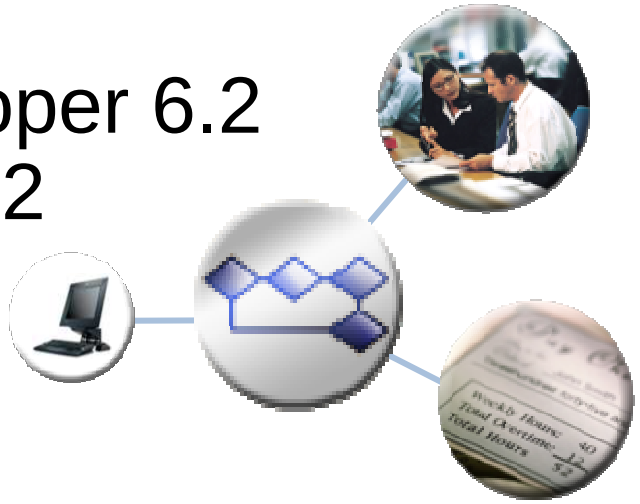
WebSphere Software

WebSphere Integration Developer 6.2
WebSphere Process Server 6.2



Riba István
WebSphere Technical Sales
istvan.riba@hu.ibm.com

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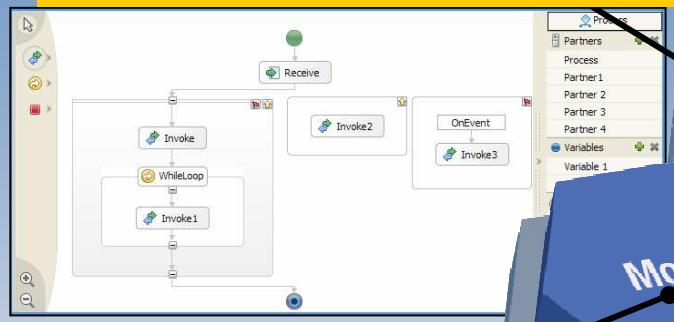
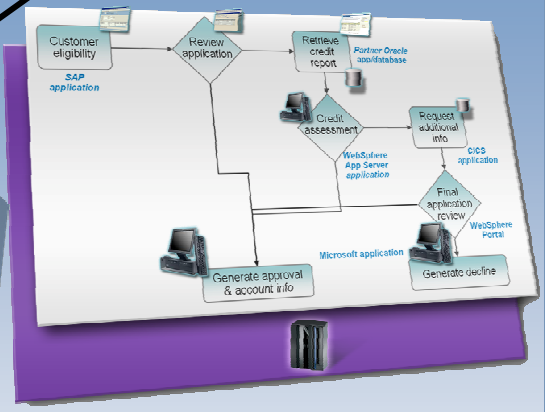
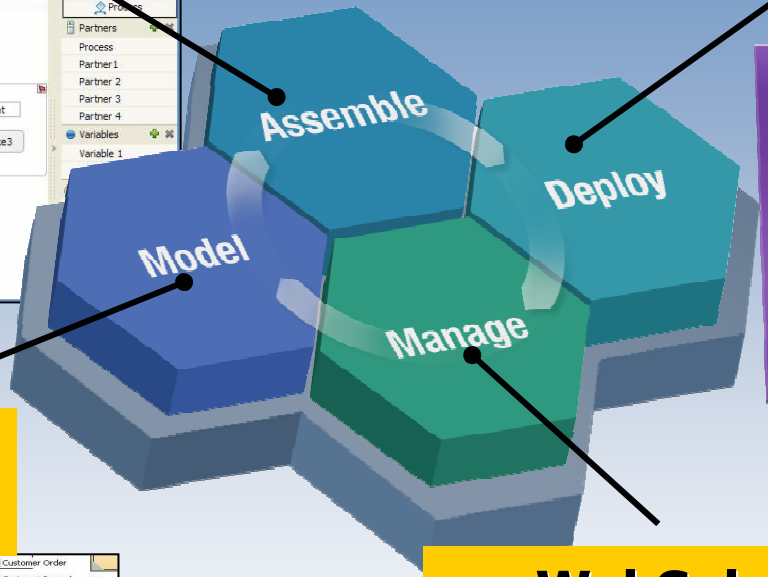
IBM WebSphere BPM suite

WebSphere Integration Developer

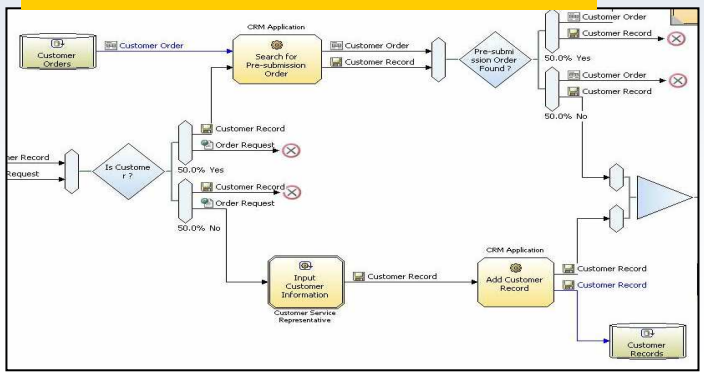


WebSphere Process Server

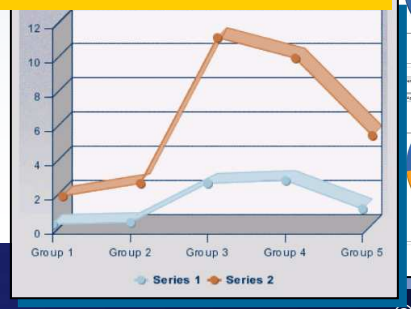




WebSphere Business Modeler



WebSphere Business Monitor



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What's new in WPS 6.2 – Overview of Topics

- SOA Core
  - Base Connectivity Enhancements
  - Dynamic invocation for all binding types
  - Consistent fault handling across bindings
- Mediation Flows
- Module Versioning
- Business Processes
- Human Tasks
- BPC Clients
- Business Space
- Administration

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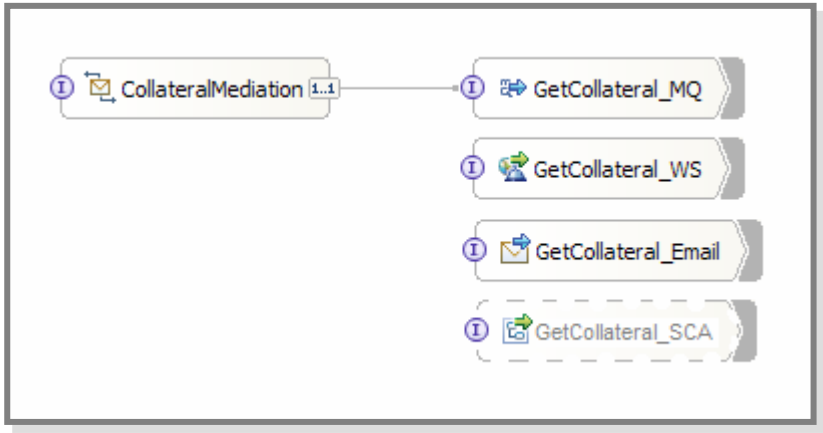
Dynamic invocation for all binding types

- Recap: Dynamic invocation
  - Allows to „overwrite“ endpoint for SCA Imports
  - Dynamically compose EndpointReference at runtime to invoke services without pre-existing SCA Import
  - Available in POJO components, Mediation flows, BPEL processes
  - Until 6.2 only supported for Web Services and SCA targets
- Dynamic invocation can now be used with all binding types
- Use cases:
  - Use the wired Import, but overwrite the endpoint address
  - Use another Import than the one wired to the component
  - Pure dynamic invocation – do not use an import



•New Web Services binding based on JAX-WS 2.0 and JAXB 2.0

•New Data Handlers support ATOM and JSON data formats

•SOAP 1.2 support

•Reliable web service interactions using WS-RM

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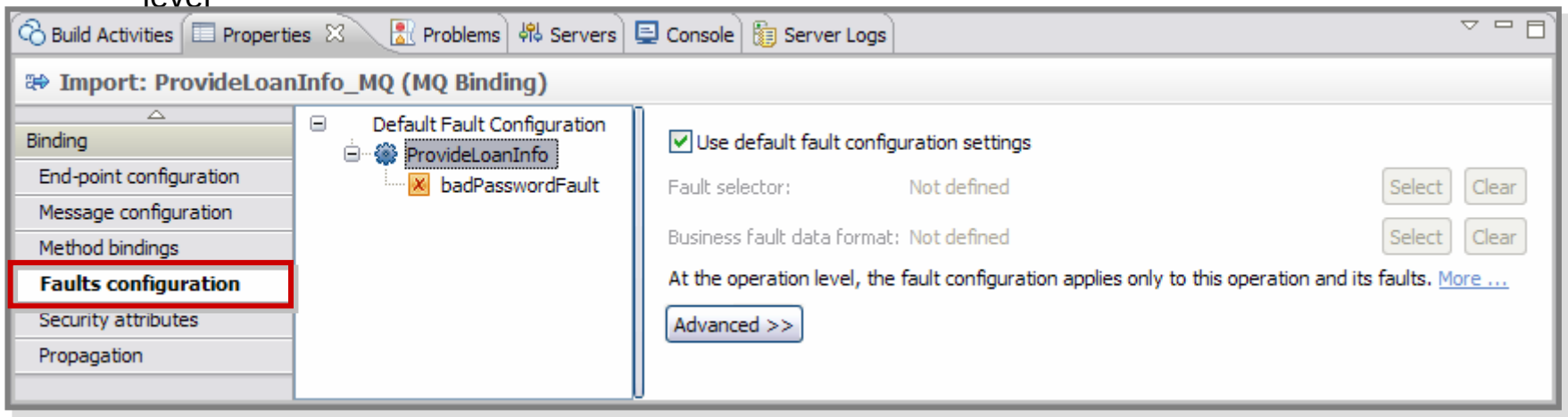
Consistent fault handling across bindings

- Fault handling for all import bindings
  - Determine whether the called service has returned a fault
  - Classify the fault (business or technical fault)
  - Map fault data if necessary
- New: Fault selectors
  - Returns a native name for the fault
  - Can be configured at binding level or operation level

Benefits

- Development Ease of Use
  - Specify fault handling for all binding in a consistent manner
- Better Process Integrity
  - Explicit and consistent fault handling for all service invocations



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Agenda

- SOA Core
- Mediation Flows
  - Component Level Updates
  - Mediation Subflows
- Module Versioning
  - Solution View
- Business Processes
- Human Tasks
- BPC Clients
- Business Space
- Administration
- Heritage Migration

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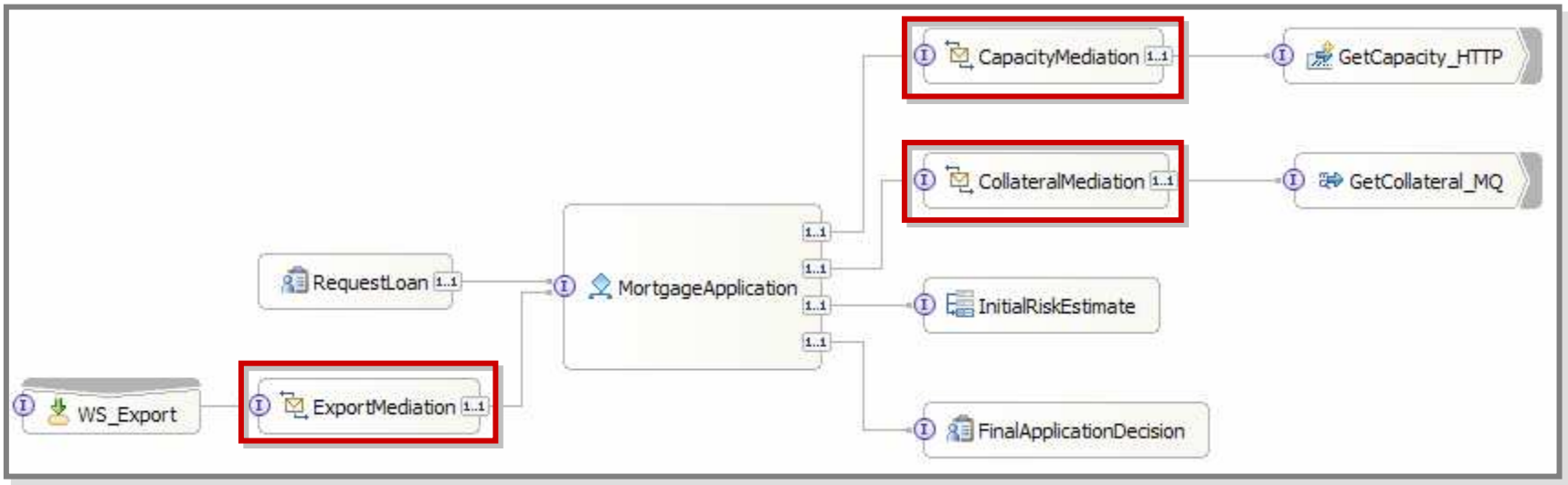
Enhanced Mediation Support: Component Level Updates

