Smart SOA in Action

Service-Oriented Architecture (SOA) for Business Process Management

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Agenda

• The Role Business Processes Play in an SOA
• Capturing Business Motivation
• Business Process Analysis
• Service Identification, Specification and Implementation
• Service Reuse in Business Process Management Suite (BPMS) Solutions
What is BPM?

- **Gartner**: BPM is “a management discipline that provides for the governance of a business process environment toward the goal of improving agility and operational performance. BPM is a structured approach employing methods, policies, metrics, management practices and software tools to manage and continuously optimize an organization's activities and processes."

- **BPM is made up of two parts:**
  - Business Process Analysis - BPA
  - Business Process Management Suite - BPMS
The BPM value proposition

**Value to shareholders and competitiveness**

- Transformation
- Business insight
- Compliance & consistency
- IT agility
- Efficiency
- Knowledge
- Process modeling

**Process monitoring**

**Process execution**

**Process optimization**

- Workers, supervisors and managers
- CIO
- CFO
- CXO
- CEO
- Customers and partners

**Stakeholders**
There are many flavors of BPA

- Elicit, analyze, communicate and validate business processes
- Deals with the who, what, why and how of the business

**BPA**

### Business Modelers (Standalone BPA)
- WBM
- MS Visio
- SmartDraw
- Process Master

Business analyst develops process models to ensure process efficiency and to expose processes for governance and compliance

### BPMS Modelers (BPA for BPMS)
- WBM
- SAP
- Etc.

Business analyst develops process models to ensure process efficiency, governance and compliance, and that are identified for automation and optimization via a BPM solution – "do things right"

### BPAM (EA for BPA/BPM)
- SA
- Aris
- Casewise
- Proforma

Enterprise architect analyzes process models to document how enterprise building blocks might be used to realize business motivation, and for project portfolio management – "do the right things"
BPMS is a Multi-faceted Solution

Bringing it All Together to Optimize Processes and Accelerate Innovation

BPMS...

- **Empowers business users** and helps drive organizational commitment to process optimization goals and achieving business results
- **Harnesses the full potential of any process** by interconnecting any touch point across different systems, people, and content for end-to-end management, faster change, deeper insights, and accelerated innovation
- **Delivers immediate benefits** and represents a longer-term business discipline that provides greater value, cost savings, and strategic advantage over time
Business Process Management Suite Capabilities

- Predict and optimize process outcomes with modeling and simulation
- Rapidly customize processes by business users with policies
- Create processes from reusable building blocks
- Leverage current IT assets regardless of underlying platform
- Sense and respond to business events in real-time for automated response or human decision support
What is SOA?

• What is it?
• What value does it have?
In BPM Service-Oriented Architecture help to:

• Address the effect of application integration across ownership boundaries
• Use Service Level Agreements to capture contracts between parties
• Extend Component Based Development with additional distributed computing and deployment concerns
• Include concepts for publishing, finding, and dynamically binding to services
• Address practical implications of the Web and existing middleware platforms
  – Example: Integration between J2EE and .Net
Overview of a SOA Solution

Constructing Processes from Services

Consumers
- Channel
- B2B

Business Process
- Composition; choreography; business state machines

Services
- atomic and composite

Service Components
- Packaged Application
- Custom Application
- OO Application

Operational Systems

Composite Service

Governance (managing the service portfolio)
- Information Architecture (meta-data)
- Business Intelligence
- Business Intelligence & Business Management
- Integration Infrastructure & Monitoring Infrastructure Services
- QoS Layer (Security, Management & Monitoring Infrastructure Services)

QoS Layer (Security, Management & Monitoring Infrastructure Services)

Inform Architecure (meta-data)

QoS Layer (Security, Management & Monitoring Infrastructure Services)

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QoS Layer (Security, Management & Monitoring Infrastructure Services)

SOA Solution Overview
How do we achieve business flexibility through services?

• Where do the services come from?
• How do we know if they are business relevant?
• How can they be designed to be consistent and reusable across the enterprise?
• How to maintain their service levels?
Business Processes have two relationships with SOA solutions

- **Business processes define requirements for service design**
  - Tasks in business processes identify candidate service capabilities
  - Service design has to look across many processes for duplication, commonality and variability
  - Service architecture involves deciding what services are provided, and how, in order to reduce coupling, manage change, facilitate reuse and enable agile solutions

- **Executable business processes can choreograph services**
  - Once services have been designed, they can be reused to create new processes
  - Such new processes can be choreographies of existing services deployed as workflow applications – design processes
  - These processes may look very different than the processes from the business analyst
Grady Booch on Architecture

“The key abstractions and mechanisms that define that system's structure and behavior as seen from the perspective of different stakeholders, each with a different set of concerns.”

