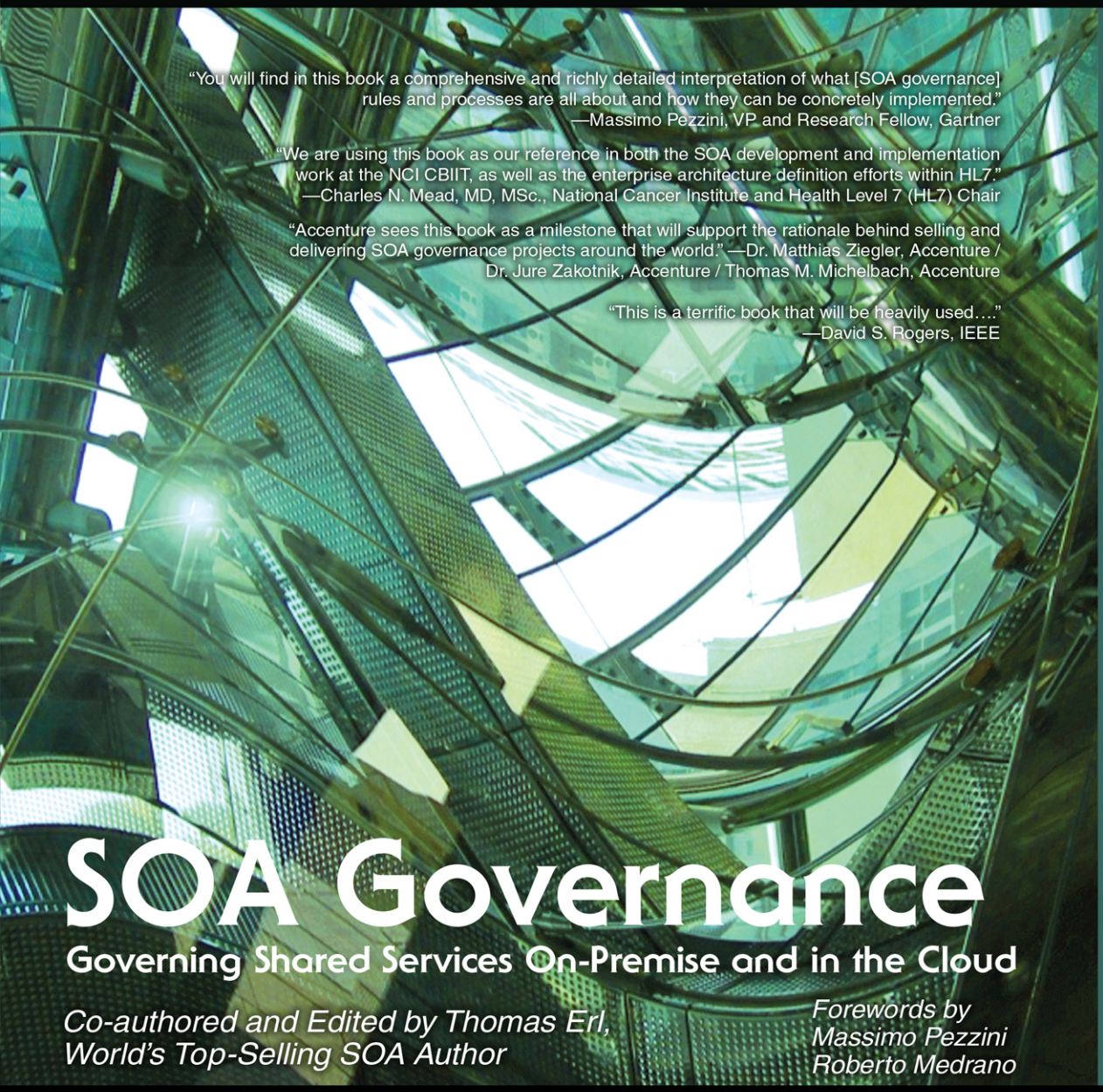
SERVICE-ORIENTED COMPUTING SERIES FROM THOMAS ERL



"You will find in this book a comprehensive and richly detailed interpretation of what [SOA governance] rules and processes are all about and how they can be concretely implemented."
—Massimo Pezzini, VP and Research Fellow, Gartner

