



SOA Governance

A Perspective

Every enterprise that has been using IT as a business enabler is thinking of, discussing about or experimenting with Service Oriented Architecture. However, a key issue that has been identified in the SOA context is the governance of the Service Oriented Architectures. This paper attempts to look at well - established concepts of governance in public and corporate life that can be applied for SOA governance. The authors also propose the use of Montesquieu's power sharing formula that can help constitute the SOA governing bodies along the lines of Legislative, Executive and Judiciary branches in a government. In the end, the paper attempts to give the structure, roles, processes and tools that will together help set up an overarching model to attain the best SOA governance possible, enabling enterprises in realizing the promise of SOA -- agility, efficiency and adaptability.

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Introduction

SOA Governance – Immortality or Re-incarnation?

Every enterprise that has some relation to Information Technology (IT), be it as consumer or as provider, is thinking of, discussing about or experimenting with Service Oriented Architecture (SOA). In the paper, “Service Oriented Architectures – An Enterprise View”, Shailendra et al have deliberated at length on the subject of SOA and how an enterprise can use it to enhance business agility and flexibility that can be instrumental in its competitive edge, that is essential to operate in the dynamic market place of today. A key issue identified in that paper is that of the governance of the Service Oriented Architectures.

In this paper we have attempted to take the concepts of governance in public and corporate life and leverage those (concepts) for SOA governance. Further we have tried to explore and apply the best practices that have evolved out of collective experiences of the human race in the field of governance in public life, to this evolving field of SOA Governance.

The governance, in whichever field we take, is about the way order is brought about in a system so as to accomplish a specific purpose. In this respect, the diagram here depicts the sphere of any governance model.



Governance Model - Conceptual

At the core of any model for governance lie the basic principles, which characterize the subjects of governance. The governance is manifested by creating organizational structures that follow defined, practiced and perfected processes and use resources and tools to perpetuate its own existence. These three together form the operational aspects of the governance model. The principles, affecting the behavioral aspects of subjects being governed, have a bearing on the interplay between the three branches of operational governance. Finally all these building blocks of governance collaborate to achieve a higher order purpose.

With the background of this model of governance, the study of cases of public or political governance, corporate governance and IT/SOA governance, reveal startling similarities. In public life, the subjects are people characterized by culture and the purpose is quality of life. In the corporate world the subjects are stakeholders having values while the purpose is business excellence. Finally, in IT governance, symbolized by SOA, the subjects are Business Driven IT characterized by services and the purpose is performance of business. The distinction however, ends here. The operational and behavioral aspects of the governance find quite a resonance among these distinct models.



Governance Model - Public



Corporate Governance



SOA Governance

This resonance is, in fact, expected and this paper delves into the various aspects of the SOA governance and leveraging this anticipated analogy to find the benefits of applying the experiences of our ancestors in one model, i.e., public life into another, i.e., SOA. And in this endeavor, the paper proposes an approach for successful SOA governance for enterprises that are taking up serious Service Oriented Business Engineering initiatives.

This journey to explore and disentangle the intricacies of SOA Governance using the age old wisdom of Governance will probably make us wonder if re-incarnation is truth or immortality is real, at least in context of principles of governance. I hope we will be able to decide by the end of this paper.

Governance: A Bird Eye View

What is Governance?

In the political parlance, where the word originated, governance means “to legally control a country or its people and be responsible for introducing new laws, organizing public services, etc”. This definition is by and large, as expected, relevant to the entities called nation-states. The nation-states are formed with the intention to exist forever (the reality may not allow that, though), which is clear from the following sentences taken out from Abraham Lincoln’s presidential address (1860):

“I hold that in contemplation of universal law and of the Constitution, the Union of these States is perpetual. Perpetuity is implied, if not expressed, in the fundamental law of all national governments. It is safe to assert that no government proper ever had a provision in its organic law for its own termination. Continue to execute all the express provisions of our National Constitution, and the Union will endure forever, it being impossible to destroy it except by some action not provided for in the instrument itself”.

The concept of governance of a nation-state is essential for its survival and prosperity, as without proper governance the chaos will reign and the basic purpose of its inception itself will be shattered.

If we extrapolate the concept of governance to all the long lasting entities of interest, it can be generalized as follows

Every entity that is formed with intention to sustain for a long enough period and lead a healthy existence needs to have a robust governance system.

Exploring the same example of a nation-state a little further, let us examine as to how governance is achieved? The history of world and political literature is full of commentaries on various mechanisms of governing a nation. From the oldest treatise on governance namely Kautilya’s Arthashastra, to Montesquieu’s theory and to the most recent essays on multi-level European government, all have their pros and cons discussed at length.

Irrespective of what model of governance is followed, the basic tenets remain the same, viz., sharing or separation of power; control of the deployment of resources; prosperity and security of its subjects and scope, provisioning of public services etc.

Power sharing formulae, given in the different forms of governance models in literature and succinctly articulated by Montesquieu, generally introduce three arms of power that are vital to any governance system. They are Legislative, Executive and Judiciary. The Legislative form of power is concerned with making laws and policies, whereas the Executive is concerned with the implementation of these laws. In reality however, these functions are not so distinctly divided and entities of the governance system may have overlapping roles. The Judiciary is the branch of governance that is entrusted with resolving any conflicting situations arising out of these overlaps or otherwise and in ensuring compliance to the laws and taking corrective action in case of any aberrations.

A governance system in existence also has cross functional checks and balances to curb the powers of each of these functionaries to avoid the power imbalance in favor of one, as that may be disastrous and impact the neutrality that is essential for a healthy governance system to continue.

In addition to these basic functionaries, there exists one more entity, especially applicable to democratic governance setup, that is, free press. The press does not participate in power sharing formulae but plays the role of influencer of opinions of all concerned.

With this background of governance in general and the key constituents of a successful governing structure, we will now try and see how we can draw from these time-tested practices, which have organizing power at a nation-states' level, to define a SOA governance model whose main objective would be to support the SOA life cycle model and the process of alignment and decomposition of processes and application into services which represent discrete enterprise capabilities.

What is SOA Governance?

The term SOA as we all know refers to Service Oriented Architecture and SOA Governance is related to governance of a Service-Oriented Enterprise that uses a business-driven, services-based approach to IT solution design, development, operation and management. To learn more about SOA, refer to whitepaper titled "Service Oriented Architecture – An Enterprise Perspective", which is available at www.tcs.com

Governance is mandatory
for any system of perpetual
existence

And SOA is such a system

SOA Governance – The Need

Prior to looking into IT Governance and SOA Governance, let's try and understand the need for Governance by briefly analyzing the SOA paradigm and how it is different from traditional software application development. SOA is an architecture style and a way of organizing the solution to foster reuse, growth and interoperability. Business-aligned IT services form the first-order construct in a Service Oriented Enterprise in contrast to applications in a traditional IT world. These services are then orchestrated and assembled to support Enterprise Business Processes. A service can be looked at as encapsulating a piece of business logic, which is written once and accessed from anywhere on the network. Services can be used in multiple business scenarios and as a foundation block for a number of composite applications. Therein lies the biggest benefit of SOA where services have cross-enterprise usage and therein also lie challenges in terms of how to change, control and monitor services.

SOA also decouples the service provider from the service consumer and provides a platform, language and protocol independent way of service invocation and use. While all of the above can provide untold opportunities, they also introduce equal number of challenges and risks.

A look at some of the challenges will set the stage for a better understanding of what SOA Governance should address.

Some of the unique challenges presented in services-based distributed computing model are

- a) How can the service consumer be guaranteed of the service provider performance?
- b) Who assures the quality of service?
- c) Who ensures that services developed are of the right level of granularity?
- d) Who controls service proliferation?
- e) Who owns the services and who funds the same?
- f) Who controls access to the services, which now represent vital enterprise information and capability?
- g) How can any changes to the service be controlled and how to determine the impact of change of a service provider on other service consumers?

