

Enterprise SOA- Strategy and Execution

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Enterprise Service Oriented Architecture

- Enterprise SOA is a blueprint for a flexible, open IT architecture and for developing services-based, enterprise level business solutions
- Enterprise SOA results in higher efficiency and reduced cost due to a higher degree of modularity and decoupling
- SOA promotes reuse, agility, adaptability, manageability, increases productivity

Enterprise Service Oriented Architecture

- SOA utilizes open standards to develop encapsulated building blocks
- SOA standardizes the interactions between the services
- Services are loosely coupled and modular elements
- Services promote reuse and interoperability

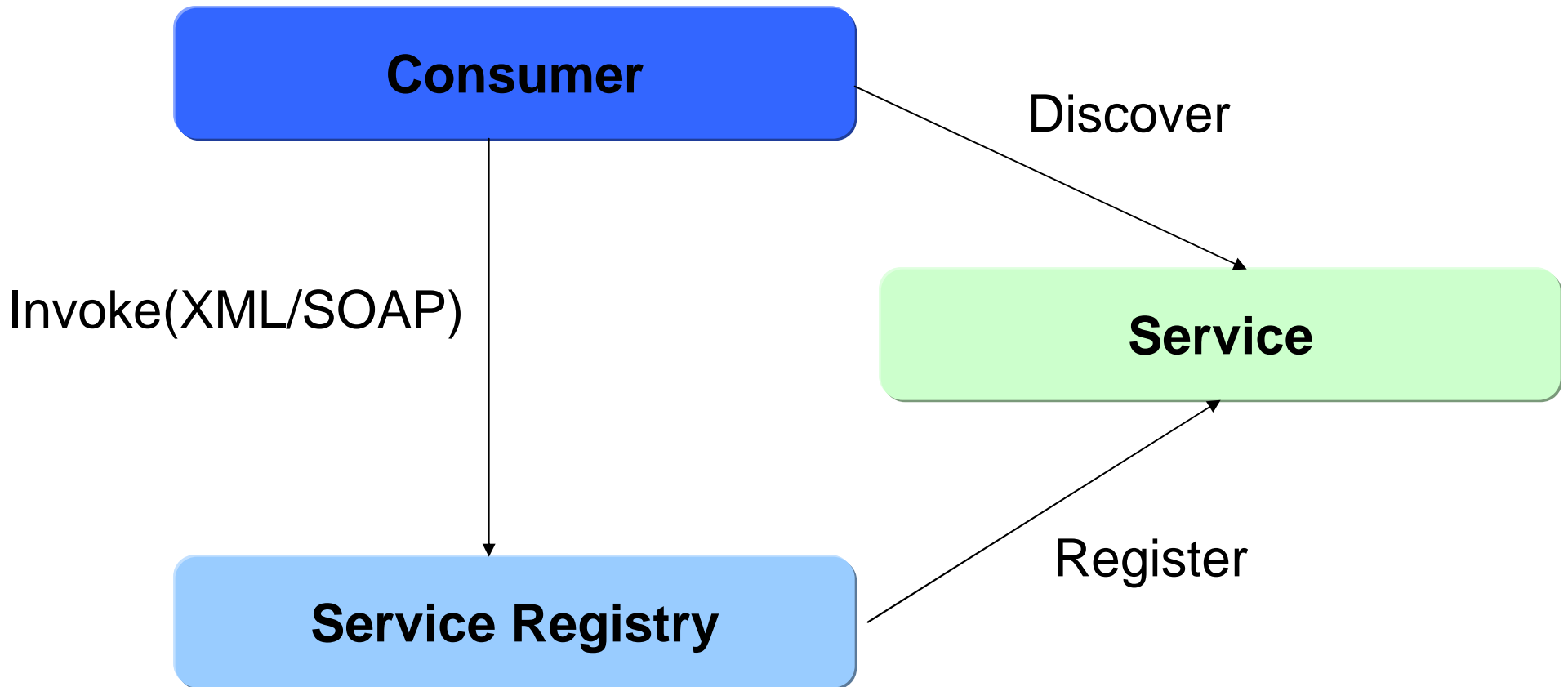
Enterprise SOA Benefits

- The development of an Enterprise Architecture Strategy and effective mapping of business processes to services facilitates the following:
 - Cost savings
 - Increased flexibility for redesign
 - Reuse of business functionality
 - Reduction of complexity, technology independence
 - More efficient development

