

# The Open Group Architecture Framework (TOGAF)

## TOGAF – The Continuing Story

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# TOGAF – The Continuing Story

- The Architecture Forum
- Our motivation for developing TOGAF
- The Current TOGAF for Technical Architectures
- The Next TOGAF for Enterprise Architectures
- Other activities of the Forum
- Future directions



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# The Open Group Forums

- The heart of cooperation between vendors and users
- Common interests explored and resources pooled
  - Active Loss Prevention
  - ***Architecture***
  - Directory interoperability
  - Enterprise management
  - Messaging
  - Mobile management
  - Platform
  - Quality of service
  - Real-time and embedded systems
  - Security and eCommerce



# Architecture Forum

- The mission of the Forum's members is to:
  - Advance the cause of IT Architecture - in order to
  - Improve the quality of information systems
  - To move IT Architecture from a cottage industry to a profession
- Original (and continuing) focus: (TOGAF)
  - Industry consensus framework and method for IT architecture
  - Tool- and technology-neutral
- Extended focus
  - Architecture Tools
  - Certification



# Forum Membership

- BMC Software Inc. (US)
- Booz Allen & Hamilton (US)
- Boeing Corporation (US)
- Brandeis University (US)
- CC and C Solutions ((Aus)
- Centre For Open Systems (Aus)
- ChiSurf (Hong Kong)
- Computacentre (UK)
- Computas (Nor)
- Computer Associates (US)
- Conclusive Logic (US)
- Department of Defense / DISA (US)
- Department of Works and Pensions (UK)
- Desktop Management Task Force (US)
- Fujitsu (Japan)
- Frietuna Consultants (UK)
- Hewlett-Packard (US)
- Hitachi (Japan)
- IBM (US)
- Innenministerium NordRhein-Westfalen (Ger)
- Jet Propulsion Labs (US)
- Lockheed Martin (US)
- Ministry of Defence (UK)
- Mitre Corporation (US)
- Monash University (Australia)
- Motorola (US)
- NASA Goddard Space Flight Center (US)
- National Computerization Agency (Korea)
- NATO C3 Agency (Bel)
- NEC (Japan)
- NeTraverse, Inc. (US)
- Nexor, Inc. (US)



# Forum Membership

- Open GIS Consortium, Inc. (US)
- PASS Network Consulting (Ger)
- Popkin Software & Systems, Inc (US)
- POSC (US)
- Predictive Systems AG (Ger)
- ReGIS (Japan)
- QA Consulting (UK)
- SCO (US)
- Sun Microsystems (US)
- Teamcall (Bel)
- The Terasoft Group (US)
- Tivoli (US)
- Toyota InfoTechnology Center (Japan)
- TRON Association (Japan)
- University of Plymouth (UK)
- University of Reading (UK)
- Veriserve Corporation (US)
- Visa International (US)
- Weblayers, Inc. (US)
- Westpac Banking Corporation (Australia)



# Who's Who

- Director

John Spencer

The Open Group

- Chair

Chris Greenslade

Frietuna Computer Consultants (UK)

- Vice Chairs

Barry Smith

The MITRE Corporation (USA)

Ian McCall

IBM Global Services (UK)

Vish Viswanathan

CC & C Solutions (Australia)



# The Story So Far (1)

- The direction of TOGAF's evolution has been driven by The Open Group's membership over a period of 8 years
- An annual publication cycle
  - 1994: Requirement statement developed
    - Proof of need
  - 1995: X/Open Architecture Framework - version 1
    - *Proof of concept*
  - 1996: TOGAF - version 2
    - Proof of application
  - 1997: TOGAF - version 3
    - Relevance to practical architectures



## The Story So Far (2)

- 1998: TOGAF - version 4
  - TOGAF in context - the Enterprise Continuum
  - Web structured documentation - ease of use
- 1999: TOGAF - version 5
  - Re-organized around extended ADM
  - Business scenarios to help define requirements
  - Addition of ADML
- 2000: TOGAF - version 6
  - Integration of Building Block work
  - Integration of other initiatives, US DoD, IEEE 1471, IEEE 1003.23



# Current situation

- 2001: TOGAF - version 7
  - New sections on Architecture Patterns, Architecture Principles, Architecture Compliance Reviews
  - Significant additional material on Business Scenarios
  - Comparisons of TOGAF with other frameworks
  - Further integration of IEEE Std 1471-2000 into TOGAF
  - Metis model of the TOGAF ADM
  - Positioning of TOGAF relative to enterprise architecture

**Current**

- 2002: TOGAF version 8 - Enterprise edition

**Work in progress**



# TOGAF – The Continuing Story

- The Architecture Forum
- Our motivation for developing TOGAF
  - What is an IT Architecture
  - What are the business benefits
  - What is an IT Architecture Framework
  - What is the role of the IT Architect
- The Current TOGAF for Technical Architectures
- The Next TOGAF for Enterprise Architectures
- Other activities of the Forum
- Future directions



# What is an IT Architecture?

- ANSI/IEEE Standard 1471-2000
  - **Conceptually** an IT Architecture is
    - The fundamental organization of a system,
    - embodied in its components,
    - their relationships
      - to each other
      - and the environment,
    - and the principles governing its design and evolution.
  - **Practically** it is represented in Architectural Descriptions from the viewpoints of the Stakeholders



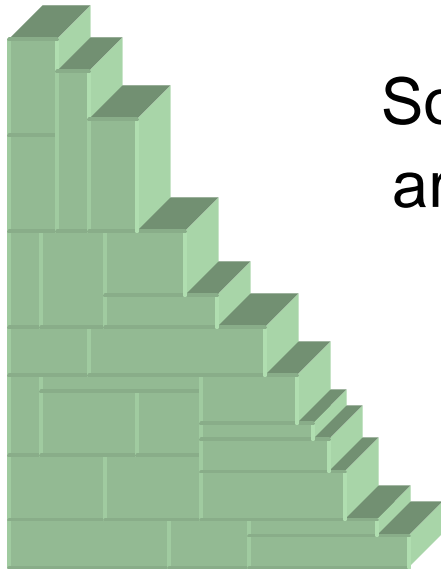
# Some more ANSI/IEEE definitions

- Architect:
  - the person, team, or organisation responsible for systems architecture
- Architecting:
  - the activities of defining, documenting, maintaining, improving and certifying proper implementation of an architecture.
- Architectural description
  - a collection of products to document an architecture.



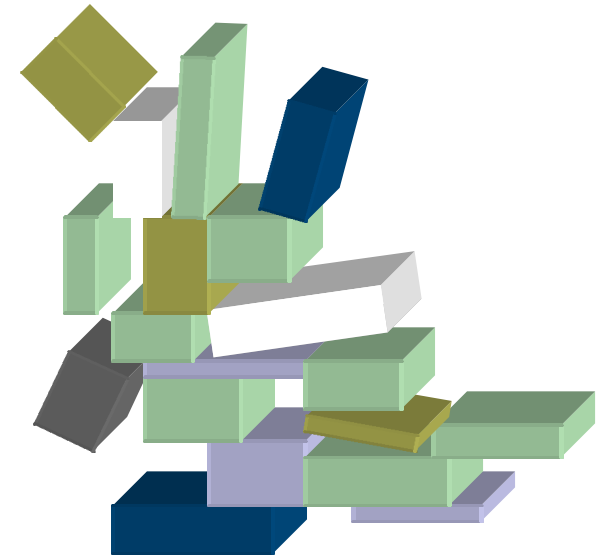
# An IT Architecture is not optional

Every enterprise already has an IT Architecture



Some  
are designed

and some  
just happen



But it's there  
and it affects the efficiency of the enterprise



# What should an IT Architecture do?

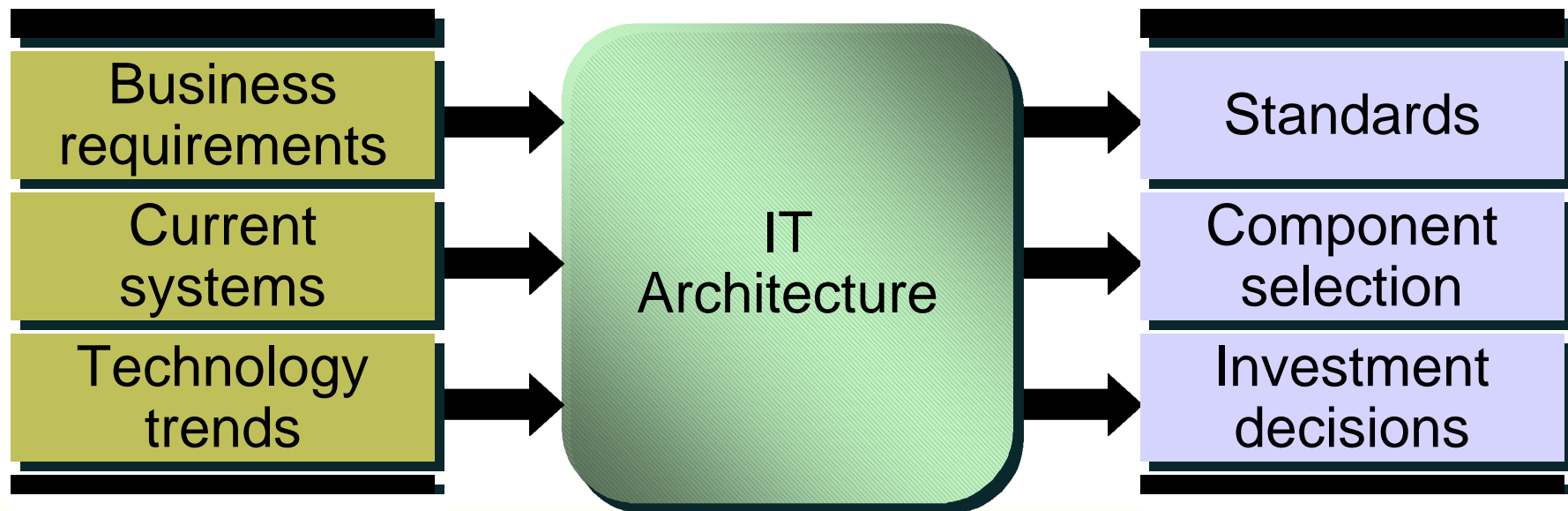
A well-designed and effective IT Architecture will:

- Clearly define the structure of the existing system
- Set out the strategy for future purchases
- Specify migration strategies
- Reduce the number and complexity of the interfaces between the components, improving the ease of:
  - Application portability
  - Component upgrade
  - Component exchange
  - Component development and maintenance



# What should an IT Architecture do? (cont.)

- Be derived from business requirements
- React to change at a rate dictated by the speed of change in the enterprise's markets
- Be understood and supported by senior management.



# What are the business benefits?

- Greater ability to respond to new demands
- Greater business value from IT operations
- Greater ability to introduce new technology
- Faster, simpler and cheaper procurement
- Faster time-to-market

Can a business succeed without a documented business plan?

Can IT succeed without a documented architecture?



## In addition

- Pace set by public agencies and large vendors
- More enforcement of acquisition regulations
  - Clinger-Cohen Act (US Information Technology Management Reform Act 1996)
  - EU Directives on the Award of Public Contracts
- Contracting Authority needs procedures for ensuring vendor independent expression of needs
- Tendering contractors need procedures for ensuring common format for response



# What is an Enterprise Architecture?

- Types of architecture:
  - Business architecture
  - Data/information architecture
  - Application (systems) architecture
  - **Information technology (IT) architecture**
- All these are related

An IT Architecture is the technical foundation  
of an effective IT strategy



# The Zachman Framework

	<i>What?</i> Data	<i>How?</i> Function	<i>Where?</i> Network	<i>Who?</i> People	<i>When?</i> Time	<i>Why?</i> Motivation	
<i>Planner's Viewpoint</i> Contextual							Scope
<i>Owner's Viewpoint</i> Conceptual							Enterprise Models
<i>Designer's Viewpoint</i> Logical							Systems Models
<i>Builder's Viewpoint</i> Physical							Technology Models
<i>Sub-contractor's Viewpoint</i> Out-of-context							Detailed Representations
Functioning Enterprise							Actual Systems



# What is an Architecture Framework?

- Architecture design is a complex process
- An Architecture framework is a tool for:
  - Designing a broad range of architectures
  - Assisting the evaluation of different architectures
  - Selecting and building the right architecture for an organization
- It embodies best practice and acknowledged wisdom
- It presents a set of services, standards, design concepts, components and configurations
- It guides the development of specific architectures

