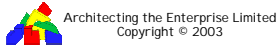


The Open Group Architecture Framework (TOGAF)

The Continuing Story

Presented by Chris Greenslade
Chris@Architecting-the-Enterprise.com



TOGAF - The Continuing Story 1 of 41



The questions to answer

- Who are we?
- What principles have we adopted?
- What have we achieved so far?
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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
 - IT Architect Certification




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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)

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Forum Membership

- Architecting-the-Enterprise (UK)
- BMC Software Inc. (US)
- Boeing Corporation (US)
- Booz Allen & Hamilton (US)
- Brandeis University (US)
- C and C Technology (UK)
- Capita (UK)
- Capital Health Authority (Canada)
- CC and C Solutions (Aus)
- Centre For Open Systems (Aus)
- ChiSurf (Hong Kong)
- Computacenter (UK)
- Computas (Nor)
- Computer Associates (US)
- Conclusive Logic (US)
- Department for Works and Pensions (UK)
- Department of Defense / DISA (US)
- Desktop Management Task Force (US)
- Frietuna Consultants (UK)
- Fujitsu (Japan)
- Hewlett-Packard (US)
- Hitachi (Japan)
- IBM (US)
- Innenministerium NordRhein-Westfalen (Ger)
- Jet Propulsion Labs (US)
- Lockheed Martin (US)
- MEGA International (Fr)
- Ministry of Defence (UK)
- Mitre Corporation (US)
- Monash University (Australia)
- NASA Goddard Space Flight Center (US)
- National Computerization Agency (Korea)



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Forum Membership

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- Nexor, Inc. (US)
- Open GIS Consortium, Inc. (US)
- Popkin Software and Systems, Inc. (UK)
- POSC (US)
- Predictive Systems AG (Ger)
- Primeur (Italy)
- QA Consulting (UK)
- Real IRM Solutions (South Africa)
- ReGIS (Japan)
- SCO (US)
- Sun Microsystems (US)
- Teamcall (Bel)
- Telemanagement Forum (US)
- Toyota InfoTechnology Center (Japan)
- TRON Association (Japan)
- University of Kyoto (Japan)
- University of Plymouth (UK)
- University of Reading (UK)
- US Army Weapon Systems Technical Working Group (WSTAWG) (US)
- Veriserve Corporation (US)
- Weblayers, Inc (US)
- Westpac Banking Corporation (Australia)

55



The questions to answer

- Who are we?
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Defining 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



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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
- The collection of views comprises the description of the architecture



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



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TOGAF populates the Zachman Framework

	What? Data	How? Function	Where? Network	Who? People	When? Time	Why? Motivation	
Planner's Viewpoint Contextual	Validated principles	Validated principles	Validated principles	Validated principles	Business goals	Refined Business principles	Scope
Owner's Viewpoint Conceptual	Data model management view	Business process	Business architecture	Business architecture version 0.1	Business architecture version 0.1	Business architecture version 0.1	Enterprise Models
Designer's Viewpoint Logical	Common applications	Business architecture	Business architecture version 0.1	Business architecture version 0.1	Business architecture version 0.1	Business architecture version 0.1	Systems Models
Builder's Viewpoint Physical		Technology architecture version 0.1	Technology architecture version 0.1	Technology architecture version 0.1	Technology architecture version 0.1	Technology architecture version 0.1	Technology Models
Sub-contractor's Viewpoint Out-of-context							Detailed Representations
Functioning Enterprise							Actual Systems



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What is an Enterprise Architecture?

- An Enterprise Architecture is the technical foundation of an effective IT strategy
- It consists of four types of architecture:
 - Business architecture
 - Information system architectures
 - Data or information architecture **TOGAF 8 Enterprise Edition**
 - Application architecture
 - Technology architecture **TOGAF 7 Technical Edition**
- All these are related



What is the desired benefit of TOGAF?

