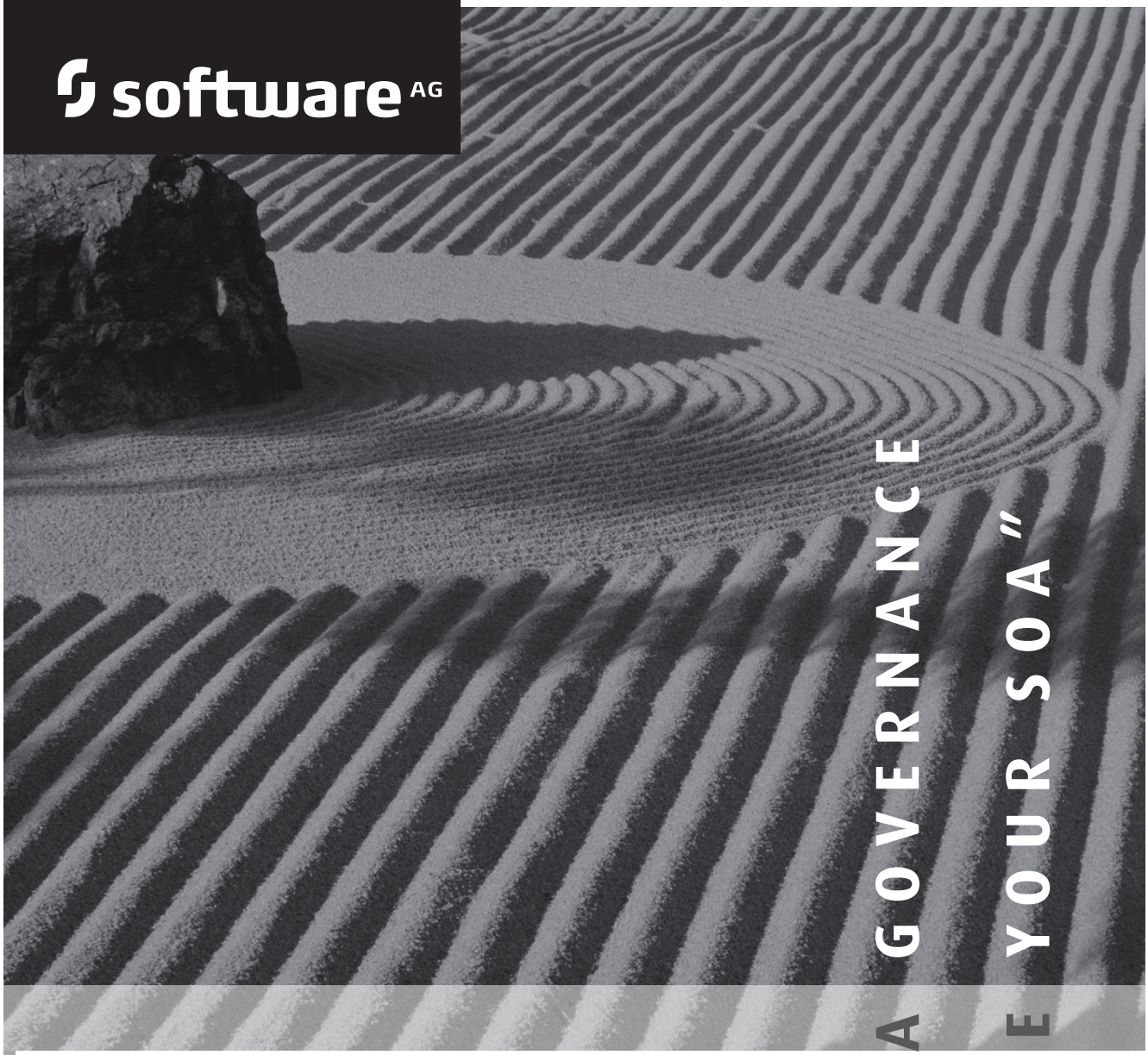
software AG



SOA GOVERNANCE

"RULE YOUR SOA"

Crossvision

Business White Paper

CONTENTS

INTRODUCTION

Could your SOA Governance strategy be described as incidental, accidental, or even non-existent? And, if so, should you care?

Synopsis

This whitepaper underscores the fact that SOA Governance is no side issue – but rather the key factor to overall SOA and business success! Effective SOA Governance supports your IT organization, aligns business and IT, and provides the foundation for compliance management. Business benefits from your SOA initiative can be monitored and optimized, providing you with traceable business goals and the appropriate service implementations and operations. A well-founded and executed SOA Governance avoids the "chaotic growth" of an enterprise's SOA and allows an organization to supervise and manage the entire SOA lifecycle.

What benefits do organizations expect from SOA Governance?

¬ Support alignment of Business and IT

¬ Improve business agility and flexibility

¬ Optimize SOA business benefits

¬ Enable management and control of services

¬ Provide traceable business goals within SOA

Governance – a Hot Topic

Before we address SOA Governance, let's look first at the broader framework of Corporate Governance. In many industries governance has become a hot topic in recent years, as financial scandals have eroded confidence in many professional and corporate organizations; remember Enron? As a result of government intervention, corporate CEOs are now personally responsible to ensure accuracy of their company's accounts and reports.

