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SOA Governance

Governing Shared Services On-Premise & in the Cloud

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SOA Governance

Chapter 8

Governing Service Analysis Stages

Service analysis stages are a focal point when comparing SOA methodologies. Often, what distinguishes approaches to the delivery of services and collections of services is the extent to which analysis receives up-front attention, and how analysis is positioned in relation to other stages. From a governance perspective, the analysis of services is regulated to make the very most of the time and effort available to analysis-related proejct stages. The smaller the window allocated for analysis work, the greater the importance of firm governance.

In this chapter, we cover governance precepts for the two fundamental service analysis stages:

- Service Inventory Analysis

- Service-Oriented Analysis (Service Modeling)

As explained in Chapter 5, these stages are very much interrelated in that if a Service Inventory Analysis is carried out, it will establish a cycle in which the Service-Oriented Analysis stage will be performed iteratively (see Figure 8.2).

The maximum amount of iterations that can be executed is determined by the scope of the planned service inventory. The amount of *actual* iterations executed before post-analysis project stages take place is determined by the methodology. Therefore, it is important to understand the governance impact of allocating more or less time and effort to up-front analysis.

Specifically, the extent to which the Service Inventory Analysis cycle is iteratively (and competently) carried out has a direct bearing on the extent of pre-design and post-deployment governance burden services can impose.

Specifically, when more up-front time and effort is allocated:

- there is increased up-front burden, because the scope of governance responsibilities and required regulation for analysis tasks is broadened, but…

- there is a decrease in post-deployment governance burden, because the more advance effort invested in the definition of the service inventory blueprint, the better the quality of the resulting service candidates.

Better quality service candidates reduce the likelihood that subsequently delivered services will require refactoring, versioning, or will otherwise introduce avoidable governance-related impact to the IT enterprise in response to business change. In other words, increasing analysis effort helps increase the lifespan of service versions and can reduce the post-implementation governance burden of entire collections of services.

On the other hand, when going with a methodology that limits or minimizes the amount of time and effort allocated to service analysis stages:
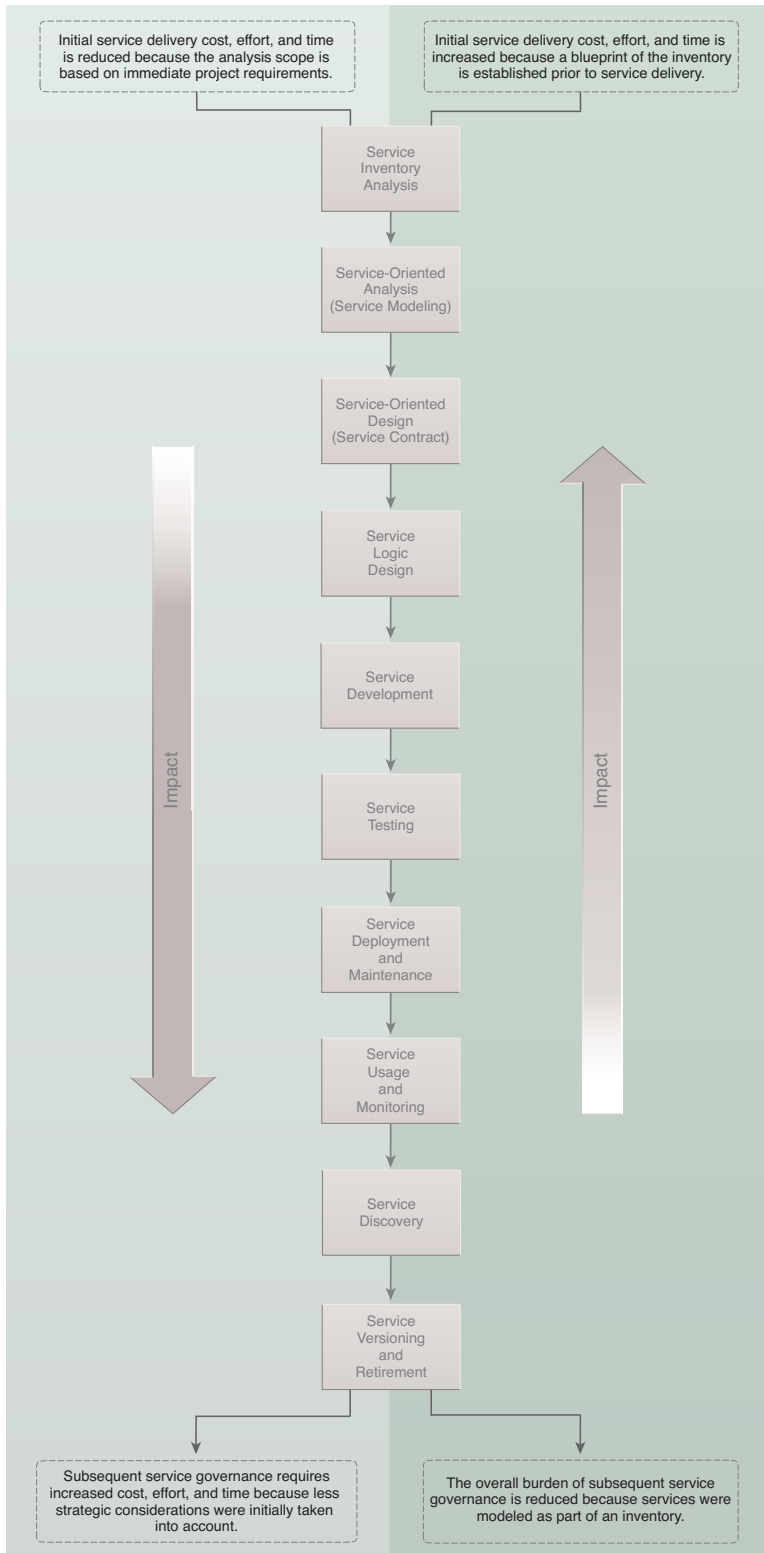
- there is decreased up-front governance burden, because there is less analysis activity to regulate, but…

- there is an increase in post-deployment governance burden because of a greater likelihood that delivered services will require versioning and refactoring sooner than later.

Figure 8.1 contrasts these approaches. The large vertical arrows represent where, within the project lifecycle stages, this type of governance impact typically occurs.