- Architected business information systems will have:
 - A greater ability to respond to new demands
 - A greater business value to the organization
 - A greater ability to use new technology
 - A faster, simpler and cheaper procurement process
 - The ability to support a faster time-to-market

**Can a business succeed without
a documented business plan?**

Can IT succeed without a documented architecture?



What is an Architectural Framework?

- Architecture design is a complex process
- An architectural 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



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What is an Architectural 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



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The position of IT Architects

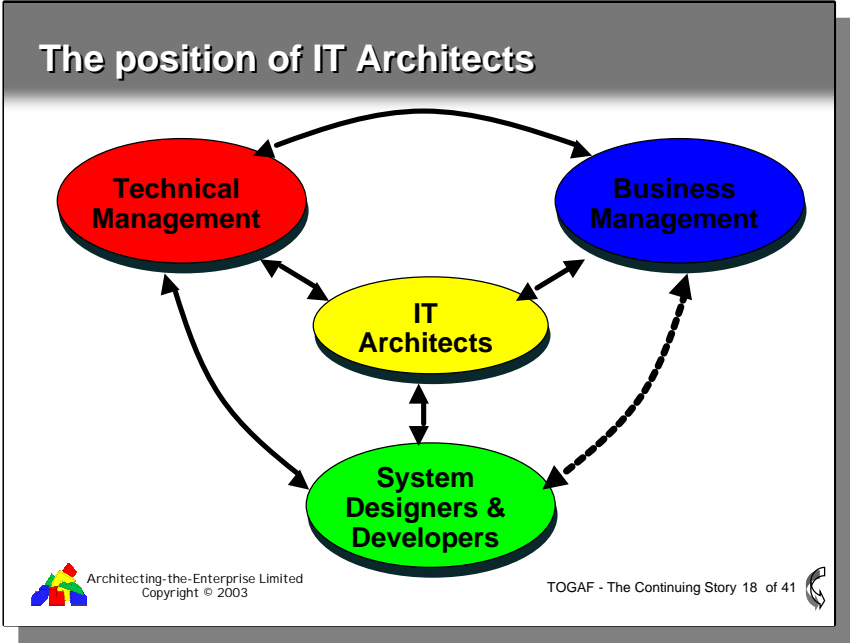
We know solutions to every problem? What's your problem?

IT Architect

How do I know what I want, when I don't know what you can do for me?

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The questions to answer

- Who are we?
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The story so far

- The direction of TOGAF's evolution has been driven by The Open Group's membership over a period of 9 years
- An annual publication cycle
 - 1994: Requirement statement developed
 - Proof of need
 - 1995: X/Open Architectural 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

- 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



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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

Technical Edition

■ 2002: TOGAF - Version 8

Enterprise Edition



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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
 - Business scenarios
 - IT Governance
 - Architecture patterns
 - ADL
 - Case studies
 - TABB
 - Architecture principles
 - Architecture contracts
 - Additional reference models

