TOGAF™ and The Open Group Architecture Forum

Enterprise Architecture & TOGAF Meeting
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THE *Open* GROUP

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Agenda

- Context - The Open Group

- The Architecture Forum

- TOGAF

  - Background

  - TOGAF 8 "Enterprise Edition"

  - A look ahead to TOGAF 9

- Summary

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The Open Group

Activities of The Open Group

- Certification Services
  - For specifications of The Open Group and other consortia
- Conferences
  - Quarterly member meetings
  - Architecture Practitioners Conferences
    => *Hosted by the Architecture Forum*
    - Barcelona, January 2006
    - Cape Town, March 2006
    - Miami, July 2006
    - Lisbon, October 2006
- Member Forums and Working Groups

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Member Forums and Working Groups

- ❑ Architecture
- ❑ Enterprise Management
- ❑ Grid Enterprise Services
- ❑ Homeland Defense WG
- ❑ Jericho Forum
- ❑ Messaging
- ❑ Platform
- ❑ Real-time and Embedded Systems
- ❑ Security
- ❑ Service Oriented Architectures WG
- ❑ UDEF / Semantic Interoperability

Governing Board

Customer Council

Supplier Council

Forum

DIF
EMF
SEC
MMF
RT
MSG
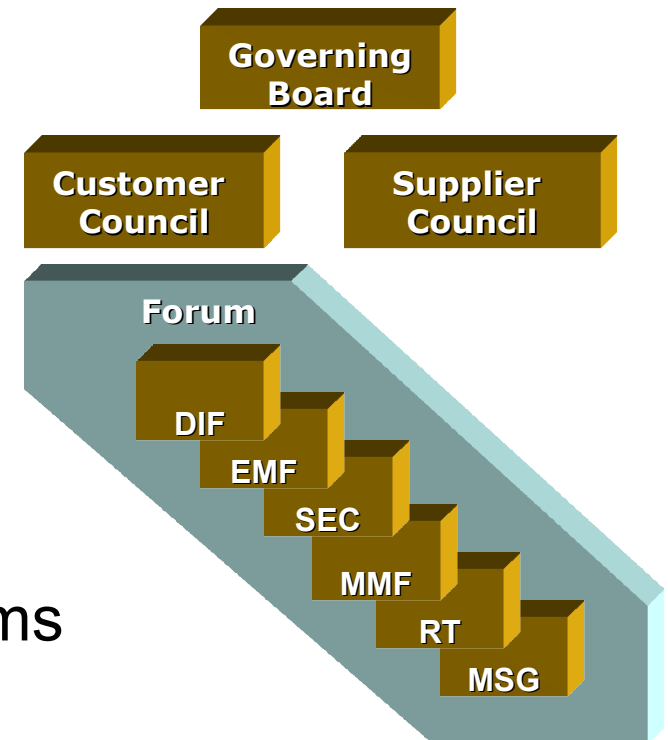
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Forum Operation

- ❑ Meeting points for Suppliers and Buyers of IT products and services
  - ▪ In a non-sales environment
- ❑ Each Forum effectively a mini-consortium operating within The Open Group
  - ▪ Officers elected from members
  - ▪ Direction determined by members
  - ▪ Outputs approved by members
  - ▪ Must obey some rules to respect anti-trust legislation
- ❑ Forums initiate new areas of work, often in partnership with other Forums
  - ▪ …leading to industry standards…
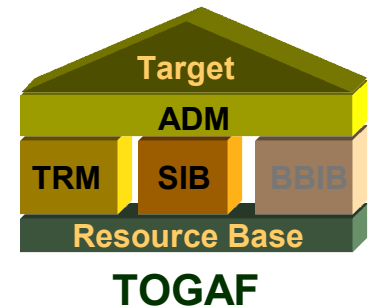 - ▪ …and certification programs based on those standards

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The Architecture Forum

Architecture Forum - Focus

□ Original (and continuing) focus:
- ■ TOGAF™

TOGAF

□ Extended focus:
- ■ Architecture as a Professional discipline

- ■ Architecture Tools

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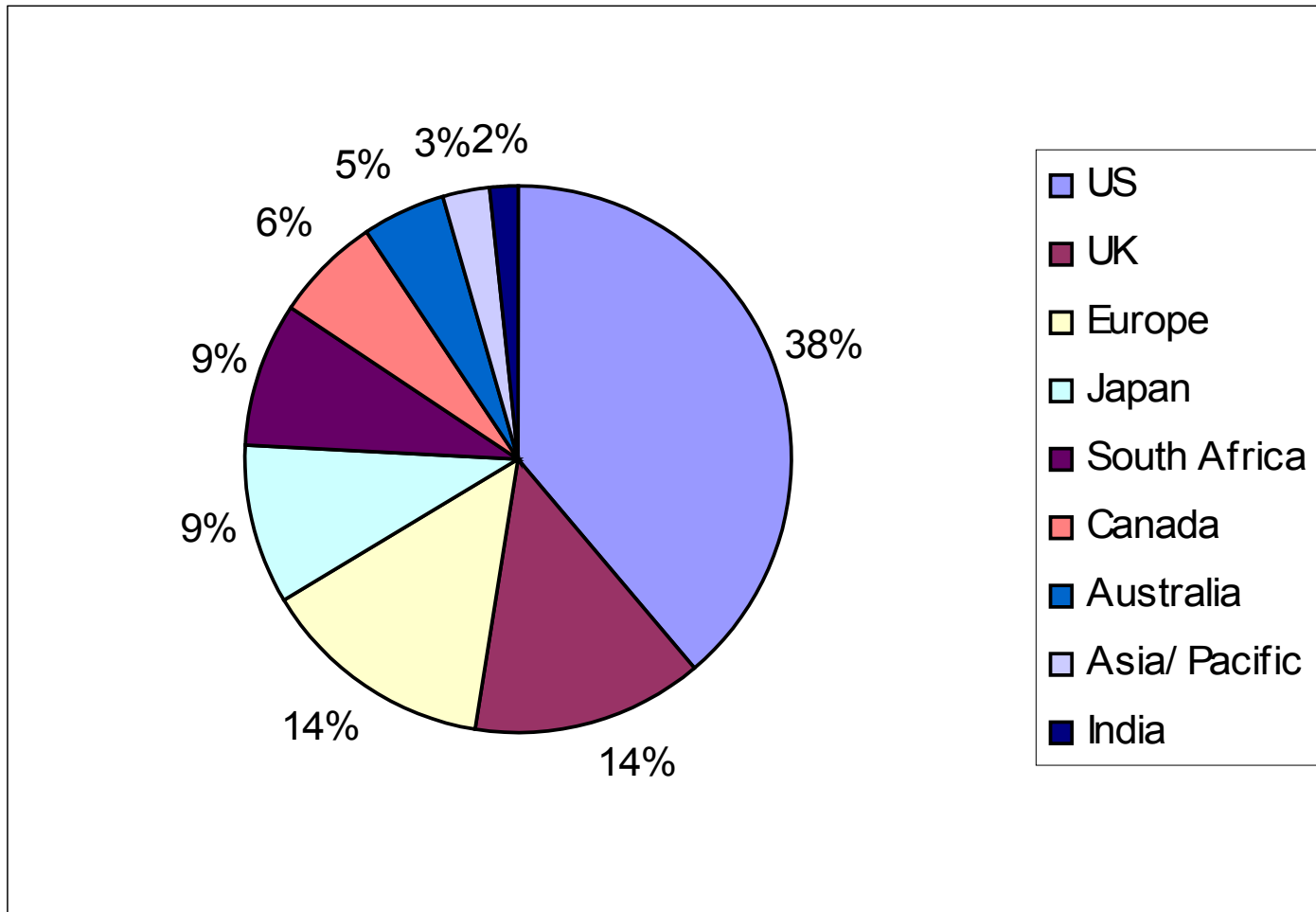
Architecture Forum Members

Accenture (US)
act! Consulting (Germany)
ADP, Inc. (US)
American Express (US)
Allied Irish Bank (Ireland)
APL, Limited (US)
Architecting-the Enterprise Ltd (UK)
Arismore (France)
Armscor (South Africa)
Armstrong Process Group, Inc. (US)
Austin Energy (US)
Bank of Montreal Financial Group (Canada)
Boeing Corporation (US)
C & C Technology (UK)
Capgemini Limited (France)
Capita IT Services (UK)
CC and C Solutions (Australia)
Celestial Consulting Ltd (UK)
Centre For Open Systems (Aus)
CGI (Canada)
ChiSurf (Hong Kong)
Cisco Systems, Inc. (US)
Citigroup (US)
Companhia Vale do Rio Doce (Brazil)
Computer Associates (US)
Data Access Technologies (US)
Dept for Works and Pensions (UK)
Desktop Management Task Force (US)
Detecon International GmbH (Germany)
Enbridge, Inc. (Canada)
Eskom Holdings (South Africa)

Fannie Mae (US)
Frietuna Consultants (UK)
Fujitsu (Japan)
Fundani Computer Systems (South Africa)
Future Tech Systems (US)
glue: Limited (UK)
Grant MacEwan College (Canada)
GTECH Corporation (US)
Heck Consulting (Germany)
Hewlett-Packard (US)
Hitachi (Japan)
Hornford Associates (Canada)
IBM (US)
Identum (UK)
Infosys (India)
Infovide (Poland)
Innenministerium NordRhein-Westfalen (Germany)
Integration Consortium
Investec (South Africa)
Itochu Techno-Science Corporation (Japan)
Johnson & Johnson (US)
Kansas State University (US)
Letsema Consulting (South Africa)
Lockheed Martin (US)
Marathon Oil (US)
MEGA International (Fra)
Metaplexity Associates (US)
Ministry of Science Technology & Innovation (Denmark)
MIT Lincoln Laboratory (US)
MITRE Corporation (US)
Mitsubishi Corporation (Japan)
Mizuho Information and Research Institute, Inc. (Japan)
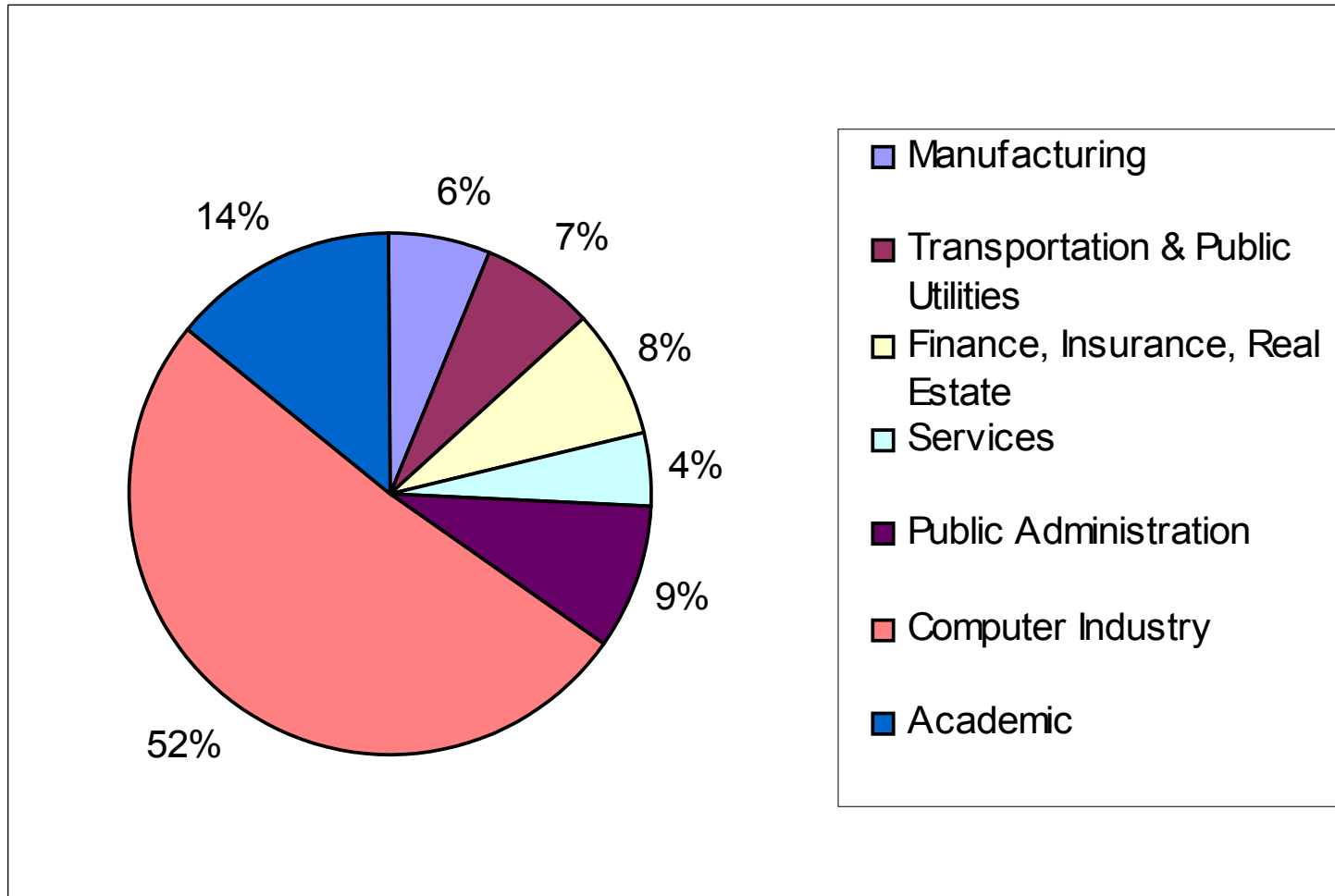Monash University (Australia)
NASA Jet Propulsion Labs (US)

