

Module Objectives

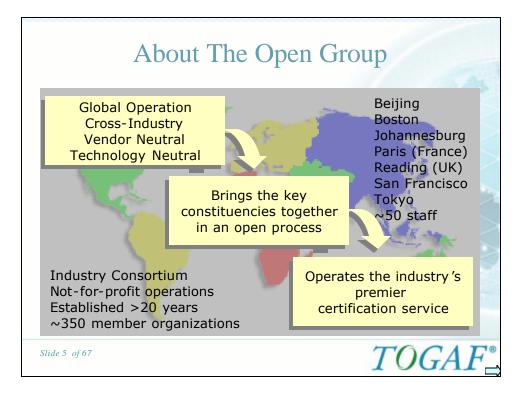
- To provide a management overview of TOGAF 9
 - The Open Group
 - The Architecture Forum
 - Why enterprise architecture
 - Why a framework
 - TOGAF 9
 - TOGAF 9 Certification
 - Summary

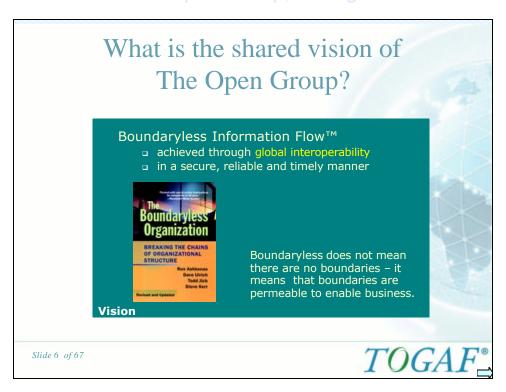
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Agenda • The Open Group • The Architecture Forum • Why Enterprise Architecture • Why a Framework • TOGAF 9 • TOGAF 9 Certification • Summary Slide 4 of 67





How Important...

- Not having Boundaryless Information Flow where systems interoperate, i.e. easily exchange information and use that information to improve operations, is causing organizations real pain *
 - 100s of millions in lost opportunities
 - Billions spent to make systems interoperate or to recover from mistakes
 - The risks are not only financial but deal with lost lives
 - Hospitals, 911/999 systems, Critical infrastructure, Air Traffic Control...

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What is The Open Group's role?

Customers

- Articulate current and emerging requirements, establish policies, and share best practices
- Provide feedback on deliverables

Suppliers

 Develop consensus to evolve and integrate specifications and open source technologies and deliver open standards

Other consortia and standards bodies

 Collaborate openly when it is in the best interest of their and our members or the industry generally, and share information freely

Staff

- Support the work of the members
- Offer a comprehensive set of services to enhance the operational efficiency of other consortia; and
- Develop and operate the industry's premier certification service and encouraging the market adoption of certified products and people

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^{*} respondents to survey taken at Open Group conference

Activities

- · Board work groups
 - IT Architect Certification
 - IT Specialist Certification
- Councils
- Customer Council, Supplier Council
- Member Forums
 - Architecture ArchiMate®
 - Enterprise Management, Platform
 - Real Time & Embedded, Security and Identity Management
 - Trusted Technology Forum, Jericho Forum
- Work Groups
 - Business Architecture
 - Cloud Computing
 - Quantum Lifecycle
 - Semantic Interoperability, including Universal Dat (UDEF)
 - Servicé Oriented Architecture (SOA)



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Forums/Work Areas of The Open Group

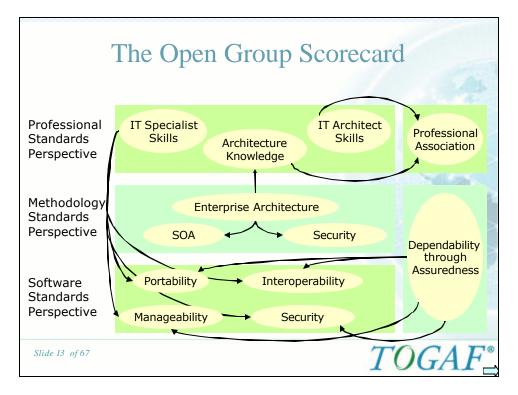
- Meeting points for Suppliers and Buyers
- Each Forum is effectively an autonomous consortium operating within The Open Group
 - Direction determined by members
 - Outputs approved by members
 - Must obey some rules to respect anti-trust legislation
- Forums initiate new areas of work, often in partnership with other Forums
 - ...leading to industry standards
 - ...leading to certification programs based on those standards