- h) How should service consumers be made aware of changes to service provider?
- i) How can reuse be enforced?
- j) How does one ensure that services developed comply with the standards and best practices for creating business services?

It is these very tough questions that an effective governance model addresses. SOA is more about approach than technology and hence governance is mandatory for success.

SOA Governance – Defined

So, what exactly is governance? While there are plenty of definitions, we will go with a crisp and concise definition.

Governance comprises of:

- leadership & organizational structures for specifying the decision rights and accountability framework to encourage desirable behavior in line with business objectives and
- processes that enable smooth and sound decision making
- while providing for measurement of the effectiveness of the decisions.

A sound Governance framework must clearly articulate

- What are the decision domains and what decisions must be made?
- Who makes the decision? and
- How these decisions are made, monitored and measured?

Thus SOA governance can be understood to be a combination of policies, processes, structures and skills to enable the effective development and management of services that the business needs and IT provides.

SOA Governance – The Scope

SOA Governance must govern the entire service cycle from strategy to design to development to operations and subsequent SLA management. The governance considerations across the entire SOA lifecycle are represented below.

Let’s now look at what a Governance model should specify against each of the above functions.

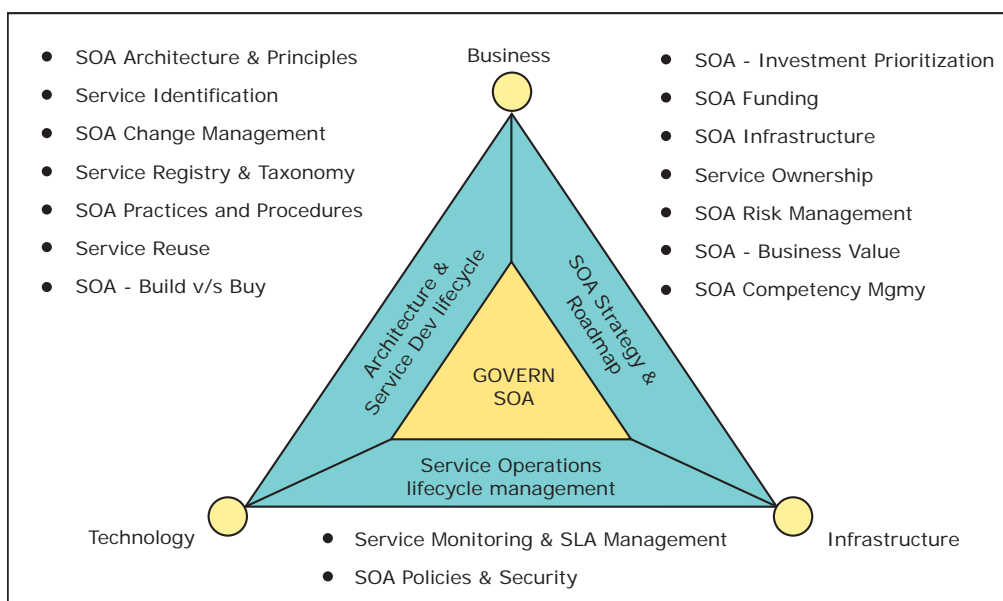


Fig 1 Scope of SOA Governance

SOA Investment Prioritization – The governance model must specify how SOA business cases are put forward and who has the final authority in prioritizing and approving SOA projects.

SOA Funding – Deciding upon this aspect within the governance model helps understand who must fund a particular project/investment and also lays down chargeback policies for service usage.

SOA Infrastructure Management – The governance model must specify the entity who will decide on the hardware and the software components required for building the services platform and the process for building the SOA infrastructure over time. It also specifies who would be responsible for ongoing infrastructure upgrades and the process for the same.

Service Ownership – This function establishes ownership for business services in the Enterprise Service Mosaic. The Business Service Owner is responsible for upgrades and enhancement of services and in ensuring that the service meet with the Quality of Service (QoS) requirements specified in its contract.

SOA Risk Management – This function helps to define the processes for continuous monitoring of risks in a SOA program in order to take immediate corrective action.

SOA Business Value – The function encompasses the metrics for measuring business value and systematic process for capturing metrics, quantifying and publishing business value from SOA are defined.

SOA Competency Management – The different roles required for a SOA program and the corresponding skills must be defined. This is then used to drive SOA training initiatives and to build the required competencies and skill base within the organization.

SOA Architecture and Principles – This function aims at defining/refining the SOA Reference Architecture, Principles and Standards that the service design and development uses.

Service Identification – Identification of services with right level of granularity is the most critical aspect of SOA. The services must be coarse-grained and defined keeping reuse and usage in different business contexts in mind. Process for rigorous review of service design prior to development is defined.

SOA Change Management – The governance model must specify the process to make changes to services in production and on maintaining (pruning, deprecating) multiple versions of a service. Guidelines and best practices in this regard must be defined.

Service Registry and Taxonomy – Specifies who is responsible for publishing services into the registry and for defining service taxonomy to enable one to easily search for services.

SOA Practices and Procedures – Best Practices with respect to building business services, integration services, technical services and use of pattern-based approaches are defined. Processes are defined to ensure that learning from every project goes into the SOA knowledge base and it is institutionalized by rolling into SOA Practices and Procedures Compendium which all projects must comply with.

SOA Reuse – This function helps define structures and process to ensure that services are reused wherever available and puts in place the necessary infrastructure to facilitate reuse in an organization.

SOA (Build v/s Buy) – Defines the process for making Build v/s Buy decision.

Service Monitoring and SLA Management – This function defines the aspects of a service that must be controlled and monitored. Process for reporting and managing SLA exceptions is defined.

SOA Policies and Security – It is critical to control access to services and protect the data that is exchanged by enforcing appropriate policies. Security policies must be tightly controlled and the process and organization structure to support it are defined.

We have thus far looked at the need for SOA Governance and the SOA Governance considerations; we will now outline the objective of SOA Governance, look into the basis of any sound governance framework, the challenges with respect to implementation of SOA Governance, before drawing a SOA Governance model.

Objectives of SOA Governance

Based on our understanding of IT governance goals and the role of SOA in an IT Enterprise, we can formulate the significant goals that SOA Governance needs to accomplish. The governance objectives must be aligned with the strategic use of SOA in an enterprise and must ensure that the structures defined help the organization in its transition towards a Service Oriented Enterprise.

Flexible, Business-aligned IT Enterprise

Business Processes and applications are decomposed into modular components in a Service Oriented Enterprise. As we start rethinking components for business and applications, we must, over time, build a portfolio of process, business and application services that is in tune with the business strategy, business architecture and mission of the enterprise.

The SOA Governance framework must provide an overarching structure to prioritize and support the above described decomposition and enterprise reconstruction on a strategic, functional, and operational level. It must establish chains of authority and an accountability framework to steer the SOA program, redefine software processes and procedures in the context of SOA and enable SOA competency building in the enterprise.

SOA Platform Realization

In order to accrue the benefits of SOA, the right set of SOA platform infrastructure elements need to be selected. SOA infrastructure plays a key role in enabling enterprise agility as a number of functions now move from applications to SOA infrastructure elements. Hence it is absolutely necessary to select appropriate products that foster interoperability rather than hinder it.

The SOA platform implementation can yield cost benefits, flexibility and architecture simplification; however, tightly controlled governance is required to implement it in practice. This is warranted in light of the fact that irrespective of whatever is the promise of the quantum of benefits, the big bang replacement of existing platforms or new infrastructure layers cannot be introduced overnight. And to have a phased transformation, good SOA governance must be in place that can continuously watch the market and technology space and evaluate the best fit products and platforms to supplement the IT architecture of enterprise.

Right Grained Business Service Identification And Design

Business excellence and continuous process improvement can be achieved through the re-use and continuous improvement of services. The SOA design must ensure that changes to business processes and services, leading to process improvements, can be implemented easily by localizing the change to a set of services. This can be achieved only if services are correctly identified and designed as per SOA principles. This activity is very crucial to ensure that SOA delivers the much talked about business agility. This is an essential aspect that needs to be considered under 'Design-Time SOA Governance'.

