

Service Oriented Architecture Best Practices and Building an Agile SOA Framework

Presented by:
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Enterprise SOA

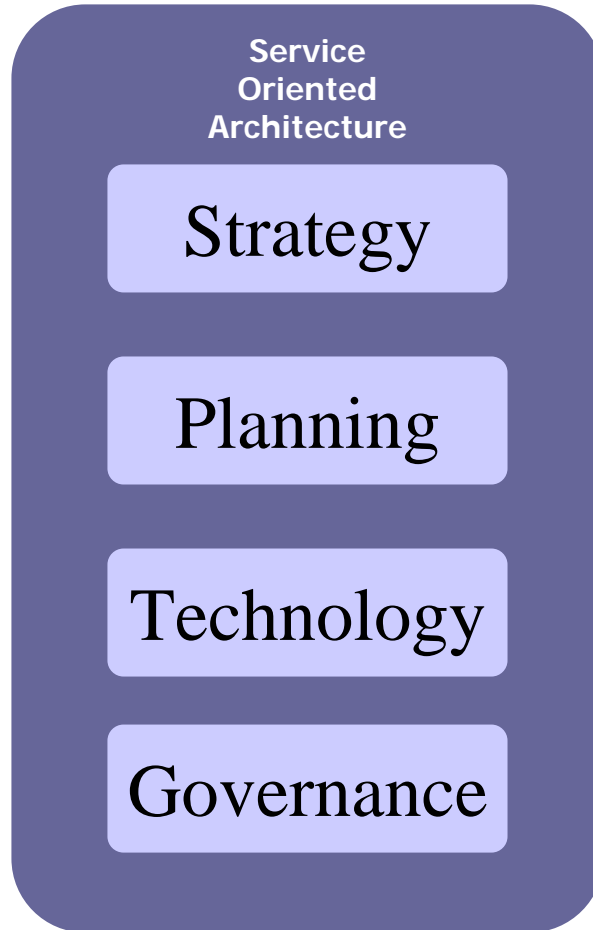
Enterprise SOA is a blueprint for an
Enterprise wide IT architecture for developing
services-based, interoperable solutions