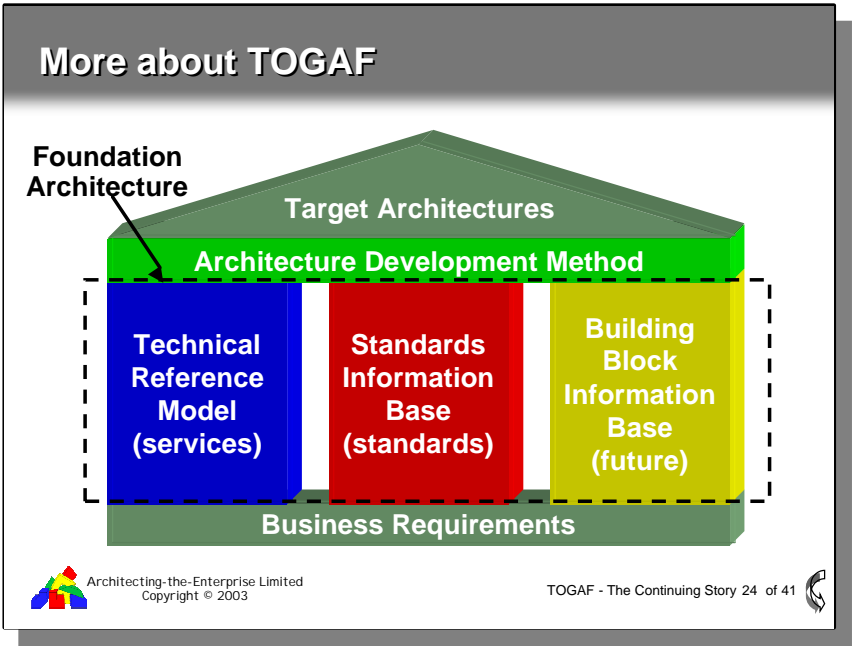


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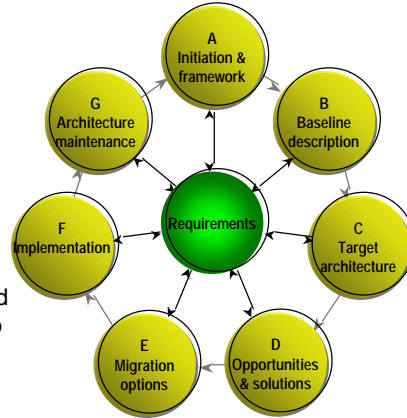


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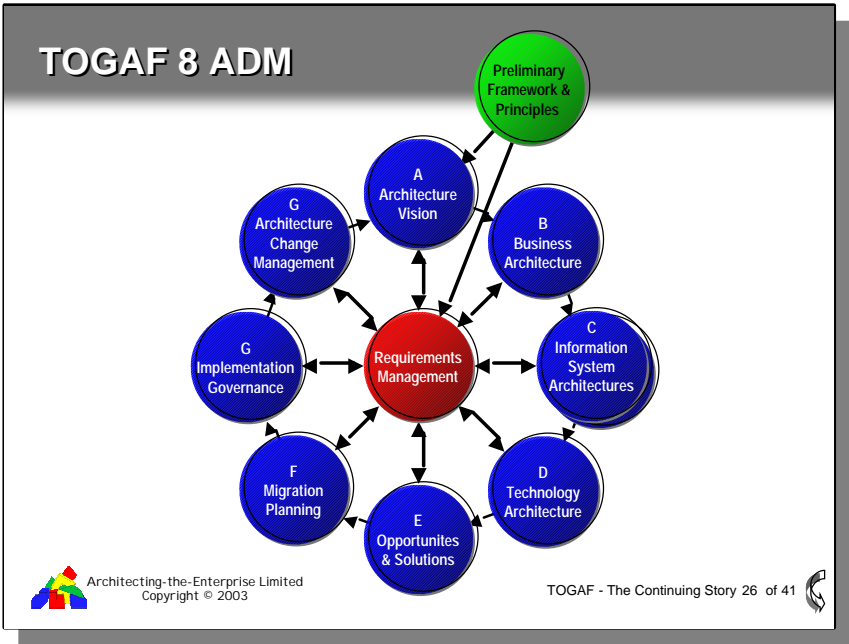