Although it is often preferred to proceed with a Service Inventory Analysis prior to a business process-specific Service-Oriented Analysis, it is not always required or possible. There are cases where practical concerns or tactical business requirements take precedence over the strategic benefits of increased up-front analysis. As stated earlier, when less time within an SOA project is allocated to service analysis stages, it further amplifies the need for strong governance of the analysis effort.
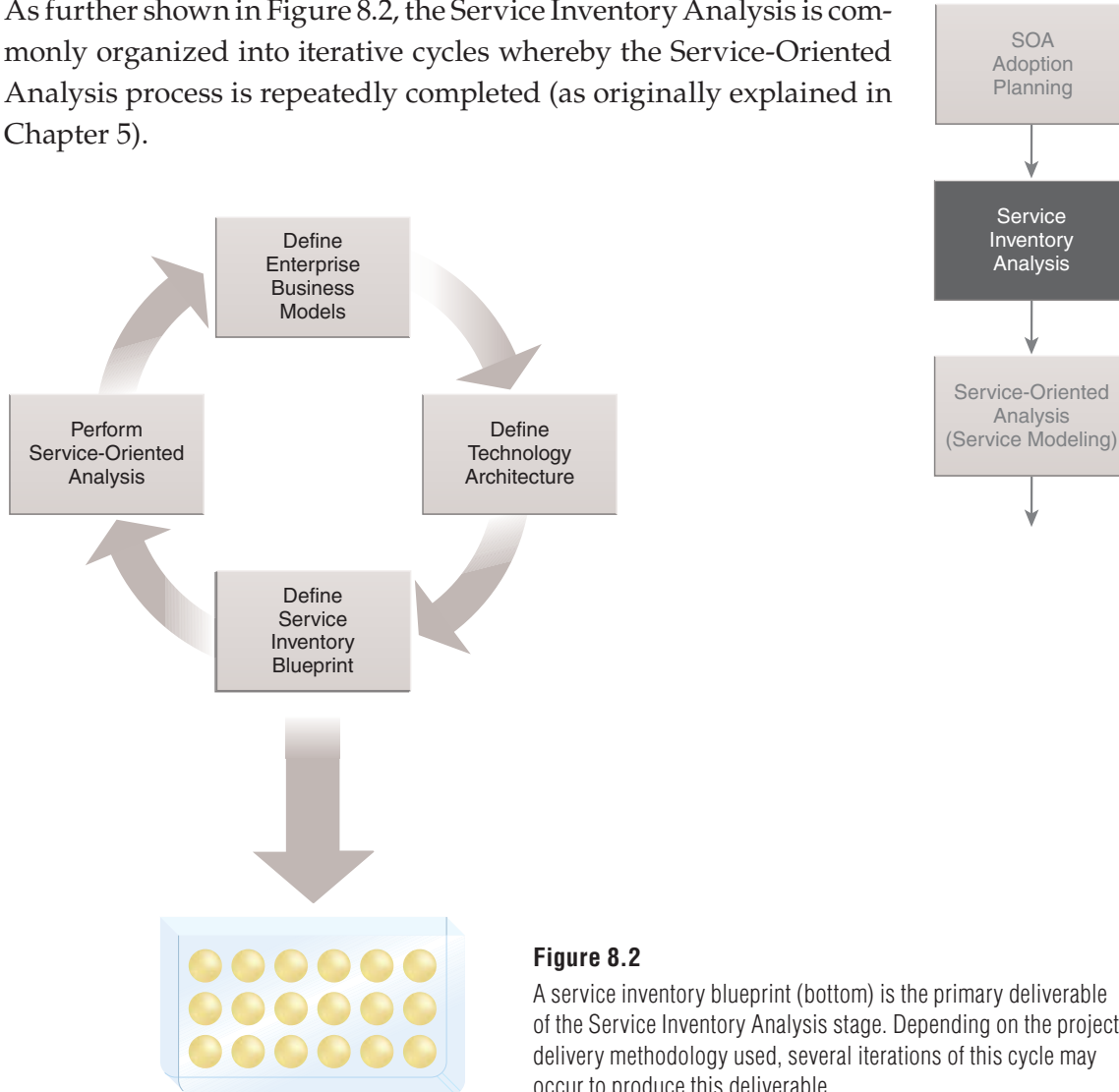
Figure 8.1

Generally, the less time and effort spent on the up-front service analysis, the greater the on-going, post-deployment governance burden. The approach on the left is comparable with bottom-up service delivery and the approach on the right is more akin to top-down delivery. SOA methodologies that attempt to combine elements of both approaches also exist.

Initial service delivery cost, effort, and time is reduced because the analysis scope is based on immediate project requirements.

Initial service delivery cost, effort, and time is increased because a blueprint of the inventory is established prior to service delivery.

Service Inventory Analysis

Service-Oriented Analysis (Service Modeling)

Service-Oriented Design (Service Contract)

Service Logic Design

Service Development

Service Testing

Service Deployment and Maintenance

Service Usage and Monitoring

Service Discovery

Service Versioning and Retirement

Impact

Impact

Subsequent service governance requires increased cost, effort, and time because less strategic considerations were initially taken into account.

The overall burden of subsequent service governance is reduced because services were modeled as part of an inventory.

8.1 Governing Service Inventory Analysis

As further shown in Figure 8.2, the Service Inventory Analysis is commonly organized into iterative cycles whereby the Service-Oriented Analysis process is repeatedly completed (as originally explained in Chapter 5).

Figure 8.2

A service inventory blueprint (bottom) is the primary deliverable of the Service Inventory Analysis stage. Depending on the project delivery methodology used, several iterations of this cycle may occur to produce this deliverable.

NOTE

The *Define Enterprise Business Models* step in the Service Inventory Analysis lifecycle refers to published business specifications, documents, and artifacts that provide suitable input for the Service-Oriented Analysis stage. Several of the precepts covered in Chapter 12 pertain to the definition of these types of business models as the basis of governance precepts.

Precepts

Service Inventory Scope Definition

A key success factor in any Service Inventory Analysis effort is the correct scope definition for the service inventory blueprint. As stated in the SOA Manifesto (and the *Balanced Scope* section in Chapter 4), the scope of a service inventory needs to be "meaningful and manageable." The manageability of the planned service inventory is a foremost governance concern.

The application of this precept will need to involve the SOA Governance Program Office as this scope represents not only the magnitude of the SOA project delivery effort, but also the corresponding SOA governance effort. The definition of the service inventory scope is an overarching precept that establishes a concrete boundary within the IT enterprise for the delivery of a specific collection of services. As such, it further influences (but does not set) the scope of the Service Inventory Analysis stage.

Within the established boundary, services need to adhere to consistent governance, management, and methodology. Specifically, from a governance perspective, the service delivery lifecycle is required to adhere to the precepts established by the governance system applied to the service inventory.

Further, the service inventory blueprint scope represents a contract between IT and any related business operating units. This agreement establishes priorities that provide a means of carrying out a methodology for the identification, definition, development, and deployment of services within the service inventory in order to:

- match the value and urgency of relevant business needs

- most effectively support high-priority business goals (such as improving operational efficiency, profitability, organizational agility, etc.)

- cost-effectively leverage associated IT skills and resources

To achieve a governance system dedicated to Service Inventory Analysis with the aforementioned qualities depends on the successful usage and adherence of a number of additional stage-specific governance processes and precepts.

> **SOA PRINCIPLES & PATTERNS**
>
> This precept relates to the Enterprise Inventory [522] and Domain Inventory [520] patterns, each of which provides an alternative approach for the definition of a service inventory scope, in relation to the scope of the overall IT enterprise.
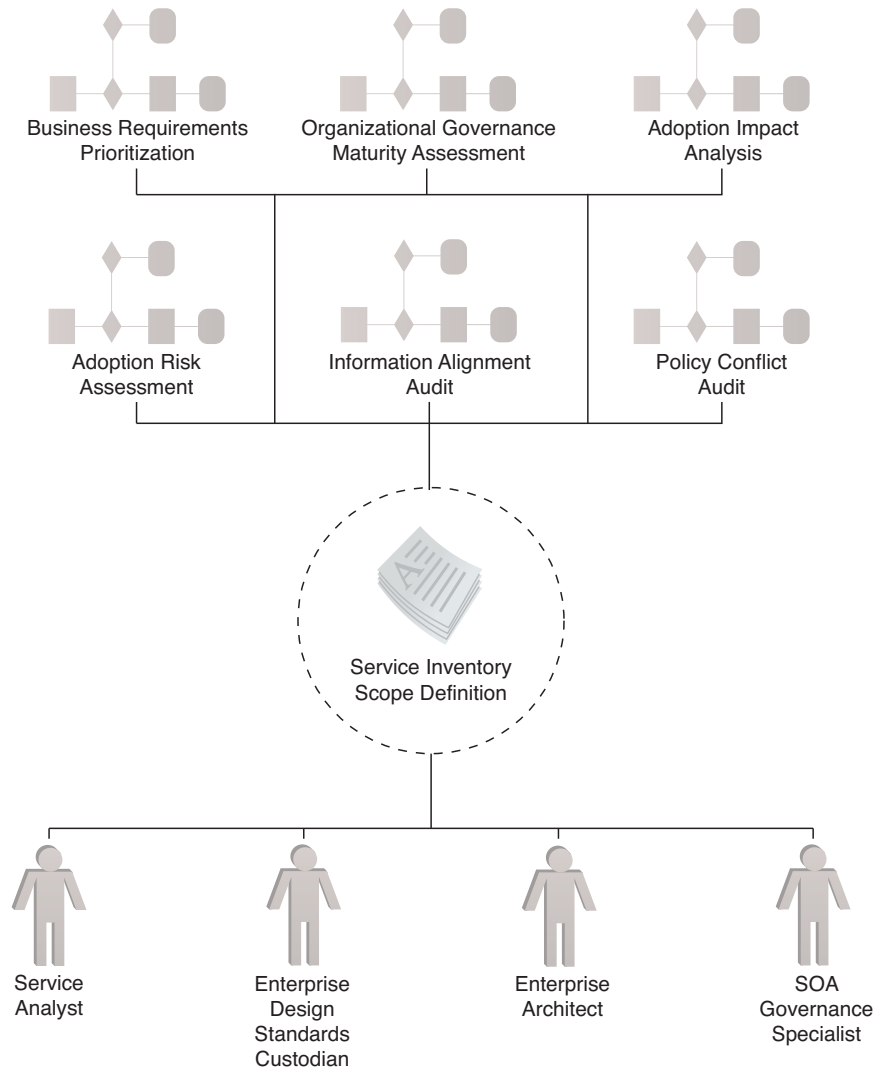
Figure 8.3
The Service Inventory Scope Definition precept.

