

Rich Enterprise Applications


Powered by Oracle Application
Development Framework
(Oracle ADF)



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Building Process Centric Applications with ADF and BPM

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Sr. Director, BPM Suite Product Management



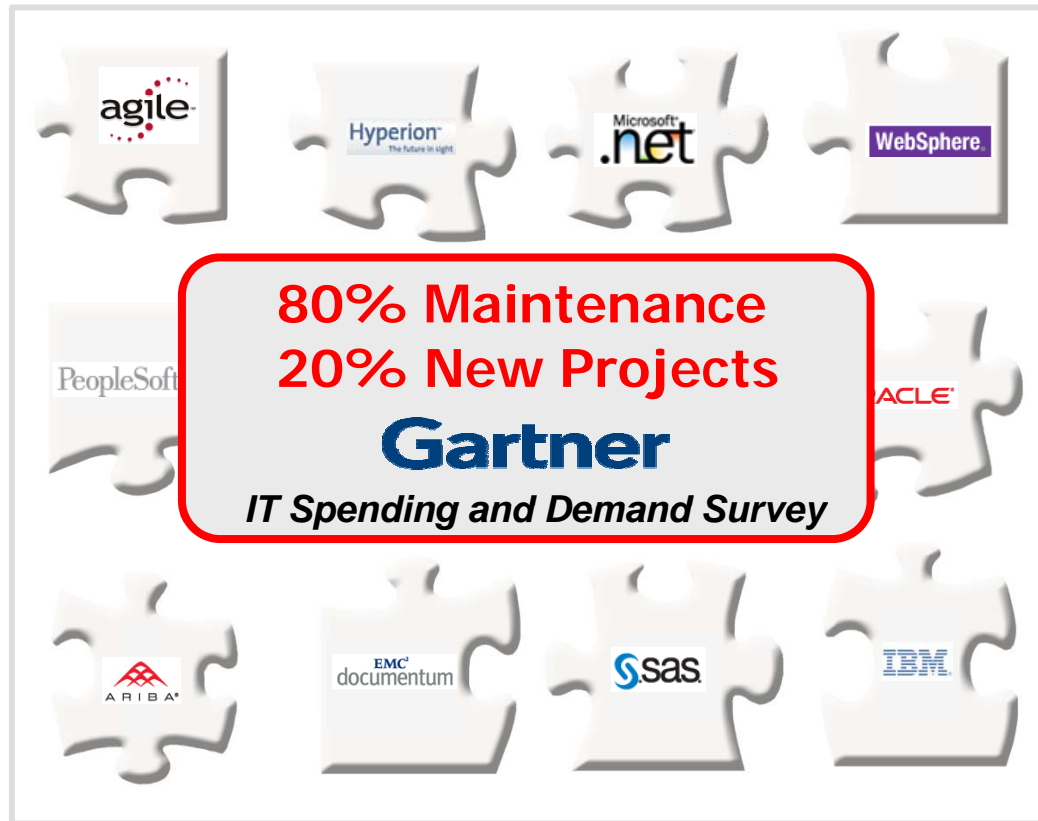
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Agenda

- • Why BPM for building applications
 - Introduction to Oracle BPM Suite 11g
 - BPM 101 Demo
 - How to use BPM for building applications
 - BPM and ADF
- Learn More

The Challenge



How to....?

- ... orchestrate multi-channel customer interactions?
- ...automate processes across applications?
- ...easily modify such processes?
- ...make relevant business insight available to the masses?
- ... make upgrade safe customization to applications?

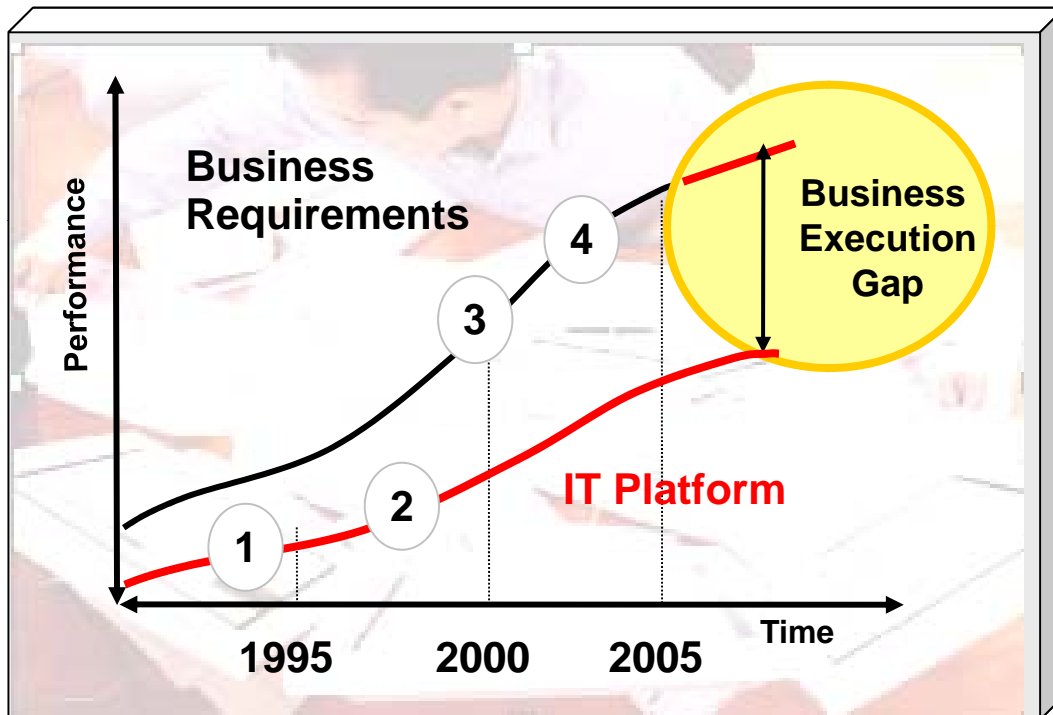


7 Impediments

1. Business intent is “lost-in-translation” due to business-IT “impedance mismatch”
2. Change is hard but shows up immediately and never ends
3. Variations in needs and requirements between geographies and departments
4. User adoption is harder than anticipated
5. Lack of business visibility into status of transactions
6. Difficult to relate investment to business benefits delivered
7. No methodology to continually improve