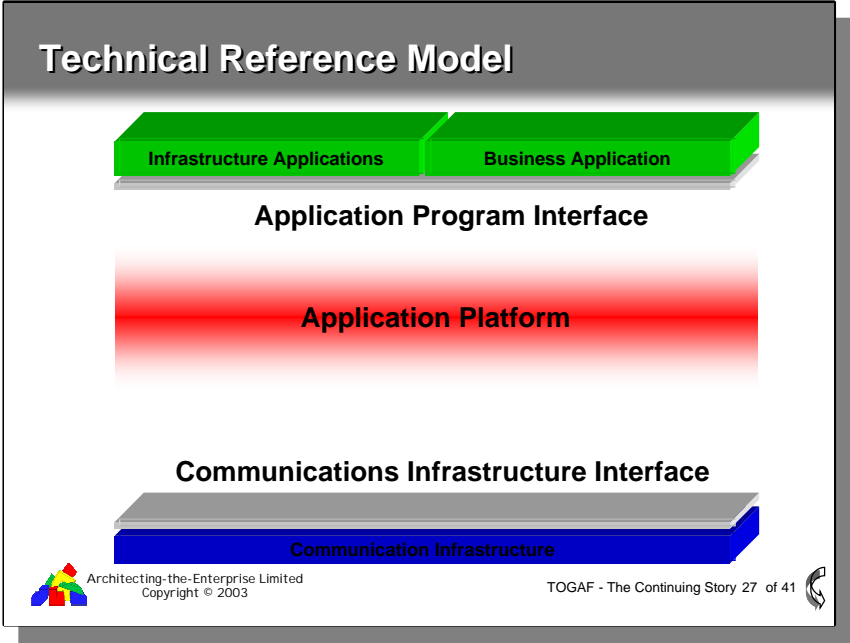
TOGAF 7 ADM

- 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

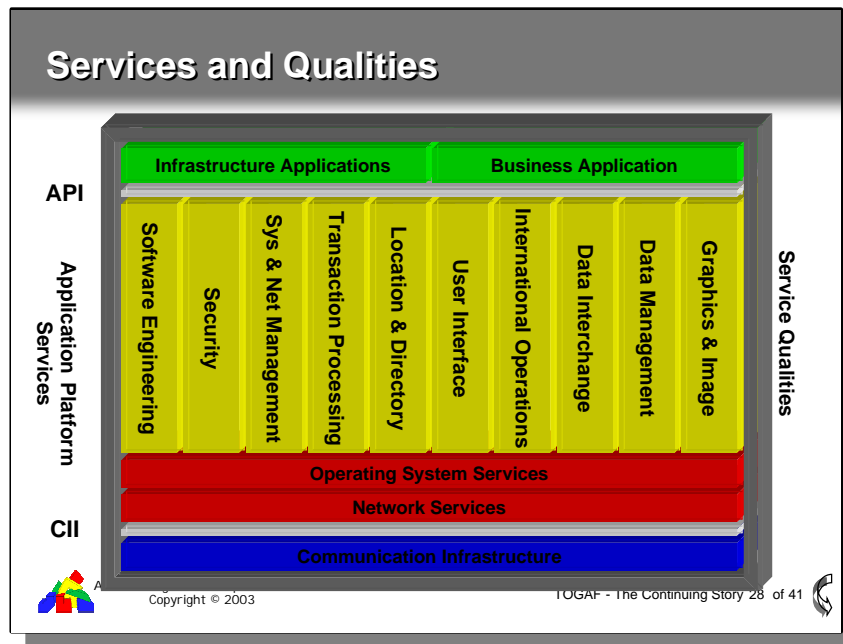


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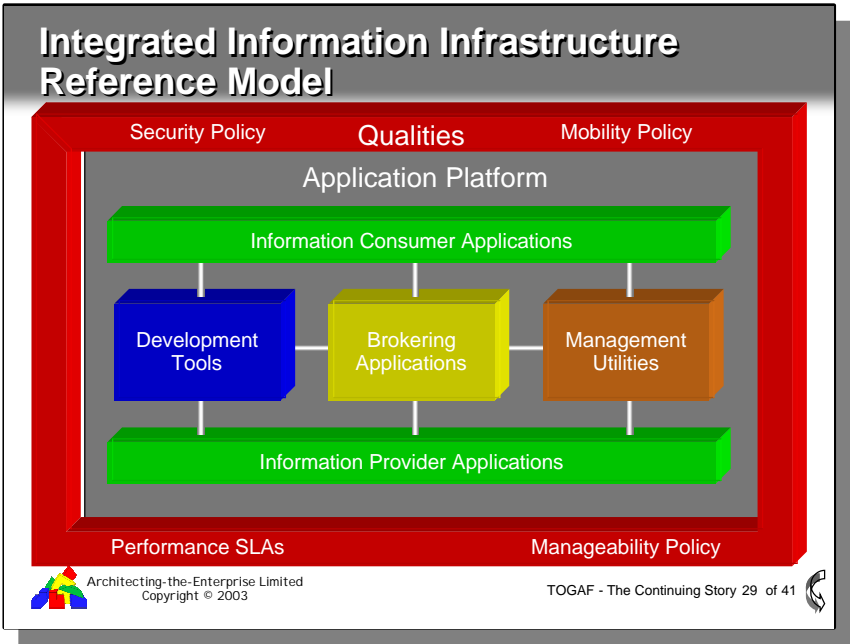