Related Processes

- Business Requirements Prioritization

- Organizational Governance Maturity Assessment (Chapter 7)

- Adoption Impact Analysis (Chapter 7)

- Adoption Risk Assessment (Chapter 7)

- Information Alignment Audit (Chapter 12)

- Policy Conflict Audit (Chapter 12)

Related Roles

- Service Analyst

- Enterprise Design Standards Custodian

- Enterprise Architect

- SOA Governance Specialist

Processes

Business Requirements Prioritization

A primary consideration when carrying out the Service Inventory Analysis is how to prioritize business processes and requirements in order to determine the order in which they are subjected to the iterations of the Service-Oriented Analysis process. This relates directly to the *Define Enterprise Business Models* step that starts off each iteration of the Service Inventory Analysis cycle.

Business requirements prioritization involves a process whereby the business automation requirements within the domains or sub-domains of the Service Inventory Analysis scope are compared. This comparison can involve various criteria, including the urgency of requirements, cost of automation, impact on legacy systems, and so on.

A common deliverable used to organize the typical output of this process is the *business heat map*. This document contains tables consisting of columns that represent individual business units, each further containing a set of business activities (or responsibilities) specific to that unit. Heat maps are organized into business domains. For most large organizations, many of these domains will be split into sub-domains, each of which may be controlled by a separate IT Manager. In most cases, the top one or two domain levels suffice.

In order to fulfill its responsibilities, each domain has to be able to carry out certain business activities. Assigning a business activity to a specific domain implies assigning ownership of that activity to that domain. However, it does not imply that it is exclusively involved in the execution of that activity because many business activities can involve interaction between multiple business domains. Developing the heat map begins by creating a list of the business activities owned by each domain.
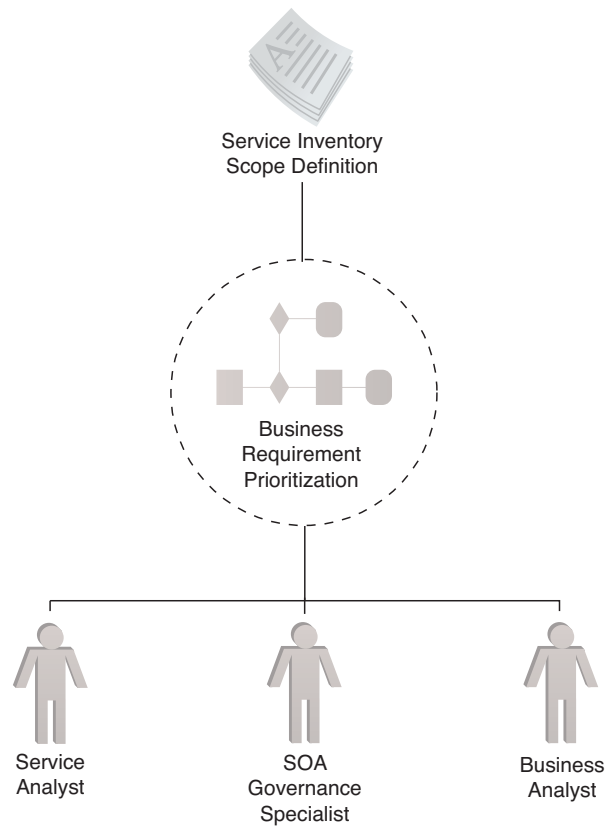
Figure 8.4
The Business Requirement Prioritization process.

The next step is to define which of those identified business activities needs to be improved or enhanced in some way to meet specific strategic business goals.

Examples include:

- business activities that are strategic but are being performed ineffectively

- business activities that reflect new business opportunities

- business activities that address new threats

- business functionality performance improvements

- areas of business activity that need to be downsized

- business activities that might be candidates for outsourcing or selling off

"Hot spot" areas, such as these, that require specific attention (based on the aforementioned criteria) are displayed in a different color. Separate explanatory text describes the type of attention of each focus area. (See the case study at the end of this section for an example of a business heat map.)

A business heat map can provide valuable governance input to help plan and carry out a Service Inventory Analysis. It represents a consensus view of business priorities and offers the additional benefit of providing a high-level view of the internal structure of one or more business domains.

Related Precepts

- Service Inventory Scope Definition

Related Roles

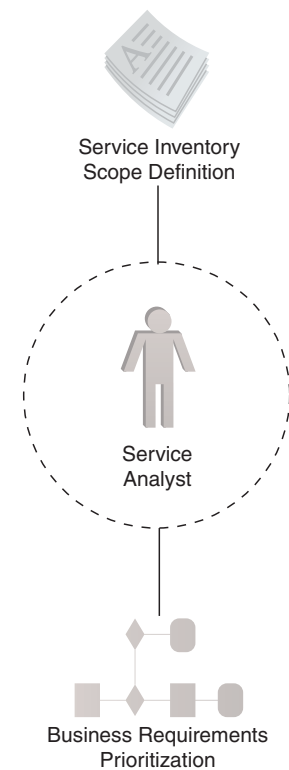- Service Analyst

- SOA Governance Specialist

- Other: Business Analyst

People (Roles)

Service Analyst

The Service Inventory Analysis stage is essentially led by Service Analysts. Depending on how many are involved with the creation of a given service inventory blueprint, it may be necessary to designate a lead Service Analyst. This may especially be required when multiple teams of Service Analysts are working concurrently on producing service candidates for the same service inventory blueprint.

On the other hand, Service Analysts tend to take a secondary role when involved with the Business Requirements Prioritization process. Their contribution to this process primarily relates to ensuring a constant alignment between business processes and business domains used as input for the Service Inventory Analysis and Service-Oriented Analysis stages.

Service Inventory
Scope Definition

Service
Analyst

Business Requirements
Prioritization

Figure 8.5

Service Inventory Analysis governance precepts and processes associated with the Service Analyst role.
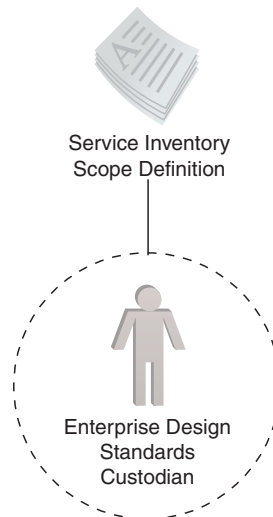
Related Precepts

- Service Inventory Scope Definition

Related Processes

- Business Requirements Prioritization

Enterprise Design Standards Custodian

Certain types of design standards can impose limitations or parameters that affect the definition of service inventory boundaries. For example, there may be product-specific platforms or proprietary technology or legacy resources that can impose hard perimeters that end up reducing or adjusting the planned scope of a service inventory. Enterprise Design Standards Custodians will be aware of these limitations (and may have themselves even defined them), making their involvement in this stage important. As a role that also commonly audits compliance to enterprise design standards, their participation may, in fact, be mandatory in that they may need to sign off on the proposed service inventory blueprint specification.

Figure 8.6
Service Inventory Analysis governance precepts and processes associated with the Enterprise Design Standards Custodian role.

