
Abstract

SOA is relatively new, so companies seeking to implement it cannot tap into a wealth of practical expertise. Without a common language and industry vocabulary based on shared experience, SOA may end up adding more custom logic and increased complexity to IT infrastructure, instead of delivering on its promise of intra and inter-enterprise services reuse and process interoperability. To help develop a shared language and collective body of knowledge about SOA, a group of SOA practitioners created this SOA Practitioners' Guide series of documents. In it, these SOA experts describe and document best practices and key learnings relating to SOA, to help other companies address the challenges of SOA. The SOA Practitioners' Guide is envisioned as a multi-part collection of publications that can act as a standard reference encyclopedia for all SOA stakeholders.

1.1 Intended Audience

This document is intended for the following audience:

- Business and IT leaders, who need to start and manage an SOA strategy across the enterprise/LOB
- Enterprise Architects who need to drive the vision and roadmap of the SOA program and the architecture of each implementation that falls under it
- Program Managers who need to manage a portfolio of sub-projects within an overall SOA business strategy
- Project Team Members, who need to map dependencies and develop a timeline that meets the business expectations
- Vendors who provide solutions and tools for new business capabilities to the business and IT
- Standards bodies which need a better understanding of use cases of how business and IT plan to leverage technology to meet their objectives.

Services Lifecycle Stages

1.2 Requirements and Analysis

1.2.1 Actors

- Business personnel (typically business operations from LOB)
- Project managers (business & IT)
- Business analysts
- Architects (optional)

1.2.2 Tools Used

- Business requirements tools including office, business process modeling tool, requirements capturing tools
- Business process modeling tools including BPMN, Visio, and Pro*Activity
- Business rules tools including product rules engines and Word
- User Interface tools including portal simulation tools, Macromedia, Visual Studio, Eclipse, and JSP and HTML editors

1.2.3 Artifacts (Deliverables)

- Design models such as UML, BPM (business process models), data flow models
- Bindings such as JMS, RMI, IIOP, and HTTP(s)

1.2.3.1 Artifact Description

Each LOB defines its own business process, which is captured during this stage of the services lifecycle. Some LOBs may have similar business processes or sub-processes with slight variances. For example, the consumer banking division and the mortgage banking division would be two separate LOBs within a large enterprise with common business processes. Both these LOBs could benefit from documenting and sharing their business processes as well as their key learnings.

The LOB would potentially also run simulations in order to optimize business processes and would use a monitoring and management system to capture and compare actual and simulated results. The business activity monitor provides a dashboard for comparing business results to the established objectives.

The lower levels of the business process definitions would typically be used for developing composite applications. At this level services are identified and mapped to each of the business services (activities). An SOA repository should be the system of record for all these service definitions and dependencies, both for external consumption, and to help IT operations to deploy, monitor, and manage services.

1.2.4 Service Lifecycle stage key considerations

Following are some of the key considerations businesses should factor in during the requirements and analysis stage of the service lifecycle.

1.2.4.1 Business Motivation

Recording business motivation helps map the business process to services. This enables business and IT to have a productive dialog on how to develop and fund the portfolio of services. Mapping helps make the business case for funding the development of the services because it helps businesses understand how services benefit them.

1.2.4.2 Differentiation from Application Lifecycle

Even though the service lifecycle is iterative, it is similar to the application lifecycle. However, one of the best practices for the service lifecycle is to identify existing services that may provide the required functionality. Designers begin by reviewing what already exists to see if it's applicable; this increases the re-use of existing services and saves time.

1.2.5 Service Lifecycle Stage Recommended Process

Following are some of the recommended templates businesses use to initiate projects.

1.2.5.1 Project Initiation Request

Businesses use this template to submit requests for a project. At this stage the business sponsor of the project evaluates whether the project is feasible and engages the LOB-IT or PMO to assist in this effort.

1.2.5.2 Architecture Statement of Work

Once the business submits the PIR to the LOB-IT or PMO, the IT leadership team engages the business to validate that it meets all the initial criteria. The IT organization then establishes a project team consisting of the project manager, business analyst, and architect to work with the business to estimate the effort involved. Depending on the business priority, the team may or may not be working full time on this estimation.

Contributing SOA Practitioners

Surekha Durvasula, Enterprise Architect, Kohls

Martin Guttman, Principal Architect, Customer Solutions Group, Intel Corp

Ashok Kumar, Manager, SOA Architecture, Avis/Budget

Jeffery Lamb, Enterprise Architect, Wells Fargo

Tom Mitchell, Lead Technical Architect, Wells Fargo Private Client Services

Burc Oral, Individual Contributor

Yogish Pai, Chief Architect AquaLogic Composer, BEA Systems, Inc.

Tom Sedlack, Enterprise Architecture & Engineering, SunTrust Banks, Inc.

Dr Harsh Sharma, Senior Information Architect, MetLife

Sankar Ram Sundaresan, Chief Architect e-Business, HP-IT