TOGAF

Version 9 Enterprise Edition

Module 16
Phase B
Business Architecture

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Making standards work™

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Module Objectives

The objectives of this module are to understand:

- The objectives of Phase B, Business Architecture
- The Approach
- What it consists of
- What inputs are needed for it
- What the outputs are

Business Architecture Objectives

The objectives of this phase are to:

- Describe the existing Business Architecture (the baseline)
- Develop a target Business Architecture
- Analyze gaps between the baseline and target
- Select architectural viewpoints
- Select tools and techniques for viewpoints

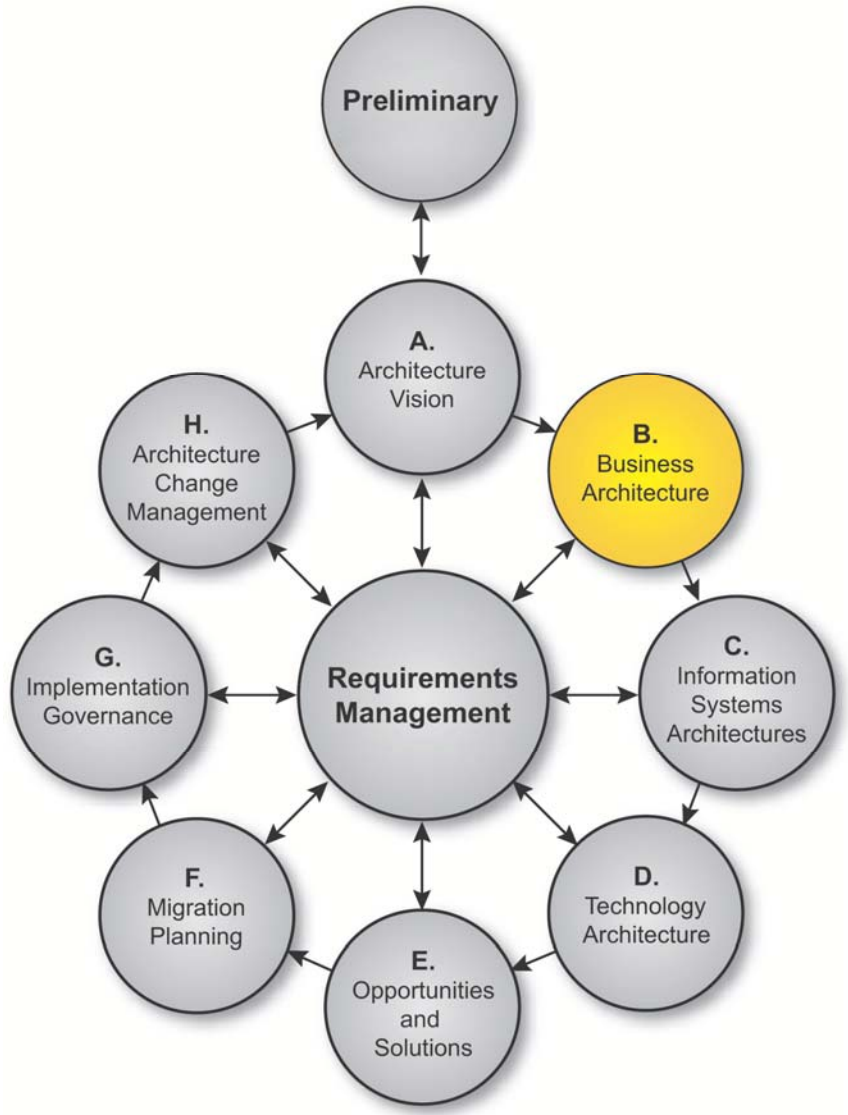
Approach

- Knowledge of the Business Architecture is a prerequisite for architecture work in the other domains (Data, Applications, Technology)
  - and so is the first activity that needs to be undertaken.
- Business Strategy defines *what* to achieve
- Business Architecture describes *how* to achieve it
- This Phase is often required to demonstrate business value of subsequent work to key stakeholders.