Related Precepts

- Service Inventory Scope Definition
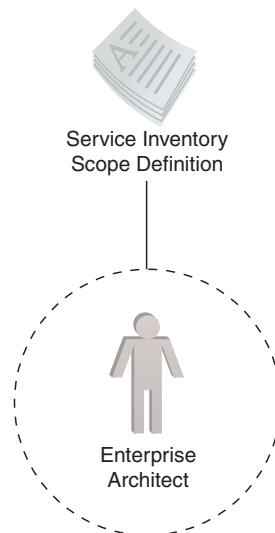
Related Processes

N/A

Enterprise Architect

Whereas the Enterprise Design Standards Custodian role is primarily concerned with the impact of and compliance to custom design standards, the Enterprise Architect will have a broader understanding of the overall IT ecosystem affected by the planned service inventory architecture. This insight will be helpful for providing guidance from a practical perspective, especially in relation to legacy resources that may need to be encapsulated by services within the planned service inventory scope.

Related Precepts

- Service Inventory Scope Definition

Related Processes

N/A

Service Inventory
Scope Definition

Enterprise
Architect

Figure 8.7
Service Inventory Analysis
governance precepts and
processes associated with the
Enterprise Architect role.

SOA Governance Specialist

The primary responsibility of the SOA Governance Specialist during the Service Inventory Analysis stage is to provide input as to the governance requirements and impacts that the proposed service inventory scope (and associated business requirements scope) will introduce. Furthermore, this role will be assigned the task of ensuring that the Service Inventory Scope Definition precept and Business Requirements Prioritization process are carried out according to other pre-defined compliance criteria.

Related Precepts

- Service Inventory Scope Definition

Related Processes

- Business Requirements Prioritization

Service Inventory
Scope Definition

SOA
Governance
Specialist

Business Requirements
Prioritization

Figure 8.8

Service Inventory Analysis governance precepts and processes associated with the SOA Governance Specialist role.

SUMMARY OF KEY POINTS

- The definition of the service inventory scope correspondingly determines the scope of the Service Inventory Analysis effort and further establishes a concrete boundary in which a collection of services will subsequently be delivered.

- Business requirements prioritization helps determine the order and sequence of business processes and requirements that are processed through iterations of the Service Inventory Analysis cycle, which includes iterations of the Service-Oriented Analysis process.

CASE STUDY EXAMPLE

Subsequent to a series of executive board meetings, Raysmoore issues a new mission statement that identifies the following as the primary strategic business goals for the upcoming year:

- reduce business operating costs to increase overall profitability

- complete the creation of a seamless supply chain across all Raysmoore subsidiaries

- improve the ability of Raysmoore to monitor and control its supply chain

- improve the speed with which Raysmoore and its subsidiaries can respond to legislative changes

- improve Raysmoore's ability to respond to business opportunities through acquisitions, business partnerships, and outsourcing

The SOA governance program created by the SOA Governance Program Office for the first planned service inventory includes the Service Inventory Scope precept, as shown in Table 8.1.

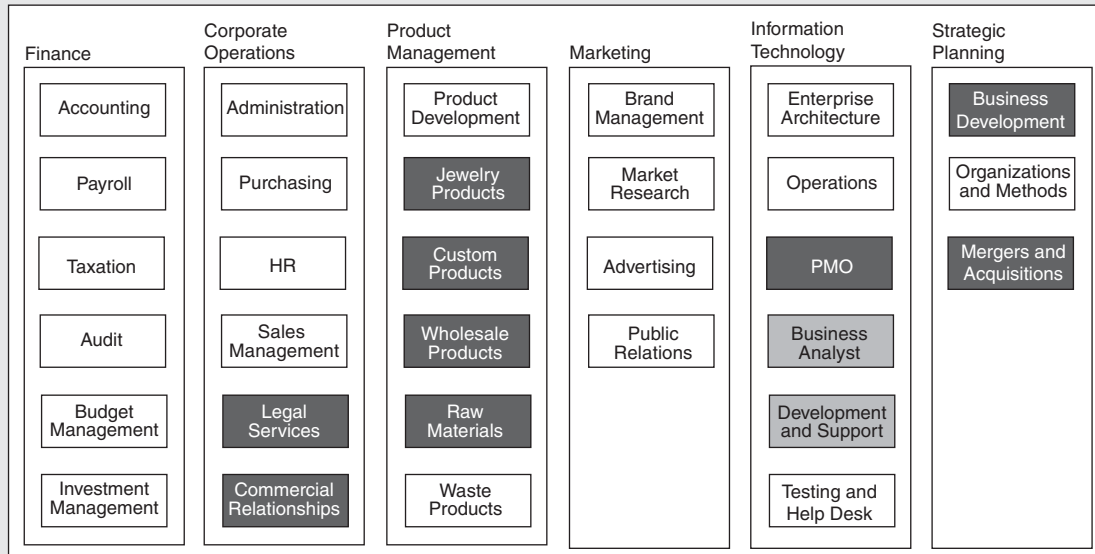| Service Inventory Scope Precept	
Objective: Define a balanced service inventory scope.	
Policy: Ensure that the scope is meaningful.	*Policy:* Ensure that the scope is manageable.
Standard: Require the scope to be meaningfully cross-silo by encapsulating at least five well-defined business processes.	*Standard:* Require the scope to be realistically manageable by calculating cost, determining the length of required up-front analysis effort, and getting written approval from all affected IT Managers.
	Guideline: Use the Business Requirements Prioritization process to help define and refine the service inventory scope and to further assist with determining required up-front analysis effort.

Table 8.1
The Service Inventory Scope precept, as defined by Raysmoore's governance office.

Business Analysts within Raysmoore's strategic planning group intend to follow this precept by starting with the recommended Business Requirements Prioritization process. A team of Business Analysts and Service Analysts is assembled to carry out a prioritization of the corporation's business requirements across the Raysmoore, Lovelt and Reeldrill business domains.
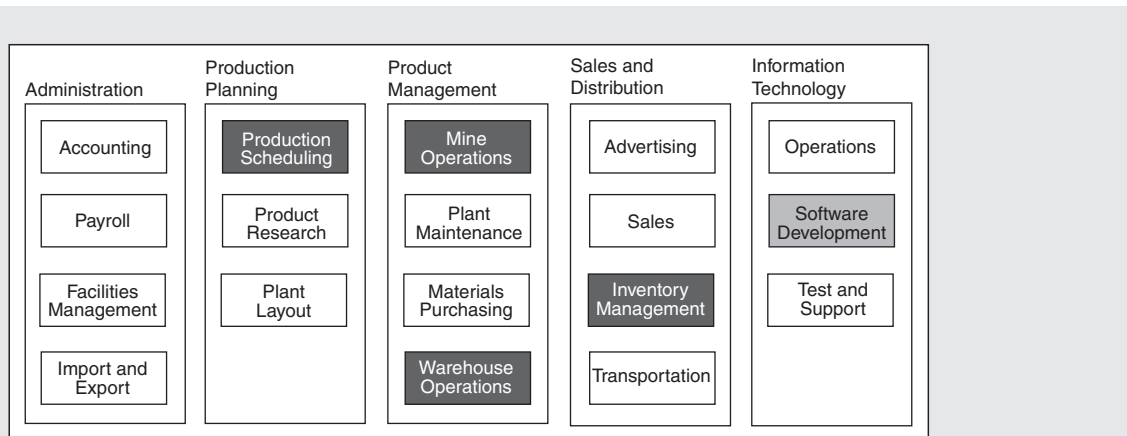
The results of this effort are the heat maps displayed in Figures 8.9, 8.10, and 8.11. While there appears to be duplication across the heat maps, it is acknowledged that Raysmoore controls and coordinates the supply chain of its multiple subsidiaries, each of which is responsible for the scope of its own operations.

