

SOA - Service Oriented Architecture Essentials

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Introduction

An increasing number of organizations are looking into SOA as a way of restructuring their architecture. This module explains how we can organize a roadmap with different levels of maturity to guide us from where we are today towards the future (more agile) vision.

- Fundamental ideas from SOA
- Introduction to a SOA adoption roadmap
- Traditional EAI approach
- Problems with the traditional EAI approach
- Enter Service Oriented Architecture (SOA)
- SOA maturity levels; using ideas from CMMI

Impact of a Service Oriented Architecture

A SOA initiative improves the organization's agility, which in turn can lead to shorter projects, vendor independence and more efficient development process. But how can management be convinced of SOA's advantages, and how to obtain funding for the SOA initiative?

- Creating a common understanding of SOA
- The evolution of SOA and changing the mindset within the organization
- Introducing the concept of services within the organization
- Changing relationships with the SOA tool vendors
- The relationship between SOA and technology
- Advantages and risks associated with SOA

Fundamental Concepts

What are the different types of services used in a SOA context? Initiatives are starting up to develop a SOA reference architecture. What is the current state of affairs concerning this reference architecture? A closer look at OASIS's work and recommendations.

- The need for a reference architecture
- What are the advantages of categorizing services?
- Building from services
- The registry and repository
- Organizing services in different SOA layers
- Deciding on the service granularity level -coarse versus fine grained approach
- Aligning Business and IT - why it won't happen overnight

A Service Oriented Methodology

For a successful SOA initiative, a solid basis of reusable basic services is needed. Successful development of basic services requires a standardized development approach. This module focuses on the contract-driven Analysis and Design stages that allow for IT to focus on returning value to the business.

- Service lifecycle
- Different service analysis techniques -choosing the right approach
- Service oriented analysis and design
- Agile Unified Process and SOA -a match made in heaven?
- Contract-driven development
- Introduction to service oriented patterns
- Overview of service component architecture (SCA)

The Architectural Roadmap

Each SOA initiative will benefit from a phased approach, thus avoiding a 'big bang' situation. This module defines different ways in which the SOA milestones can be introduced within the organization in an incremental fashion.

- The drivers for an Architectural Roadmap
- Different levels of sophistication
- Fundamental SOA - challenges and benefits
- Networked SOA - challenges and benefits
- Process-enabled SOA - challenges and benefits
- What level is right for your organization?

SOA - Service Oriented Architecture Foundations - day 2

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Service Enablement

This module explains what types of services are considered mandatory for SOA. We will define the different features a 'real' service should possess. Beware the risk of proliferation of technical service contracts. The value of assigning a human readable document to each service. And why do we need a quality gateway?

- Basic service elements
- Core services standards stacks
- What is the importance of a human readable contract?
- The (un)importance of SOAP and WSDL in a SOA context
- Using UDDI-based registries without a real repository
- Services, the registry and the quality gateway

SOA Governance

Gartner says SOA Governance isn't optional, it's imperative! How should we interpret this statement? Are SOA governance techniques any different from the traditional project management governance approach? What are the key arguments for justifying a SOA Governance Board?

- Building the services with Business value in mind
- The service justification process
- Measuring and monitoring for continuous process improvement
- Key performance indicators -how to measure success?
- The need for a central architecture board
- Breaking down the silos
- Choosing the right governance tools

Key Components of a SOA

Vendors will try to make their customers buy full SOA product suites, claiming to be a one-stop shop. This module explains why there is a real risk in focusing too much on tools from the start of the SOA initiative. We will explain the needed key components of a SOA, and focus on leveraging early service enablement benefits.

- Building a business component model
- We should focus on basic services first -but how?
- Can money buy a real enterprise service bus?
- The importance of service frontends
- Business and IT view through the registry and repository
- Data-centric basic services can render EAI links obsolete

Software Platform for SOA

Ultimately, there will be a need for SOA tools that enable the implementation of the SOA best practices. This module focuses on the key items one should look for in a SOA toolset. What are the different job roles involved with the SOA initiative?

- Key features of a SOA software tool -design and execution environment
- SOA Development Life Cycle and the different roles involved
- Examples using BizTalk, Oracle SOA Suite, Tibco, webMethods
- How to select a genuine registry and repository?
- Examples using HP Systinet and Software AG Centrasite
- The Business rules engine -Ilog, Fair Isaac, JRules

Learning from Case Studies

This module highlights some of the pitfalls and anti-patterns that our consultants encountered on-the-job. How can we find added value in case studies from other organizations operating in the same industry? Overview of SOA anti-patterns. Where do we go from here?

- Anti-patterns overview
- Best practices revisited
- The benefits and risks associated with the SOA approach
- Deciding on a Pilot project, getting the necessary funding
- Setting the right expectations, the need for regular feedback to management
- Why some SOA initiatives never see any return on investment?
- Conclusions