What we mean by Enterprise Architecture

- TOGAF says Enterprise Architecture includes:
  - Business (or business process) architecture
  - Application architecture
  - Data architecture
  - Technology architecture

Notice – Governance!!
What is SOA – The Open Group Definition *

Service-Oriented Architecture (SOA) is an architectural style that supports service orientation.
Service orientation is a way of thinking in terms of services and service-based development and the outcomes of services.

A service:
- Is a logical representation of a repeatable business activity that has a specified outcome (e.g., check customer credit; provide weather data, consolidate drilling reports)
- Is self-contained
- May be composed of other services
- Is a “black box” to consumers of the service

An architectural style is the combination of distinctive features in which architecture is performed or expressed.

The SOA architectural style has the following distinctive features:
- It is based on the design of the services – which mirror real-world business activities – comprising the enterprise (or inter-enterprise) business processes.
- Service representation utilizes business descriptions to provide context (i.e., business process, goal, rule, policy, service interface, and service component) and implements services using service orchestration.
- It places unique requirements on the infrastructure – it is recommended that implementations use open standards to realize interoperability and location transparency.
- Implementations are environment-specific – they are constrained or enabled by context and must be described within that context.
- It requires strong governance of service representation and implementation.
- It requires a “Litmus Test”, which determines a “good service”.

SOA Governance defined*

- SOA Governance is the application of Enterprise Architecture, IT & Corporate Governance to Service Oriented Architecture
  - SOA Governance processes focus on governing the service lifecycle, supporting service infrastructure and compliance with the service oriented architecture of the organization

- Architecture governance is the practice and orientation by which enterprise architectures and other architectures are managed and controlled at an enterprise-wide level.
  - Source: (TOGAF 8.1.1)

- IT Governance includes the decision rights, accountability framework and processes, to encourage desirable behavior in the use of IT.
  - Source: (based on CobiT4.0)

- Corporate Governance is the set of processes, customs, policies, laws and institutions affecting the way a corporation is directed, administered or controlled.
  - Source: (WikiPedia based on OECD Principles of Corporate Governance)

* TOG SOA Governance team’s working definition
The SOA Governance landscape

Corporate Governance
(example: OECD Corporate Governance Principles)

IT Governance
(example: CobiT)

Enterprise Architecture Governance
(example: TOGAF)

SOA Governance
The SOA Governance landscape

- Corporate Governance
  (example: OECD Corporate Governance Principles)

- IT Governance
  (example: CobiT)

- Enterprise Architecture Governance
  (example: TOGAF)

- SOA Governance
  - Service Lifecycle/Portfolio Administration
  - Service Infrastructure Direction
  - SOA Reference Architecture Conformance
# Why SOA Governance matters

## Realize business benefits of SOA
- Business process flexibility
- Improved time to market

> "Firms with above average IT governance... had more than 20 percent higher profits than firms with poor governance following the same strategy"
> 
> **Source:** Peter Weill and Jeanne W. Ross, Harvard Business School Press 2004

## Mitigate business risk and regain control
- Maintaining quality of service
- Ensuring consistency of service

> "Effective IT Governance is the single most important predictor of value an organization generates from IT."
> 
> **Source:** Peter Weill, MIT Sloan School of Management’s Center for Information Systems Research

## Improved team effectiveness
- Measuring the right things
- Communicating clearly between business and IT

> Professional investors are willing to pay premiums of 18-26% for stock in firms with high corporate governance.
> 
> **Source:** McKinsey Quarterly
As an enterprise architect, why must you care?

- You are already doing EA governance
- You are already providing oversight around solution designs
- You are the probably the connection point between business and IT
- You are the technical thought leaders in your companies
- So…… You’ll be the ones they ask about SOA
  - And governance is a real key to SOA success!
Now - time for some details about SOA Governance
How it all connects – a governance mindmap

Elements Of Company Governance

Corporation

Enterprise-wide IT Governance

Method - COBIT for overall IT governance

Overall SOA Governance (subset of IT Gov)

SOA Architecture Compliance

Checklist & ODA review

Service Lifecycle Governance

Service Factory

Option 1 - Using SOA Governance Top Map as starter

Option 1 - Using a SOA version of CBM for BoIT as a starter

Align with current customer IT Governance

SOA Operational Environment

e.g., ITIL

Financial e.g., COSO

Input from multiple LoBs

Governance Factors

Governance Goal

Governance Objective

Desired Behavior

Governance Policy

Governed Entity

Governance Point

Governance Observable

Governance Mechanism

Governance Result

IBM’s Governance Reference Discipline details what is needed in any type of governance structure (e.g., Corporate Governance). It acts as a checklist to verify that all the necessary governance factors are created to allow for the successful end-to-end governance of the respective governance structure (e.g., Overall SOA Governance).