The Result

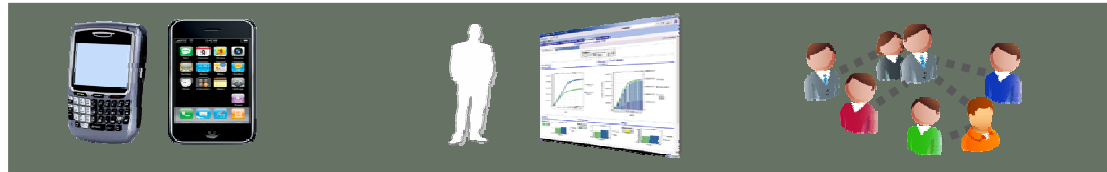
When business conditions evolve faster than the company's ability to change and respond...



- 1 ERP Deployment
- 2 CRM Deployment
- 3 Internet Explosion
- 4 Industry Consolidation

... business performance suffers

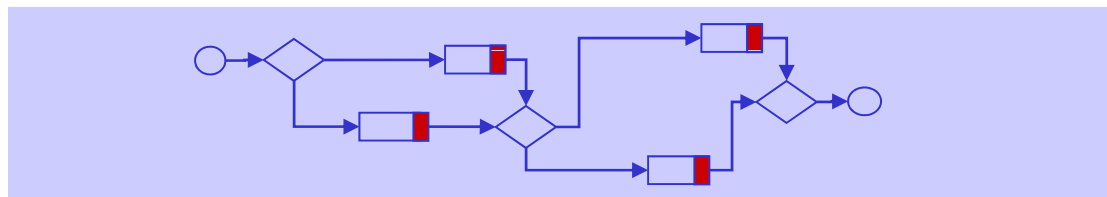
The Ideal Solution



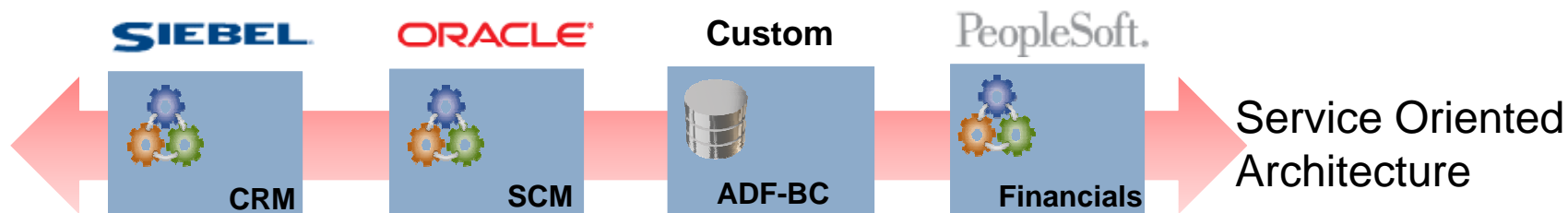
Multi-channel,
Collaborative,
Rich User Interface