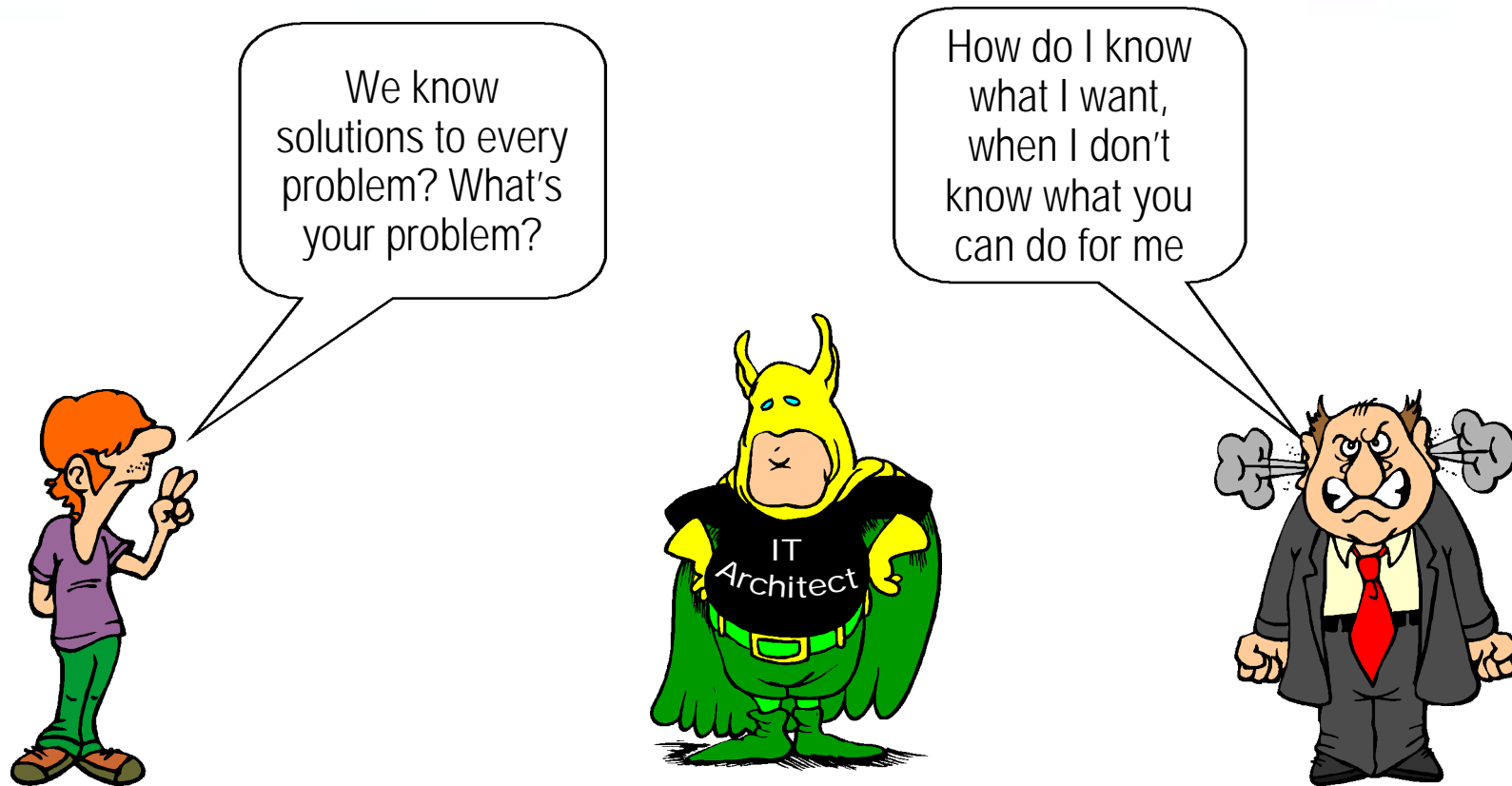


# What is an Architecture Framework?

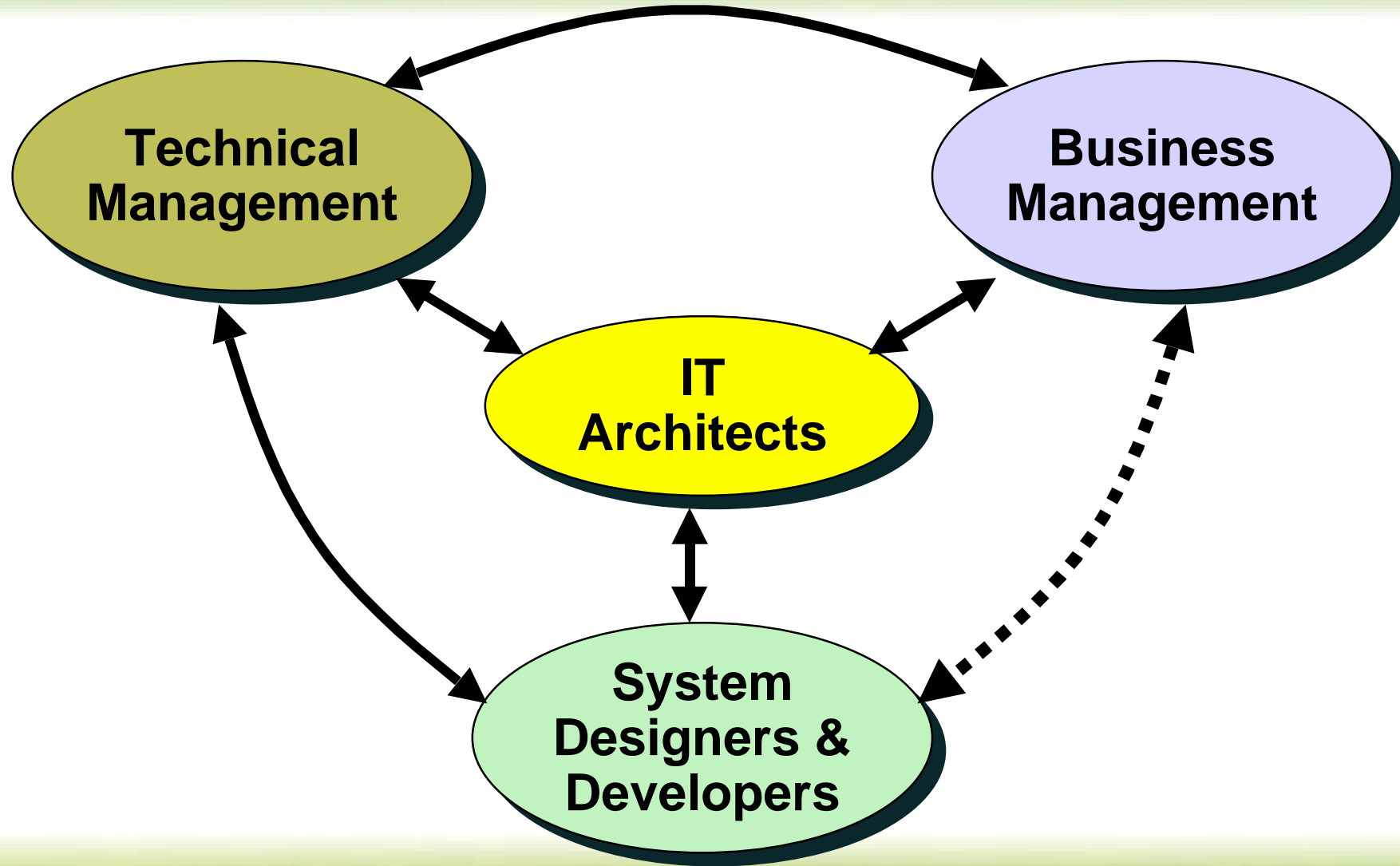
- Use of a framework leads to:
  - The use of common principles, assumptions and terminology
  - The development of information systems with better integration and interoperability, especially with respect to issues that affect the whole enterprise
- **WARNING!**
  - A framework does not make architectural design an automatic process
  - It is a valuable aid to experienced and knowledgeable IT Architects



# The position of IT Architects



# The position of IT Architects



# Architecture

- We are NOT talking about rocket science
- We ARE talking about:
  - Using common sense
  - Being systematic
  - Avoiding misunderstandings
  - Knowing what we are doing before we start
  - Knowing why we are doing it
  - Learning from the best practice of others
  - Treating the user as a partner
  - Talking to business users in business terms
  - Recording what, where, when, how, who and WHY
  - Using common sense



# TOGAF – The Continuing Story

- The Architecture Forum
- Our motivation for developing TOGAF
- The Current TOGAF for Technical Architectures
  - The Architecture Development Method (ADM)
  - The Foundation Architecture
  - Other aspects of TOGAF
- The Next TOGAF for Enterprise Architectures
- Other activities of the Forum
- Future directions

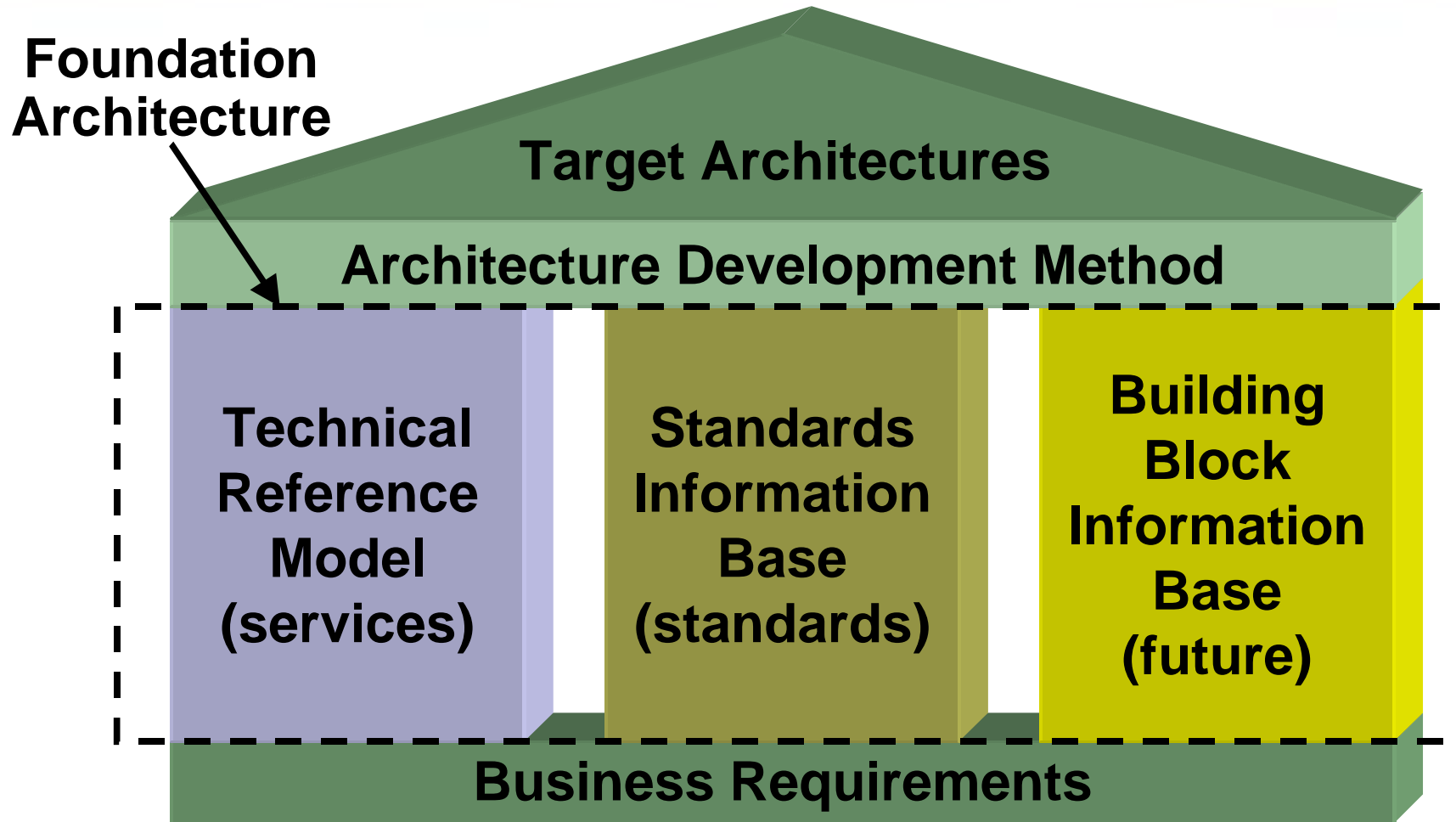


# TOGAF consists of

- An Architecture Development Method (ADM)
- Foundation Architecture
  - A Technical Reference Model (TRM)
  - A Standards Information Base (SIB)
  - Building Blocks Information Base (BBIB)
- Resource Base contains advice on:
  - Architecture views
  - IT Governance
  - ADL
  - TABB
  - Architecture contracts
  - Business scenarios
  - Architecture patterns
  - Case studies
  - Architecture principles
  - ...

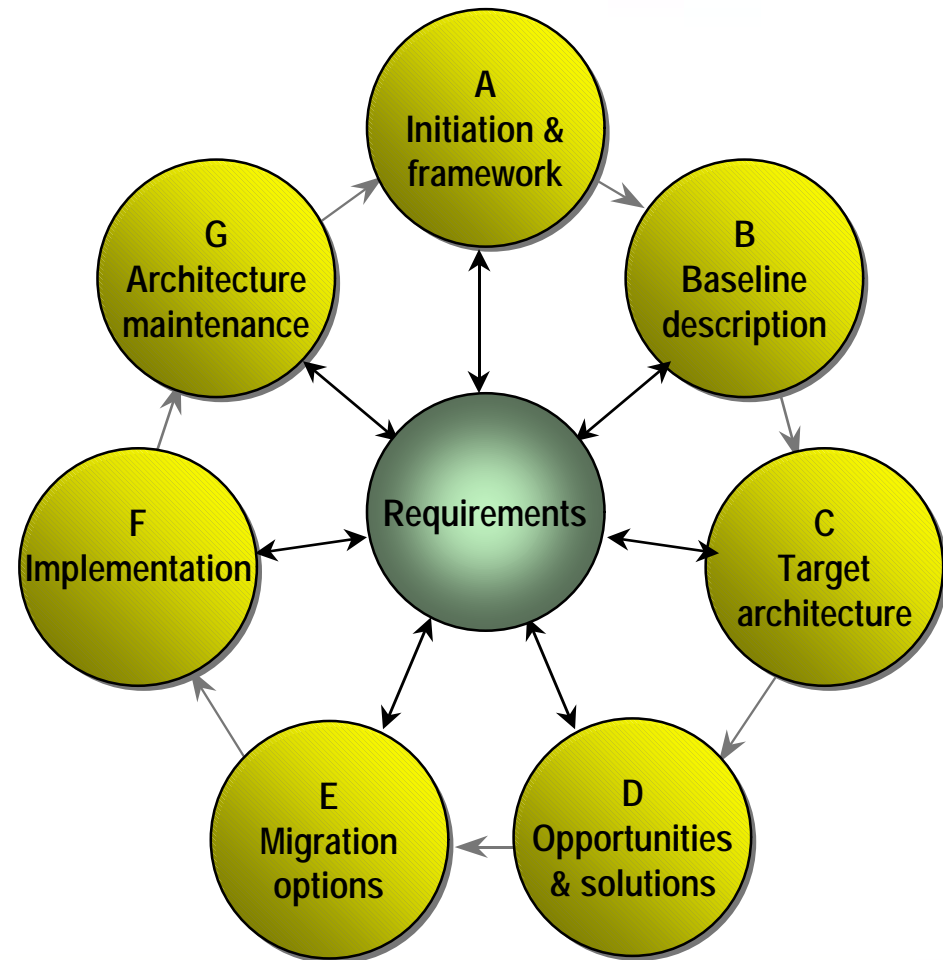


# More about TOGAF

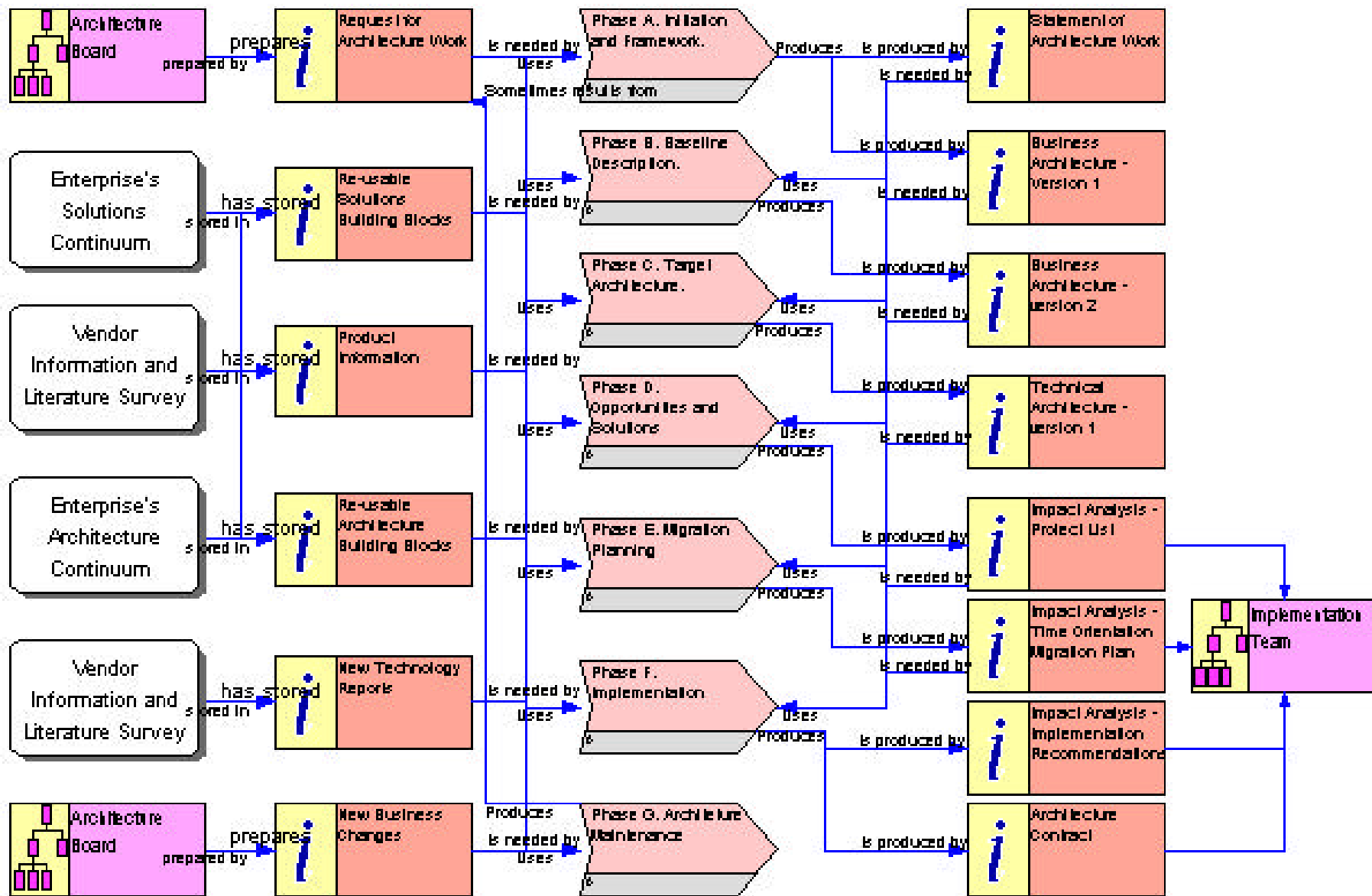


# Architecture Development Method

- Start with a foundation architecture
- Follow the phases of the ADM
- Results in
  - an organization-specific architecture
  - more reusable building block assets in the Enterprise Continuum
- Each iteration becomes easier and has more reusable building blocks to use