Corporate Governance

IT Governance

Overall SOA Governance

SOA Architecture Compliance

Service Lifecycle Governance

SOA Operational Environment
The Service Life Cycle in Detail

Service Identification (RUP Inception)
- Candidate Consumers Identified
- Operations Specified
- Search for Existing Implementation
- Identify Service Providers
- Triage & Prioritize Operations
- Review & Publish Operations List

Service Specification (RUP Elaboration)
- Create Service Specification
- Document Provider Interfaces
- Document High Level Design
- Service High-Level Design Review
- Operations List Updates
- Business Services Portfolio
- Service Specification
- Service Provider Interface Specification
- Service Design Document

Service Development
- Develop Components
- Integrate & Test
- Create Deployment Unit
- Acceptance Test
- Create Product to Release
- Code-related artifacts

Service Management
- Certify & Publish Service
- Monitor SLA Compliance
- Plan New Service Version
- Deprecate Service
- Decommission Service

Legend
- Process
- Governance

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An example of a SOA Reference Architecture *

* http://publib-b.boulder.ibm.com/Redbooks.nsf/65f0d9cea6e0ab57852569e0007452bb/f86c0f04d19a040585257108006dd764?OpenDocument
There are 14 Critical Processes that constitute an effective SOA Governance model implementation.

By effectively establishing governance mechanisms in these 14 areas, you can address these common challenges:
- Establishing decision rights
- Defining high value business services
- Managing the lifecycle of assets
- Measuring effectiveness
TOG SOA Governance team’s next steps

- **Establish SOA Governance Principles**
  - Document in the same format as TOGAF 8.1.1 Principles

- **Establish SOA Governance Reference Model**
  - Based on IT Governance processes from CobiT and establish effects of and considerations particular to SOA solutions on those processes
  - Provide SOA Key Performance Indicators for IT Governance and EA Governance processes

- **Examine impact of SOA Governance on IT processes**
  - Evaluate impact on ITILv2 and/or ITIL refresh
SOA Governance Work Plan Highlights

- TOGAF Architecture Governance and SOA Governance alignment
- High level/graphical view of SOA Governance model
- Draft of SOA Governance Responsible, Accountable, Consulted and Informed (RACI)
- Draft SOA Governance Principles
- Draft of SOA Governance and KPI impact on CoBIT processes

Dates:
- 2/12/2007
- 2/19/2007
- 2/26/2007
- 3/12/2007
- 3/19/2007
- 3/26/2007
- 4/2/2007
SOA Governance Work Plan Timeline

- Activities and owners defined for next 90 days:

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edited SOAG Principles for review</td>
<td>14 days</td>
</tr>
<tr>
<td>Initial review of subset of CoBIT processes for SOAG impact &amp; KPIs</td>
<td>4 days</td>
</tr>
<tr>
<td>Divide remaining CoBIT processes and assign to volunteers for review</td>
<td>14 days</td>
</tr>
<tr>
<td>Contact CoBIT for approval to use their material in SOA Gov team</td>
<td>1 day</td>
</tr>
<tr>
<td>Review TOGAF EA Governance for alignment to SOAG</td>
<td>9 days</td>
</tr>
<tr>
<td>Contact ITIL for approval to use their material in SOA Gov team</td>
<td>1 day</td>
</tr>
<tr>
<td>Contact CoBIT &amp; ITIL to see what they are thinking re SOAG</td>
<td>1 day</td>
</tr>
<tr>
<td>Develop SOAG graphic</td>
<td>5 days</td>
</tr>
<tr>
<td>Develop SOAG RACI chart</td>
<td>10 days</td>
</tr>
<tr>
<td>Analysis for missing processes</td>
<td>10 days</td>
</tr>
<tr>
<td>Develop SOAG glossary</td>
<td>5 days</td>
</tr>
</tbody>
</table>
Summary

- SOA is an architectural style within an Enterprise Architecture
- Getting governance right is a key indicator for SOA success
- Enterprise Architects will be looked to by their organisations to provide advice on SOA and how to govern it
- Now is the time to start getting ready
- Getting involved in The Open Group SOA Working Group and our SOA Governance team is a good way to build your skills and knowledge
Where you can learn more

- The Open Group SOA Working Group Web site

- IBM’s SOA site