- Multiple Mediation Flow Components per Module allowed
- Mediation Flow Components allowed in a Business Integration Module
  - Direct wiring between BI components and mediations

Benefits

- More flexibility when using mediations in a WPS application
- Improved admin experience and deployment performance for customers with “many” mediations



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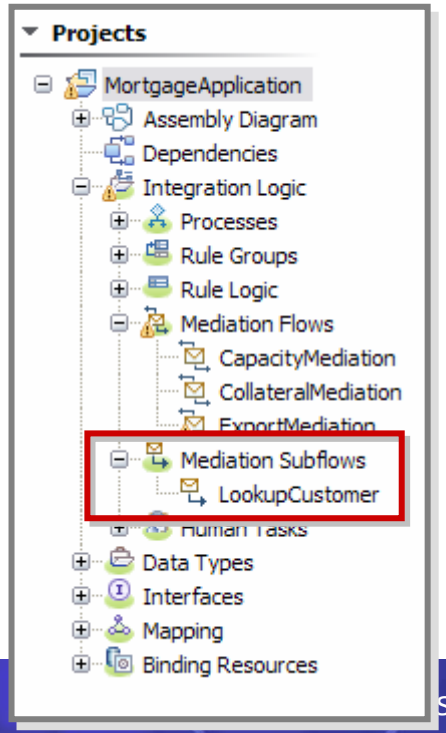
see WID 6.2

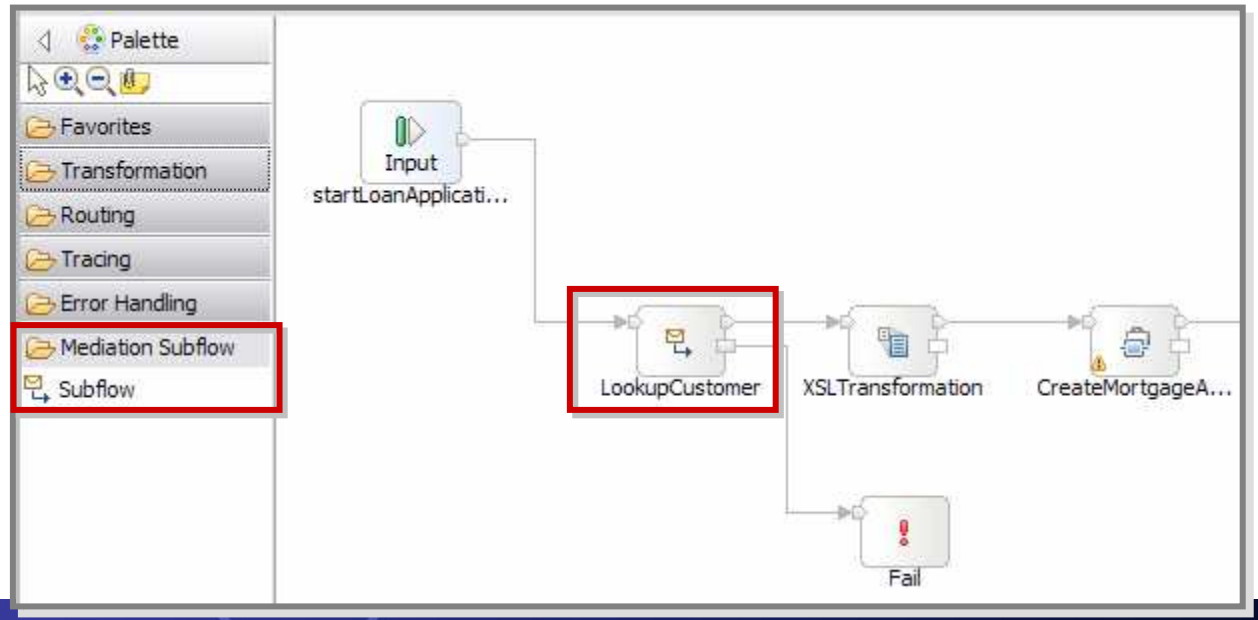
Mediation Sub-flows

- Subflows enable a snippet of mediation flow to be encapsulated and reused across a module
  - Mediation subflow acts like a mediation primitive
  - The user of a subflow does not need to be aware of the contents of the subflow, just its externals (terminals and properties)

Benefits

- Development Ease of Use
  - Common tasks within a module need to be modeled only once





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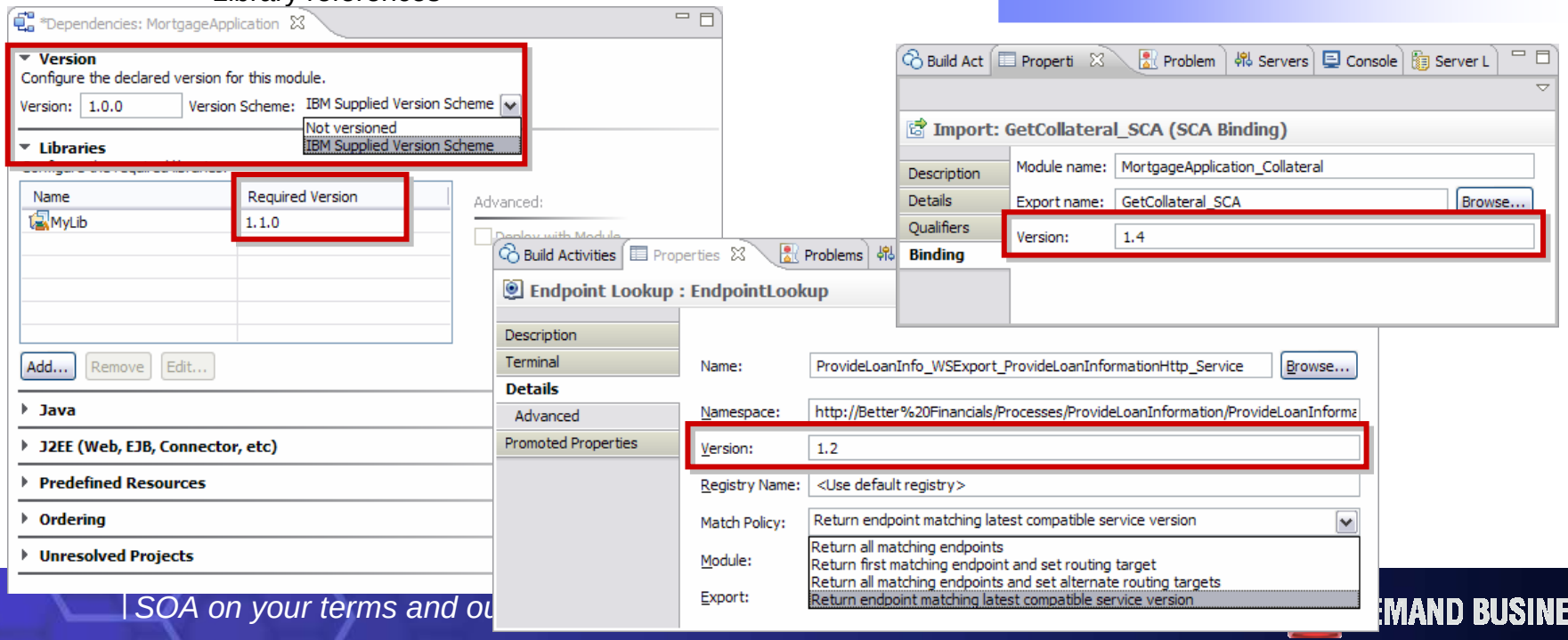
Module Versioning

- Version support for SCA modules and libraries
  - Set version number for modules and libraries
  - Use version number to use only specified version number
    - SCA imports
    - EndpointLookup Primitive
    - Library references

Benefits

- Built-in support to deploy multiple versions of the same module
  - Fine-grained control over which versions of services are to be used



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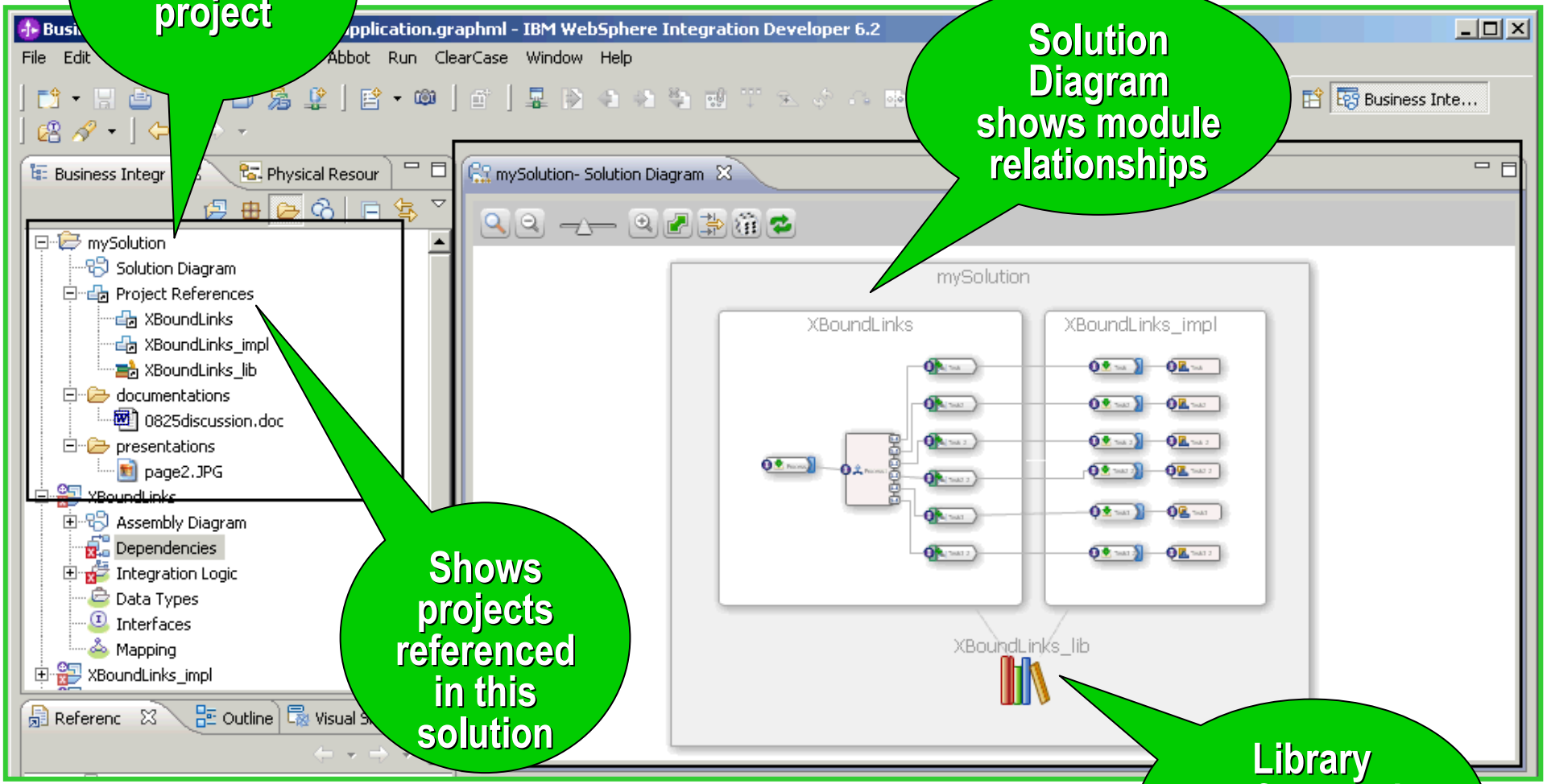
Solutions and Solution View