Actionable
Intelligence



**Cross-Application
Business Process
Management**



Application and Database Grid Foundation

Platform Services on
Demand

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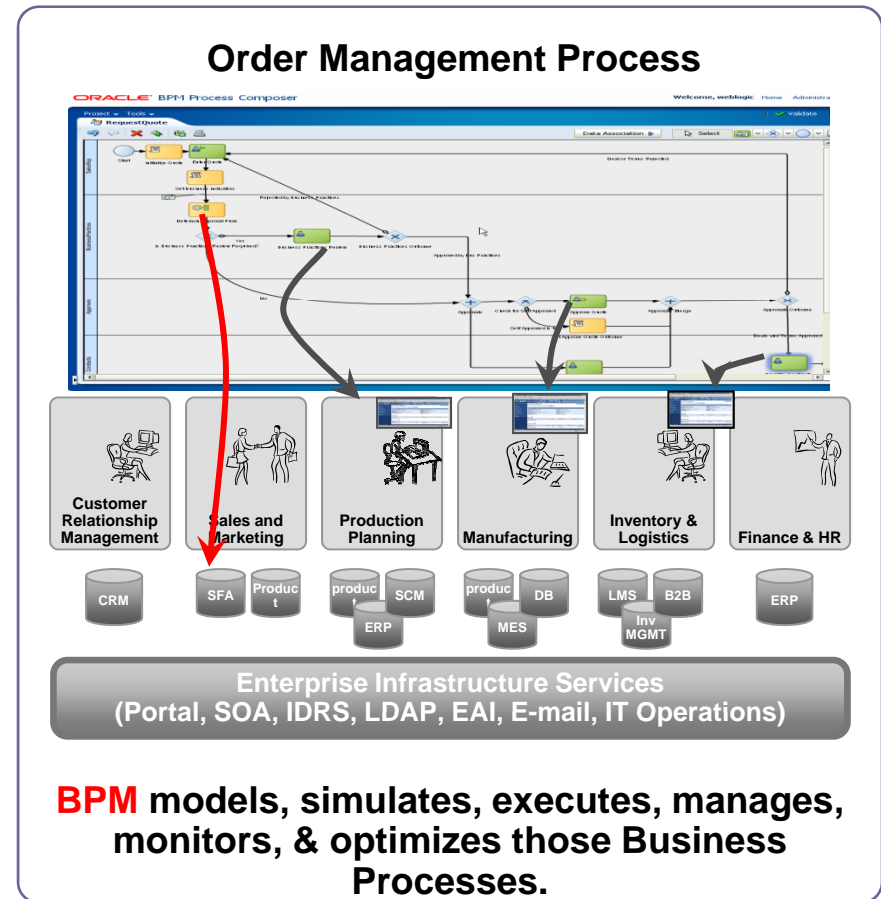
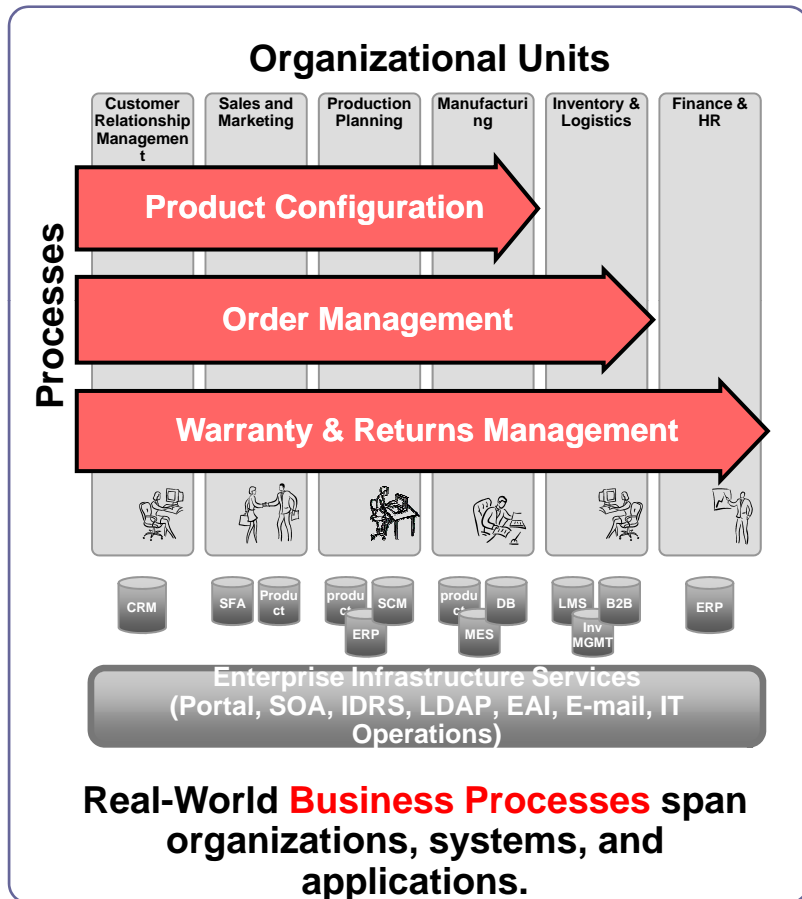
BPM Defined

Business Process Management

An explicit approach to modeling, automating, measuring and optimizing business processes across organizational divisions, systems and applications

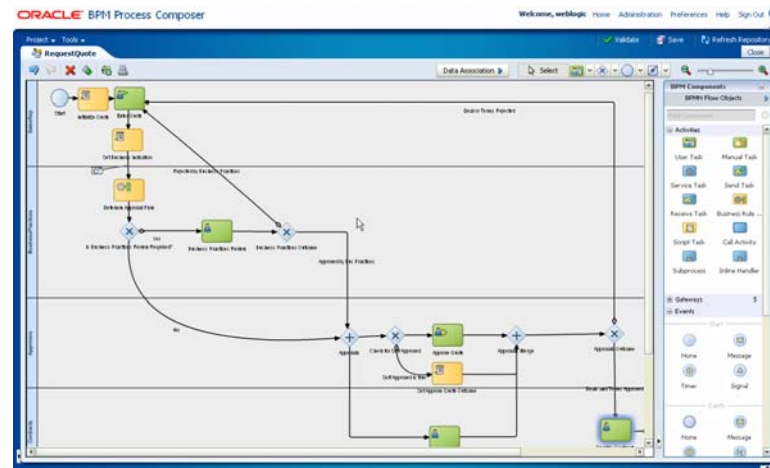
End-to-End Business Processes

Optimized, Transparent and Agile

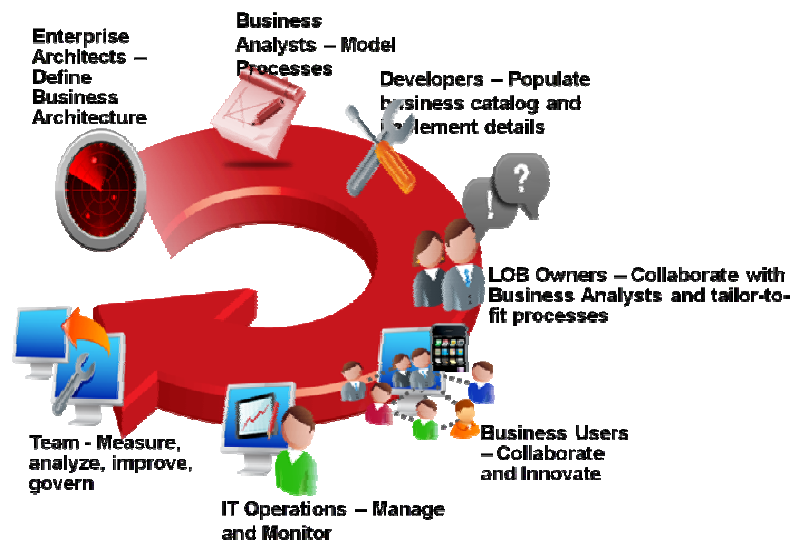


Business and IT Collaboration

Tailor-to-fit Business Processes



- Empower business users with easy-to-use process and rules modeling
- Seamless business and IT Collaboration