Approach

- Scope depends on existing strategy and planning
  - Update and verify
  - bridge between high-level business drivers, strategy, and
  - goals on the one hand, and specific business requirements
  - Existing architecture discovery must include all relevant detail
- If there is no existing strategy or planning:
  - Identify any existing architecture definitions, then verify and update
  - New process definitions may require detailed work
- In both cases, use business scenarios to identify key business objectives and processes

Phase B: Inputs

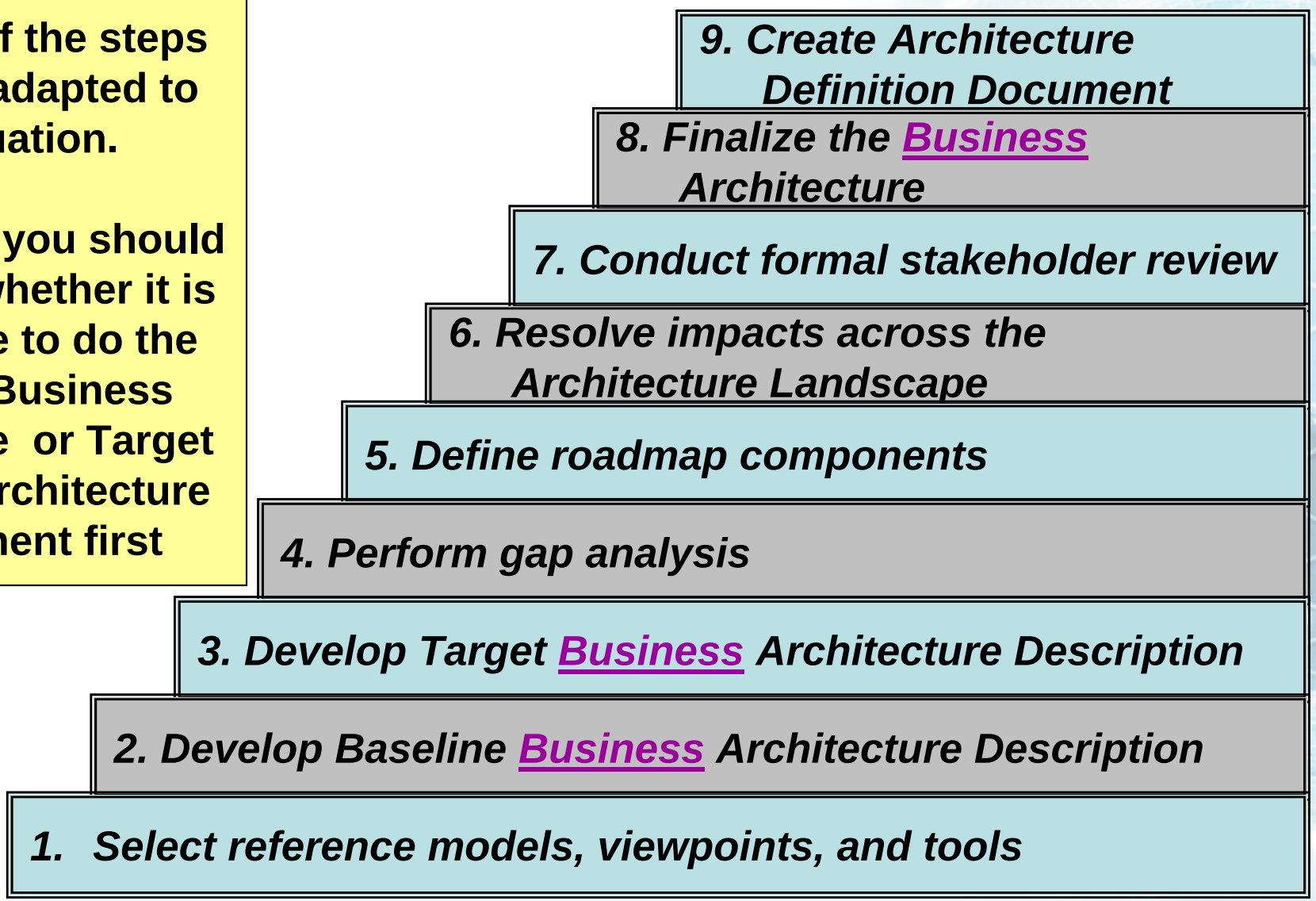


- Request for Architecture Work
- Refined statements of Business principles, goals and drivers
- Capability Assessment
- Communications Plan
- Organization model for enterprise architecture
- Tailored Architecture Framework
- Approved Statement of Architecture Work
- Architecture Principles
- Enterprise Continuum
- Architecture Repository
- Architecture Vision
  - including the first versions of the architectures

Steps

The order of the steps should be adapted to the situation.

In particular you should determine whether it is appropriate to do the Baseline Business Architecture or Target Business Architecture development first



Step 1: Select reference models, viewpoints, and tools

- Select relevant Business Architecture resources from the Architecture Repository, on the basis of the business drivers, stakeholders and concerns.
- Select relevant Business Architecture viewpoints that will enable the architect to demonstrate how the stakeholder concerns are being addressed.
- Identify appropriate tools and techniques to be used for capture, modeling, and analysis with the viewpoints.
  - simple documents or spreadsheets
  - more sophisticated modeling tools and techniques