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Architecture Forum – Vision

- · An effective open framework and method for architecture
- Architecture as a professional discipline
- · Adequate "Commercial Off-The-Shelf" architecture tools

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Stakeholders and Value

- Customer Architects
 - reduced time, cost, risk
- Tools Vendors
 - bigger market, bigger market share
- IT Solution Vendors
 - greater cost-efficiency
- Integrators
 - greater cost-efficiency, better service
- Academic /Research Organizations
 - funding support

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What is an Enterprise?

- A collection of organizations that share a common set of goals
 - Government agency
 - Part of a corporation
 - Corporation
- Large corporations may comprise multiple enterprises
- May be an "extended enterprise" including partners, suppliers and customers

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What is an Architecture?



- An Architecture is 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 Enterprise Architecture?



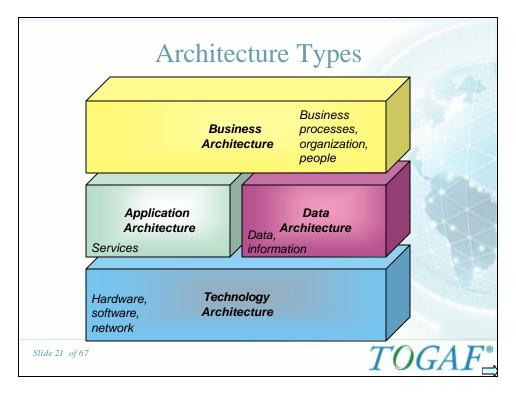
[1] MIT Center for Information Systems Research [2] SearchCIO.com

Enterprise Architecture is:

- The organizing logic for business processes and IT infrastructure reflecting the integration and standardization requirements of the firm's operating model.[1]
- A conceptual blueprint that defines the structure and operation of an organization. The intent of an enterprise architecture is to determine how an organization can most effectively achieve its current and future objectives. [2]

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Why Enterprise Architecture?

- 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?

- Two key reasons why you need an enterprise architecture:
 - Critical to business survival and success
 - Enables managed innovation within the enterprise

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Pressure to develop Enterprise Architecture

- · Laws and regulations
 - Clinger-Cohen Act (US Information Technology Management Reform Act 1996)
 - EU Directives on the Award of Public Contracts
 - Sarbanes-Oxley
- More extended enterprises
- More co-operative IT operations
- · Greater publicity to failures
- Increase in litigation
- Audit requirements

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Business Benefits of Enterprise Architecture

- It helps an organization achieve its business strategy
- Faster time to market for new innovations and capabilities
- More consistent business processes and information across business units
- More reliability and security, less risk

Source: "Why Enterprise Architecture Matters?", The Open Group White Paper, W076

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IT Benefits of Enterprise Architecture

- Better traceability of IT costs
- Lower IT costs design, buy, operate, support, change
- Faster design and development
- Less complexity
- · Less IT risk

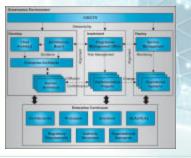
Source: "Why Enterprise Architecture Matters?", The Open Group White Paper, W076

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The Importance of Governance

- An Enterprise Architecture is only as good as the decision making framework that is established around it → "governance" framework
- The Governance Framework depends on
 - Clear authority structure
 - The right participants



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What do we mean by Governance?

- The way in which decisions are made
- Who is responsible?
- Who is involved?
- Who is accountable?

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What is an Architecture Framework?