Service Oriented Architecture

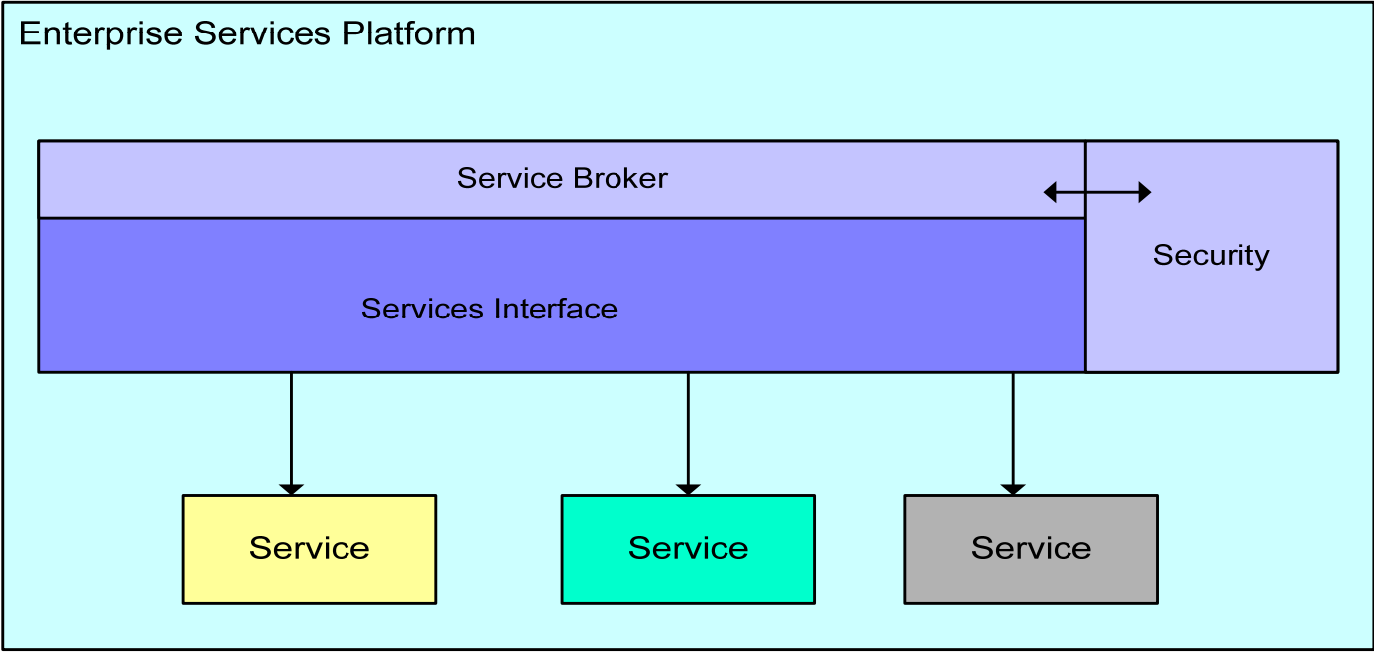
Service Oriented Architecture

- Leverages highly cohesive, loosely coupled components
- Encapsulates business data
- Establishes contracts through interfaces
- Provides interfaces to business data
- Define services with the intent of reuse