The initial plan was to establish one central enterprise service inventory that encompasses all of the business domains identified in each of the three business heat maps. However, when the group attempts to get sign-off from all of the affected IT Managers (as required by one of the precept standards), many objections arise. It becomes evident that for the scope of the service inventory to become manageable, it must be reduced.
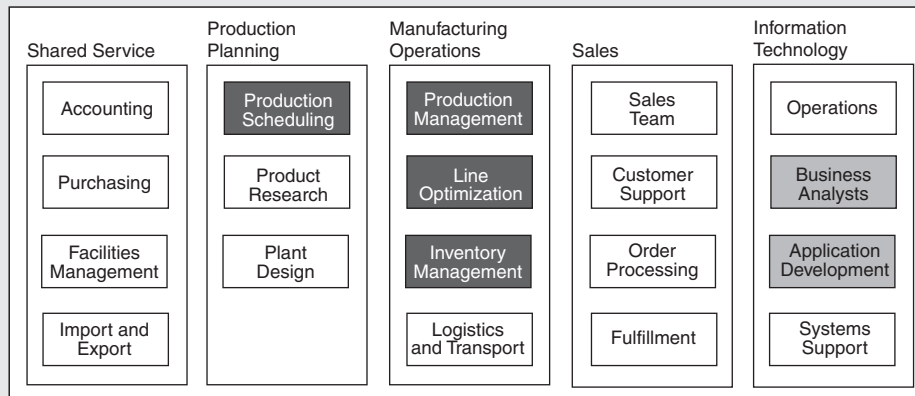

Figure 8.9
The Raysmoore business heat map.

Administration	Production Planning	Product Management	Sales and Distribution	Information Technology
Accounting	Production Scheduling	Mine Operations	Advertising	Operations
Payroll	Product Research	Plant Maintenance	Sales	Software Development
Facilities Management	Plant Layout	Materials Purchasing	Inventory Management	Test and Support
Import and Export		Warehouse Operations	Transportation	

Figure 8.10
The LoveIt business heat map.

Shared Service	Production Planning	Manufacturing Operations	Sales	Information Technology
Accounting	Production Scheduling	Production Management	Sales Team	Operations
Purchasing	Product Research	Line Optimization	Customer Support	Business Analysts
Facilities Management	Plant Design	Inventory Management	Order Processing	Application Development
Import and Export		Logistics and Transport	Fulfillment	Systems Support

Figure 8.11
The Reeldrill business heat map.

The group is determined to establish a level of federation across the Raysmoore IT enterprise and those of its two subsidiaries (LoveIt and Reeldrill). After further analysis based on the hot spots identified in the heat maps, the service inventory scope is limited to productions and operations areas, which encompass the following business units:

- Raysmoore Product Management

- LoveIt Production Management

- Reeldrill Manufacturing Operations

The result is the definition of the Productions and Operations domain service inventory.

After sign-off from IT Managers and other required stakeholders, the group turns its attention back to the business heat maps where the following business activities are identified as the immediate priority for the Service Inventory Analysis:

• Raysmoore Jewelry Products (retail)

• Raysmoore Custom Products (retail)

• Raysmoore Wholesale Products

• Raysmoore Raw Materials

• Lovelt Mine Operations

• Lovelt Warehouse Operations

• Reeldrill Production Management

• Reeldrill Line Optimization

• Reeldrill Inventory Management

These business activities reflect the perceived need to streamline development support activities and reduce duplication of effort as a means of achieving the first strategic goal of reducing operating costs. The Raysmoore team feels that the creation of federated, cross-silo services will help integrate Lovelt and Reeldrill's supply chains. To meet all of the strategic business goals is likely going to require enhancements to both the processes and tools involved in the business activities.

Specifically, in order to meet the third strategic business goal, the Raysmoore product management groups are required to improve their ability to monitor all aspects of the product supply chains across subsidiaries. This activity needs to be closely aligned with the enhancements to the subsidiaries' production management supply chain processes.

Because of the risk of heavy fines for non-compliance with increasingly complex government legislation, the Raysmoore Business Development and Legal Services teams are given the task to create an improved compliance process.

Finally, Raysmoore Business Development, Mergers and Acquisitions, Commercial Relationships and PMO groups are given the mission of creating a more structured and reliable process for integrating future acquisitions, outsourcing, and enhanced commercial relationships.

The board recognizes that these are ambitious goals and that there are several dependencies between them. Because the constraints on investment are tight, the strategic planning team has been given the authority to approve or reject all new proposed development projects with budgets exceeding $100,000 on the basis of the degree to which they support these business priorities. The first of these projects to receive approval is for the optimized automation of the cross-subsidiary supply chain.

8.2 Governing Service-Oriented Analysis (Service Modeling)

The following precepts and processes pertain specifically to the Service-Oriented Analysis project stage, regardless of whether Service-Oriented Analysis is carried out as part of the Service Inventory Analysis cycle.

Precepts

Service and Capability Candidate Naming Standards

Of the various service modeling conventions that may exist, having a system for the consistent labeling of service candidates and service capability candidates is important for governance purposes.

The naming established when individual service candidates are defined will need to be compatible with service candidates defined by other project teams during separate iterations of the Service-Oriented Analysis process. Further, service and capability names will carry over to the Service-Oriented Design process where these names then become solidified as part of the service's physical design.

Related Processes

- Service Candidate Review

Related Roles

- Service Analyst

- Enterprise Design Standards Custodian

- SOA Governance Specialist
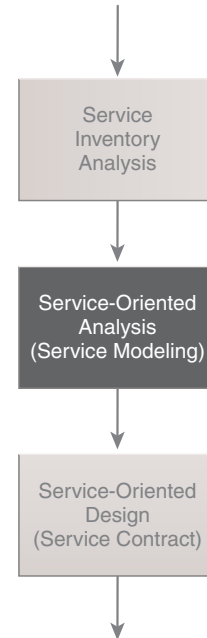
> **SOA PRINCIPLES & PATTERNS**
>
> This precept relates to Canonical Expression [497], a pattern commonly applied to establish service naming standards.

Service Inventory Analysis

Service-Oriented Analysis (Service Modeling)

Service-Oriented Design (Service Contract)
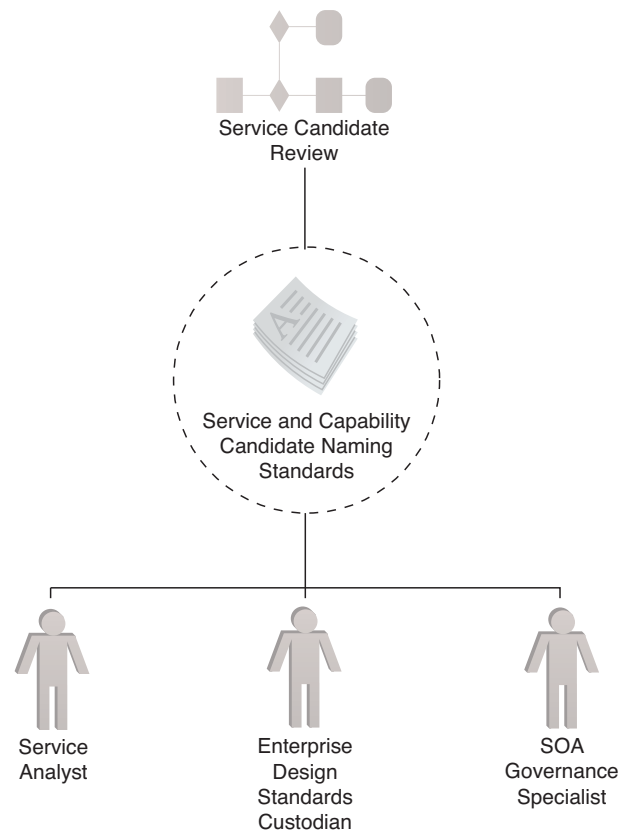
Figure 8.12
The Service and Capability Candidate Naming Standards precept.

Service Normalization

The Service Normalization precept dictates that service candidates within a given service inventory cannot have overlapping boundaries. This guarantees that no two services will introduce redundant logic, which maximizes reuse opportunities for shared services and forces services to compose other services when functionality outside of their boundaries is required.