    - activity models, business process models, use-case models, etc

TOGAF 9 Artifacts

Preliminary Phase

- Principles catalog

Phase A, Architecture Vision

- Stakeholder Map matrix
- Value Chain diagram
- Solution Concept diagram

Phase B, Business Architecture

- Organization/Actor catalog
- Driver/Goal/Objective catalog
- Role catalog
- Business Service/Function catalog
- Location catalog
- Process/Event/Control/Product catalog
- Contract/Measure catalog
- Business Interaction matrix
- Actor/Role matrix
- Business Footprint diagram
- Business Service/Information diagram
- Functional Decomposition diagram
- Product Lifecycle diagram
- Goal/Objective/Service diagram
- Use-Case diagram
- Organization Decomposition diagram
- Process Flow diagram
- Event diagram

Phase C, Data Architecture

- Data Entity/Data Component catalog
- Data Entity/Business Function matrix
- System/Data matrix
- Class diagram
- Data Dissemination diagram
- Data Security diagram
- Class Hierarchy diagram
- Data Migration diagram
- Data Lifecycle diagram

Phase C, Application Architecture

- Application Portfolio catalog
- Interface catalog
- System/Organization matrix
- Role/System matrix
- System/Function matrix
- Application Interaction matrix
- Application Communication diagram
- Application and User Location diagram
- System Use-Case diagram
- Enterprise Manageability diagram
- Process/System Realization diagram
- Software Engineering diagram
- Application Migration diagram
- Software Distribution diagram

Phase D, Technology Architecture

- Technology Standards catalog
- Technology Portfolio catalog
- System/Technology matrix
- Environments and Locations diagram
- Platform Decomposition diagram
- Processing diagram
- Networked Computing/Hardware diagram
- Communications Engineering diagram

