



WebSphere software

Demo

Account verification

Products demo Business Process Management

ON DEMAND BUSINESS™

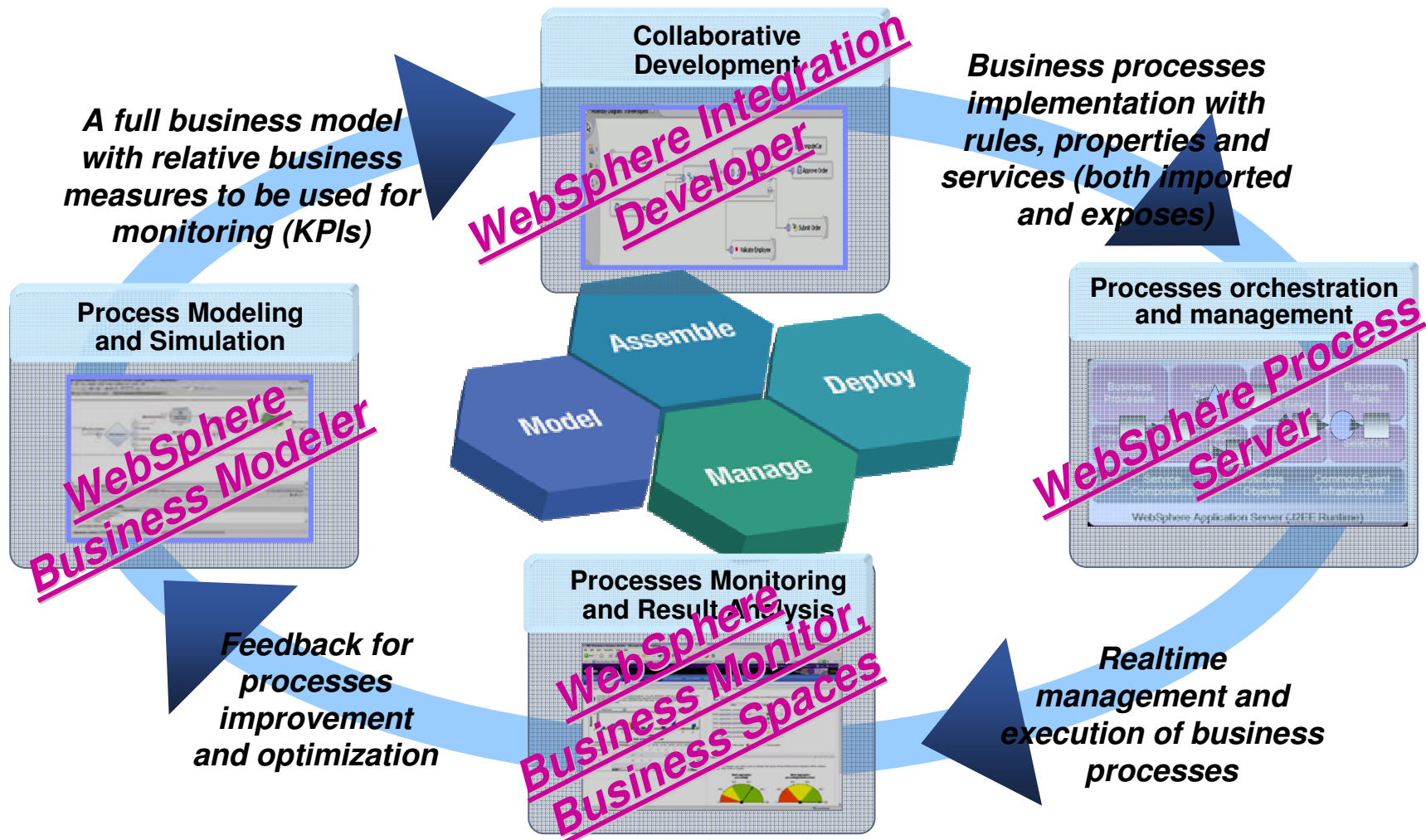
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Introduction ...

- Primary goal of this demo is to show the effective use in a BPM project of the following IBM products:
 - WebSphere Business Modeler
 - WebSphere Integration Developer
 - WebSphere Process Server
 - WebSphere Business Monitor/Business Spaces
- The products are so shown directly in their native lifecycle environment:
 - **Service Oriented Architecture** and **Composite Applications**
- The demo scenario is related to the *Account Verification process for a generic JK Enterprise*