- An architecture framework is a toolkit which can be used for developing a broad range of different architectures.
- It should describe a method for designing an information system in terms of a set of building blocks, and for showing how the building blocks fit together.
- It should contain a set of tools and provide a common vocabulary.
- It should also include a list of recommended standards and compliant products that can be used to implement the building blocks.

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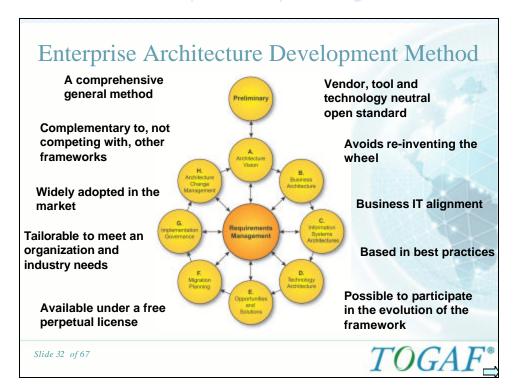


The Value of a Framework

- Provides a practical starting point for an Architecture Project
 - Avoids the initial panic when the scale of the task becomes apparent
 - Systematic "Codified common sense"
 - Captures what others have found to work in real life
 - Contains a Baseline set of resources for reuse

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TOGAF Origins

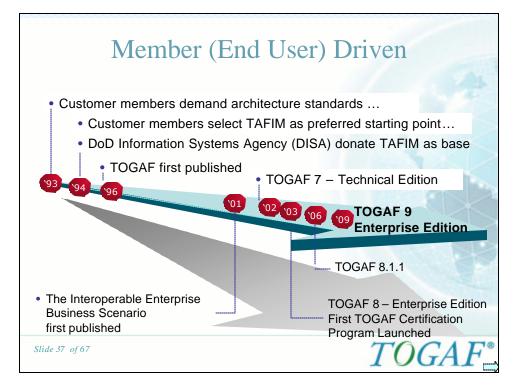
- A <u>customer</u> initiative
- A framework, not an architecture
 - A generic framework for developing architectures to meet different business needs
 - Not a "one-size-fits-all" architecture
- Originally based on TAFIM (U.S. DoD)

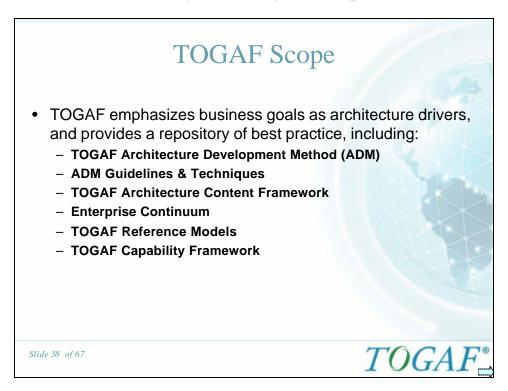
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| | | F Development |
|------|-----------------|--|
| 1994 | Requirement | Proof of need |
| 1995 | TOGAF Version 1 | Proof of concept |
| 1996 | TOGAF Version 2 | Proof of application |
| 1997 | TOGAF Version 3 | Relevance to practical architectures (building blocks) |
| 1998 | TOGAF Version 4 | Enterprise Continuum (TOGAF in context) |
| 1999 | TOGAF Version 5 | Business Scenarios (architecture requirements) |

| | IUGAF | Development |
|------|---------------------|--|
| 2000 | TOGAF Version 6 | Architecture Views (IEEE Std 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 | Technical Corrigendum 1 applied |
| 2009 | TOGAF Version 9 | Evolutionary restructure; Architecture Content Framework |



