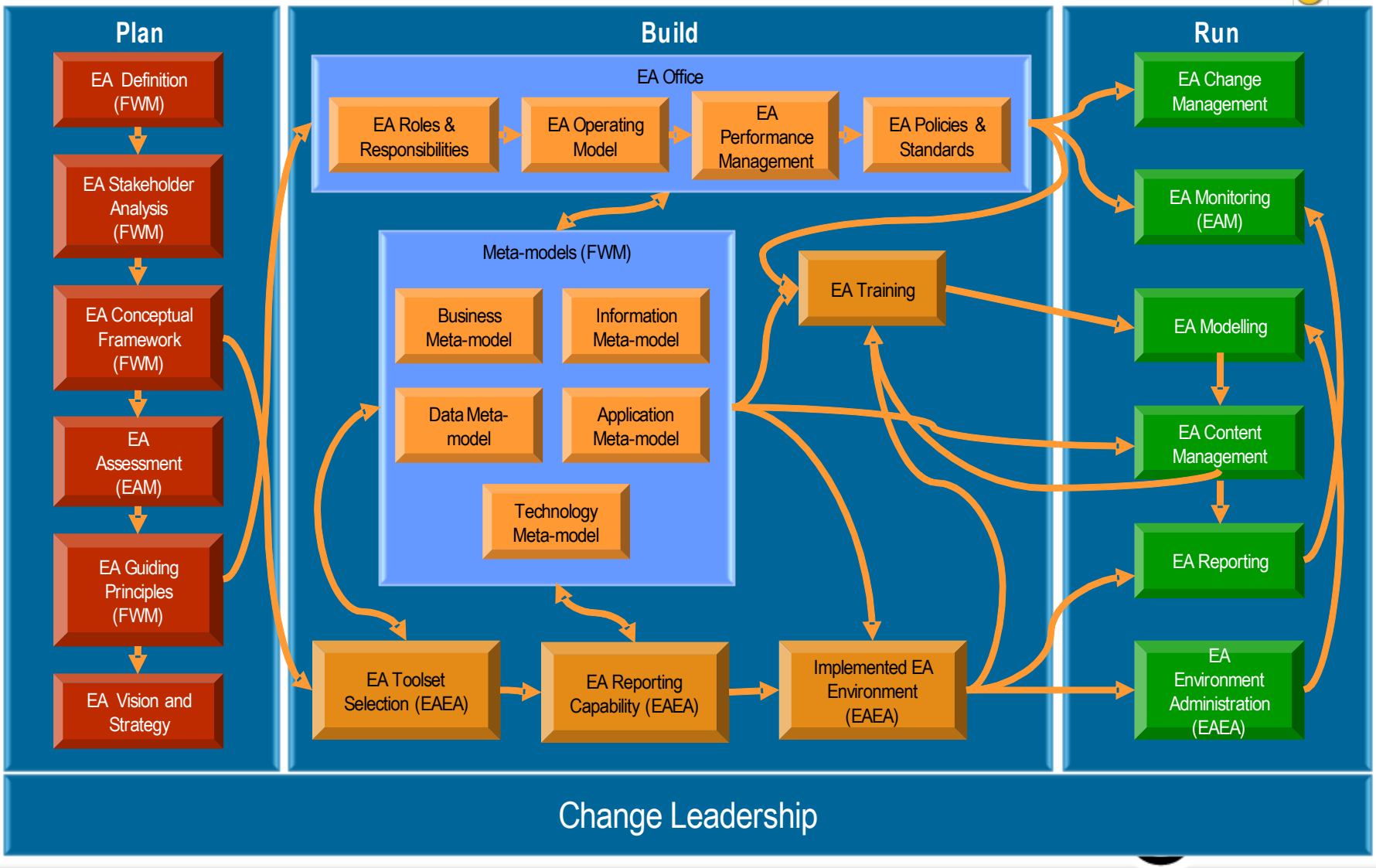
Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Migration Planning

- Plan the implementation of the architecture toolsets and repositories
- Take the following into consideration:
  - Existing architecture repositories
  - Stakeholder priorities

Real IRM Approach



Use the ADM to define Architecture Capability

Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Implementation Governance

- Confirm that the implementation is according to the agreed architecture
- This implementation is usually performed by the architects themselves