Corporate Governance is about establishing and enforcing laws and decision processes within an organization. Supported by management, the CEO has to ensure that organizational objectives are attained and the organization's resources and assets are optimally used to create value. Corporate Governance is often implemented by a *governance board,* responsible for protecting stakeholders' rights. Such a board controls management decisions, oversees their implementation and typically reports directly to either the CEO or Board of Directors.

"Top-performing enterprises generate returns on their IT investments up to 40 percent greater than their competitors."

[Weill-Ross]

The Organization for Economic Cooperation and Development (OECD) defines Corporate Governance as "providing the structure for determining organizational objectives and monitoring performance." The key differentiator between top performing organizations and their mediocre brethren is the latter: "monitoring performance." Organizations have to actively evaluate feedback and results from decisions and investments – and with respect to *every* organizational asset.

Governance both *empowers* and *controls*. It *empowers* organizations' managers and stakeholders to make and implement decisions, thereby enabling innovation and progress. At the same time, it *controls* to prevent behavior not in the best interests of the organization. In short, *governance determines who makes decisions and provides them guidance*.

For example, imagine your Chief Financial Officer (CFO) invests a significant amount of company funds in short term bonds with an AAA+ rated institution and a variable interest rate guaranteed for five days. Everyone would expect that CFO to both monitor the interest rate and evaluate the investment decision at reasonable, regular intervals. Now think about your organization's IT investments – does your organization regularly (or ever!) calculate ROI (your "interest rate") for all your IT investments? If your answer is "no" or "sometimes," how does your company determine whether its IT investments have met the stated goals? This is exactly why governance calls for two activities: *decide* and *monitor* – to keep focus on the long-term value for the organization, instead of only short-term, "project" success.

Corporations have long used policies and processes to both manage and monitor (a. k. a. govern) their key assets – human resources, financial and physical assets, and intellectual property. Harvard Business School researchers Peter Weill and Jeanne W. Ross advocate adding Information Technology to the list of key strategic corporate assets.

Key governance questions:
¬ What decisions need to be made?
¬ Who decides?
¬ How do they decide?
¬ How are results monitored?

WHAT IS IT GOVERNANCE?

Whereas Corporate Governance focuses on *strategic corporate* assets, IT Governance is strictly concerned with *Information Technology* assets. Let's look at an important example – IT budgets:

Although upper management customarily approves the concrete amount of money available for IT in a given year (i. e., the IT budget), the IT Governance body – and this could be known by many names – is the specific role or group within the organization that determines the budget, defines the rules/guidelines about how it will be allocated and decides how conflicting requests will be resolved; the key "what, who and how" governance questions previously mentioned. For example, if the IT Governance body wanted to encourage innovation and leverage risks, they could decide to partially fund "outside" projects which require new IT infrastructure, if those projects have significant potential value for other departments and/or future projects. Then, when the new infrastructure is operational, those wishing to utilize it must pay the forerunners a percentage of the investment – thereby providing the "leverage" for future projects.

According to the IT Governance Institute, the responsibility for *effective* IT Governance spans the entire reporting line – from the executive board and upper management down to individual group and/or team leads. The main goals include:
¬ Align IT with enterprise demands;
¬ Realize promised benefits;
¬ Utilize IT to increase the enterprise's value.

In practice, you will find IT Governance covers the following interrelated issues, at a minimum[1]:
¬ IT Principles, a. k. a. IT Strategy, clarify the role Information Technology plays in the business. Examples of such principles are "centralized core systems versus decentralized support systems," "reliability before features and flexibility" or "leverage economies of scale." When determining such principles, governance bodies have to combine strategic business goals with their IT foundation.
¬ IT Architecture defines standardized structures and interfaces together with integration

[1] *[Weill-Ross] The IT Governance list can also encompass IT Infrastructure, Infrastructure Strategy and other governance frameworks such as IT Control, Human Resources and Risk Management. However, our discussion focuses strictly on SOA Governance*

standards – and provides the foundation for data, application and IT infrastructure. In the context of architecture, IT Governance defines which kind of data or applications need standardization.

- Business application needs provide the link for IT applications to the overall business strategy.
- IT Investment and prioritization clarifies which IT architectures, initiatives or topics to fund and how to select between projects competing for resources/budget.

Expanding on what we learned from Corporate Governance, effective governance not only defines how to monitor results, but also how to take corrective action. This holds true for all types of governance. Ideally all enterprise governance (Corporate, IT and SOA) should be integrated to yield the maximum synergy for effective decision-making and management.

What makes IT Governance so important?

Effective IT (and SOA) Governance relates directly to:

- Profits: Independent studies have proven that profits are higher in organizations with effective IT Governance – Harvard Business School quantifies it to be in excess of 20 percent.
- Resources and Effective Decision Making: The number of people both directly and indirectly involved in IT-related decisions is rising – a good reason to have effective decision-making processes in place. Even business line managers influence IT spending today.
- Conflict Resolution: Conflicting business goals of cost-effectiveness and flexibility require balancing across the organization. Both business and IT departments often influence the way IT Governance is implemented, making it a shared responsibility between different divisions of upper management.
- ROI and Value Achieved: Current organizations invest in IT, but very often fail to monitor the value created by their investments. A well-executed governance strategy creates value, provides measurable ROI and helps you realize the full potential of SOA.

