

# A Survey On SOA Governance Scope, Objectives And Its Policies

Pushpalatha B, Prof R Jaya

PG Student, Sr. Assistant Professor

Department of Computer Science Engineering, New Horizon College of Engineering, Bangalore, Karnataka, India  
[pushpa41993@gmail.com](mailto:pushpa41993@gmail.com), [jayamanojkumar@gmail.com](mailto:jayamanojkumar@gmail.com)

**ABSTRACT:** 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. Service-oriented architecture (SOA) governance transcends simply designing and developing Web services and implementing SOA registries, repositories and other like tools. Robust organizational groundwork is required for an SOA implementation to succeed. Every enterprise that has some relation to Information Technology (IT), be it as consumer or as provider, in Service Oriented Architecture (SOA). the paper attempts to give the structure, roles, processes, features, scope and objectives that will together help set up an model to see the best SOA governance which enable --agility, efficiency and adaptability.

**Keywords** - Service-oriented architecture, IT governance, SOA governance, SOA governance model, Governance policies, Life cycle Governance.

## I. INTRODUCTION

**T**he 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.

### WHAT IS SOA GOVERNANCE?

The term SOA 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.

### KEY SOA GOVERNANCE POLICIES

**Strategic governance:** These would include anything related to SOA strategy, including who is responsible for creating it, changing it and implementing it.

**Enterprise governance:** What architectural standards should the enterprise follow? Who defines them? What is the process for adding new standards or products into the approved list? When shared service?

**Program governance:** These policies are used to define and approve business services, prioritization of service development and deployment, service ownership, and which information systems are the --systems of record-- for each particular piece of information.

**Release management:** When should services and SOA infrastructure be released into production use? When should services be retired? What are the acceptance criteria for releasing the services for use? These are part of release management governance policies.

**Service life cycle management:** These are policies that determine when and how the services are identified, how service contracts are developed, reviewed and approved, and how services are developed and put into production.

**Change management:** Changes to services and SOA infrastructure must be controlled in order to maintain a --clean-- and well-organized SOA environment.

## II THE DOMAINS OF SOA GOVERNANCE

SOA governance can be classified into multiple categories. These include the following:

**Architecture governance:** Architecture governance is about enforcing architecture principles, leading practices and standards so that architectural decisions and policies are followed throughout the enterprise in a consistent manner.

**Service life cycle management governance:** Organizations typically find themselves possessing dozens—if not hundreds—of services created by many different workgroups and departments.

**Policy life cycle management governance:** Governance is about defining policies and enforcing these policies. But the policies themselves have their own life cycles.

### 2.1 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, fig 2.1

Let's now look at what a Governance model.[4]

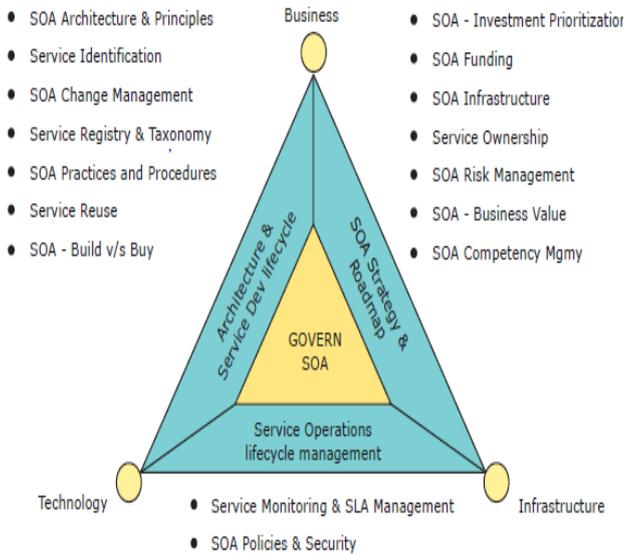


Fig2.1: governance model

**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.

**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.

**SOA Change Management** – The governance model must specify the process to make changes to services in production and on maintaining multiple versions of a service.

