



WebSphere Software

# WebSphere Business Process Management

## Technical Overview

*SOA on your terms and our expertise*

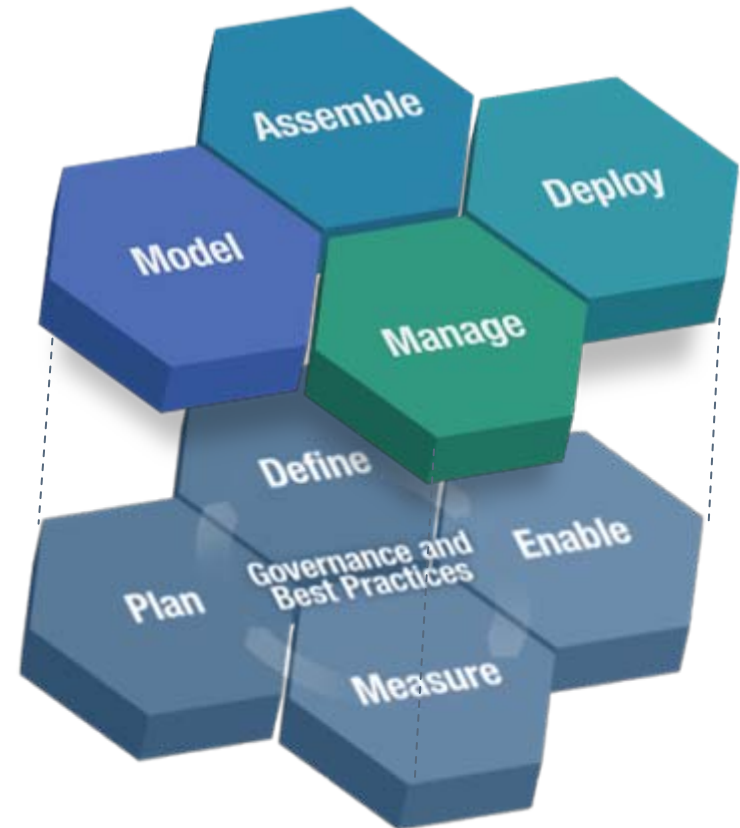
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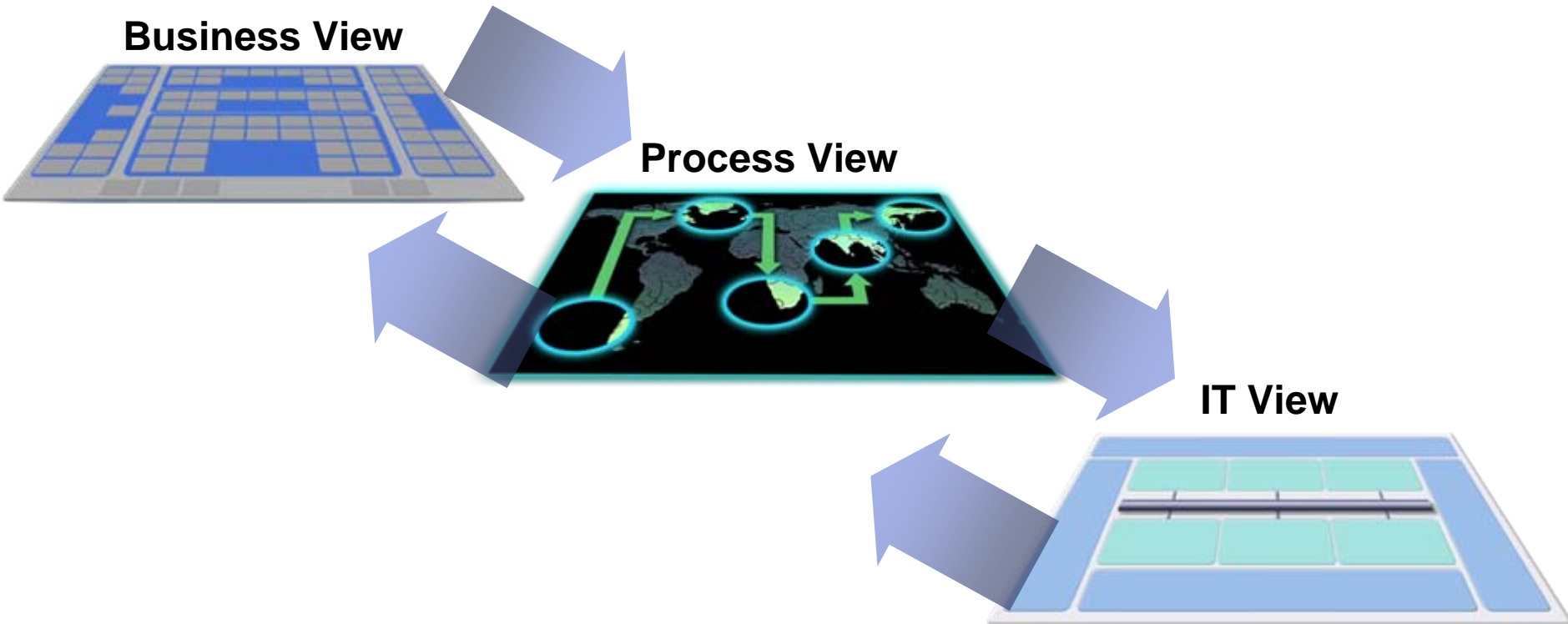
# Agenda

- **IBM SOA Foundation**
- **Model**
  - WebSphere Business Modeler
- **Assemble / Deploy**
  - WebSphere Process Server
  - WebSphere Integration Developer
- **Manage**
  - WebSphere Business Monitor
- **Govern**
  - WebSphere Service Registry & Repository



# BPM – Holistic Approach to Innovation and Optimization

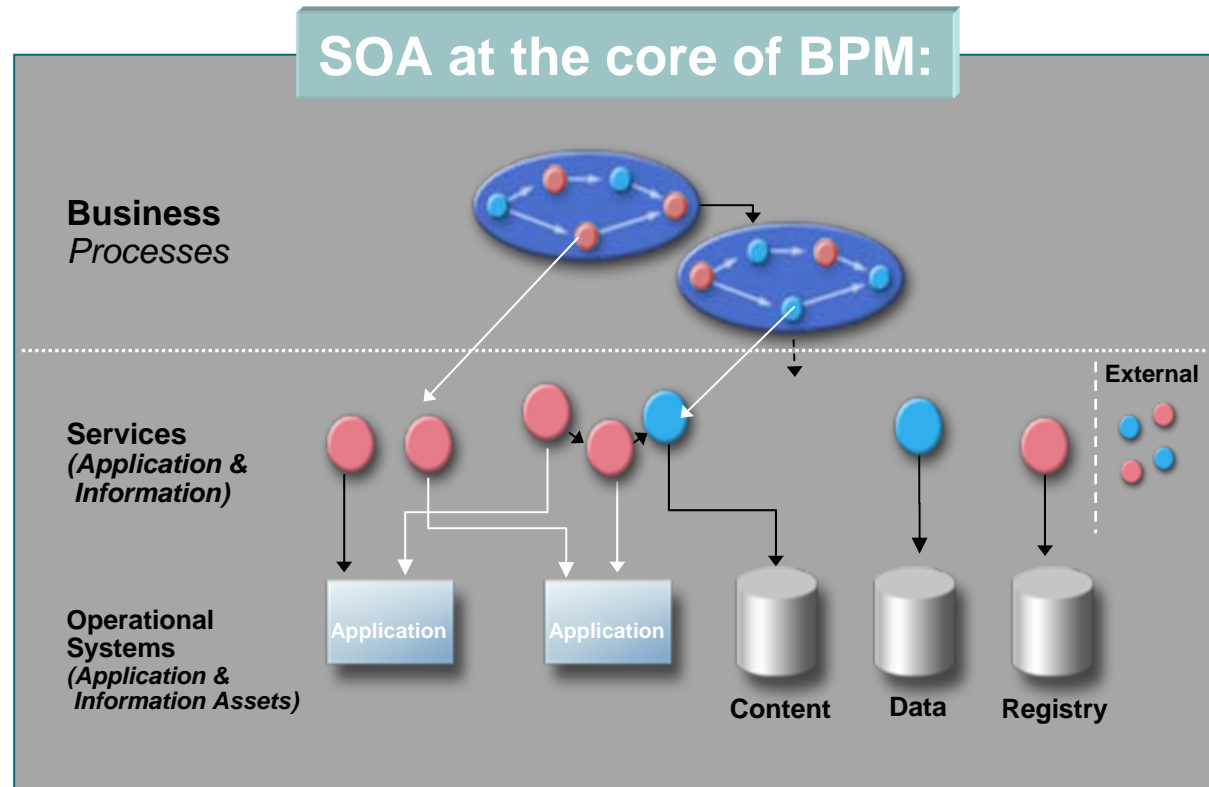
*Globally aligning your Strategy with Business and IT Execution*