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Rules driven Process Execution

```
package enterquotesui.backing;

import ...

public class DiscountHelper {
    private Double grossRevenue = null;
    private Double netRevenue;

    public DiscountHelper() {
        super();
    }

    public Double getGrossRevenue() {
        //System.out.println("getGrossRevenue Call");
        calculate();
        //System.out.println("getGrossRevenue Return");
        return netRevenue;
    }

    public Double getEffectiveDiscount() {
        // Avoid unnecessary duplication
        if (grossRevenue == null) calculate();

        //Double d = netRevenue.doubleValue();
        //d = d / grossRevenue.doubleValue();
        double d = grossRevenue.doubleValue();
    }
}
```

Ruleset_1

ApprovalMatrix

Conditions	R1	R2	R3	R4	R5
C1 QuoteSummaryType.effectiveDiscount <= preApprovedDisco...	true			false	
C2 QuoteSummaryType.effectiveDiscount	-	<0.3,[0.3..0.6)	[0.6..0.9)	>=0.9	[0.6..0.9),>=0.9
C3 QuoteSummaryType.totalNetRevenue	-	-	-	<150000,[150000.....	[5500000..15000000),...

Conflict Resolution

Override

Actions

A1 modify result(R1	R2	R3	R4	R5
businessPracticesReviewNeeded: boolean	false	true	true	true	true
numberOfTier3Levels: int	0	1	1	2	2
selfApproved: boolean	true	false	false	false	false
tier1ApprovalNeeded: boolean	false	false	false	true	true
tier2ApprovalNeeded: boolean	false	false	true	true	true
tier2Approvers: String	tier2Approvers-base	tier2Approvers-base	tier2Approvers-base	tier2Approvers-base	tier2Approvers-high

- Rules driven approval flows and task routing
- Rules driven process logic
- Rules driven validations



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BPM 11g – Functional Summary

Process Composer



- Web-based customization
- Deployment ready processes

BPM Studio



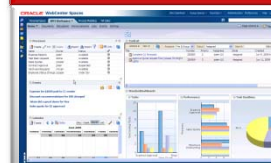
- Business IT Collaboration
- Agile Development
- Unified IDE

Process Analytics



- BAM, BI
- Business Indicators & Measures
- Process Cubes

Process Spaces



- Rich persona based UI
- Web 2.0 based Extreme collaboration
- Contextual insight

BPM Runtime

- Standards – BPMN 2.0, BPEL, WS-Human Task
- Business Rules
- Dynamic
- Enterprise-grade
- Layered on SCA based SOA server

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BPM 11g Feature Highlights

- 1 BPMN 2.0 modeling & simulation
- 2 Web-based Process Composer
- 3 Model is the executable (Zero Code)
- 4 Business catalog driven collaboration
- 5 Social Process Spaces
- 6 Ad-hoc and collaborative processes
- 7 Rich process analytics
- 8 Unified BPM & SOA runtime server





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Demo

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Agenda

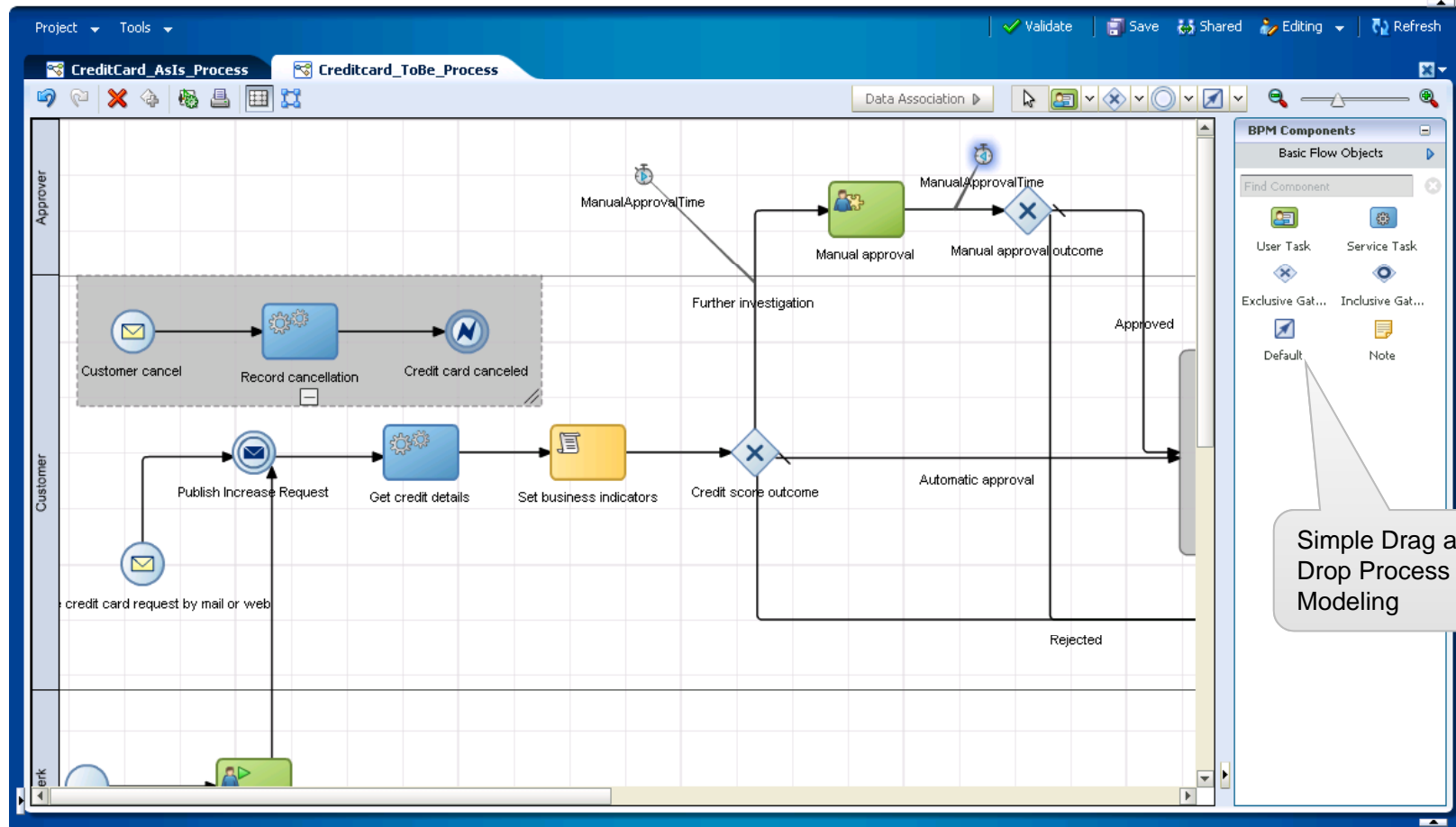
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Process Composer