Business Process Management attraverso la SOA

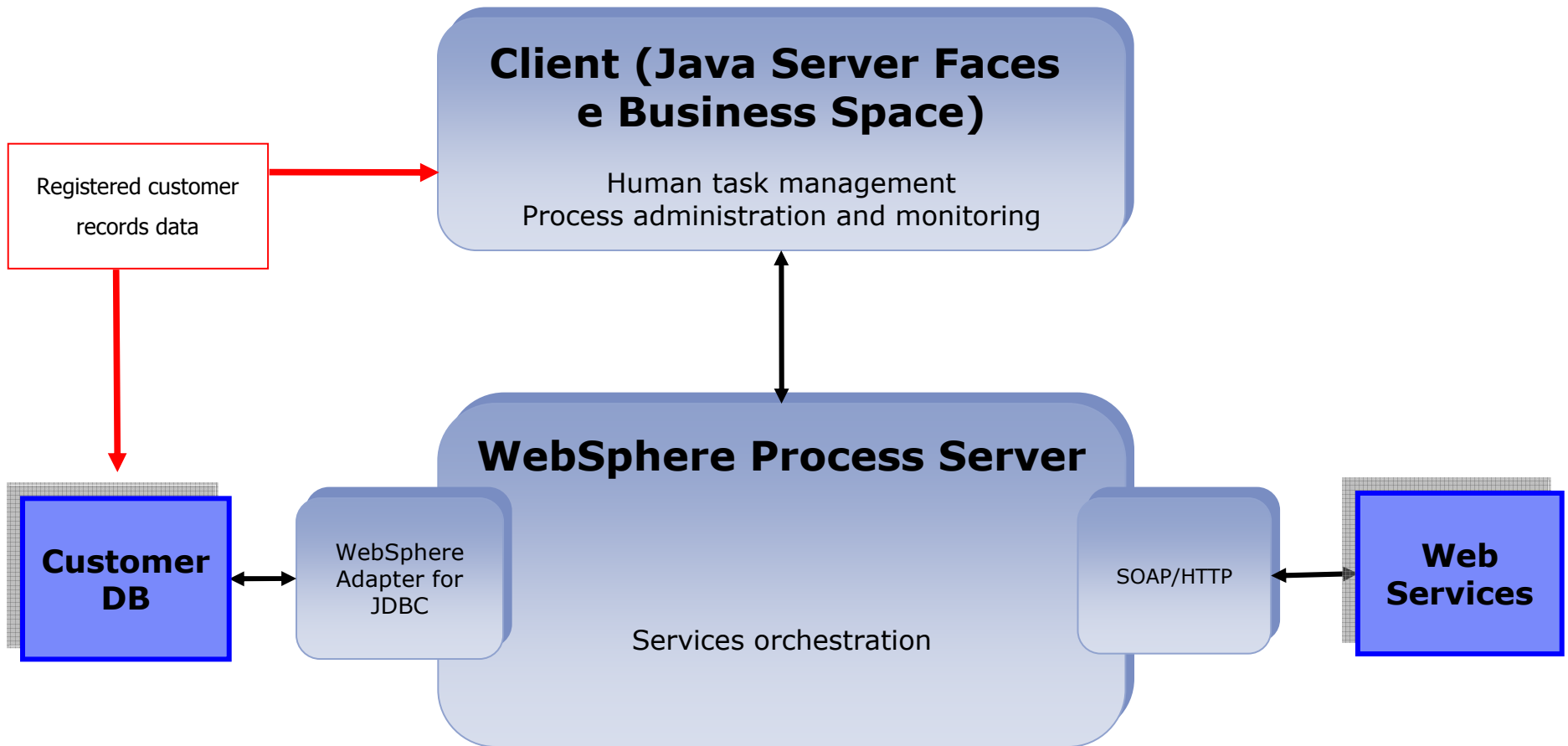
Iniziare dove occorre, utilizzare solo quello di cui si necessita



Scenario

- Proposed demo is about optimizing *account verification* process for a generic *JK Enterprise*
- The analyzed process leverages the reuse of externally provided services and applications:
 - **Registered customer information retrieval service:** the data is collected invoking external Web Services
 - **Business rules to assign a credit risk value to customer application:** local Java-based implementation and local defined rules
 - **Geographical pricing service:** this task is executed invoking an external web service selected at runtime
- In case of critical values for assigned *credit risk* the process needs human interactions (approvals) in order to complete

Technology components



Application architecture

- The demo has been developed following the guidelines defined by SOI and Composite Application approaches:
 - Integrated **applications** have been defined as “**web services**” defined by standard interfaces (WSDL).
 - **Exchanged data** is defined as XML documents (Business Objects)
 - **Integration logic** is defined through BPEL (Business Process Execution Language)
 - **Data mapping** is managed through interfaces maps external to the process logic

Application architecture

- **Java Server Faces interfaces** have been generated in order to manage **human task** available for the process
 - The interfaces supply to the process actors the possibility to manage and execute all the human tasks required for the full process execution, like the ones needed to approve or decline a credit request
- The new **Business Space** environment is used in order to manage and monitor the execution of the business process
 - *Business Space* is a web application integrating Web 2.0 widgets and allowing users to customize their own interface according to their needs

