

The SOA Governance Framework

In previous reports we have introduced the concept of an SOA Governance Framework - a structured approach to ensuring the architecture delivers the required levels of adaptability and integrity. In this report we detail each of the layers in terms of how the policies, practices, patterns and tools enable delivery of business and technical objectives.

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Introduction

In a previous report¹ we introduced the concept of a framework for SOA Governance. We discussed the need to have an explicit program for governance over the delivery of SOA characteristics. In this report we are going to provide some definitions and details around the framework.

We have discussed previously that SOA is an inherently distributed approach to architecture, and therefore the requirements for governance are even more critical than in more centralized environments. The focus of governance in a SOA environment is to ensure that the service oriented strategy is realized in capabilities, assets and processes that deliver on the required levels of business and technical adaptability.

While we continue to use the term SOA governance, we have come to realize that in many respects the architectural naming might be too narrowly focused. In our first report on the topic² we showed how service design is an integral part of organizational design and engineering, and that asking the right questions in service design will often lead to profound change in distribution of responsibility, authority, expertise and work (RAEW).

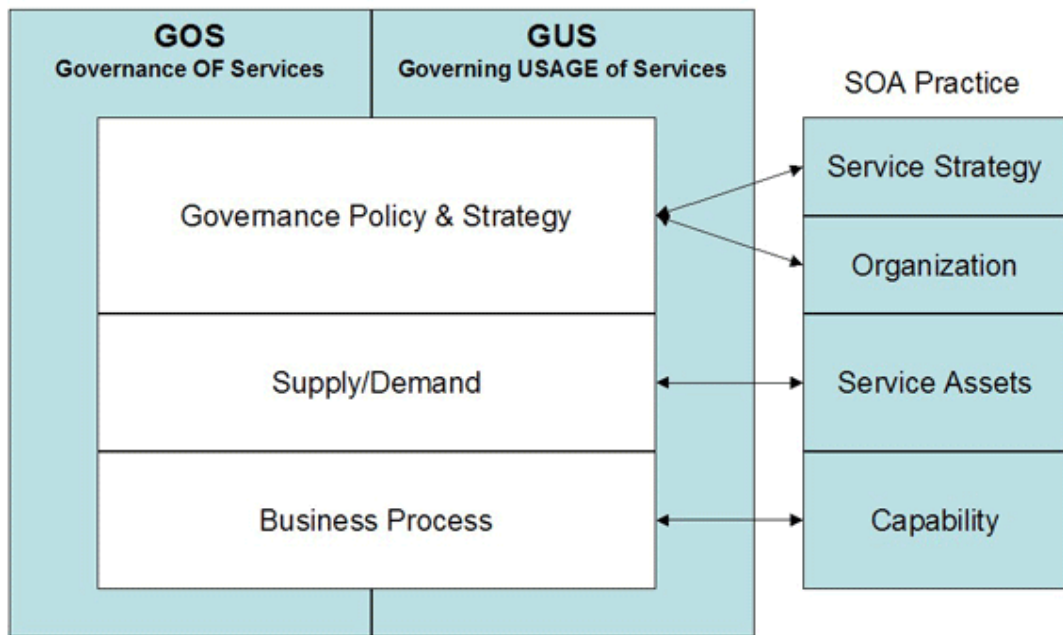


Figure 1 - Layered Governance Framework

In Figure 1 we further develop the outline framework introduced in our June report. The focus of SOA governance is to align the elements of SOA practice - strategy, organization, assets (including reusable

services) and capability, to ensure implementation of the distributed architecture adheres to the overall strategy.

We identify three layers where we will need to exert some form of governance - the development of policy and strategy, the matching of service requirements with assets (supply/demand) and the delivery and usage processes. If this looks a little academic, think of it as the checklist of things that need to be done to ensure the success of the SOA. The layering simply makes it easy to separate out the governance concerns that we need to exercise in policy setting, design and implementation.

We have also found it useful to separate out the governance of the services as assets (GOS) from the usage of the services (GUS) as there are quite distinct life cycles and interests.

- Governance Of Services as assets (GOS) - the governance activities that ensure the service architecture, design and delivered services meet the real needs of the business.
- Governance of the Usage of Services (GUS) - the governance activities that ensure the service execution has integrity and complies with quality of service requirements.

Governance Policy & Strategy

Sitting above the supply/demand coordination layer, the governance layer includes control, intelligence and policy. Activity in this layer needs to set the goals, context and constraints for both the business process layer and the supply/demand coordination layer in both the creation/acquisition and the usage of services.