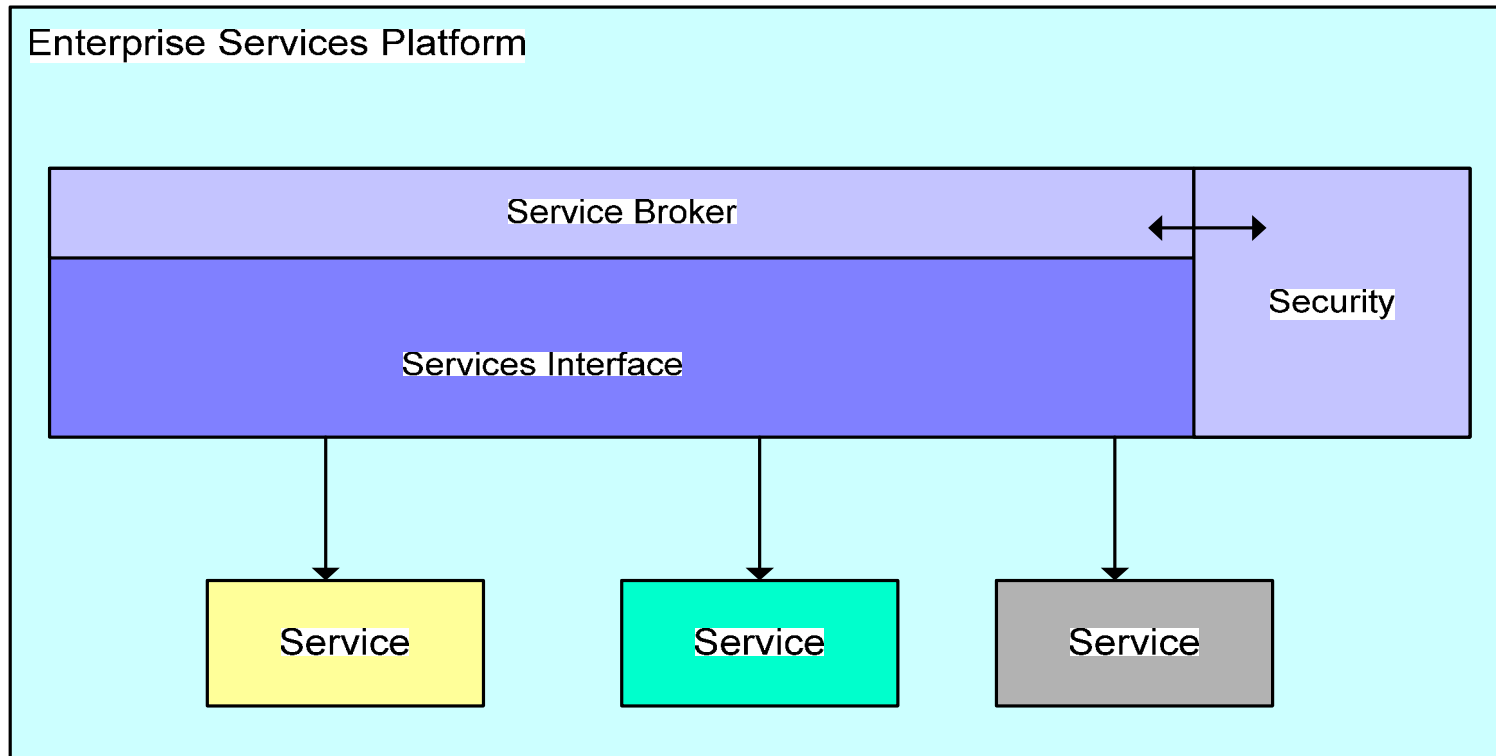
SOA Growth

- Enterprises are adopting SOA based solutions to provide better access to information and develop a unified framework
- Recent requirements for flexible business processes and trends in outsourcing are drivers for SOA Growth
- Adoption of Enterprise Service Buses is instrumental in higher adoption levels

Service Oriented Architecture



Enterprise Services Platform



Enterprise Service Platform

- The functions of a Enterprise Service platform are to implement:
 - Service Control
 - Service Infrastructure
 - Service Composition
 - Service Delivery
 - Service Access
 - Service Measurement