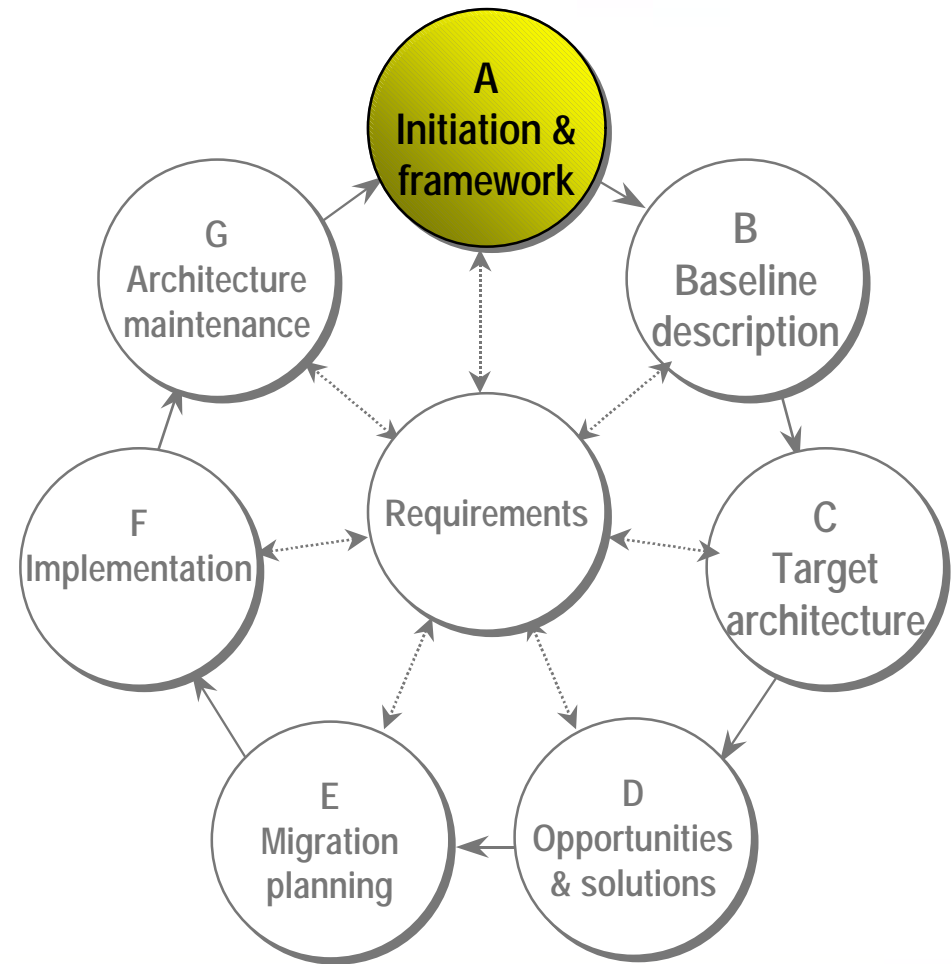
# ADM Information Element links



# The TOGAF ADM

## A - Initiation and Framework

- Establish or revalidate architecture principles
- Use business scenarios
- Understand how scenarios map to IT
- Define relevant business requirements
- Build consensus with business partners
- Plan and get commitment to IT Governance



# Architecture Principles

- The principles for developing Architectures not for any particular architecture
- Define the underlying general rules and guidelines
- Architecture principles – to guide all future work on all future architectures
- Are applied for the use and deployment of all IT resources and assets
- Form the basis for making future IT decisions
- Clearly relate back to the business objectives and key architecture drivers



# Documented Architecture Principles

- Involves
  - Obtaining a consensus
  - Demonstrating commitment
  - Documenting clearly
  - Publishing and promoting
  - Mandating



# Developing Architecture Principles

- They should include a statement, the rationale and the implications
- They are developed by the Chief Architect and key business stakeholders
- They must be appropriate policies and procedures
- They must ensure alignment of IT strategies with business principles strategies and visions
- A good set of principles will be understandable, robust, complete, consistent and stable
- Everything should be done to minimize violations whether deliberate or accidental



# Example Architecture Principles

- From TOGAF documentation
  - Primacy of Principles
  - Business Continuity
  - Common Use Applications
  - Data is an Asset
  - Data is protected from unauthorized use and disclosure
  - Technology Independence
- Mark Forman – US Office of Management and Budget
  - Component of 5-part President's Management Agenda
  - Market-based, Result-oriented, Citizen-centered
  - Simplify and Unite

**Boeing**  
**“Thou shalt not**  
**idle the factory**  
**floor”**



# Business scenarios

- A complete description of the business problem in business and architectural terms
  - Text, diagrams and models
- It ensures:
  - The architecture is based on a complete set of requirements
  - The business value of solving the problem is clear
  - The relevance of potential solutions is clear
- Aids the buy-in by business stakeholders
- Clarifies communication with vendors
- Is used and validated in all Phases



# Business scenarios

- A Business Scenario describes
  - A business process - an application or set of applications enabled by the proposed solution
  - The business and technology environment
  - The people and computing components (called “actors”) who execute it
  - The desired outcome of proper execution
- A good Business Scenario
  - Is representative of a significant market
  - Enables the supply side to understand the value to the buy side of a developed solution
  - Is also “SMART” ...



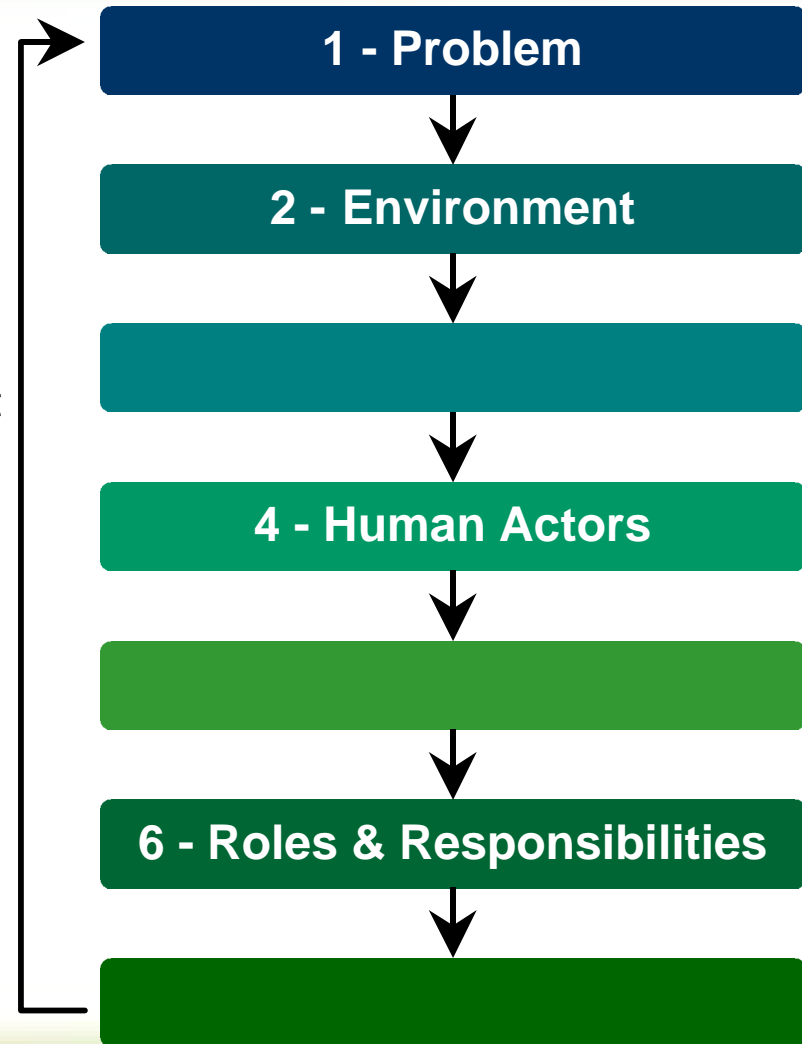
# A SMART business scenario

- **S**pecific - defines what needs to be done in the business
- **M**easurable - clear metrics for success
- **A**ctionable - it clearly segments the problem and provides the basis for determining elements and plans for the solution
- **R**ealistic - the problem can be solved within the bounds of physical reality, time and cost constraints
- **T**ime-bound - there is a clear understanding of when the solution opportunity expires

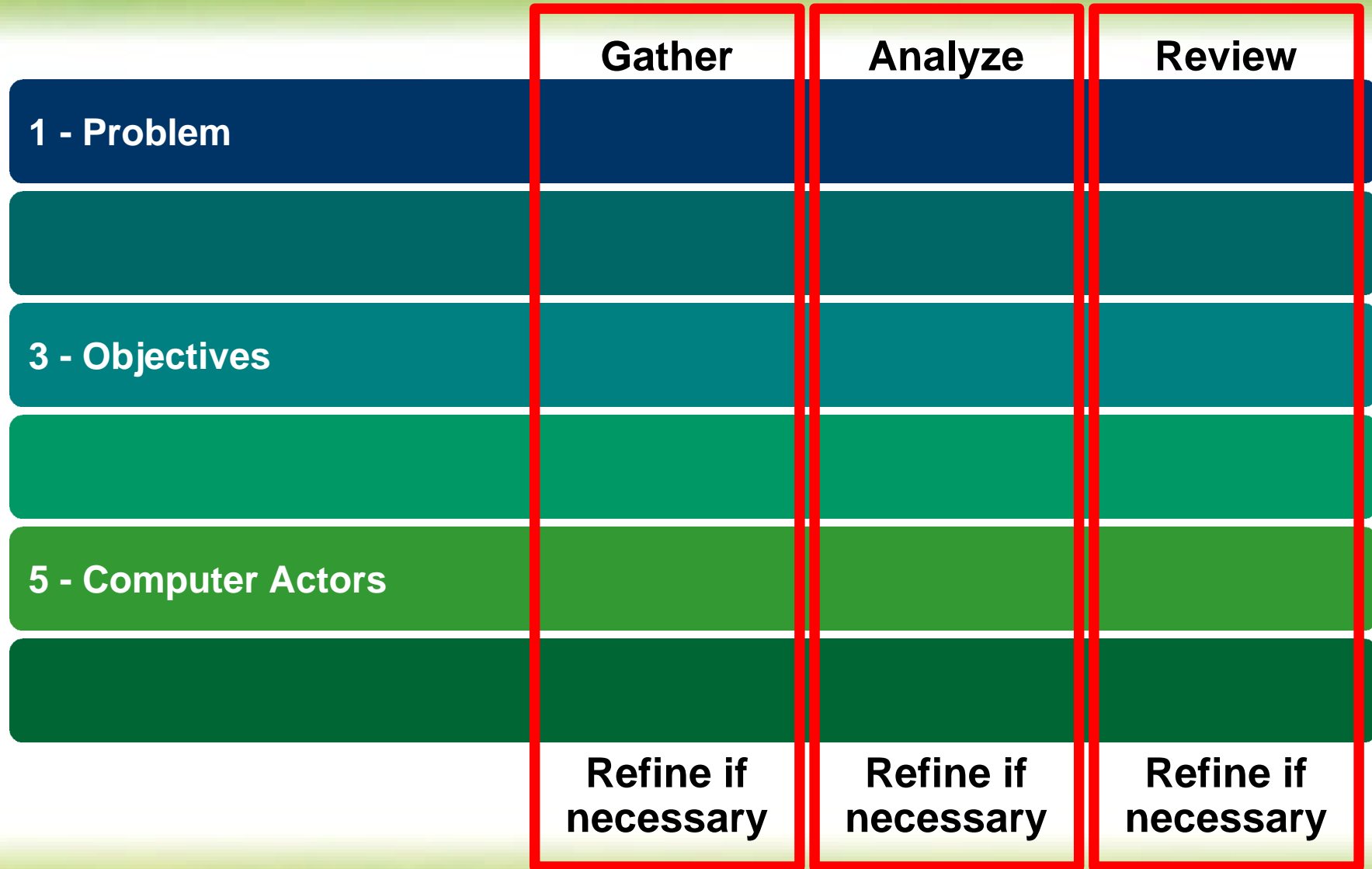


# 7 Steps to building a business scenario

- 1 - Identify, document and rank the problem driving the scenario
- 2 - Identify business and technical environment where situation is occurring, and document in scenario models
- 3 - Identify and document desired objectives - the results of handling the problems successfully - get SMART
- 4 - Identify human actors, their roles, their place in the business model
- 5 - Identify computer actors (computing elements), their roles, their place in the technology model
- 6 - Identify and document roles, responsibilities, measures of success per actor
- 7 - Check for “fitness for purpose” and refine only if necessary



# Business Scenario phases



# IT governance

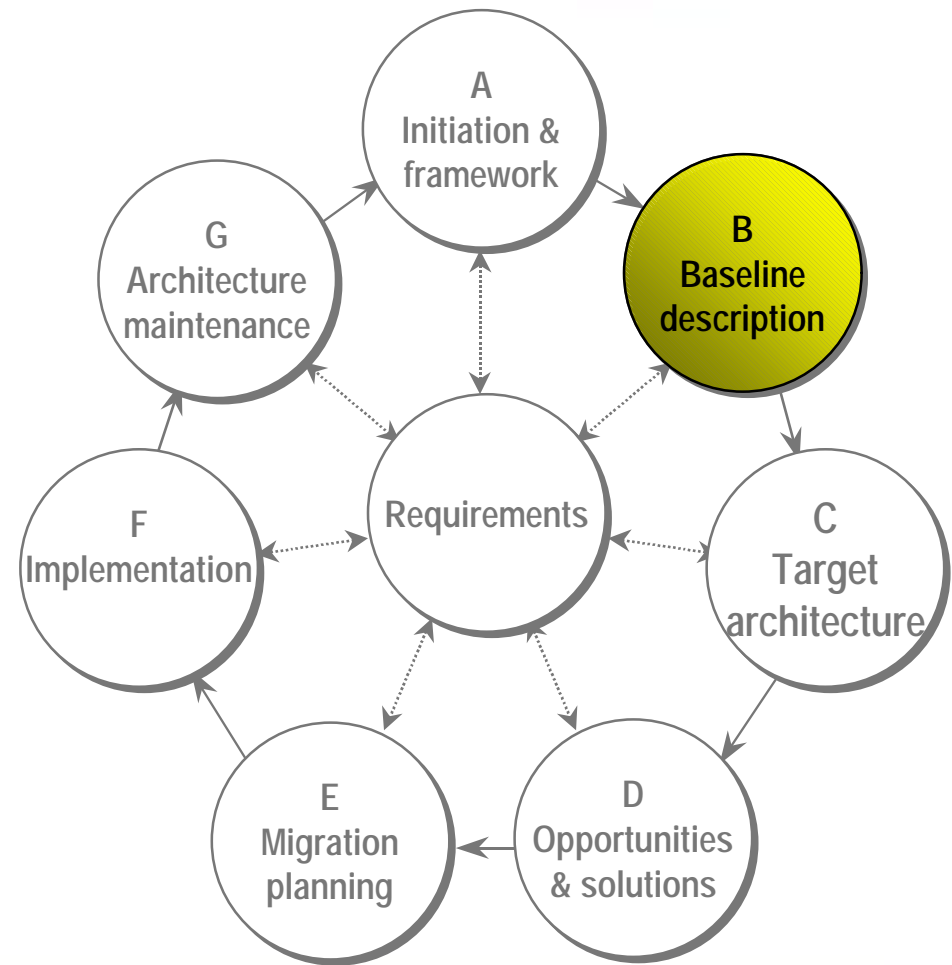
- Established to ensure senior management retain control of IT operation
- Established to ensure senior management is seen to assume responsibility for IT operation
- Two important elements
  - A cross-organization Architecture Board
  - An IT architecture compliance strategy
- IT Governance Institute
  - Control OBjectives for Information and related Technology (COBIT)
  - <http://www.itgi.org/>



# The TOGAF ADM

## B - Baseline Description

- Inventory of re-usable IT building blocks
- Build description of current system
  - Functional view
  - Platforms in place
  - Complete yet fit for purpose
- Multiple views



# Architecture views - definitions

- *Adapted from IEEE 1471 Recommended Practice for Architectural Description*
- **SYSTEM**: a collection of components organized to accomplish a specific function or set of functions
- **ARCHITECTURE**: the fundamental organization of a system embodied in its components, their relationships to each other and to the environment and the principles guiding its design and evolution
- **ARCHITECTURAL DESCRIPTION**: a collection of products to document an architecture.
  - Architecture views are the key products in TOGAF



# Architecture views - definitions

- **SYSTEM STAKEHOLDER:** an individual, team, or organization (or classes thereof) with interests in, or concerns relative to, a system.
- **VIEW:** a representation of a whole system from the perspective of a related set of concerns.
- **VIEWPOINT:** a schema of the information in a view
  - IEEE 1471 defines this as: "A viewpoint acts as a pattern or template from which to develop individual views by establishing the purposes and audience for a view and the techniques for its creation and analysis.")