NASA Scientific. & Engineering Workstation Procurement (SEWP) (US)
National Computerization Agency (Korea)
National E-health Transition Authority (Australia)
National University of Singapore
NEC (Japan)
Norwegian University of Science and Technology (Norway)
Object Management Group (US)
Open GIS Consortium, Inc. (US)
Penn State University / App. Research Lab (US)
Portland General Electric (US)
POSC (US)
PricewaterhouseCoopers (UK)
ProForma Corporation (US)
Qualiware ApS (Denmark)
Quick Response Systems, Inc. (Canada)
Raytheon (US)
Real IRM Solutions (South Africa)
ReGIS (Japan)
Rococo Company Limited (Japan)
Rolls Royce (UK)
Royal Institute of Technology, Stockholm
SCC (UK)
Serono International SA (Switzerland)
Standard Bank Group (South Africa)
Swiss Federal Department of Finance (Switzerland)
Systems Flow, Inc. (US)

Tanager, Inc (US)
Teamcall (Bel)
Telelogic / Popkin Software Inc. (US)
Telemanagement Forum (US)
Telkom S.A. (South Africa)
Tonex (US)
Toyota InfoTechnology Center (Japan)
Treasury Board of Canada Secretariat (Canada)
TRON Association (Japan)
Troux (US)
Unisys (US)
University of Chicago (US)
University of Johannesburg (South Africa)
University of Kyoto (Japan)
University of Plymouth (UK)
University of Pretoria (South Africa)
University of Reading (UK)
University of Technology, Sydney (Australia)
UPCO (UK)
US Army Weapon Systems Technical Working Group (WSTAWG)
Veriserve Corporation (US)
Westpac Banking Corporation (Australia)
White Knight Management (UK)
Wipro Technologies (India)

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Architecture Forum Members – by Geography

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Architecture Forum Members – by Industry Sector

Pie chart legend:
- Manufacturing
- Transportation & Public Utilities
- Finance, Insurance, Real Estate
- Services
- Public Administration
- Computer Industry
- Academic

Pie chart values: 6%, 7%, 8%, 4%, 9%, 52%, 14%

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Stakeholders and Value

- **Customer Architects: Reduced time, cost, risk**
  - procuring effective IT architecture tools
  - developing an IT architecture
  - procuring products to implement an IT architecture
- **Tools Vendors: Bigger market, bigger market share**
  - supporting open methods for architecture
- **IT Solution Vendors: Greater cost-efficiency**
  - reduced cost of bidding, greater share of procurements
- **Integrators: Greater cost-efficiency, better service**
  - better service delivery to clients
  - more effective use / re-use of own architecture assets
- **Academic / Research Organizations: Funding support**
  - demonstrated relevance to market, route to standardization
  - "technology transfer" important in bids for funding

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TOGAF Background

TOGAF Origins

- A <u>customer</u> initiative
- A framework, not an architecture
  - A generic framework for developing architectures to meet different business needs
  - <u>Not</u> a "one-size-fits-all" architecture
- Originally based on TAFIM (U.S. DoD)

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TOGAF Development

- **1994: Requirement** ⬅ *Proof of need*

- **1995: TOGAF Version 1** ⬅ *Proof of concept*

- **1996: TOGAF Version 2** ⬅ *Proof of application*

- **1997: TOGAF Version 3** ⬅ *Architecture building blocks*

- **1998: TOGAF Version 4** ⬅ *Enterprise Continuum (TOGAF in context)*

- **1999: TOGAF Version 5** ⬅ *Business Scenarios*

- **2000: TOGAF Version 6** ⬅ *Architecture views - IEEE 1471*

- **2001: TOGAF Version 7** ⬅ *Architecture Principles; Compliance Reviews*

- **2002: TOGAF Version 8** ⬅ *Extension to Enterprise Architecture*

- **2003: TOGAF Version 8.1** ⬅ *Requirements Management; Governance; Maturity Models; Skills Framework*

- **2006: TOGAF Version 8.1.1** ⬅ *Corrigendum Update*

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TOGAF 8 "Enterprise Edition"

TOGAF 8 Scope

□ TOGAF 8 covers the development of four related types of architecture:

- ■ Business architecture   **TOGAF 7 "Technical Edition"**
- ■ Data or information architecture
- ■ Application architecture
- ■ Technology architecture   **TOGAF 7 "Technical Edition"**

TOGAF 8 "Enterprise Edition"

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TOGAF 8 Goals

- Long-term:
  - An industry standard, generic enterprise architecture method….
  - ….usable in conjunction with frameworks having products relevant / specific to particular sectors.
    - Several frameworks have mindshare:
      - Zachman, Spewak, DoD Framework, FEAF, TEAF, …
    - Almost all focus on products, not method
    - TOGAF <u>and</u>…. (not TOGAF <u>or</u>….)

- Version 8:
  - An overall structure and core method for enterprise architecture that can be filled out in future years.

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TOGAF 8 Components
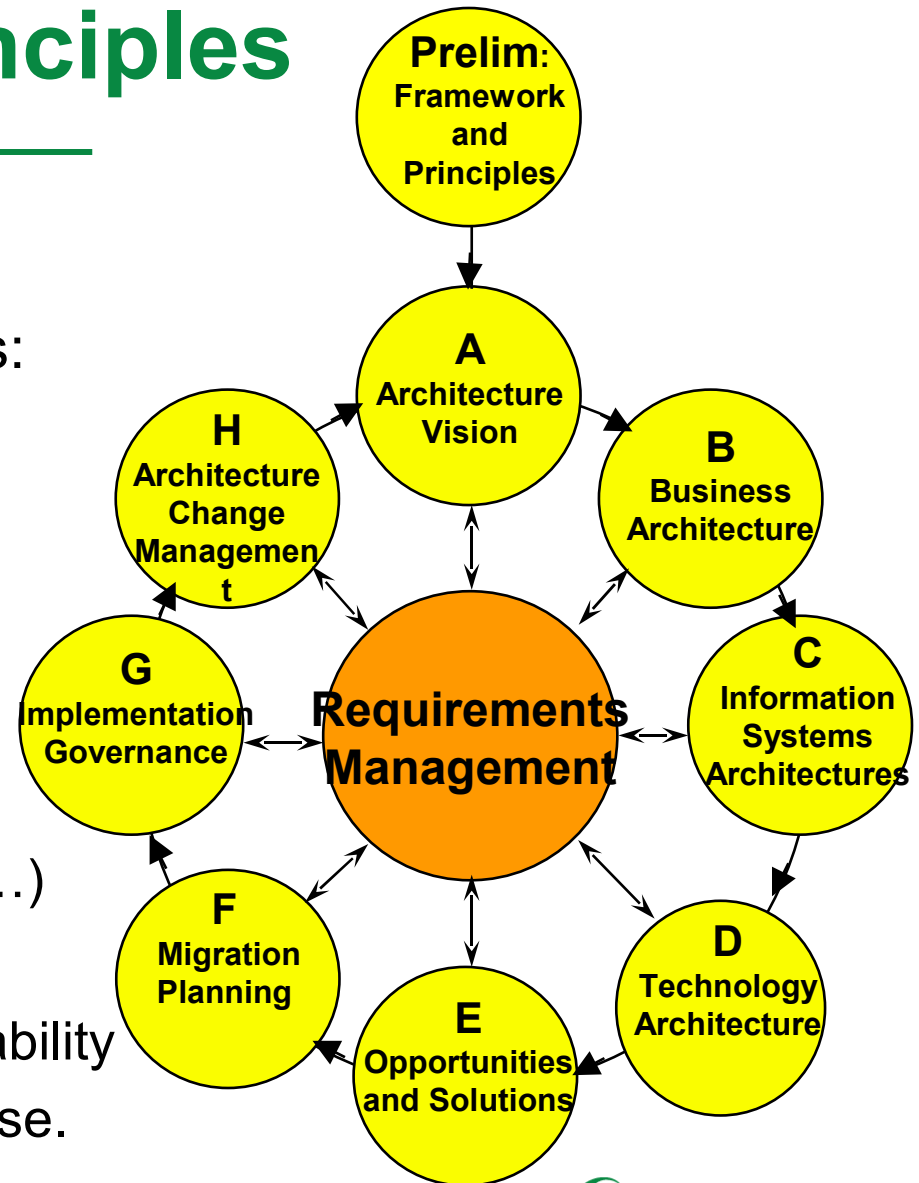
- Architecture Development Method (ADM)
- Reference Architectures
  - Foundation Architecture
    - Technical Reference Model
    - Standards Information Base
  - Integrated Information Infrastructure Reference Model
    - Supporting "Boundaryless Information Flow"
  - Enterprise Continuum
- Resource Base

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TOGAF 8 "Enterprise Edition" – Architecture Development Method

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ADM – Basic Principles

- An iterative method
- Each iteration = new decisions:
  - Enterprise coverage
  - Level of detail
  - Time horizon
  - Architecture asset re-use:
    - previous ADM iterations
    - other frameworks, system models, industry models,…)
- Decisions based on:
  - Competence / resource availability
  - Value accruing to the enterprise.