Although the need for this precept typically emerges during the Service-Oriented Analysis stage when individual business process

> **SOA PRINCIPLES & PATTERNS**
>
> This precept relates to the Service Normalization [563] and Capability Composition [503] patterns, both of which are concerned with establishing independent functional contexts for services and preserving these functional boundaries within the scope of a service inventory.
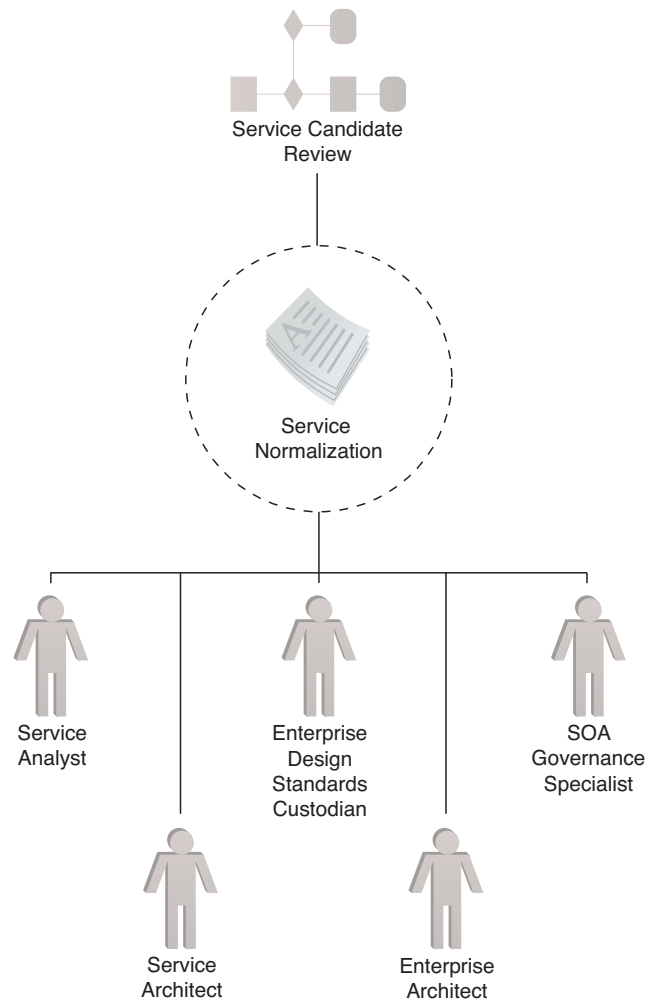
definitions are being decomposed, it is a precept that actually affects and applies to the service inventory blueprint as a whole. Therefore, this precept can also be associated with the Service Inventory Analysis stage.

Related Processes

• Service Candidate Review

Related Roles
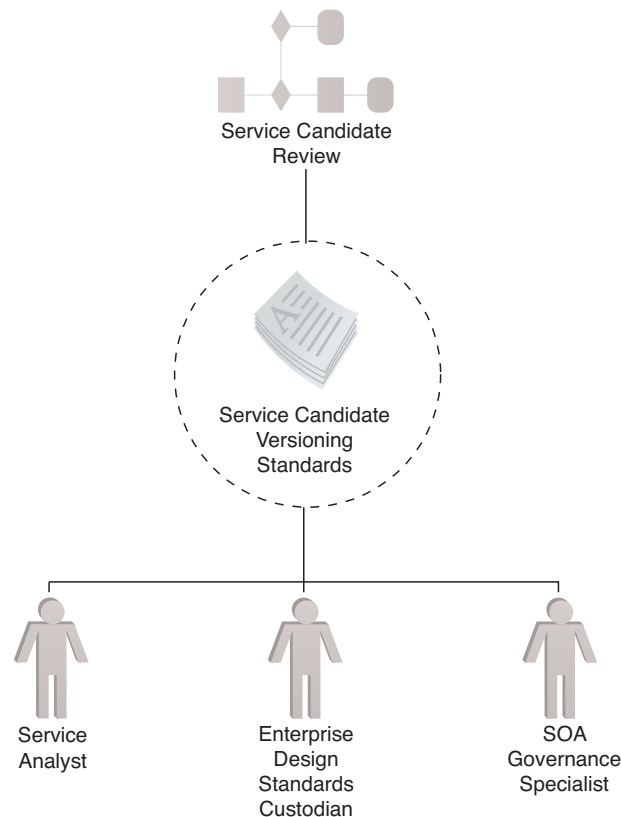
• Service Analyst

• Service Architect

Figure 8.13
The Service Normalization precept.

- Enterprise Design Standards Custodian

- Enterprise Architect

- SOA Governance Specialist

Service Candidate Versioning Standards

Though services are only conceptualized during the Service-Oriented Analysis stage, the need for versioning can still arise when service candidates and even entire service inventory blueprints are required to be re-aligned with how deployed services have been changed or versioned. There may even be a service candidate versioning system that facilitates the versioning of service candidates during the Service Inventory Analysis cycles. In this case, agnostic service candidates undergo repeated refinement as a result of being reviewed as part of multiple service composition candidate definitions.

Figure 8.14
The Service Candidate Versioning Standards precept.

Related Processes

- Service Candidate Review

Related Roles

- Service Analyst

- Enterprise Design Standards Custodian

- SOA Governance Specialist

Processes

Service Candidate Review

A formal review is recommended when a service candidate is first defined and whenever it undergoes significant changes.

Possible outcomes of the service candidate review are:

- changes or extensions to the service candidate are approved

- approval of the changes or extensions is deferred pending additional remedial service modeling activity

- changes to the service are rejected

In some cases, reviews may be required for individual service capability candidates. This requirement may surface when service capabilities have different custodians or when an already implemented service is extended by the addition of one or more new service capabilities that are first modeled prior to actual design and development. In the latter case, the review may also check for compliance to service candidate versioning standards.

Related Precepts

- Service and Capability Candidate Naming Standards

- Service Normalization

- Service Candidate Versioning Standards

Related Roles

- Service Analyst

- Service Architect

- Enterprise Design Standards Custodian

- Enterprise Architect

- SOA Governance Specialist
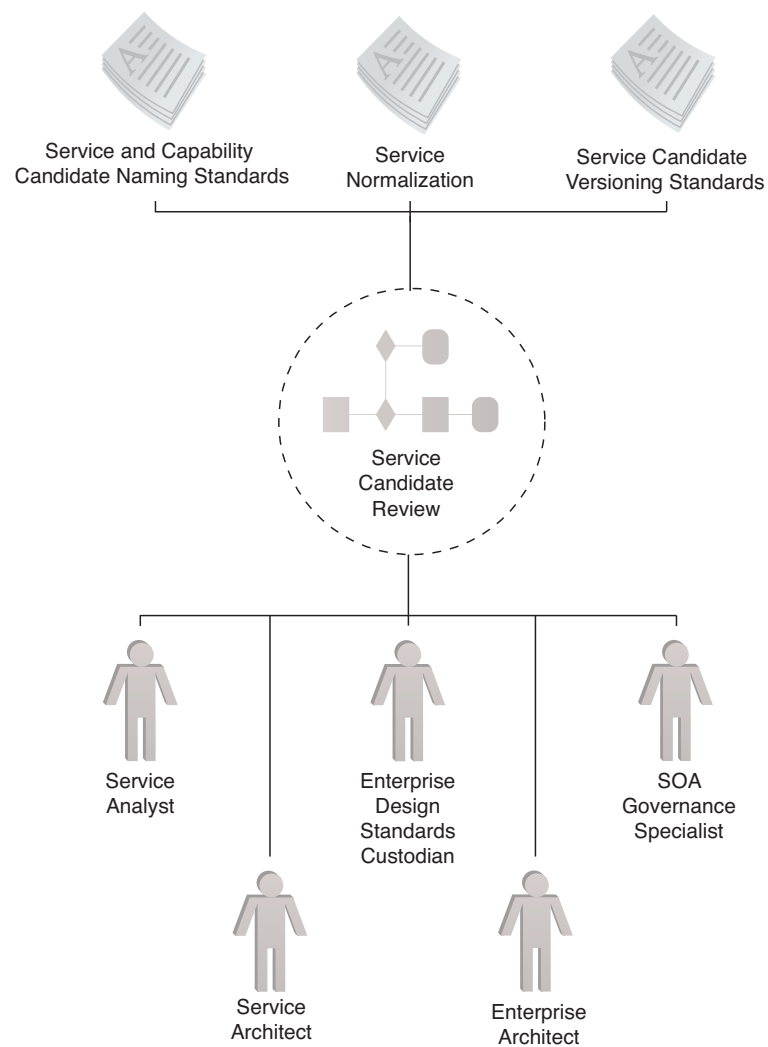
Figure 8.15
The Service Candidate Review process.