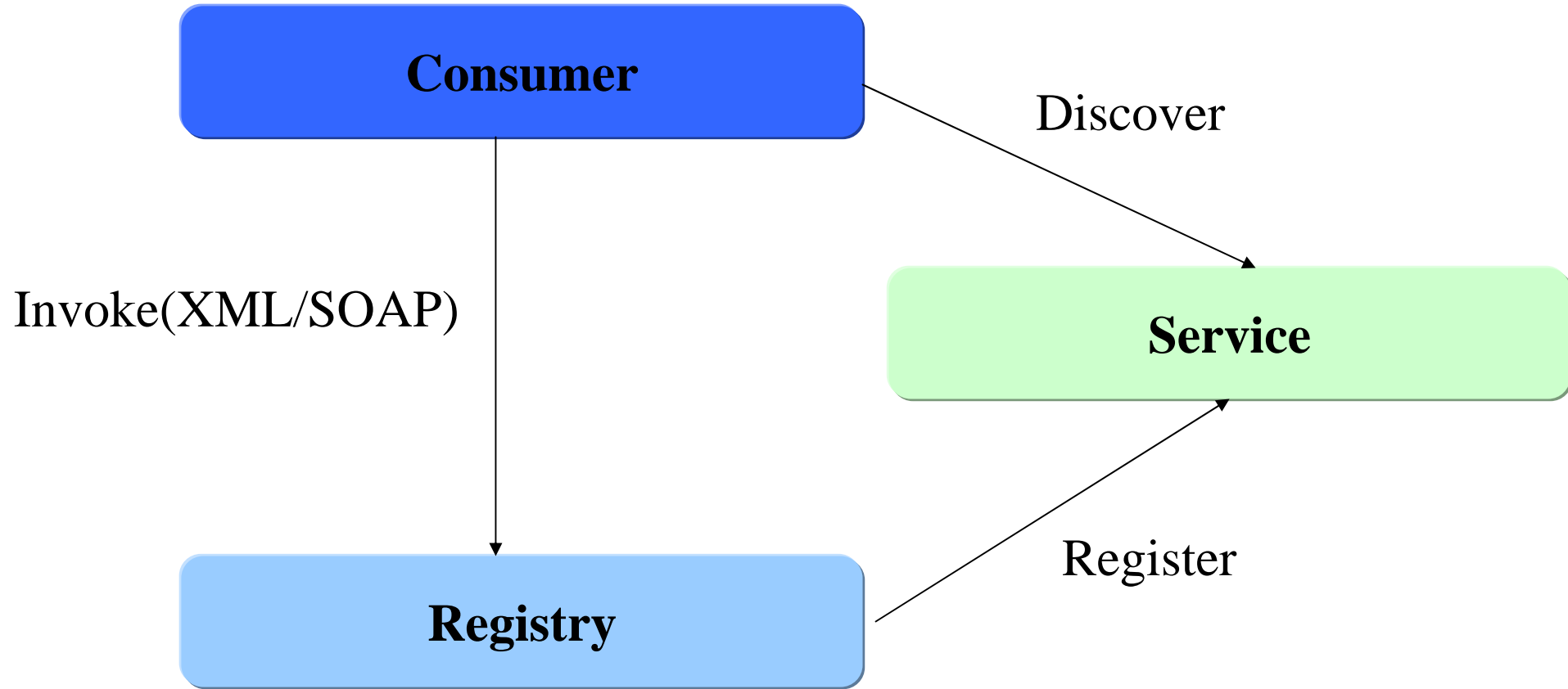
SOA Key Areas



Enterprise Services Platform



Service Oriented Architecture



Elements of a service

- A service is a building block with a standard interface that is independent of implementation considerations
- Services are
 - Self contained
 - Loosely coupled
 - Support Reuse
 - Easily maintainable

Service patterns

- Everything is not a Service!
- Typical services can be business, workflow, data, security
- Service Categories
 - Business Services
 - Application Services
 - Infrastructure Services
 - Security
 - Identity management
 - Persistence

SOA Adoption

- Identify existing services and business processes
- Identify existing service interfaces
- Identify information that can be encapsulated as new services
- Build services and support service discovery

SOA Adoption

SOA Adoption should focus on:

- SOA Planning, governance, policies, procedures
- Support and deployment of shared services
- Support of interfaces based on standards
- Iterative development