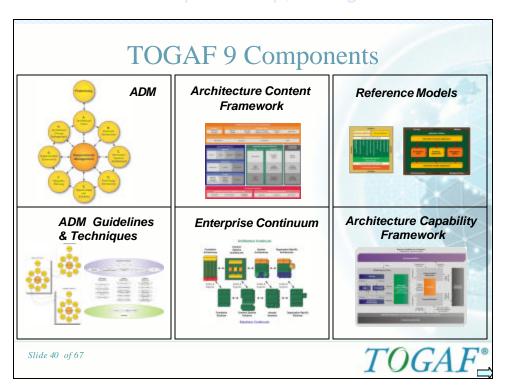


TOGAF Goals

- Long-term:
 - An industry standard, generic enterprise architecture method....
 -usable on its own or in conjunction with frameworks having products relevant/specific to particular sectors.
 - Several frameworks have mind share:
 - Zachman, Spewak, DoD Framework, FEAF, TEAF, ...
 - Almost all focus on products, not method
 - TOGAF and.... (not TOGAF or....)
- Version 9:
 - An evolution from TOGAF 8.1.1. Closer alignment with the business. Restructuring for ease of use. Overall structure and core method for enterprise architecture that can be filled out in future years.

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| | TOGAF 9 Specification | |
|----------------|---|-------|
| | Part I - Introduction | |
| | Preface, Executive Overview, Core Concepts, Definitions and Release Notes | |
| | Part II - Architecture Development Method | |
| | Introduction to ADM ADM Phase Narratives | |
| | Part III - ADM Guidelines and Techniques | |
| | Guidelines for Adapting the ADM Process | |
| | Techniques for Architecture Development | |
| | Part IV – Architecture Content Framework | |
| | Architecture Content Metamodel | |
| | Architectural Artifacts | |
| | Architecture Deliverables | |
| | Building Blocks Part V – Enterprise Continuum and Tools | |
| | Enterprise Continuum Enterprise Continuum | |
| | Architecture Partitioning | |
| | Architecture Repository | |
| | Tools for Architecture Development | |
| | Part VI - TOGAF Reference Models | |
| | Foundation Architecture: Technical Reference Model | |
| | Integrated Information Infrastructure Reference Model | |
| | Part VII - Architecture Capability Framework | |
| | Architecture Board | |
| | Architecture Compliance | |
| | Architecture Contracts | |
| | Architecture Governance | |
| | Architecture Maturity Models | |
| | Architecture Skills Framework | |
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TOGAF 9 Components

- Architecture Development Method (ADM)
 - An iterative sequence of steps to develop an enterprise-wide architecture
- ADM Guidelines and Techniques
 - Guidelines and techniques to support the application of the ADM
- Architecture Content Framework
 - A detailed model of architectural work products, including deliverables, artifacts within deliverables, and the Architecture Building Blocks (ABBs) that deliverables represent.

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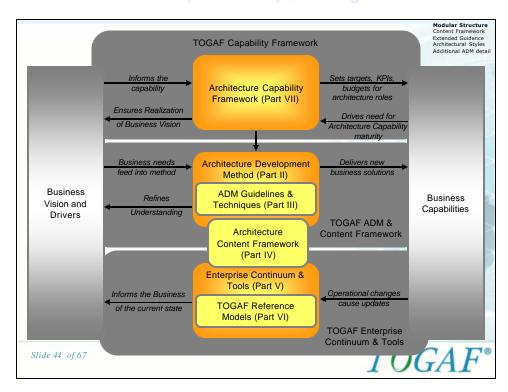