Phase E. Opportunities & Solutions

- Project Context diagram
- Benefits diagram

Requirements Management

- Requirements catalog

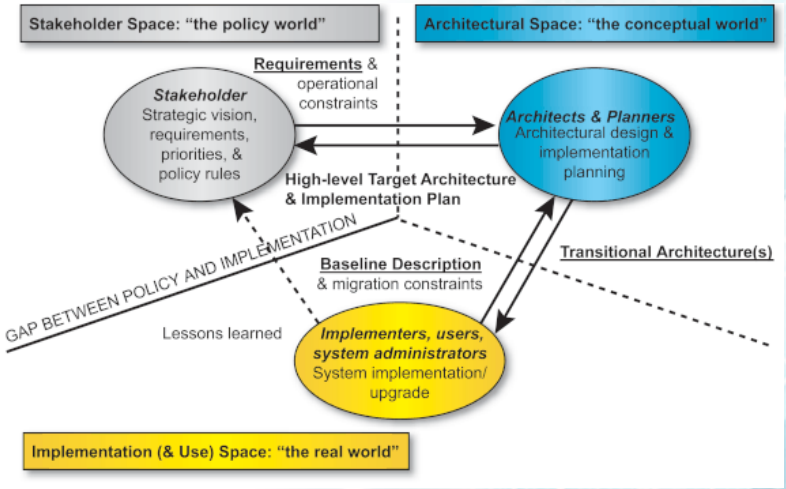
Step 1: Select reference models, viewpoints, and tools

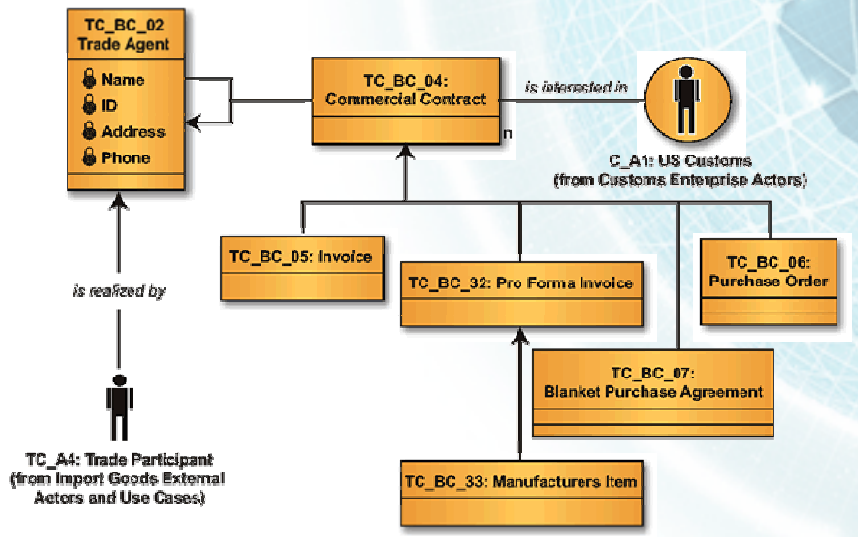
- Determine Overall Modeling Process
  - For each viewpoint, select the models needed to support the specific view required, using the selected tool or method. Confirm all stakeholders' concerns are addressed. If not, use business scenarios to discover business requirements.
- Identify Required Service Granularity Level, Boundaries, and Contracts
  - identify which components of the architecture are functions and which are services. Specify required service levels. This can lead to the generation of formal Service Level Agreements.

Modeling Examples

	1:Initiate	2:Discuss Reqmts	3:Create Config	4:Verify Config	5:Price	6:Confirm	7: Order	8:Accept
Sales Person	Greets customer.	Listens.	Represents options with different capabilities.	Accesses ICSys and SchSys and presents availability to customer.	Accesses price system and presents price to customer.	Presents offer.	Accesses order system.	Presents contract.
Customer	Accepts sales person.	Discusses problems/ desires.	Listens and decides on options based on capabilities.	Accepts or rejects.		Accepts or rejects.		Signs or rejects.
Sales Person's Laptop			Interacts with configurator.	Interacts with ICSys and SchSys.	Interacts with price system.		Interacts with order system and receives fax response.	
Sales Person's CIPR			Provides central information processing.					
Sales Person's LIPR			Provides local information processing					
ProdConfig			Presents configs to sales person per needs, providing capabilities.					
ICSys				Provides availability.				
SchSys				Provides delivery date.				
$Sys					Provides price information on a config.			
OrderSys							Processes order and sends fax of order to sales person's laptop.	