“Going back to the A part of SOA, the issue then is one of abstraction, separation of concerns, and all the usual fundamentals of architecture. I've seen some folks suggest creating an SOA from the bottom up: look at a silo, identify the potential services, and publish them, then weave a system together from them. This is in essence technology first. In my experience, this is a recipe for disaster and/or serious over-engineering. You've got to start with the scenarios/business needs, play those out against the existing/new systems, zero in on the points of tangency, and there plan a flag for harvesting a meaningful service. These styles, and their resulting costs/benefits, are rarely discussed.”

See also: Software Architecture
Architecture bridges between business and IT

Business Services Contract

Business process provide validated service requirements

Contracts are fulfilled by architected SOA solutions

Reuse architected services to implement BPM solutions
The consequences of not applying architectural principles

• Inconsistent IT decision making within the project and across the enterprise
• Incompatibility of solutions in different organizations across the enterprise
• Lack of reuse of IT solutions
• Duplication and proliferation of effort
• Inconsistent, poor quality design decisions
• Longer learning time for users and developers
• Excessive, inefficient, and possibly ineffective efforts to fix, adapt, and maintain the system
• Lack of flexibility of the IT infrastructure in responding to changing business needs
• Inability for the system to evolve to take advantage of new components and technologies
• Failure to find a common language to talk about the system across the different communities of users and interested parties
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Hi, I’m Patricia

I’m the Project Manager for JK Enterprises, a global financial corporation. My role is to lead the Account Opening project. We just completed analysis of there different project proposals to improve customer account opening.

My team is distributed over three continents and development follows the sun. To lead my project I need to to manage change, track health and manage quality by collaborating with my team and stakeholders.

Our project is a component of a larger solution, so we need integrations that let us release to JKE’s global integration and delivery chain which is based on ClearCase.
JK Enterprises Account Management System (AMS) Project
“From Business Motivation to Deployed Solution”

Manage Portfolio
Patricia – Project Manager
Patricia is managing the review and approval of new business requirements.
She and the AO team plans, assesses and approve projects for further development.
Monitor Health
She tracks work progress and project health.

Capture Business Motivation
Bob – Business Analyst
Bob and his LOB capture the business motivation: the vision, goals, objectives, mission, strategy and tactics.
He organizes the business around competencies and accountabilities in order to identify required business components and services.

Analyze and Design
Solution Architecture
AI – Solution Architect
AI collaborates with the team to identify, specify, realize and implement IT services that fulfill business requirements.
He designs the solution architecture, chooses the platform and generates the initial solution using MDA.

Analyze Business Requirements

Implement Solution
 Diedrie – Developer
Diedrie implements and assembles the solution starting with the artifacts generated by AI. She works with Uwe to create the user interface.
Diedrie also works with Rebecca to build and deploy the solution, and perform initial testing.
Meet Bob. He’s the business analyst on the AMS-Prime project team.

Bob’s initial task is to determine the business requirements for the AMS Prime Project.

He starts by understanding the Executive’s business vision and uses that to determine the exact goals and quantifiable objectives.

He then determines the business strategies and tactics necessary to achieve the intended goals.

Bob is also responsible for organizing JK Enterprise into different functional areas and determining the business services in each area.

Given the business motivation and organization, Bob then captures the high-level requirements for the identified business components in Business Use Cases.
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Bob has captured the business goals, objectives, strategies, tactics, influencers, policies, rules and assessments. But before handing these requirements off to the development, they must be analyzed to determine the business processes necessary to fulfill them.

Bob starts by examining existing JK Enterprises processes as identified by the business components in the CBM map. He develops any important missing processes by observing how they are currently performed.

He then analyzes the as-is against the business motivation to determine how they should be modified into to-be processes that fulfill the objectives.

Bob uses business process simulation to get an idea what resources are required, where they are located, how much the process will cost, and how long it will take. He then uses this information to evaluate against the objectives to see if the to-be processes adequately meet the business requirements.
Start with Basic Process Flow

Define the data and order in which activities are performed.

Note whether activities are manual (human) or automatic (rule, service).

Indicate if process paths are mutually exclusive or parallel.

Define the data and order in which activities are performed.
Add Detailed Process Information (optional)

• **Business-relevant human task**
  - Assign who should perform the task?
  - Under what circumstances should the task be escalated to a manager or alternate user?