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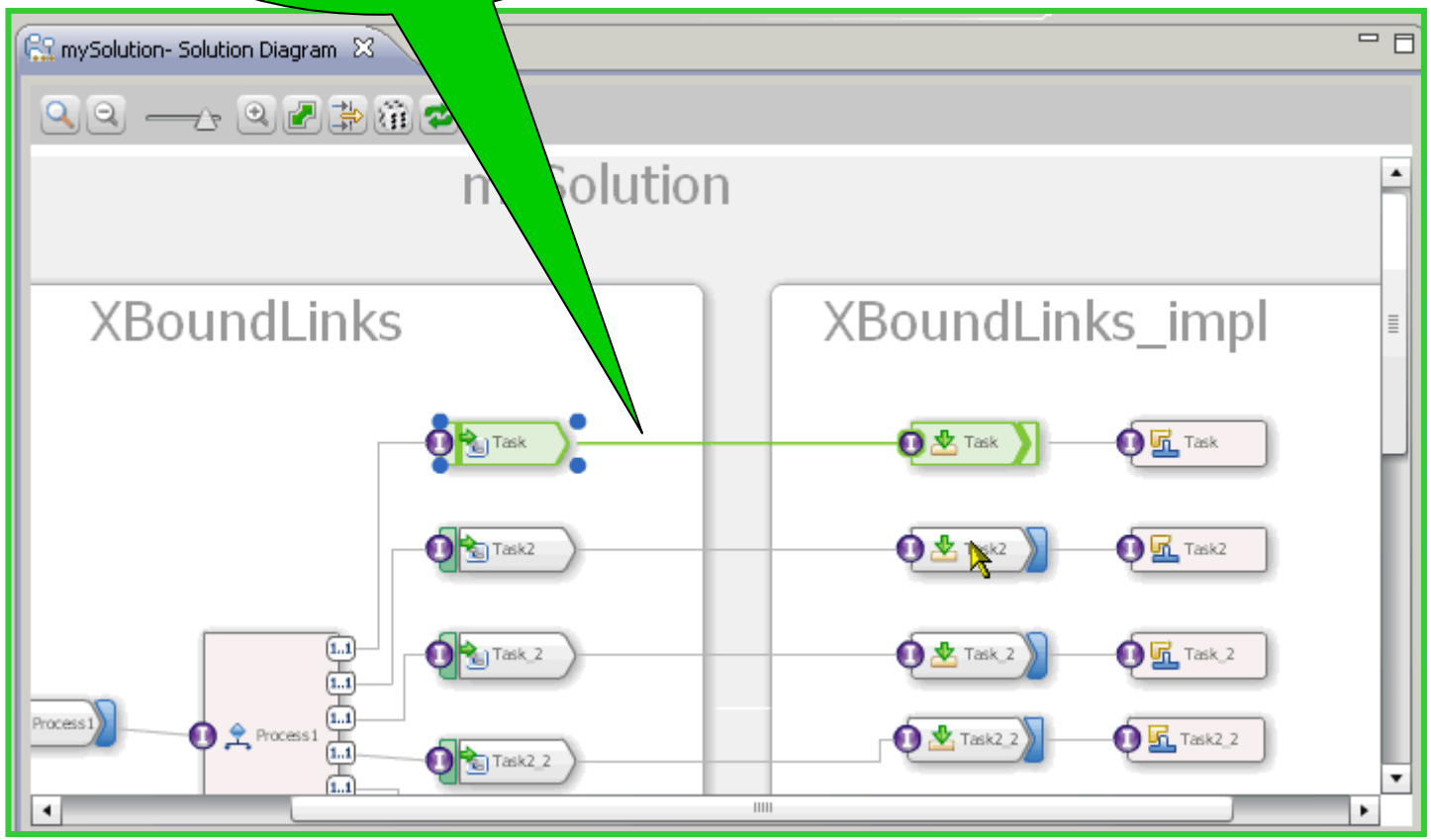
Solutions and Solution View

Transaction boundaries shown across modules



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Agenda

- SOA Core
- Mediation Flows
- Module Versioning
- Business Processes
  - Improved WS-BPEL 2.0 Support
  - Activity Exit Conditions
  - Richer Flow Model
  - Enhanced Dynamicity for Knowledge Workers
  - Various repair and dynamicity BFM features
- Human Tasks
- Business Space
- Administration

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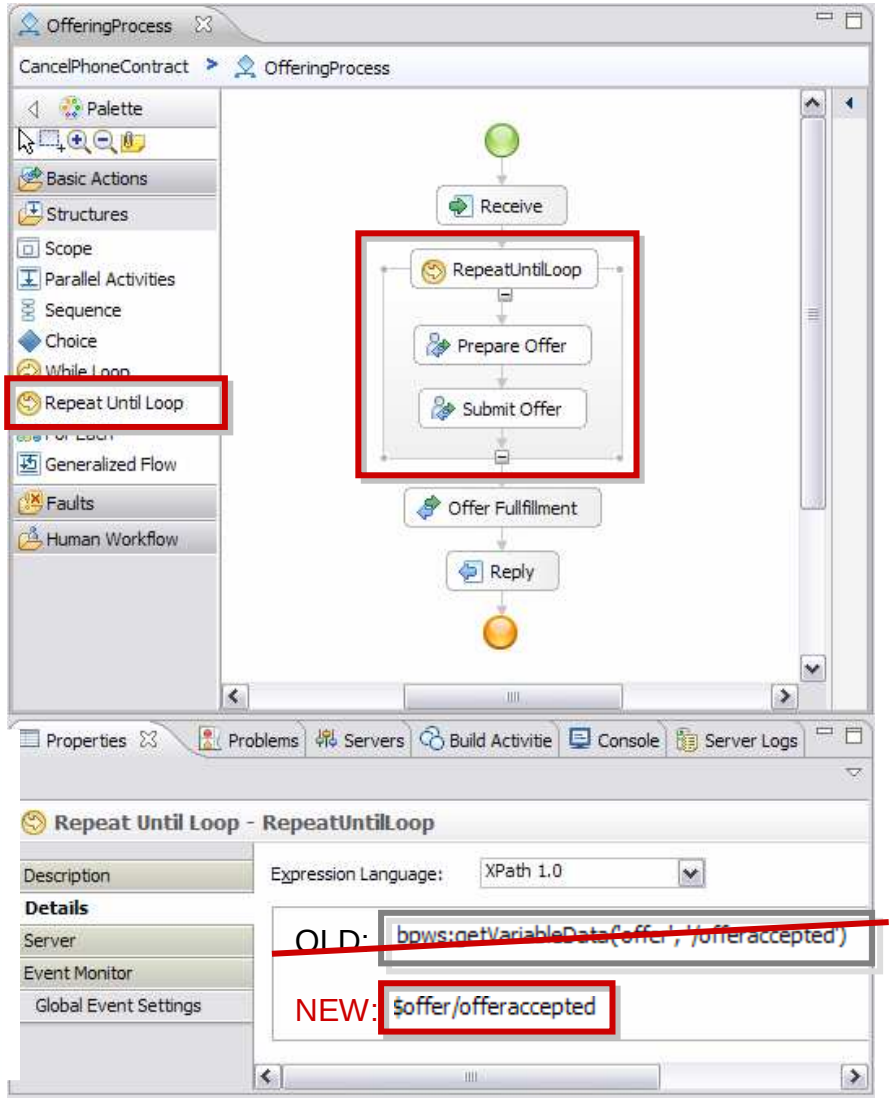
Improved WS-BPEL 2.0 Support

- Introduction of RepeatUntil Loop
  - Loop is executed at least once
  - The condition is tested after each execution of the body of the loop
- XPath variable references
  - In WS-BPEL 1.1, reference to XPath variables required use of the `GetVariableData()` method
  - In WS-BPEL 2.0, XPath variables can be referenced using the `($variable)` notation
  - Used in assign activities and condition expressions



Benefits

- Development Ease of Use
  - More options for looping constructs in business processes
  - Less XPath expertise needed to create conditions and data maps

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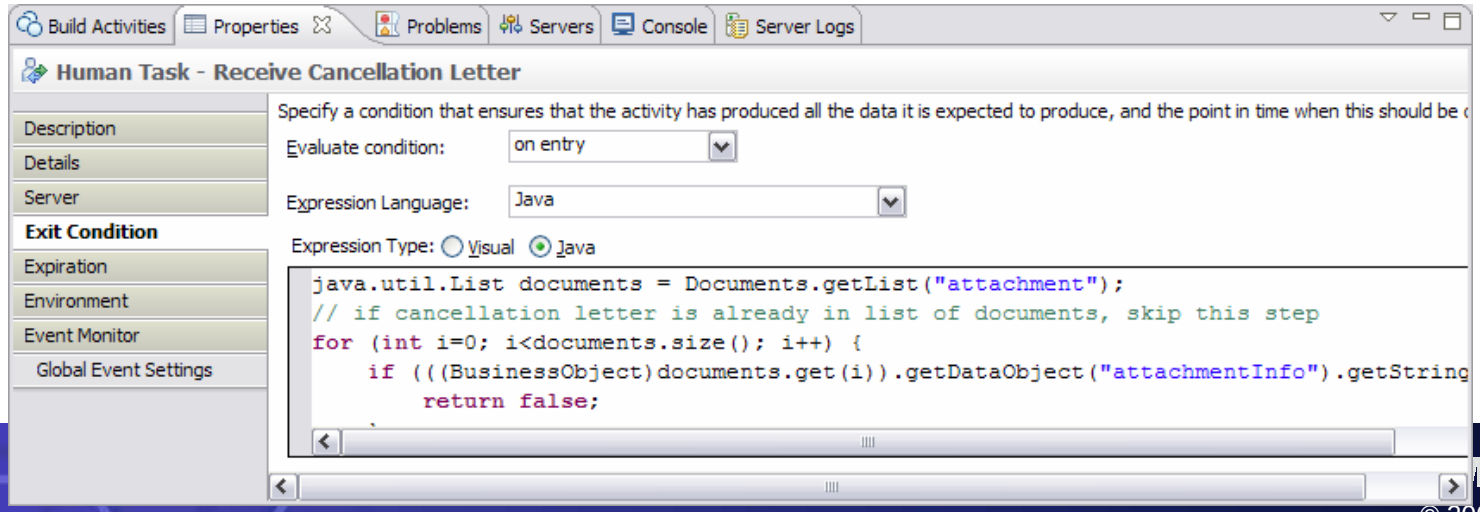
Activity Exit Conditions

- Impose conditions that need to be fulfilled at activity entry and/or exit
  - For example, make sure that certain data is available
- Condition can be…
  - On entry of the activity
    If condition is already fulfilled when entring an activity, the activity does not need being executed anymore. It is skipped automatically, navigation continues after the activity
  - On exit of the activity
    Ensures that processing of business process can continue successfully. Otherwise, process comes to a halt, i.e., activity is set to stopped

Benefits

- Additional business scenarios enabled
- "Clean" process models
  - No extra (technical) activities needed to perform checks
  - Natural definition of entry and exit conditions



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Richer Flow Model (1/2)

- Generalized Flow activity
  - Allows to mix parallel execution and arbitrary cycles
  - Validation in place to ensure that the modelled flow is valid
  - Replaces the Cyclic Flow activity
- Gateways are used to define the diverging and converging behavior when more than one link is the target or source of an activity