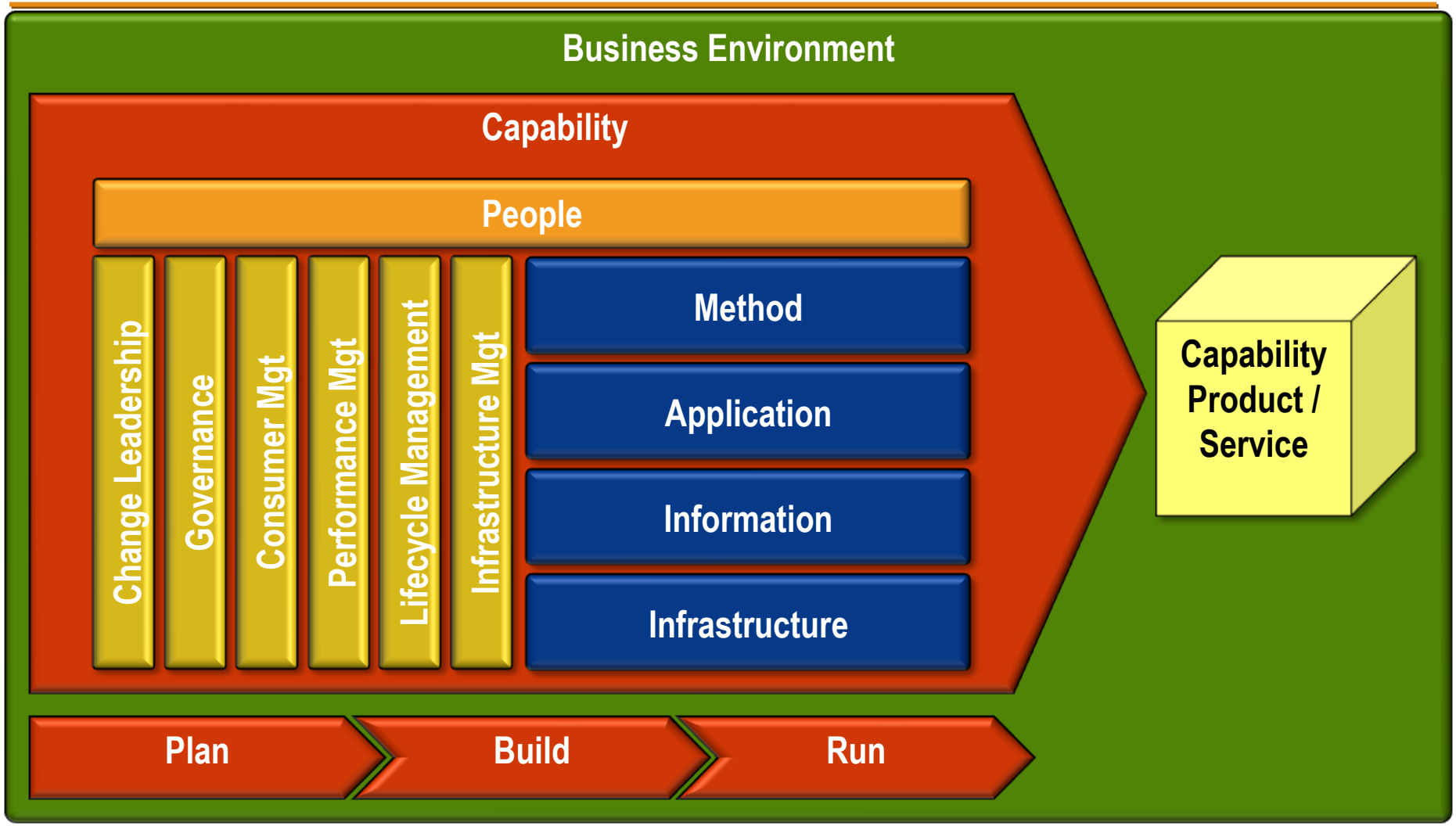
Use the ADM to define Architecture Capability