Prelim: Framework and Principles

A Architecture Vision

B Business Architecture

C Information Systems Architectures

D Technology Architecture

E Opportunities and Solutions

F Migration Planning

G Implementation Governance

H Architecture Change Management

Requirements Management

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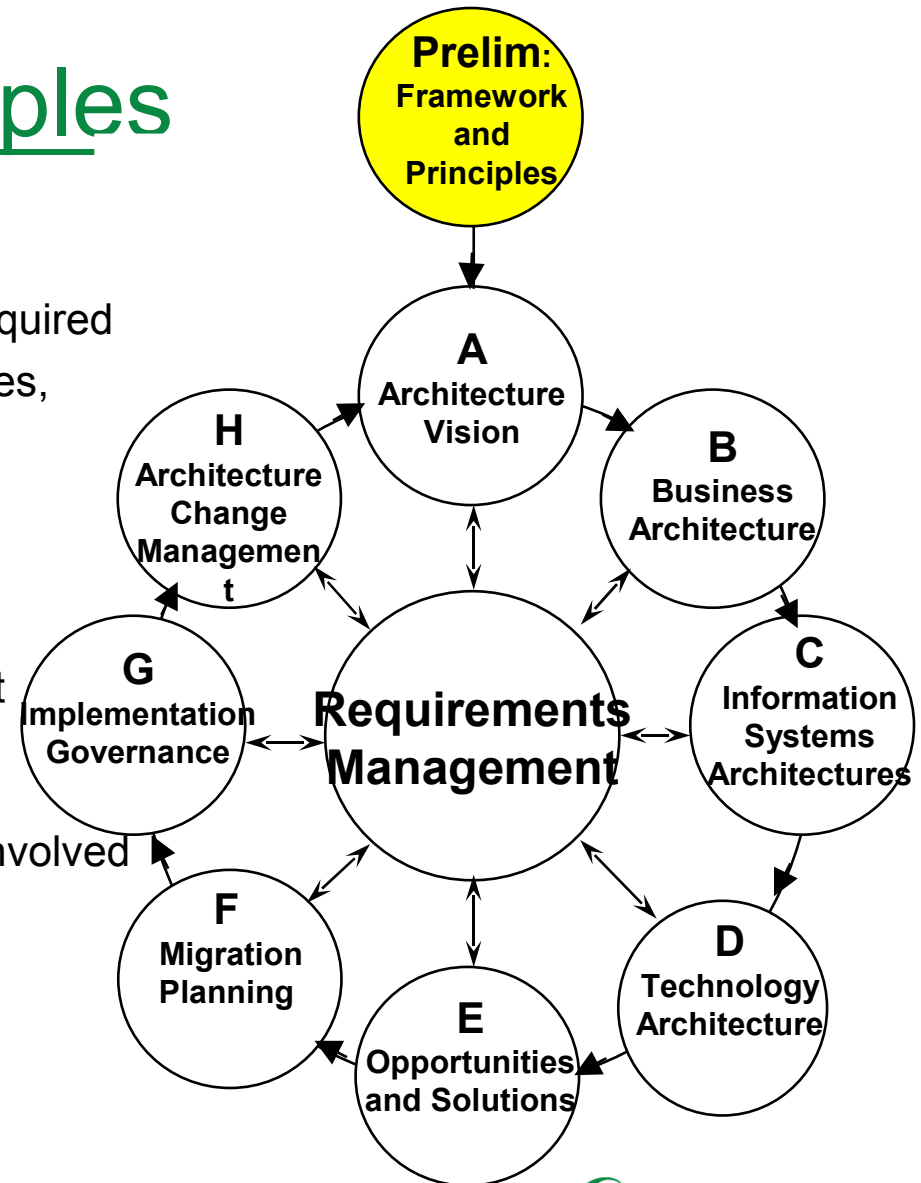# Preliminary:
Framework / Principles

❑ **Inputs**

- ▪ TOGAF ADM
- ▪ Other architecture framework(s), if required
- ▪ Business Strategy, Business Principles, Business Goals, Business Drivers
- ▪ IT Governance Strategy
- ▪ Architecture Principles

❑ **Steps**

- ▪ TOGAF ADM a generic method -- not practical to define specific steps for adapting.
- ▪ ADM Introduction discusses issues involved and gives general guidelines.

❑ **Outputs**

- ▪ Framework Definition
- ▪ Architecture Principles
- ▪ Restatement of Business Strategy, Principles, Goals, Drivers

Prelim: Framework and Principles

A — Architecture Vision
B — Business Architecture
C — Information Systems Architectures
D — Technology Architecture
E — Opportunities and Solutions
F — Migration Planning
G — Implementation Governance
H — Architecture Change Management

Requirements Management

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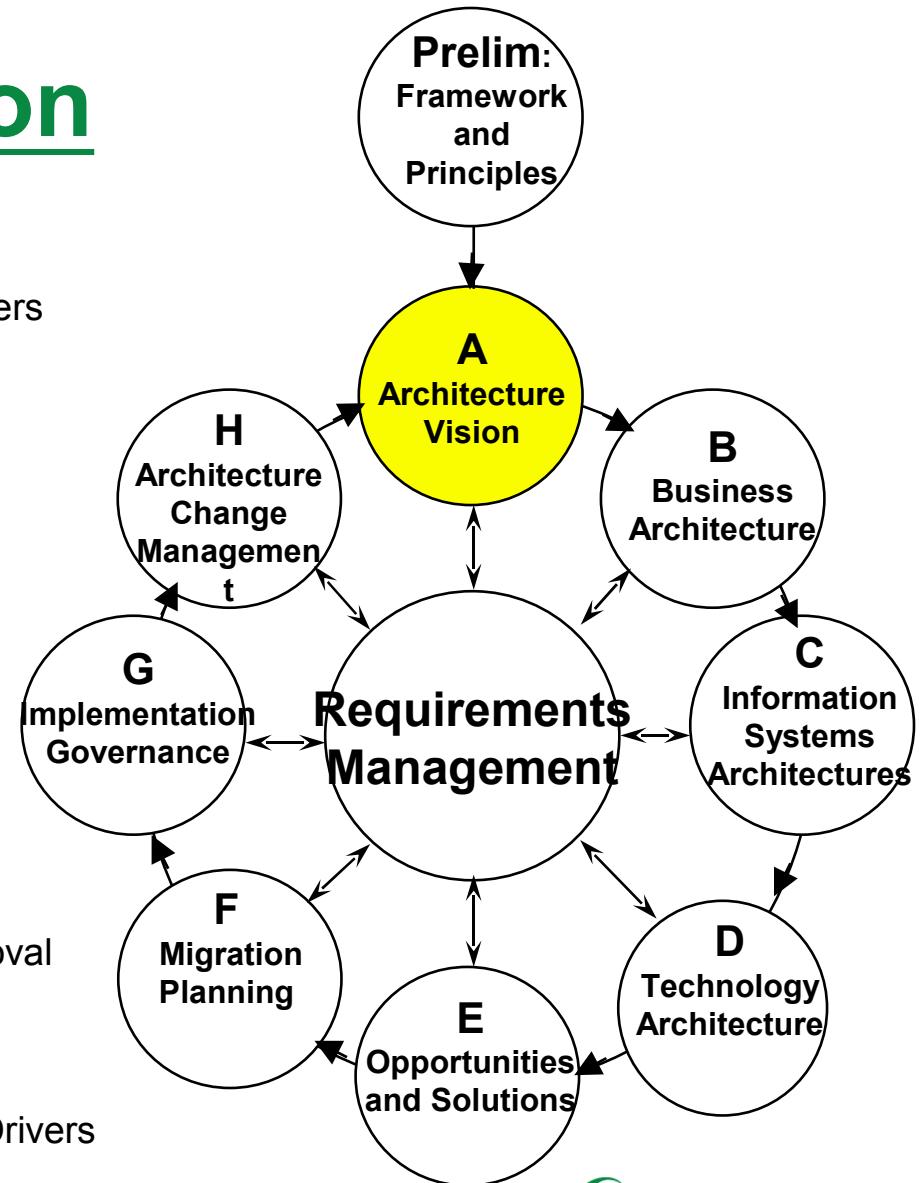THE *Open* GROUP

Phase A: Architecture Vision

□ **Inputs**
- Request for Architecture Work
- Business Strategy, Principles, Goals, Drivers
- Architecture Principles
- Enterprise Continuum - existing arch. documentation

□ **Steps**
- Project Establishment
- Business Principles, Goals and Drivers
- Architecture Principles.
- Project Scope
- Constraints.
- Stakeholders and concerns, Business Requirements, and Architecture Vision
- Statement of Architecture Work and Approval

□ **Outputs**
- Statement of Architecture Work
- Refined statements of Principles, Goals, Drivers
- Architecture Vision
- Business Scenario

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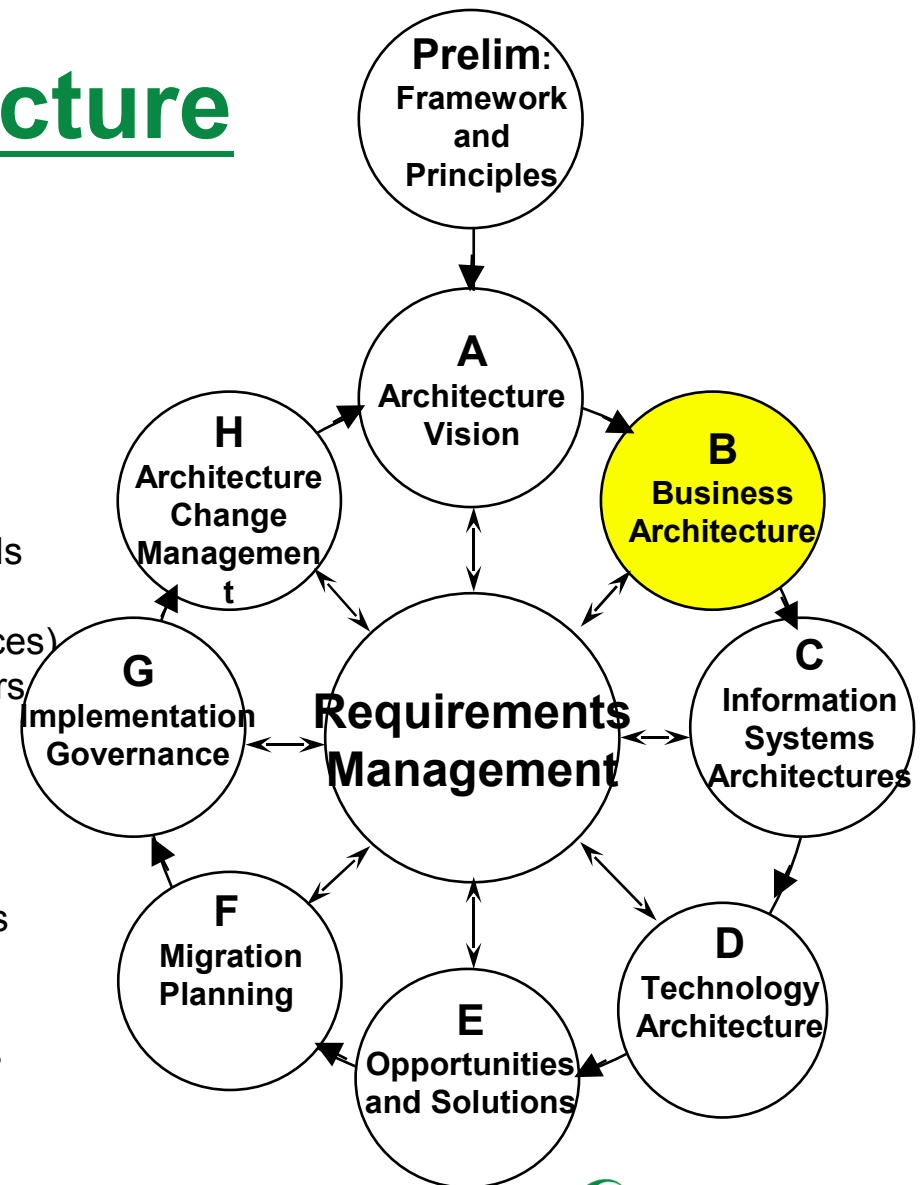
Phase B:
Business Architecture