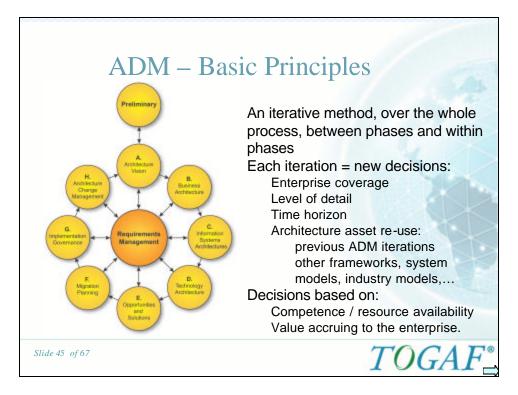
TOGAF 9 Components

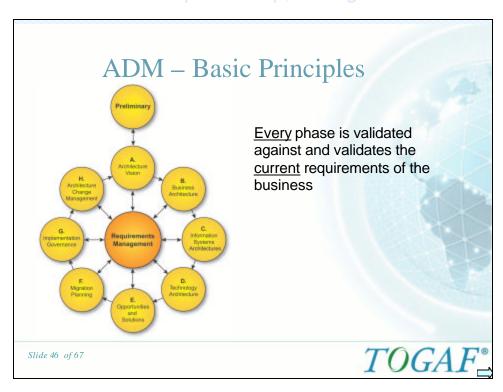
- The Enterprise Continuum
 - A model for structuring a virtual repository and methods for classifying architecture and solution artifacts
- TOGAF Reference Models:
 - The TOGAF Technical Reference Model (TRM)
 - The Integrated Information Infrastructure Model (III-RM).
- The Architecture Capability Framework
 - A structured definition of the organizations, skills, roles and responsibilities to establish and operate an Enterprise Architecture.

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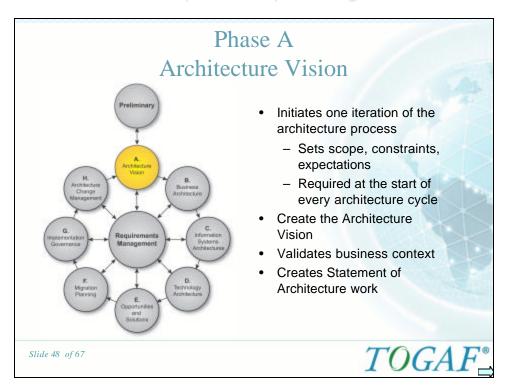