# Translate vision into action with BPM enabled by SOA

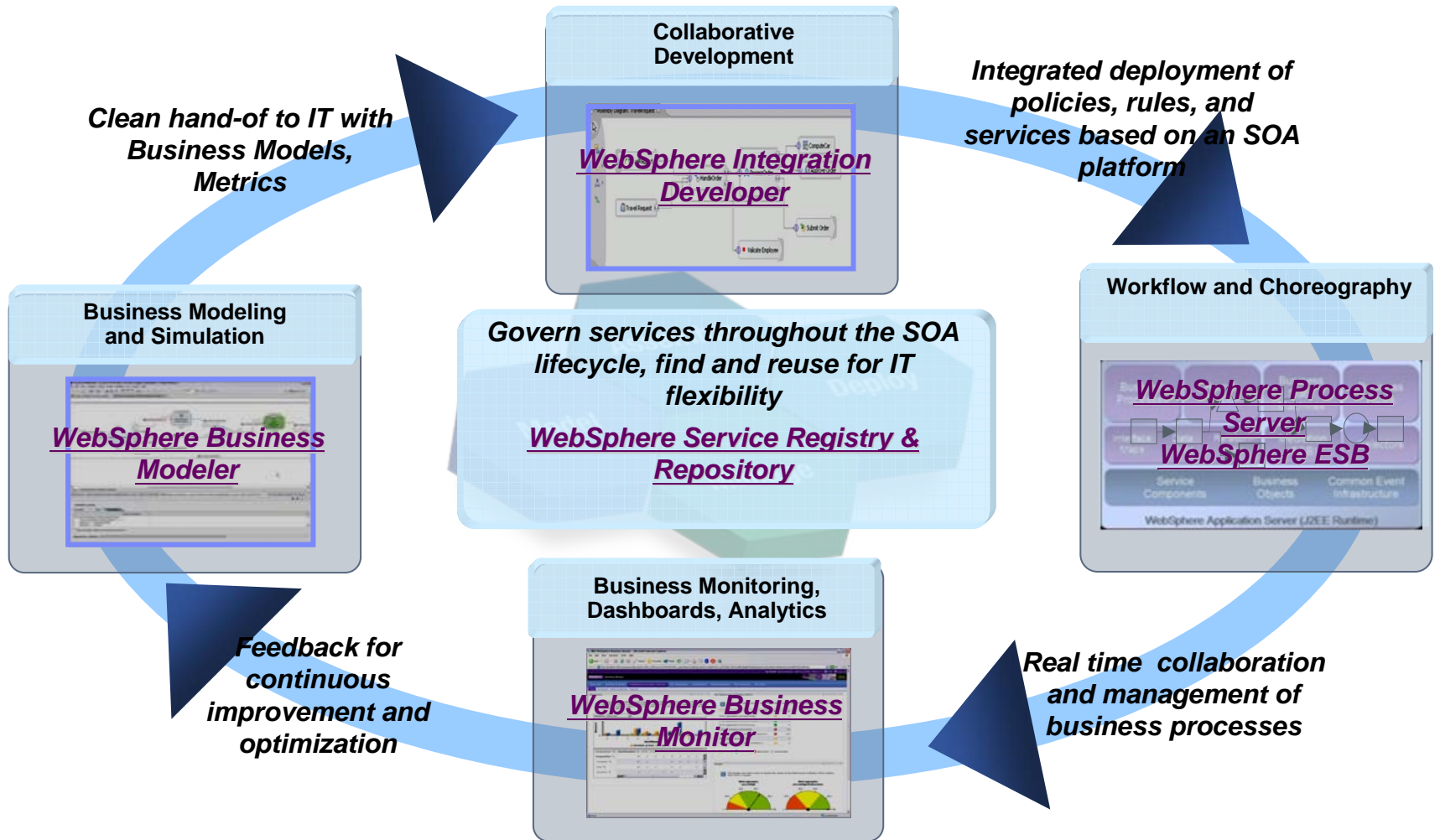
SOA improves how you design, manage, and optimize your business processes by enabling:

- Solution Building Efficiency
- Reuse of existing assets
- Flexibility in change



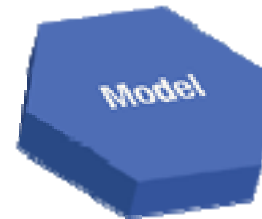
# Business Process Management enabled by SOA

*WebSphere Process Server is the core of BPM*



# Agenda

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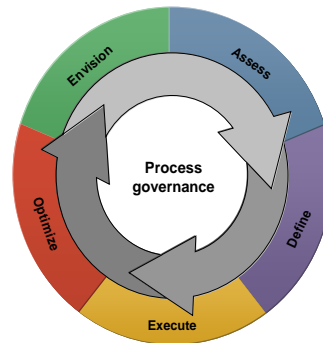
# Why Customers do Business Process Modeling

## Documentation & Compliance



- Existing: Sarbanes Oxley in US; WEEE and RoHS in EU
- Forthcoming: Carbon emissions

## Redesign & Optimization



- Increase efficiencies
- Reduce costs/waste/errors
- Six Sigma – Lean initiatives
- Increase visibility into end-to-end processes

## Execution



- Offer new products & services
- Compete effectively in global economy
- React quickly to unexpected situations



# Document & analyze processes for insight and understanding

## Designed for business users

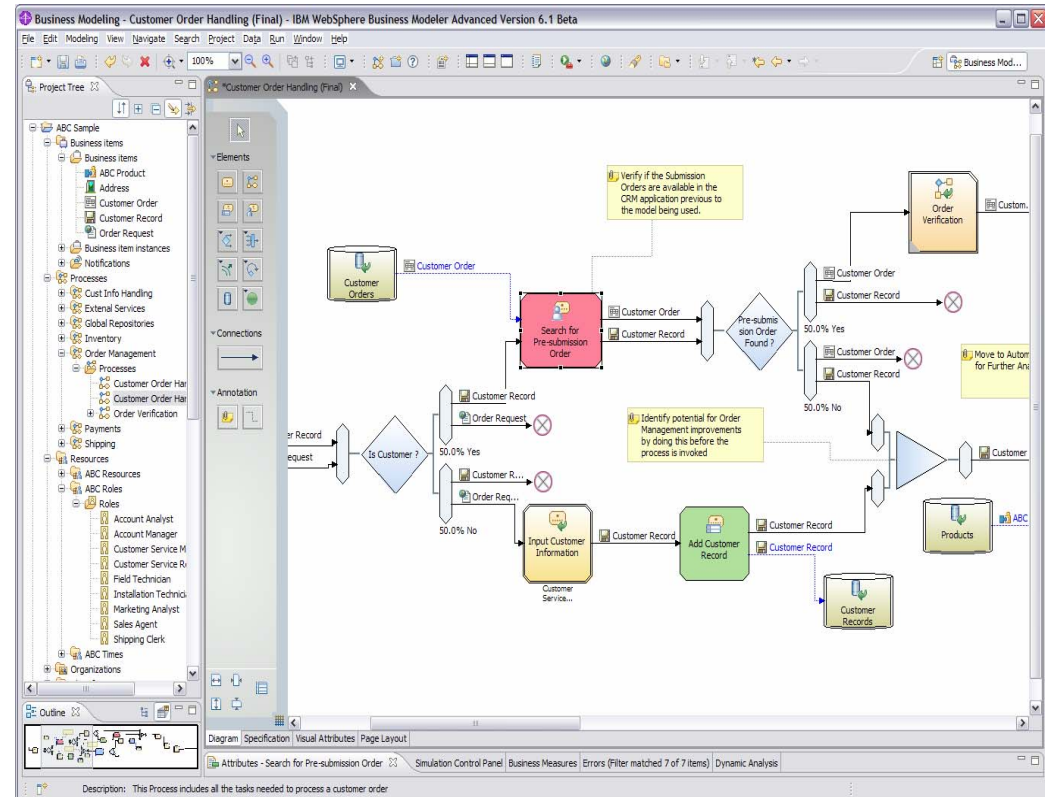
- Import models directly from Visio
- Hundreds of process templates available (IFW, IAA)
- Optimize all aspects of your business – set KPI's and metrics
- Collaborate with subject matter experts through WebSphere Business Modeler Publishing Server

## Model, simulate, and analyze

- Enhanced analysis and simulation capabilities. Fully understand impacts before deploying.

## Clean hand-off to I/T

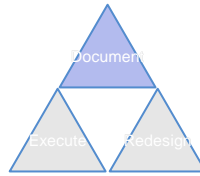
- Rapid and accurate deployment of your solutions
- Business modeling is the starting point for IT deployment (WebSphere Integration Developer)



**WebSphere Business Modeler 6.1**

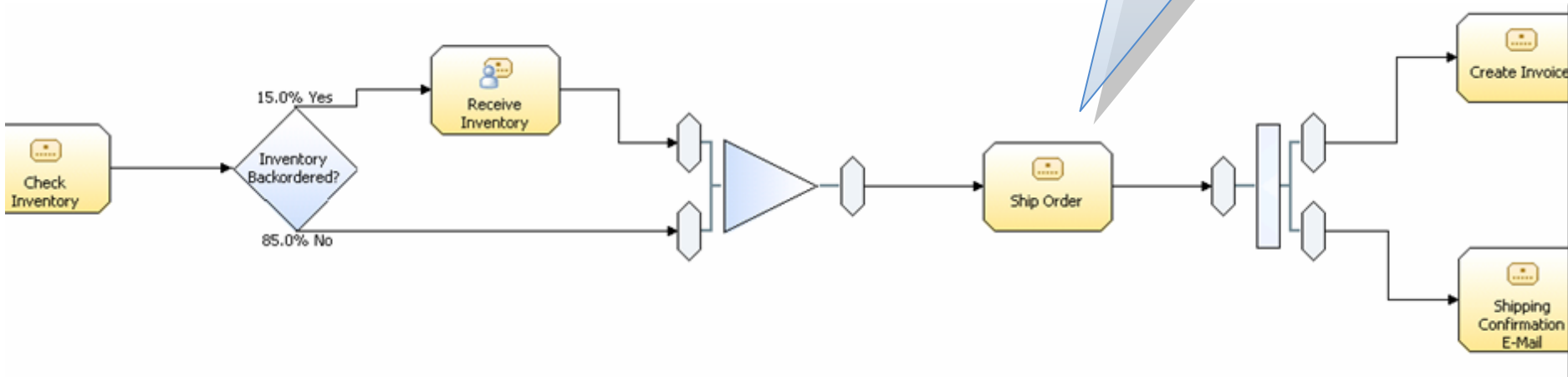


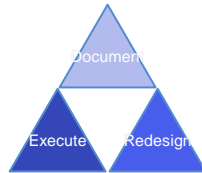
# Document Process Flow



- Simple drag-and-drop interface
- Process diagrams are easy to read and interpret
- Capture process activities and decision logic
  - Use existing process collateral, interview involved parties and key stakeholders