Implementation Standardization

Like the obvious objective of any governance system, enforcing the standard way of implementation by way of usage of patterns, best-practices and pre-built templates should be aimed at in order to control cost and complexity and to increase reliability and quality of the end solution.

Compliance, Controls and Measures

You can control, only what you can measure, and the only way to know whether the SOA program is providing the projected benefits, is by putting metrics and measurement programs in place. Business Service Level Measurements and Monitoring, SOA Infrastructure monitoring, SOA value measurements are some of the programs that must be implemented. To provide optimum performance and output from the services platform, the resource utilization needs to be controlled tightly through policies and tools. Compliance to Business Service KPI(s) must be measured and appropriate policies (which control resource allocation) must be implemented to ensure adherence to Business SLA(s).

This can be enabled only when the SOA Governance system in place

- can enforce such policies
- can provide the tooling and processes for management of policies and
- has the runtime infrastructure for such policy implementation.

These aspects fall under 'Run-Time SOA Governance'

Challenges of SOA Governance

The aforementioned definition and objectives make SOA an imperative for every agile and performance oriented enterprise. Also it is obvious that in the absence of proper governance the SOA initiative will result in sub-optimal deployment of IT at best and total chaos at worst.

This happens due to inconsistent decisions, lack of control over the service life cycle, unstructured integration of applications, under utilization of capabilities, insufficient monitoring and inaccurate measurements.

Knowing all these factors that may adversely affect the fate of the SOA initiative it is very intuitive to ask the question: Why don't we impose a good governance model for SOA initiatives? Or alternatively, what are the obstacles in implementing a sound governance model for SOA initiatives?

The main challenges understood thus far are:

- Lack of awareness and recognition of the significance of SOA for an organization and its impact on various facets of business and IT
- Funding to support the governance structure
- Threat to regional fiefdoms of Business Unit's, IT departments, from the centralized governance model
- Poor involvement of business and a lack of understanding of its role in a SOA program

Basics of Good Governance

To understand the basics of good governance, let's again go back to governance of nation-states and examine the fundamental principles of a good governance system. We will later use these very same principles and see how our SOA Governance model can embody these essential principles of good governance.

Accountability - government is able and willing to show the extent to which its actions and decisions are consistent with clearly-defined and agreed-upon objectives. Accountability can be both an end in itself – representing values – and a means towards development of efficient and effective organizations. Accountability is a key way to ensure that resources and decision making powers are used appropriately.

Efficiency and Effectiveness - government strives to produce quality public outputs, including services delivered to citizens, at the best cost, and ensures that output meets the original intentions of policymakers.

Transparency - government actions, decisions and decision-making processes are open to an appropriate level of scrutiny by other parts of government, civil society and, in some instances, outside institutions and governments.

Responsiveness - government has the capacity and flexibility to respond rapidly to societal changes. It takes into account the expectations of civil society in identifying the general public interest, and is willing to critically re-examine the role of government.

Forward vision - government is able to anticipate future problems and issues based on current data and trends and can develop policies that take into account future costs and anticipated changes (e.g. demographic, economic, environmental, etc.).

Rule of law - refers to the institutional process of setting, interpreting and implementing laws and other regulations. It means that decisions taken by government must be founded in law.

Predictability, Reliability and Measurability - of the decisions and policies and the impact their-of on the quality of public life in general. That means the arbitrariness in policy is minimized and a stable outlook is developed.

Participation - of governed subjects is key yardstick that is used to measure the overall success of the governance system. Participation gives government access to important information about the needs and priorities of individuals, communities and private businesses. Governments that involve the public will be in a better position to make good decisions, and decisions will enjoy more support once taken.

To practice these principles in spirit and word, the various practical measures that a good governance system must resort to are:

- To have a Constitution (written or otherwise) that is detailed enough to clearly define the basic principles
- To implement a structure of governance with three constituent roles of Legislative, Executive and Judiciary with proper checks and balances
- To ensure constitution of an effective organization of the Executive body for efficient operations and prudent deployment of resources
- To enable and encourage the formation of a fourth pillar that can act as a watchdog, to keep the three arms of governance under active vigilance on behalf of the subjects.
- Balance in flexibility and rigidity of the law-making and amendment process, so as to remain pragmatic.

In following sections we will see how these basic principles of nation-state governance can be applied to a specific case of our interest, i.e., SOA Governance.

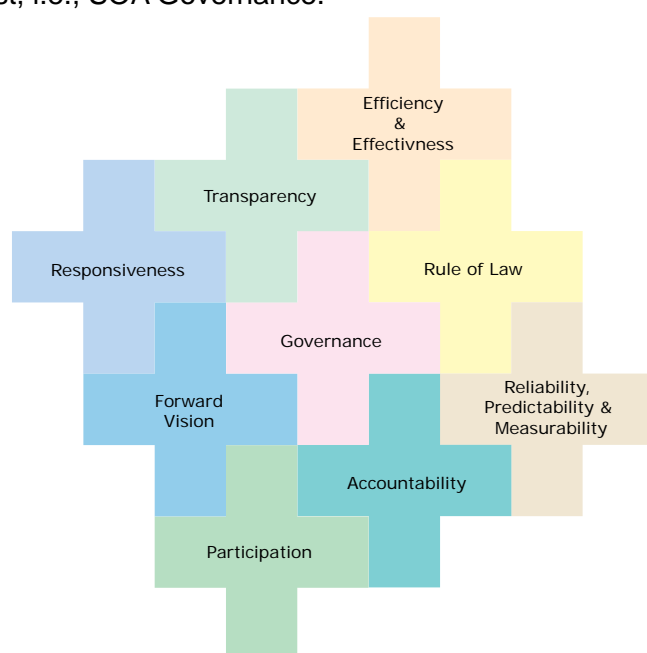


Fig 2 Basic Features of Good Governance

SOA - Legislative

“If men were angels, no government would be necessary. If angels were to govern men, no controls on government would be necessary”. In framing a government of men over men, the great difficulty lies in as captured in the following statement: “You must first enable the government to control the governed, and in the next place oblige it to control itself” – Madison

Just as we have civil laws to restrain men in society, we have constitutional laws to restrain men in power. Likewise, we need a policy-maker within SOA Governance.

There is a need for basic policies that are derived from and aligned to the strategic goals of the enterprise, which form the core constitution of SOA governance. These may be related to cost competitiveness, flexibility in operational procedures, improving time-to-market for business opportunities, customer centric organizational processes or any other business objectives.

This core set of policies thus form the constitution of the SOA governance. And just like any constitution, there is a need to establish the means of:

- making the policies in first place
- declaring the policies sacrosanct for all concerned organizations and entities in the enterprise
- enforcing the effective implementation of the policies
- allowing the adaptive adjustments of outdated policies or replacement with new ones

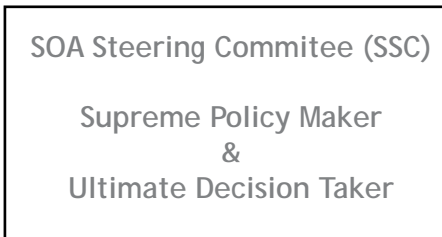
Organization Structure

Not unlike its political counterpart, SOA Governance model also provides for varying structures to distribute the legislative power to make, maintain, review and amend the policies, depending on the corporate culture and governance model prevailing in the enterprise.

Since the policy making role is a key one and sets the direction for a business-driven IT enterprise, it has to be entrusted to delegates of highest authority in the business and IT organization.

At this point we would prefer to again resort to the knowledge that we have acquired since the ancient times in the field of political governance. These suggest that the Policy-making power must be vested in senior-executives (no more than 5 or 6 in number) who have deep understanding and knowledge of diverse corporate functions such as finance, IT, markets, industry etc. We will term this group of top executives, as the SOA Steering Committee.