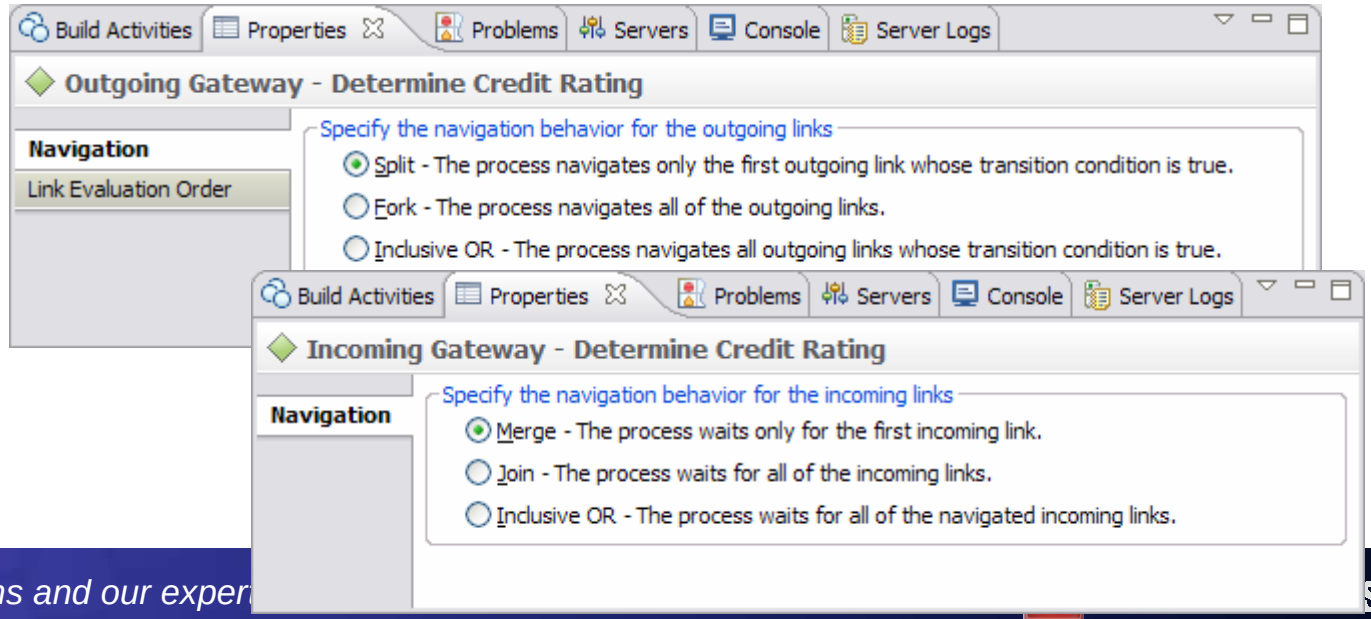
Benefits

- Development Ease of Use
  - More flexibility when defining the flow within a business process

Split / Merge

Fork / Join

Inclusive OR



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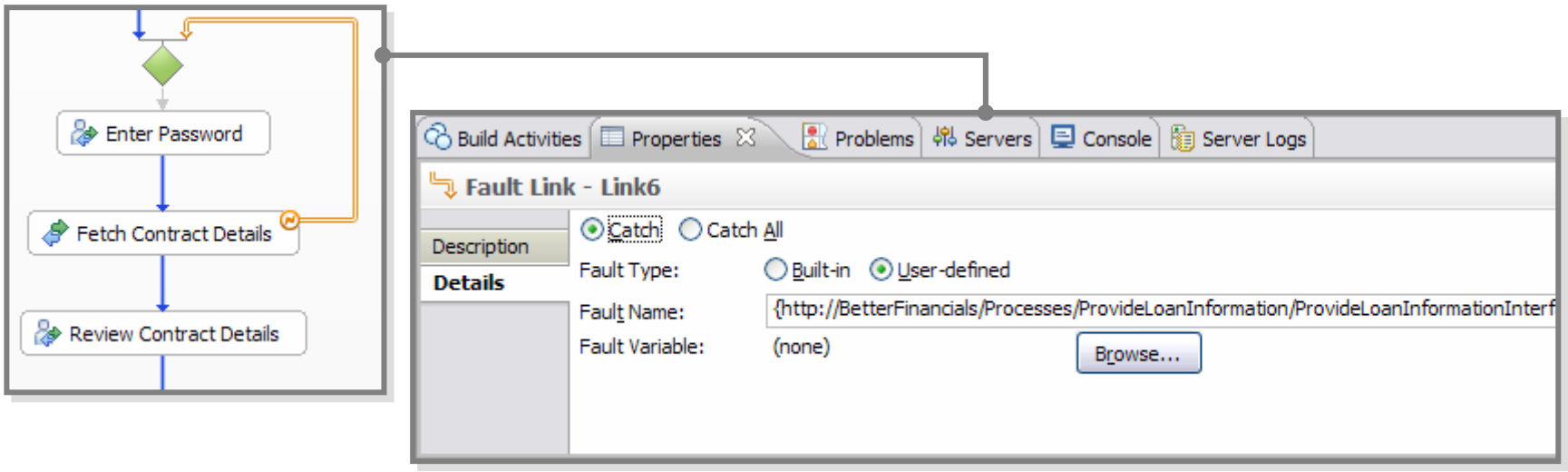
Richer Flow Model (2/2)

- Fault links are executed after a fault has occurred in the source activity of the link
  - Fault catching rules are the same as for the fault handlers: A fault name and fault variable to catch can be specified, or all faults can be caught
  - When a fault occurs and is caught by a fault link, only this link is navigated
  - The fault path can merge back into the regular flow

Benefits

- Development Ease of Use
  - More flexibility when defining the flow within a business process



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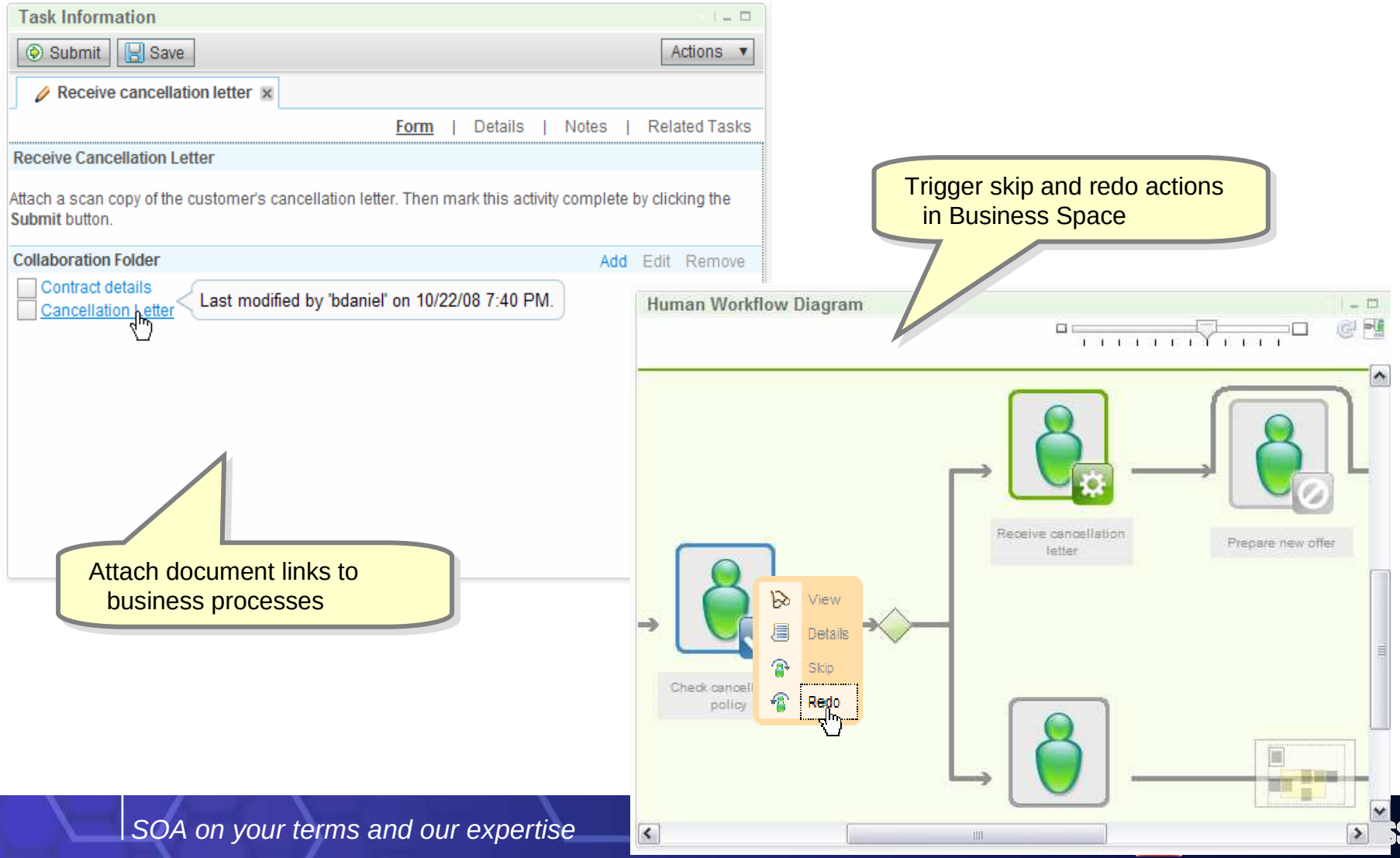
Enhanced Dynamicity for Knowledge Workers … aka Case Handling



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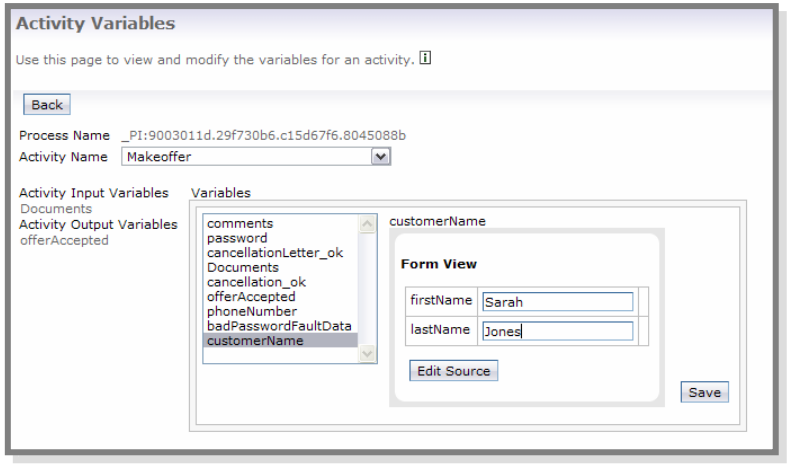
Various repair and dynamicity features

- Some restrictions for jumps within processes lifted
  - For example, jumps within a parallel flow activity are now possible under certain circumstances
- Transfer process ownership (starter)
  - All activities are executed using the process starter's credentials / security context
- Explore and change variable values
  - Now also possible for variables visible for activities that are not yet navigated
- Additional repair scenarios
  - Provide transition condition values for outgoing links of an activity to allow navigation of selected branches
  - Provide case/branch of a switch/if-then-else activity with which the process should proceed

Benefits

- Better administration and management capabilities for business processes
- More options to respond to problem situations
  - Enhanced repair capabilities



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Agenda

- SOA Core
- Mediation Flows
- Module Versioning
- Business Processes
- Human Tasks
  - Enhanced page flow / single person workflow
  - Standalone human task managed by calling process
  - History log for human tasks
- Business Space
- Administration

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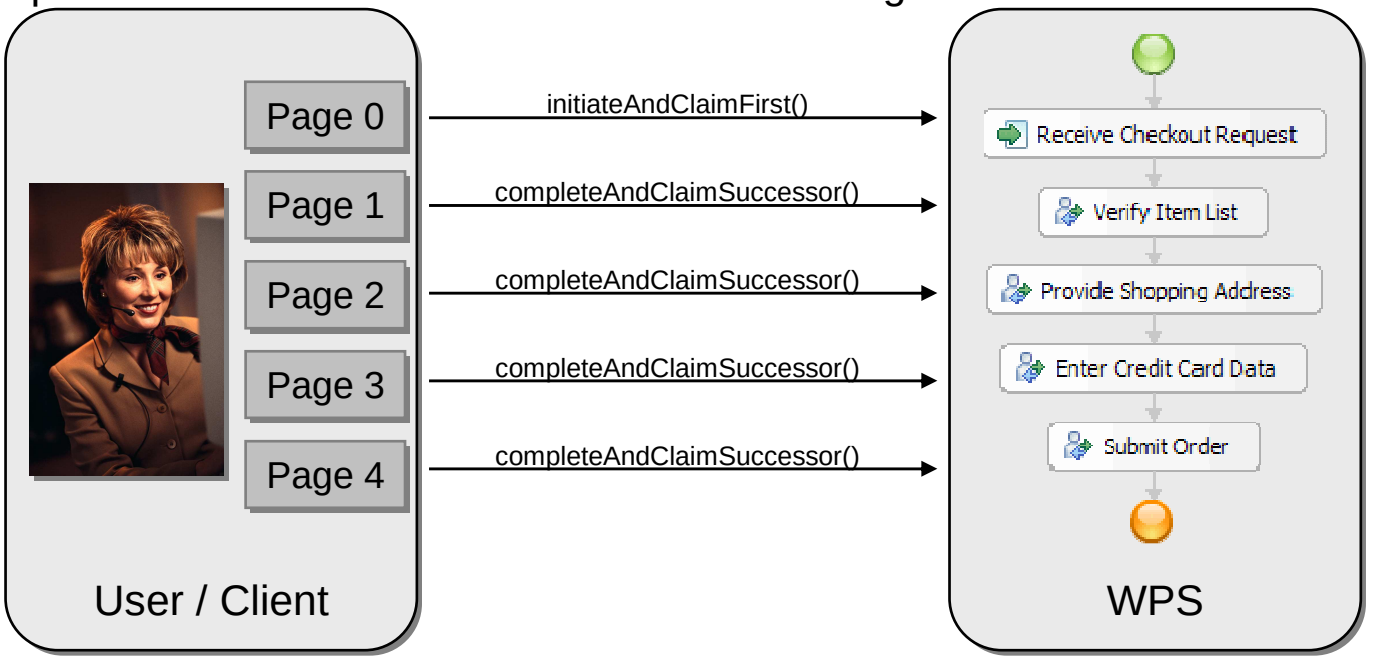
Enhanced page flow / single person workflow