"We are using this book as our reference in both the SOA development and implementation work at the NCI CBIIT, as well as the enterprise architecture definition efforts within HL7."
—Charles N. Mead, MD, MSc., National Cancer Institute and Health Level 7 (HL7) Chair

"Accenture sees this book as a milestone that will support the rationale behind selling and delivering SOA governance projects around the world." —Dr. Matthias Ziegler, Accenture / Dr. Jure Zakotnik, Accenture / Thomas M. Michelbach, Accenture

"This is a terrific book that will be heavily used…."
—David S. Rogers, IEEE

SOA Governance

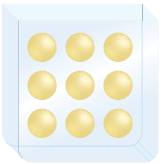
Governing Shared Services On-Premise and in the Cloud

Co-authored and Edited by Thomas Erl, World's Top-Selling SOA Author

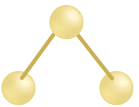
Forewords by Massimo Pezzini Roberto Medrano

Stephen G. Bennett, Clive Gee, Robert Laird, Anne Thomas Manes, Robert Schneider, Leo Shuster, Andre Tost, Chris Venable
With contributions from Benjamin Carlyle, Robert Moores, Filippos Santas

SOA School PRESS



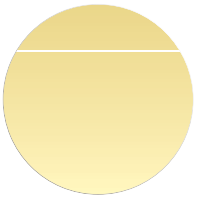
service inventory



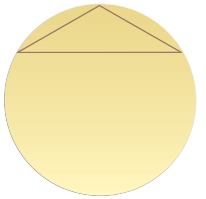
service composition

service (labeled)

service layer



service (chorded circle notation)



service accessed via a uniform interface (chorded circle notation)

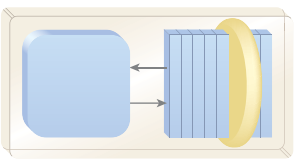
component or program

decoupled service contract

decoupled service contract accessed via a uniform interface

service agent

firewall



Web service with service contract

component with service contract

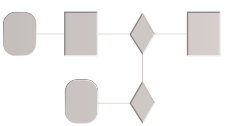
WSDL definition

XML Schema definition

WS-Policy definition

general machine processable document

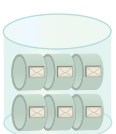
human-readable document or content (including precepts)



process logic

message

security element or locked resource

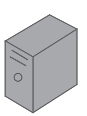


message queue

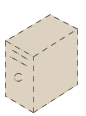
repository or registry

actively processing

process step or project/lifecycle stage



physical server



virtual server

cloud

zone or region

conflict symbol

transition arrow

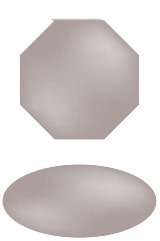
human or role

client workstation

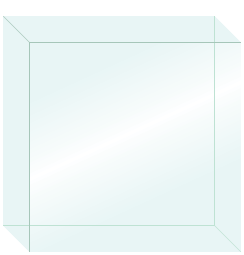
user interface

mobile device

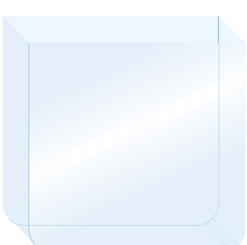
product or system



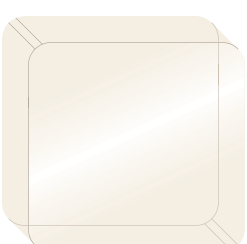
symbols used in conceptual relationship diagrams



general physical boundary



service inventory boundary



service boundary

Related Processes

- Adoption Impact Analysis
- Adoption Risk Assessment

Related Roles

- SOA Governance Specialist

Processes

Organizational Governance Maturity Assessment

This process incorporates all of the preceding precepts in addition to several other factors with the goal of assessing the maturity of an organization in relation to different areas affected by SOA governance. The purpose of the assessment is essentially to identify how ready and prepared an organization is to assume SOA governance responsibilities. The results of completing this assessment will not only help determine strengths and weaknesses within the organization, it will also help define the appropriate scope of the SOA adoption effort to ensure that it is both meaningful and manageable.

Another expected result of this assessment process is to increase the actual level of organizational maturity.