Table 32.1: Use-Case Table of Sales Process





Step 1: Select reference models, viewpoints, and tools

- Identify Required Catalogs of Business Building Blocks
  - Catalogs form the raw material for development of matrices and views and also act as a key resource for portfolio managing business and IT capability.

Step 1: Select reference models, viewpoints, and tools

- Identify Types of Requirement to be Collected,
  - Functional requirements
  - Non-functional requirements
  - Assumptions
  - Constraints
  - Domain-specific Business Architecture principles
  - Policies
  - Standards
  - Guidelines
  - Specifications

Step 2: Develop Baseline Business Architecture Description

- Must be complete, but without unnecessary detail
- If possible, identify the relevant Business Architecture building blocks, drawing on the Architecture Repository
- If not, develop a new architecture description:
  - use the models identified within Step 1 as a guideline

Step 3: Develop Target Business Architecture Description

- If possible, identify the relevant Business Architecture building blocks, drawing on the Architecture Repository
- If not, develop a new architecture description:
  - use the models identified within Step 1 as a guideline

Step 4: Perform Gap Analysis

Verify the architecture models for internal consistency and accuracy:

- Perform trade-off analysis to resolve conflicts (if any) among the different views
- Validate that the models support the principles, objectives, and constraints
- Note changes to the viewpoint represented in the selected models from the Architecture Repository, and document
- Test architecture models for completeness against requirements
- Identify gaps between the baseline and target:
  - Create the gap matrix (see next slide).
  - Identify building blocks to be carried over, classifying them as either changed or unchanged.
  - Identify eliminated building blocks.
  - Identify new building blocks.
  - Identify gaps and classify as those that should be developed and those that should be procured.

Continued...

Step 5: Define roadmap components

- The initial Business Architecture roadmap will be used as raw material to support more detailed definition of a consolidated, cross-discipline roadmap within the Opportunities & Solutions phase.

Step 6: Resolve impacts across the Architecture Landscape

- Architecture artifacts in the Architecture Landscape should be examined to identify:
  - Does this Business Architecture create an impact on any pre-existing architectures?
  - Have recent changes been made that impact on the Business Architecture?
  - Are there any opportunities to leverage work from this Business Architecture in other areas of the organization?
  - Does this Business Architecture impact other projects ?
  - Will this Business Architecture be impacted by other projects?

Step 7: Conduct Formal Stakeholder Review

- This is a formal review of the model and building blocks selected.
- The purpose is to compare proposed business architecture against the SOW.
- It is possible to loop back to earlier steps if necessary.