❑ **Inputs**
- Request for Architecture Work
- Approved Statement of Architecture Work
- Refined Business Principles, Goals, Drivers
- Enterprise Continuum
- Architecture Vision / Business Scenario

❑ **Steps**
- Describe Baseline Business Architecture
- Identify Reference Models, Viewpoints, Tools
- Create Architecture Model(s)
- Select Building Blocks (e.g., business services)
- Formal Checkpoint Review with Stakeholders
- Complete Business Architecture
- Perform Gap Analysis, Report

❑ **Outputs**
- Statement of Architecture Work (updated)
- Validated Business Principles, goals, drivers
- Target Business Architecture (detailed)
- Business Baseline (detailed)
- Views addressing key stakeholder concerns
- Gap analysis results
- Tech. requirements (drivers for Tech. Architecture)
- Business Architecture Report
- Updated business requirements

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Phase C:
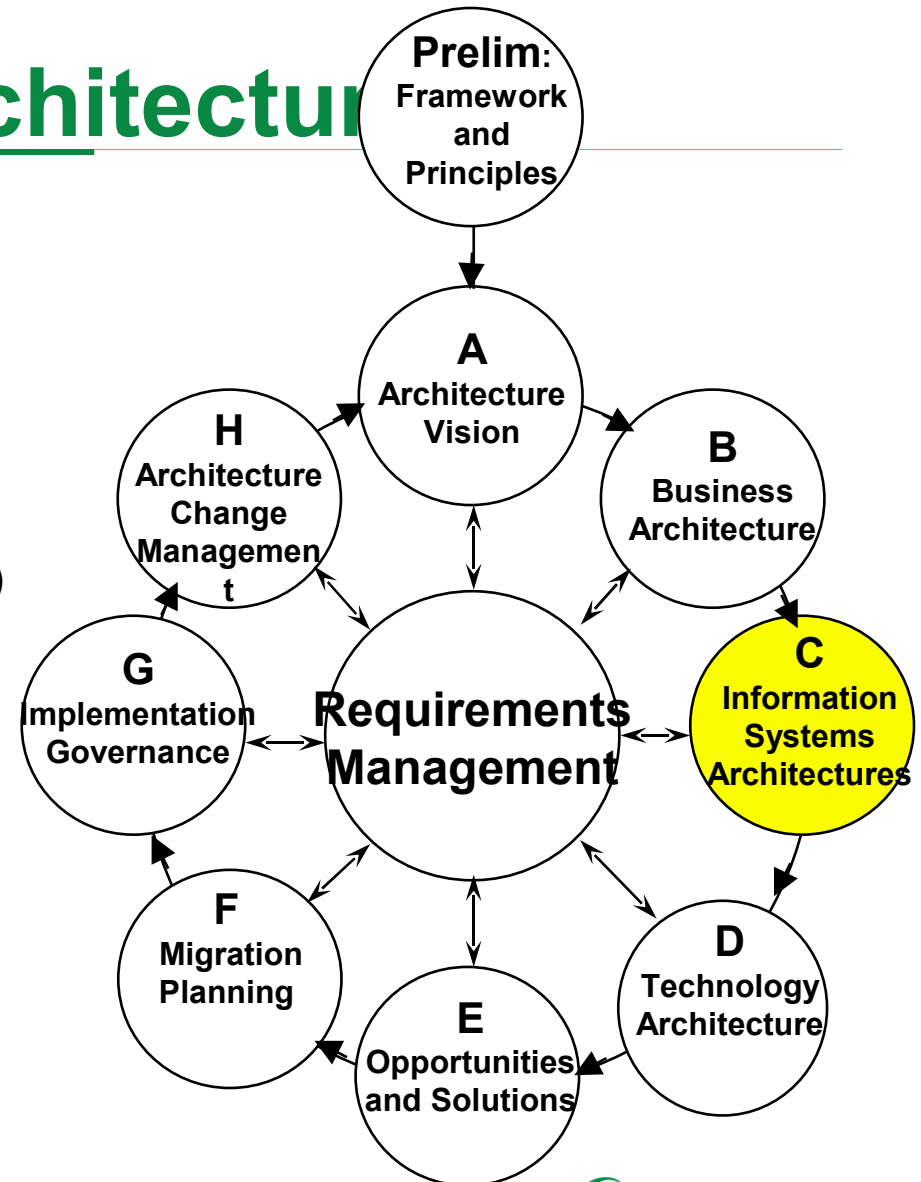# Info. Systems Architecture

- **Inputs**
  - Applications and Data Principles
  - Request for Architecture Work
  - Statement of Architecture Work
  - Architecture Vision
  - Business Baseline
  - Target Business Architecture
  - Relevant technical requirements
  - Gap analysis (from Business Architecture)
  - Re-usable building blocks

- **Steps (for Data and Applications Arch.)**
  - Describe Baseline Architecture
  - Identify Reference Models, Viewpoints, Tools
  - Create Architecture Model(s)
  - Select Building Blocks
  - Formal Checkpoint Review with Stakeholders
  - Review Qualitative Criteria
  - Complete Architecture Description
  - Conduct Checkpoint / Impact Analysis
  - Perform Gap Analysis, Report

- **Outputs**
  - Statement of Architecture Work (updated)
  - Target Data and Applications Architectures
  - Data and Applications Architecture Views
  - Data and Applications Architecture Reports
  - Gap analyses
  - Impact Analyses
  - Updated business requirements

Prelim: Framework and Principles

A Architecture Vision

B Business Architecture

C Information Systems Architectures

D Technology Architecture

E Opportunities and Solutions

F Migration Planning

G Implementation Governance

H Architecture Change Management

Requirements Management

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Phase D:
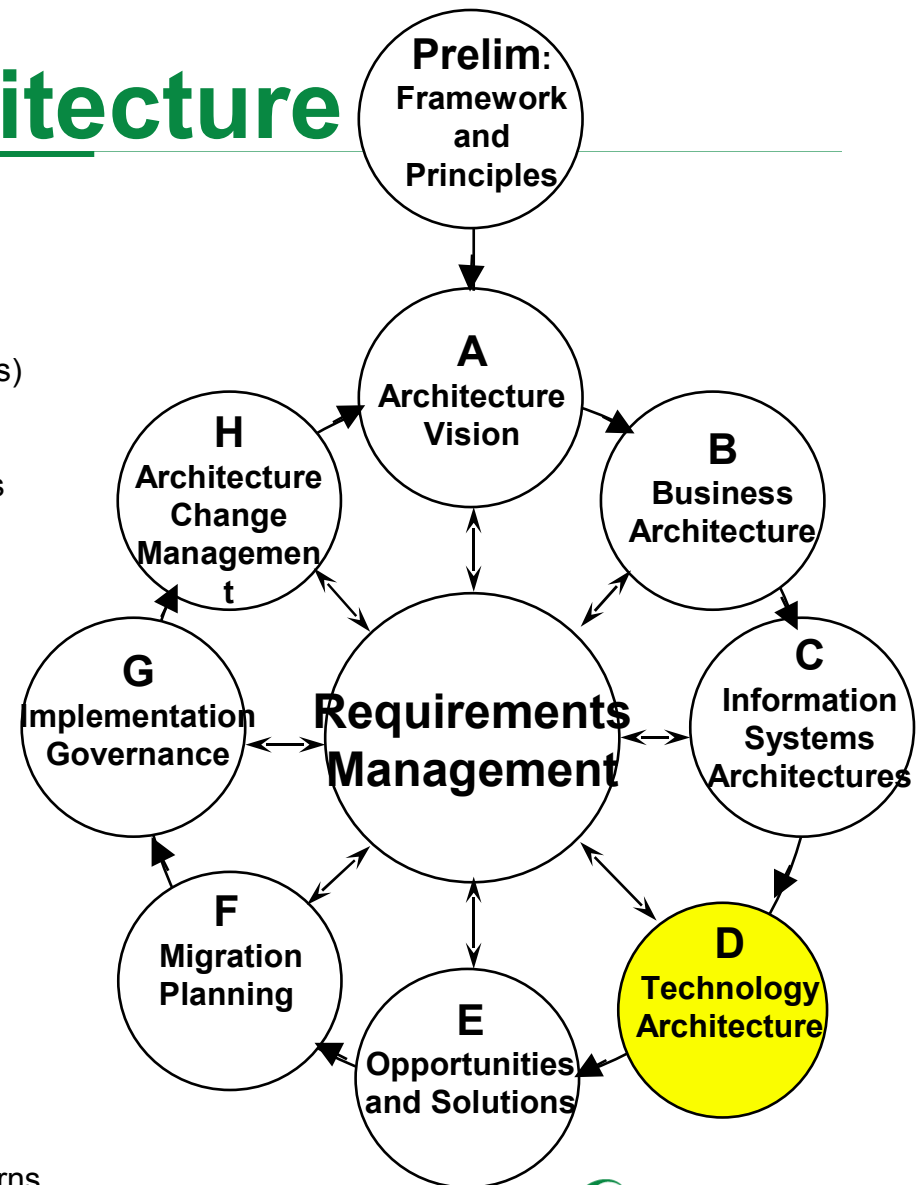# Technology Architecture

- **Inputs**
  - Technical Principles
  - Request for Architecture Work
  - Statement of Architecture Work
  - Architecture Vision
  - Relevant technical requirements (previous phases)
  - Gap analyses
  - Business, Data and Applications Baselines
  - Target Business, Data, Applications Architectures
  - Re-usable building blocks
- **Steps**
  - Describe Baseline Technology Architecture
  - Identify Reference Models, Viewpoints, Tools
  - Create Architecture Model(s)
  - Select services portfolio per building block
  - Confirm business goals and objectives being met
  - Determine criteria for specification selection
  - Complete Technology Architecture
  - Perform Gap Analysis, Report
- **Outputs**
  - Statement of Architecture Work (updated)
  - Technology Baseline
  - Technology Principles
  - Technology Architecture Report
  - Target Technology Architecture
  - Technology Architecture - gap report
  - Viewpoints / views addressing stakeholder concerns.