SOA GOVERNANCE HAS ENTERPRISE RELEVANCE

As SOA is a fundamental organization-wide movement, it should not be governed just by looking at certain technologies or IT projects. Previously we touched on the concept that SOA Governance is an integral part of overall governance – but what exactly is it? One way to describe SOA Governance is that it defines the decision-making authority for developing and/or modifying SOA artifacts; and it has both a strategy and a lifecycle. In addition, it encompasses people (i.e., roles), technologies (i.e., tools) and processes (i.e., production) – further emphasizing the far-reaching effects SOA Governance has on the organization. Here we look at some of the drivers behind a SOA strategy and a common SOA service lifecycle. Then we will build on this foundation, joining these concepts with a common SOA maturity model to help us answer the question, "When does SOA Governance become important to your enterprise?" Combining these key aspects of SOA Governance leads us to practical SOA implementations.

SOA Strategy and Drivers

Typical SOA strategy "phases" (see Figure 1) are also the basis for common SOA maturity models. Phases can have different "motivations," or goals, but it is not necessary to implement all phases equally in order to gain valuable benefits from a SOA.

Phase 1 – Modernizing Production Systems

Often motivation for a SOA is reuse of existing systems, such as mainframe applications. Well-defined service interfaces allow the strategic IT assets of the enterprise to become valuable assets *across* the internal service market. Production applications encapsulated as services with new service interfaces can be combined with new services to develop initial SOA applications, by means of point-to-point connections. Key SOA artifacts are the service interfaces and adapters integrating the production systems. This is the time to start thinking about SOA Governance.

Phase 2 – Loose Coupling/Loosely-Coupled Discoverable Services

Once an initial service pool is established, secondary drivers for SOA initiatives are often practical management and production service usage. This is the time to start implementing SOA Governance. New roles such as service architect/designer, and tools such as service registries/repositories are now part of the SOA landscape. At this point it pays to utilize tools which not only manage service interfaces, but also all key SOA artifacts. A good SOA registry/repository can support this requirement – and may easily become the "Swiss army knife" for all SOA and SOA Governance participants.

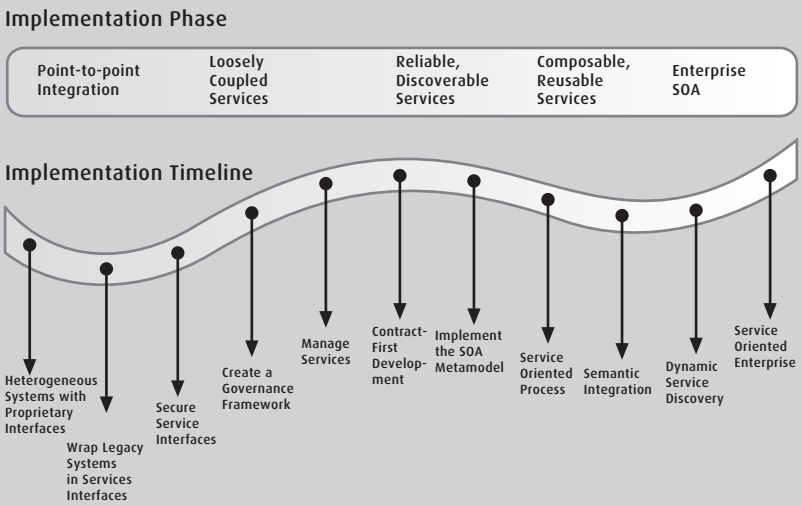


Figure 1: SOA Strategy and Phases (adapted from zapthink)

Phase 3 – Composite Applications and Business Processes

Now that service management and production use is a reality, the wish for even easier service usage quickly ensues. Business units want to rapidly compose services into new applications and have flexible processing. SOA promises of flexibility and agility become a reality. Keywords such as process and flow descriptions (e.g., using WS-BPEL) come to mind as additional artifacts during this phase. Now new applications are about assembly, not development.

Further phases eventually lead to an enterprise-wide SOA, where entities such as rules, business and IT roles, development and governance tools, SOA production, and so on, are established and commonly used throughout the enterprise. Iteratively and incrementally SOA and SOA Governance provide higher and higher enterprise value.

SOA Service Lifecycle

By examining and relating some key aspects of the SOA Service Lifecycle, we can better understand what practical SOA Governance is all about. The SOA service lifecycle (see Figure 2) involves services, related artifacts and roles/actors. In practice, a business process analysis and optimization request could result in either creation of a new service, modification of an existing service or service reuse. Here SOA Governance provides guidance by:

- ¬ Describing how new services move from planning and design to production,
- ¬ Mandating that service reuse or modification is always considered before a new service is approved,
- ¬ Ensuring that reviews are an integral part of each phase, and
- ¬ Defining what each role does in the service lifecycle.