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Standards Information Base (SIB)

- A complete and up to date database of open industry standards with links to conformant products
- Standards Information Base publicly available
 - At <http://www.opengroup.org/sib>
 - With user guide
 - Search or full listing
- Can be used to:
 - Define particular services
 - Define properties of components
 - Be the basis of procurement procedures
- Keeps the architecture up to date with the latest IT industry consensus



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Benefits of TOGAF to the architect

- Avoids regular reinvention of the wheel
- Provides a corporate memory of previous successes and failures
- Ensures completeness of the design process
- Provides access to accumulated best practice wisdom
- Avoids communication difficulties within the team
- The professional approach
- “Best endeavor” legal defense - just in case



TOGAF - its key benefits (1)

- Vendor-Neutral
- Comprehensive process - from business requirements to applications to infrastructure
- The result of 8 years of global development
- Cuts up-front costs - avoids re-inventing the wheel
- Refined and honed checklists at all levels - from business requirements to physical components
- The Standards Information Base
 - Maintained, current and comprehensive
- Standard documented approach insures against the departure of key staff



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TOGAF - its key benefits (2)

- TOGAF is available today under an evaluation license
 - <http://www.opengroup.org/architecture/togaf7/index7.htm>
 - <http://www.opengroup.org/architecture/togaf8/index8.htm>
- TOGAF is available under a free perpetual license for use within your own organization
- Third-party users can buy a commercial license or can join the Architecture Forum
- Any member of the Architecture Forum can participate in shaping TOGAF's evolution



TOGAF - its key benefits (3)

- TOGAF 7 is the vendor-neutral, global basis of Certification to impose standards within our profession



Architecture tools which support TOGAF 7



Training courses which instruct in TOGAF 7



Architects trained in the use of TOGAF 7



Professional services offered to support TOGAF 7



The questions to answer

- Who are we?
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What is our current motivation?

- The work goes on - new knowledge, new experience, new ideas, new challenges
- Changes that will influence the future take-up of IT 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



The questions to answer

- Who are we?
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TOGAF - The Continuing Story

The Architecture Forum

- Striving to achieve a total, practical, architectural solution

Certification of

- Training courses
- TOGAF practitioners
- Professional Services
- IT Architects

Knowledgeable and professional practitioners

A good architecture framework

TOGAF X Enterprise Edition

Tools Certification

Support tools at all levels


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What are our future directions?

?

**A good question!
Its up to us to decide!
Maybe...**

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What are our future directions?


- Evolution of TOGAF – Enterprise Edition
 - Bring to maturity
 - Plan the future lifecycle
 - Establish TOGAF X Certification
 - And possibly:
 - Enhance to align with OMG's MDA
 - Enhance to include mobility features
 - Enhance to support Boundaryless Information Flow
 - Enhance to include industry TRMs
- Establishment of IT Architect Certification
- Promote, support, advise and get it all into use.



The questions to answer

- Who are we? ✓
- What principles have we adopted? ✓
- What have we achieved so far? ✓
- What is our current motivation? ✓
- What are our future directions? ✓

Any questions?

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