The Steering Committee in a SOA-BPM initiative should typically consist of the decision makers, who control the business, infrastructure and resources as well as those who are responsible for business operations. The usual members of a SOA Steering Committee (SSC) are COO, CIO/CTO, CFO and optionally other Business Unit Heads. The exact constitution of an SSC will be based on the culture and existing corporate governance structure of the enterprise.



Governance Functions

The main function of the SSC is to take decisions which are strategic in nature and which set the direction for the SOA-Executive body (the function of SOA-Executive body follows in the next section). The decisions that SSC takes and the functions that SSC supports are mainly in the SOA strategy and roadmap domain of the Governance model shown in fig 1.

These include:

- Defining the SOA Program Charter and the program imperatives
- Driving the adoption of SOA by mandating SOA-related practices and procedures
- Designating the leads in the SOA Executive body
- SOA Funding
- SOA Investment Prioritization
- SOA Infrastructure related decisions
- Defining Service Domains and Service Owners for each domain
- SOA Program Monitoring and Risk Management
- SOA – Business Value Measurement

Model Fitment To Basics of Good Governance

Now let us turn our attention to aspects of good governance discussed earlier and see how these are addressed by SOA–Legislative body:

Accountability - The senior executive group is responsible for deciding the strategy of business and for ensuring that the business and IT strategies are aligned. The senior executive group is accountable to stakeholders and customers for their action. Making this group responsible for driving the SOA initiative adds additional responsibilities and helps them in effectuating better Business-IT alignment.

Efficiency and effectiveness - The clarity of direction, stability of strategy and quickness in taking vital investment decisions are the key parameters that decide the effectiveness of the SSC in respect of its SOA-legislative responsibilities. Making the senior executives responsible for the SOA legislative functions will ensure quick decisions and its alignment with business objectives.

Transparency - The decisions of the legislative body will be communicated in form of strategic directives to SOA-Executive Body and stakeholders. The reasons for change in strategic direction, however, may or may not be communicated owing to competitive fears. This is an acceptable deviation from total transparency, and is in accordance with values of good governance.

Responsiveness - SSC must align the strategy and direction based on inputs from the market and the stakeholders in order to ensure responsive policy definition/change process.

Forward vision - The proactive strategy adjustment based on the information provided by SOA-Executive body (see next section) will ensure that the SSC policies address future problems and issues and exploits the newer opportunities unraveled during SOA implementation.

Rule of Law - By having the senior-most executives drive the SOA-legislative body, the enforcement of strategic decisions and policies are largely guaranteed.

Predictability, Reliability and Measurability - The stability of strategic vision at highest level will ensure it percolates down the organizational hierarchy via the executive arm of SOA governance.

Participation - The possible inclusion of key Business Unit Heads or their representatives into SSC will make the policy adoption by those units easier due to early buy-in.

SOA - Executive

The executive wing of the governance model is the key for sustainable functioning of any entity. The SOA-Executive wing is responsible for implementation and transitioning the enterprise to a service-oriented enterprise by proper integration of business processes and IT services. The wing is responsible for defining and owning the processes & architecture and subsequent implementation.



A SOA implementation entails changes to the way applications are designed and built, changes to the way data, software infrastructure is managed and a number of other radical changes. This underscores the need for a body that controls the transition. Success of the SOA initiative in any enterprise depends heavily on how a Service-based enterprise is realized and the SOA-Executive wing owns this function. This Executive wing of the governance model can take many forms and there can be many models.

An effective method to implement the SOA-Executive arm is by formation of Service Oriented Business Engineering Team (SOBET) which is led by an individual nominated by the SSC.

It is important to understand why such a term is coined and to know what it exactly does.

Looking back in the section that advocates the need for SOA governance, it is quite obvious that any SOA and BPM initiative can only give the promised benefits when it is conceived, implemented and maintained properly. We have also emphasized on Business Process driven SOA initiative as only this will offer the required alignment of business processes and IT services. SOA is not an IT initiative and has to be driven by a close association between business and IT in an organization. The SOBET will help bring in the required participation from both - Business and IT.

We have intentionally introduced the word 'team' as part of the acronym to get Business and IT to work together as one team towards the SOA charter of the enterprise. This will break down the walls that have existed between business and IT and will aid in greater participation of business in the way IT services are conceptualized, designed and built.

The prime objective of BPM and SOA are to:

- streamline business processes by leveraging the interoperability and business service reuse offered by SOA,
- enable end-to-end business visibility and
- eliminate process inefficiencies by providing the right information to the right people at the right time.

BPM clearly focuses on Enterprise Business Processes and breaks down the departmental process mindset. It is these Enterprise Business Processes that will be continuously measured, monitored and improved upon. This explains the term 'Business-Engineering' in the acronym SOBET.

Finally, since the service oriented architecture style will be leveraged for adapting the application, data and software infrastructure towards building a robust services platform, the term Service Oriented is added as part of SOBET.

It is time to dive into the composition of Service Oriented Business Engineering Team (SOBET) and the roles and responsibilities of each of the members

Organization Structure

The SOBET is a multi-disciplinary, cohesive team which is formed by drawing competent candidates from IT and business so that a strong team, that has the required business and technical competencies, can be built to drive and implement a Service Oriented Enterprise.