Let Business Analysts Drive

ORACLE® Business Process Composer

Welcome, jstein Home Administration Preferences Help Sign Out



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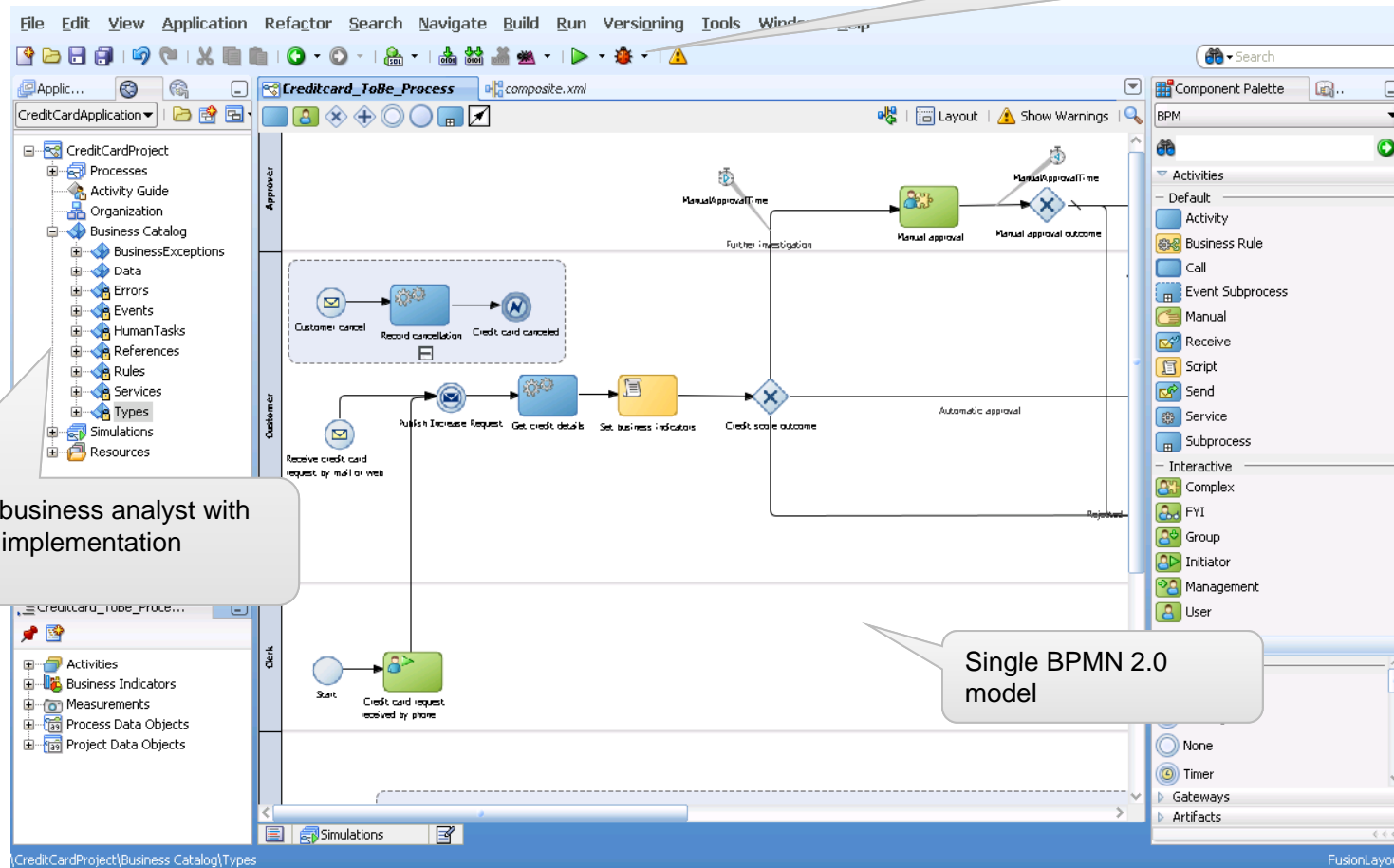
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Process-centric Application Design