People (Roles)

Service Analyst

Service Analysts are typically involved with both the application and definition of precepts and processes that pertain to the Service-Oriented Analysis stage. Because of their hands-on participation in service modeling processes, they have the highest level of expertise required to help establish modeling standards in cooperation with SOA Governance Specialists and Enterprise Design Standards Custodians. Although it will generally be a Service Analyst that proposes one or more modeled services for the Service Candidate Review, it is common for a peer Service Analyst to participate as a reviewer as well.

Service and Capability
Candidate Naming Standards

Service
Normalization

Service Candidate
Versioning Standards

Service
Analyst

Service Candidate
Review
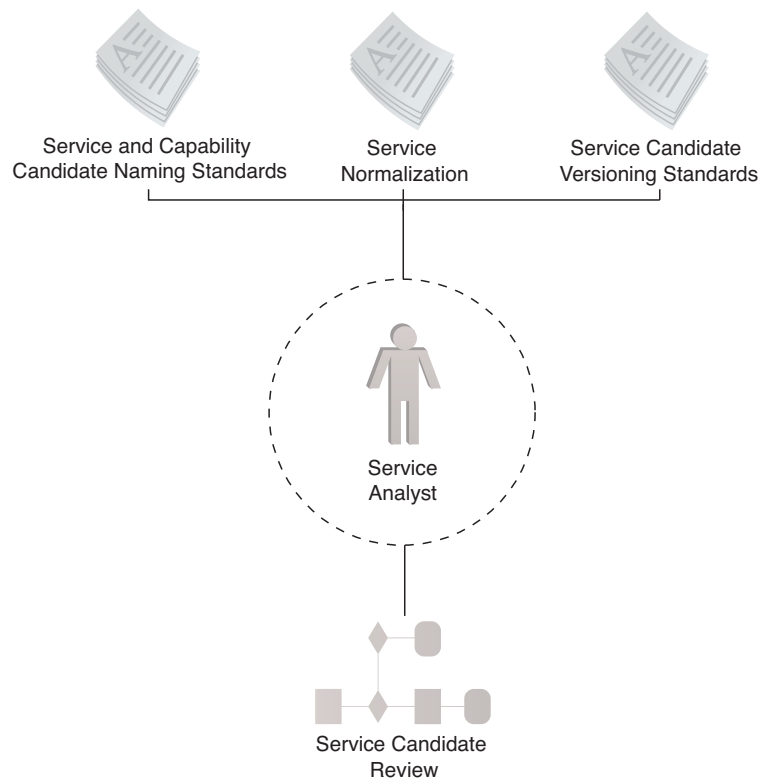
Figure 8.16

Service-Oriented Analysis governance precepts and processes associated with
the Service Analyst role.

Related Precepts

- Service and Capability Candidate Naming Standards

- Service Normalization

- Service Candidate Versioning Standards

Related Processes

- Service Candidate Review
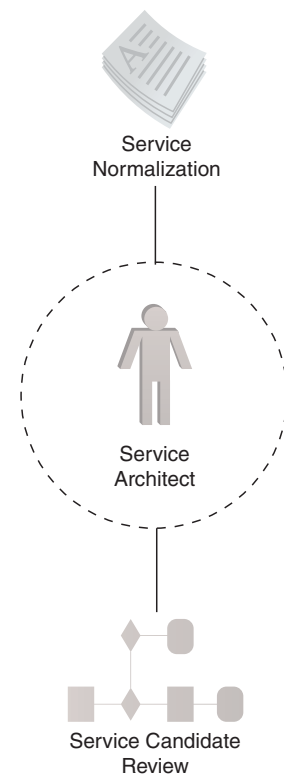
Service Architect

The involvement of Service Architects with the Service Normalization precept is typically more peripheral than Service Analysts. Service Architects can assist with the definition and application of these precepts by providing input regarding the practical considerations of establishing functional service boundaries. This can influence the extent to which some service candidates can be normalized as well as the granularity of their functional boundaries. The same practical issues can require a Service Architect to act as one of the reviewers during the Service Candidate Review process.

Related Precepts

- Service Normalization

Related Processes

- Service Candidate Review

Service Normalization

Service Architect

Service Candidate Review

Figure 8.17

Service-Oriented Analysis governance precepts and processes associated with the Service Architect role.
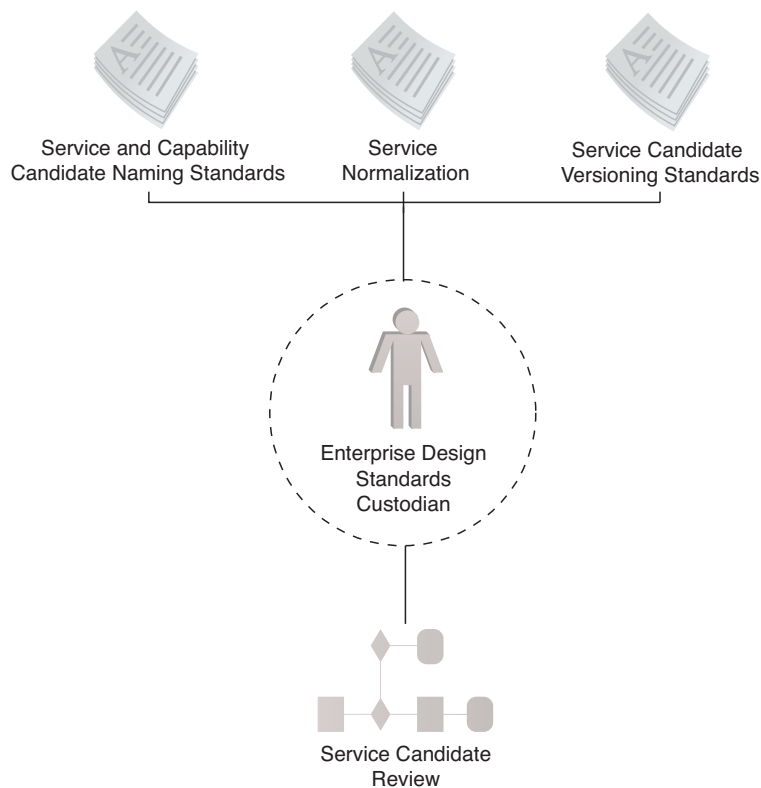
Enterprise Design Standards Custodian

The definition of any standards pertaining to service modeling and Service-Oriented Analysis in general will require the involvement or, at minimum, the approval of the Enterprise Design Standards Custodian. To verify compliance to these standards during the Service Candidate Review may further require attendance by the person assuming this role; however, it is not uncommon for the Enterprise Design Standards Custodian to delegate this responsibility to a senior Service Analyst.

Related Precepts

- Service and Capability Candidate Naming Standards
- Service Normalization
- Service Candidate Versioning Standards

Related Processes

- Service Candidate Review

Figure 8.18
Service-Oriented Analysis governance precepts and processes associated with the Enterprise Design Standards Custodian role.
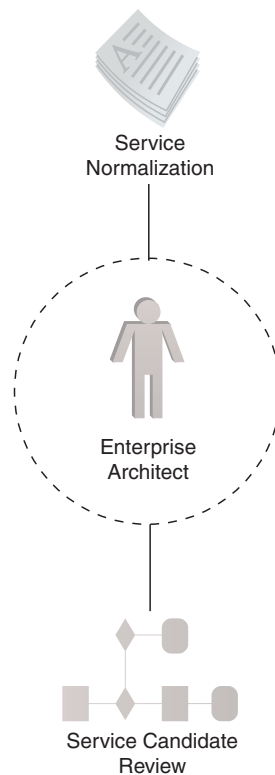
Enterprise Architect

Whereas Service Architects can provide input regarding service-specific encapsulation considerations, Enterprise Architects can comment on broader platform and resource issues that can further affect the application and definition of the Service Normalization precept. For the same reasons, an Enterprise Architect may need to serve on the review team for the Service Candidate Review process.