• **Define business rule logic and structure**
  - Rules can be modified at runtime to easily fine-tune the process
  - Use simple if-then rule structure to indicate desired behavior
Model and Simulate the as-is Business Process

**Table 1: Case Name, Distribution, Success Status, Average Elapsed Duration, and Average Throughput**

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Distribution</th>
<th>Success Status</th>
<th>Average Elapsed Duration</th>
<th>Average Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>40.00%</td>
<td>Succeeded</td>
<td>5 hours 20 minutes</td>
<td>0.19 work item / hour</td>
</tr>
<tr>
<td>Case 2</td>
<td>32.00%</td>
<td>Succeeded</td>
<td>1 hour 15 minutes</td>
<td>0.80 work item / hour</td>
</tr>
<tr>
<td>Case 3</td>
<td>20.00%</td>
<td>Succeeded</td>
<td>3 days 5 hours 50 minutes</td>
<td>0.01 work item / hour</td>
</tr>
<tr>
<td>Case 4</td>
<td>8.00%</td>
<td>Succeeded</td>
<td>3 days 5 hours 50 minutes</td>
<td>0.01 work item / hour</td>
</tr>
<tr>
<td>All Cases</td>
<td></td>
<td></td>
<td>1 day 19 minutes 36 seconds</td>
<td>0.04 work item / hour</td>
</tr>
</tbody>
</table>

**Table 2: Case Name, Distribution, Success Status, Average Revenue, Average Run Cost, Average Delay Cost, and Average**

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Distribution</th>
<th>Success Status</th>
<th>Average Revenue</th>
<th>Average Run Cost</th>
<th>Average Delay Cost</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>40.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD60.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 2</td>
<td>32.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD25.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 3</td>
<td>20.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD430.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 4</td>
<td>8.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD420.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>All Cases</td>
<td></td>
<td></td>
<td>USD0.00</td>
<td>USD151.60</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
</tbody>
</table>
Model the to-be Business Processes

- Automated task to assess risk - reduced assessment time from 1 hr to 5 min
- added Medium Risk case – approve without manual process
Simulate the to-be Business Processes

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Distribution</th>
<th>Success Status</th>
<th>Average Elapsed Duration</th>
<th>Average Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>16.00%</td>
<td>Succeeded</td>
<td>5 minutes 10 seconds</td>
<td>11.61 work items / hour</td>
</tr>
<tr>
<td>Case 2</td>
<td>12.00%</td>
<td>Succeeded</td>
<td>3 days 4 hours 15 minutes 10 ...</td>
<td>0.01 work item / hour</td>
</tr>
<tr>
<td>Case 3</td>
<td>24.00%</td>
<td>Succeeded</td>
<td>4 hours 15 minutes 10 seconds</td>
<td>0.24 work item / hour</td>
</tr>
<tr>
<td>Case 4</td>
<td>12.00%</td>
<td>Succeeded</td>
<td>4 hours 15 minutes 10 seconds</td>
<td>0.24 work item / hour</td>
</tr>
<tr>
<td>Case 5</td>
<td>36.00%</td>
<td>Succeeded</td>
<td>4 hours 10 minutes 10 seconds</td>
<td>0.24 work item / hour</td>
</tr>
<tr>
<td>All Cases</td>
<td></td>
<td></td>
<td>12 hours 11 minutes 46 seconds</td>
<td>0.08 work item / hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Distribution</th>
<th>Success Status</th>
<th>Average Revenue</th>
<th>Average Run Cost</th>
<th>Average Delay Cost</th>
<th>Average Delay Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 1</td>
<td>16.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD30.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 2</td>
<td>12.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD435.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 3</td>
<td>24.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD85.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 4</td>
<td>12.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD75.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Case 5</td>
<td>36.00%</td>
<td>Succeeded</td>
<td>USD0.00</td>
<td>USD65.00</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
<tr>
<td>All Cases</td>
<td></td>
<td></td>
<td>USD0.00</td>
<td>USD109.80</td>
<td>USD0.00</td>
<td>USD0.00</td>
</tr>
</tbody>
</table>
Assess Processes Against Objectives