**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.

**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.

### III OBJECTIVES OF SOA GOVERNANCE

#### 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.

#### SOA Platform Realization

In order to accrue the benefits of SOA, the right set of SOA platform infrastructure elements need to be selected. The SOA platform implementation can yield cost benefits, flexibility and architecture simplification; however, tightly controlled governance is required to implement it in practice.

### 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.

### 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.

## IV BASICS 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.

**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.

**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.

To implement a structure of governance with three constituent roles of Legislative, Executive and Judiciary with proper checks and balances fig 4

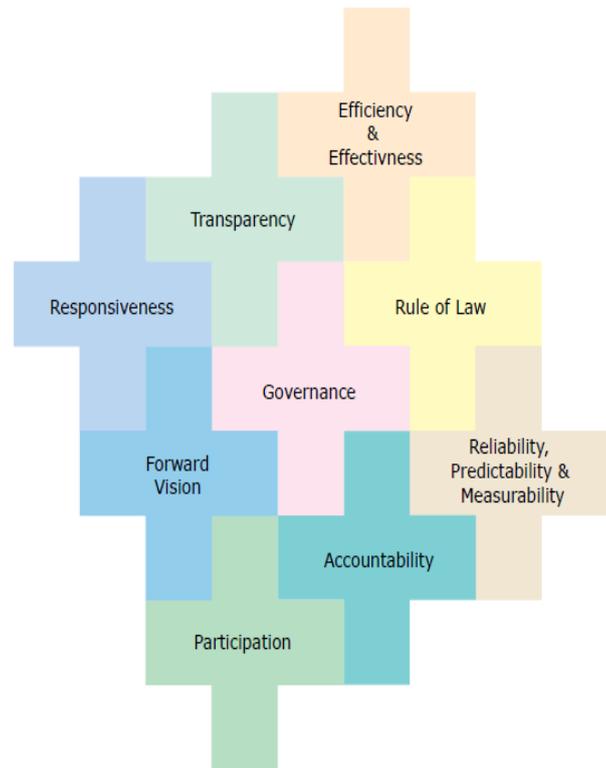


Fig 4: Basic Features of Good Governance

## V CONCLUSION

By implementing SOA in an evolutionary manner through incremental development and deployment of business applications and reuse of business components, organizations have a much better chance of building the right architecture and adopting the right practices needed to bring a successful SOA vision to fruition.

## REFERENCES

- [1]Luthria, H., Rabhi, F.: Service-oriented computing in practice – an agenda for research into the factors influencing the organizational adoption of service oriented architectures. J. Theor. Appl. Electron. Commer. Res. 4(1), 39–56 (2009)
- [2] Beimborn, D., et al.: The role of IT/business alignment for achieving SOA business value - proposing a research model. In: Americas Conference on Information Systems (AMCIS). AIS Electronic Library (AISeL)(2009)
- [3]www.findwhitepapers.com/Technology/Data Management
- [4] www.oracle.com/us/.../soa/soa-lifecycle-governance-wp-

971496.pdf

[5]Shankar Kambhampaly, —*Service-Oriented Architecture for Enterprise Applications*], Wiley.

[6] Mark D. Hansen, —*SOA using Java Web Services*], Practice Hall, 2007.

[7]WaseemRoshen, —*SOA-Based Enterprise Integration*], Tata McGraw-HILL, 2009.

## BIOGRAPHIES AND PHOTOGRAPHS

### 1 PUSHPALATHA B



She is doing her Master of Technology (M Tech) degree in Computer Networking from New Horizon College of Engineering, Bangalore, Karnataka, India. She held the Bachelor of Technology (B Tech) degree in Computer Science and Engineering from BTL Institute of Technology and Management Bangalore, Karnataka, India. Her primary research interests are in the area of Big Data, Service Oriented Architecture, Cyber Security, and Information Network Security.



R.JAYA is working as a Sr.Assistant Professor in the department of CSE at New Horizon college of Engg. She has 13 years of teaching experience. She has done bachelor and master degree in engineering under Anna University. She is doing Ph.D under VTU. Her research interest includes data mining, expert systems, SOA and security.