Related Precepts

- Service Normalization

Related Processes
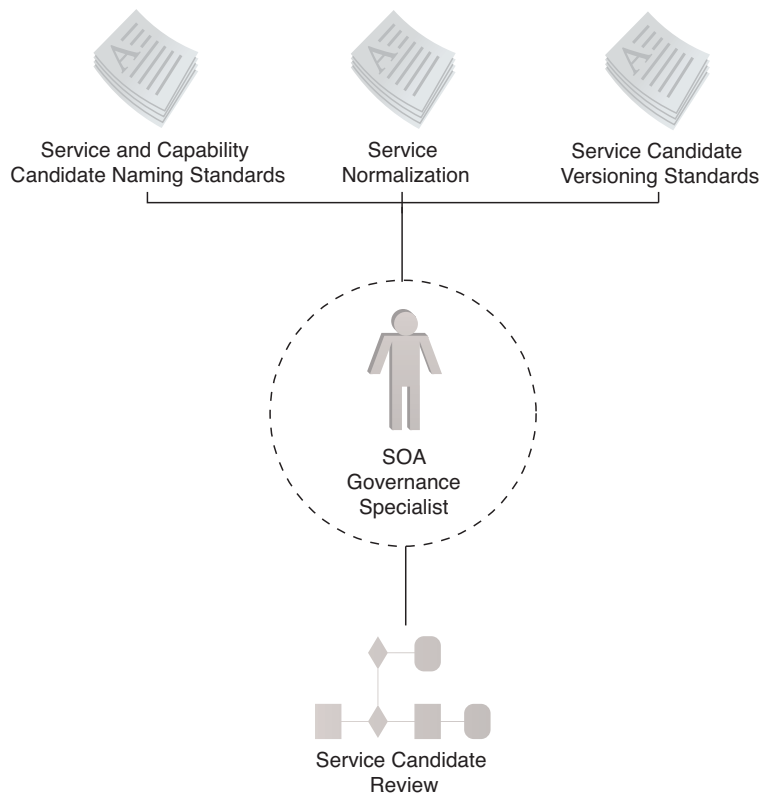
- Service Candidate Review

Figure 8.19

Service-Oriented Analysis governance precepts and processes associated with the Enterprise Architect role.

SOA Governance Specialist

Bringing together the precepts and a supporting process for the Service-Oriented Analysis stage falls upon the SOA Governance Specialist. A primary task in accomplishing this is coordinating the involvement of Service Analysts, Service Architects, and possibly also an Enterprise Architect and Enterprise Design Standards Custodian.

Especially challenging can be the incorporation of the precepts with a methodology that only allows limited or partial service analysis, prior to proceeding with post-analysis project stages. In this case, judgment is required to ensure that the most important standards are adhered to and that some form of meaningful review can occur before service candidates are transposed to concrete service contract designs.

Figure 8.20

Service-Oriented Analysis governance precepts and processes associated with the SOA Governance Specialist role.

Related Precepts

- Service and Capability Candidate Naming Standards

- Service Normalization

- Service Candidate Versioning Standards

Related Processes

- Service Candidate Review

SUMMARY OF KEY POINTS

- The Service-Oriented Analysis stage is responsible for producing the very first incarnations of services and service capabilities, and therefore presents an opportunity to establish precepts that can support eventual governance tasks.

- The primary governance responsibilities relate to the consistent definition and versioning of service candidates, and to ensuring their review before moving on to the Service-Oriented Design stage.

CASE STUDY EXAMPLE

The first iteration of the Service-Oriented Analysis process focuses on the decomposition of the business process that encompasses supply chain management across Raysmoore, Lovelt, and Reeldrill. Several service candidates and service capability candidates are derived from the subsequent service modeling effort. The Product service is an agnostic service candidate that in particular appears to have high reuse potential throughout the planned service inventory.

Initially, Business Analysts encountered confusion caused by different subsidiary legacy environments using different terms to refer to the same types of functionality and, worse, the same terms referring to different types of functionality.

Fortunately, the SOA governance program includes the Service and Capability Naming precept (Table 8.2) that addresses this problem. The SOA Governance Program Office, in cooperation with Service Analysts, supplement this precept by authoring a lexicon that encompasses a vocabulary of naming conventions for service candidates and service capability candidates.

Service and Capability Naming Precept

Objective: Service candidates and service capability candidates within the same service inventory must adhere to the same naming conventions.

Policy: Ensure that a common vocabulary is used.	*Policy:* Ensure that a common name format is used.
Standard: Require that all service candidates and service capability candidates are assigned names based on a pre-defined lexicon and/or pre-defined naming conventions.	*Standard:* Require that pre-defined formats are applied to all service and service capability candidate names so that the name structure and sequence of combined words is consistent.

Standard: Require that all service and service capability names are reviewed for compliance in accordance with the vocabulary and format standards as part of the Service Candidate Review process.

Table 8.2
The Raysmoore Service and Capability Naming precept.

The required usage of this precept further ensures that service modeling tasks carried out by different project teams remain in alignment. Newly defined service candidates will be able to encapsulate and abstract disparate legacy applications (and the disparity among the terms and vocabulary used by these legacy environments), and still provide a conceptual set of services that establish standardized endpoints.

This level of consistency among service candidates allows Raysmoore to consolidate similarities across supply chain business requirements from its subsidiaries and essentially enables the definition of service candidates that represent parts of supply chain processes as logical wholes. However, as service modeling efforts proceed, Business Analysts begin to uncover some significant differences between the requirements of Raysmoore and Lovelt in relation to supply chain business rules used for authorization and access to product inventory data. Specifically, Lovelt has traditionally allowed customers to view its product inventory levels, whereas Raysmoore has always had a policy that regarded overall corporate stock levels as a trade secret available only to internal staff.

This conflict affects the definition of the Product service that is being modeled. Initially, the project team proposes to create two variations of the service, one specific to Raysmoore and the other specific to Lovelt (Figure 8.21). This would allow each service to incorporate different business rules that could be further independently evolved.

Figure 8.21
Two service candidates with overlapping functional boundaries.

SOA Governance Specialists, however, push back on this approach and state that ultimately this service inventory is intended to establish a unified view of business automation that spans the Raysmoore and Lovelt IT enterprises. Further, they point to the Service Normalization precept (Table 8.3), which states that the creation of separate service candidates with comparable functional boundaries is not allowed.

Service Normalization Precept	
Objective: Service candidates within the same service inventory cannot have overlapping functional boundaries.	
Policy: Ensure that no two services within the same service inventory contain redundant logic.	*Policy:* Ensure that no two services within the same service inventory have overlapping functional contexts (regardless of their actual implemented logic).
Standard: Require that the logic of all service candidates is explicitly documented in service profiles.	*Guideline:* Register service candidates in the service registry with a status of "analysis."
Standard: Require that the functional context of each service candidate is reviewed in relation to other services in the service inventory blueprint, as part of the Service Candidate Review process.	

Table 8.3
The Raysmoore Service Normalization precept.

Subsequent to further analysis and discussion, it is decided to only proceed with a single Product service (Figure 8.22). The conflict is addressed by the application of the Contract Denormalization [510] pattern, which allows for a single service to contain capabilities that express redundant logic without being in violation of the Service Normalization precept. Access control of the individual service capabilities is further ensured via appropriate security mechanisms.

Figure 8.22

A single Product service candidate containing service capability candidates that provide an extent of redundant functionality. The capabilities further qualified with "Full" allow for the retrieval of product inventory stock values for LoveIt customers only.

Product

○ Get

○ GetFull

○ GetRange

○ GetRangeFull

○ Order

○ BackOrder