# Architecture view

- Description of the architecture from the viewpoint of a specific stakeholder
- The main mechanism of communication between the architect and the stakeholder
- Used to ensure accuracy of understanding of the current system
- Used to ensure the architecture meets the need of each stakeholder
- TOGAF's list of views is only a recommendation



# Recommended architecture views

- Business architecture views
  - To address the concerns of users
- Technical architecture views
  - Engineering views
    - To address the concerns of System and Software Engineers
  - Operations views
    - To address the concerns of Operators, Administrators and Managers
  - Acquirers' views
    - To address the concerns of Acquirers



# Business Architecture Views

- Business Architecture Views
  - People - human resource aspects
  - Process - user processes involved
  - Function - functions to support the processes
  - Business information -its flow in support of the processes
  - Usability - of the system and its environment
  - Performance - of the system and its environment



# Engineering views

- Security view
- Software engineering view
- Data view
- System engineering view
- Communications engineering view



# Operations views

- Security view
- Software view
- Data view
- Computing/Hardware view
- Communications view



# Acquirer's views

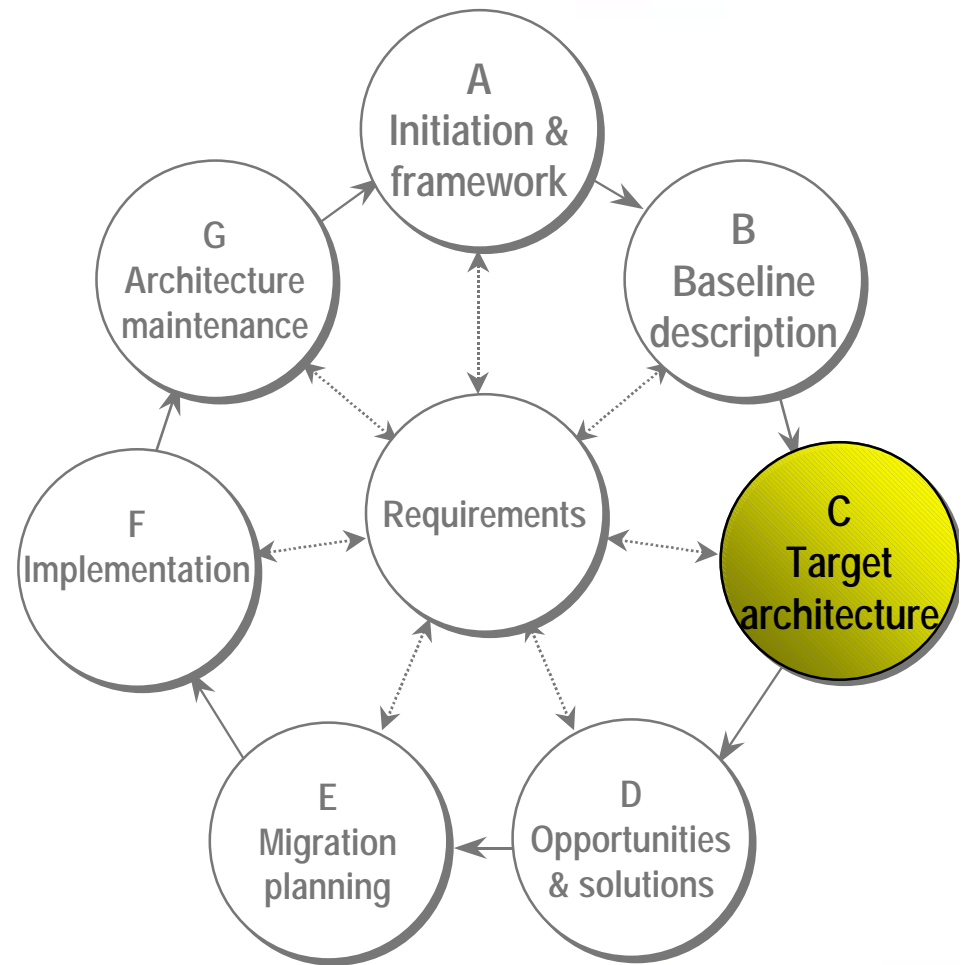
- Building blocks cost view
- Standards view



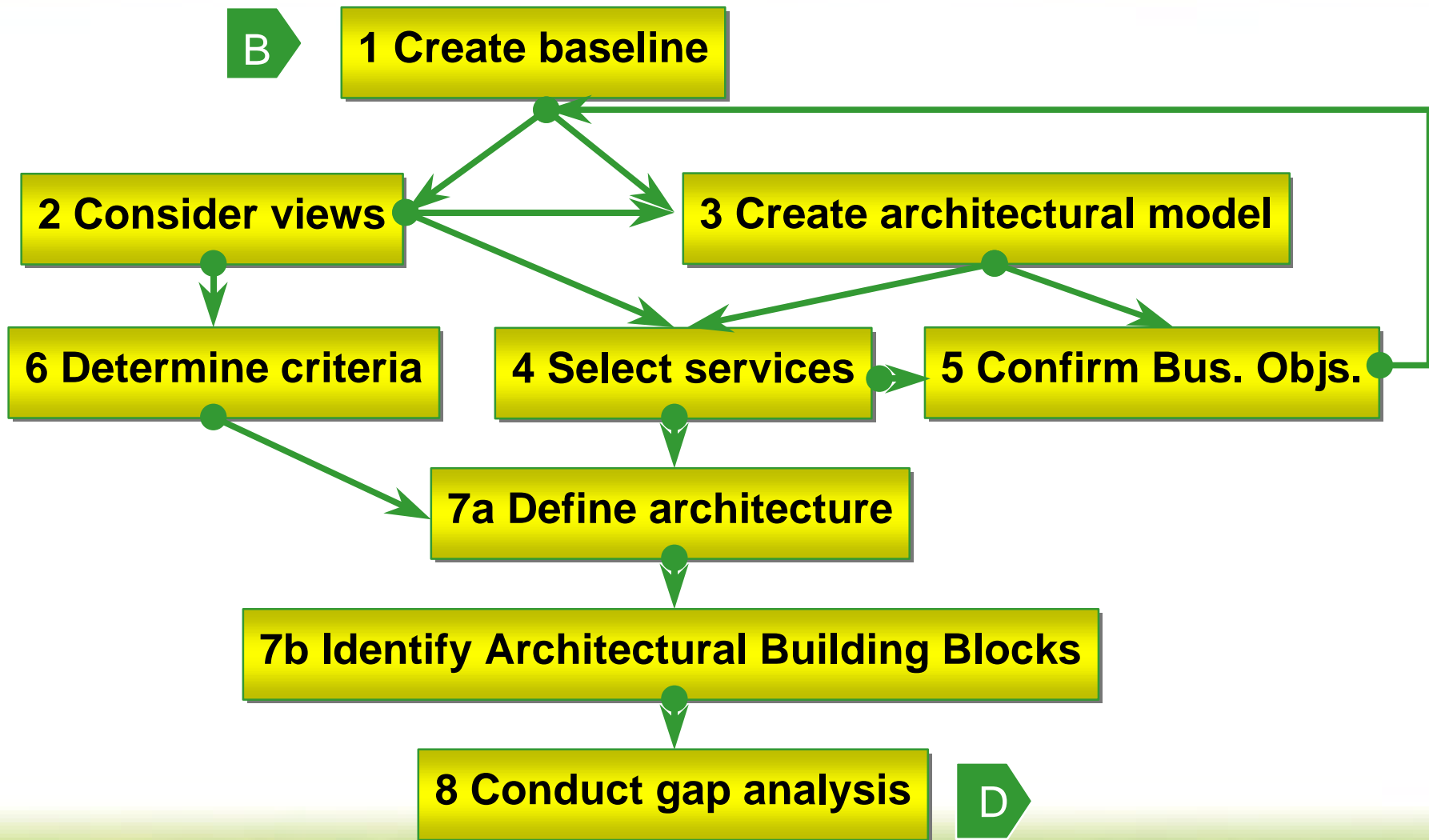
# The TOGAF ADM

## C - Target Architecture

- Identify target architecture
  - Multiple views
  - All needed services

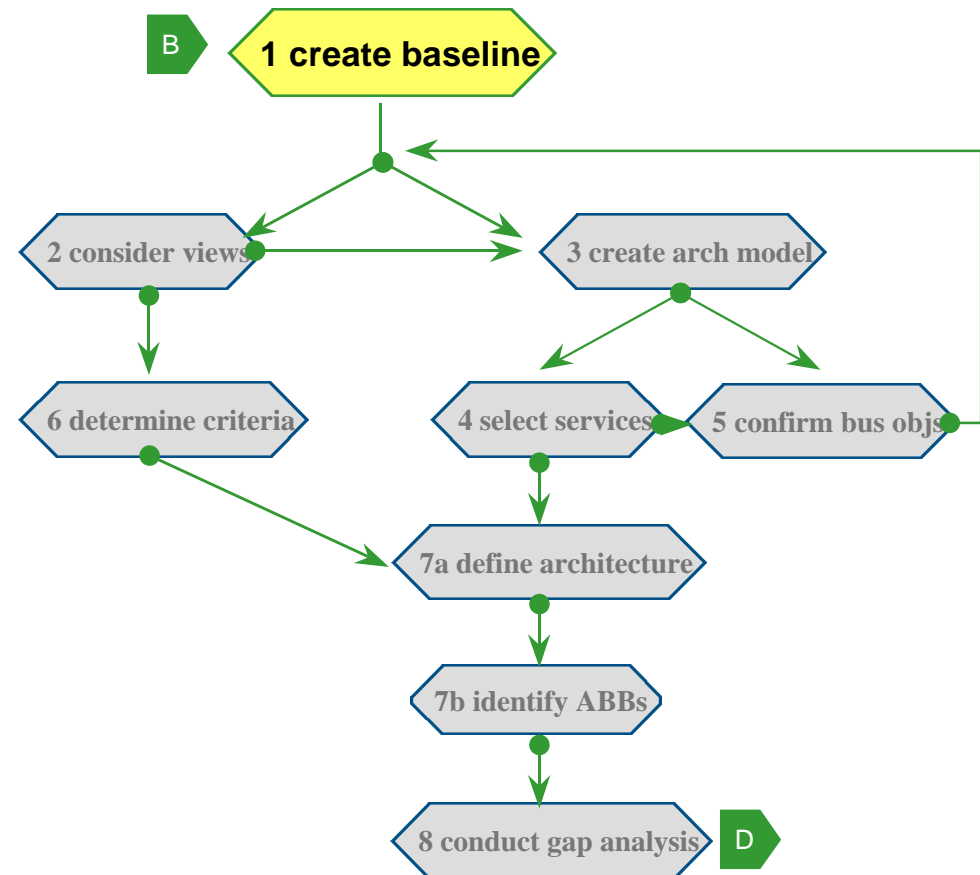


# C - Target Architecture (Sub-process Steps)



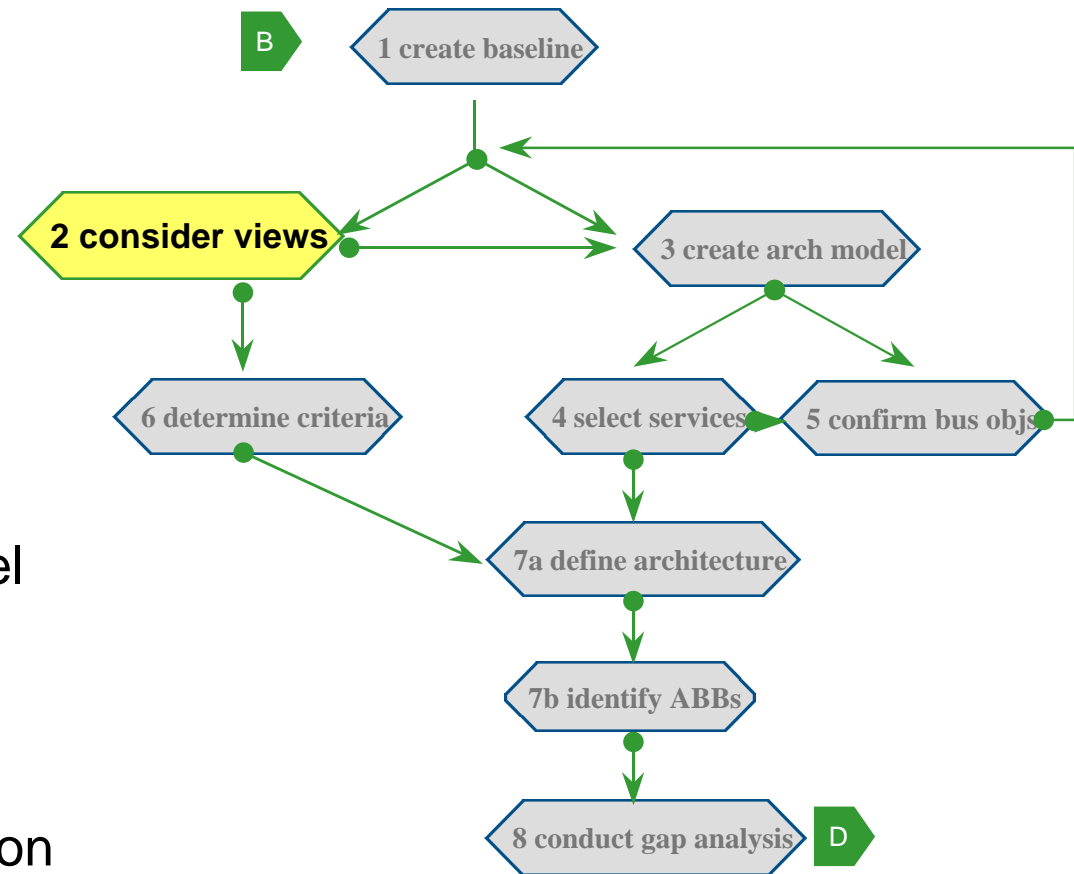
# Step 1 - Create baseline

- Describe current system in terms of TOGAF and re-usable building blocks
- Inputs
  - As for whole Phase
- Outputs is TOGAF description of current system in the form of Technical Architecture 0.1
  - Model - Version 0.1
  - Constraints
  - Architecture Principles
  - Requirements Traceability
    - key question list for evaluating merits
    - criteria for selection of service portfolio



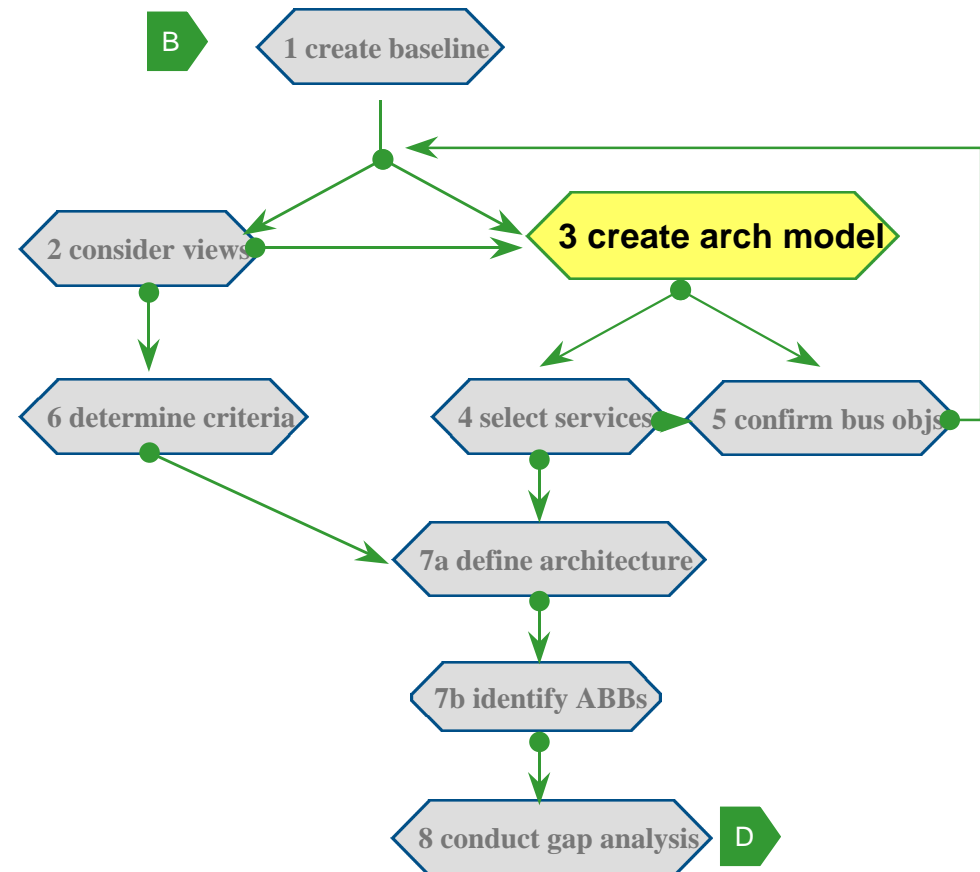
# Step 2 - Consider architectural views

- Ensure all requirements from all stakeholders are covered
  - functional, management, development, ... views
- Input
  - Technical Architecture 0.1
- Outputs
  - Technical Architecture 0.2
    - Target Architecture model from each view
    - Constraints imposed by each view
    - Rationale for each decision