Prelim: Framework and Principles

A Architecture Vision

B Business Architecture

C Information Systems Architectures

D Technology Architecture

E Opportunities and Solutions

F Migration Planning

G Implementation Governance

H Architecture Change Management

Requirements Management

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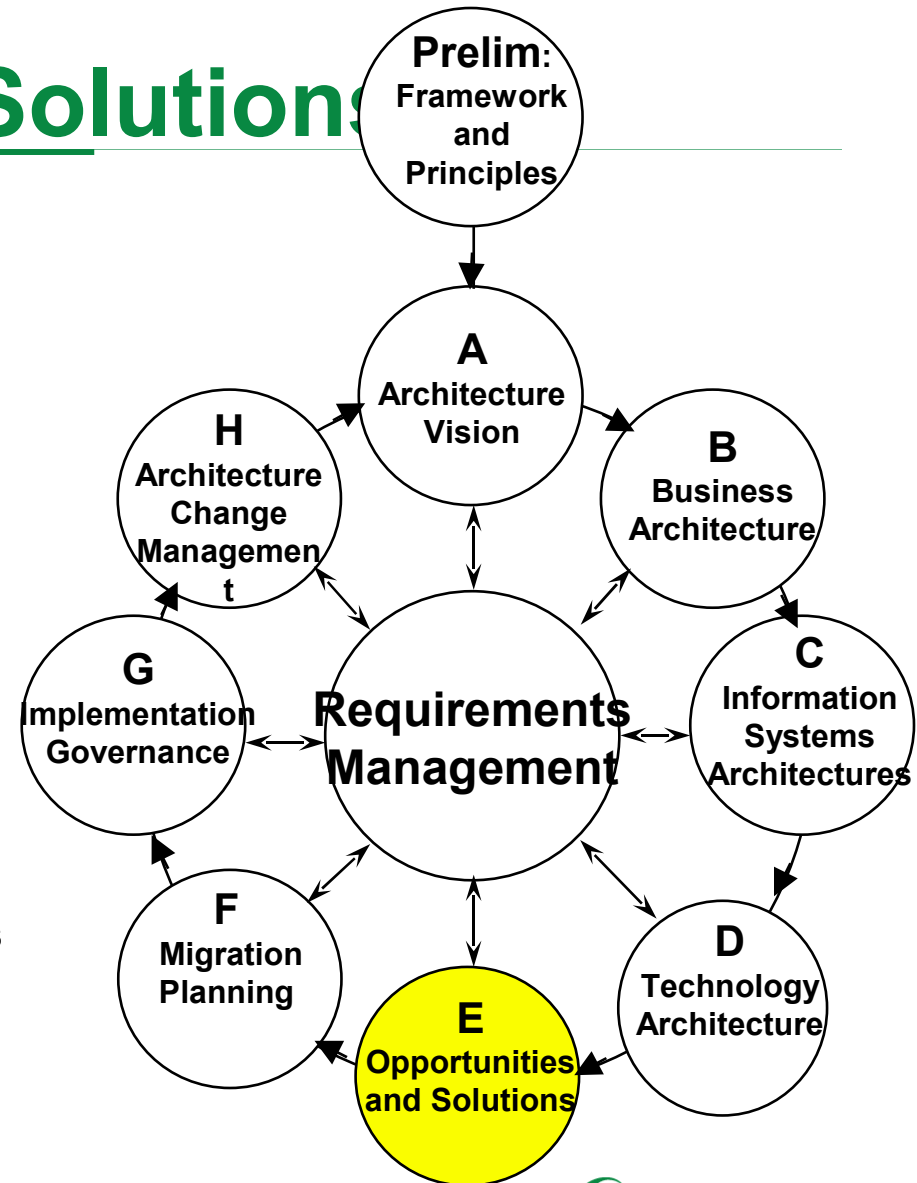# Phase E:
Opportunities & Solutions

□ **Inputs**
  ▪ Request for Architecture Work
  ▪ Statement of Architecture Work
  ▪ Business, Data, Applications, Technology Architectures
  ▪ Re-usable architecture building blocks
  ▪ Product information

□ **Steps**
  ▪ Identify business drivers constraining implementation sequence (cost reduction; service consolidation; etc.)
  ▪ Review gap analysis generated in Phase D.
  ▪ Brainstorm technical requirements
  ▪ Brainstorm co-existence, interoperability requirements
  ▪ Architecture assessment and gap analysis
  ▪ Identify major work packages; classify as new development, purchase opportunity, reuse of existing system.

□ **Outputs**
  ▪ Impact Analysis - Project list

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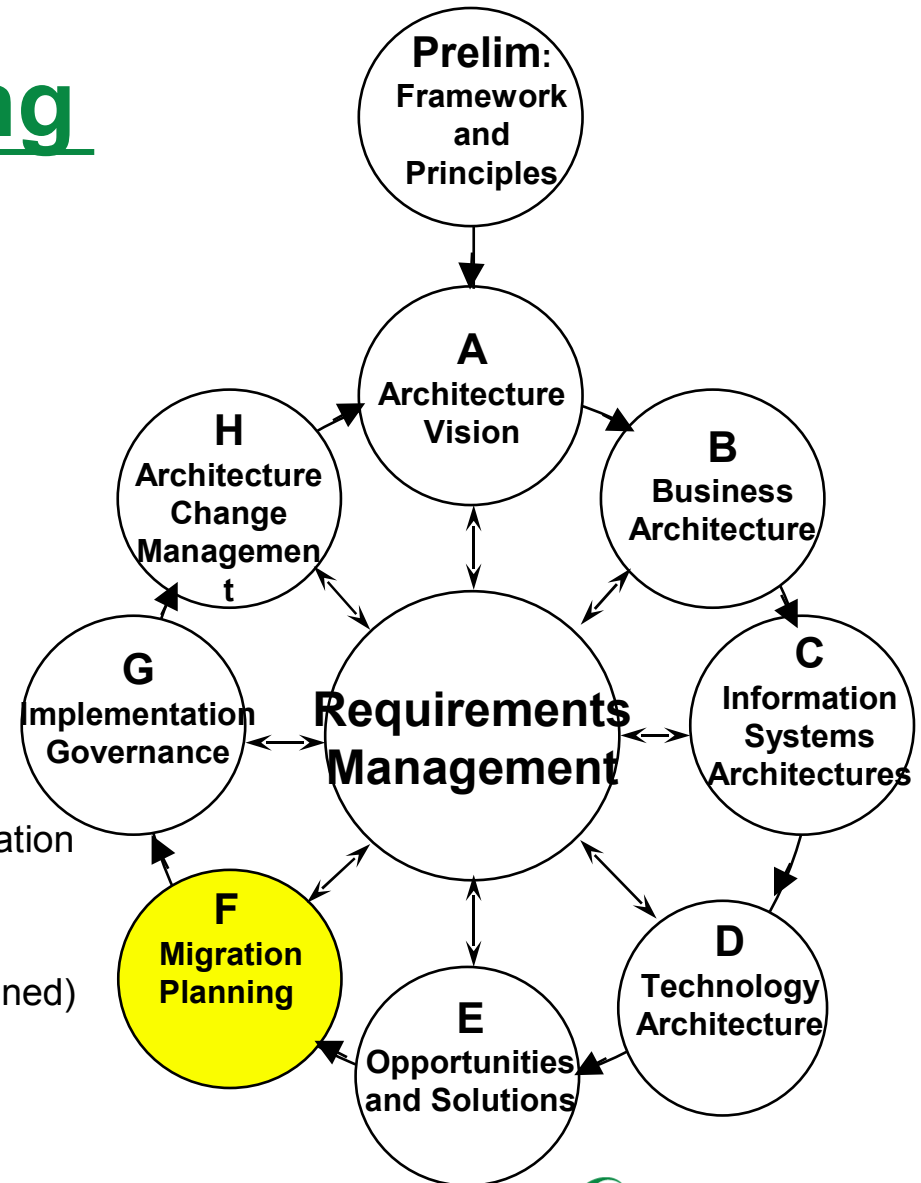
Phase F:
Migration Planning

- **Inputs**
  - Request for Architecture Work
  - Statement of Architecture Work
  - Business Architecture
  - Data Architecture
  - Applications Architecture
  - Technology Architecture
  - Impact Analysis - Project list
- **Steps**
  - Prioritize projects
  - Estimate resource requirements and availability
  - Perform cost / benefit assessment of migration projects
  - Perform risk assessment
  - Generate implementation roadmap (time-lined)
  - Document the Migration Plan
- **Outputs**
  - Impact Analysis - Migration Plan

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# Phase G: Implementation Governance

- ❑ **Inputs**
  - ▪ Request for Architecture Work
  - ▪ Statement of Architecture Work
  - ▪ Re-usable solutions building blocks
  - ▪ Impact Analysis - Migration Plan
- ❑ **Steps**
  - ▪ Formulate project recommendations; for each implementation project, document:
    - ▪ scope
    - ▪ strategic requirements (from architectural perspective)
    - ▪ change requests
    - ▪ rules for conformance
    - ▪ time-line requirements from roadmap
  - ▪ Architecture Contract – document, obtain developing and sponsoring organization signatures
  - ▪ On-going implementation governance and architecture compliance review.
- ❑ **Outputs**
  - ▪ Impact Analysis - Migration Plan

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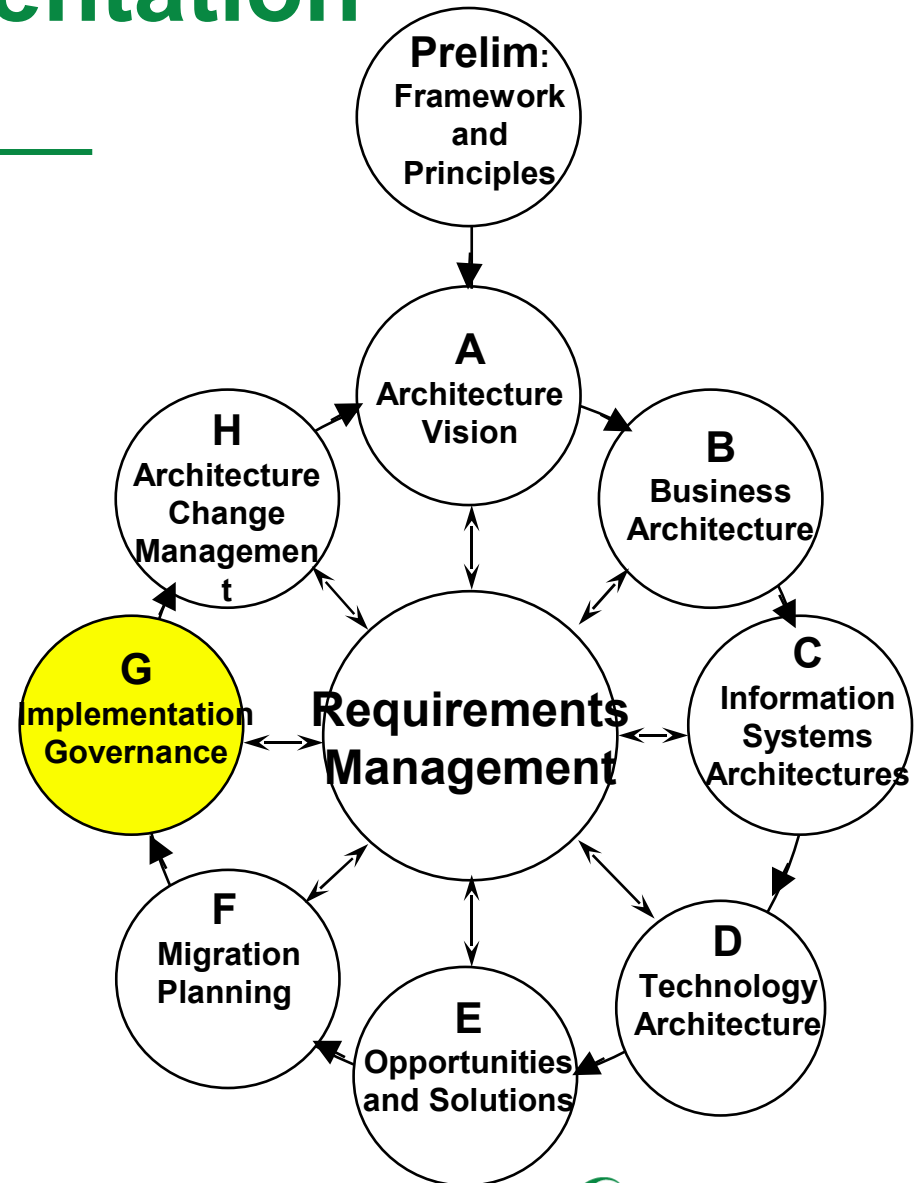
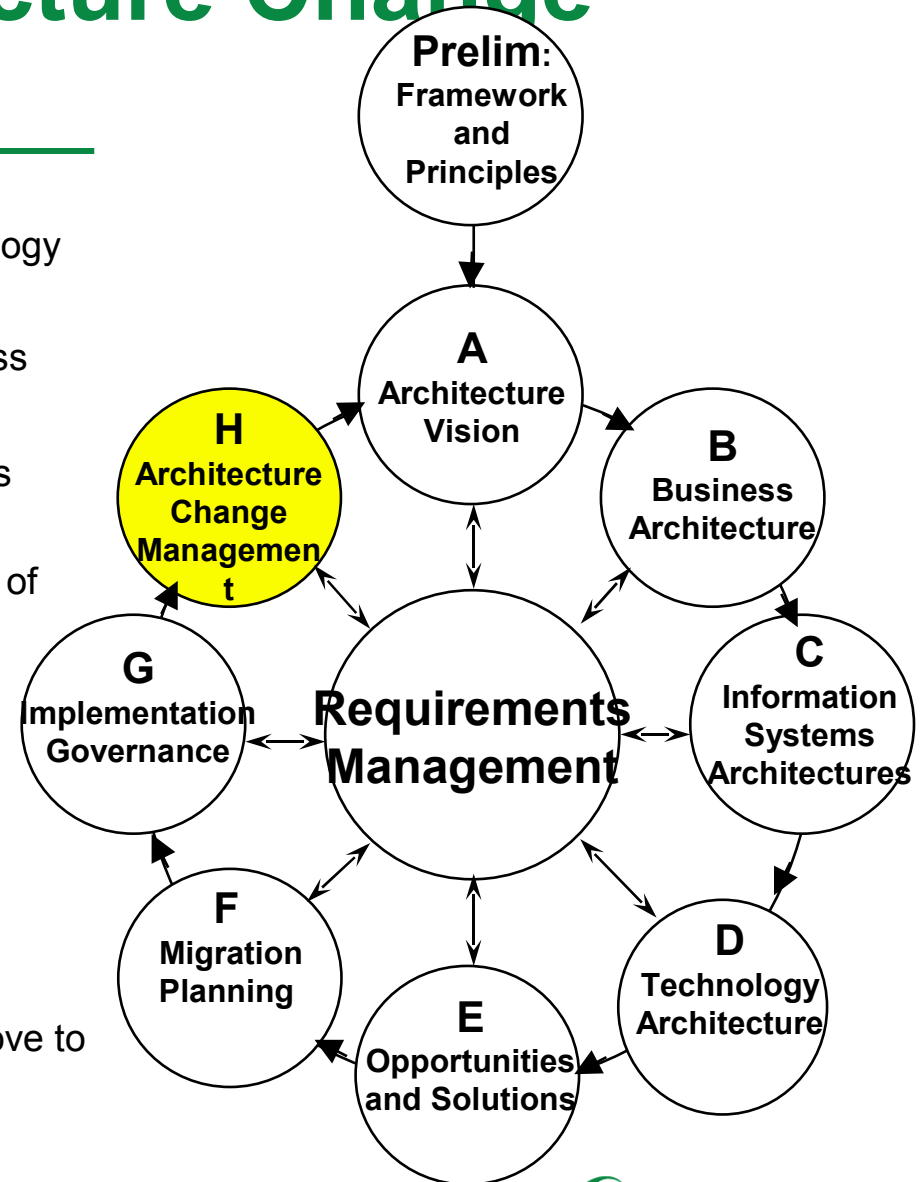# Phase H: Architecture Change Management