Common understanding of processes throughout the organization, compliance is well documented





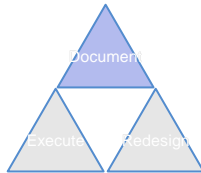
# Add Detailed Process Information

- Through additional investigations and interviews, begin to identify detailed attributes

- ✓ Business Items
- ✓ Roles
- ✓ Resources
- ✓ Durations
- ✓ Costs
- ✓ Descriptions
- ✓ Classifiers
- ✓ Organizations

A screenshot of the IBM Business Process Manager interface. At the top, a diagram shows a task named 'Shipping Confirmation E-Mail' highlighted with a red box. Below the diagram, a navigation bar contains tabs for 'Attributes - Shipping Confirmation E-Mail', 'Business Measures', and 'Errors (Filter matched 0 of 0 items)'. A red box highlights the 'Attributes' tab, which is further divided into sub-tabs: 'General', 'Cost and Revenue', 'Duration', 'Inputs', 'Outputs', 'Input Logic', 'Output Logic', 'Resources', 'Organizations', 'Classifiers', 'Advanced Input Logic', and 'Advanced Output Logic'. The 'General' sub-tab is selected, showing a form with fields for 'Name' (Shipping Confirmation E-Mail) and 'Description' (Send e-mail confirming order shipment to customer.).

# View the Model in "Three Dimensions"

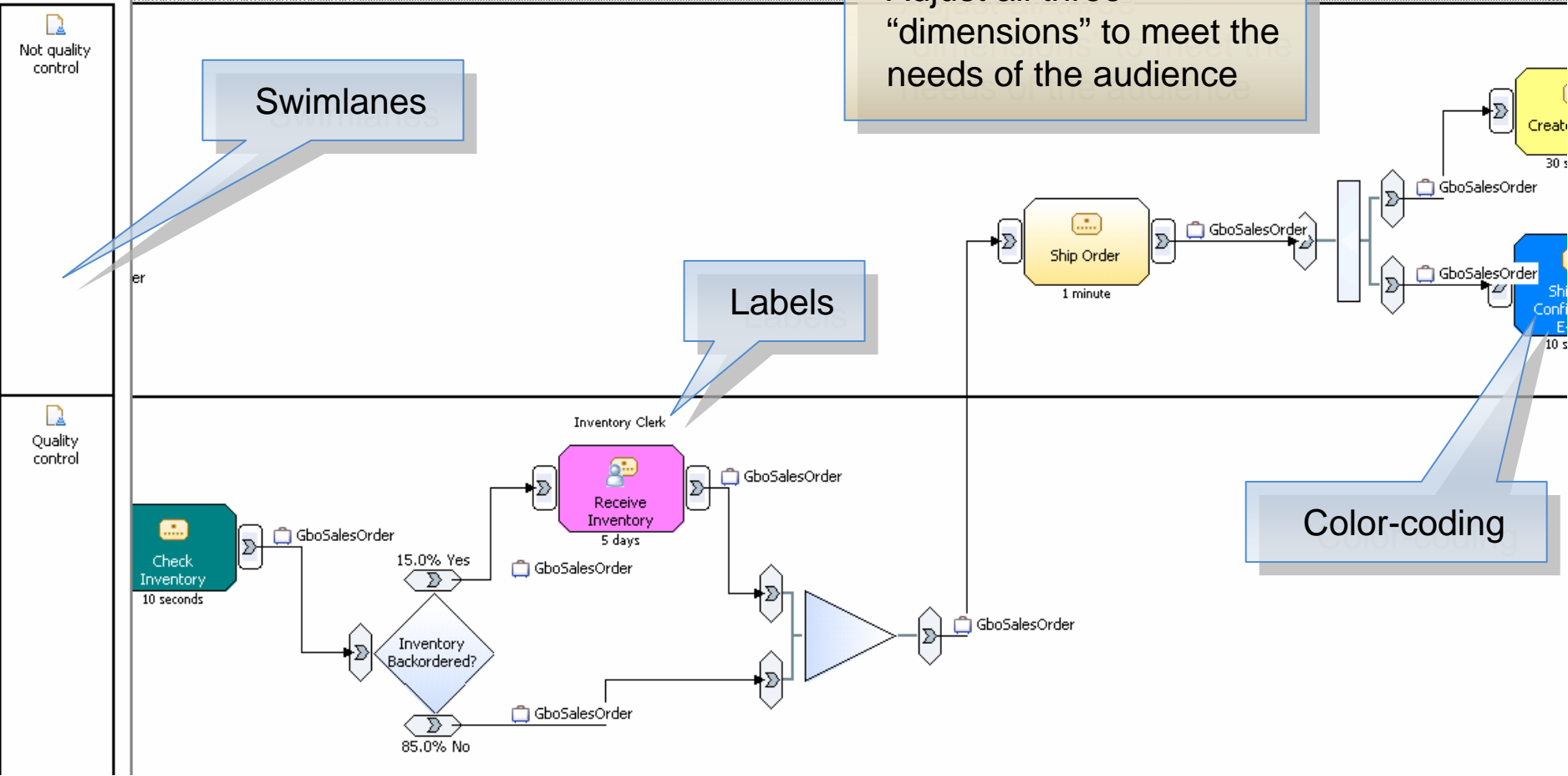


Adjust all three "dimensions" to meet the needs of the audience

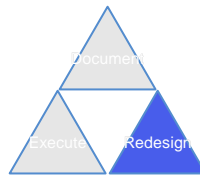
Swimlanes

Labels

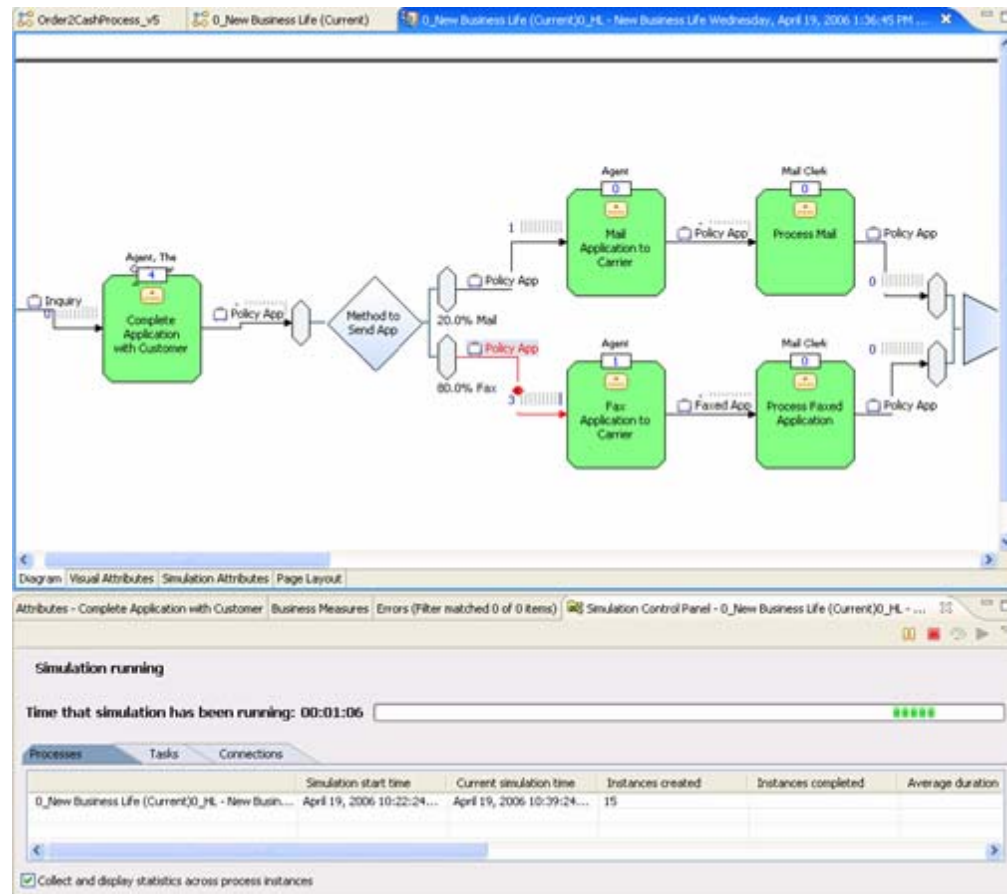
Color-coding

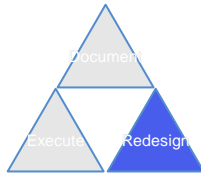


# Process Simulation



- Based on metrics provided by subject matter experts
- Powerful simulation engine allows for detailed, statistically relevant investigations
- Specify input volumes, time constraints
- Visualize simulated behavior
- Improve understanding of process behavior





# Process Analysis

- Analyze simulation results or static process models
- Identify root cause of problems in current state processes
- Perform what-if analysis and calculate ROI on potential future states
- Holistic business view of processes, including costs, cycle time, etc.
- Investigate various utilization patterns for people and other resources