<table>
<thead>
<tr>
<th>Simulation Result Name</th>
<th>Process Name</th>
<th>Average Elapsed Duration</th>
<th>Average Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Verify Account as-is</td>
<td>1 day 19 minutes 36 seconds</td>
<td>0.04 work item / hour</td>
</tr>
<tr>
<td></td>
<td>Verify Account</td>
<td>1 day 11 minutes 46 seconds</td>
<td>0.08 work item / hour</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>12 hours 7 minutes 50 seconds</td>
<td>-0.04 work item / hour</td>
</tr>
<tr>
<td>Percentage Change</td>
<td></td>
<td></td>
<td>-99.46%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Simulation Result Name</th>
<th>Process Name</th>
<th>Average Revenue</th>
<th>Average Run Cost</th>
<th>Average Delay Cost</th>
<th>Average Resource Cost</th>
<th>Average Cost</th>
<th>Average Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Verify Account as-is</td>
<td>USD0.00</td>
<td>USD151.60</td>
<td>USD0.00</td>
<td>USD14.96</td>
<td>USD166.56</td>
<td>USD166.56</td>
</tr>
<tr>
<td></td>
<td>Verify Account</td>
<td>USD0.00</td>
<td>USD103.80</td>
<td>USD0.00</td>
<td>USD39.82</td>
<td>USD149.62</td>
<td>USD149.62</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>USD0.00</td>
<td>USD41.80</td>
<td>USD0.00</td>
<td>(USD24.88)</td>
<td>USD16.94</td>
<td>USD16.94</td>
</tr>
<tr>
<td>Percentage Change</td>
<td></td>
<td>undefined</td>
<td>27.57%</td>
<td>undefined</td>
<td>-166.19%</td>
<td>10.17%</td>
<td>10.17%</td>
</tr>
</tbody>
</table>

- Automated and more complete customer view reduces number of customers needing credit reports.
- Automated credit report is significantly less expensive and faster.
- Approving larger percentage of customer requests.
Design Business Measures and Metrics

### Business Measures Summary

This section provides information about business measures such as metrics and KPIs.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Target</th>
<th>Time Period</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rejected Percentage</td>
<td>KPI</td>
<td>50</td>
<td></td>
<td>Track the percentage of requests which are rejected</td>
</tr>
<tr>
<td>Average Verify Duration</td>
<td>Aggregate metric</td>
<td></td>
<td></td>
<td>Verify that the average duration for the Verify Account process is well...</td>
</tr>
</tbody>
</table>

### Monitored Values

This section indicates which values you want returned from WebSphere Business Monitor after the process has been monitored.

<table>
<thead>
<tr>
<th>Process Element</th>
<th>Processing Time</th>
<th>Processing Cost</th>
<th>Startup Cost</th>
<th>Revenue</th>
<th>% Per Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess Risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Assessment?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Determine Applicant Eligibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get Customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need Credit Report?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set Credit History</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verify Account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Transform for Development (BPEL)
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Business Analyst Bob has captured, analyzed and verified the business operational requirements.

Software Architect Al is ready to begin architecting a services solution to realize the business requirements in a manner that addresses the IT concerns.

Al must look across a number of possibly complex processes with overlapping roles that may need to be significantly refactored for an effective, maintainable services solution. Al must also deal with IT concerns such as availability, distribution, integrity, security and persistence as well as the nonfunctional characteristics of an acceptable solution.

Al has chosen SOA as an architectural style for developing a solution that he thinks will meet the business and IT functional and non-functional requirements.

To ensure conformity to the chosen architecture, Al generates the initial solution artifacts to be used by development.
Review Requirements

- Al views the business process as a service collaboration
- The service collaboration indicates:
  - What is being accomplished – Verify Account
  - What requirements it fulfills
  - Who participates to get it done
  - What the roles are responsible for
  - The rules for how the roles interact
  - Constraints to determine success
- Al will use this service collaboration to identify necessary services and their capabilities
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  - The rules for how the roles interact
  - Constraints to determine success
- Al will use this service collaboration to identify necessary services and their capabilities.
Specify Services

- AI now completes the service specification details
  - What Interfaces are provided and required?
  - What Operations are in the Interfaces?
  - What are the protocols for using the capabilities defined by the operations?
- In this case, all the service specifications are simple interfaces
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Implement Solution

Architect Al has completed a services design model that fulfills the business requirements and generated the initial solution artifacts using UML to Web Services transforms.

Developer Diedrie now must complete the solution by assembling the parts, implementing the incomplete components, deploying the solution and testing to make sure it works.

Diedrie will start by reviewing the solution architecture using platform specific programming tools. She will then implement any service method that were not generated from the model.

Some operations are manual. For these Diedrie will work with a UI designer to develop the required user interface.

Diedrie will also need to implement the persistence mechanisms to allow service implementations to access the persistent data sources.