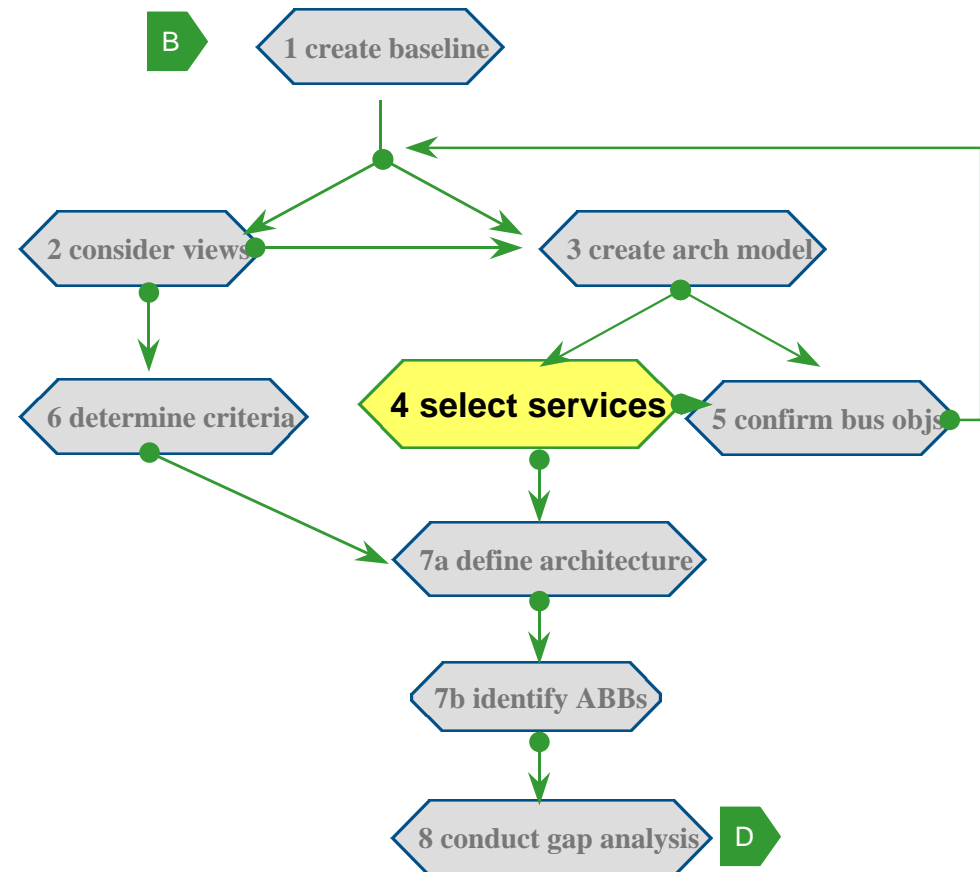
# Step 3 - Create an architectural model

- Create an architecture model of building blocks
- Input  
Technical Architecture 0.2
- Outputs  
Technical Architecture 0.3
  - Architecture model of building blocks
  - High-level description of target architecture
  - Modifications to architecture continuum
    - Extensions
    - Amendments



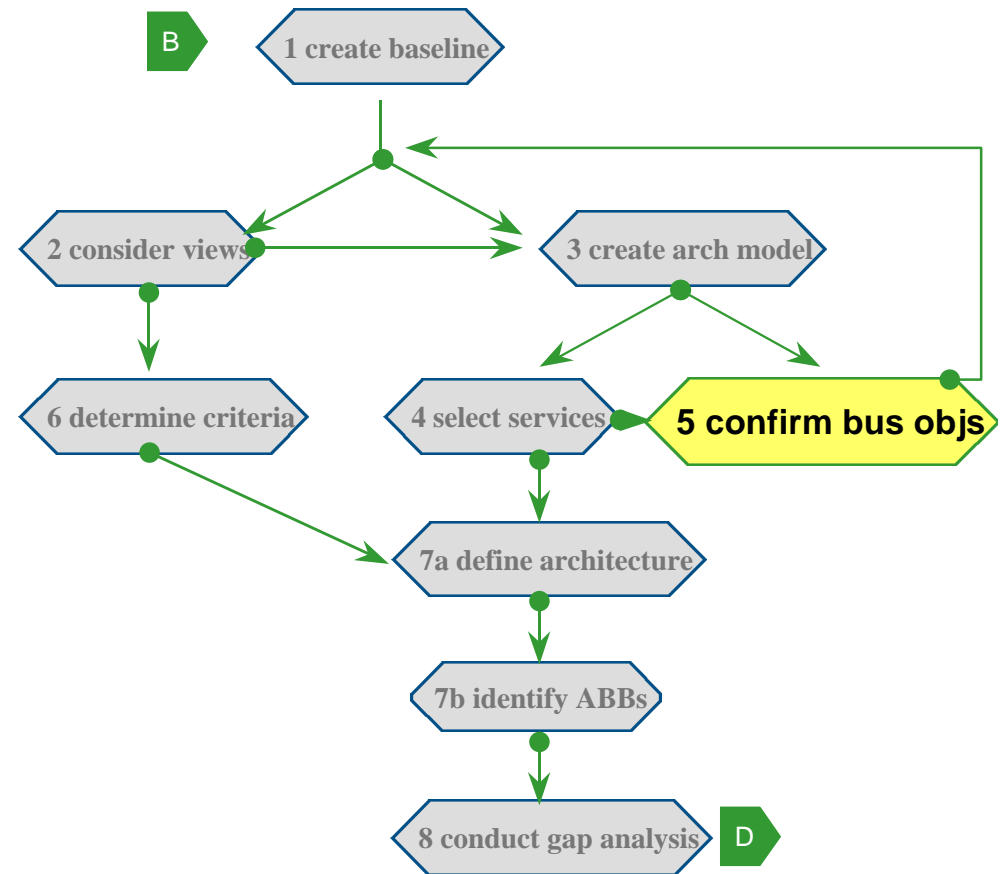
# Step 4 - Select services

- Select services portfolio for each building block
- Inputs
  - Technical Architecture 0.3
  - TOGAF TRM
  - Standards Information Base
- Outputs
  - Technical Architecture 0.4
    - Description of the service portfolios required
    - Modifications to architecture continuum
      - Extensions
      - Amendments



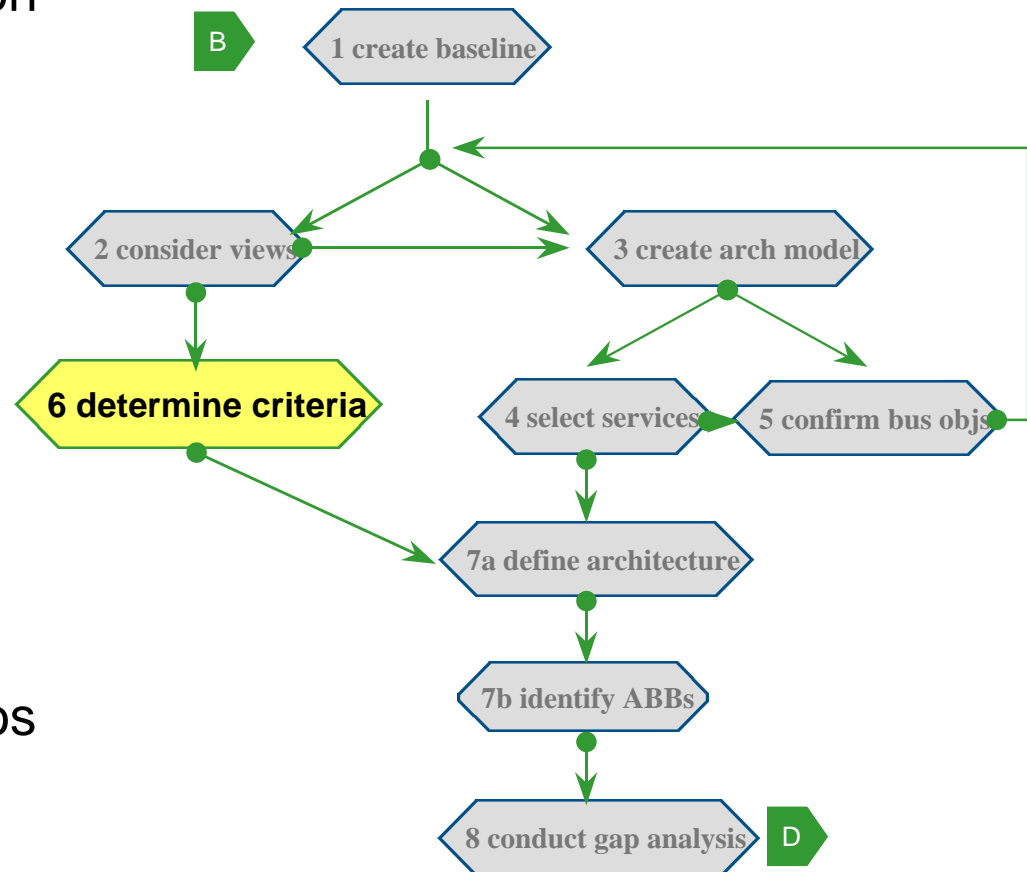
# Step 5 - Confirm business goal are met

- Get buy-in and insure everything is on the right track
- Inputs
  - Technical Architecture 0.4
  - Business Architecture 2
- Outputs
  - Technical Architecture 0.5
    - List of objectives and how the emerging architecture meets them
    - Answers to Key Questions List



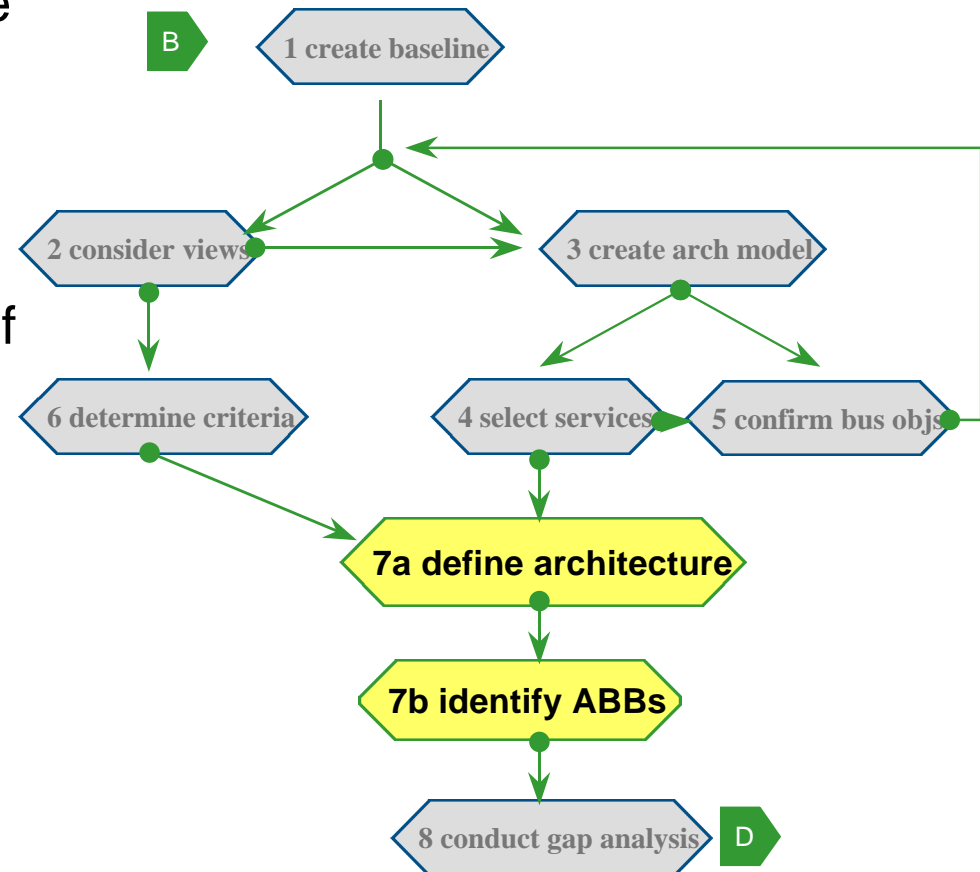
# Step 6 - Determine selection criteria

- Determine criteria for specification selection for populating the architecture
- Inputs
  - Technical Architecture 0.5
  - Standards Information Base
- Outputs
  - Technical Architecture 0.6
    - Criteria for selecting specifications that will make up fully populated final architecture
    - Criteria for selecting portfolios of specifications



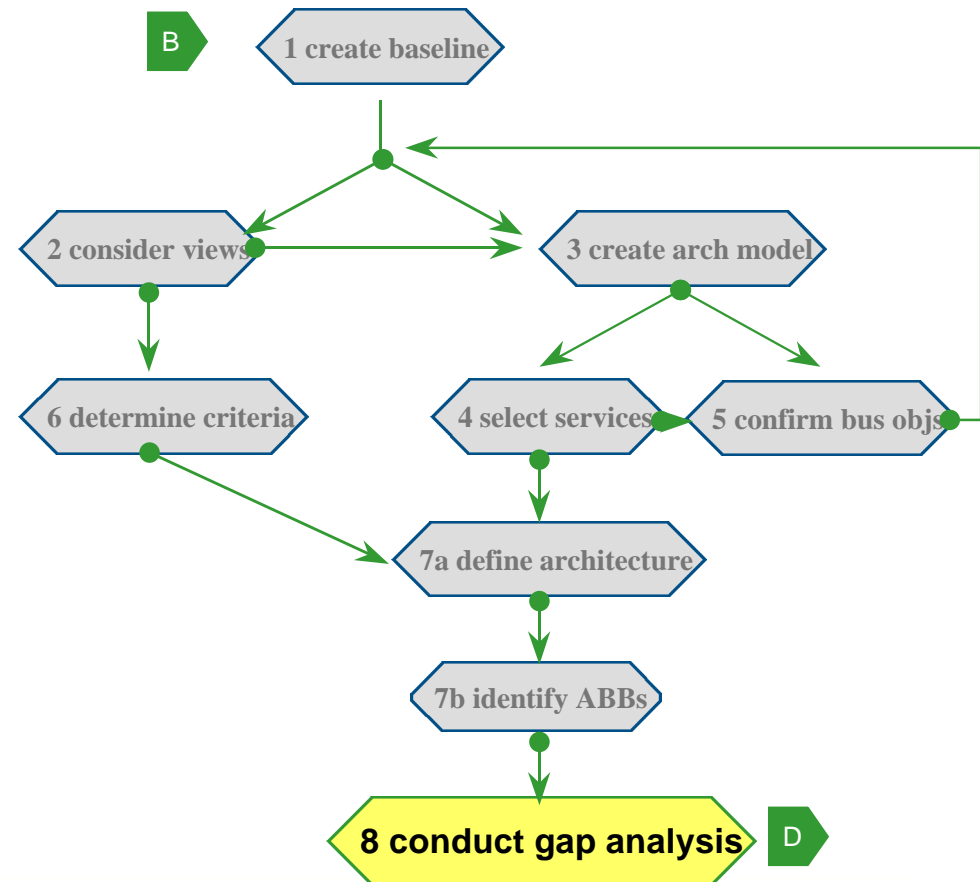
# Step 7- Complete defining the architecture

- Fully specify the target architecture
- Inputs
  - Technical Architecture 0.6
- Outputs
  - Technical Architecture 0.7
    - Fully defined (by service) list of standards
    - All the building blocks
    - Architecture specification (by building blocks)
    - Requirements traceability
    - Mapping of the architecture in the architecture continuum



# Step 8 - Conduct a gap analysis

- Understand the gaps
  - in the architecture
  - between the architecture and reality
- Inputs
  - Technical Architecture 0.7
- Outputs
  - Technical Architecture 1
    - Gap report

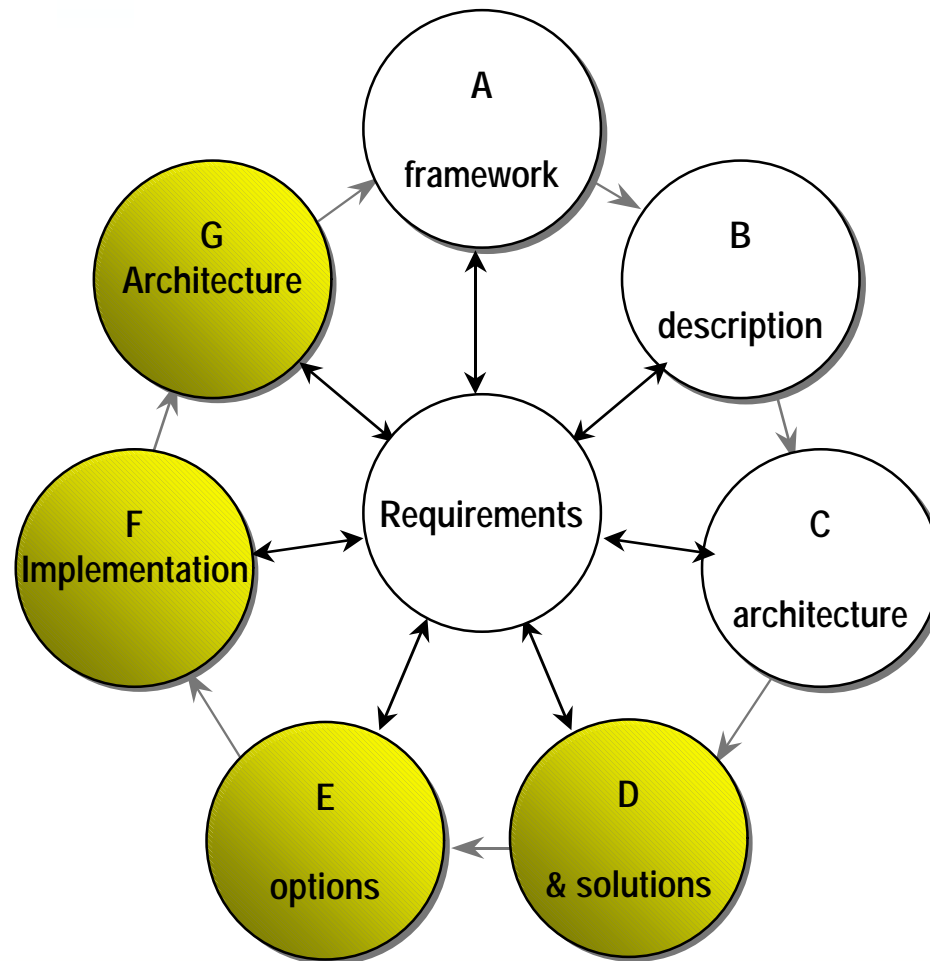


# Gap matrix

Target → ↓ Current	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 REVISE
NEW		GAP Enhancement to be developed	GAP To be procured	