Activity Name	Average Elapsed Duration	Average Delay Duration	Average Throughput
0_HL - New Business Life	23 hours 30 minutes 13.75 seconds	1 day 6 hours 16.875 seconds	0.04 work item / hour
Assemble Policy	5 hours 4 minutes 13.5 seconds	4 hours 59 minutes 13.5 seconds	0.20 work item / hour
Complete Application with Customer	8 minutes 23.625 seconds	7 minutes 23.625 seconds	7.15 work items / hour
Fax Application to Carrier	3 minutes 36.27 seconds	1 minute 36.27 seconds	16.65 work items / hour
File Poly	6 hours 50 minutes 47.625 seconds	6 hours 47 minutes 47.625 seconds	0.15 work item / hour
Fork	0 seconds	0 seconds	undefined
Fork:2	0 seconds	0 seconds	undefined
Join	0 seconds	0 seconds	undefined
Mail Application to Carrier	3 minutes 54.666 seconds	54.666 seconds	15.34 work item / hour
Mail to Agent	6 hours 49 minutes 4.875 seconds	6 hours 47 minutes 4.875 seconds	0.15 work item / hour
Merge	0 seconds	0 seconds	undefined
Method to Send App	0 seconds	0 seconds	undefined
Photocopy Application	5 minutes 39.75 seconds	3 minutes 39.75 seconds	10.60 work items / hour
Pickup & Sort Policies	9 hours 39 minutes 58.875 seconds	9 hours 34 minutes 58.875 seconds	0.10 work item / hour
Print Policy	1 hour 15 minutes 29.925 seconds	1 hour 14 minutes 29.925 seconds	0.79 work item / hour
Process Faxed Application	14 minutes 28.15 seconds	12 minutes 28.15 seconds	4.15 work items / hour
Process Mail	15 minutes 24 seconds	10 minutes 24 seconds	3.90 work items / hour
Route Application	13 minutes 2.25 seconds	12 minutes 2.25 seconds	4.60 work items / hour
Underwrite	1 second	0 seconds	3,600.00 work items / hour

**Current State – Times & Costs**  
Case Analysis with Unlimited Resources

Probability	Average Process Time (min:sec)	Average Cost	Case	Case Description	Probability	Average Process Time (min:sec)	Average Cost
32.91%	10:11	\$5.40	1	Paper & Mail, Complex	35.57%	8:16	\$4.38
32.10%	3:11	\$1.67	2	Paper & Mail, Simple	33.03%	1:51	\$0.96
15.01%	14:11	\$7.56	3	Printed Phone Calls (Complex)	13.51%	7:51	\$4.16
5.20%	3:21	\$1.77	4	Paper & Mail, Work not Complete, Simple	4.50%	1:54	\$0.96
5.20%	11:11	\$5.93	5	Email, Complex	3.93%	8:16	\$4.38
4.85%	4:11	\$2.20	6	Email, Simple	4.85%	1:51	\$0.96
3.58%	10:21	\$5.50	7	Paper & Mail, Work not Complete, Complex	3.70%	8:19	\$4.38
0.81%	11:21	\$8.03	8	Email, Work not Complete, Complex	0.89%	8:19	\$4.38
0.81%	4:21	\$2.30	9	Email, Work not Complete, Simple	0.23%	1:54	\$0.96

**Future State – Times & Costs**  
Case Analysis with Unlimited Resources

**Simulation Results – Weighted Average Analysis**

**Current Process Results**

Resources	Items per hour	Elapsed Duration	Average Cost
Unlimited Resources	7.55	7.56	\$4.20
Current Resources	3.41	17.33	\$4.02

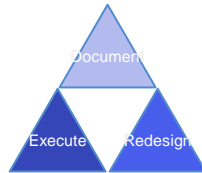
**Future Process Results**

Resources	Items per hour	Elapsed Duration	Average Cost
Unlimited Resources	10.95	5:28	\$2.89
Current Resources	.80	1:15:19	\$2.59

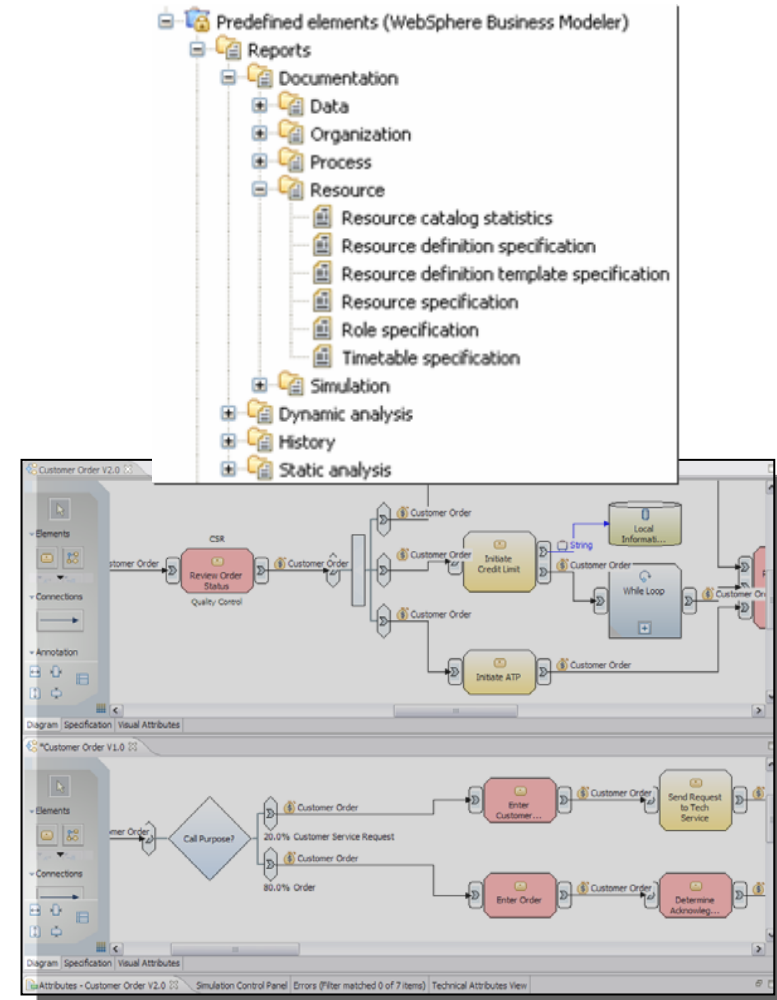
Re-allocating resources balance costs with productivity

Resources	Items per hour	Elapsed Duration	Average Cost
Balanced	2.45	24:28	\$2.75

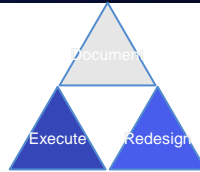
# Reports



- Extract useful information from models in an easily consumable format
  - Microsoft® Word (.docx)
  - PDF
- Choose from dozens of pre-defined reports, or build custom reports
- Integration with Crystal Reports
- Visually compare process models

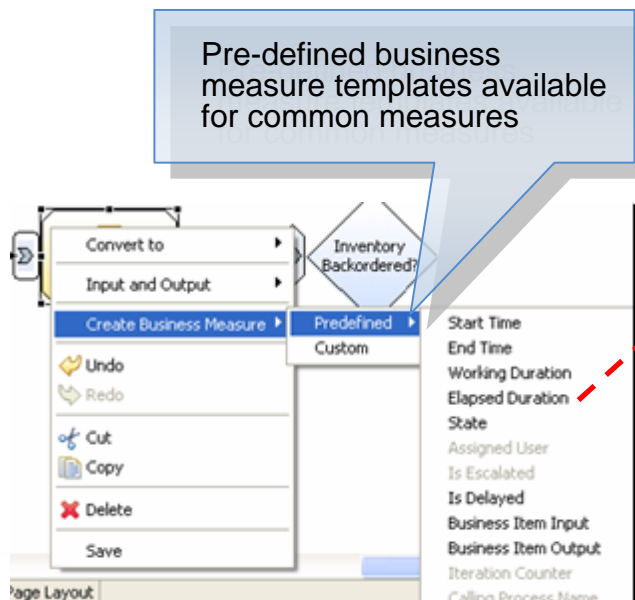






# Business Measures Definition

- Business users identify their Key Performance Indicators and other business measures, relate them to the process or individual process activities
- Information on what is to be measured is defined in Modeler, details on how to perform the measurements are defined in the Monitor Development Toolkit (plug-in to WebSphere Integration Developer or Rational Application Developer)
  - Modeler exports a skeleton Monitor Model (.mm) file



Optionally, you can create a business measure by applying a predefined template to a process element.

Template:

Process element:

Name:

Type:  KPI  Instance metric  Aggregate metric  Unspecified

Description:

Dashboards

Specify a default value and type

Type:

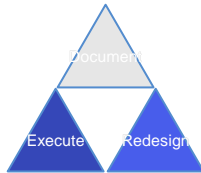
Default value: Days:  Hours:  Minutes:  Seconds:  Milliseconds:

Specify when to send an alert and the action to take as a result

For example, when this measure exceeds a certain value, an email may need to be sent.

Alert Description:

Add Remove



# Monitored Values Import

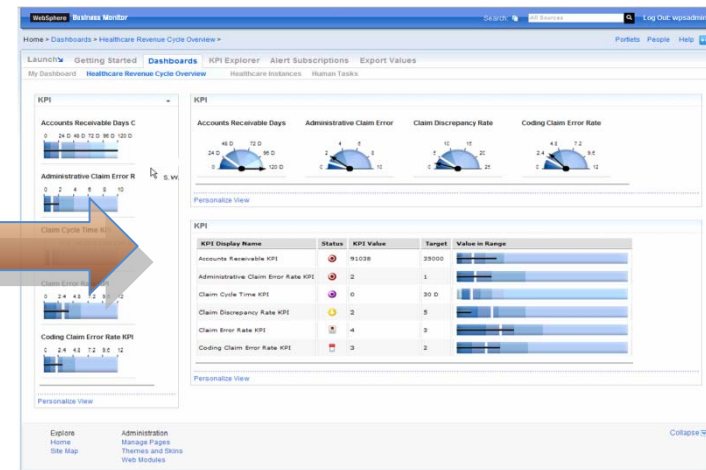
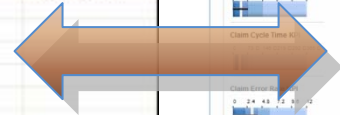
- Refine process models by feeding live monitored business data back into models
  - Update activity durations and costs, decision percentages
- Perform simulations with updated data to gain a more accurate understanding of the process
  - Modifications to the process may be suggested as a result of this further investigation and analysis

Business Performance Indicators Monitored Values

Monitored values

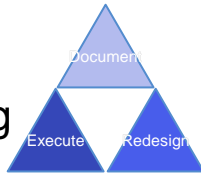
This section indicates which values you want returned from WebSphere Business Monitor after the process has been monitored.