Step 8: Finalize the Business Architecture

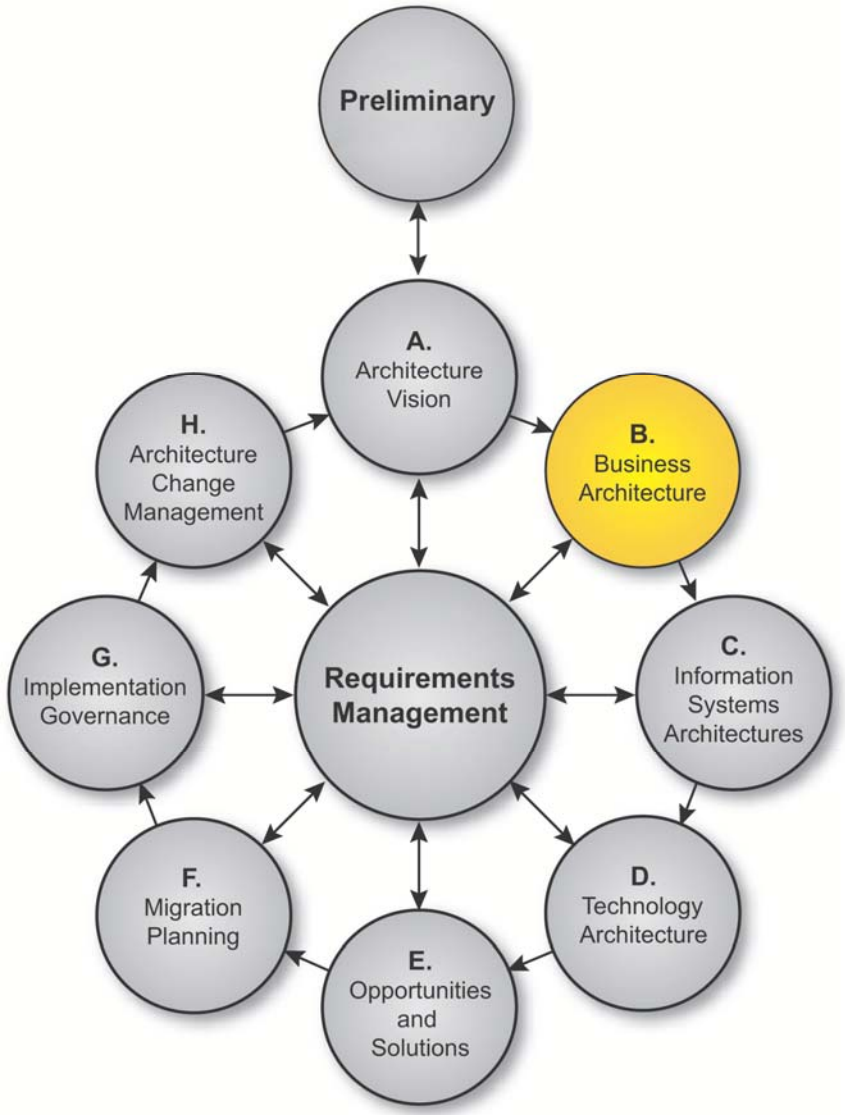
- Select standards for each of the ABBs, reusing where possible from the Architecture Repository.
- Fully document each ABB.
- Cross check the overall architecture against the business goals.
- Document final requirements traceability report.
- Document final mapping of the architecture within the Architecture Repository. From the selected ABBs, identify those that might be reused and publish via the architecture repository.

Continued

Step 9: Create Architecture Definition Document

- Document the rationale for all building block decisions in the architecture definition document.
- Prepare the Business sections of the architecture definition document report.
- If appropriate, use reports and/or graphics generated by modeling tools to demonstrate key views of the architecture. Route the document for review by relevant stakeholders, and incorporate feedback.

Phase B: Outputs



- Statement of Architecture Work
- Validated business principles, goals and drivers
- Elaborated Business Architecture principles
- Draft Architecture Definition Document
- Draft Architecture Requirements Specification
- Business Architecture components of an Architecture Roadmap

Architecture Definition Document

- Scope
- Goals, objectives, and constraints
- Architecture principles
- Baseline Architecture
- Architecture models (for each state to be modeled):
  - Business Architecture models
  - Data Architecture models
  - Application Architecture models
  - Technology Architecture models
- Rationale and justification for architectural approach
- Mapping to Architecture Repository:
  - Mapping to Architecture Landscape
  - Mapping to reference models
  - Mapping to standards
  - Re-use assessment
- Gap analysis
- Impact assessment

Architecture Definition Document – Business Architecture Components

- Baseline Business Architecture, if appropriate – this is a description of the existing Business Architecture
- Target Business Architecture, including:
  - Organization structure – identifying business locations and relating them to organizational units
  - Business goals and objectives – for the enterprise and each organizational unit
  - Business functions – a detailed, recursive step involving successive decomposition of major functional areas into sub-functions
  - Business services – the services that the enterprise and each enterprise unit provides to its customers, both internally and externally
  - Business processes, including measures and deliverables
  - Business roles, including development and modification of skills requirements
  - Business data model
  - Correlation of organization and functions – relate business functions to organizational units in the form of a matrix report
- Views corresponding to the selected viewpoints addressing key stakeholder concerns