The primary goal of SOA is to become service-oriented. This means the business developing into a service-oriented business, configured as a continuous fabric of services. An essential component of SOA policy and strategy is therefore an adoption roadmap – a plan that defines reasonable phasing of ambition and capability over time, and the activities to transition the capability of the organization from one state to the next.

In defining strategy and policy for usage of services there will be many aspects of usage that will apply to sets of services - for example the SLA or levels of trust as applicable to internal services, B2B, or B2C.

Supply/Demand

To address questions of adaptability and business alignment, we have to look below the governance layer to the coordination processes that link service demand and service supply. This coordination ensures that the life cycle of a service is managed on the assumption that the service may be a shared, reusable asset. Supply and demand activities ensure that where appropriate the service provisioning and usage supports a wider set of objectives than one specific project or consumer.

Where supply and demand are in different organizations, this process will be specified in or constrained by a commercial contract. Even where supply and demand are in the same organization, this process needs clarity as well as flexibility.

An important function within the supply/demand coordination layer is the determination/negotiation of a range of lifecycle objects – so-called metadata, including WS-* stuff: WSDL, Policy, BPEL and other process definitions and process-level agreements.

Business Process

The business process layer is where the rubber hits the road, and governance activities ensure that the implementation and usage continue to conform to policy and supply/demand requirements set in the prior layers.

References

We have developed further detailed guidance on the SOA Governance Framework and published this in the CBDI Practices & Patterns portal. We welcome review comment and feedback.
See: <http://www.cbdiforum.com/practices>

	GOS - Governance OF Services	GUS - Governing USAGE of Services
L1 - Policy & Strategy - (defining requirements)	Definition of policy, strategy and plans governing the requirement, creation and delivery of services	Definition of goals, targets and measures governing the usage of services
	Policy for service based business - strategic direction, linkage to product,	Defining accountability for service provision and usage
	Strategy underlying organizational design in service based business	Setting service goals - success measures and targets
	Linkage to business and investment plans, driving RAEW for services - overall policies dynamically governing the allocation of development and other resources	Defining and monitoring QoS policy
	Technical SOA strategy and policies - including patterns, practices, templates, for delivery, upgrade and replacement	Defining and monitoring business SLA policy
	Requirements for adaptability - determining the boundaries and key articulation points	Defining and monitoring Technical SLA policy
	Requirements for business governance compliance - mandatory or advisory services to ensure consistency of business compliance to regulatory requirements and conformance with policy	Defining and monitoring business rules governing exception reporting
	Coordination of business development, negotiation and collaboration across internal and external organizations, including trust.	Defining and monitoring Life Cycle Management Policies (governing life cycle management)
	The SOA Roadmap - the strategic direction and detailed plans governing the implementation of change covering business design and service oriented architecture.	Defining and monitoring trust policies
L2 - Supply/Demand	Governance of service provisioning	Governance of service use
	Providing the right services to internal and external customers, partners etc - ensuring sharing where appropriate. Identification of standard business and infrastructure services and situation applicability	Life cycle management (delivery and usage) ensuring integrity in versioning, configuration and change management
	Selecting and consuming the right service to meet business functional requirements, ROI, and to fill contractual obligations such as SLA for onward service consumers	Implementation of trust policies and practices covering user profiles, usage and access rights and authentication
	Coordinating distributed service specification to meet a common goal; determining appropriate level of generalization to meet strategic goals and organizational design	Maintenance of business perspective in resource allocation, alternative service assignment and rule application
	Aligning software governance with business governance	Knowledge Management / IPR management
	Managing reuse across internal and external domains to achieve maximum agility and economics of scale/scope.	
	Compliance with policy level industry standards	
	Determination and negotiation of life cycle objects - meta data covering semantic and technical protocols that need to be aligned	

	between providing and consuming parties	
L3 - Business Process - (managing execution)	Governance of service delivery	Governance of service execution and usage
	Monitoring business process design and software development and acquisition against SO best practice and policy	SLA Monitoring - monitoring the contractual commitment of software services, including security
	Life cycle management (specification) - ensuring integrity in versioning, configuration and change management	SO Accounting - monitoring the business performance of services, including ROI
	Consistency of classification	Monitoring usage of business rules
	Conformance with SOA, reuse of standard components, patterns and contracts	Monitoring effectiveness of agility
	Coordination of business rule implementation	
	Conformance with trust policies and architecture	

Table 1 - SOA Governance Framework

Governance in a SOA environment is to ensure that the SOA strategy delivers on the required levels of business and technical adaptability

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1. [Business-Driven SOA 2 - How business governs the SOA process](#)
 2. [Business-Driven SOA - Supply/Demand oriented SOA architecture](#) - driving the SOA from a business perspective