- ❑ **Inputs**
  - ▪ Request for Architecture Change - technology
  - ▪ New technology reports
  - ▪ Request for Architecture Change - business
- ❑ **Steps**
  - ▪ Ongoing monitoring of technology changes
  - ▪ Ongoing monitoring of business changes
  - ▪ Assessment of changes and development of position to act
  - ▪ Meeting of Architecture Board (or other governing council) to decide on handling changes
- ❑ **Outputs**
  - ▪ Architecture updates
  - ▪ Changes to Architecture Framework and Principles
  - ▪ New Request for Architecture Work (to move to another cycle)

Prelim: Framework and Principles

A Architecture Vision

B Business Architecture

H Architecture Change Management

C Information Systems Architectures

G Implementation Governance

Requirements Management

D Technology Architecture

F Migration Planning

E Opportunities and Solutions

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Requirements Management in the ADM

- The ADM is continuously driven by Requirements Management.

- A **dynamic** process, whereby requirements for enterprise architecture, and subsequent changes to requirements, are identified, stored, and fed into and out of relevant ADM phase(s).

- Requirements Management does **not** dispose of, address, or prioritize requirements
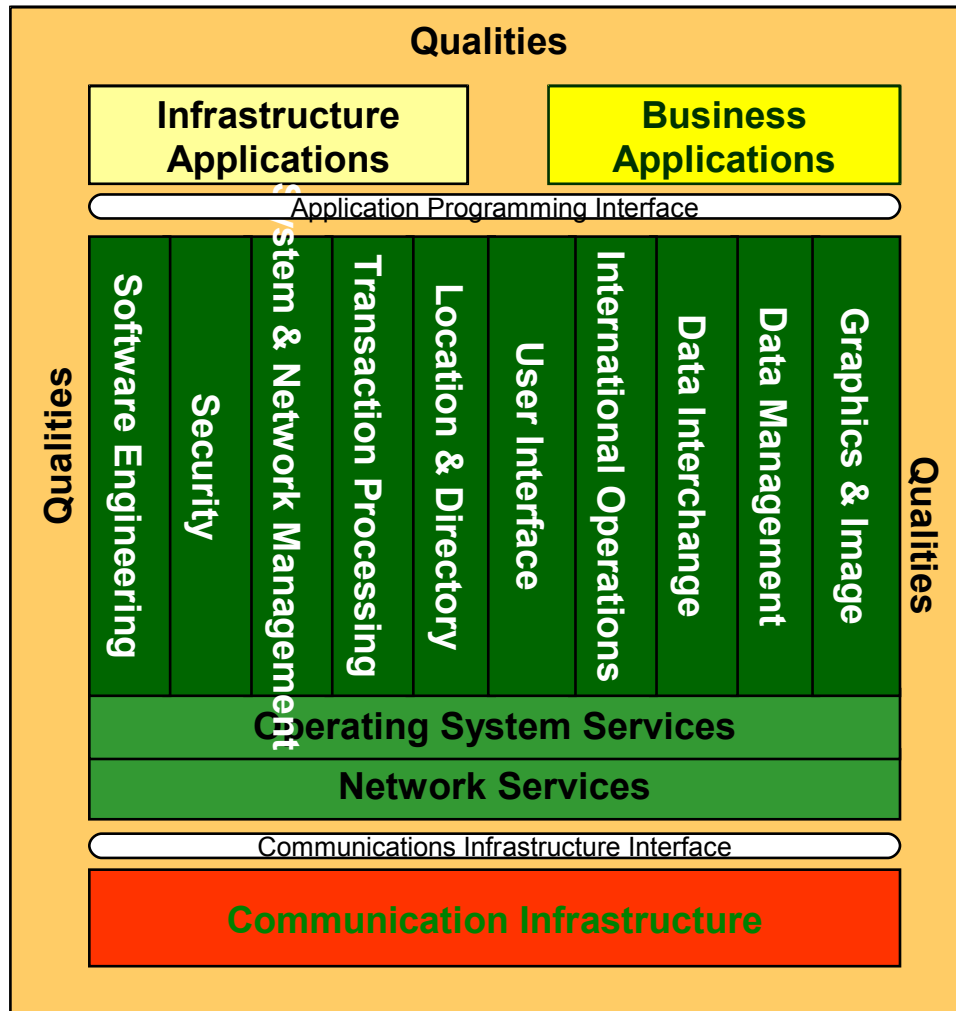
  - This done within relevant ADM phase(s).

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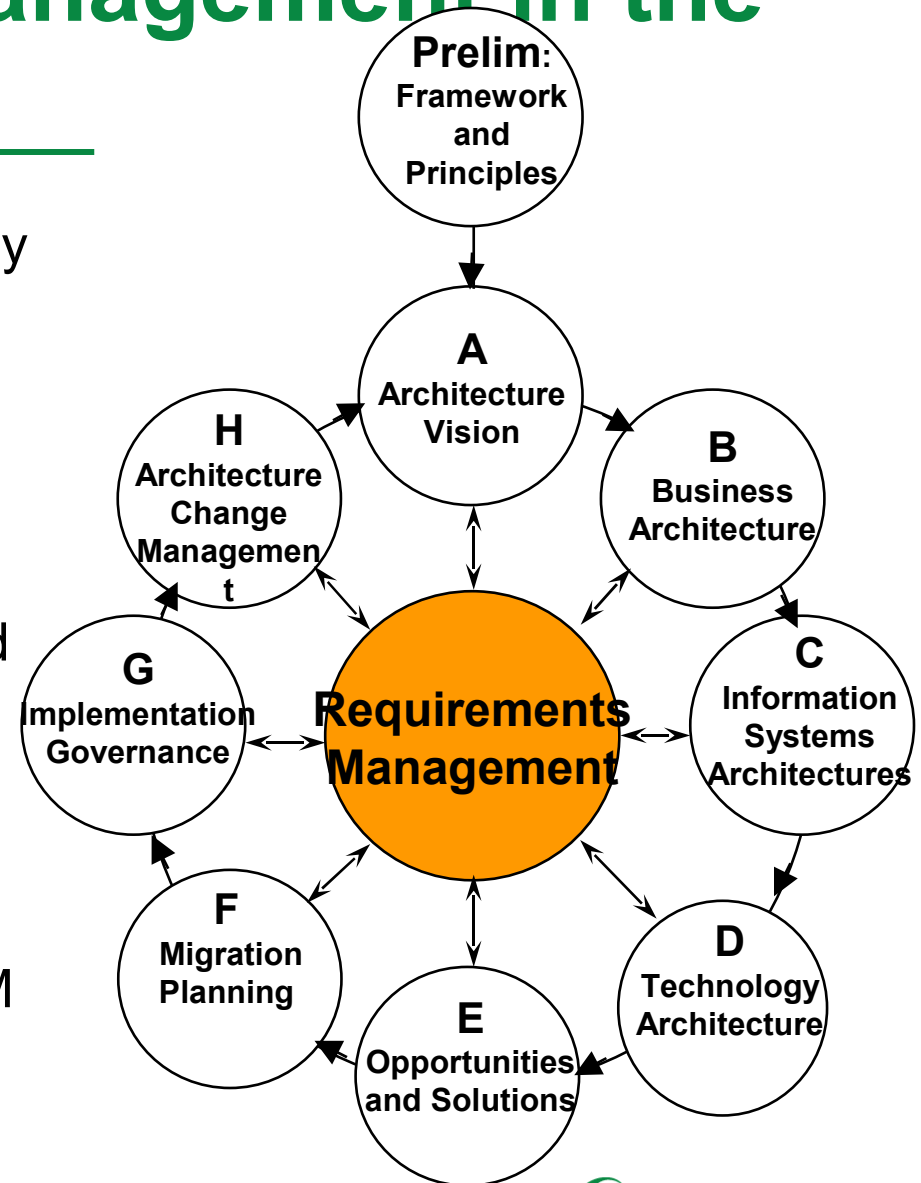
TOGAF 8 "Enterprise Edition" – Reference Models

Foundation Architecture: Technical Reference Model (TRM)