Finally she will deploy and test the completed application in a test environment before making it ready for system test and then production deployment.
Import from WebSphere Modeler
Tools for Development

- Human Tasks Tools
- Business Process Tools
- Business Rules Tools

...and more
Create Business Rule Template and Rules

Rule Template

Rule Template Instances

Runtime representation with parameters

Rule Template

Parameters

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Constraint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>param1</td>
<td>int</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>param2</td>
<td>int</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>param3</td>
<td>string</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

If

- Input.creditScore > param1
- Input.creditScore < param2

Then

Output.creditRiskAssessment = param3
Refine Business Objects

Business Objects Editor – only basic grasp of XML skills required

XML Schema Editor – requires knowledge of XML schema

Easy to use Business Object Editor is available in WID

A Typical XML Schema editor
Component Assembly
Standardized Service Invocation

If Approved then
Send letter offering gold
If NOT Approved
Send letter offering Credit counseling service
Unit Testing
Test a Component and examine the outputs

1. Enter input data and start the test
2. Data entry with parameter validation
3. Error markers
4. Maximize button for easier data entry
5. Multi-line data entry
Business User Interface Wizard
**Generates three UI styles and accepts several options**

- UI Wizard provides several code generation options
  - Support logo image, css style sheet, client location
  - UI as Form, Portlet, JSP

- Generated client can be customized
  - Example below shows the Java ServerFaces client and the source code that can be customized
Sample Human UI (JSF, generated from WID)

<table>
<thead>
<tr>
<th>Field</th>
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WebSphere Process Server Highlights

• Enables simple and flexible execution of standards-based business process solutions in an SOA
• Orchestrates a business’ assets – people, processes and information services – to form highly optimized and effective processes in a single SOA environment
  – Robust process automation, advanced human workflow, business rules, system-to-system and B2B capabilities on a common SOA platform
• Inherits the robust capabilities and qualities of service provided by WebSphere Application Server
• Built on top of an open standards based ESB
  – Provides a flexible connectivity infrastructure for integrating applications, data and services
• Modify processes in real-time
  – Plug-and-play capabilities while system is running
  – Ability to change business rules on the fly
  – Extend human task activities with ad hoc tasks
What is Key Performance Indicator (KPI)

\[
\text{Percent Accounts Opened} = \frac{\text{Total Applications Approved}}{\text{Total Applications Processed}} \times 100
\]

- **KPI**
  - Percent Accounts Opened
  - Total Applications Approved
  - Total Applications Processed

- **Metrics**

- **Counters**
  - Application Approved Counter
  - Application Processed Counter

- **Triggers**
  - When the "approval" step is complete
  - When the entire process instance is complete

*Counters* will increment their values when triggered, and provide a source of data for our metrics.
Create Monitor Models / KPIs

- Create monitor models
- Implement Metric, KPIs based on business data
- Implement Scalable Vector Graphic (SVG) annotator to SVG diagrams

Average Sales broken out by month. Drill down to view by country

Graphical view of key performance indicators
WebSphere Business Monitor at a glance

Know the state of your business via

Scorecards
Key Performance Indicators for business units

Take action via
Collaboration
Work with teams to resolve situations

Take more action via
Business Alerts
Notification of situations that require response

Evaluate data via
Reports & Analyses
Understanding trends by combining real-time performance and historical information
Demo

Deploy process models

Revise process models based on simulations

WebSphere Business Modeler

WebSphere Integration Developer

Monitor KPIs and process activities in real time

Export actual monitoring results to Modeler

WebSphere Process Server

WebSphere Business Monitor

WebSphere Business Monitor
Developing Business Process Management Solution with SOA

Business Analyst (Analyze/design bus. process)
- Create as-is workflow
- Perform simulation
- Enhance as-is to future workflow
- Perform simulation and review result
- Export to BPEL

IT Developer (Develop business processes)
- Import BPEL
- Add details to human tasks
- Add details to business rules
- Link tasks to services (Service, EJB, etc)
- Generate UI
- Create KPI for monitoring
- Testing
- Deployment to Process Server and Monitoring Server

User/ Customer (Executes business processes)
- Execute business processes

User Manager (Manages business processes)
- Monitor business processes

Useful Information
1. IBM Smart SOA Insight White Papers
2. Business Process Management Powered By Smart SOA™
   http://www-01.ibm.com/software/info/bpm/
3. IBM SOA Portal
4. SOA and WebServices Technical Papers
   http://www.ibm.com/developerworks/webservices
Architecture for Business Process Management with SOA
QUESTIONS
THANK YOU