- Recap: Page Flow / allows to present a person with a series of UI screens when working on a series of inline human tasks of a particular business process („Next“ button)
- Now it is also possible to start the business process and claim its first human task in one go

Benefits

- Allows to create more easy to use custom clients
  - Less clicks needed to start and execute a process



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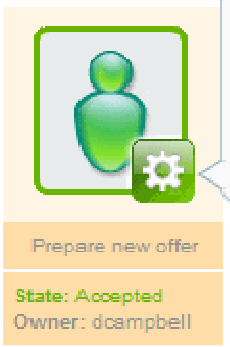
History log for human tasks

- The Human Task History provides the following information
  - Who has worked on a human task
  - What did the person do
  - When did it occur
- The Human Task History is considered to be data that is part of the human task instance, consequently its life-cycle is tied to the enclosing human task
- For auditing purposes, CEI or the audit log should be used
- Can be enabled/disabled in the admin console (Panels for BPC Container and HTM configuration)

Benefits

- Empowers business users
  - Capture and show additional context information for human tasks
- Enhances productivity



The customer 'Sarah Jones' has requested a cancellation of his phone contract. Prepare a new offer for the customer.

History

State	Name	Timestamp
Task created	bdaniel	10/23/08 3:50 PM
Task started	bdaniel	10/23/08 3:50 PM
Task accepted	bdaniel	10/27/08 2:57 PM
Task pending on other tasks	bdaniel	10/27/08 4:54 PM
Pending tasks completed	jjames	10/27/08 4:55 PM
Task transferred from bdaniel to dcampbell	bdaniel	10/27/08 4:55 PM

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Agenda

- SOA Core
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- Business Space
  - Ad-hoc support for Business Users
- Administration

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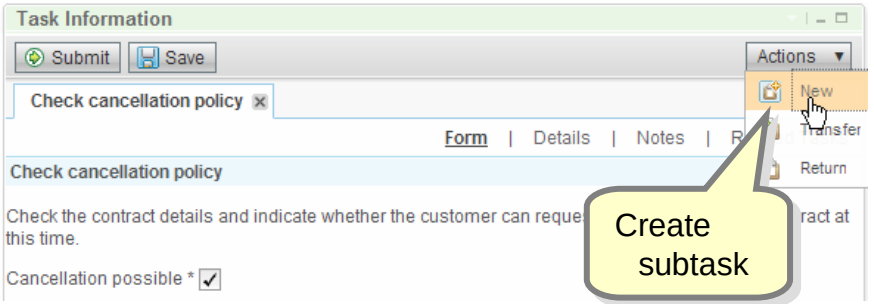
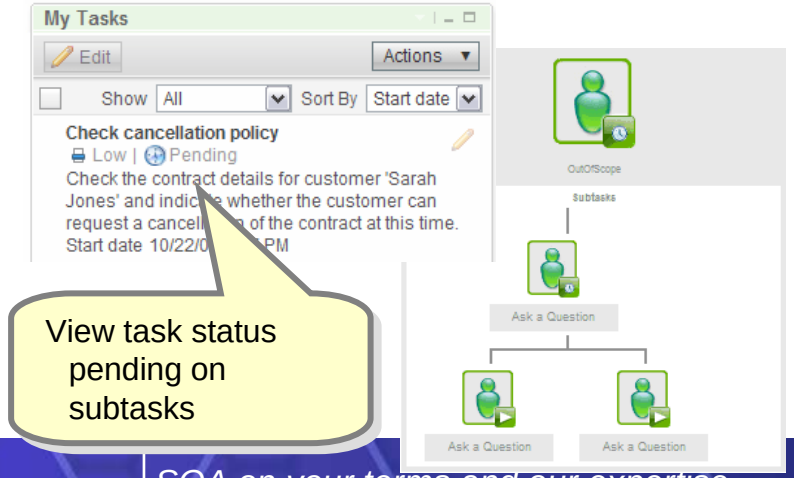
Ad-hoc support for Business Users

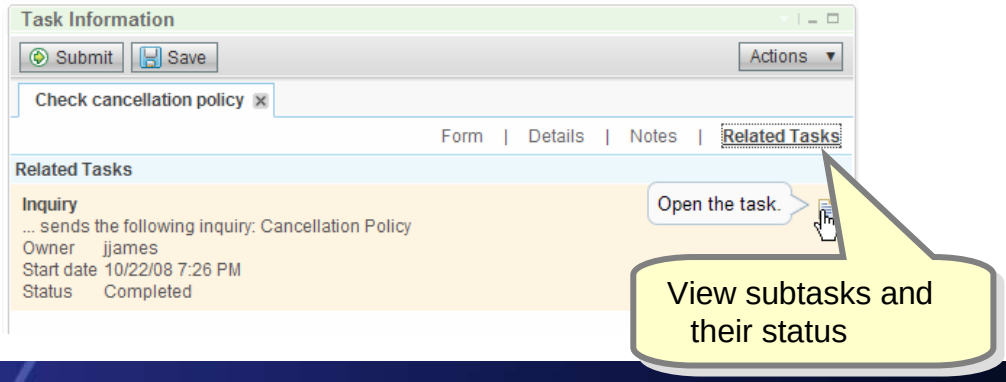
- Business users can now…
  - Exploit subtasks
  - Skip and redo activities (see Case Handling)
- The following scenarios are supported
  - Create new subtask
  - View task status pending on subtasks
  - View status of subtasks for a given task
  - View result of finished subtask fro a given task
  - Cancel subtask of a given task
  - View created tasks and subtasks

Benefits

- Empowers business users
- Enhances flexibility and productivity







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Agenda

- SOA Core
- Mediation Flows
- Module Versioning
- Business Processes
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- Business Space
- Administration
  - Cleanup service for business processes / human tasks

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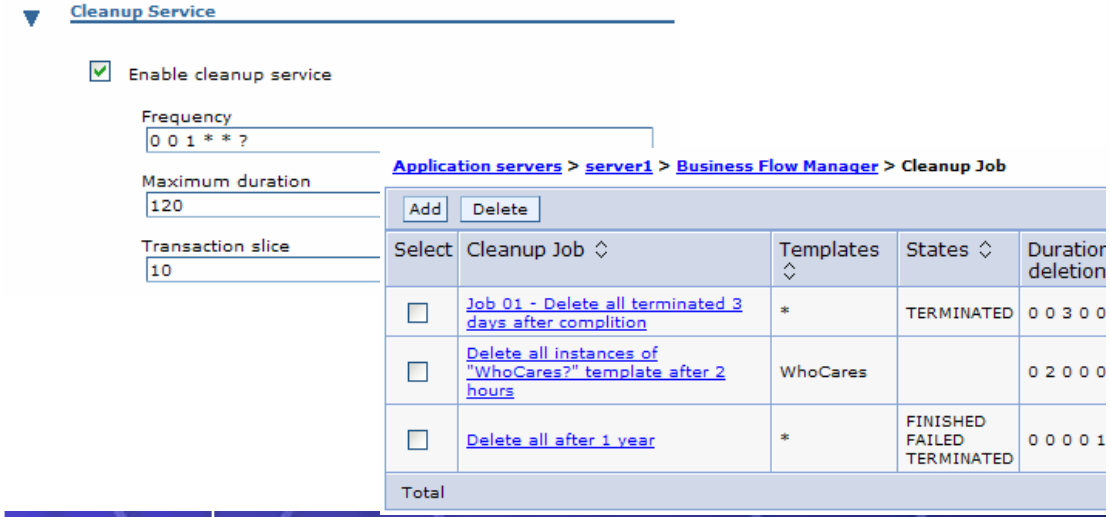
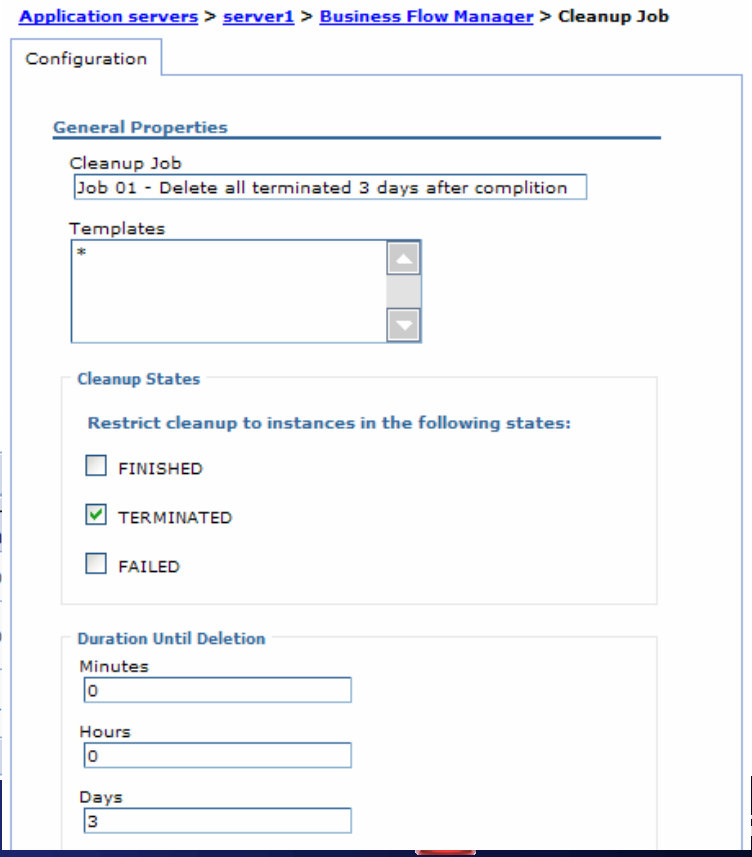
Cleanup service for business processes / human tasks

- New Cleanup Service allows for scheduled deletion of instances out-of-the-box
  - Specify when the service should run, how long it should run and how many instances it should delete in one transaction
- One or multiple Cleanup Jobs possible
  - Specify which instances should be deleted, and how long they should be kept after completion

Benefits

- Simplifies maintenance of business processes and human tasks





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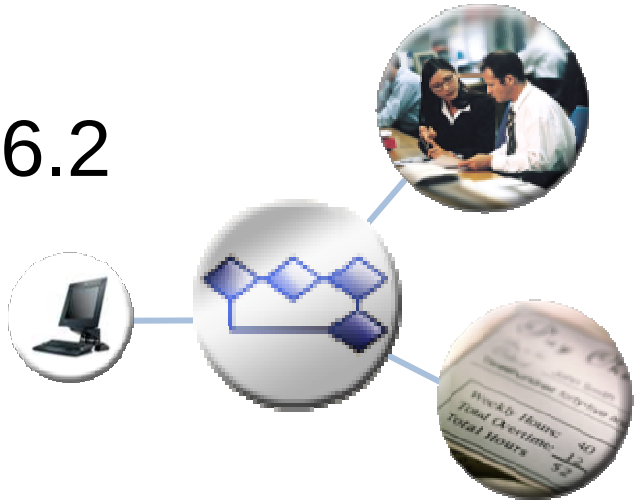