Roles play an important part in the service lifecycle as well, and SOA Governance helps define what roles are needed, where and when. For example, if we look at service interface design, we find it typically involves the following roles:

- ¬ Service champion – the business department and/or person which owns this service;
- ¬ Architect – responsible for service business design and if an existing service can be reused, modified, or versioned; also ensures that the new service will fit well into the service landscape;
- ¬ Service Designer and Service Developer – technical roles responsible for the technical service design and implementation.

The service lifecycle also includes design- and runtime aspects; for example – relationships between services and other SOA artifacts, such as Business Process Execution Language (BPEL) and Extensible Process Description Language (XPDL) process descriptions, graphical process diagrams based on Business Process Modeling Notation (BPMN), business rules, verbal service descriptions, service policies, service metrics like "degree of service reuse" – and more.

A very important element of SOA Governance is the management of the SOA artifacts involved within a service lifecycle. To gain an impression of the magnitude, complexity and importance of this, consider the following:

For one single service, the initial analysis, implementation and production phases alone provide a wealth of documents and artifacts to be managed (e.g., business processes, business cases and additional requirements, later followed by architecture, implementation, test and production documents). Each of these artifacts provides long term value for service users and providers – not to mention that they need to be available for other SOA participants as well. So it's easy to see that manual management of even a small number of services becomes very tedious, if not impossible; the right tools – at the right time – are essential for successful SOA Governance.

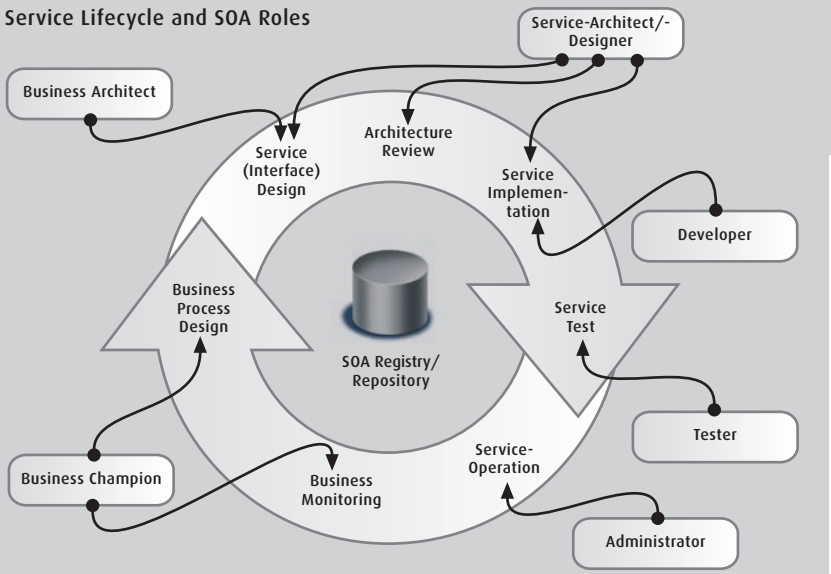


Figure 2: Service Lifecycle and SOA Roles

SOA Maturity and Governance

SOA Governance is a strategic investment which spans the enterprise and functions best as a project on its own. Ideally SOA Governance, key roles and related tools, such as a SOA Registry/Repository, should be established and operational even before initial services are in production.

Also relevant, SOA maturity models help keep the SOA enterprise vision "in mind." To establish trust in SOA, a pilot project typically introduces SOA incrementally with just a few services. Initial services are often derived from existing production applications and have business value, but are not mission critical. Since they are small, pilot projects can oftentimes employ manually-controlled documents and spreadsheets to describe services, artifacts and their relationships. Once the early phase has concluded and SOA has the enterprise's "green light," planning for the systematic development of SOA can commence. SOA Governance with comprehensive tool support is critical from this point forward.

The need for SOA and IT Governance escalates as you ascend levels; SOA Governance should be initiated during level 1 and SOA registry/repository support added when moving from level 1 to level 2 (Figure 3).

Improve Governance in Parallel

In principle, SOA Governance should not be implemented without the complementary Corporate and IT Governance. However, these could, and should, evolve together; if an organization suffers from an underdeveloped IT Governance, its SOA initiative with integrated SOA Governance could be used to improve overall governance issues.

SOA Governance has considerable synergy with IT Governance – and they should evolve together.