Single Model From Modeling to Execution

Studio – Comprehensive IDE for Developers



Empower business analyst with catalog of implementation artifacts

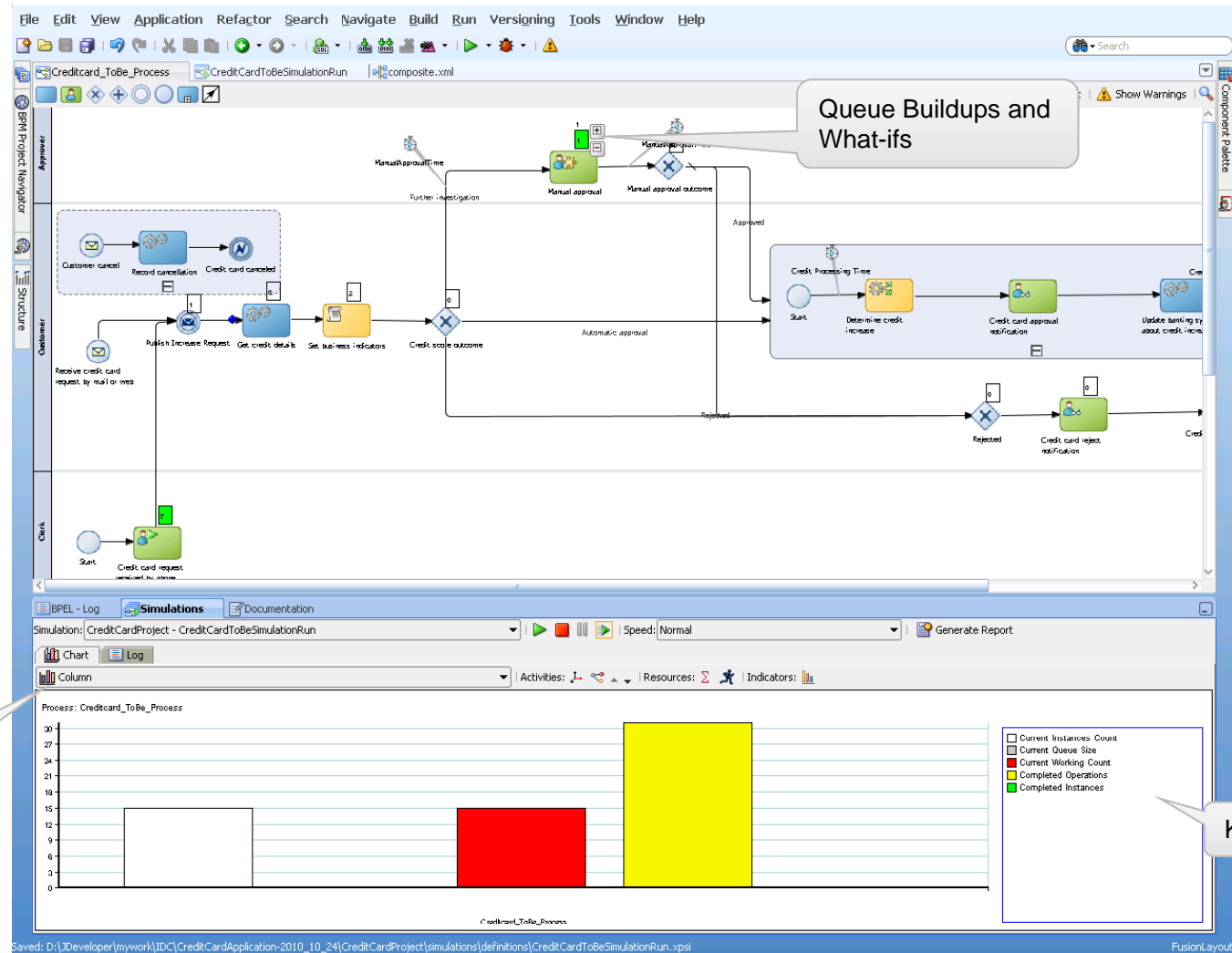
Single BPMN 2.0 model

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Simulate Before You Implement



Business Rules

Delegate business-interesting, volatile, dynamic,
and highly-varying logic to Business Rules