Enterprise SOA Strategy

As part of the Enterprise SOA strategy:

- Establish SOA Governance, Methodology for SOA services and related practices
- Collaborate extensively with Business Owners, Business Analysts, SOA Architects
- Develop candidate architectures and reference models
- Develop services in a step by step manner, develop Service Level Agreements and measure the return

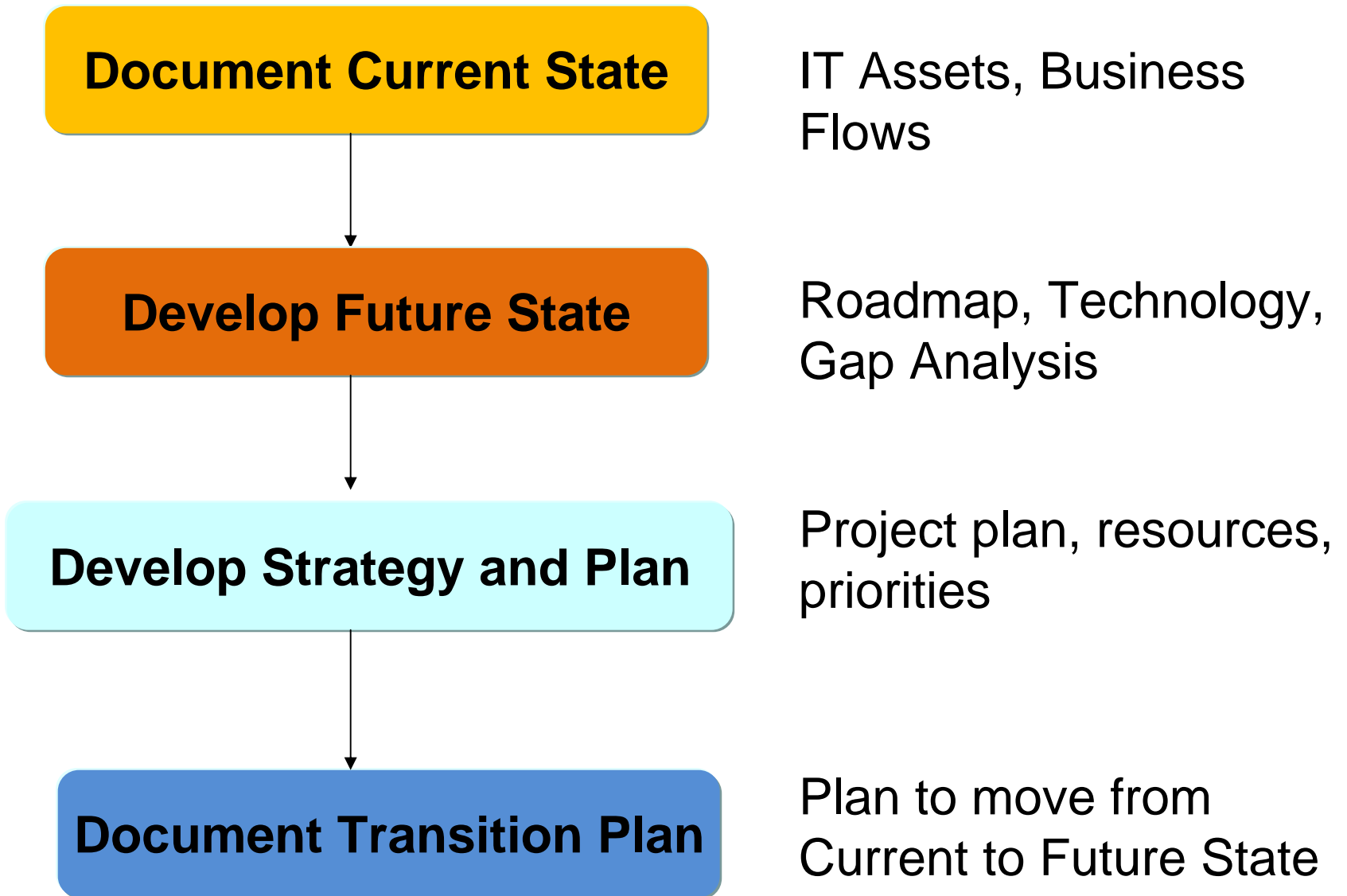
Enterprise SOA Strategy

- Establish a Vision that aligns Business with IT
- Define the SOA Roadmap and Plans
- Define the organization structure
- Conduct detailed analysis of the business domain, functions, processes, interactions, events
- Define the SOA Architecture and Technology
- Develop services, aggregation of services
- Measure results as a result of SOA