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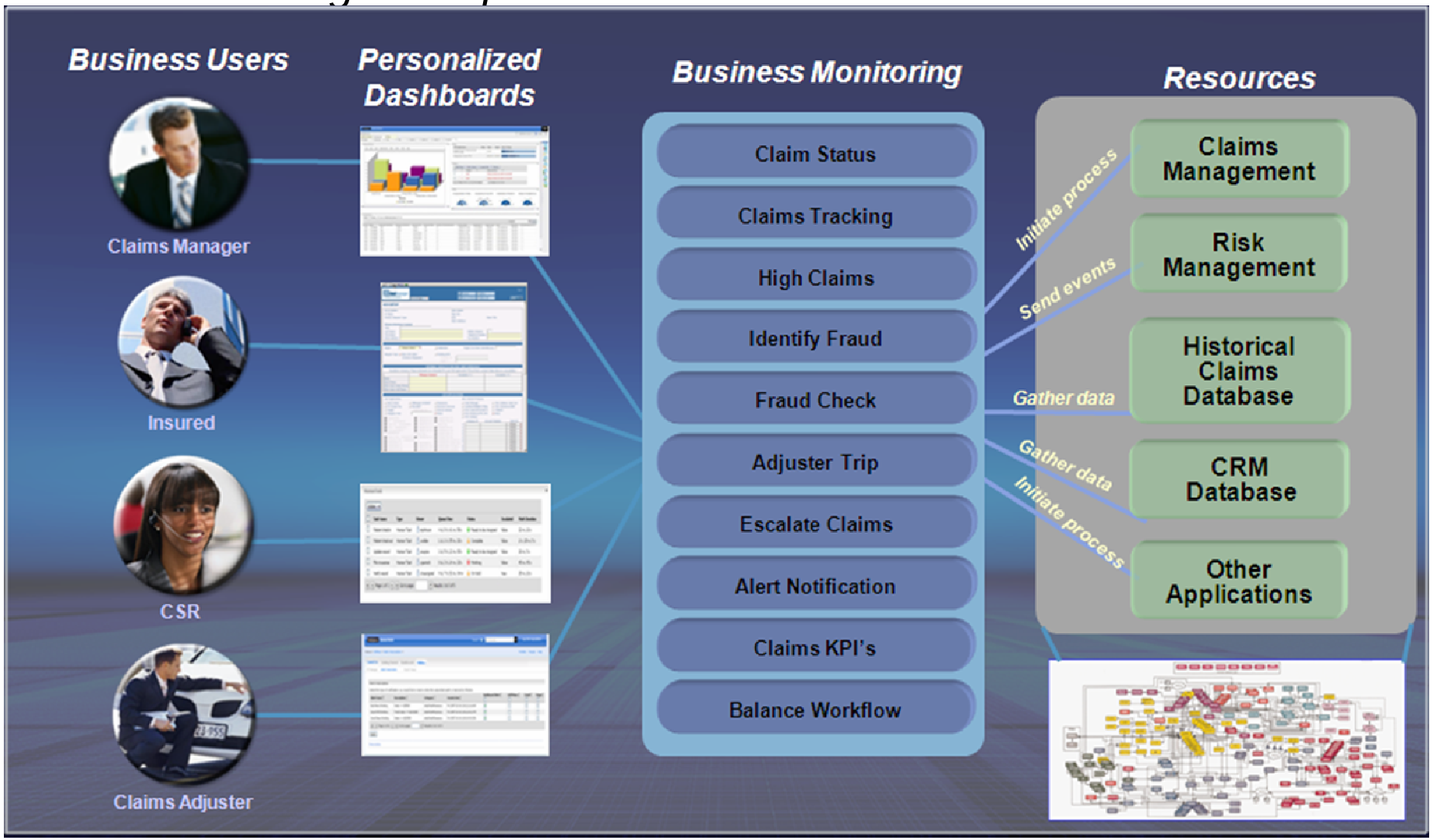
End to End Business [Process] Monitoring

Claims Tracking Example



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Business Activity Information from Multiple Sources

More comprehensive end-to-end visibility

Common Event Sources

Workflow or process management such as:
- WebSphere Business Services Fabric
- WebSphere Process Server
- WebSphere MQ Workflow
- IBM FileNet P8

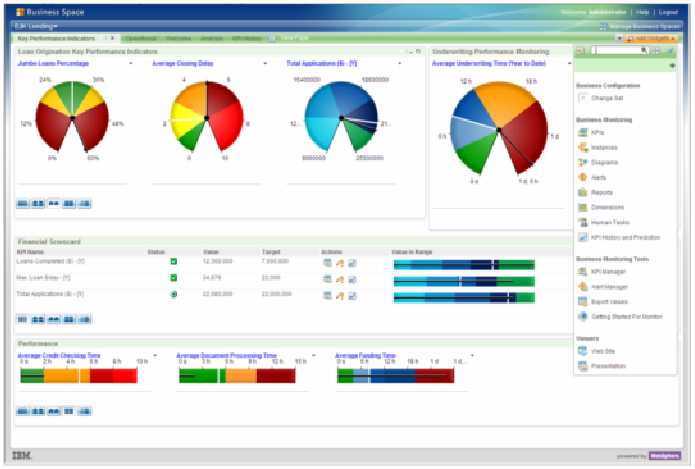
Connectivity software such as:
- WebSphere Business Events,
- WebSphere ESB,
- WebSphere Message Broker,
- WebSphere Partner Gateway,
- DataPower XI50

SAP, Siebel CRM & other software via an IBM ESB & Adapters or MQ

Publish from other software via Web service (WS-Notification) or REST API

WebSphere Business Monitor Server

- Event capture and processing
- KPI calculation and prediction



Business Space Dashboards

- Visibility and analysis
- Dynamic alerts and ability to take action

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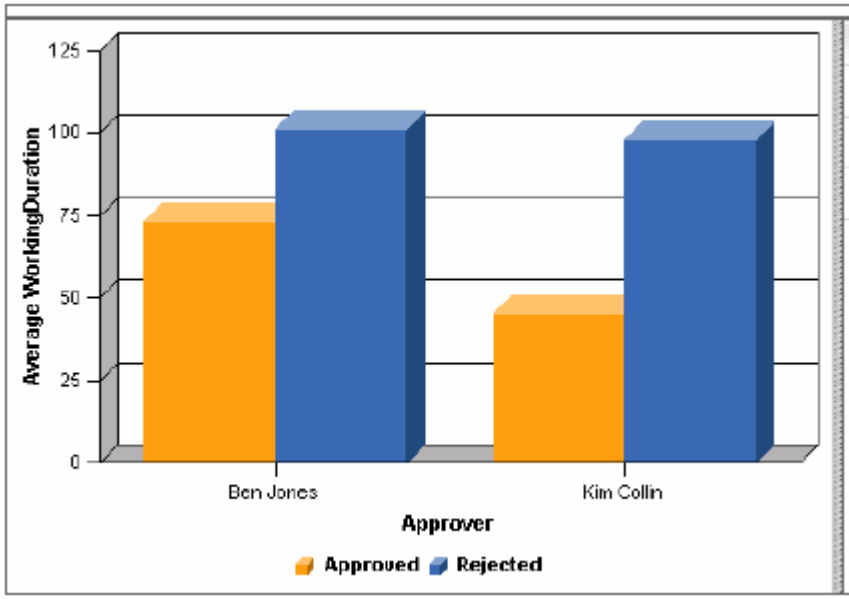
Multiple views - Dimensional view

- Displays multidimensional reports that analyze different aspects of data retrieved from a multidimensional data mart
  - Charts and grids present data for analysis against different dimensions



Approval Status	Approver	Ben Jones	Kim Collin
Approval Status	80.097	79.505	86.278
Approved	72.527	73.274	45.25
Rejected	100.375	101.167	98

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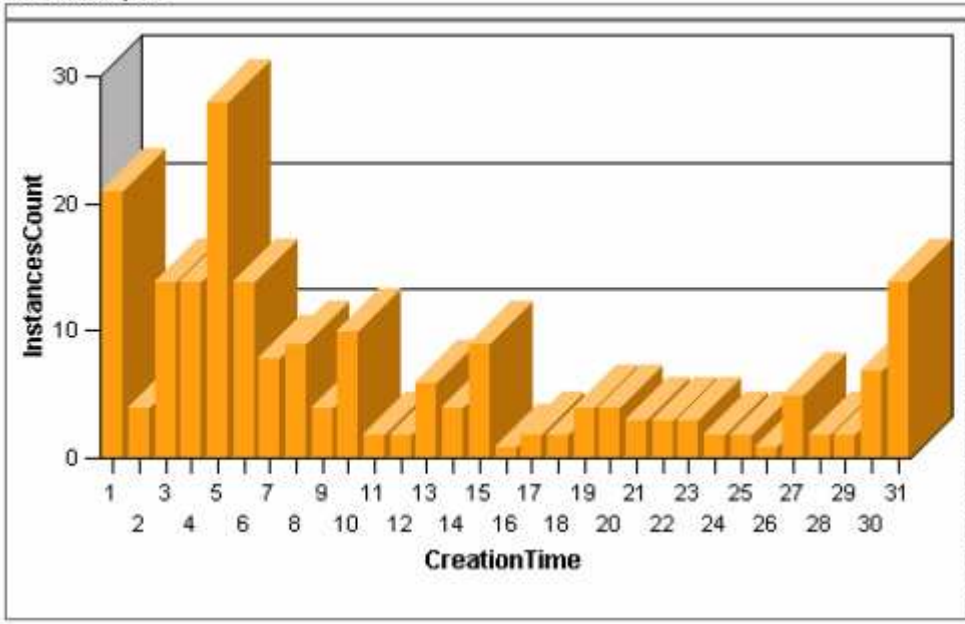
Multiple views - Report view

- Displays performance reports relative to a time axis
- Analyze historical values of numeric business measures that belong to a cube
  - Typically represented in tables and graphs
- Drill up or down using dimensions

Basic analysis



CreationTime	InstancesCount
2000	206
1	206
1	21
2	4
3	14
4	14
5	28
6	14
7	8

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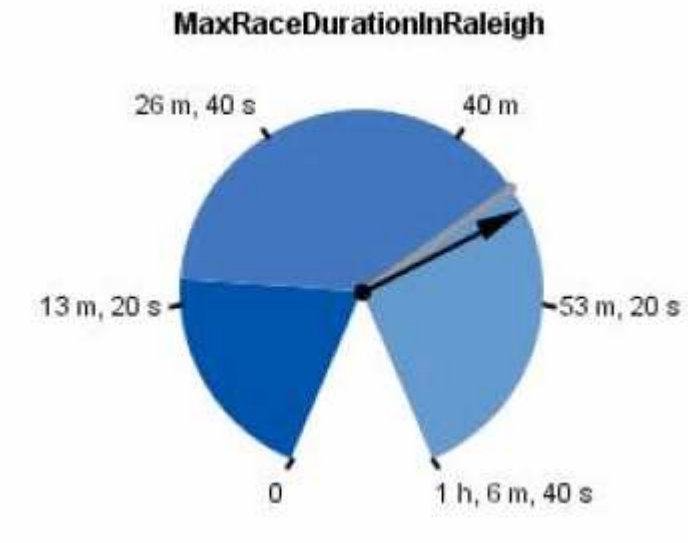
Multiple views - Gauge view

- Displays an individual Key Performance Indicator (KPI) value, relative to the KPI range and target, if applicable
- Each gauge represents the value of a single KPI
- Gauge minimum and maximum are defined in the view configuration
- Lower and upper limits for the KPI are defined in the monitor model