Process Element	Processing Time	Processing Cost	Startup Cost	Revenue	% Per Branch
Billing Confirmation E-Mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check Credit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Check Inventory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Invoice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Order	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E-Mail Rejection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inventory Backordered?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Order2CashProcess_v5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rejected?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Require Approval?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ship Order	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shipping Confirmation E-Mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



# Web Portal – Publishing Server

- Share models with employees across multiple geographic locations without requiring them to have Modeler installed on their desktop
- Gain feedback on live processes implementations or proposed future states



**Project Tree**  
Navigate through a structured view of models and related elements

**Process Editor**  
Compose process models and edit other reusable elements

**Comments View**  
View and add comments relating to the selected process element

**Outline View**  
Navigate the open process model

**Attributes View**  
Access detailed information about the open process model

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# Integration in a SOA World

## *Critical Requirements Met by WebSphere Process Server*

### ***Common Data Model***

- All data is represented consistently
- **Standard:** SDO (Service Data Objects)

### ***Common Service Invocation Model***

- All components are represented consistently and invoked identically
- **Standard:** SCA (Service Component Architecture)

### ***Common Connectivity***

- Enterprise Service Bus
- **Standards:** WS-\*/Web Services standards

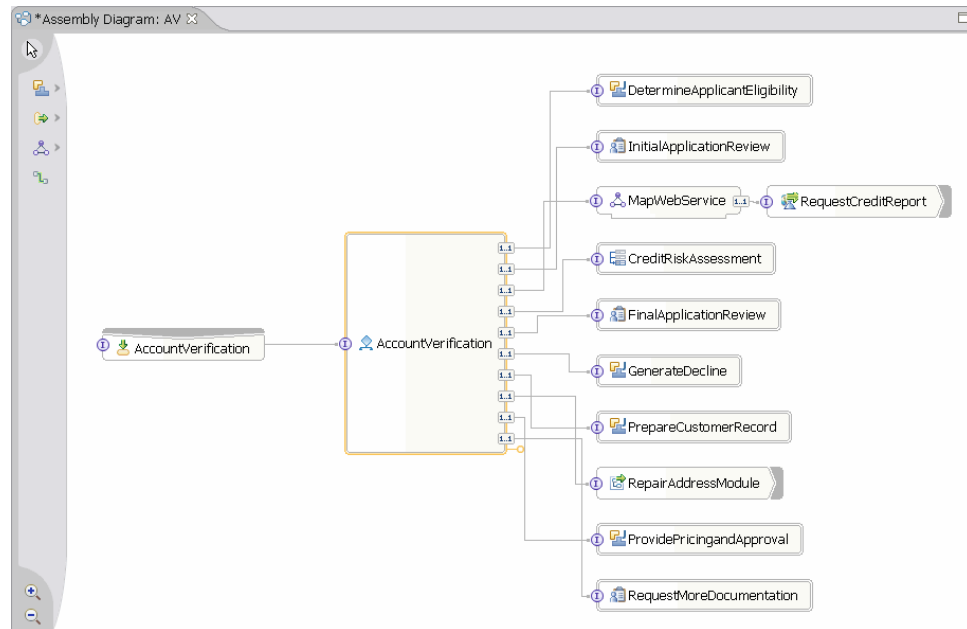
### ***Common Service Choreography***

- Components can be choreographed independently of their implementation
- Human tasks as services
- **Standard:** WS-BPEL (Business Process Execution Language)

# WebSphere Integration Developer

## *Service-oriented Integration Application Development*

- User-friendly Authoring Environment
- Component based Programming Model
  - Service Components & Modules
- Visual Editors minimize writing Code
  - Business Process
  - Human Task
  - State Machine
  - Business Rules ...
- Team-based development
- Full Test Environment
  - Including Visual Debugger for all components
- Service discovery including WebSphere Service Registry & Repository





# WebSphere Process Server

## *Comprehensive Business Flexibility*

- A Single Server Environment for
  - Business Processes
  - State Machines
  - Human Tasks
  - Business Rules
  - Integration of existing assets
- Reliable, scaleable, secure
  - Fully leverages the breadth and capability of IBM WebSphere Application Server ND
- Integrated ESB For Range And Reach
  - Provides seamless access to available assets
  - Adapters provide the service on-ramp for existing applications
- B2B Capabilities to interoperate with your extended partner network



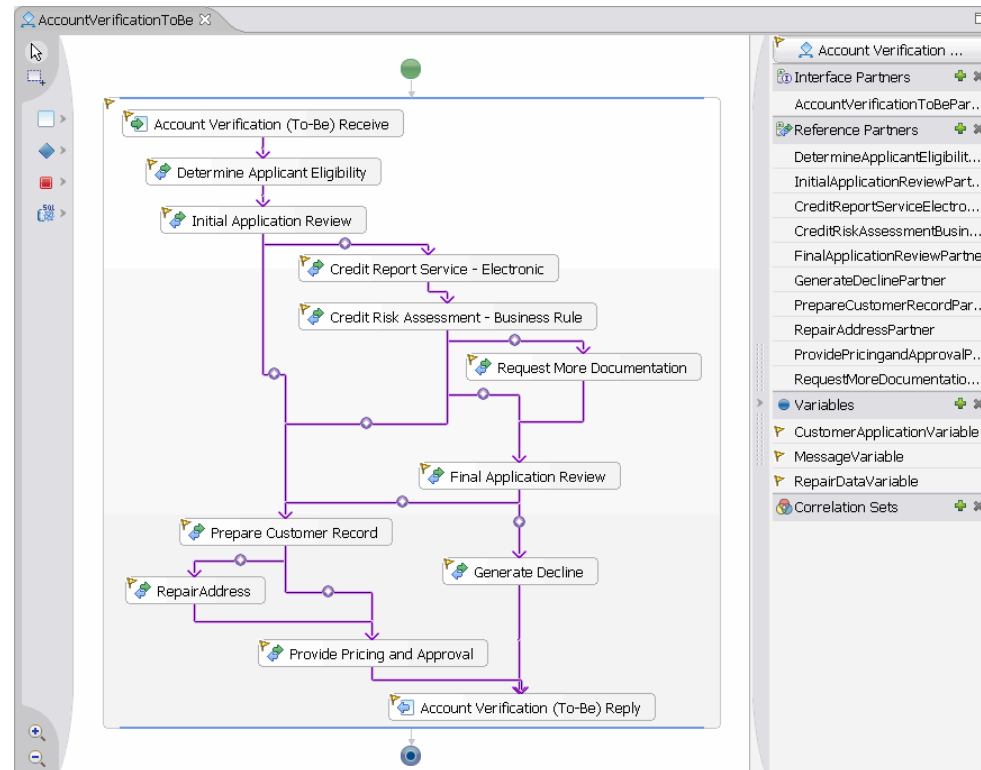
***"Once the up-front analysis and definition work are completed, the Business Integration infrastructure allows us to implement new business processes at a rate of one every few weeks for medium to complex processes."***

*EAI Project Manager, Electrabel*

# Comprehensive Support for Business Processes

## *Standards Based Business Process Support without Coding*

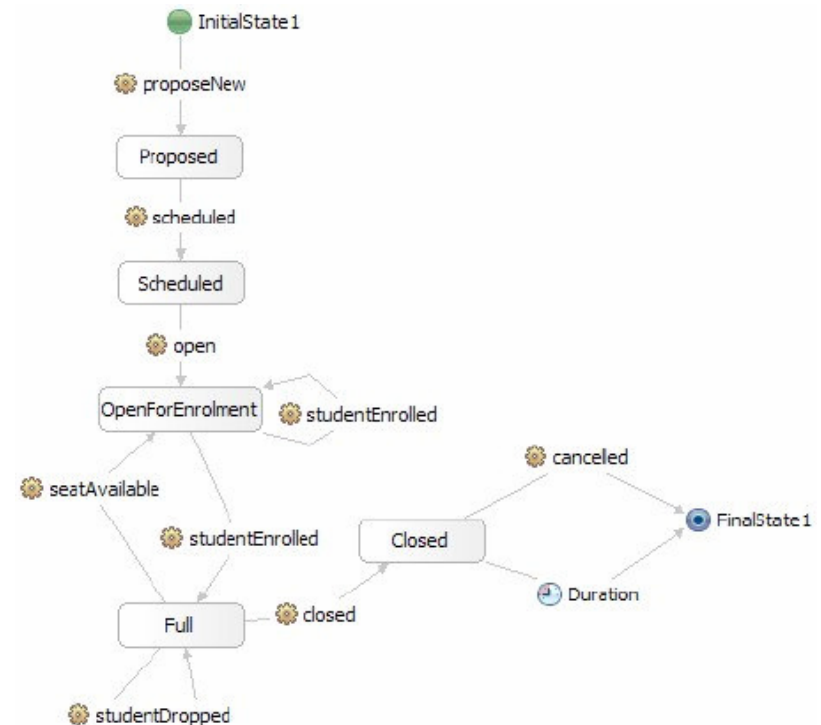
- Import process models from WebSphere Business Modeler
- Intuitive drag-and-drop tools
  - Visually define the sequence and flow of business processes
- Develop Executable Process
  - WS-BPEL with or without IBM Extensions
- Integrated fault handling
- Compensation support
  - Provide a logical “undo” capability