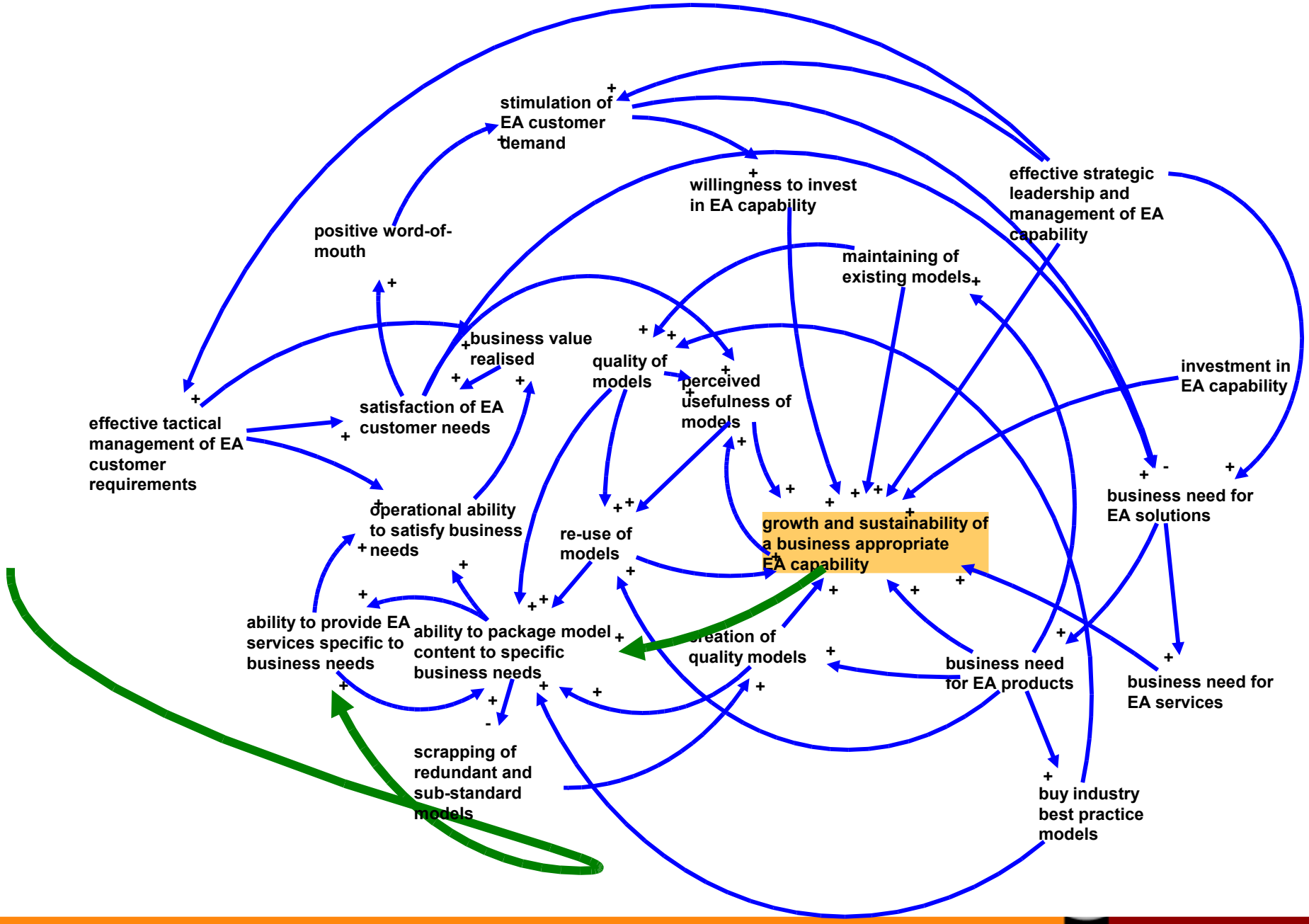
Go through each phase with the requirement to establish an Architecture Capability based on TOGAF.

Architecture Change Management

- Implement a change management process that will result in a controlled change environment for all the aspects of architecture, including:
  - Architecture Roles and Responsibilities
  - Architecture Processes
  - Architecture Framework
  - Architecture Meta-model
  - Architecture Toolsets
  - Architecture Repositories

Capability Framework





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