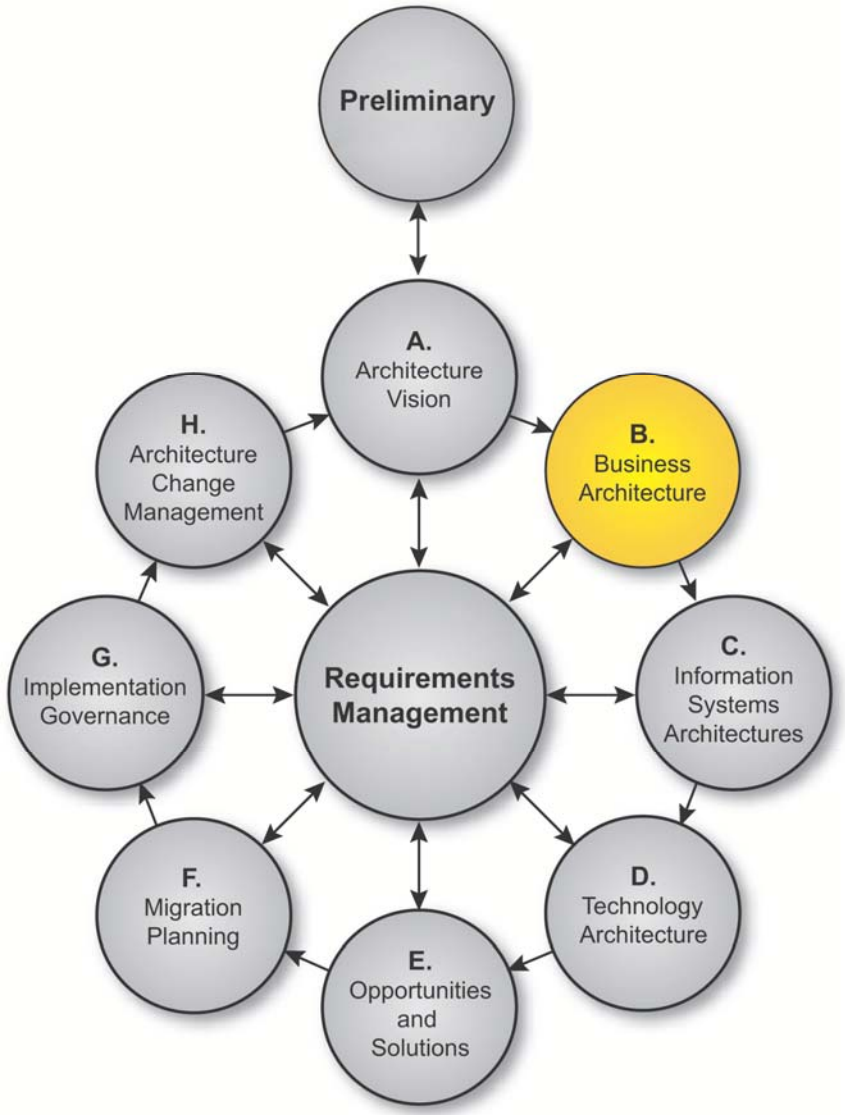
Architecture Requirements Specification

- Success measures
- Architecture requirements
- Business service contracts
- Application service contracts
- Implementation guidelines
- Implementation specifications
- Implementation standards
- Interoperability requirements
- Constraints
- Assumptions

Architecture Requirements Specification – Business Architecture Components

- Gap analysis results
- Technical requirements
- Updated business requirements

Summary



- The objective of Phase B is to document the fundamental organization of a business
  - Embodied in its business processes and people
  - Their relationships to each other and the environment
  - The principles governing its design and evolution
  - How the organization meets its business goals