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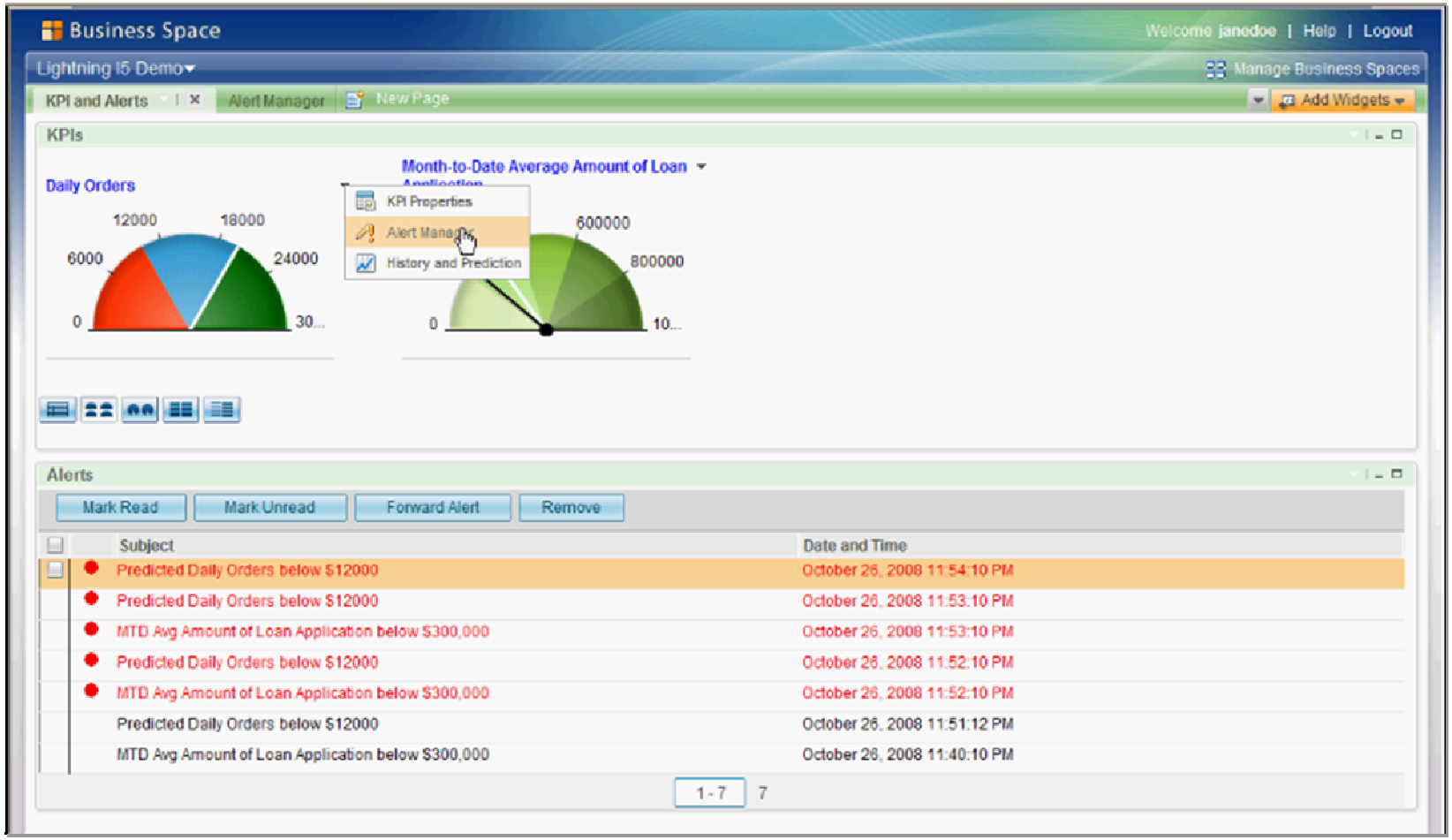
Business User Alerts

Allow business users to set and control the conditions under which alerts are sent



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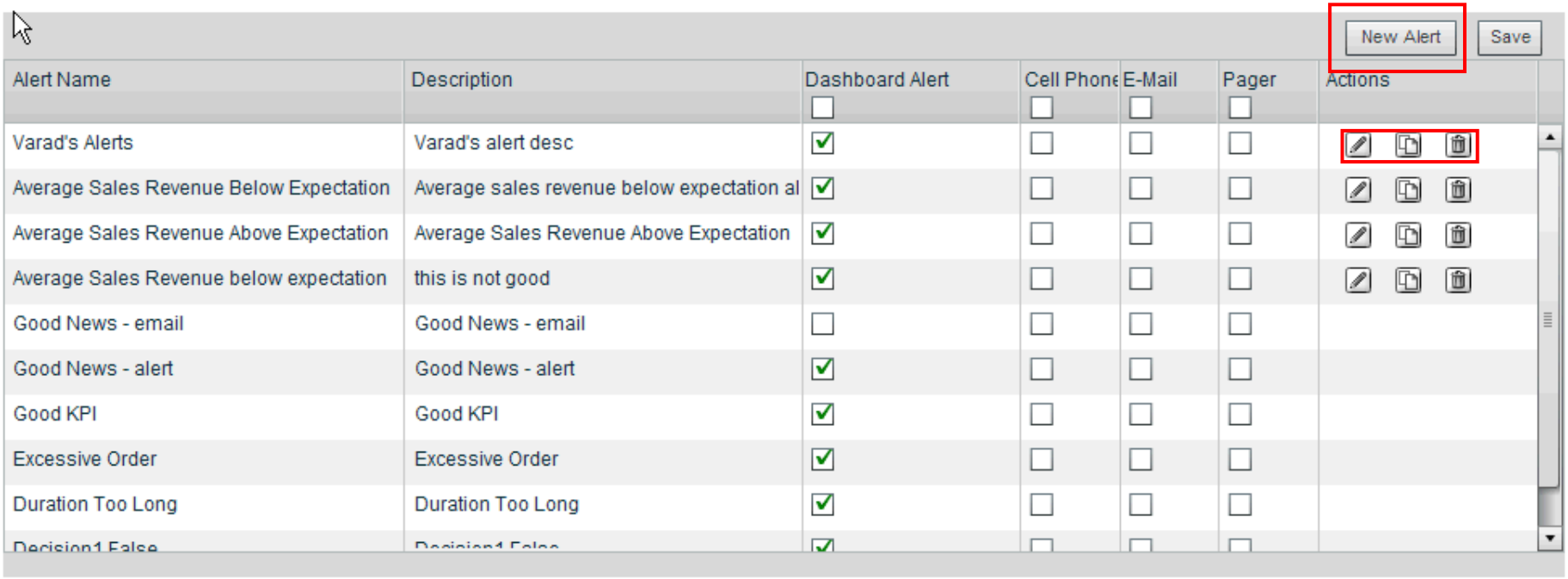
Business User Alerts

- New Alert Manager widget replaces Alert Subscriptions, and adds additional function to create, edit and delete Business User Alerts, as well as change subscriptions



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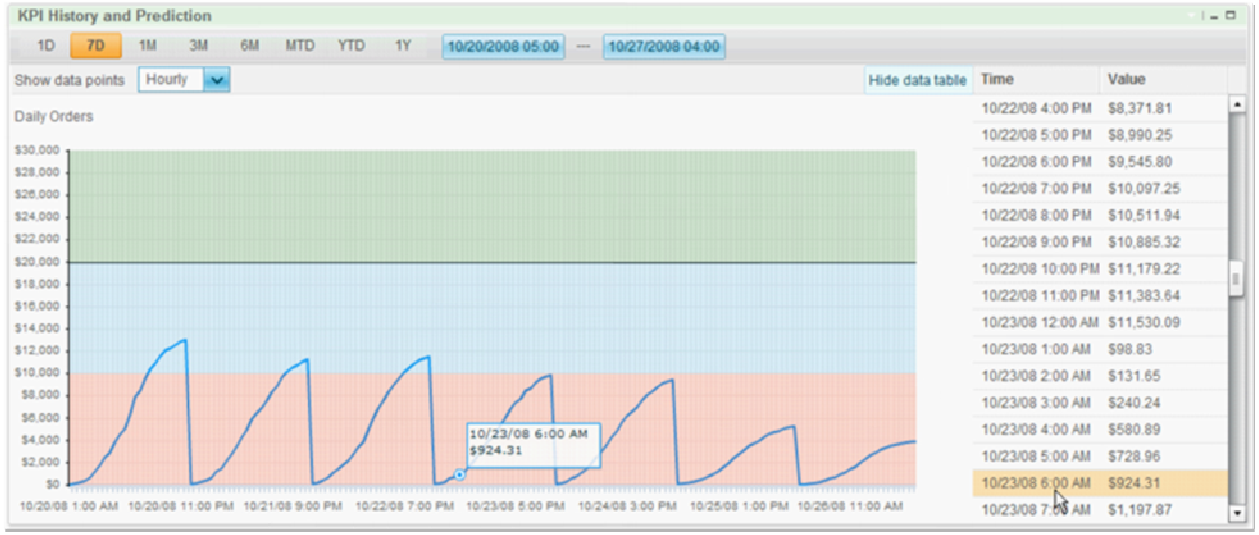
KPI History

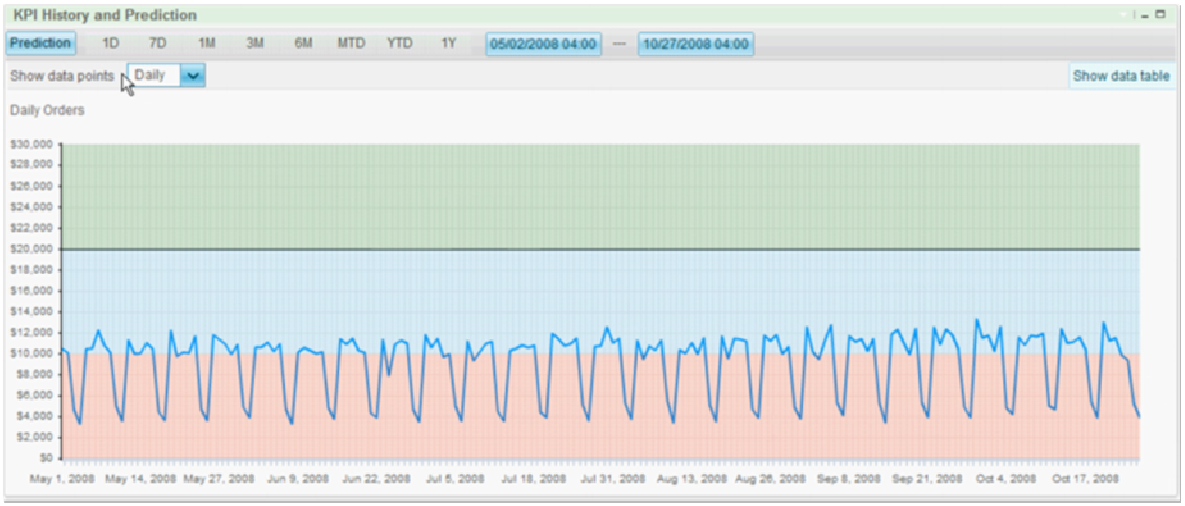
- View KPI value history over time
- Variable data frequency
  - Show daily values
  - Show monthly values

– Show targets and ranges

– Mouse over data points and ranges to get extra information

– Interactive chart for changing time range





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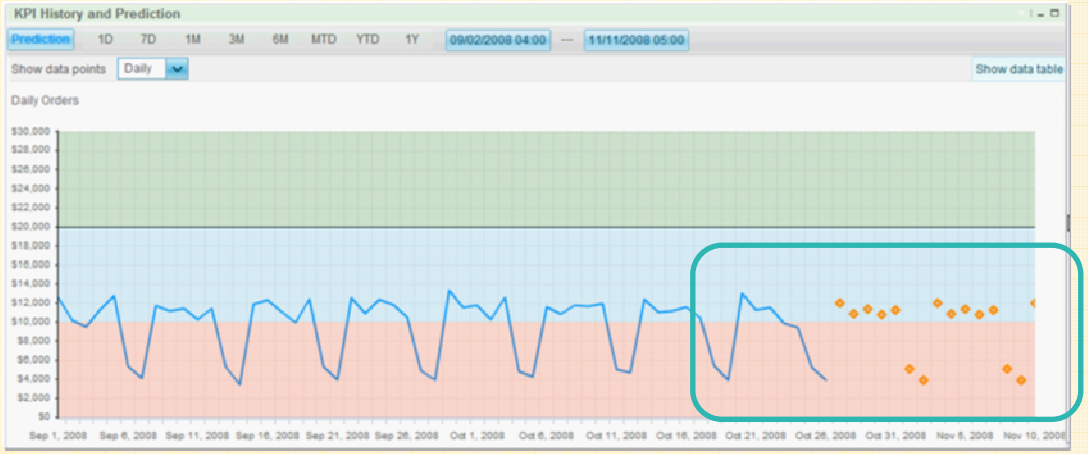
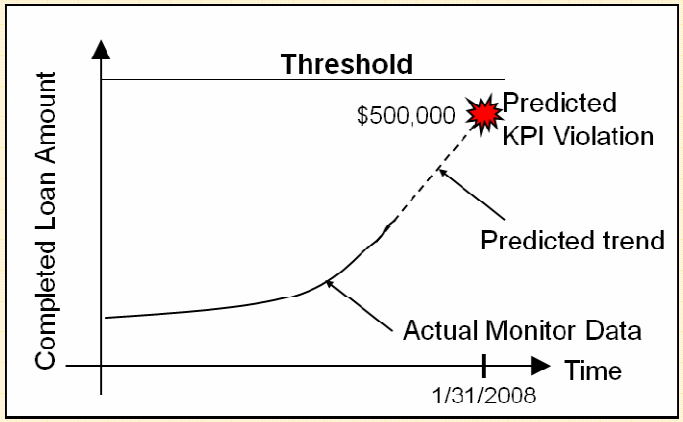
Predictive Monitoring





- Predictive KPIs
  - Use current trends and historical seasonal/cyclical patterns to compute the future values of KPIs
- Predictive alerts
  - Use predictions to detect potential violation of threshold conditions. Take proactive action through a process or by changing a process
- Pattern detection with WBE
  - Send predictive alerts to WebSphere Business Events to detect complex situations indicating a potential business problem that might otherwise go undetected.