# The TOGAF ADM



# Impact analysis

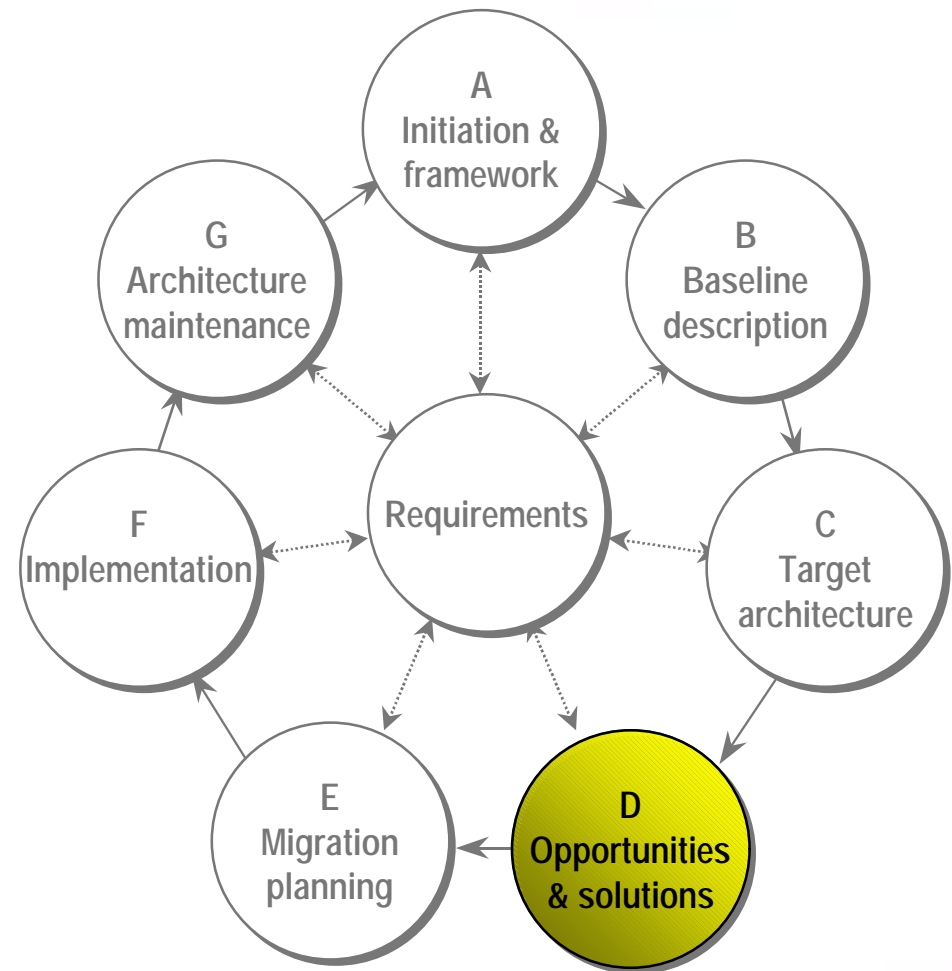
- Phase D - Project list
  - Name, description and objectives of each project
  -
- Phase E - Time oriented migration plan
  - Benefits of migration [including mapping to business requirements]
  - Estimated costs of migration options
- - Criteria measures of effectiveness of projects
  - Risks and issues
  -



# The TOGAF ADM

## D - Opportunities and Solutions

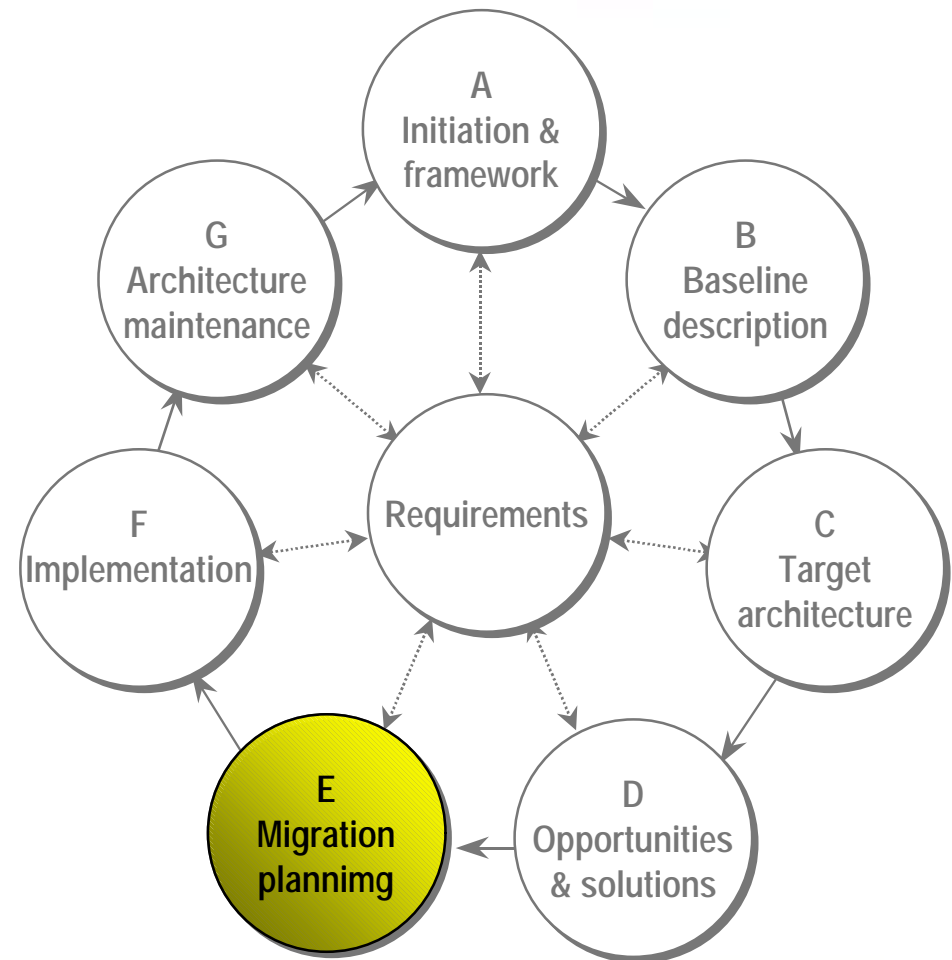
- Brainstorming sessions on
  - technical requirements from a functional perspective
  - co-existence and interoperability requirements
- Architecture assessment and gap analysis
- Project identification and classification
- Output
  - Impact Analysis - Project list



# The TOGAF ADM

## E - Migration Planning

- Project prioritization
- Migration brainstorm session
- Dependencies, costs and benefits assessment of the various migration projects
- Risk assessment
- Roadmap (time-lined) generation
- Output
  - Impact Analysis - Migration Plan



# Questions to ask (1)

- What are the dependencies of this project on other activities?
- What products are needed?
- What components must be developed?
- Does the organization have the resources needed to develop such components?
- What standards are the products or components built on?
- When will they be available?



## Questions to ask (2)

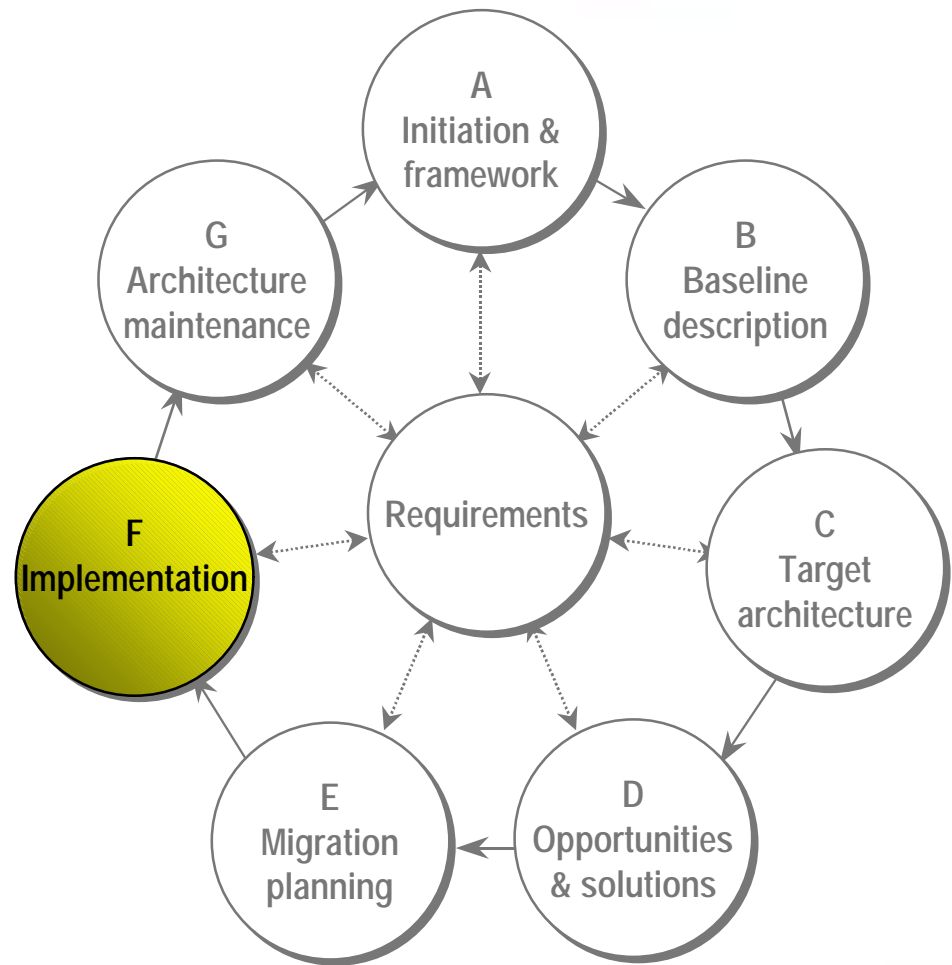
- Will the products stand the test of time
  - because of the technology
  - because of the viability of the supplier?
- What is the cost of retraining the users?
- What is the likely cultural impact on the user community, and how can it be controlled?
- What is the total cost of the migration, and what benefits will it deliver?
- Is the funding available?
- Is the migration viable?



# The TOGAF ADM

## F - Implementation

- Project recommendation formulation, for each separate implementation project
- Document in Impact Analysis:
  - scope of individual projects
  - strategic requirements
  - change requests
  - rules for conformance
  - time-line
- Document Architecture Contract
  - obtain signature from all developing organizations and sponsoring organization



# Architecture Contract

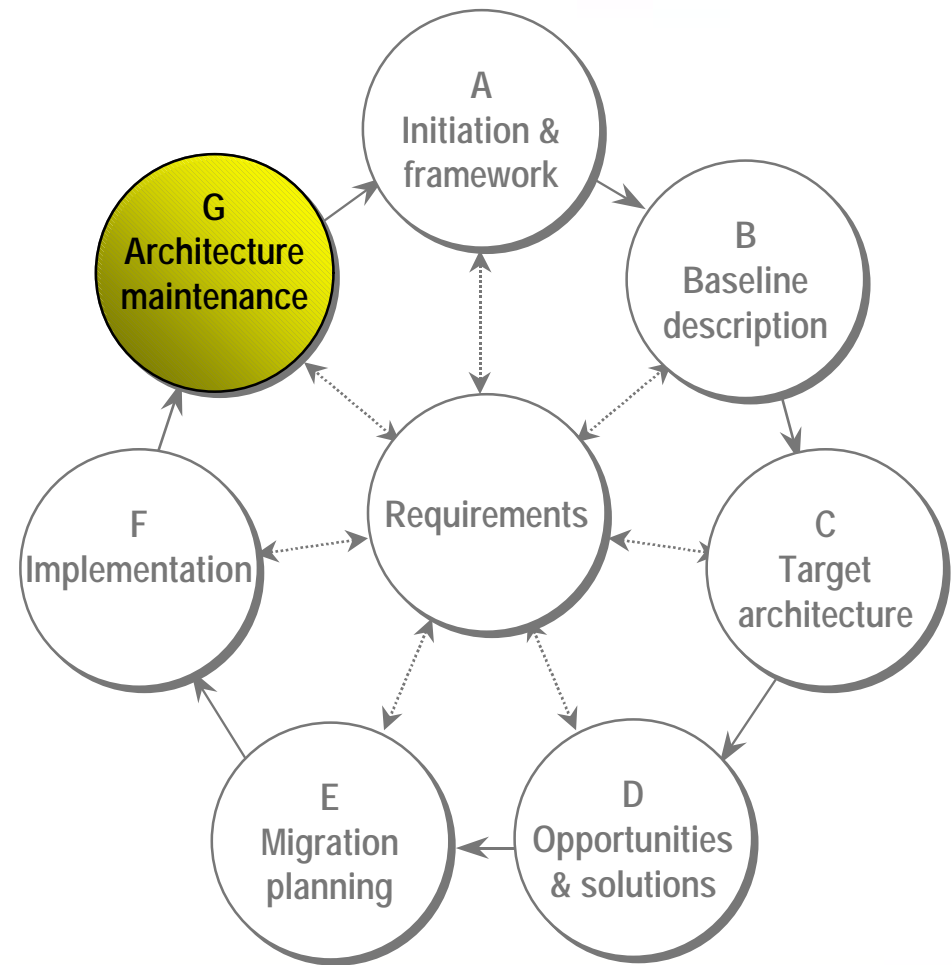
- Signed statement of intent from the developing organization to follow the architecture
  - Introduction
  - Background
  - The nature of the agreement
  - Scope
    - Strategic requirements
  - Conformance requirements
  - Architecture adopters
  - Time window



# The TOGAF ADM

## G - Architecture Maintenance

- Input
  - Request for Architecture Work (new cycle)
  - New technology reports
- Output
  - Request for Architecture Work (new cycle)
  - Technical architecture updates

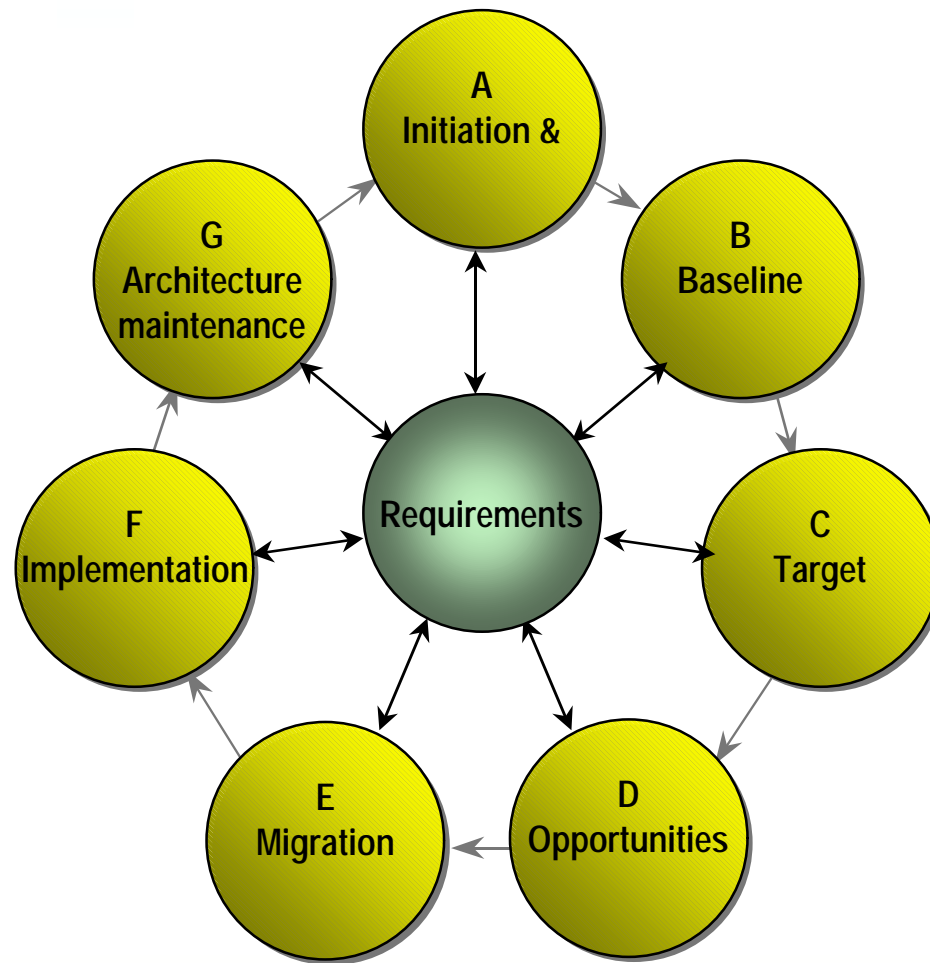


# Key steps in this phase

- Key steps in this phase include:
  - Ongoing monitoring of technology changes
  - Ongoing monitoring of business changes
  - Assessment of changes and development of position to act
  - Meeting of governing council to decide on handling changes (technology and business)