# Comprehensive Support for Event-based Scenarios

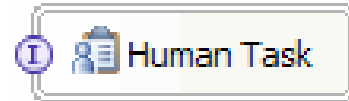
## *Business State Machines*

- “Sequential” Business Processes are not suitable for event-based scenarios
- Some business processes need to understand and react to many different events that can occur at any time
- State machines simplify design by focusing states & events
  - Events are handled differently depending on the current “state” of a process
  - Processes may need to revert to earlier states at any time
  - Reaching a point in time can change the process state without requiring an event



# Comprehensive Support for Human Workflow

- Human Workflow fully integrated with SOA Environments
  - Human tasks are treated just like any other service
  - Full flexibility to adapt business processes quickly to changing requirements
    - With a few mouse clicks, replace human tasks by unattended services, and vice versa
    - No Change to business process necessary
- Rich task assignment capabilities
  - Staff queries to assign the right task to the right person at the right time
  - Real-time access to staff / organization directories through LDAP
  - Ability for fully dynamic task assignment at runtime
    - Query Parameters from process variables
    - Historic information
- Multi-level escalation mechanisms
  - Time / priority based aging of tasks
  - Notification through e-mail and notification work items



# Flexible User Interface Support

## *Generate & Customize the user clients you need*

- Comprehensive User Interface Support for Human Tasks
  - BPC Explorer
  - WebSphere Portal Task List
  - Generate Custom Clients
  - Completely customized API Clients
  - Graphical Process Instance View
- Customizable business user interface support
  - Tasks allow to specify client settings that contain information used at runtime to properly render a task, depending on user role and client used

The image displays two overlapping browser windows. The top window is Microsoft Internet Explorer showing the IBM WebSphere Portal. The bottom window is Mozilla Firefox showing a custom 'Business User Client' interface for 'My Company.com'. The interface includes a navigation menu with options like HOME, Business Case, New, Status, My ToDo, Open, Claimed, and Logout. The main content area shows a 'Business Case' section with instructions and a 'My ToDo' section. A process flow diagram is visible on the right, showing a sequence of tasks and snippets: Invoke\_SBE\_Fault leads to Assign1, which then branches into fault1, fault2, and fault3. These faults lead to Snippet3, Snippet4, and Snippet5, which then lead to Assign3, Assign5, and Assign6. A 'ThrowYN' node leads to Case, Case, and Otherwise, which then lead to Throw, Snippet10, and Snippet9.

# Dynamic Processes for Flexibility And Responsiveness

- Business Rules & Decision Tables dynamically determine process flow
  - Expose process decision points as business parameters
    - e.g. Credit rating level based on net worth
  - Allow non-disruptive, real-time business change
    - e.g. New lending policies allow changing the credit rating criteria without redeploying the loan application process
  - Ensure consistency across the business
    - e.g. Every loan application process executes the same rule group
- Selectors dynamically determine which components are used
- Dynamically call sub-processes
  - WS-Addressing or by name

▼ Rules

Name	Rule2
Template	Template 1
Presentation	If the assets are greater than <u>2000000</u> and the liabilities are less than <u>500000</u> , then the rating is <u>A</u> .
Name	Rule1
Template	Template 1
Presentation	If the assets are greater than <u>2000000</u> and the liabilities are less than <u>1000000</u> , then the rating is <u>B</u> .

▼ Templates

Name	Template 1				
Presentation	If the assets are greater than <u>{0}</u> and the liabilities are less than <u>{1}</u> , then the rating is <u>{2}</u> .				
Parameters	Index	Name	Type	Constraint	
	{0}	var1	double	None	
	{1}	var2	double	None	
If	all of the following are true				
	<ul style="list-style-type: none"> <li>● info.assets &gt; var1</li> <li>● info.liabilities &lt; var2</li> </ul>				
Then	rating = var3				

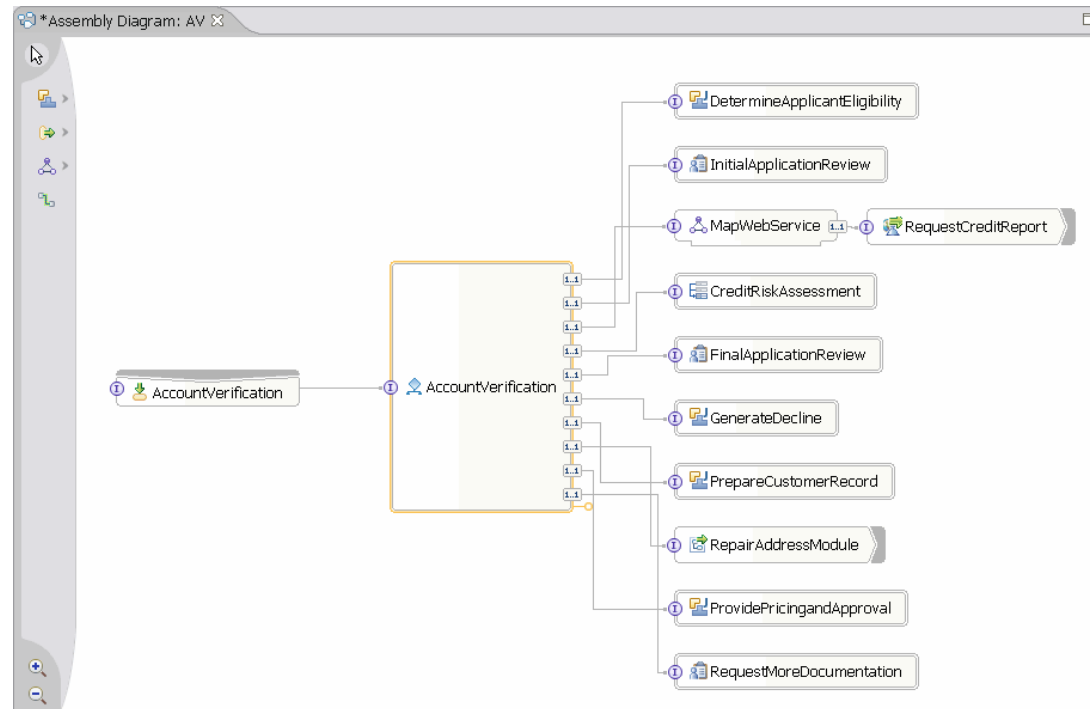
▼ Decision Table

info.assets	> 500000		<= 500000	
info.liabilities	< 10000	>= 10000	< 10000	>= 10000
rating	"A"	"B"	"C"	"D"



# Assembly With WebSphere Integration Developer

- Assemble Integration Applications from Service Components
  - An Assembly Editor for overall solution assembly
  - All the tools you need for building solution components (Editors for Business Processes, Business Rules....)
- Modular Development
  - Build modules for specific functionality
  - Link Modules through Imports / Exports
  - Update / Maintain Modules independently from each other
- Change Implementations without disrupting Module consumers
  - E.g. replace Human Task with Business Rule



# Test with Integration Test Client

## 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

**Component Invocation Trace**

**Module and Component Selection**

**General Properties**

- Configuration: Default Module Test
- Module: LoanApplicationModule
- Component: mainProcess
- Interface: mainProcessInterface
- Operation: applyOnline

**Detailed Properties**

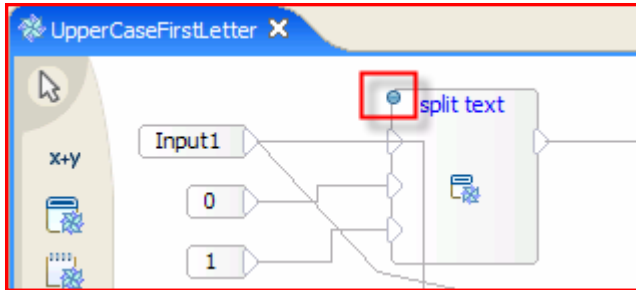
Initial request meters

Name	Type	Value
applicationInfor	ApplicationBO	✓
applicant	ApplicantBO	✓
name	string	✓ Paul Pacholski
email	string	✓
taxPaye	string	✓
loanamount	double	✓ \$10000.00

Initial request meters: \$10000.00 is not of type double

# Integrated Debuggers

## Visual Java Snippet

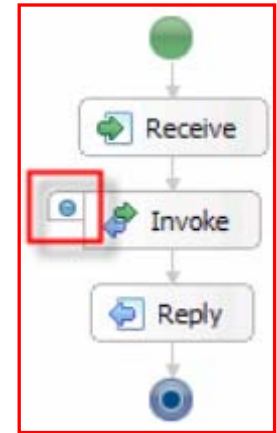


## Business Rule

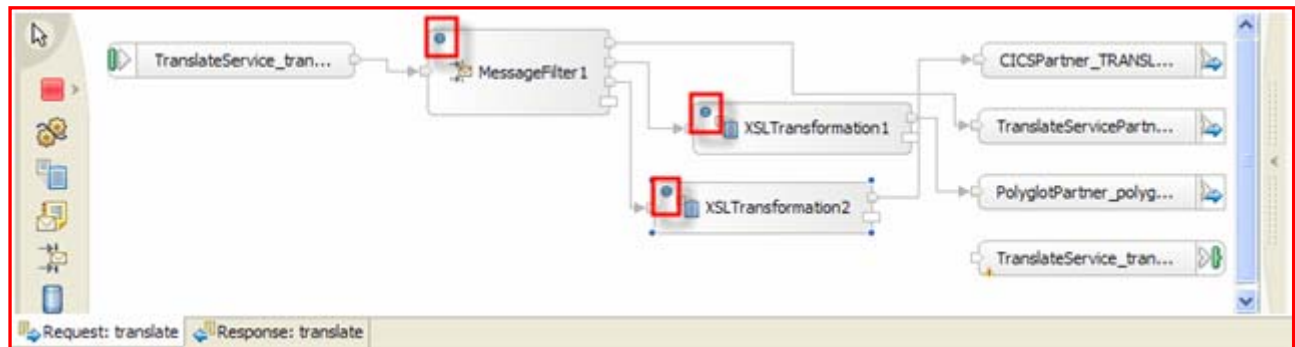
Decision Table

Conditions	output1	output1	output1
input1.creditScore > 500	> 300	> 300	>= 0
input1.requestAccountAmount > 50000	"REQ"	"REQ"	"REJ"
> 10000	"APP"	"REQ"	"REJ"
>= 0	"APP"	"APP"	"REQ"
Actions			