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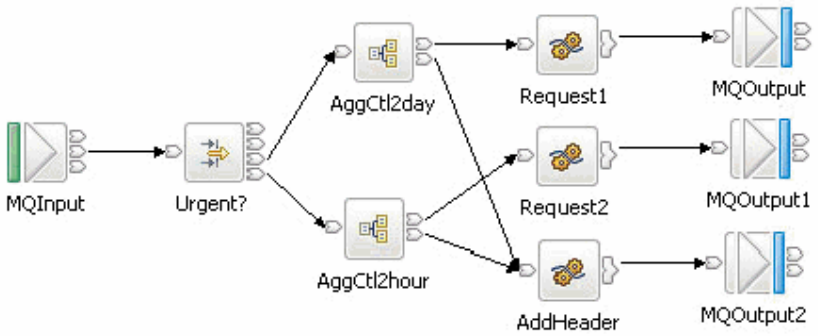
Enhanced **Message Broker** monitoring



- More capable: Events can now contain complex, structured content
- Broader visibility: In addition to raising events on input nodes (as with 6.1), can now raise events from any terminal in the flow (6.1.0.3)
- Easier development: New MB Toolkit support for creating xpath expressions to populate event content
- Easier administration: Graphical administration tools for enabling event emission

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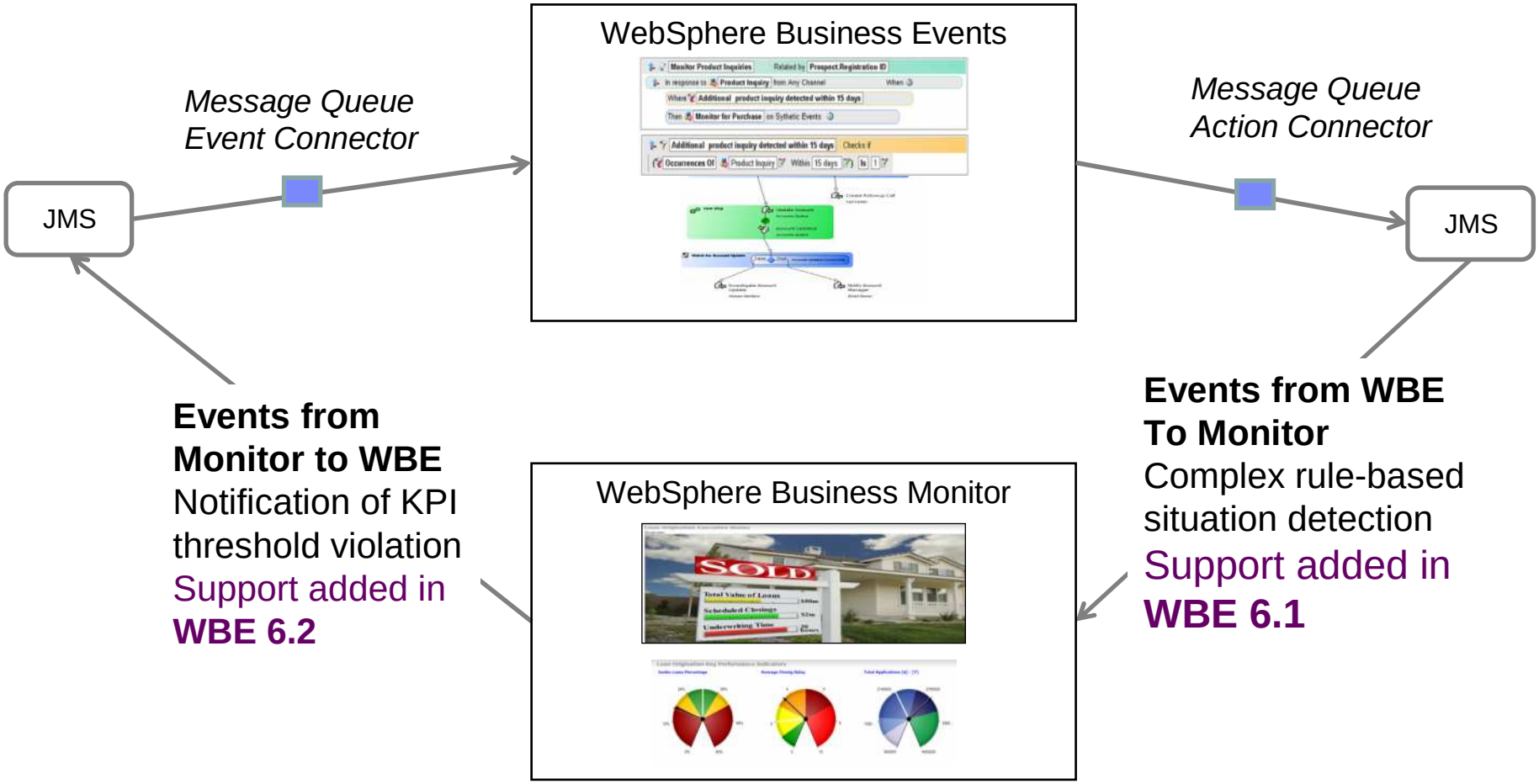
Enhanced **WebSphere Business Events** integration



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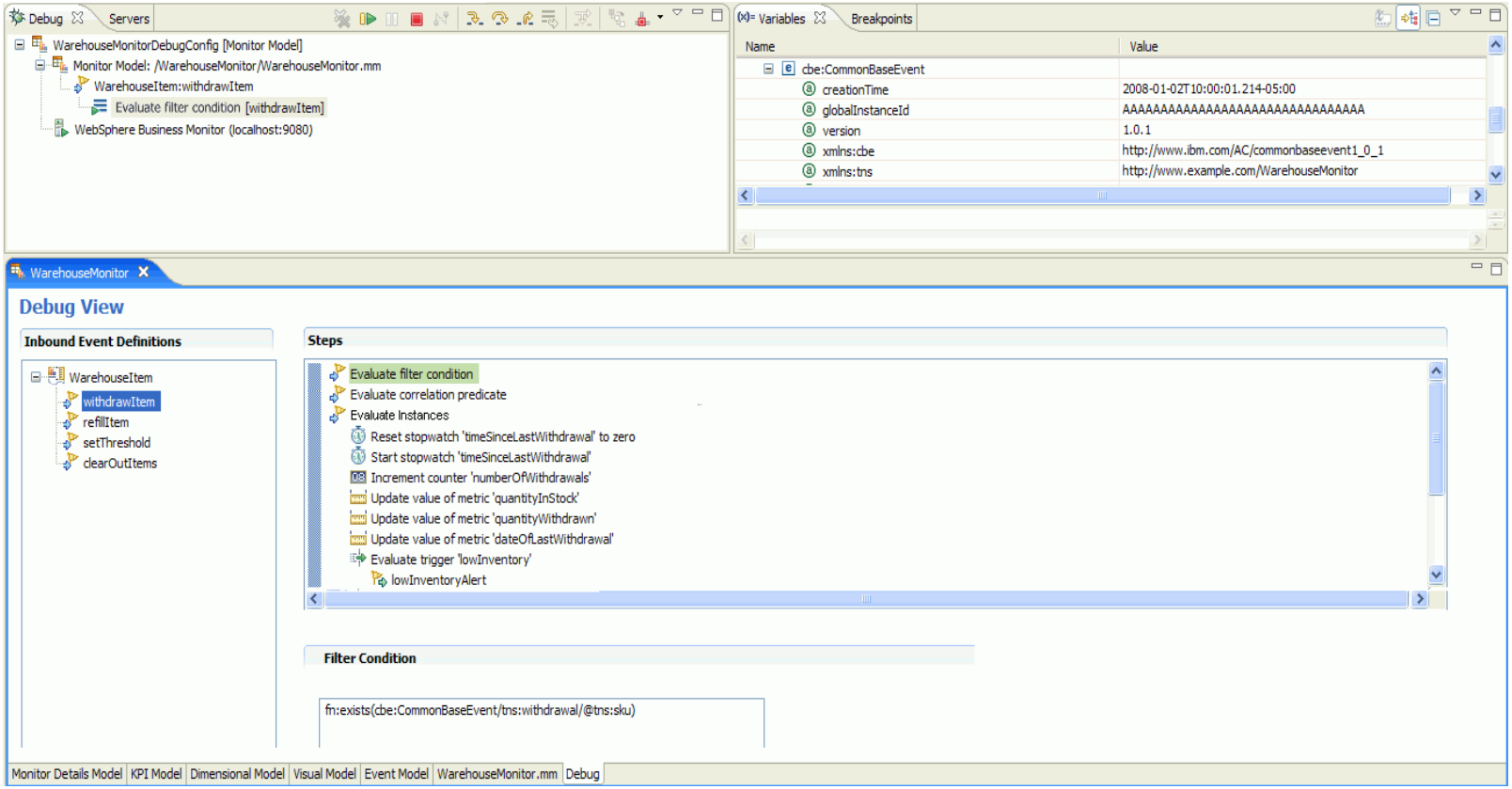
Improve Productivity of Developers through **Graphical Debugger**

- New features in 6.2 to improve speed to accurate models
  - Ability to process events directly from CEI (use of ITC now optional)
  - Significant Usability and Performance improvements



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Flexible Access to Business Indicators and Alerts: Mobility and Integration into Business User Experiences

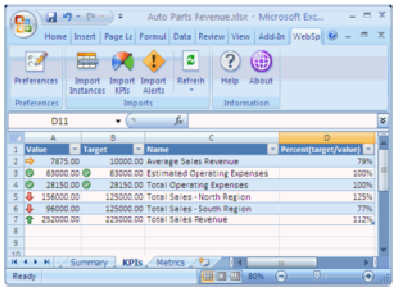
Business Users

Process Owner

Business Analyst

Business Leader

On Blackberry smartphones and iPhones



In Excel

Through Google Gadgets and Google Desktop

Business Space and Portal

Lotus Sametime and Notes

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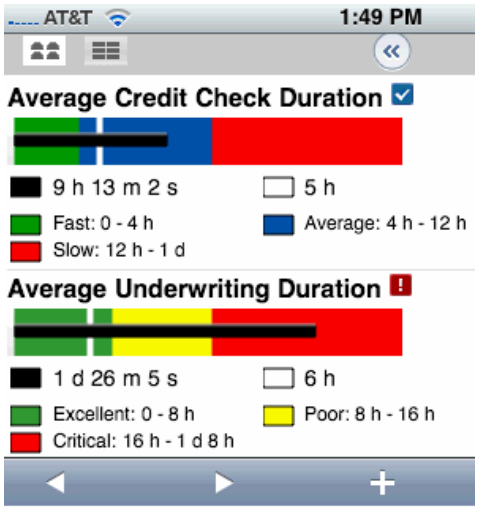
Experience Monitor through your **iPhone**



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Thank You

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