ORACLE Business Process Composer

Welcome, jstein Home Administration Preferences Help Sign Out

Project Tools

Validate Save Shared Editing Refresh

CreditCard_AsIs_Process Creditcard_ToBe_Process CreditIncreaseRules

(x) Globals
Bucketsets
Links
Decision Functions

Rulesets
CreditIncreaseRules

View DecisionTable

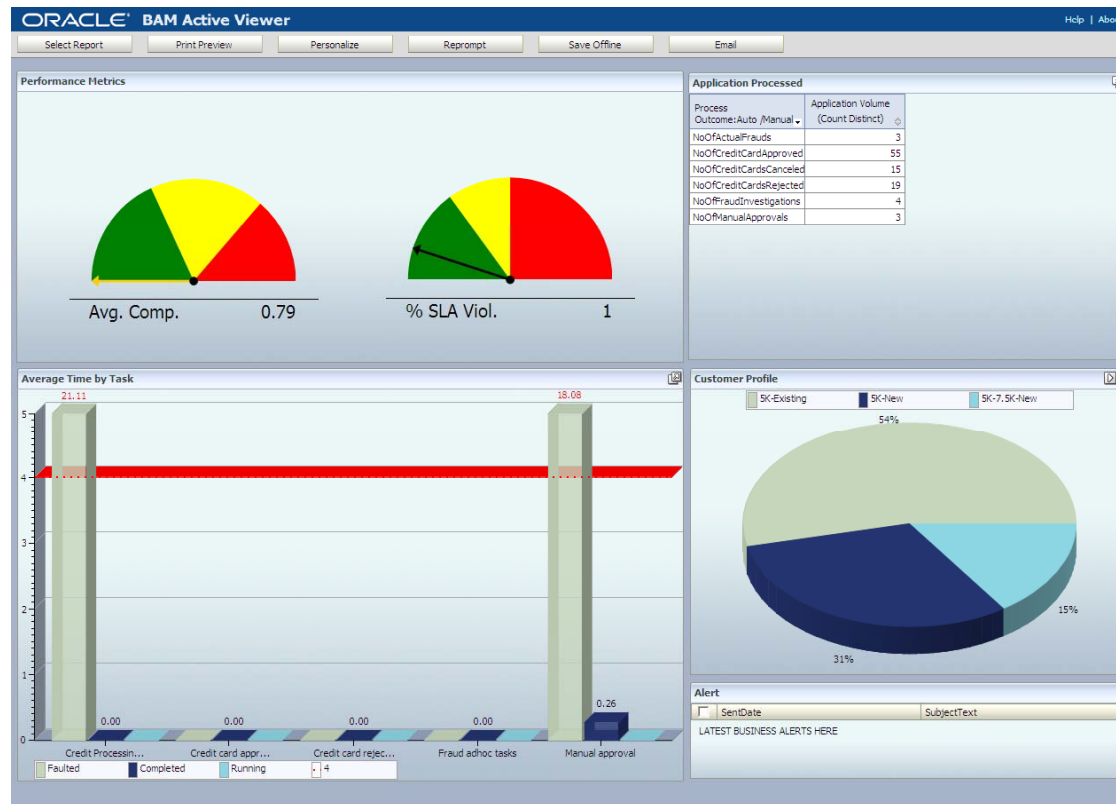
DecisionTable

Show Conflicts Switch Rows to Columns

Conditions	Rules			
	R1 X	R2 X	R3 X	R4 X
CreditScoringResponseType.currentBalance	<1000.0, [1000.0..5000.0)		[5000.0..10000.0), [10000.0..100000.0)	
CreditScoringResponseType.latePaymentCount	<1, [1..3)	[3..5), >=5	<1, [1..3)	[3..5), >=5
Conflict Resolution				
Actions				
Modify result	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
approvedIncrease:int	2000	1000	5000	2000

Process Analytics

Build business metrics into design and drive continuous process improvement



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Task-centric Design

Design Deadlines, Notifications, Authorizations

Single-click Form Generation

Deadlines and Notifications

Digital Signatures

Grant or deny actions based on roles

Actions	Admin	Approvers	Assignees	Creator	Owner	Reviewers
APPROVE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
REJECT	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Acquire	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Adhoc Route	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Delegate	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Escalate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Check action boxes to permit access: ☒ Coarse grained ☐ Fine grained Reset

Signature policy: None

Specify Restricted Assignment: Configure Restricted Assignments...

Process Workspace

Business visibility into status of transactions and
easy-to-use collaborative task-driven interface

The screenshot displays the Oracle Process Spaces Business Process Workspace interface. The interface is divided into several sections:

- Home:** Includes 'Available Processes' (e.g., [Base] ReportExpenses v1.0, [Base] RequestVacation v1.0), 'Members' (e.g., Conan Doyle), 'Process Calendar' (showing dates and process instances), and 'Recent Activity' (showing discussions and pages).
- Process Tasks:** A table listing tasks with columns: Title, Card Number, Account Id, Priority, Brand, Last Name, First Name, Start Date, Created, and Instance Space. The table shows three tasks related to 'Fraud Handling'.
- Process Monitors:** A section for monitoring process performance, including a 'Workload per process' chart.
- Discussion Forum Manager:** A section for managing discussions, including a 'Create Topic' button and a list of topics.
- Standard Dashboards:** A section for viewing process details, including a table of process instances, a 'Details' section for a specific instance, and an 'Audit Trail' section showing the process flow.

The 'Standard Dashboards' section is expanded, showing a detailed view of a process instance. The 'Details' section shows the process name, instance number, and status. The 'Open Activities' section shows a list of activities. The 'Audit Trail' section shows a flow diagram with nodes for 'customer cancel', 'Manual approval', and 'Automatic approval'.

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BPM and ADF

- View Controller – BPM generates and uses ADF Faces and Task Flows for BPM UI elements
- Model/Binding Layer – BPM Data Control
- Business Services Layer – BPM can leverage ADF-BC data and services

BPM Forms are ADF Task Flows

Data Controls – ADFBC, Web Services, etc.

BPM Data Control for drag-and-drop extension of generated form

Built-in components for comments, attachments, etc.

Data Visualization Components.