Enterprise SOA Planning

- Review current business processes, architecture
- Define future state and identify gaps
- Identify and classify services
- Develop Governance model, Benefits, ROI
- Develop detailed plan, task and cost estimates
- Develop Transition plan and communicate to the stakeholders

Enterprise Service Oriented Architecture Process



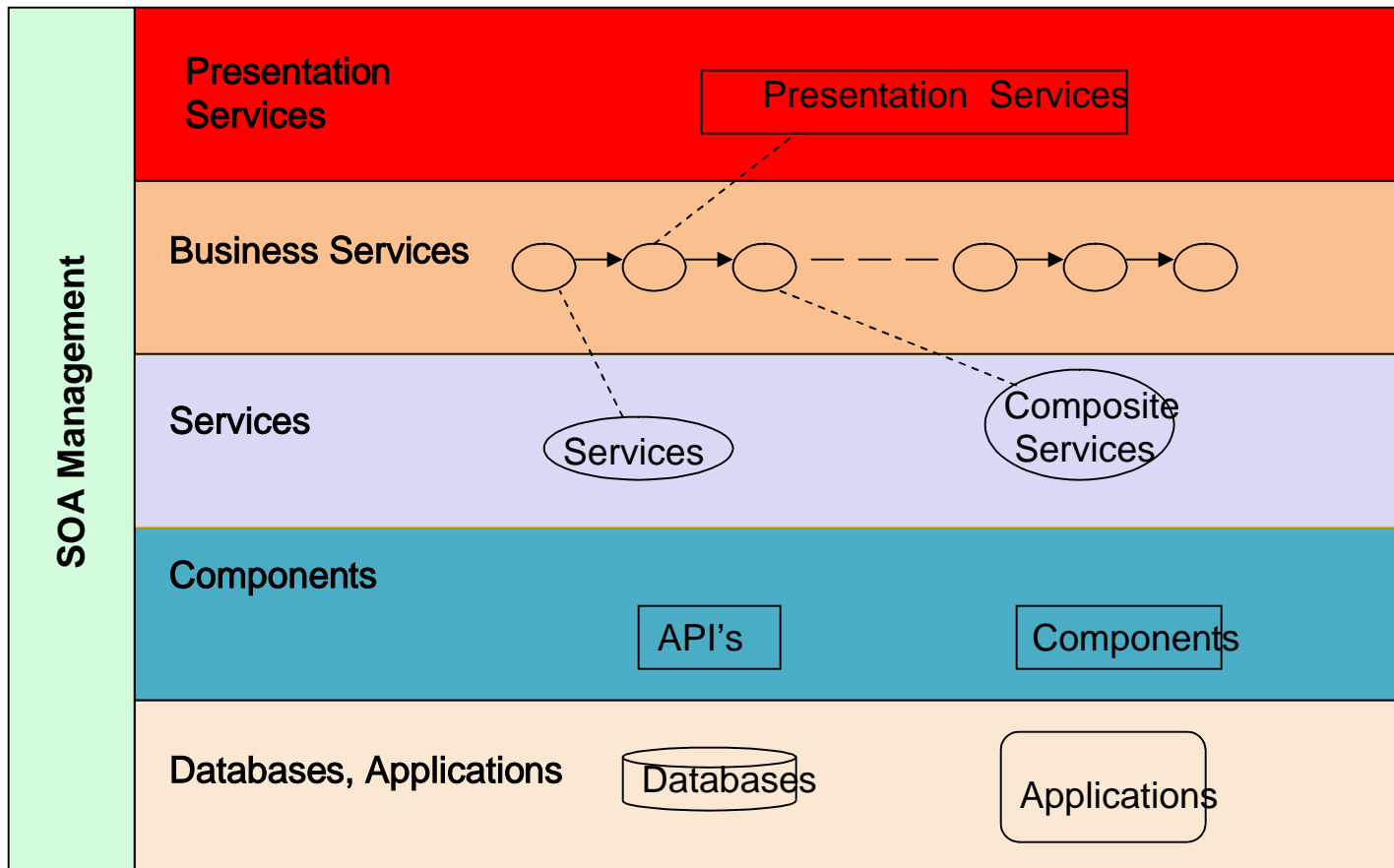
SOA Technology Execution

- Create a SOA roadmap and detailed plans
- Incorporate the SOA strategy in transition planning
- Define mechanisms for discovering services
- Categorize Services:
 - Business Services
 - Business level
 - Application Services
 - Application level
 - Infrastructure Services
 - Security
 - Identity management
 - Persistence
- Develop services with the proper granularity
- Manage and monitor service usage, performance, reliability

SOA Technology Execution

- Abstract cross cutting functionality such as infrastructure functions
- Create a service registry and publish services
- Comply with industry standards – SOAP, XML, WSDL, WS-Security, BPEL
- Leverage process and methodology to build SOA solutions
- Utilize SOA Implementation frameworks, Enterprise Service Bus etc.

SOA Execution Framework



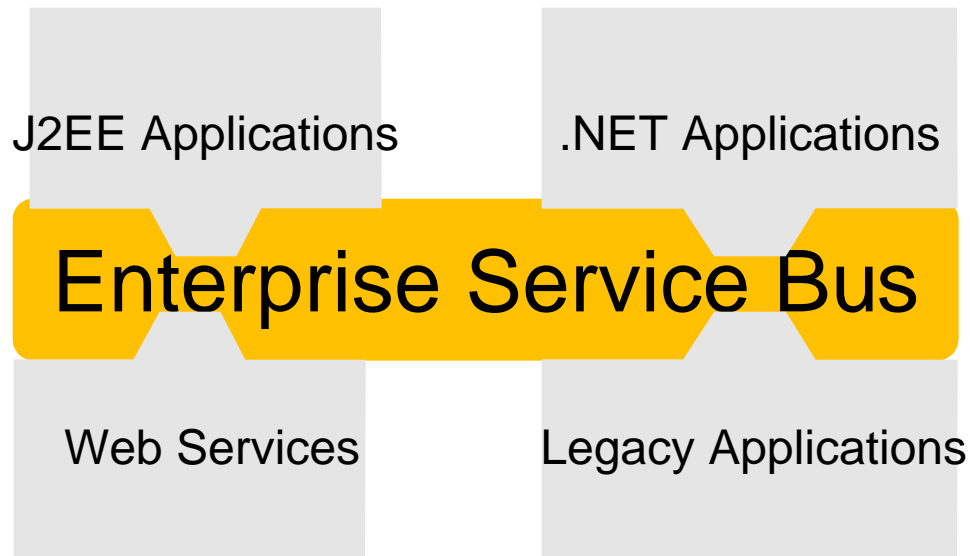
Enterprise Service Bus

- Enterprise Service Bus (ESB) is the backbone for SOA and provides a standards based, secure and reliable messaging mechanism
- The ESB provides interoperability through adapters and interfaces
- The ESB is configuration driven and provides Security, logging, auditing capabilities
- ESB functions include:
 - Message Transformation
 - Content Based Routing
 - Publish and Subscribe

Enterprise Service Bus

- The Enterprise Service Bus (ESB) provides a robust, scalable infrastructure that connects disparate applications, mediates their incompatibilities and orchestrates their interactions. The ESB also:
 - Streamlines the development of services
 - Promotes intelligent routing and real time monitoring
 - Supports security and exception handling
 - Supports multiple binding strategies

Enterprise Service Bus



Service Mediation

- Web services have technology neutral XML based message interactions
- Service mediation handles the interaction between the service provider and consumer
- Mediation takes care of the transformation between formats when services are accessed

Service Orchestration

- Service Orchestration coordinates individual services into a bigger units
- The services layers can map to Application, Business and Orchestration layers
- Orchestration includes the process and service elements
- ESBs can support mediation and orchestration capabilities

SOA Execution

- Process and Governance – Policies, Interface management, Points of contact, SOA adoption across the enterprise
- Identify the existing Business Domain Model – Functions, Data, Systems
- 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
- Create a registry in the organization
- Security – WS Security, SAML etc

ENTERPRISE SOA STRATEGY AND EXECUTION

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, CSM, ECM (AIIM) Master and ITIL-F 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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