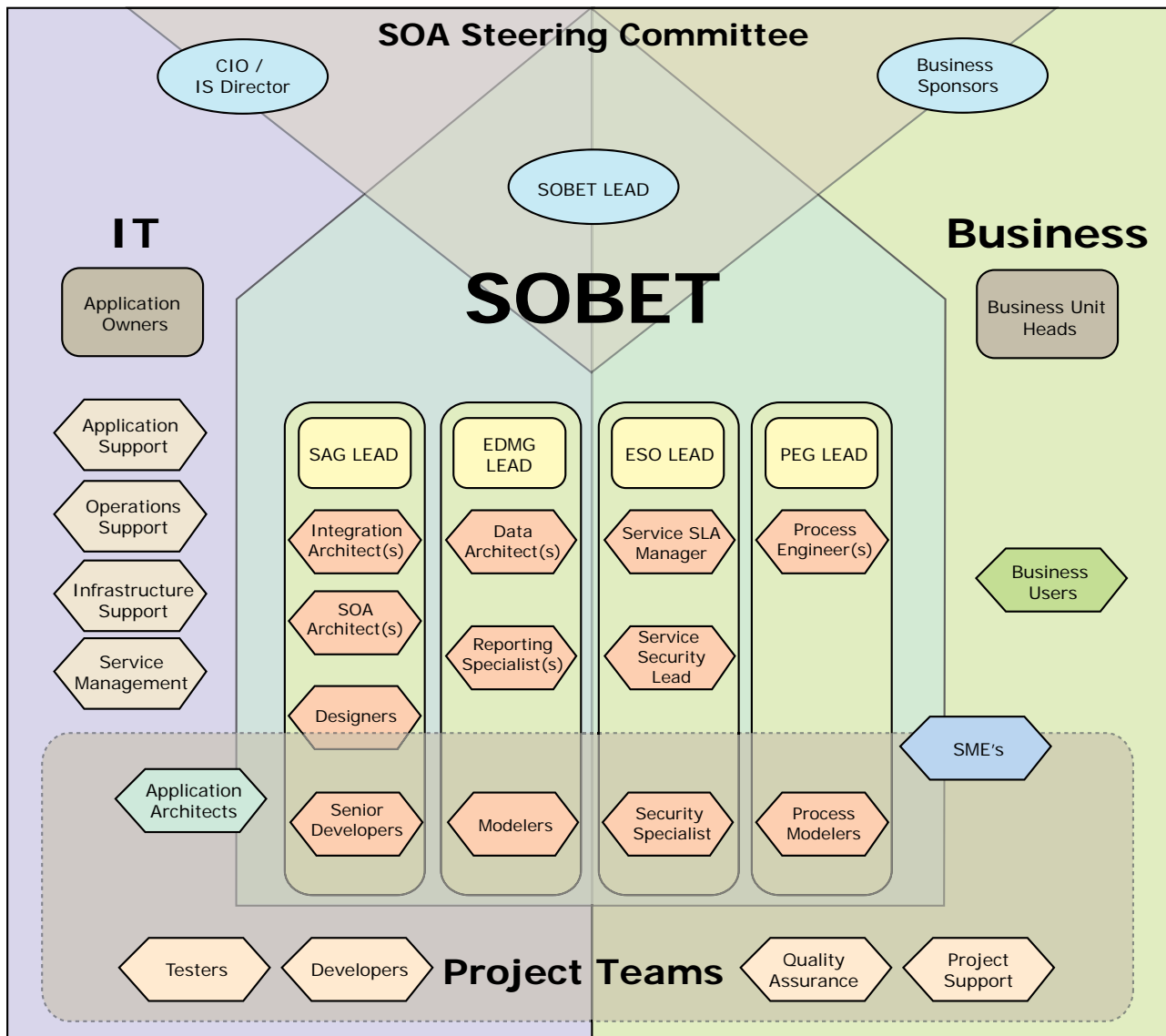


Fig 3 SOBET Organization Structure

Since SOBET has to take the lead in an initiative which is business-oriented but must yet leverage existing enterprise IT assets and skills, it is appropriate to depict it as sandwiched between IS/IT unit and the business units of the enterprise.

Let us see what each role in SOBET is responsible for and what typical skills/competencies are needed for candidates in a given role:

Roles And Responsibilities

At the highest level of this governance structure is the SOA Steering Committee, the constitution of which we spoke about in the previous section. The SSC plays a vital role in SOA decision-making. The SOBET lead is responsible for providing the SSC, inputs for such decision-making.

Sobet Lead

Success of the program hinges on the SOBET Lead and it is important that the individual identified enjoys credibility and is accepted as a leader in the business and IT circles within the enterprise.

Profile

- Business Domain Expert with good change management skills and influencing capabilities
- Sound understanding of Architecture Governance and use of technology as an enabler
- Is a leader and can evangelize and drive a business-transformation program

Responsibility

- Interface between IT and Business units to get their required support and buy-in
- All decisions with respect to SOA implementation and operations
- Lead the execution of building and sustaining a process-driven, service-oriented enterprise
- Keep the SSC informed of the progress and provide inputs to aid SSC in decision and policy making.

Process Engineering Group (PEG) Lead

A business transformation initiative leveraging SOA and BPM will require domain experts who have a good understanding of the Enterprise Processes and how the business runs and operates. A person with such wide ranging functional expertise will be suitable to head the Process Engineering Group.

Profile

- Business Process Director with in-depth domain Expertise
- Good understanding of organization and its overall functioning
- Can define and align Processes to support business objectives

Responsibility

- Setting up and managing Process Engineering Group
- Interface with Business Unit Heads/Process Owners to manage cross-enterprise business process
- Process Standardization, Harmonization and Optimization
- Enterprise Process Change Management
- Maintain a business process knowledge base
- Business Process Performance Measurement and Management

Process Engineers

BPM being the major driver and focus of business engineering team's charter, the process engineer role is vital.

Profile

- Expert in Designing, Analyzing and Optimizing Business Processes
- Good knowledge of BPM tools, technologies and Business Process Modeling Standards and Notations

Responsibility

- Creating and Modeling the business processes working with SMEs
- Working with SMEs/Business users to understand and identify KPIs for processes/sub-processes
- Process simulation and optimization
- Giving feedback to Peg Lead and in turn to BU Heads about process ground realities
- To work with SAG (Service Architecture Group) to identify and model business services
- Define the best practices with respect to Business Process Modeling

The process engineers will work with SME(s) and users from business to come up with process designs and the SME(s) will also help in review of the processes designed by the process engineers.

Service Architecture Group (SAG) Lead

Service Orientation involves componentization of existing enterprise resources to represent discrete business functions and processes. The Service Architecture Group' main objective is to define the architecture domains where the services exist, the characteristic of each domain, the guidelines, standards and programming model for design, development and integration of services in these different domains.

SAG must also control and ensure that services designed are in line with the enterprise best practices and service reuse happens

Profile

- Enterprise Architecture skills
- Skilled in SOA, web services, enterprise application design, distributed computing technologies
- Good exposure to SOA standards, tools and products
- Integration Technologies Expert with Project Management Expertise

Responsibility

- Owning the Canonical Service Model (enterprise view of Business Services)
- Standards selection, products and programming model selection based on needs
- Setting up and managing the Integration Competency Center (traditional ICC)
- Interacting with Application IT owners for exposing the required Application Services
- Interacting with Partners, Suppliers (for B2B agreements)
- Defining the SOA Best practices with reference to design and development of application, business, integration and utility services
- Defining the service development life cycle process
- Facilitating reuse and maintaining the service registry
- Defining the SOA Change Management Process and Best Practices
- Designing and Reviewing Business Service

Integration Architects

This role is very important as integration of services in SOA is a key.

Profile

- Integration Technologies Expert
- Knowledge and experience of multiple technical architecture styles
- Is well versed with middleware technologies and standards and with Integration platform chosen by the Enterprise

Responsibility

- Decision making for Integration toolsets and principles
- Designing the best practices with reference to integration services
- Integration services design and review
- Defining practices for pattern-based integration design
- Definition of Message Canonicals (To be done by working with Data Architect)

SOA Architects

The SAG lead will delegate some of its responsibilities to SOA architects. The responsibilities would include:

- Defining the SOA Best practices with reference to application, business, integration and utility services
- Defining the service development life cycle process
- Facilitating reuse and maintaining the service registry
- Designing and Reviewing of Application and Infrastructure Services
- Defining the SOA Change Management Process and Best Practices

Designers and Senior Developers

As Enterprise Application Integration (EAI), Enterprise Service Bus (ESB) and other similar middleware products in the market demand a lot of experience, successful project execution will need SOBET to provide the technology specific experts to project teams. The model of engagement between SOBET and project teams can be different depending on the overall governance model in the organization. However, there is a definite need for SOBET to employ, train, and deploy designers and developers.

Profile

- Expertise in the chosen Integration Platform
- Good grasp of SOA concepts and service-oriented development and integration

Responsibility

- Creating re-usable integration components/services and
- Providing support to project teams on technical matters involving integration of services (like compensation , transaction management, appropriate use of message exchange patterns etc)

Enterprise Data Management Group (EDMG) Lead

All process engineering effort will end up for naught, if the data used by the services are of poor quality. The SOA transformation exercise should also focus on making and treating core data/master data that is used by number of application/services as an Enterprise Data Asset. This implies that Business Entities and business data must be defined not within the context of application but with enterprise context in mind. Enterprises must define how data (both application and core data) will be managed in a SOA environment. The EDMG group will be responsible for defining a vocabulary of commonly used business entities and for putting in place effective data management strategies that ensure data integrity and reduce data duplication as much as possible. The strategies must help in defining data services that provide a unified and integrated view of business information irrespective of the data store they reside in.

Hence, the traditional business intelligence team (including roles like data architects, data-warehouse designers, analytics specialists, data miners and reporting experts), need to be constituted under SOBET umbrella to support the Peg and SAG teams. The role of the EDMG is becoming increasingly important with new areas of business performance measurement, Business Activity Monitoring (BAM) and knowledge management. coming to the fore.

Profile

- Business Data Expert
- Credentials in Data Warehousing (DW) and Reporting Technology

Responsibility

- Understanding Enterprise Data Requirements and defining a vocabulary for business data
- Formulating of SOA Data Strategy
- Managing the DW and BAM deliveries

Data Architect

The Data Architect reports to the EDMG Lead:

Profile

- Business domain knowledge
- Experience in creating enterprise-wide semantic data models
- Expertise in enterprise data modeling tools

Responsibility

- Working with Application owners and Business Users to create enterprise data model (precursor of canonical data model)
- Designing the Data warehouse for reporting
- Designing the BAM solution
- Designing the data service layer based on SOA data strategy

Reporting Specialist

Reports to EDMG Lead:

Profile

- Expert in Business Intelligence (BI) Reporting tools

Responsibility

- Working with the Process Engineer and directly with business users for reporting requirements
- Helping in designing the reporting infrastructure and the BAM dashboards

Projects Teams
The Distributed Executive
OR
An Extension of SOBET

ESO Lead (Enterprise Service Operations Lead)

The lead is responsible for setting up the SOA infrastructure, capacity planning and upgrades associated with the same. Some of the other responsibilities include:

- Defining appropriate mechanism for monitoring the service performance as against their KPI(s) and
- Managing the security architecture in a SOA environment.

