Seven Steps to a Service Oriented Evolution

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Service Oriented Evolution

Seven Steps to an SOE

Source: http://bijonline.com/index.cfm?section=article&aid=524
Service Oriented Architecture

Service Repository
- Service Description
  - Service Description
  - Service Description
  - Service Description

Service Consumer A
- Components

Service Consumer B
- Components

Service Provider A
- Business Function
  - Components

Service Provider B
- Business Function
  - Components

Identify
Solutions define services .... Services make solutions

**Vertical Solutions**
Stand-alone or interconnected business processes relating to specific domains

**Business Processes**
Orchestrate business services as well as human services into meaningful business processes

**Business Application Services**
Composite services constructed by using service components, packaged apps and integration brokers.

**Service Components**
Fine grained business objects providing low-level access to enterprise data.
SOA Granularity

Business Logic

Vertical Solutions
- CRM
- Deposits
- Loans
- Financial Cards
- Mortgage

Business Processes
- Manage Accounts
- Manage Deposits
- Manage Loans
- Manage Financial Cards
- Manage Mortgages

Business Application Services
- Account Open
- Customer Search
- Assign Agents
- Account Transaction Processing
- Interest Rate Refresh

Service Components
- Create New Customer
- Retrieve Valid Customer
- Verify Customer ID
- Retrieve Valid Account
- Retrieve Valid Interest Rate
Multiple tiers of services

SOA tiers

Client Tailored Solutions

Multi-client Operations

Industry Focused

Common Services And Business Utilities

Leveraged Platform

Applications

Infrastructure

Network

Multiple tiers of services
Content-Based Routing

Customer Profile Service A

Region A Customers

Customer Profile Service B

Region B Customers

Locate
Service Repository-Based Routing

Locate
Back-End Replication

Customer Profile Service

Region A Customer Repository

Region B Customer Repository

Customer Profile Service

Locate
<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Middle Tier Platform</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Loans</td>
<td>UNIX</td>
<td>SAP</td>
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<tr>
<td>Online Banking</td>
<td>Windows</td>
<td>Siebel</td>
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<td>Banking Centers</td>
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<tr>
<td>Insurance Services</td>
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<tr>
<td>Consumer Loans</td>
<td>Linux</td>
<td>ORACLE</td>
</tr>
<tr>
<td>Corporate Loans</td>
<td>UNIX</td>
<td>IBM DB2</td>
</tr>
</tbody>
</table>
Service Domains

- **Functional Domains**
  - Loans Service Domain
  - Banking Service Domain
  - Insurance Service Domain

- **Application Domains**
  - SAP Services
  - PeopleSoft Services
  - ORACLE Services

- **Technology Domains**
  - UNIX Services
  - Windows Services
  - Linux Services
Service Packaging Challenge

- Challenge
  - Packaging existing code into a service oriented representation
- Three step approach
  - Business Area Definition
  - Program Assignment
  - Loosely Coupled Integration
- One of the key aspects of Legacy modernization
Service Packaging Legacy Applications

Legacy

- Screen
- Transaction
- Database

Packaged

- Browser
- GUI
- Services
- Thick Client
- High End
- Direct Data Access
- App
- Data
. . . is best performed using BPM

Purchase Ticket

- Get Customer
- Get Schedule
- Check Availability
- Quote Fares
- Receive Payment

Service Repository

Orchestrate
Service Domain Routers and Service Routers

SERVICE DOMAIN (INSURANCE)

Financial Customer Request

Service Domain Router A

Service Router

Create Customer

New Vehicle Loan

SERVICE DOMAIN (BANK)

Financial Customer Request

Service Domain Router B

Service Router

Create Customer

New Insurance Policy
SOA Governance is across the Enterprise

Corporate Governance

Architecture Governance

IT Governance

SOA Governance
A SOA governance model must be developed within the context of the overall Enterprise Governance Framework. There are multiple model types to choose from, but the final model must be consistent with other organizational structures, processes and tools.
Service Oriented Evolution

Seven Steps to an SOE

Identify → Locate → Group → Package → Orchestrate → Route → Govern

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SOA – Operational View

Web Services Platform

Business Process Management (BPM)

Business Logic

Vertical Solutions

- Human Resources
- Accounts Payable
- Procurement
- Accounts Receivable
- Customer Relationship Management

Business Processes

- Pay Employees
- Process Invoices
- Request Resources
- Manage Customer Billing
- Manage Campaign

Business Application Services

- Produce Paycheck
- Create Invoice
- Generate Purchase Order
- Construct Bill
- Assemble Campaign List

Service Components

- Obtain Employee ID
- Authenticate Requester
- Validate Requester Authorization
- Retrieve Authorized Data
- Present Retrieved Data

Foundational Capabilities

- Message Delivery Guarantees
- Data Transformation
- Intelligent Message Routing

Presentation Layer

Industry Solutions

Use Case Development Tools

Process Orchestration Tools

Process Optimization Tools

Development Tools

Performance Monitoring Tools

Web Services Management Tools

Introspection Tools

Code Generation Tools

Version Control Tools

Enterprise Systems Management Tools

Server & Network Management Tools

Interactive Dashboards

Portals & Mobility Tools
Business operations, systems, and technology work closely together to meet business needs. SOA is therefore described by 4 Views. To be successful, an enterprise SOA approach must address these views and their interrelationships.
Great Companies Think Alike!

Great Companies Define standards!

Great Companies work with Open Group!
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