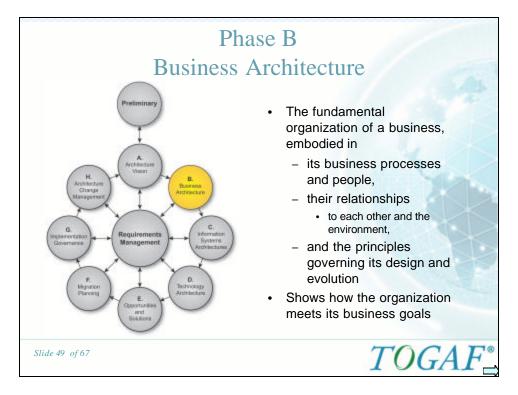


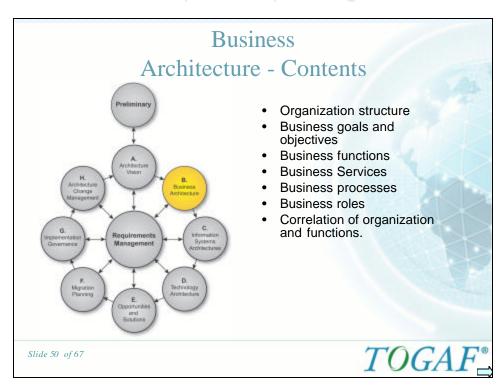


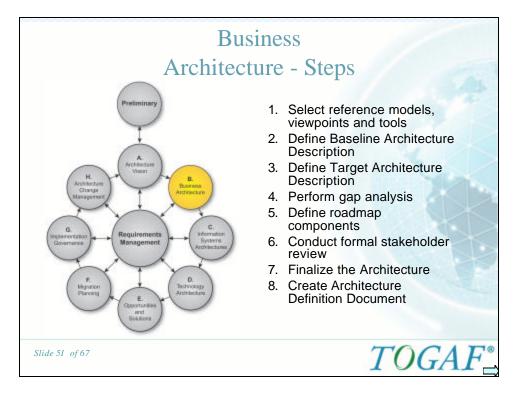


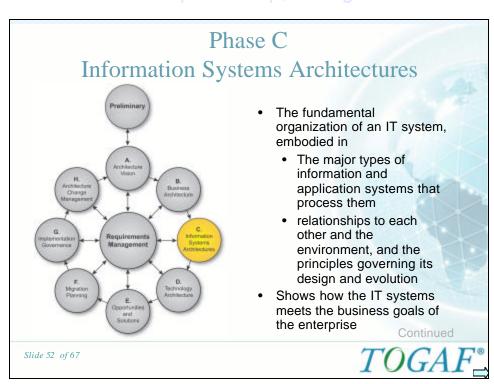


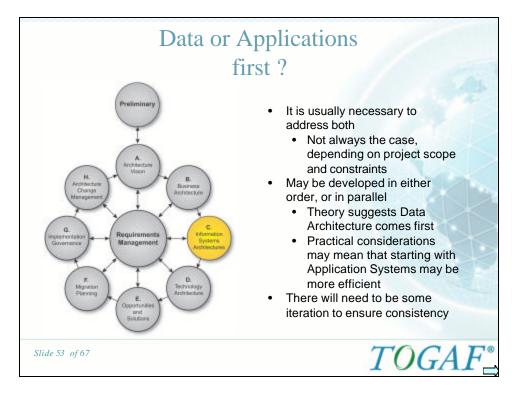


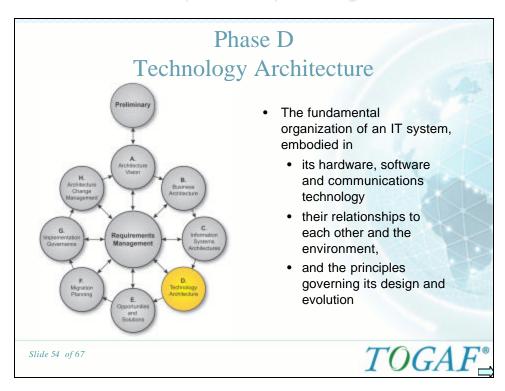


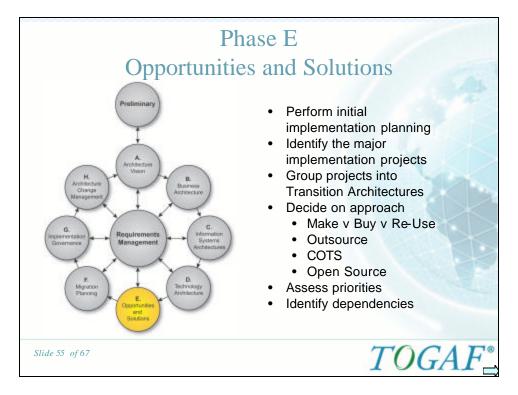


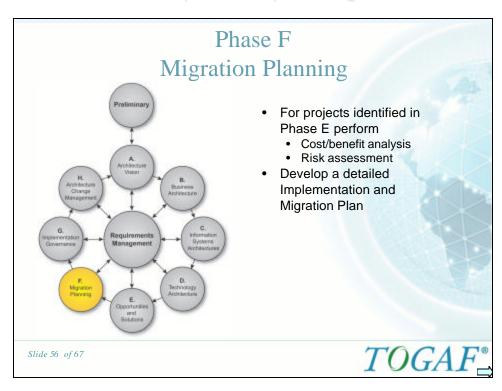


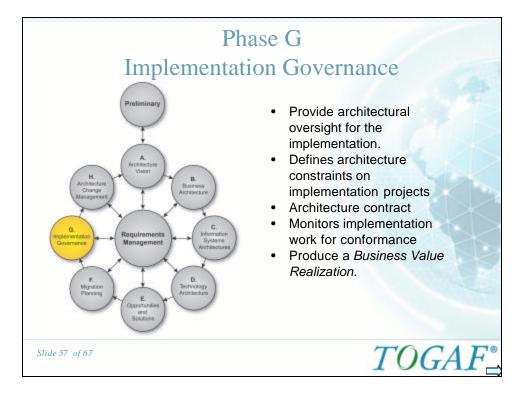


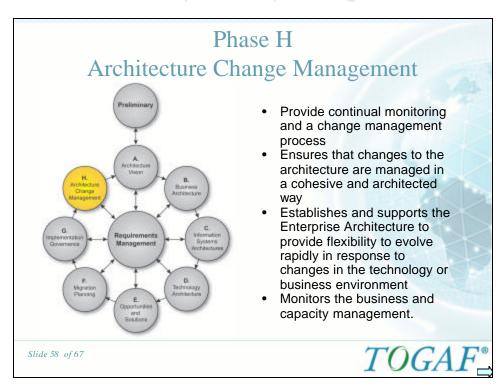




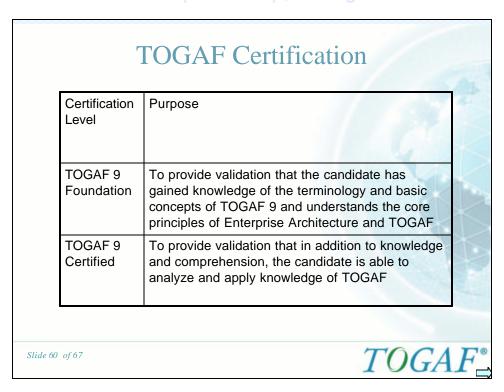












TOGAF Foundation Target Audience

- Individuals who require a basic understanding of TOGAF 9
- Professionals who are working in roles associated with an architecture project such as those responsible for planning, execution, development, delivery and operation
- Architects who are looking for a first introduction to TOGAF 9
- Architects who want to achieve Level 2 certification in a stepwise approach.

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TOGAF Certified Target Audience

- Individuals who require a deeper understanding of TOGAF 9;
- Professionals who are working in an organization where TOGAF 9 has been adopted and who need to participate in architecture projects and initiatives;
- Architects who will be responsible for developing architecture artifacts;
- Architects who wish to introduce TOGAF 9 into an architecture practice;
- Architects who want to achieve a recognized qualification to demonstrate their detailed knowledge of TOGAF 9.