Service SLA Manager

Responsibility

- Ensuring service consumers of the SLA(s) guaranteed by the service provider

Service Security Lead

Responsibility

- Selection of appropriate security infrastructure components
- Design of appropriate policies for securing access to service
- Monitoring the risks with respect to security and taking appropriate steps to protect the enterprise against identified vulnerabilities

Discussed below are some of the roles within IS/IT and Business that SOBET would interface with

Application Owners

Although not part of SOBET, their role needs mention as the responsibilities with respect to Business Engineering initiative need to be defined.

Responsibility

- Managing the Provisioning of Application Services (from conceptualization to realization)
- Application Operation Support

Business Unit Heads

This role again is not part of SOBET, but has a bearing on the functioning of SOBET. Depending on the organization culture and governance model, they may be part of steering committee as well.

Responsibility

- Working with the Peg Lead for standardization of business processes and implementation of the same in their units
- Providing appropriate resources (business users and SMEs) to work with SOBET process engineers
- Specifying Process KPI(s)

Project Teams

Individual projects within the enterprise will have a close interaction with SOBET. In the initial phases of SOA adoption within the enterprise, the SOBET members will be a part of project teams and will guide (mentor) by taking on project roles like Data Modeler, Senior Developer, Process Modeler, Security Specialist etc. As the enterprise progresses in SOA maturity, the SOBET will play more of a review role rather than a participative role in each project. The coupling between the SOBET and project team is dependent on the culture of the enterprise.

Application Architects

Service enabling an existing application or building a new application from scratch using SOA principles will need competent application architects. The responsibility will be the same as that of a software architect on a project. Application Architects will be a part of project teams and will interface with SOBET' SAG for service design review and to share project learning. This will ensure that the SOBET learns and employs the best practices discovered as part of project execution and can institutionalize the same wherever applicable.

Application and Operation Support

The group of people in these roles are also external to SOBET but will provide inputs to SOBET's ESO on the infrastructure bottlenecks. Their main responsibility will include monitoring the uptime of applications and the supporting infrastructure. They will also be responsible for system administration and system operation tasks.

Service Management

This team is external to SOBET. They will be responsible for managing the Services environment and its supporting infrastructure on an ongoing basis. This team is responsible for infrastructure upgrades and for monitoring compliance with service SLAs defined. It works very closely with the SOBET's ESO. In the initial phases of SOA adoption, the ESO will work as part of the Service Management team but over time it will limit itself to an advisory/review role.

Interaction Model

The interactions of SOBET constituent roles among themselves and with other entities within or outside the enterprise are part of the model of governance advocated in this paper.

Broadly speaking these interactions can be categorized as follows:

- Command Line Interactions
- Internal Peer Communication Interactions
- External Interactions

Each of the aforementioned categories encompasses many different pre-defined interactions while the model also keeps a healthy leeway for customizing the interactions to take care of organizational culture and existing corporate governance model under which this model operates. Each category is further looked at individually to highlight the interactions within.

Command Line Interactions

The foremost interaction in this category is the interaction between the SOBET Lead and rest of steering committee. As per the role definition, the SOBET Lead is authorized by the senior management to take operational decisions affecting the interface between IT and Business. This in turn implies that the accountability for success of business engineering initiative lies with this role or more specifically with the person assuming this role.

The next most important interaction of this category is the reporting interaction of SAG, EDMG, Peg and ESO Leads with the SOBET Lead.

Similar interactions happen within each team where SOA Architect, Integration Architect, Designers and Senior Developers report to SAG Lead whereas data architect, modelers and reporting specialist report into EDMG Lead.

Outside the SOBET team, application support, operations support and infrastructure support roles report into the Application Owners, Support Director, Infrastructure VP, or similar middle to senior management roles depending on the existing organization structure prevailing in the enterprise.

Internal Peer Communication

These interactions are vital for the success of the concept of business engineering initiative to be run with a multi-disciplinary team. The key interactions in this category are those between:

- Process Engineer and Integration Architect
- Process Engineer and Reporting Specialist
- Process Engineer and SMEs
- Integration Architect and Data Architect
- SOA Architects and Application Architects
- Integration Architect and Application Architects

External Communication

The most important criteria for the SOBET to deliver on its promise of agility and business alignment, is the interface between the SOBET constituents and other existing entities of the enterprise. Some of the key interactions in this category are:

- Process Engineer and Business Users
- SAG Lead and Application Owners
- SAG Lead and B2B Partners
- BU heads and Peg Lead
- Application Support Team and ESO
- Service Management Team and ESO
- SOBET as a whole with Project Teams

The last interaction, i.e., of SOBET with project teams is very important and we recommend SOBET's active participation in the initial SOA projects undertaken by the enterprise.

In most organizations, the SOBET will be the central body to prioritize the requirements and will be responsible to build the business case for various projects and to get the funding approved from SSC.

Other significant communications in this category are:

- Users with Reporting Specialists
- Data Architect with Application Owners and SME(s)
- Integration Architects with B2B partners

We have listed a set of possible and necessary interactions between the various entities of governance organization. The interactions will be taking place, however, under aegis of well defined processes rather than being freeform.

Functions

The functions that SOBET supports are mainly in the Architecture and Service Development lifecycle and Service Operation lifecycle Management domains of the Governance model shown in fig 1

In addition the SOBET will also be responsible for SOA Competency Management in the Enterprise

For a detailed list of functions supported by SOBET and other constituents of SOA Governance model proposed here, check the appendix A.

Model Variations

The organization as mandated here for an executive arm of SOA governance have been based on marrying the best practices in IT field with best practices of governance in public and corporate arena. Just as in public life it is not expected to have one size fit all, so is the case for SOA governance model.

We expect most variations in the way the SOA-Executive arm is constituted as this will be heavily dependent on the core cultural makeup of the business. These variations will be less in terms of the roles but more in terms of interaction models and distribution of responsibilities. There could also be some variance in the way SOBET and project teams within the enterprise interact.

The processes used by the SOA- Executive arm will more or less remain constant in terms of objectives of those processes. However, the details of implementation for these processes may vary to some extent, depending on the variety of interaction model as well as depending on the tools selected.

Model Fitment to Basics of Good Governance

Looking back at how the SOA-Executive arm will comply with basics of good governance as outlined earlier:

Accountability - The accountability of SOBET is inherent in its setup. The SOBET lead is accountable to SSC for implementation of the strategic decision made by business.

Efficiency and effectiveness - of SOBET is measured by the business value addition resulting from better resource utilization, higher customer satisfaction, quicker response to market opportunities, higher compliance to regulations and improvement in cost structures.

Transparency - The multi-level interactions among the groups within and outside SOBET ensure the maximum possible transparency that is essential to smooth functioning.

Responsiveness - The SOBET, with the help of its extensions - the project teams, gets the feedback on its policies and standards and their implications in the field. This close-loop approach makes it responsive to user and market needs.

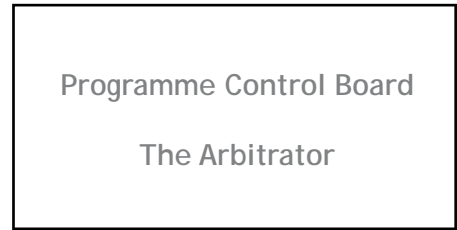
Rule of Law - The SOA-Executive arm takes responsibility for establishing and publishing various standards and processes and ensures compliance with the same.