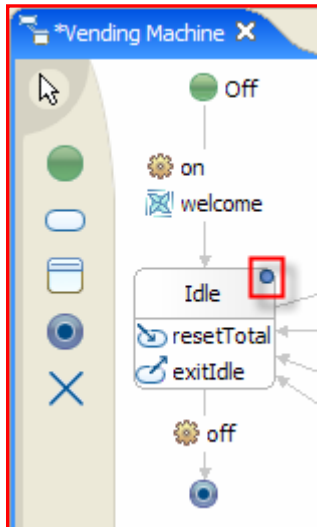
## Process



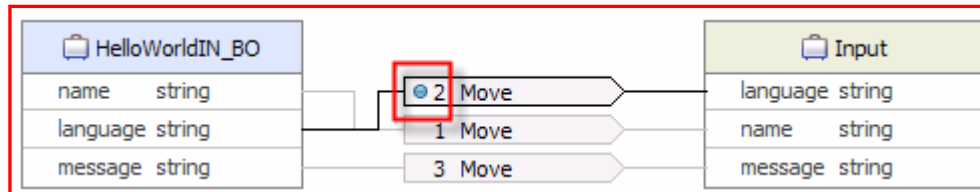
## Mediation Flow



## State Machine



## Business Object Map



# Agenda

- IBM SOA Foundation
- Model
  - WebSphere Business Modeler
- Assemble / Deploy
  - WebSphere Process Server
  - WebSphere Integration Developer
- **Manage**
  - **WebSphere Business Monitor**
- Govern
  - WebSphere Service Registry & Repository



# WebSphere Business Monitor at a glance

*Understand, monitor, and explore the state of business operations*

## Scorecards

Key Performance Indicators for business units

## Collaboration

Work with teams to resolve situations

## Business Alerts

Notification of situations that require response

## Reports & Analyses

Understanding trends by combining real-time performance and historical information

## External Information

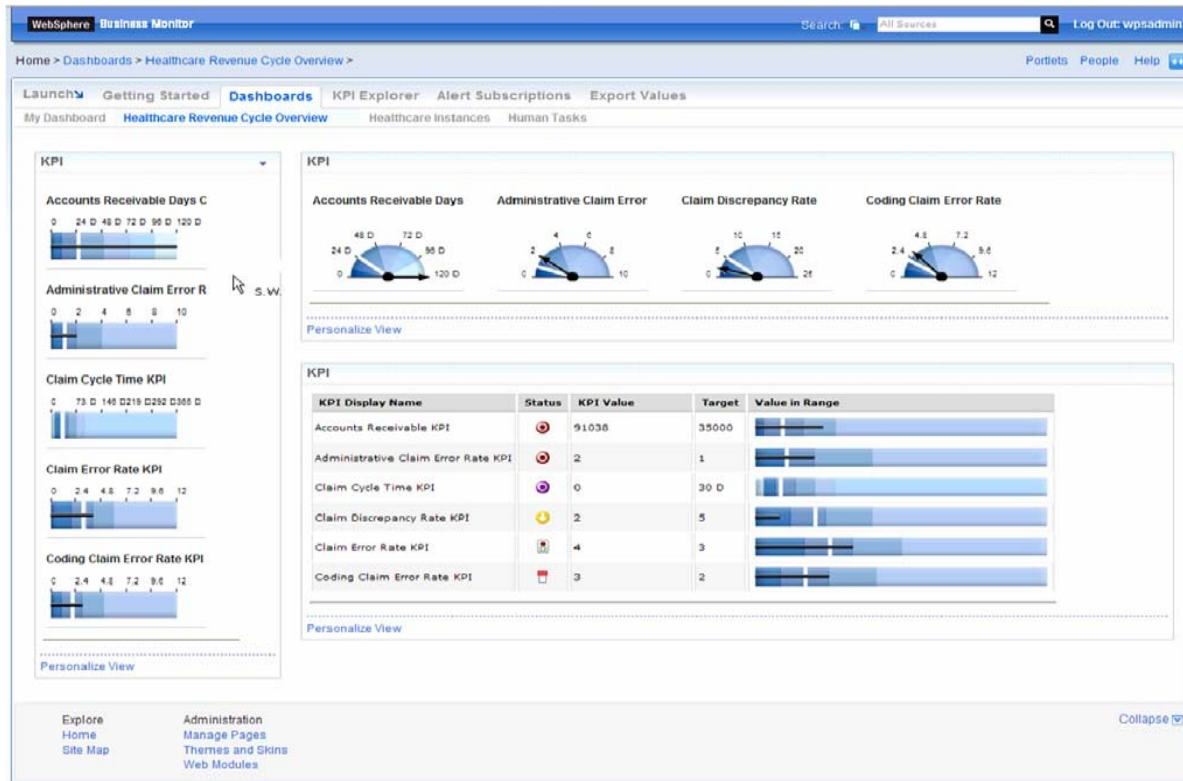
Information affecting performance



# Business Activity Monitoring for better Business Decisions

## WebSphere Business Monitor 6.1

- Create high productivity role based Dashboards
- Monitor Business Process Performance
- Manage In-Flight Business Processes
- Gather Business Intelligence from Collected Data
- Detect Business Situations and Take Action





# Monitor Business Process Performance

- View Key Performance Indicators (KPIs) calculated from live event data
  - Understand how your projected cost KPIs are doing against actual values
  
- Anonymous BAM Support
  - Monitor events from arbitrary systems
  - Not just IBM Software

What is a Key Performance Indicator (KPI)?

A KPI is a critical measurement that is associated with targets and limits

Key Performance Indicators (KPI's)

The KPI view allows users to monitor Key Performance Indicators

KPI	↑↓	Status ↑↓	Value
Retail.Forecast Cost		N/A	48
Retail.Actual Cost MTD		N/A	8
Retail.Actual Cost YTD		✓	47
Retail.Actual Capital MTD		N/A	0
Mortgage.Actual Cost MTD		N/A	2.4
Mortgage.Actual Cost YTD		⬇	6
Retail.Actual Capital YTD		N/A	8
Retail.Actual Interest Income YTD		✓	470
Retail.Actual Interest Income MTD		N/A	83

⬇ Below limit   
 ✓ Within limits   
 ⬇ Above limit

The Gauges view allows users to display the values of aggregate Key Performance Indicators (KPIs) relative their limits or targets.

Retail.Actual Cost YTD

Mortgage.Actual Cost YTD

KPI Name	Status	Value	Target	Value in Range
MaxRaceDurationInRaleigh	⊙	0 D, 0 H, 46 M, 40 S	0 D, 0 H, 45 M, 0 S	
Average Claim Amount in New York	⬇	674.17	350	
Total Claim Amount in New York	⊙	4045	4045	
My KPI2	⬇	42.85	24	
My KPI3	⊙	93.62	45	
kpi1	⊙	27.20	25	

# Manage In-Flight Business Processes

- Monitor executing processes
  - Process Status
  - Execution paths
  - Inspect process instance data
  - Examine durations, costs
- Administer process instances
  - Start/Stop claims processes if a high value claim is being handled incorrectly
  - Transfer work items to users with the appropriate authority

Active Instances

This view shows the running instances of a certain process and its activities. You can drill down through the instance.

ReserveFlight

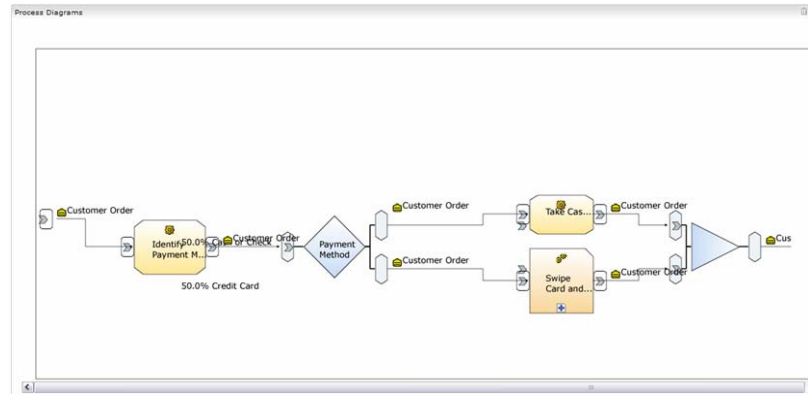
Shows old instances

File Edit View Data Tools Help

Results 1 to 7 of 7

Actions	Diagram	State	Description	Is Delayed	Start Time
		Completed		false	Oct 12, 1980 10:10:30 AM
		Completing		false	Oct 12, 1980 10:10:30 AM
		Ready		false	Oct 12, 1980 10:10:30 AM
		Running	Flight Reservation for flight AF6755	false	Oct 12, 1990 10:10:30 AM
		Suspended	Flight Reservation for flight AF6766	false	Oct 12, 2000 10:10:30 AM
		Suspending		false	Oct 12, 1980 10:10:30 AM
		Terminated		false	Oct 12, 1980 10:10:30 AM