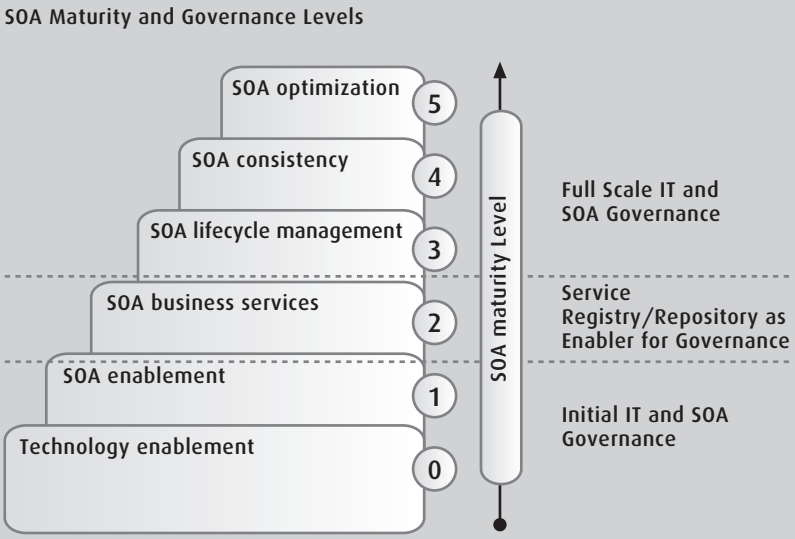
IMPLEMENTING SOA GOVERNANCE

Proper planning is key to implementing SOA Governance successfully. First, evaluate *what* needs to be governed, and then decide *how* it will be governed and monitored. When implementing SOA Governance, an organization or enterprise needs to at least address the following:

1. Define *and publish* your SOA goals – give your SOA a clear target and tell your stakeholders about it.
2. Define the SOA organizational structure – identify the SOA Governance body first and then define required roles, such as service architect, and assign each a clear set of responsibilities. The SOA Governance body should include at least one representative from both business and IT, have direct links to upper management and be empowered to decide SOA-related issues.
3. Create the *required processes* for SOA Governance – begin with initial concepts, such as service design, service development through service deployment and operation. Make sure to correlate roles and responsibilities with tasks relevant for your specific SOA initiative. For example, it's a design-time responsibility to decide which access-rights someone will need to consume a new service or which response-time can be guaranteed in its policy. It's a runtime responsibility to monitor that the aforementioned policies are met. (Remember that governance is about decisions and monitoring!) At a minimum, assign the roles "Business Service Architect," "Technical Service Architect" and "Service Administrator" appropriately within your organization.

Since SOA infrastructure is potentially heterogeneous – SOA Governance should be handled with a best-of-breed (or best-fit) product strategy.

Figure 3: "SOA Maturity"– Introducing SOA Governance and SOA Registry/Repositories



4. Evaluate and decide the technical issues – first, get the proper tools for the job – specific technologies and products. In the beginning, simple tools, such as Wikis that enable collaborative authoring are sufficient. However, as the number of services and service users increases beyond 10, complexity will correspondingly increase exponentially; ensure your tools will grow with you, and are integrated and federated to the widest possible degree. Next, establish how the enterprise will decide questions concerning basic infrastructure, such as service bus, SOA Registry/Repository or development tools? How will new technologies be integrated into the existing IT landscape? The "one size fits all" approach is often not suitable for SOA. Imagine design artifacts, interfaces, policies etc. stored in a SOA Registry/Repository, an ESB for integration, management tools for runtime SOA Governance supervision, a SOA Registry/Repository which can interface with existing Service registries or LDAP servers, project documentation tools, development environments and more – flexible SOA technology should allow using all of them in a federation, rather than forcing you to pick just a predefined tool set.

Start early with SOA Governance, rather than waiting until many services are already in place; a holistic, yet simple, governance approach at the beginning of your SOA initiative provides the groundwork for success!

A priori define how to evaluate new technologies and products and make appropriate decisions.

Practical SOA Governance – Use Cases

Design- and runtime are two very important, interconnected stages in a service's lifecycle; decisions made during design-time directly influence runtime results. Design-time typically spans service planning, design, implementation and testing phases. Design-time actors are the people who, for example, make the many business and technical decisions needed, clarify and establish the interfaces, identify reusable services, and develop and test service implementations.

In contrast, during runtime people are only involved as users; the actors are most often production services. In this stage, services or composite applications call other services utilizing real parameters and policies.

The following use cases present SOA Governance from role-based perspectives:

#1: An architect plans development of a service
#2: A business analyst plans a change within a certain business process
#3: The CIO needs to monitor service reuse
#4: A chief business officer needs to monitor a business process
#5: A chief business officer needs to ensure specific *policies* of a service

Use Case #1: An architect plans development of a service

First the architect discusses the overall business context with the appropriate business analyst. Next, he researches whether similar processes already exist using the service repository and document management system advocated by his SOA Governance team. His internal SOA RSS news feeder recently notified him of upcoming service changes, and linked him directly to an internal Blog discussion about those services and their usage. Finding a suitable candidate for reuse, also rated "high" in the internal Blog, he phones the responsible

service owner (a role defined by SOA Governance) using contact data contained in the SOA Registry/Repository.

Then the architect and service owner mutually decide on the required enhancements to the existing service, using the decision process prescribed by their SOA Governance rules. Design and development also follow the established rules – then implementation, service versioning, testing and, finally, getting the updated service operational.

Figure 4 shows this typical drill-down scenario: An integrated SOA environment lets people find the information they require – ranging from detailed technical documentation (interface contracts, BPEL models, policy assertions and so forth) and informal social network information, such as user ratings, to contact information for those responsible. This kind of tool support characterizes effective governance.