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Some Figures about TOGAF

- Developed by 300+ organisations worldwide involved in its development
 - Large IT users
 - IT vendors
 - System Integrators
 - Academics
- · Used in major IT projects worldwide
 - IBM, EDS, HP, Sun, Infosys,
- · Community of knowledgeable TOGAF practitioners
 - More than 15000 certified
- Supported by Architecture Tools

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TOGAF.

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Agenda

- The Open Group
- The Architecture Forum
- Why Enterprise Architecture
- Why a Framework
- TOGAF 9
- TOGAF 9 Certification
- Summary



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TOGAF 9 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
- Vendor, tool, and technology neutral
- A framework and method for achieving the "Boundaryless Information Flow" vision

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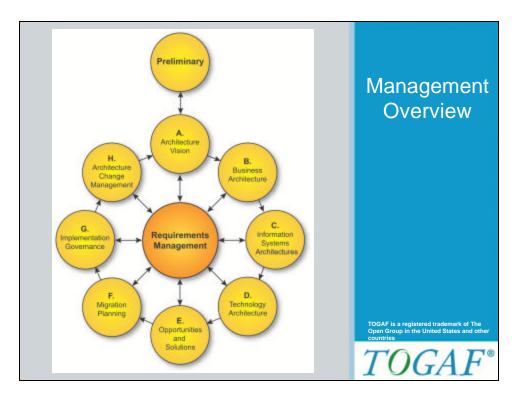
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For More Information . . .

- The TOGAF Web Site
 - http://www.opengroup.org/togaf/
- The Architecture Forum
 - http://www.opengroup.org/architecture/
- TOGAF Version 9 on-line
 - http://www.opengroup.org/architecture/togaf9-doc/arch/
- TOGAF Version 9 licensing and downloads
 - http://www.opengroup.org/togaf/

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