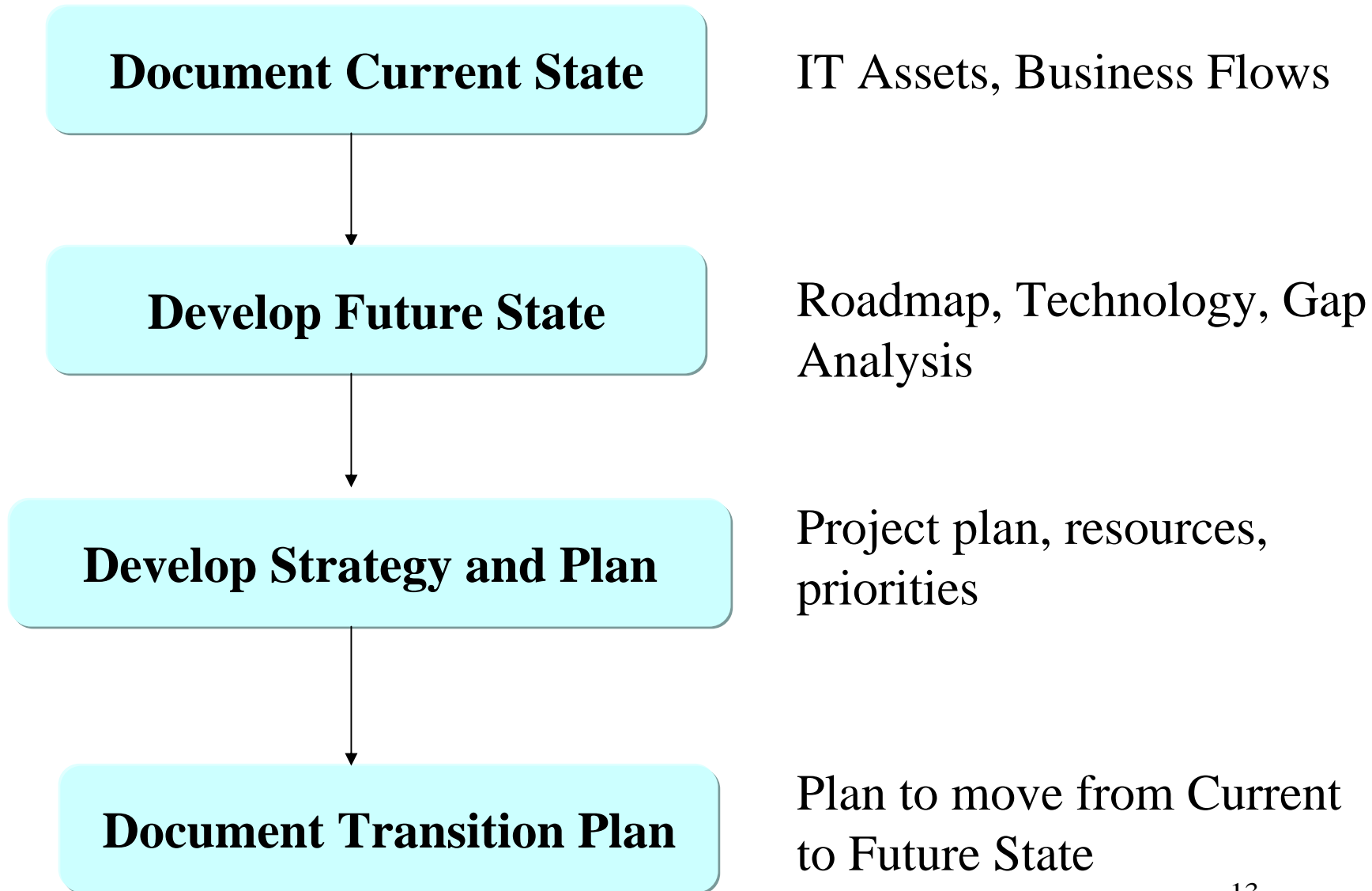
Benefits of SOA

- The benefits of SOA are:
 - Reuse
 - Cost reduction
 - Flexibility
 - Interoperability
 - Platform independence

SOA Best Practices

- Create a roadmap and detailed plans
- Incorporate the SOA strategy in Transition Planning
- Utilize existing standards such as web services
- Develop services with the right granularity
- Define interfaces and categorize services
- Define mechanisms for discovering services

Service Oriented Architecture Process



SOA Service Design Best Practices

- SOA service design considerations are:
 - Granularity of services
 - Appropriate coupling
 - Local or Remote
 - Incremental development

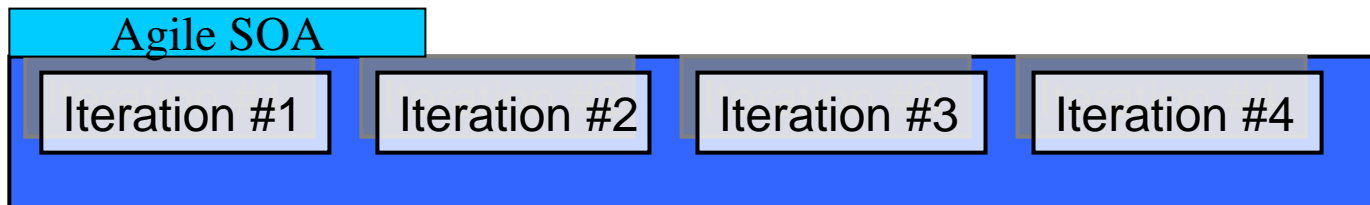
SOA Operational Best Practices

- Identify the existing Business Domain Model - Data, Systems, Functions
- Define the technology standards and use them across the organization – SOAP, XML, WSDL
- Define and identify services and relate to business processes based on data, latency
- Categorize the services during the analysis and design process
- Create a Registry in the organization - UDDI
- Security – WS Security, SAML etc
- Process and Governance – Interface management, Points of contact, SOA adoption across the enterprise

Agile SOA

The objective is to rapidly adapt to changes in a cost effective manner. Key elements for service development are:

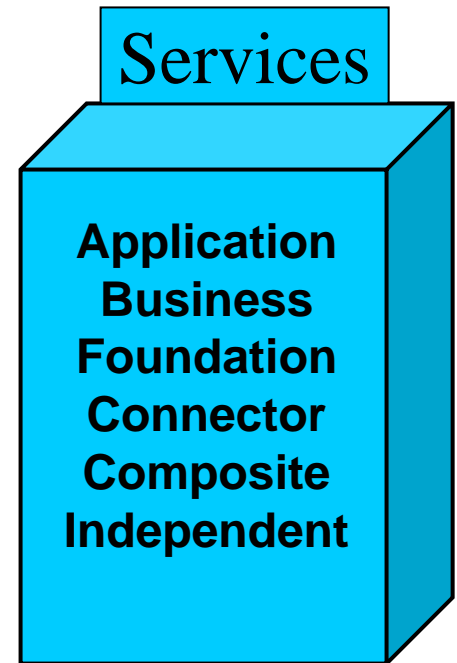
- Plan for each iteration as a comprehensive unit
- Identify and develop services iteratively
- Perform frequent and distinct service definition and integration
- Perform incremental service delivery



Agile Service Framework

Service Categorization

- Application – Functional
- Business – Functional logic
- Foundation – Basic services
- Connector – Link services
- Composite – Aggregate services
- Independent – Free standing



Agile SOA Process

- Service requirements and analysis occur in parallel with service development
- SOA requirements do not have to be fully developed initially
- Develop potential services and refine the services during the SOA process
- Minimize iterations and incremental development for core and foundation services
- Develop plans for iterations and incremental development

Major SOA Considerations

- Major Considerations are:
 - Process consistency
 - Service adaptability
 - Service Granularity
 - Change management
 - Encapsulation and Coupling
 - Aggregation and Connection
 - Iteration timeframe and overload

SOA - Business to Technology

Business

- SOA Strategy
- SOA Vision
- Business Requirements



Technology

- SOA Architecture
- SOA Framework
- SOA Technology

Service Oriented Architecture Best Practices and Building an Agile SOA Framework

Abstract

Service oriented architecture (SOA) is bridging the gap between business strategists and IT architects through the large-scale development of reusable services. SOA can result in business agility, efficient integration and reuse. SOA promotes the encapsulation and deployment of services that support interaction with other elements in the organization. Such distributed services provide a high degree of flexibility for responding to changes and to support the business processes. This presentation will discuss SOA best practices, methodologies and challenges. The presentation will talk about projects that have used SOA for promoting reuse and consolidation. It will also outline the SOA architecture that is mapped to web services for building an operational SOA environment.

Service definition is just the tip of the iceberg since these services need to be developed and utilized effectively. An Agile SOA framework supports the concept of shared services that result in rapid realization, significant cost benefits and improved efficiency. Such a framework results in the quick deployment and integration of reusable services. These services are developed with a strong focus on iterative development and interact in a standard manner with other applications. The iterative agile processes for the realization of the reusable services are embedded within the system development life cycle.

The objective of Agile SOA is to develop and deploy services that are adaptable, align the business objectives and IT and promote the efficient realization of services throughout the organization. This presentation expands the vision of reusable services to incorporate agile and iterative processes. The deployment of such an operational SOA can serve as the blueprint for rapid and efficient modernization throughout the organization.

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Questions

Thank you

Bio:

Ajay Budhraj has over 18 years in Information Technology with experience in areas such as management, project management, enterprise architecture, system architecture, software engineering, training, methodologies, networks, databases etc. He has a Masters in Engineering (Computer Science) and also a Masters in Management. He is a Project Management Professional certified by the PMI and is also CICM certified. Ajay has led large-scale projects for big organizations and has extensive IT experience related to telecom, business, manufacturing, airlines, finance, government. He has delivered web based technology solutions and strategies for e-business platforms, portals, mobile e-business and content management. As Adjunct Faculty, he has taught courses for several universities and has presented papers at worldwide conferences.

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