Use Case #2: A business analyst plans a change within a certain business process

A business analyst needs to incorporate some changes into the company's HR processes to meet new law requirements effective later in the year. Since the HR processes are SOA-based, he uses his browser-based SOA Registry/Repository to find the definition of the relevant HR processes, as specified in his company's SOA Governance policy. Locating a graphical process model for that particular process, he finds it contains a well-balanced amount and depth of information, including what parts of the process are implemented by which services, and also provides detailed interface descriptions. User comments on the services provide valuable advice, for example, HR process changes must be reviewed by the workers' union, so he knows to schedule a review session and by when.

Next, he models the updated parts of the process in the modeling tool provided by IT and SOA Governance, and uses the SOA Repository/Registry to conduct an impact analysis as described in the SOA Governance role and process documentation. With the tool, he finds that one operational service will be affected by the change. He notifies the appropriate service-owner, who was assigned by the SOA Governance team. The modified service will receive a new version number, as prescribed by SOA Governance rules, to allow for parallel usage of both service generations in different applications. From there this is a classical change request (and may be handled similar to Use Case #1).

All the business analyst's changes are monitored and recorded by the SOA Governance tool suite (e.g., SOA Registry/Repository and related tools) so other members of the SOA initiative can benefit from his work.

Use Case #3: The CIO needs to monitor service reuse

The CIO needs to finish her monthly status report for the board meeting. She has been asked to report whether the company's goals for service reuse have been met (a classical SOA Governance issue). With several hundred operational services and millions of service-calls per week, her SOA is state-of-the art. Manual tracking of service definitions, interfaces and invocations would be impossible; the CIO relies on the company's SOA Registry/Repository, federated with ESB and management tools, to do this job for her. Monitoring and reporting activities, such as these, are defined by the company's SOA Governance runtime strategy. In this case, the Registry/Repository data reflects that 21 % of all services are used in more than 90 % of all service invocations – clearly showing that these services form the core IT assets of the enterprise.

To her surprise, the CIO also finds that a number of services are operational but have not been used within the last six months. The CIO identifies the business and IT service architects responsible for the un-used core services and asks them to conduct an internal retrospective meeting with the SOA team.

Figure 4: "Architect finds information" related to service

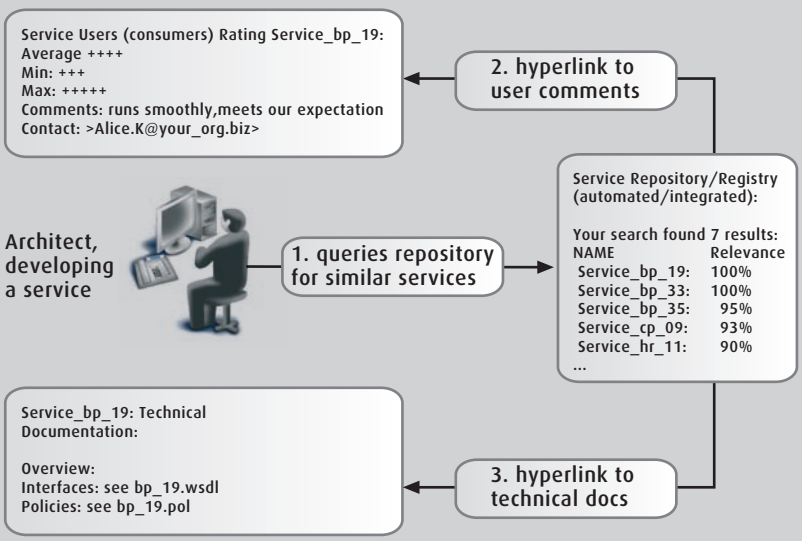
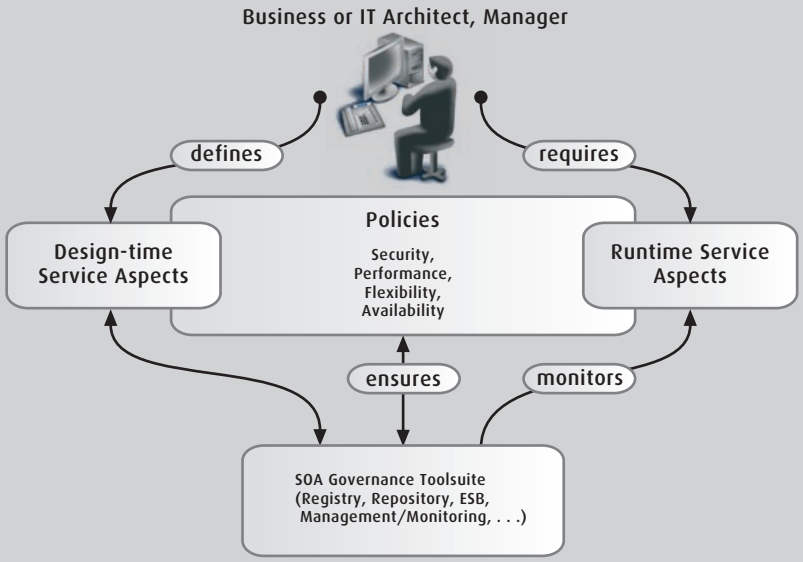


Figure 5: Policies and other aspects at design- and runtime.