Predictability, Reliability and Measurability - These are the very important aspects of governance as manifested by the various functions that the SOBET takes care of along with project teams.

Participation - The multi-layered interaction model of SOBET has been designed to take into account the distributed knowledge that exists across different groups of enterprise's IT and business operations. The appropriate-for-enterprise SOBET engagement model ensures the participation of all those whose involvement is key to the functions that SOBET carries out.

SOA - Judiciary

The role of judiciary is to check the uncontrolled and counter-productive use of power by SOBET. Conflicts could arise between SOBET and Project teams and the judiciary's main role is to resolve these in an amicable fashion, keeping the interest of both parties in mind.



Organization Structure

To counter the excessive centralization of power with the SOBET, a third arm must be setup that takes care of the interests of the affected subjects. In SOA world, the affected subjects would be Business Units and Application Owners, Operations Staff, and Business Users of IT systems.

The judiciary arm is needed more when SOA projects are initiated within the enterprise. Members from the IT and business units would come together to form a project team. This project team will need to comply with the standards and practices advocated by SOBET. During execution, conflicts could arise between Project Teams and SOBET which would need timely resolution. The judiciary plays the vital role of arbitrator to resolve such conflicts.

At the start of any SOA project, we recommend setup of a PCB (Program Control Board) that will act as arbitrator to resolve conflicts that could emerge. The PCB will be constituted with key project stakeholders such as BU heads, Application owners, business users and members from SOBET and infrastructure, operations support units.

Fig 4 depicts a very generic constitution of PCB and shows its position vis-à-vis SOBET and SCC.

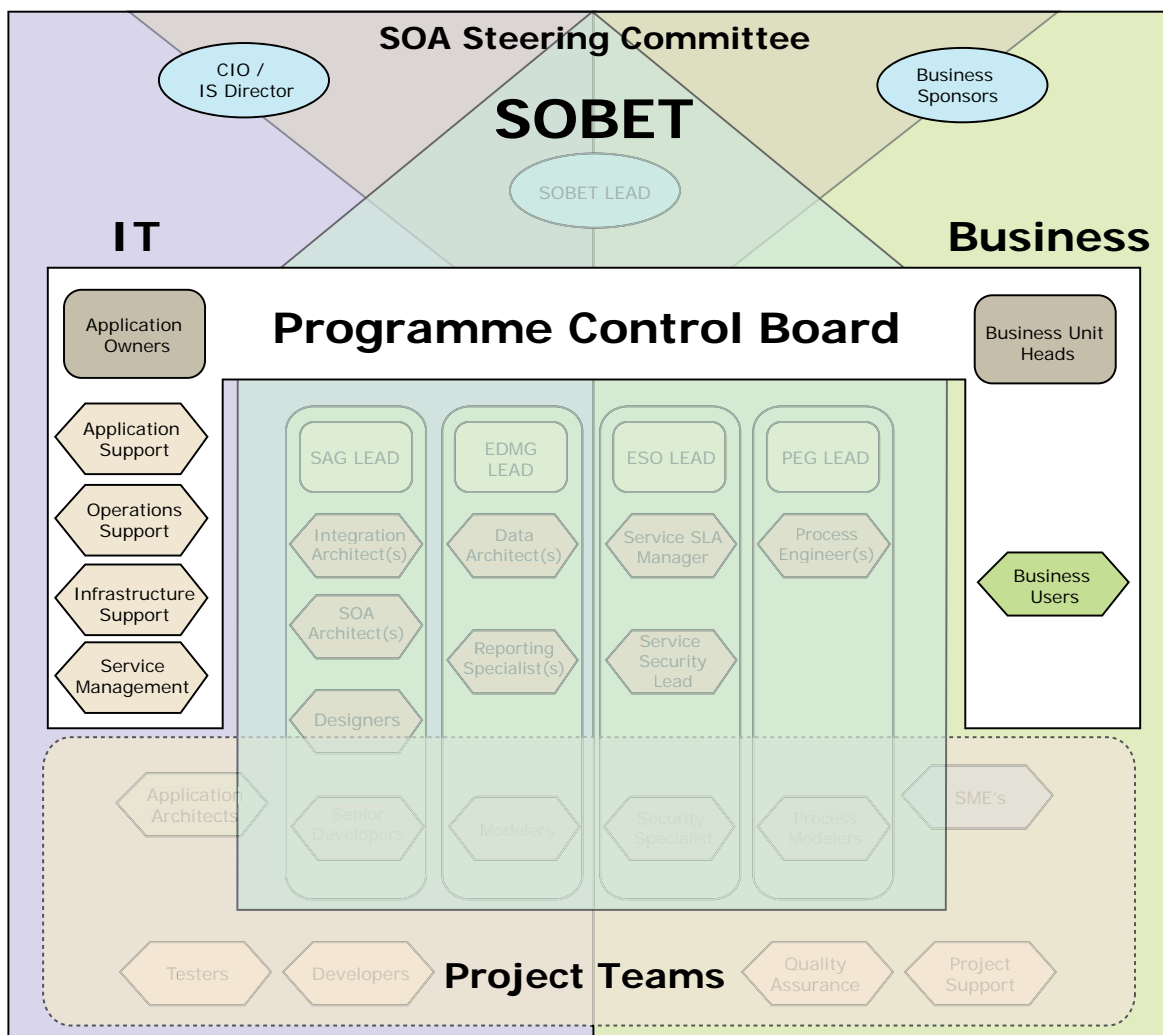


Fig 4 Organization of Program Control Board

It must be noted that although the PCB membership shows range of BU Heads, Application owners etc, in practice each program will only have a representation from each affected BU or Application while having senior management from infrastructure, operation or application support units.

Model Fitment To Basics Of Good Governance

Let us see how the presence of the SOA judiciary, i.e., the Program Control Board will help in achieving the good governance as outlined earlier:

Accountability - PCB having the responsibility of pragmatic implementation of the policies and strategies ensures the overall accountability of the governance of SOA initiatives towards business and stakeholders.

Efficiency and effectiveness - Taking project level decisions in terms of policy interpretation and implementation is delegated from SSC to PCB. Considering the time commitment that a program may need from senior executives, this arrangement allows for highly efficient decision making processes. Considering the direct involvement of PCB in affecting delivery of business value, thus renders this setup very effective in terms of SOA initiative's overall purpose.

Transparency - The due diligence applied by the PCB in implementation of strategic decisions gives the desired transparency to whole process as such.

Responsiveness - The basic premise of PCB's role is to look at the strategic directive in context of project(s) at hand and take appropriate action. This may involve corrective measures as well to the policies as defined. That way a highly responsive governance of SOA initiative is ensured.

Rule of Law - The PCB by the nature of its role ensures the strategically right implementation by adhering to the policies that are set upfront by SSC and the standards defined by SOBET.

Participation - Having the business unit heads, IT operational heads and representatives from user communities the PCB takes care of all the groups that are affected by the SOA program deliverables. And hence ensures the participation from all that are not covered by SSC, SOBET and Project Teams

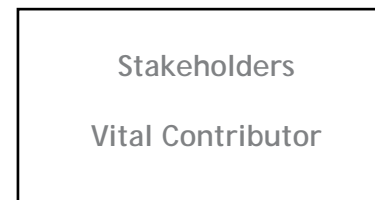
The Fourth Pillar

The modern democratic governance system, in addition to the classical three way power sharing structure, also have an entity, in form of free press, to monitor the moves of legislative, executive and judiciary arms of governance and to share these with the subjects being governed. Although the fourth pillar (as it is generally called) in public governance system does not have any statutory power per se, however, it has its own share of power, accountability, responsibilities and influence that it exerts over the subjects and external entities that interact with the government.