Chapter 4 introduced the following common organizational maturity levels:

- Service Neutral
- Service Aware
- Service Capable
- Business Aligned
- Business Driven
- Service Ineffectual (negative)
- Service Aggressive (negative)

The intelligence and insight gathered by the assessment can help educate key IT stakeholders, as well as the SOA Governance Program Office itself. This can effectively transition the IT enterprise from the Service Neutral to the Service Aware maturity level, thereby reducing the risk of an SOA initiative inadvertently moving to the negative Service Ineffectual or Service Aggressive levels.

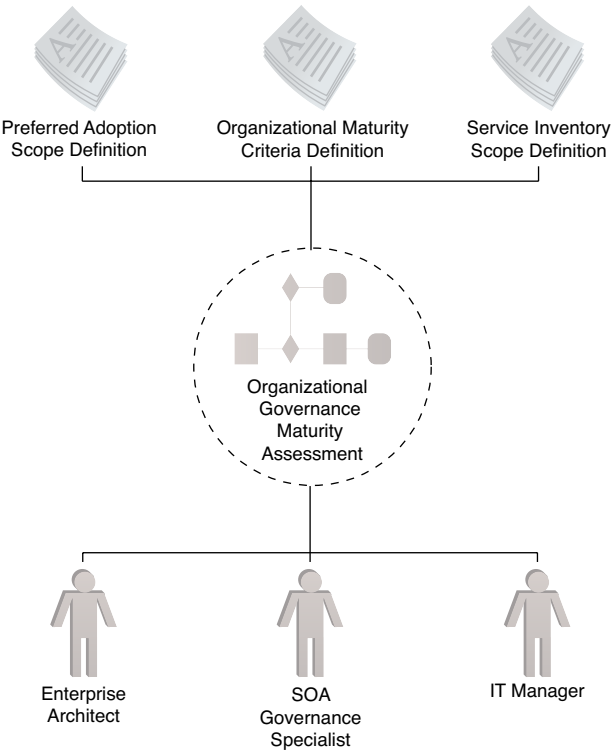


Figure 7.7
The Organizational Governance Maturity Assessment process.

NOTE

Although the Organizational Governance Maturity Assessment will be carried out by SOA Governance Specialists and others involved with the SOA Governance Program Office, the results of this assessment may end up impacting the structure of the SOA Governance Program Office itself. For example, additional resources may be added to address identified gaps or weaknesses. Or, perhaps the assessment results are lower than expected, thereby requiring a reduction in adoption scope and a corresponding reduction in the size of the SOA Governance Program Office.

To carry out an Organizational Governance Maturity Assessment process requires a framework that provides a quantitative means of measuring specific aspects of maturity in the organization. This framework may have its own structured methodology used to identify symptoms while at the same time diagnosing their root causes. Various industry and proprietary maturity assessments exist, some of which build on established IT maturity models and frameworks.

NOTE

Visit www.soaspecs.com for a list of maturity models and frameworks relevant to SOA and service-orientation. Note, however, that many of these models and frameworks are used to assess the overall maturity of an IT department or its maturity in relation to SOA adoption. Although this is helpful, it is not specific to assessing the *SOA governance* maturity of an IT department.

The Organizational Government Maturity Assessment can also be used to collect statistics about various domain-specific projects so that common pre-project maturity levels can be captured and so that common transitions between positive and negative maturity levels can be recorded. A valuable metric derived from collecting this information over time is how much easier and faster subsequent projects transition through or reach positive maturity levels compared to earlier initiatives. Measured improvements can be an indication of how early projects are raising awareness of requirements and critical success factors that can help other parts of the organization better prepare for future projects.

Related Precepts

- Preferred Adoption Scope Definition
- Organizational Maturity Criteria Definition
- Service Inventory Scope Definition (Service Inventory Analysis, Chapter 8)

Related Roles

- Enterprise Architect
- SOA Governance Specialist
- Other: IT Manager

Adoption Impact Analysis

With a solid understanding of an organization's current level of maturity in relation to the adoption of SOA and associated governance requirements, the scope of the adoption effort can be more accurately established. This will result in a clear definition of the target state that the organization expects to achieve as a result of a successful adoption.