Monitor your level of service reuse regularly – it avoids negative surprises – and builds on proven expertise in your own organization.

Use Case #4: A chief business officer needs to monitor a business process

The chief business officer of your sales organization is interested in certain results from the Western sales region. He remembers recently his direct reports spoke about some business processes which used a new set of business statistic services. He asks his personal assistant (PA) to find the business service that can provide the information he needs. Utilizing the company's SOA Registry/Repository, the PA quickly browses the business service descriptions (their SOA Governance rules require this description for all services) and, using the Excel integration available with this service, prepares a table with the requested sales results, including SLA exceptions he found as a result.

Use Case #5: A chief business officer needs to ensure specific policies of a service

The highest-ranking business executive needs to ensure several policies (in pre-SOA times, this was referred to as *qualities* or *non-functional requirements*) of a certain billing service:

- The service shall only be used by authorized users and consumers – a security requirement which has consequences for both design- and runtime. Their SOA Governance strategy prescribes a strict role-based access model and monitoring of runtime-policies; therefore the business executive asks the chief architect to have these policies incorporated in the service's metadata (See Figure 5).
- In addition, some customers now require higher performance in several of their processes, so the business executive asks the chief architect to add the desired average response times to the appropriate policy. This has consequences from design-through runtime, so the architect uses their well-integrated SOA Governance tool federation comprised of an ESB, a management and monitoring tool and a runtime-registry/repository to handle this request.

Combining design- and runtime policies ("requirements") requires traceability between different lifecycle phases. This is a daunting task to tackle manually, perhaps impossible, but quite doable when performed automatically.

BENEFITS OF SOA GOVERNANCE

Governance is not an option but a must within SOA initiatives to ensure success. Introducing SOA Governance yields a number of important benefits for the enterprise, not just certain IT projects.

By properly implementing SOA Governance, companies can avoid uncontrolled service development; and when service design is well supported by SOA Governance and governance tools, reuse of existing services and related artifacts is enhanced. In contrast with former isolated design decisions, projects can now rely on appropriate documentation and metadata to only develop the parts really needed – and reuse everything else. With SOA Governance in place, you don't need to fear service inflation with its associated high maintenance costs.

SOA Governance optimizes technical manageability for your SOA. It leverages the benefits of service monitoring at a technical level along with advanced features of business activity monitoring (BAM). Achieving this goal requires strong, consistent tool support.

By covering both technical and business artifacts, SOA Governance makes business goals traceable into respective service

implementations. It even helps uncover hidden dependencies between various service consumers and providers – avoiding *ripple effects* from modifications or updates. With a working SOA Governance in place, you'll know the exact consequences of changes to existing services and which consumers it potentially affects. This highlights the fact that design- and runtime service call monitoring is a *must-have* feature for a state-of-the art governance Registry/Repository, having the added benefit that when service changes will occur, consumers can be automatically notified prior, so they can be proactive, rather than reactive.

BEST PRACTICES

- **Upper management visibility:** Ensure SOA Governance, including the overall SOA initiative, has upper management's attention. Without this it will likely fail or founder – due to high initial costs and later-realized results (e. g., middle to long term improvements in flexibility and cost savings).
- **Early SOA Governance:** Introduce SOA Governance early on to avoid chaotic service growth. Is it evolution or revolution - enterprises already talk about "legacy" Web services...!
- **No big bang:** Avoid a big bang – introduce SOA and SOA Governance incrementally. Don't try to switch overnight to full SOA Governance. Ensure that SOA Governance forms a part of your overall IT Governance. Introduce initial technical, organizational SOA and SOA Governance aspects step-by-step.
- **Center of excellence:** Establish a SOA "center of excellence," which forms the base for SOA Governance bodies, such as a SOA Governance team. Such a group needs to be cross-organizational and include business representatives as well as IT people, such as architects and senior engineers.
- **Governance friendly culture:** Be sure, to establish a governance friendly culture across your organization. You need organizational buy-in for effective (SOA) governance. Show them the benefits that good governance can provide and sponsor their usage; comprehensive, easy-to-use tool support will help this.
- **Internal cooperation:** Ensure your SOA Governance cooperates with version control and document management, not against. These systems store valuable information and meta-information, especially needed by service architects and service developers.
- **Federate with existing systems:** Ensure your SOA tool suite can federate with all kinds of existing repositories, document stores and development tools within your organization. It's unlikely you will have the freedom to develop a completely new SOA from the ground floor up.
- **Standardize your SOA:** Your SOA center of excellence and, later on, your SOA Governance team, should standardize your SOA technologies; otherwise you risk introducing another technology silo.
- **Organize and align:** Let your SOA Governance team drive alignment of SOA business and SOA IT to use processes, domain models, etc.; without organization, SOA Governance will not work.
- **Establish SOA metrics:** Let your SOA Governance team establish SOA metrics to measure SOA effectiveness, e. g., service reuse. Give benefits for "good rankings" in service metrics, e. g., for service development and more importantly, service reuse. Let the metrics be supported by tools as your SOA grows.
- **Fast standard SOA Governance processes:** Be sure your SOA Governance team works fast on standard processes like "approval of a service design," otherwise you will hinder your day-to-day projects.
- Expert knowledge: Examine SOA Governance case studies and expert knowledge.
- Avoid too much regulation: SOA Governance should strive to strike the right balance between rules/strictness and flexibility/creativity. Getting the *right* amount of pressure requires experience.