# The TOGAF ADM - the whole cycle



## Request for Architecture Work

- obtained from the sponsoring/funding organization
- - supplied by the architecture organization of the business
- Product Information
  - supplied by the Information Technology organization of the business, or supplying partners
- - supplied by the technology watchdog organization

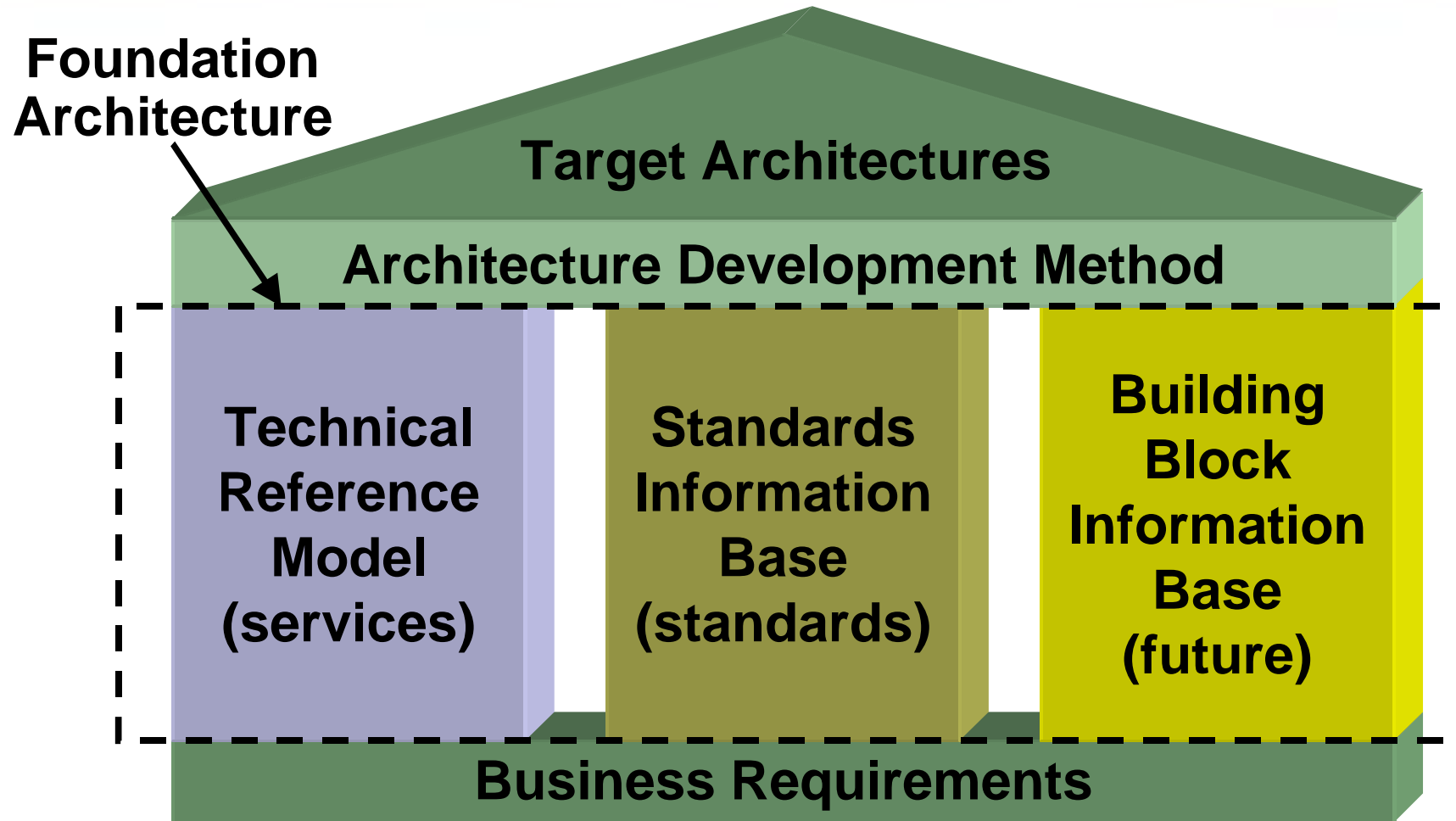


# Major output list - ADM A to G

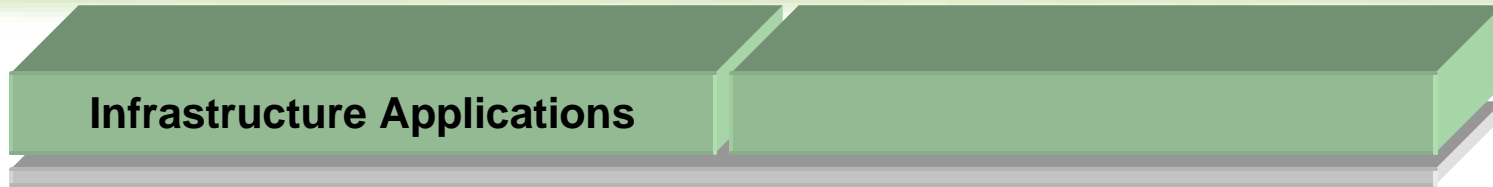
- Statement of Architecture Work
- Technical Architecture
- Impact Analysis
- Ancillary documents for gaining consensus
  - Business scenarios
  - Business process domain views
  - Project impact assessments



# More about TOGAF



# Technical Reference Model



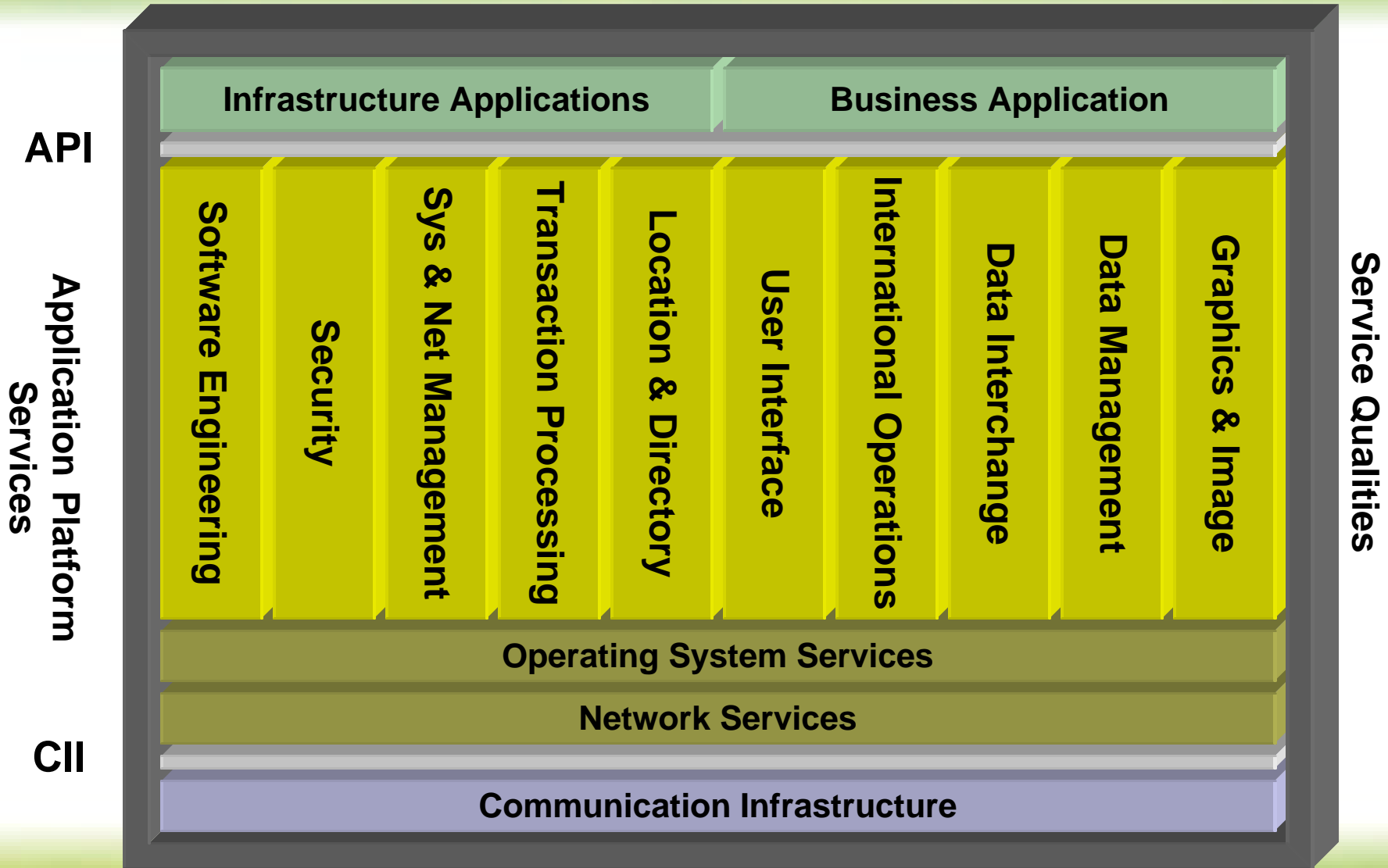
**Application Program Interface**

**Application Platform**

**Communications Infrastructure Interface**



# Services and Qualities



# Standards Information Base (SIB)

- A complete and up to date database of open industry standards with links to conformant products
- - With user guide
  - Search or full listing
  - Define particular services
  - Define properties of components
- Keeps the architecture up to date with the latest IT industry consensus



# TOGAF - its key benefits (1)

- Vendor-Neutral

Comprehensive process - from business requirements to applications to infrastructure

The result of 8 years of global development



- Support for Quick-Start learning curves

  - Mentoring and consultancy

  - Training courses available

  - TOGAF based services for Architecture audit etc.



Refined and honed checklists at all levels - from business requirements to physical components

- The Standards Information Base
  - Maintained, current and comprehensive
- The Building Block Information Base is being developed
- TABB is being planned as an open source architecture tool
- TOGAF available today
  - <http://www.opengroup.org/architecture/togaf/>
- TOGAF is on free-license for own use
- Third-party users are expected to join the Forum
- Any member can participate in shaping TOGAF's evolution



# TOGAF – The Continuing Story

- The Architecture Forum



- The Next TOGAF for Enterprise Architectures

The enhancements to the ADM

Boundaryless Information

- How this maps onto the Zachman

- Other activities of the Forum

- Future directions



**WARNING!**

**Everything about  
TOGAF 8 is  
provisional,  
subject to The  
Open Group's  
review process**



# What is our current motivation?

Changes that will influence the future take-up of Architecture

- More extended enterprises
- More co-operative IT operations
- Tighter IT budgets
- Global competition
- More frantic skills chase
- Increase in litigation
- Failure can be terminal



# What is our current motivation?

- Pace set by public agencies and large vendors
- More enforcement of acquisition regulations
  - Clinger-Cohen Act (US Information Technology Management Reform Act 1996)
  - EU Directives on the Award of Public Contracts
- Contracting Authority needs procedures for ensuring:
  - Completeness of given business requirements
  - Vendor independent expression of needs
  - Same information to all



# What is the Enterprise Edition?

- An Enterprise Architecture is the technical foundation of an effective IT strategy
- Types of architecture:
  - Business architecture
  - Information System Architectures
    - Data or information architecture **TOGAF 8**
    - Application architecture
  - Technology architecture **TOGAF 7**
- All these are related



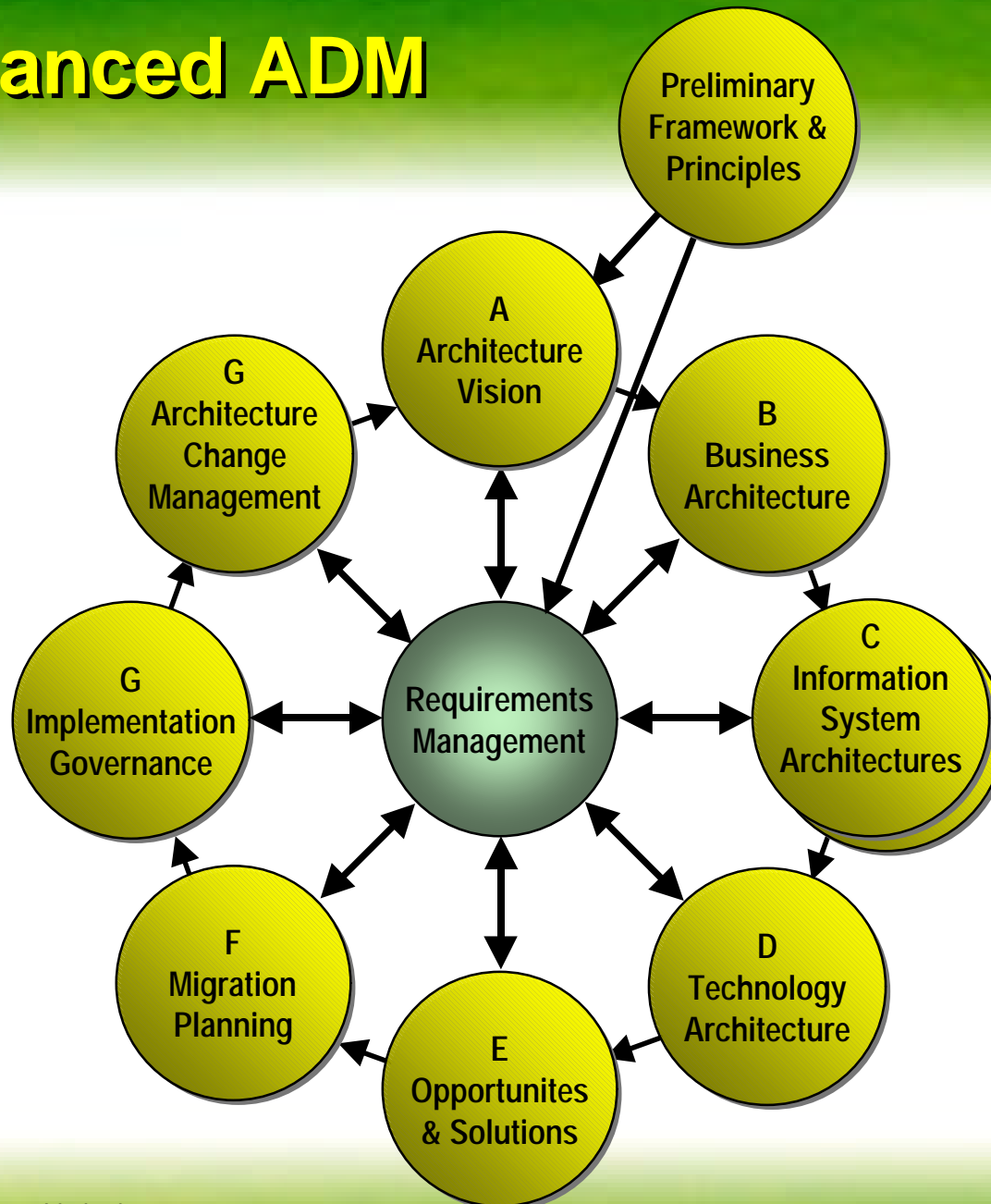
# Schedule for TOGAF 8

09 Sep	Start company review
07 Oct	End company review
17-18 Oct	Change Request review meeting
01 Nov	Recommendations posted for ballot
04-15 Nov	Ballot of recommendations
18-22 Nov	Address unresolved issues
02 Dec	'Sanity check' draft review
09 Dec	Board approval to publish
13 Dec	TOGAF Version 8 published

**TOGAF 8**



# The Enhanced ADM



# Preliminary steps

- Getting the buy-in
  - The most difficult stage
  - The most important stage
- Establishing the Architecture Framework
  - Customizing, configuring and selecting options suitable for the organization
- Integrating the framework with existing procedures
  - Preserving tried, trusted, or mandated procedures
- Monitored pilot project
  - Built-in leeway to allow for familiarization and fine-tuning



# Establishing the Architecture Framework

- Providing a foundation for the framework by establishing:
  - Architecture principles – to guide all future work on all future architectures
  - IT Governance
  - Architecture compliance procedures
- Customizing the framework to suit the environment
- Choosing the tools
- Creating a repository for Building Blocks (BBIB?)