BPM Forms continued

- 3 Flavors of Form Generation
 - Generate to new ADF View Controller Project
 1. One-click
 2. Wizard driven, template based
 - Add BPM Task Flow to existing ADF View Controller Project
 3. New → ADF Task Flow based on Human Task
- All flavors can be modified in ADF editors
 - Special drop-handlers for adding BPM elements when dragging and dropping Task element from Data Control
- ADF page included in email notification

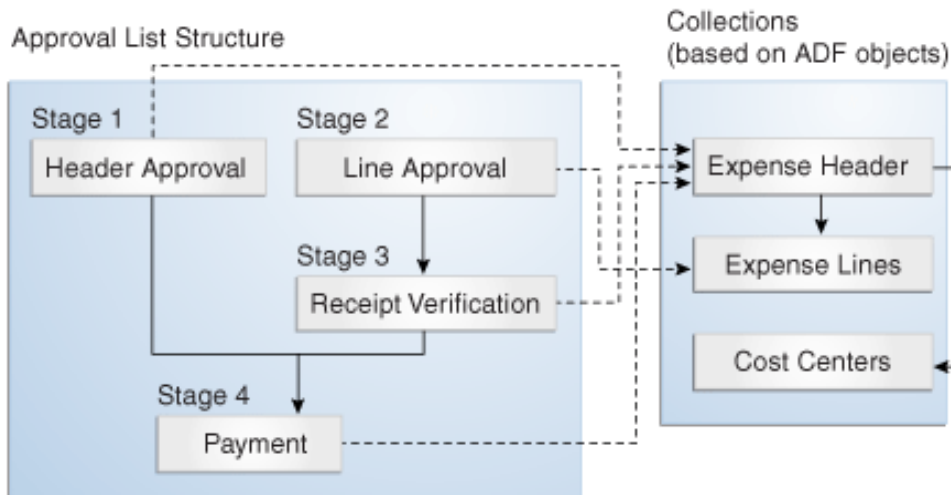


BPM and ADF-BC Interaction Patterns

- BPM Task Flows can include ADF-BC data controls
- BPM can get data using ADF-BC services
- Human Tasks can work with ADF-BC services
- Business Rules support ADF-BC facts
- BPM and ADF can interact via EDN events

ADF-BC Driven Approval Routing

Tasks can be routed and assigned based on ADF-BC objects



History			
<div><div><div></div><div></div><div></div></div><div>Task Snapshot</div><div><input checked="" type="checkbox"/> Future Participants</div><div><input checked="" type="checkbox"/> Full task actions</div><div><input checked="" type="checkbox"/> All parent tasks</div><div>Apply</div><div>Reset</div></div>			
#	Participant	Action	Action Date
1	SupervisoryStage		
1.1	wfaulk(user)	ASSIGNED	Jul 25, 2008 4:10 PM
1.2	cdickens(user)		
2	Lines		
2.1	Lines		
2.1.1	Lines		
2.1.1.1	wfaulk(user)		
2.1.1.2	cdickens(user)		
2.1.2	Lines		

Business Rules and ADF-BC

ADF-BC Facts and Decision Point API

The screenshot displays the Oracle JDeveloper IDE interface. The top toolbar shows the 'OracleRules1.rules' file. The left sidebar contains a 'Facts' section with a tree view showing 'Functions', 'Globals', 'Bucketsets', 'Links', 'Decision Functions', and 'Rulesets'. The 'Rulesets' section is expanded, showing 'Ruleset_1'. The main workspace is divided into two panes. The top pane, titled 'ADF-BC Facts', contains a table with the following data:

Alias	View Definition	Top Level
DepartmentsView	orderapproval.DepartmentsView	<input checked="" type="checkbox"/>
EmployeesView	orderapproval.EmployeesView	<input checked="" type="checkbox"/>

The bottom pane shows the rule logic for the 'THEN' clause. The logic is as follows:

```
Manager is a Employee and  
    Manager.EmployeeId == Employee.ManagerId and  
    Manager.DepartmentId != Employee.DepartmentId  
<insert test>  
  
<insert pattern>  
THEN  
    assert new MessageAction ( <add property> message : "Employee " + Employee.FirstName + " " + Employee.LastName + "(" + Er  
<insert action>
```



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Conference Tracks

Time	Basics	Advanced	Hands on Lab	Best Practices	Enterprise
8:00 – 8:15	Conference orientation				
8:15 – 9:00	Keynote: Rich Enterprise Applications				
9:00 – 10:00	Rich Web UI made simple - an ADF Faces Overview	Developing for Mobile Devices with Oracle ADF	LAB – Web Applications with ADF Part 1	Starting an Enterprise ADF project	Developing with Oracle WebCenter
10:00 – 11:00	Next Generation Controller for JSF	ADF Binding Internals	LAB – Web Applications with ADF Part 2	The bit every one forgets: Unit testing your ADF applications with JUnit	Build Killer Sites with Oracle WebCenter
11:00 – 12:00	From Forms to ADF - When, Why, How?	Advanced ADF Faces - Skinning & Javascript	LAB - Web Applications with Oracle WebCenter	ADF Security in a Project-Centric Environment - An ADF Case Study	Building Process Centric Applications with ADF and BPM
12:00 – 12:30	Survey & Event checkout				

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- <http://kscope11.com/>
- Special Fusion Middleware Track
- 50 dedicated sessions and hands on labs
- Presented by Oracle ACEs, developers and product managers
- ADF, WebCenter, BPM Suite and more



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Available Now Hands-On Tutorial

<http://snipurl.com/bpm11packt>



Coming Soon Handbook

<http://snipurl.com/bpm11handbook>



Downloads and More OTN



<http://www.oracle.com/technetwork/middleware/bpm/overview/index.html>

Ask and Discuss



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Summary

- BPM is an essential tool in an application developer's toolbox
- BPM enables process-centric applications that:
 - Adapt to change easily
 - Provide business end-to-end visibility
 - Drive outcome optimization through focus on metrics
- BPM as a methodology:
 - Enhances business IT collaboration
 - Drives continuous process improvement
- BPM leverages existing ADF skills and assets

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