COMMON MISTAKES TO AVOID

In a fundamental and groundbreaking effort like SOA, a great deal of (well-intended) things can go wrong. Apply special care to avoid common mistakes.

- **SOA Governance "committee":** Ensure, that your SOA Governance team decides quickly. A SOA Governance team could become a bottleneck or even a single point of failure.
- **Performance ignorance:** Do not ignore performance! Performance is still key for production applications. Additional overhead added by SOA Governance, such as collection of SOA related events "calls to a service per millisecond" must not introduce performance issues.

Special Note: Avoid bottlenecks! No single person or committee should hinder business and service agility by postponing decisions – ensure proper and fast decision-making processes and rules.

- **Service registry chaos:** Just using a simple UDDI service registry without an agreed SOA Governance model might quickly result in inefficient service lifecycles, security issues, avoidance of policies and rules, etc.
- **SOA "un-readiness":** Before thinking about SOA or SOA Governance, check that your enterprise is SOA-ready. SOA in a single application usually won't help much.
- **IT-centric SOA Governance perspective:** SOA Governance must include both business and IT perspectives since it establishes and controls business value. SOA Governance driven solely by IT without the business perspective may not provide any or enough business value.
- **Lack of CxO-support:** Not taking enterprise-wide consequences into account via executive support and leaving SOA to the techies will result in little business value achieved.
- **SOA Extremes:** Extreme mindsets, such as "SOA and its governance is nothing new" vs. "SOA helps for everything" and "SOA Governance gives us the license to print our own money" provides little business value and long-term will lead to high frustration.
- **IT (Web services) centric design:** Approaches which assume that a couple of Web services are already a SOA will fail. Such a design will often ignore performance aspects, reuse, loose coupling, metadata support, policies or other SOA goodies.
- **Over-regulation:** Over-regulation can go wrong in many ways. Find the right amount of governance to keep your business and IT people creative and flexible on the one hand, while giving them guidance and transparency on the other.

Implementing SOA processes iteratively and incrementally helps ensure the continuous architectural evolution of the overall SOA.

KEY POINTS FOR SUCCESS

- Expect that Service Orientation and SOA initiatives will result in some fundamental organizational changes.
- SOA Governance has to be part of overall corporate IT Governance.
- SOA without governance will likely result in service chaos vs. delivering on its promises.
- SOA Governance builds on organization, roles and rules, and should govern artifacts, service descriptions, artifact relationships, policies, service level agreements, service metrics, etc. throughout the SOA lifecycle.
- To gain valuable, measurable results, practical SOA Governance implementations need tools which work jointly in a tool federation, e. g., an ESB, SOA Registry/Repository and runtime management.
- Practical use cases for SOA Governance provide some hints as to what you can expect from your investments.
- Best practices and things to avoid help you implement your SOA Governance in reality.

You'll find a practical implementation of concepts described and proposed in this paper at http://www.softwareag.com/centrasite. CentraSite™, the jointly developed SOA repository from Software AG and Fujitsu, is a full-featured solution for SOA Governance built on an open and standards-based next-generation SOA Registry/Repository. With CentraSite™ you can leverage the benefits of systematic and efficient SOA Governance approaches – including systematic monitoring and reporting capabilities to oversee your SOA initiative.

REFERENCES

[CorpGov]: www.corpgov.net

[ebizQ-2006]: "The Current State of SOA Governance "; ebizQ White Paper/Online survey; www.ebizQ.net; 2006

[ITGI]: IT Governance Institute, www.itgi.org

[Totev-Oct06]: "SOA Governance und Repositories: Vernunftehe oder Traumhochzeit?" Computerwoche Article. Ivo Totev, Oct 2006

[Weill-Ross]: Peter Weill, Jeanne W. Ross: IT Governance: How Top Performers Manage IT Decision Rights for Superior Results, Harvard Business School Press, 2004

About Software AG

Software AG, headquartered in Darmstadt, Germany, provides a full range of products and services to deliver a service-oriented architecture (SOA) IT infrastructure, based on over thirty-five years experience in high-performance databases, application development tools and integration technologies. Its technology offers process driven integration through legacy modernization and SOA based integration. Software AG helps its customers to achieve a competitive advantage through flexible and adaptive business processes based on fast and easy integration of existing IT assets. It supports the mission-critical systems of over 3,000 customers globally. Software AG is represented in around 70 countries with more than 2,700 employees. It is listed on the Frankfurt Stock Exchange (TecDAX, ISIN DE 0003304002/SOW). In 2005 Software AG posted 438 million in total revenue. http://www.softwareag.com.

SOFTWARE AG HAS OFFICES IN OVER 70 COUNTRIES.

TO FIND THE OFFICE NEAREST YOU, PLEASE VISIT WWW.SOFTWAREAG.COM

SOA/WP02E1106