# The Zachman Framework

	<i>What?</i> Data	<i>How?</i> Function	<i>Where?</i> Network	<i>Who?</i> People	<i>When?</i> Time	<i>Why?</i> Motivation	
<i>Planner's Viewpoint</i> Contextual	Validated principles					Refined Business principles	Scope
<i>Owner's Viewpoint</i> Conceptual	Gap analysis results						Enterprise Models
<i>Designer's Viewpoint</i> Logical	Technology architecture version 0.3						Systems Models
<i>Builder's Viewpoint</i> Physical							Technology Models
<i>Sub-contractor's Viewpoint</i> Out-of-context							Detailed Representations
Functioning Enterprise							Actual Systems

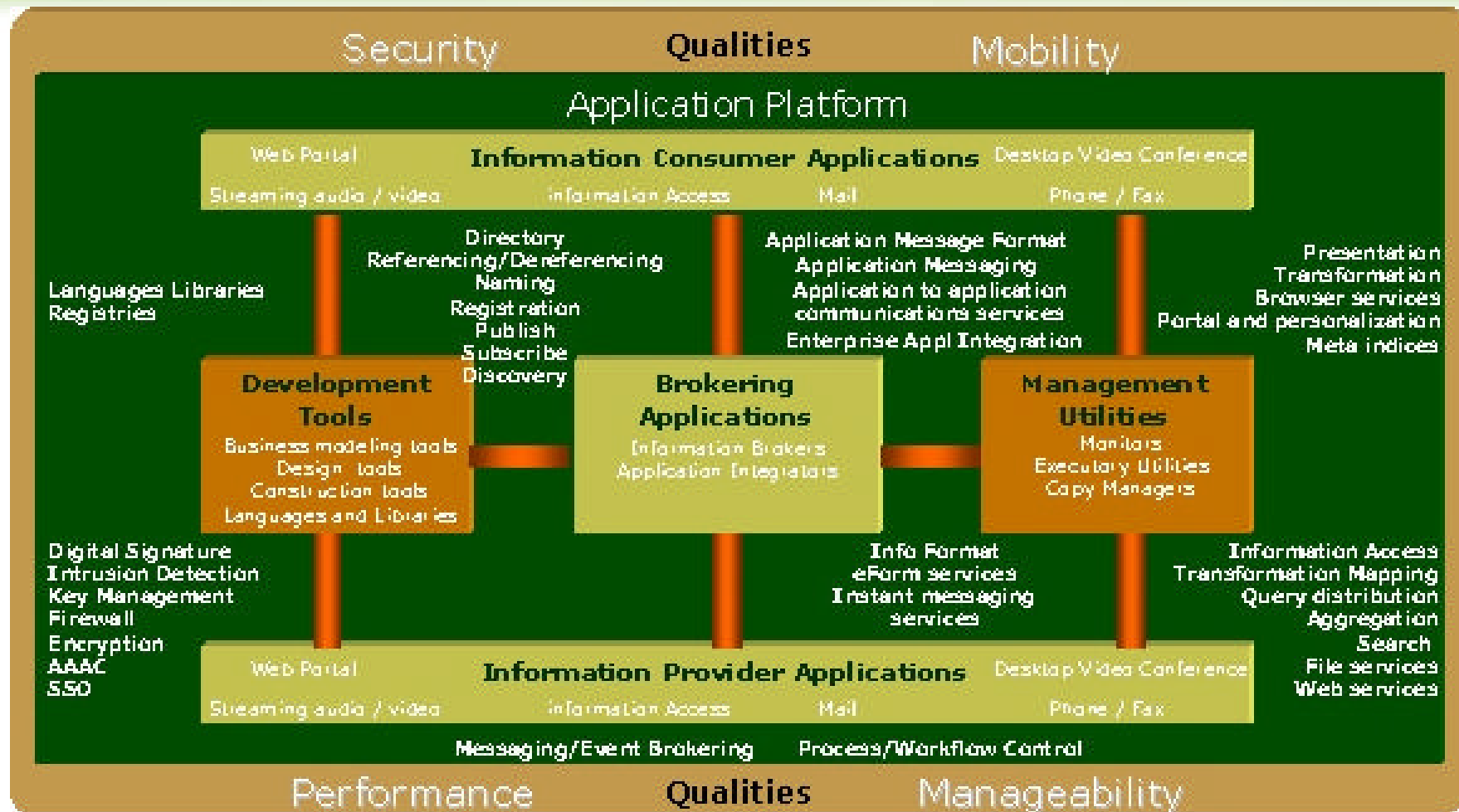


# Possible transition policy

- TOGAF 7 will be frozen and retained as the version for Technology Architectures
- TOGAF 8 will be the first release of the Enterprise Edition
  - There will be work to be completed for the Business, Data and Application Architectures
  - The Technology Architecture will not be as strong as TOGAF 7 due to changes to integrate with the other Architectures
- Future releases will complete, strengthen and work harden the Enterprise Edition
- TOGAF 7 will be withdrawn when the Technology subset of the Enterprise Edition is as complete as TOGAF 7



# III-RM Graphic



## Integrated Information Infrastructure Reference Model



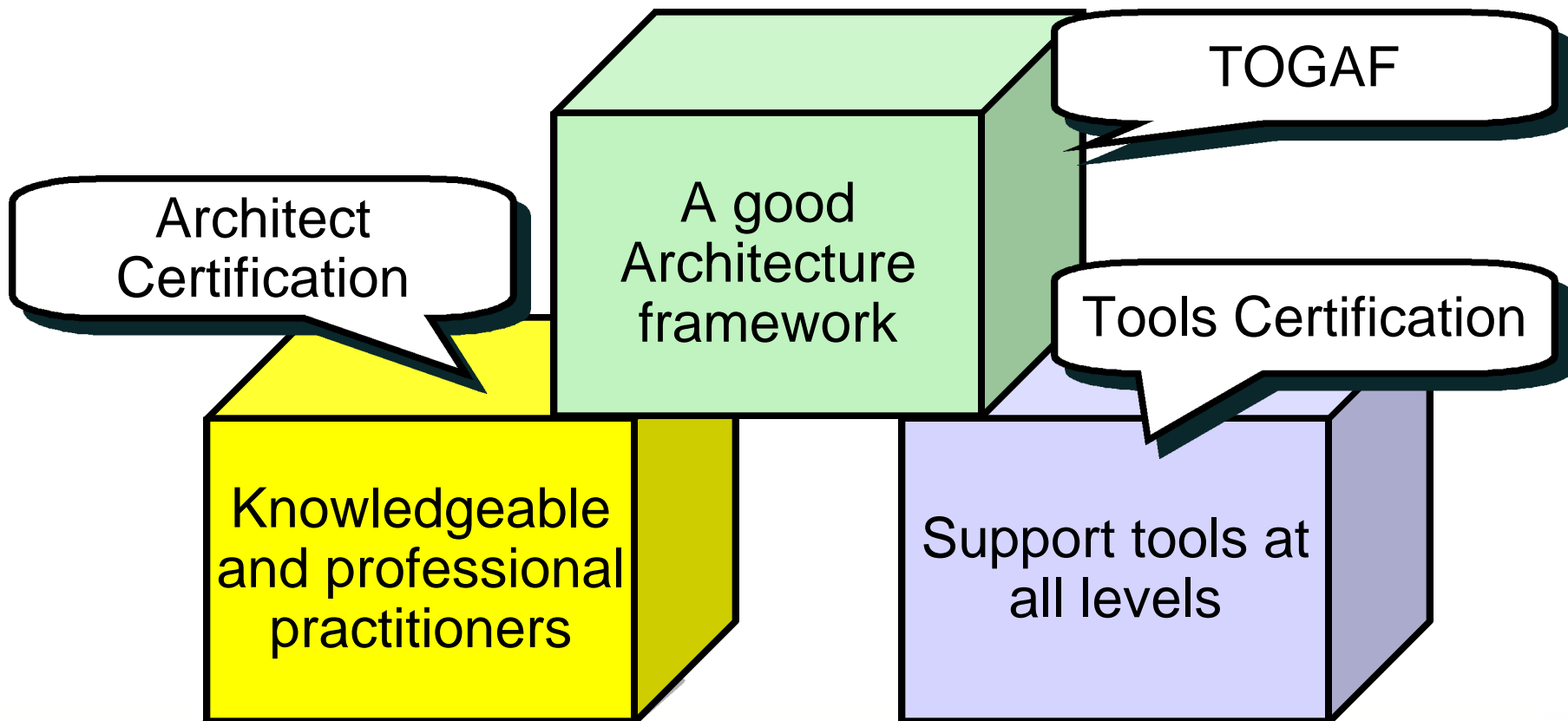
# TOGAF – The Continuing Story

- The Architecture Forum
- Our motivation for developing TOGAF
- The Current TOGAF for Technical Architectures
- The Next TOGAF for Enterprise Architectures
- Other activities of the Forum
  - Completing the Architectural capability
  - Architecture practitioners
  - Architecture tools
- Future directions



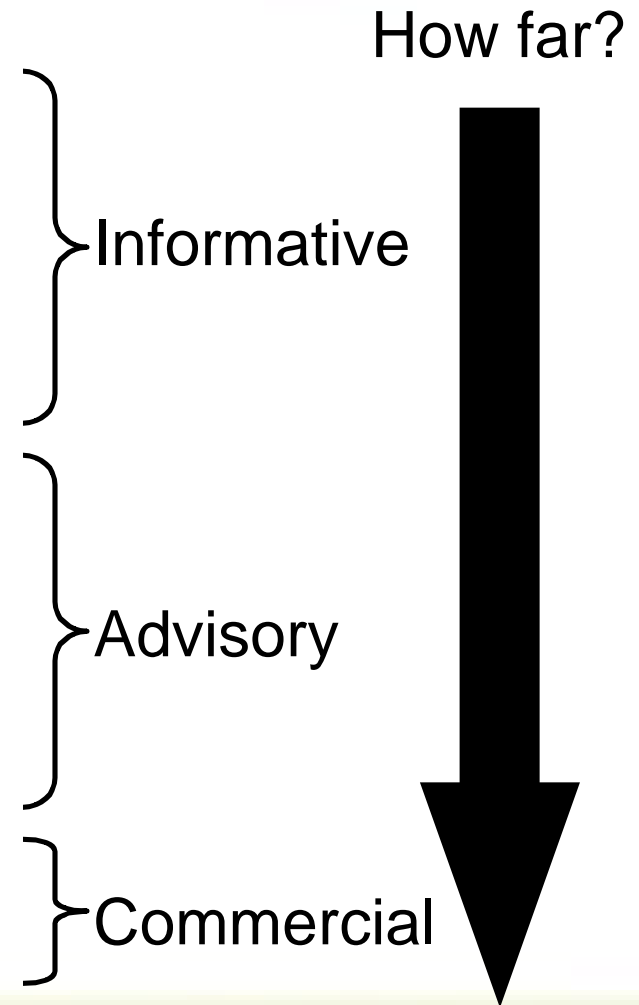
# The Architecture Forum

- Striving to achieve a total, practical Architecture solution

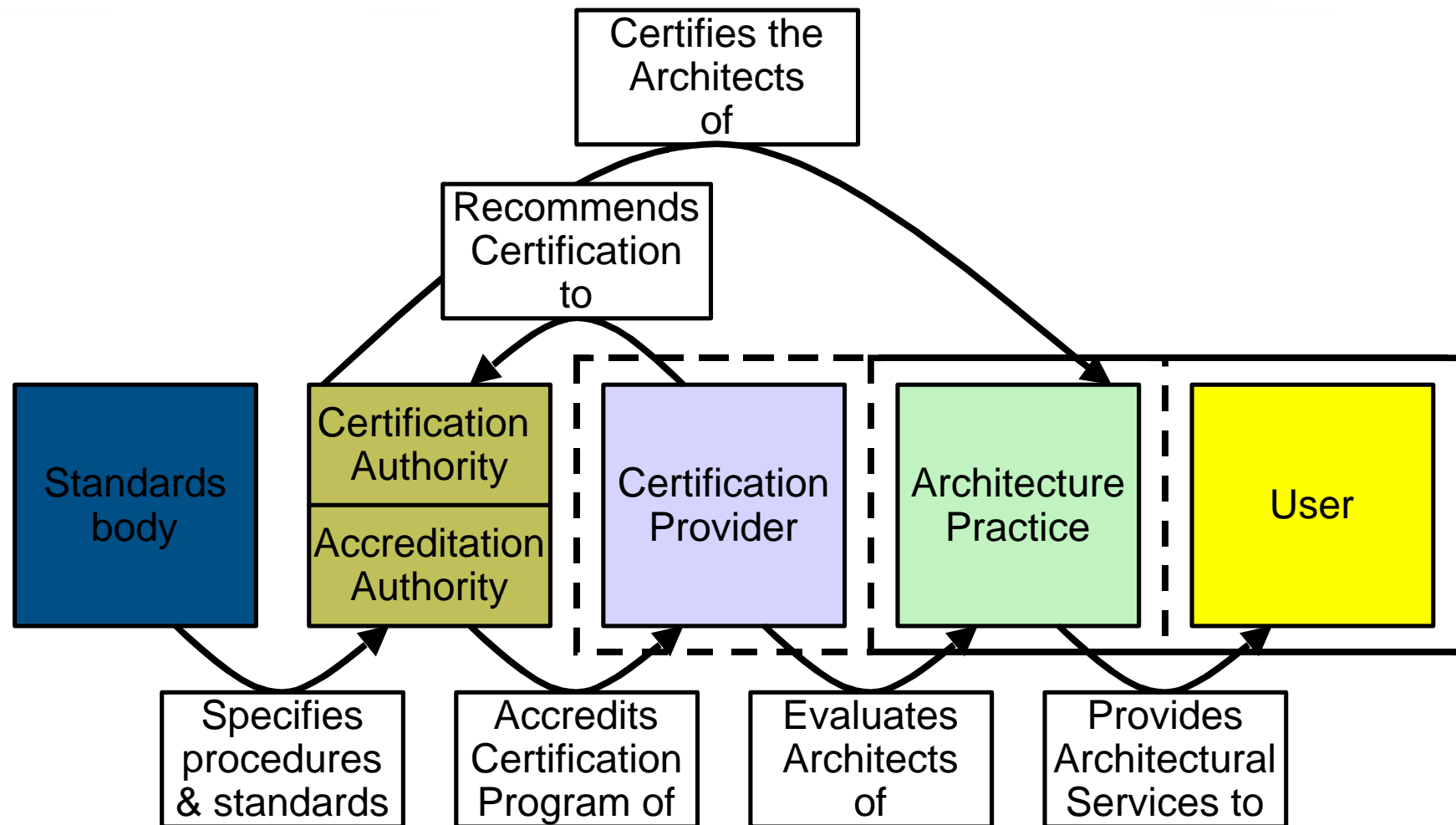


# Separate issues of architect certification

- 1) Defining the role of “Architect(s)” in developing information services
- 2) Identifying the skills, knowledge and experience necessary to fulfil that role
- 3) Identifying techniques for validating each of (2)
- 4) Recommend Certification Programs based on a combination of (3)
- 5) Accrediting Certification Programs to achieve a level global standard



# Role players



# Stakeholder categories

- Education & Training
- Professional Bodies and Associations
- IT industry
- Enterprise Users
- Legislators
- Recruitment Organizations
  
- 28 Stakeholders identified



# TOGAF – The Continuing Story

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# What are our future directions?

- Evolution of TOGAF – Enterprise Edition
  - Bring to maturity
  - Enhance to align with OMG's MDA
  - Enhance to include mobility features
  - Enhance to support Quality of Service
  - Possible alignment with Zachman Framework
  - Enhance to include industry TRMs
- Promote, support, advise and get it all into use.
- Develop the distributed BBIB
- Establishment of IT Architect Certification
- Protection of TOGAF with Certification



# TOGAF Certification

- To protect the value of TOGAF
- **Architecture tools** – to ensure that the ADM is supported consistently by different architecture tools
- **Training courses** – to ensure that the course syllabus includes coverage of the necessary elements of the ADM
- **Architects** – to ensure that professional services are delivered by architects who up to date knowledge
- **Professional services** –to ensure that organizations who offer such services abide by an approved code of practice and use properly trained architects



# TOGAF – The Continuing Story

- The Architecture Forum
- Our motivation for developing TOGAF
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**Any questions?**