In the context of SOA also, there are certain entities (internal as well as external to enterprise) that interact with the enterprise and its system of governance as described in previous chapters. Some of the key entities are:

- Regulatory Organizations
- Customer Forums
- Financial Auditors
- Certifying Agencies
- Industry Standards Bodies
- Partners and Suppliers
- Markets
- Suppliers and Dealers
- Technology Providers/Vendors and finally
- The Employees

The fourth pillar of SOA governance model are these Stakeholders including the employees both on business front as well as on IT front, who have the interface roles with any of the external entities bodies as well as those who need to work with any of the three entities described earlier.



That way the customer facing units, IT Delivery teams, Support and Operations units and their members form the desired monitoring and the crucial feedback channel. The enterprises having internal quality groups, audit departments and employee unions may have these internal special interest groups also play the role of fourth pillar, partially.

The SOA governance system being put in place must allow for the feedback from these groups being recorded and acted upon in a formal way so as to allow the necessary influence on the policies and business strategies as well as SOA implementation plans and priorities, technologies and business requirements etc.

Risks Vs Rewards

The employment of fourth pillar in total SOA governance system can be debatable.

The main argument against the role of this entity is generally founded on the belief that too many decision takers or influencers will impede the speed of decisions and hence will affect the agility of the business. This is a valid objection from that (speed) aspect, however, it should be noted that the role of fourth pillar is just as a whistle-blower in giving a different angle for any decision rather than actually taking any decision. So in that respect, decision speed should not be affected as long as the review process and intention is properly understood.

The advantage generally cited for such an arrangement is that it allows more circumspect view of the decisions and hence more stable policy. The stability however will always be a function of the people participating and playing the role of fourth pillar.

Model Fitment To Basics Of Good Governance

In general the role of fourth pillar is just to act as a watchdog and it affects the basic tenets of good governance in that capacity:

Accountability - of other constituent arms of the SOA governance is ensured by constant scrutiny of their functions by vigilant stakeholders.

Transparency - is boosted by presence of demanding stakeholders who are affected by the result of the SOA initiative.

Participation - is the key attribute of SOA governance that gets a fillip by the presence of strategic objective oriented stakeholders. This ensures a high rate of adoption of the IT solutions in general and SOA in particular.

This and similar sections in previous chapters have attempted to show how the good governance characteristics (defined in context with a public governance system) are manifested in different constituents of the SOA governance model. Appendix B aggregates these model maps and depicts the relative significance of these basics of good governance with respect to the role each of the SOA governance body play.

Epilogue

Do Not Ever Confuse Discipline With Rigidity

The constitution of SSC, SOBET, Project Teams, PCB and feedback channels etc., at first, may seem to be a too bureaucratic a setup and advocates of lean government may argue against so much of formality in extensive structural and process definition. However, it must be noted that although, the paper – taking its cues from governance in public and corporate life – is in favor of making formal structures, defining and practicing process oriented approach of governance with stress on using industry standard tooling that enforces best practice IT governance processes, it by no means promotes the hard line approach.

Every aspect of governance, be it business decision making; governance body formation; project execution; or policy adjustments, has a built in flexibility that allows the enterprise to tailor the governance framework so described in this paper. The basic tenet of the proposed model is based on the service capability of a business driven IT organization. This is in line with the analogy with public governance models that have cultural differences as the basis for creating a suitable governance model (structure, process and resources or tools) and to prioritize the parameters of good governance and thence implement an effective governance system.

The IT Governance with Service Oriented Architecture and Business Process based approach for conceptualizing, designing, constructing, deploying, maintaining and optimizing IT systems also allows the enterprise to take different forms in terms of structure, processes and tools based on the core strengths of its IT setup. At the same time, the model also suggests normative approach to governance, to ensure that flexibility is not taken too far to violate the first principle of the governance, that is, the discipline.

In short, it may be appropriate to say that by observing discipline in the SOA initiatives and implementing an appropriate variant of the SOA Governance system advocated in this paper, an enterprise will definitely reap rich rewards in terms of business benefits of their efforts in these initiatives. The SOA promise can be realized by following the path of the intelligent.

One who uses the knowledge of predecessors and adds to it in the process is the real intelligent.

So, do you think we can decide whether the SOA Governance is immortality of the age old governance principles or re-incarnation of the principles in the context of modern IT reality?

Appendix A – Processes and Tools for SOA Governance

The key processes that are taken care by the SOA Governance and the role in the proposed model fulfils the same, are enumerated below with the respective governing body that is involved along with the tools that may possibly be used to help carry out the function.

There are a number of pure play IT governance tool and platform vendors that have either tailored their tools for SOA governance or have built such tools from scratch. Most of the various SOA governance functions that have been listed earlier can be catered to by these tools while for others there is still a lot is desired. Some of the vendors and their offerings have been briefly outlined below. These by no means can be considered exhaustive as a number of vendors are coming up almost weekly with new tools and upgrades to their existing IT governance tools making those more promising by the day.

Process	Role					Representative Tools
	SSC	SOBET	Project Team	PCB	Other	
SOA Infrastructure Management		R			P	<ul style="list-style-type: none"> Compuware Changepoint™
SOA Change Management		P	S	R		<ul style="list-style-type: none"> Oracle CCM Mercury CCM / Systinet Information Manager
Service Ownership (Contract)		R	S		P	<ul style="list-style-type: none"> Systinet Contract Manager
SOA Competency Management		P	S			<ul style="list-style-type: none"> Custom
SOA Investment Prioritization	R	P	S			<ul style="list-style-type: none"> Compuware Changepoint™ PPM
SOA Funding	P	S				<ul style="list-style-type: none"> Compuware Changepoint™
SOA Risk Management		P	S	R		<ul style="list-style-type: none"> Project Management Tools
SOA Business Value	R	P	S			<ul style="list-style-type: none"> Mercury
SOA Policies and Security		P		R	S	<ul style="list-style-type: none"> Reactivity Management Console SOA Software's Service Manager SilverKite Systinet (Mercury/HP) Policy Manager WebLayers Center™ Actional Security Gateway and SOAPstation Oracle Web Security Manager
Service Monitoring (SLA)		R	S		P	<ul style="list-style-type: none"> Oracle Enterprise Manager – SLM AmberPoint SOA Management System Actional (Sonic) Looking Glass WebLayers Oblicore Guarantee™ Tivoli ITCAM for SOA

SOA Architecture & Principles		P				<ul style="list-style-type: none"> • System Architect • Rational Software Architect
Service Identification (and lifecycle management)		R	P		S	<ul style="list-style-type: none"> • BEA, IBM, Microsoft, Oracle and other platform vendors • Mindreef SOAPscope Server™
Service Registry and Taxonomy		P	S			<ul style="list-style-type: none"> • Sun Service Registry • Systinet (Mercury/HP) • Infravio X Registry™ • IBM Registry (WSRR)
SOA Practices and Procedures		P	S	R		<ul style="list-style-type: none"> • Collaboration and Knowledge Management Systems
SOA Reuse		P	S			<ul style="list-style-type: none"> • Service Repositories like Software AG CentraSite
SOA (Build v/s Buy)		R	P			<ul style="list-style-type: none"> • NA

* P = Primarily Responsible, S = Supporting role, R = Reviewer role

All the product names used here may be copyrights and/or trademarks of the respective vendors and inclusion or exclusion of any, is a matter of co-incidence rather than intentional.

APPENDIX B – GOOD SOA GOVERNANCE VIS-À-VIS PROPOSED MODEL

The various aspects of good governance and how these are manifested in the different constituent bodies of the governance model that has been proposed in this paper for SOA governance are depicted below. The relative role these constituent bodies play in the realization of these desired characteristics of good governance, as perceived by the authors, is also shown.

Good Governance Characteristics	SOA Governance Body				
	Legislative (SSC)	Executive (SOBET)	Executive Extension (Project Team)	Judiciary (PCB)	Fourth Pillar (Stakeholders)
Accountability					
Efficiency and Effectiveness					
Transparency					
Responsiveness					
Forward Vision					
Rule of Law					
Predictability, Reliability and Measurability					
Participation					

Legend

No or Marginal Role	Have Some Role	Significant Role	Key Role	Very Critical Role



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