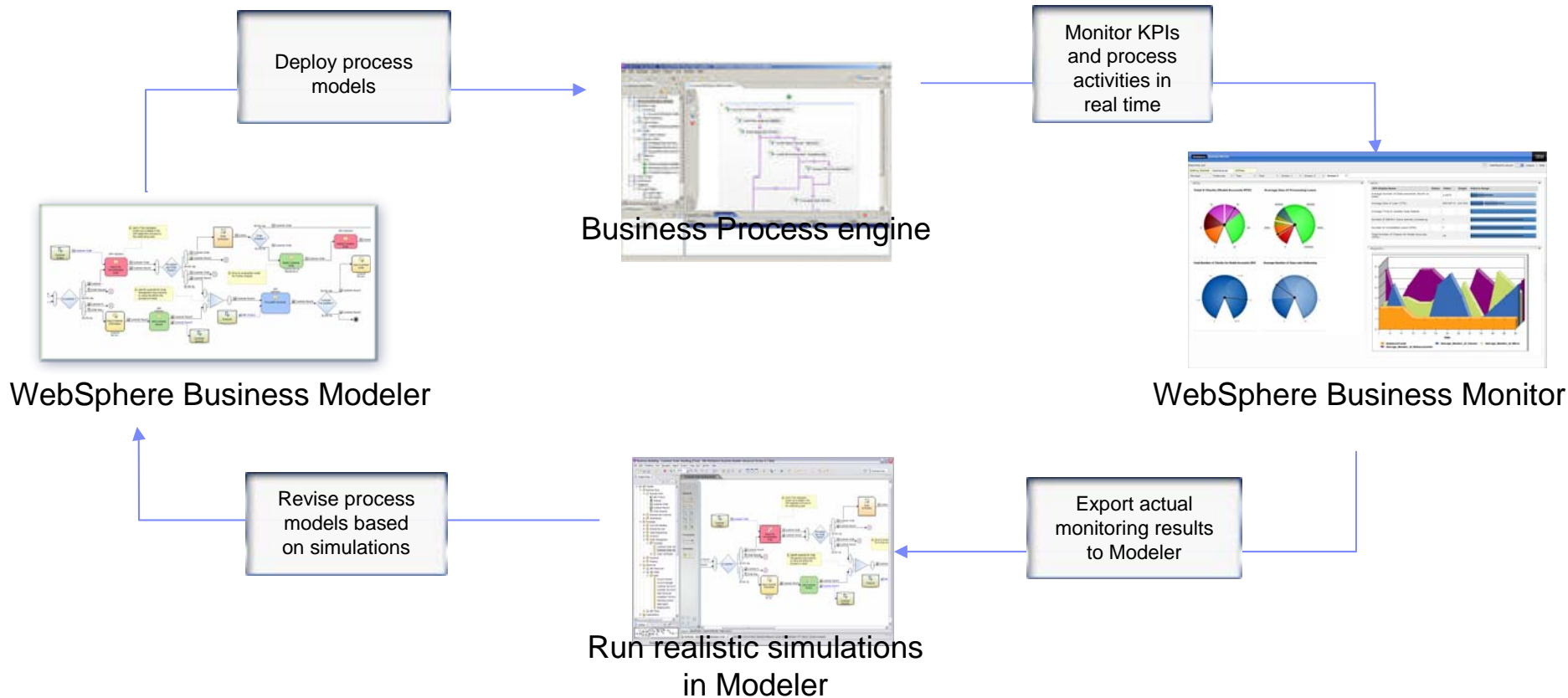
Back Next Finish Cancel



# Continuous Process Improvement

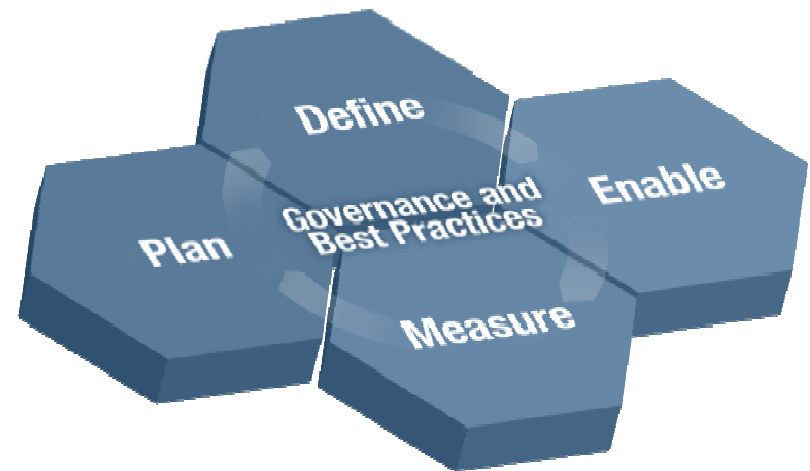
*Simulate the processes you monitor with actual, real-time data*

- WebSphere Business Monitor integrates with WebSphere Business Modeler
- Create more realistic simulations in Modeler with actual data from Monitor



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# SOA brings new emphasis to the governance challenges within organizations

**How do I eliminate “rogue services” and ensure control of my SOA?**

**How do I govern services as part of my SOA?**

**How do I manage the services lifecycle?**

**How do I increase service reuse?**



**How do I enable enforcement of policies across all internal and external services?**

**How can I help my ESB execute in the right context?**

**How do I help services interact efficiently and dynamically with each other?**

**How do I optimize service interactions to be better aligned with business process?**

# The WebSphere Service Registry and Repository provides value throughout the SOA lifecycle

## WebSphere Service Registry and Repository



### Encourage Reuse

Find and reuse services for building blocks for new composite applications.



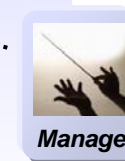
### Enable Governance

Govern services throughout the service lifecycle



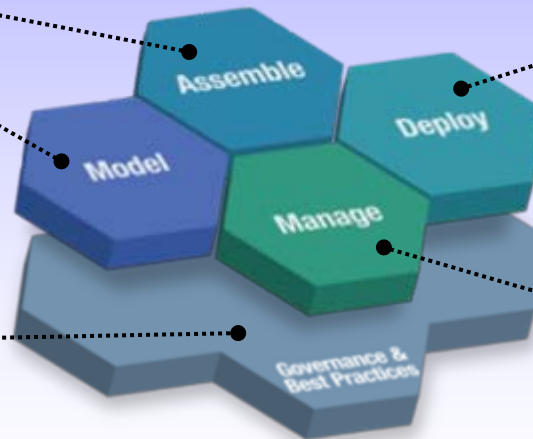
### Enhance Connectivity

Enable dynamic and efficient interactions between services at runtime.



### Help optimize service performance

Enable enforcement of policies. Impact analysis

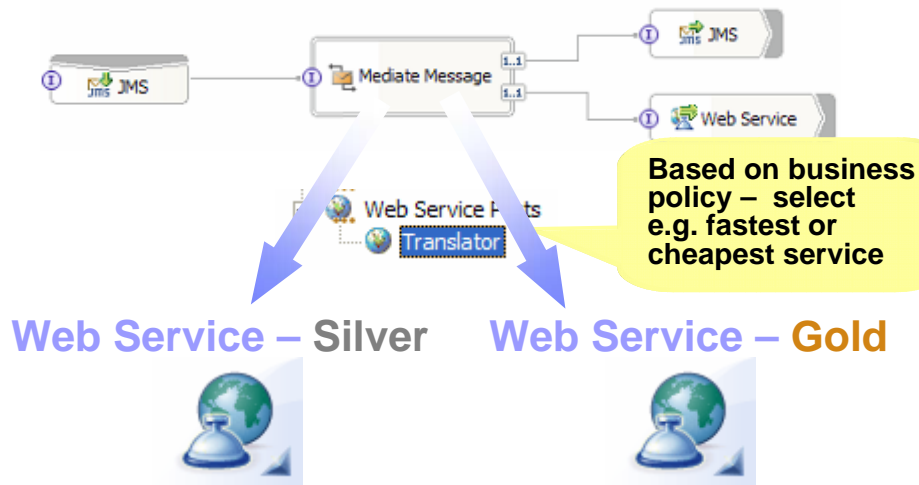
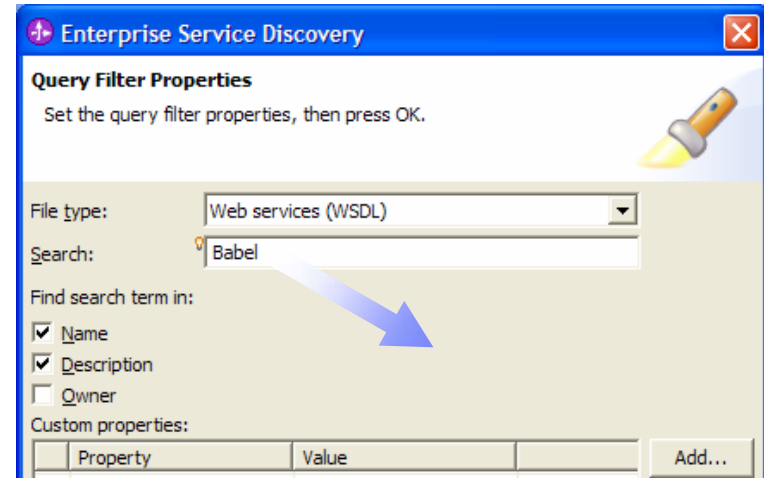




# WebSphere Services Registry & Repository

*Integration points into WebSphere BPM*

- **Development:** Get services at development time
  - Search for service definitions that were published to WSRR
  - Import Service Definitions into WebSphere Business Modeler
  - Import to WebSphere Integration Developer
  - Use services to assembly solution
  
- **Runtime:** WebSphere ESB supports dynamic selection and invocation
  - Search suitable service at runtime
  - Invoke service dynamically based on business policy data



# Summary

- IBM SOA unleashes the Real Value of BPM
- IBM delivers the most comprehensive Business Process Management solution to power your SOA!  
Increase business flexibility and responsiveness with:
  - WebSphere Business Modeler
  - WebSphere Process Server
  - WebSphere Integration Developer
  - WebSphere Business Monitor
  - WebSphere Service Registry & Repository
- IBM has been a leader in the IT architectural evolution and continues to be on the forefront as the leading provider of Web Services / SOA platforms



Thank  
YOU