- ❑ Associated with detailed taxonomy of **services**
  - ▪ defines scope of each service category
- ❑ Identifies system-wide capabilities or **"qualities";** e.g.:
  - ▪ Internationalization
  - ▪ Security
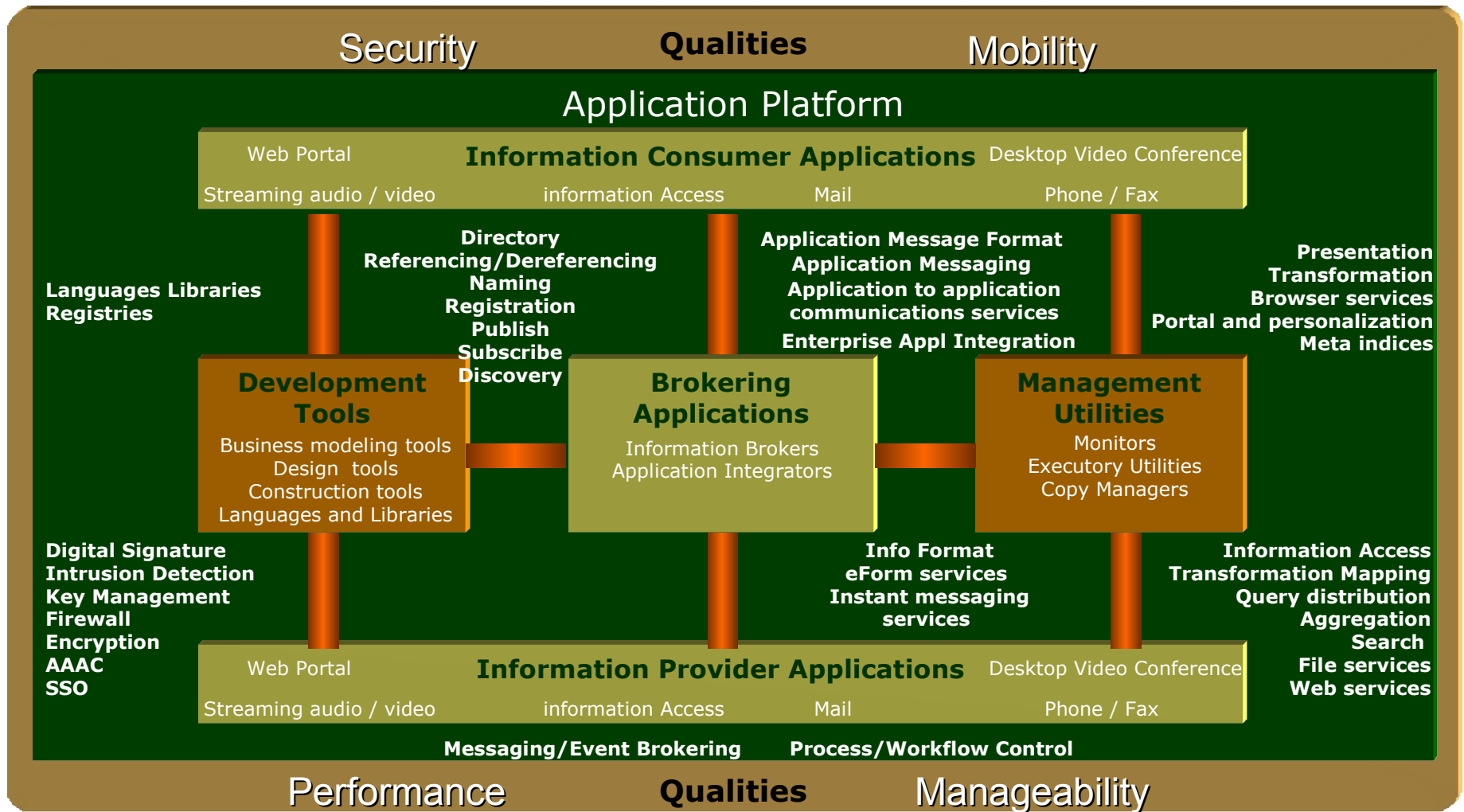 - ▪ Management

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Foundation Architecture: Standards Information Base (SIB)

- ❑ A database of open industry standards
- ❑ Content determined by Open Group consensus process
- ❑ Structured according to TOGAF Technical Reference Model taxonomy
- ❑ Available for public web access
  - ▪ http://www.db.opengroup.org/sib.htm
- ❑ Gateway to many linked resources

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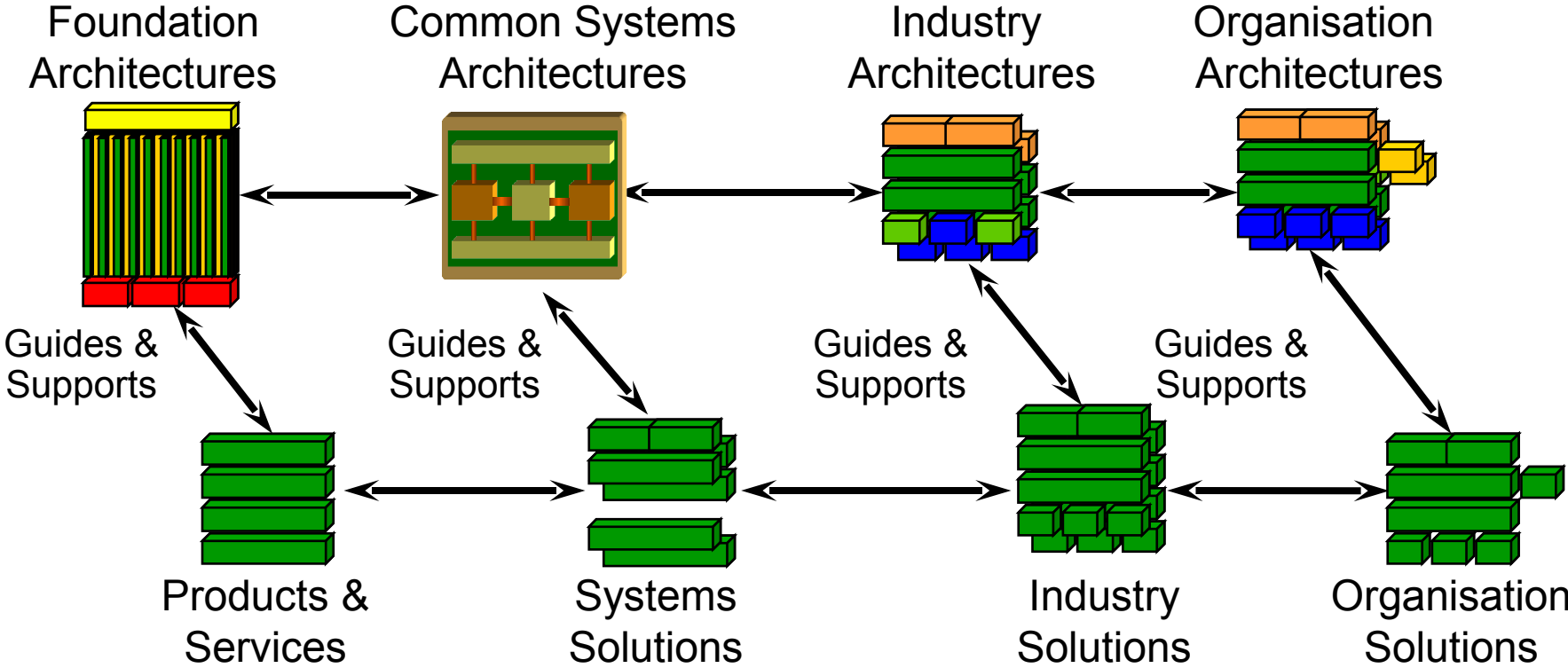# Integrated Information Infrastructure Reference Model

- ❑ A model of the key components for developing, managing, and operating an integrated information infrastructure.

  - ■ Supporting "Boundaryless Information Flow"

- ❑ A model of a set of applications that sit on top of an application platform.

- ❑ An expanded subset of the TOGAF Technical Reference Model, using different orientation.

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Integrated Information Infrastructure Reference Model – Detailed Model

Security   **Qualities**   Mobility

Application Platform

Information Consumer Applications

| Web Portal | | Desktop Video Conference |
| Streaming audio / video | information Access | Mail | Phone / Fax |

Directory
Referencing/Dereferencing
Naming
Registration
Publish
Subscribe
Discovery

Application Message Format
Application Messaging
Application to application
communications services
Enterprise Appl Integration

**Languages Libraries
Registries**

**Presentation
Transformation
Browser services
Portal and personalization
Meta indices**

Development Tools
Business modeling tools
Design tools
Construction tools
Languages and Libraries

Brokering Applications
Information Brokers
Application Integrators

Management Utilities
Monitors
Executory Utilities
Copy Managers

**Digital Signature
Intrusion Detection
Key Management
Firewall
Encryption
AAAC
SSO**

**Info Format
eForm services
Instant messaging
services**

**Information Access
Transformation Mapping
Query distribution
Aggregation
Search
File services
Web services**

Information Provider Applications

| Web Portal | | Desktop Video Conference |
| Streaming audio / video | information Access | Mail | Phone / Fax |

Messaging/Event Brokering   **Process/Workflow Control**

Performance   **Qualities**   Manageability

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The "Enterprise Continuum"

Architecture Continuum

Foundation Architectures	Common Systems Architectures	Industry Architectures	Organisation Architectures

Guides & Supports	Guides & Supports	Guides & Supports	Guides & Supports

Products & Services	Systems Solutions	Industry Solutions	Organisation Solutions

Solutions Continuum

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TOGAF 8 "Enterprise Edition" – Resource Base

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Resource Base

- **Architecture Board:** Guidelines for establishing and operating an Enterprise Architecture Board

- **Architecture Compliance:** Guidelines and checklists for ensuring project compliance to architecture

- **Architecture Contracts:** Guidelines for architecture contracts

- **Architecture Governance:** Arrangements for effective control of IT Architecture by enterprise management

- **Architecture Patterns:** Guidelines on architecture patterns

- **Architecture Principles:** Guidelines on developing Architecture Principles; and a generic set of Architecture Principles

- **Architecture Views:** Guidelines for developing viewpoints and views in architecture models

- **Building Blocks Example:** Example illustrating use of building blocks in architecture

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Resource Base (continued)

- **Business Process Domain Views:** A set of function views aligned with the business process structure of the enterprise

- **Business Scenarios:** A method for deriving business requirements for architecture and the implied technical requirements

- **Case Studies:** Real-life examples of TOGAF in use

- **Glossary**: Definitions of key terms

- **Other Architectures / Frameworks:** and relationship to TOGAF

- **Tools for Architecture Development:** Generic evaluation criteria for architecture tools

- **Zachman Framework mapping:** Mapping the TOGAF ADM to the Zachman Framework

TOGAF 8 - Recent Developments

- Hewlett-Packard's internal IT used TOGAF8 in successful merger with Compaq

- Raytheon integrating TOGAF8 into its REAP methodology

- Sun Microsystems incorporating TOGAF8 into a composite best-of-breed of EA frameworks

- TOGAF8 supported in Troux (Metis), ProForma (ProVision), Telelogic (Popkin) architecture tools

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TOGAF 8 Certification

- ❑ TOGAF8 Certification Program launched February 2004
- ❑ >1,400 TOGAF certified individuals to date around the world
- ❑ A vendor-neutral, global basis of certification to impose standards for TOGAF 8 within the industry

TOGAF 8 Certified   Architects trained in the use of TOGAF 8

TOGAF 8 Training   Training courses which instruct in TOGAF 8

TOGAF 8 Tool Support   Architecture tools which support TOGAF 8

TOGAF 8 Professional Services   Professional services offered to support TOGAF 8

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TOGAF 8 global, online testing

