WebSphere Process Integration Overview
Service Oriented Architecture and Process Integration
On Demand Business – The “Why”

An on demand business is an enterprise whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with speed to any customer demand, market opportunity or external threat.
Service Oriented Architecture is Key

The flexibility to treat elements of business processes and the underlying IT infrastructure as secure, standardized components (services) that can be reused and combined to address changing business priorities.

Services are the building blocks

- Packaging business functions from new and existing applications in a simple and standardized way creates services that are available for use
- Services can be reused and combined to deploy composite applications to address new opportunities
- Increasing use of “Web” services based on open standards complements existing services technology
Process Integration is a key layer of an SOA

Service Oriented Architecture is based on a 3-layer model of “components”, “services” and “processes”
As an example of this …

**Business Process**
- may be long running
- multiple valid process states
- alternative workflows for non-normal conds and/or compensation for exception management

**Business Transaction**
- short term, non-interactive
- one change of business state or STP
- consumes one or more function service
- targeted level of service reuse
- loose coupling very important
- may require compensating transactions

**Function Service**
- collaborations to implement a single FS
- collaborating apps encapsulated via FS(s)
WebSphere Process Integration
IBM WebSphere Integration Reference Architecture

- Development Services
- Business Performance Management Services
  - Interaction Services
  - Process Services
  - Information Services
- Connectivity Services
  - Partner Services
  - Business Application Services
  - Access Services
- Infrastructure Management Services
WebSphere Process Integration Capability

Development Services

Business Performance Management Services

Interaction Services
Process Services
Information Services

Connectivity Services

Partner Services
Business Application Services
Access Services

Infrastructure Management Services
Process Integration

Optimize and integrate business processes to keep them in line with strategic goals

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Benefits from WebSphere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to streamline business processes, meet regulations, at low cost.</td>
<td>Model, simulate and optimize business processes</td>
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<tr>
<td>Need to integrate people and applications in the business process</td>
<td>Choreograph process activities across the organization</td>
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<tr>
<td>Unable to monitor, control &amp; continuously improve business operations</td>
<td>Monitor and manage process performance</td>
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Process Modeling and Simulation

Process Automation

Process Management

WebSphere Business Integration Modeler

WebSphere Business Integration Server Foundation

WebSphere Business Integration Server
WebSphere Process Services

- **Choreography Services**
  - Flow may be determined by externalized business rules
  - Rules can be separately changed

- **Business Transaction Services**
  - Compensating transactions

- **Process State Services**
  - Long duration activities

- **Staff Services**
  - People assignments determined by business rules
  - People in support of business process
Scenario: eXtendBank Loan Application
eXtendBank – The OLD Loan Application System

1. Fill in Loan Application at Loan Dept
2. Loan Officer enters loan information (3270 emulator)
3. Requests FAX Credit Report
4. Makes decision as to whether this Loan application needs approval.
5. Makes a decision on Loan Application
6. Loan Officer reserves Funds
7. Sends email to Assess Business Risk – (Government Watch List)
8. Notifies customer
Challenges with the OLD System

Takes **too long** to process loan applications

**Paper-based human interaction** in loan processing is error prone

Many **different technologies** involved (legacy, app servers, email apps, etc)

Integrating **people, processes, and information** is difficult

Manual **work is needed to “undo”** work performed processes fail

**Difficult to react** to business rule changes
Building NEW QuickLoan Process with WebSphere

WebSphere Studio Application Developer Integration Edition V5.1
Available Today

WBI Server Foundation v5.1
Available Today

WBI Modeler v5.1
Available Today

WBI Monitor v6
Available late 2H 2005
eXtendBank: The NEW QuickLoan Business Process

1. Start
2. Create Loan App
3. Credit Check
4. Loan Officer Approval
   - Pre-Approved?
     - YES: Reserve Funds
     - NO: Too Risky?
6. Assess Loan Risk
   - Too Risky?
     - NO: End
     - YES: Send Risk Rejection Email
7. Send Rejection Email
   - End
8. Send Confirmation Email
   - Next
Benefits of the NEW System

**QuickLoan Automated Business Process** reduces time to process loan applications:
- Human activities can be replaced with automated services
- Tasks can be performed in parallel

**People, Processes, and Information** easily integrated
- CICS, J2EE Applications, partners, email systems, etc.

**Failures during a process** can be easily “undone”

**Easy to react quickly** to business rule changes

**Services Oriented Architecture** allows plug-and-play capabilities
- QuickLoan activities can be easily integrated into other business processes
- The QuickLoan Business Process can be integrated into other business processes
Product Introduction
WebSphere Business Integration Modeler

Modeling the Processes

Contextual Navigator

Swimlane Viewer

Task Details

"Drag & Drop" Interface

WebSphere Business Integration Modeler
IBM WebSphere Business Integration Server Foundation and IBM WebSphere Studio Application Developer Integration Edition

✓ Service oriented architecture
✓ BPEL4WS process choreography
✓ Human workflow support
✓ Business rules support
✓ Application adapters
✓ Programming model extensions
✓ Support for WebSphere Business Integration Modeler and Monitor (2H05)
✓ Common Event Infrastructure
✓ J2EE Application Server
✓ Integrated J2EE development environment
WebSphere Business Integration Server Foundation

• **Choreography Services**
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Business Transaction: Compensation – “Undo”

- Forward Logging

- Backward Compensation
# WebSphere Business Integration Adapters

## Adapters

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<tr>
<th>Application</th>
<th>Technology / Data Handlers</th>
<th>Mainframe</th>
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<td>Ariba Buyer</td>
<td>Adapter for e-mail</td>
<td>CICS</td>
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<td>Clarify CRM</td>
<td>COM</td>
<td>IMS Transaction</td>
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<td>JText</td>
<td>DB2 Databases</td>
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<td>Natural</td>
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<td>Fulfillment Management</td>
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WebSphere Business Integration Monitor
Supervise end-to-end business process execution

Monitor and manage business process status and execution

Track process in near real-time across value chain

Display information on custom dashboards

Alert the business to react to out-of-line conditions
Summary
Summary

- Responsiveness is a high priority for IT and business

- Service Oriented Architecture (SOA) is key for process integration and On-Demand Business

- WebSphere provides a integration platform for building, deploying, and choreographing services to form composite applications within a service oriented architecture.
Thank You