With the current and target states well-defined, an analysis can be performed to document and assess both the technological and organizational impacts required to carry out the adoption of SOA and service-orientation.

The basic types of impacts addressed by this process are focused on:

- Cost
- Effort
- Disruption

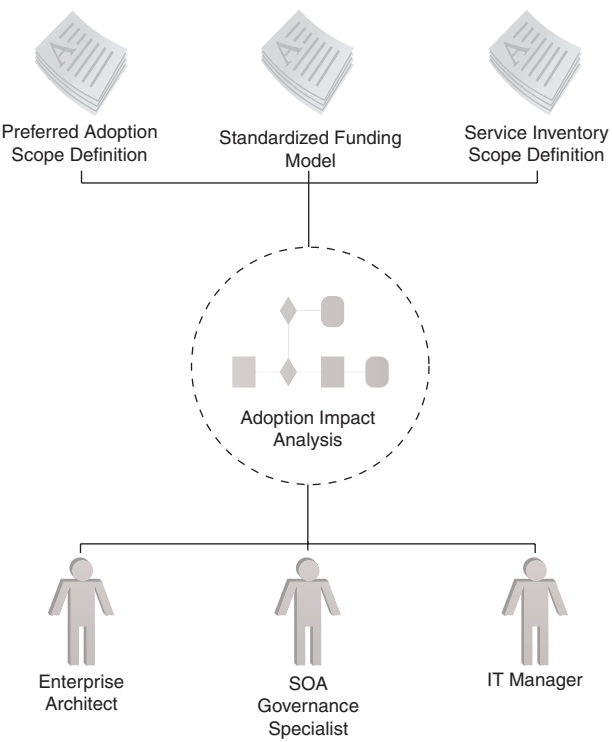


Figure 7.8
The Adoption Impact Analysis process.

The extent of this study will be directly related to the planned scope of the adoption, as well as the assessed maturity of the organization. The areas covered by an Adoption Impact Analysis process can vary dramatically, as they pertain specifically to the unique business and technology-related characteristics of a given organization's current and target state.

Provided here is a sampling of some common impact analysis areas:

- changes to traditional IT organizational and departmental structures
- introduction of new organizational roles and responsibilities
- changes to traditional IT management systems and methodologies (especially in relation to the governance, ownership, and evolution of shared services)
- impacts to legacy resources targeted for service encapsulation
- new technology products required for infrastructure and architecture upgrades
- planned shifts of on-premise IT resources to cloud environments (or vice-versa)
- new or augmented security requirements
- maturity issues related to planned service technologies
- performance and reliability impacts (especially in comparison to established silo-based applications)

The output of this process is typically a formal report detailing the cost, effort, and anticipated disruption of each identified area of impact. As with the completion of the Organizational Governance Maturity Assessment, the conclusions drawn from the completion of the Adoption Impact Analysis may lead to an adjustment in adoption scope.

NOTE

A more accurate analysis of impacts can be performed subsequent to the definition of the service inventory blueprint specification. Depending on the methodology being used for the SOA project, it may or may not be warranted to revisit and revise the results of the original Adoption Impact Analysis.

Related Precepts

- Preferred Adoption Scope Definition
- Standardized Funding Model
- Service Inventory Scope Definition (Service Inventory Analysis, Chapter 8)

Related Roles

- Enterprise Architect
- SOA Governance Specialist
- Other: IT Manager

Adoption Risk Assessment

There are several established assessment models and systems used by IT departments to help determine the risk of change. These models can be used to gauge risks associated with new technology adoption, the automation of new business processes or domains, the proposed expansion or reduction of IT staff and resources, the shifting of IT resources to external environments (such as third-party clouds), and/or the outsourcing of various IT functions.

With all of the intelligence gathered as a result of applying the preceding precepts and processes, a great amount of information will be available for stakeholders to perform a formal Adoption Risk Assessment of the planned SOA adoption project. This process may not result in any new concrete information pertaining to the project planning of the initiative; however, it may provide some fresh revelations and insights by focusing solely on risk factors.

Related Precepts

- Preferred Adoption Scope Definition
- Standardized Funding Model
- Service Inventory Scope Definition (Service Inventory Analysis, Chapter 8)

Related Roles

- Enterprise Architect
- SOA Governance Specialist
- Other: IT Manager