❑ Thomson Prometric now live……

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TOGAF 8 Study Guide

Available from Certified Trainers & Franchises
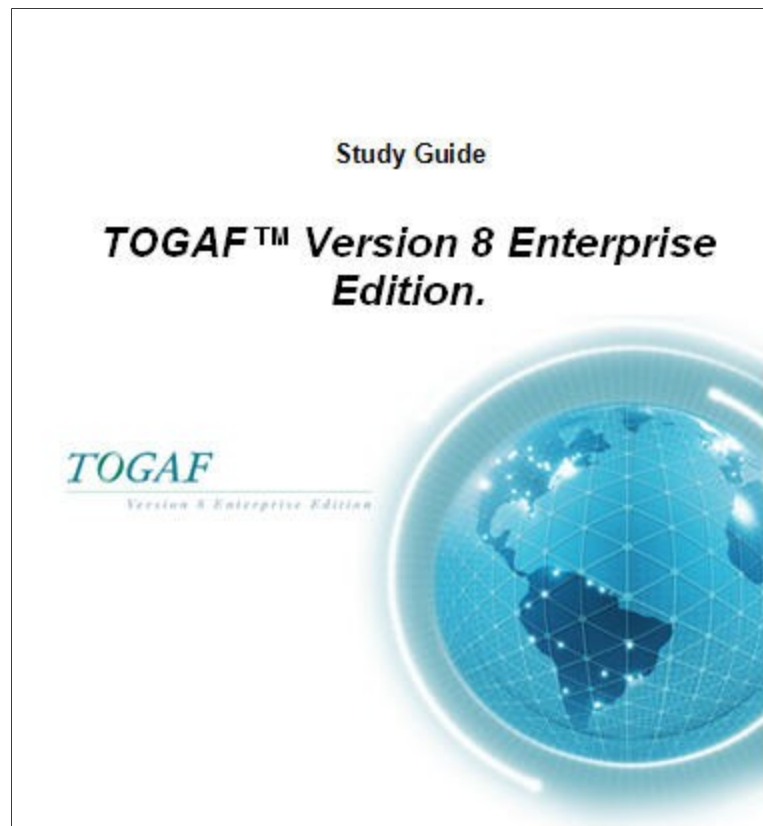
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TOGAF 8 Product & Service Showcase
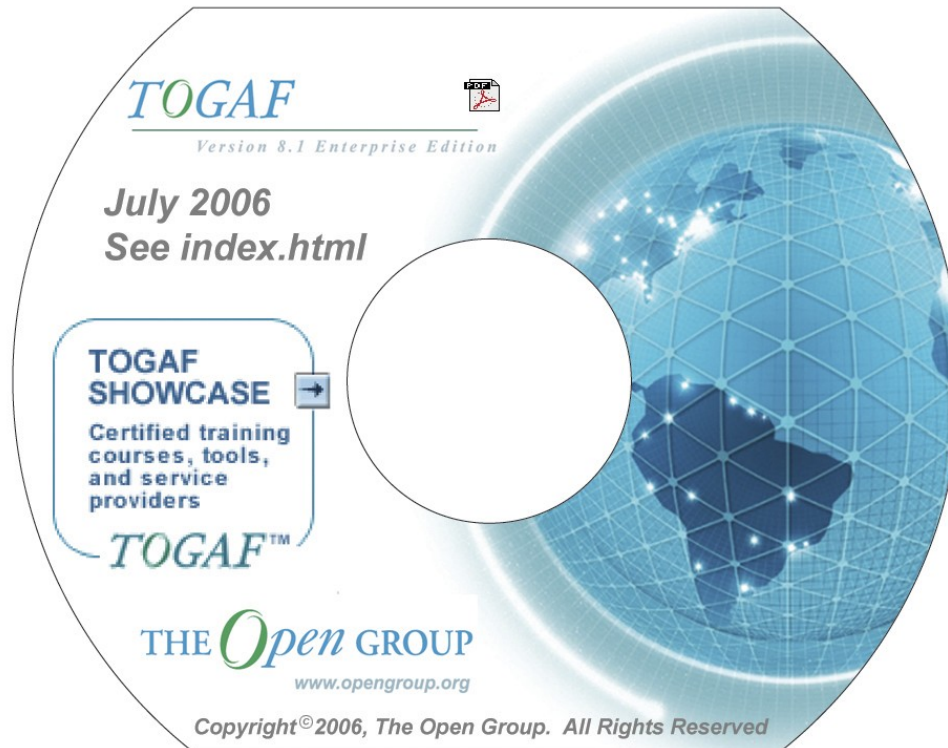
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TOGAF 8 Core Training Materials

❑ Licensed from The Open Group

❑ 4-day & 1-day versions

TOGAF

Version 8 Enterprise Edition

Personal Certification Course

A four-day taught course for:
· IT Architecture students and practitioners

A single-day course for:
· Senior managers (needing an overview)

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TOGAF and Other Frameworks / Bodies of Knowledge

- ❑ TOGAF8 already contains mapping to Zachman Framework

- ❑ Recent White Paper maps TOGAF to OMG's MDA modeling standards:
    - ▪ http://www.opengroup.org/architecture/wp/

- ❑ Near completion:
    - ▪ White Paper mapping TOGAF8 and DODAF
    - ▪ White Paper mapping TOGAF8 and COBIT4

- ❑ Agreement in principle to map TOGAF and ITIL

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TOGAF 8 Evolution – TOGAF 8.1.1

- A minor release to correct recognized deficiencies in TOGAF 8.1
  - No significant technical changes
  - No impact on TOGAF8 certification
  - All changes listed in a Technical Corrigendum, freely available from The Open Group Publications Catalog

- New web design and content structure
  - Structure aligns closely with TOGAF "The Book"

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TOGAF 8 "The Book"

- ❑ Published September 2005
- ❑ Professional graphics
- ❑ New "Look & Feel"
- ❑ 8.1.1 Corrigendum September 2006
  - ▪ No technical changes
  - ▪ Look & Feel of on-line document now aligned with "The Book"

2006 Edition (incorporating TOGAF 8.1.1)

TOGAF
Version 8.1 Enterprise Edition

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TOGAF 8 Summary

- An effective, industry standard framework and <u>method</u> for enterprise architecture.

- Complementary to, not competing with, other enterprise frameworks

- A repository of best practice
  - "Demystifies" architecture development

- A framework and method for achieving the "Boundaryless Information Flow" vision

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Plans for TOGAF Version 9

- ❑ Five domains:
    - ■ Architecture Development – developing an enterprise architecture.
    - ■ Business Transformation Planning – using enterprise architecture to drive a program of change throughout the enterprise
    - ■ Architecture Deployment – implementing the enterprise architecture and Transformation Plan.
    - ■ Architecture Value Realization - using enterprise architecture during normal operational services to realize the business benefits that were envisioned when the architecture was developed.
    - ■ Architecture Best Practice Management - managing and governing the enterprise architecture practice.

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Conclusions

❑ Adopt and use TOGAF
  - An effective, industry standard framework and method for enterprise architecture.
  - Vendor, tool, and technology neutral
  - Complementary to, not competing with, other frameworks

❑ Join and participate in the Architecture Forum
  - Worldwide forum for Architecture practitioners
  - Network with peers and industry experts
  - Contribute to / leverage work in progress
  - Help further development of Enterprise Architecture as a discipline and a profession

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For More Information . . .

- ❑ The Architecture Forum:
  - ▪ http://www.opengroup.org/architecture/

- ❑ Viewing TOGAF Version 8 on-line:
  - ▪ http://www.opengroup.org/architecture/togaf8-doc/arch/

- ❑ TOGAF Version 8 licensing and downloads:
  - ▪ http://www.opengroup.org/architecture/togaf8/index8.htm

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About The Open Group

Global Operation
Cross-Industry
Vendor Neutral
Technology Neutral

San Francisco,
Boston, UK, Tokyo
Regional chapters
50+ staff

Brings the key
constituencies together
in an open process

Industry Consortium
Not-for-profit operations
Established >20 years
~280 member organizations

Operates the industry's
premier
certification service

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Mission and Strategy

- Mission:
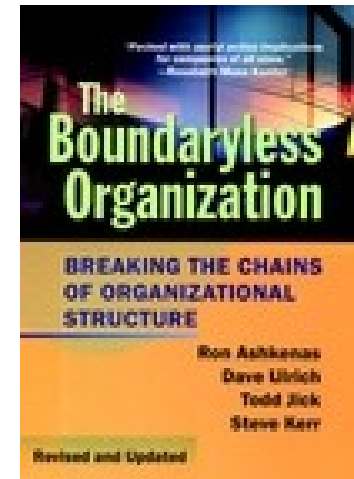 - Drive the creation of **Boundaryless Information Flow**
- Strategy:
  - Work with **customers** to capture, understand and address current and emerging requirements, establish policies and share best practices
  - Work with **suppliers**, **consortia** and **standards bodies** to develop consensus and facilitate interoperability, to evolve and integrate open specifications and open source technologies;
  - Develop and operate the IT industry's premier **certification service** and encourage procurement of certified products.

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The Open Group Vision - Boundaryless Information Flow™

- ❑ In 2002 The Open Group published a White Paper, championed by its Customer Council, entitled "The Interoperable Enterprise"
  http://www.opengroup.org/cio/iop/index.htm

- ❑ It addressed the issue of integrated information, and integrated access to that information, to support the many different business processes of the enterprise

  - ▪ External as well as internal - spanning key interactions with customers, suppliers, partners

- ❑ As industry after industry strived to break down the stovepipes, industry leaders like Jack Welch talked of the need for the "Boundaryless Organization".

- ❑ So The Open Group Customer Council called for information to flow in a "boundaryless" way also.

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Architecture - the driving force

- Architecture is critical to achieving Boundaryless Information Flow™:

  - As organizations strive to break down the boundaries within and between them, they increasingly recognize the need to take a "city planner" view of IT, as opposed to an application-by-application view….

  - ….which in turn is driving the demand for Enterprise Architects

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Context:
Enterprises, Architecture,
and Enterprise Architecture

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What is an Enterprise?

- A collection of organizations sharing a common set of goals, and/or a single bottom line; e.g.:
  - A government agency
  - A whole corporation
  - A division or department of a corporation
- Large corporations may comprise multiple enterprises.
- The "extended enterprise" includes partners, suppliers, and customers.

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What is an Architecture?

- The fundamental organization of something, embodied in
  - its components,
  - their relationships to each other and the environment, and
  - the principles governing its design and evolution.

Adapted from ANSI/IEEE Standard 1471-2000

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What is an Enterprise Architecture? (1)

- ❑ The vision, principles, standards and processes that guide the purchase, design and deployment of technology within an enterprise.

- ❑ Describes the interrelationships between business processes, information, applications, and underlying infrastructure for that enterprise.

- ❑ Provides best practices for technology purchase, design and deployment.

- ❑ Governs adherence to an organization's technology strategy and provides a managed environment for the introduction of new technology.

Serono International

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What is an Enterprise Architecture? (2)

- TOGAF 8 defines it as four related types of architecture….:
  - Business architecture
  - Data or information architecture
  - Application architecture
  - Technology architecture
- ….covering the components of an enterprise
  - organizations, business processes, humans, data, applications, technology, ….etc.
- ….where "enterprise" means enterprise-wide, not everything in the enterprise…
  - An enterprise architecture effort must address a specific problem, not all problems at once!

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Why Enterprise Architecture? (Internal)

- ❑ Effective management and exploitation of information through IT is key to business success
- ❑ Good information management = competitive advantage
- ❑ Current IT systems do not really meet the needs of business
  - ▪ Fragmented, duplicated
  - ▪ Poorly understood
  - ▪ Not responsive to change
- ❑ Investment in Information Technology
  - ▪ Focussed on system maintenance
  - ▪ Tactical developments rather than a strategic plan

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Why Enterprise Architecture? (External)

- ❑ Laws and regulations
  - ▪ Clinger-Cohen Act (US Information Technology Management Reform Act 1996)
  - ▪ EU Directives on the Award of Public Contracts
  - ▪ Sarbanes-Oxley
- ❑ Greater publicity to failures
- ❑ Increase in litigation
- ❑ Audit requirements

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