Application development

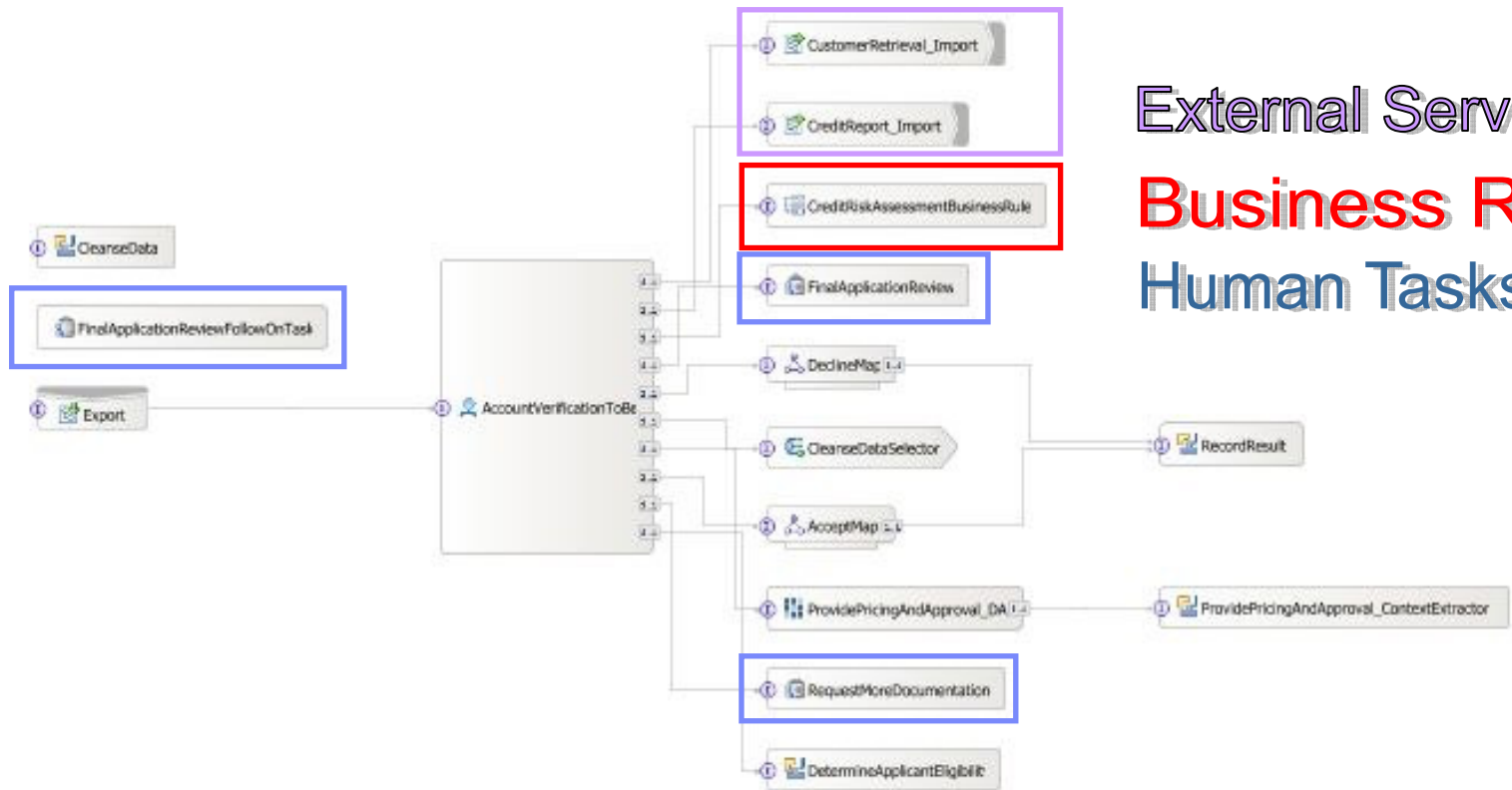
- The demo has been modularized as follows:
 - **CustomerRetrievalService**
 - Allows to retrieve registered customer information
 - **DetermineEligibilityService**
 - Contains the business logic in order to process with credit risk assessment
 - **ProvidePricingAndApprovalService**
 - Contains the business logic for determine the final pricing for the customer, bounded to its geographical region
 - **NoticeGenerationServices**
 - Generates final notifications for approved or declined requests

Development environment

- The demo development has been realized using following tools:
 - **WebSphere Business Modeler**
 - Business process modeling and process simulations
 - **WebSphere Integration Developer**
 - Process development, data transformation, service development and integration, ecc.

- All the products are based on the Rational Development Platform (Eclipse)

Demo – Assembly diagram



External Services
Business Rules
 Human Tasks

“Account verification” process

Business rule is used to automatically assess the customer associated credit risk.

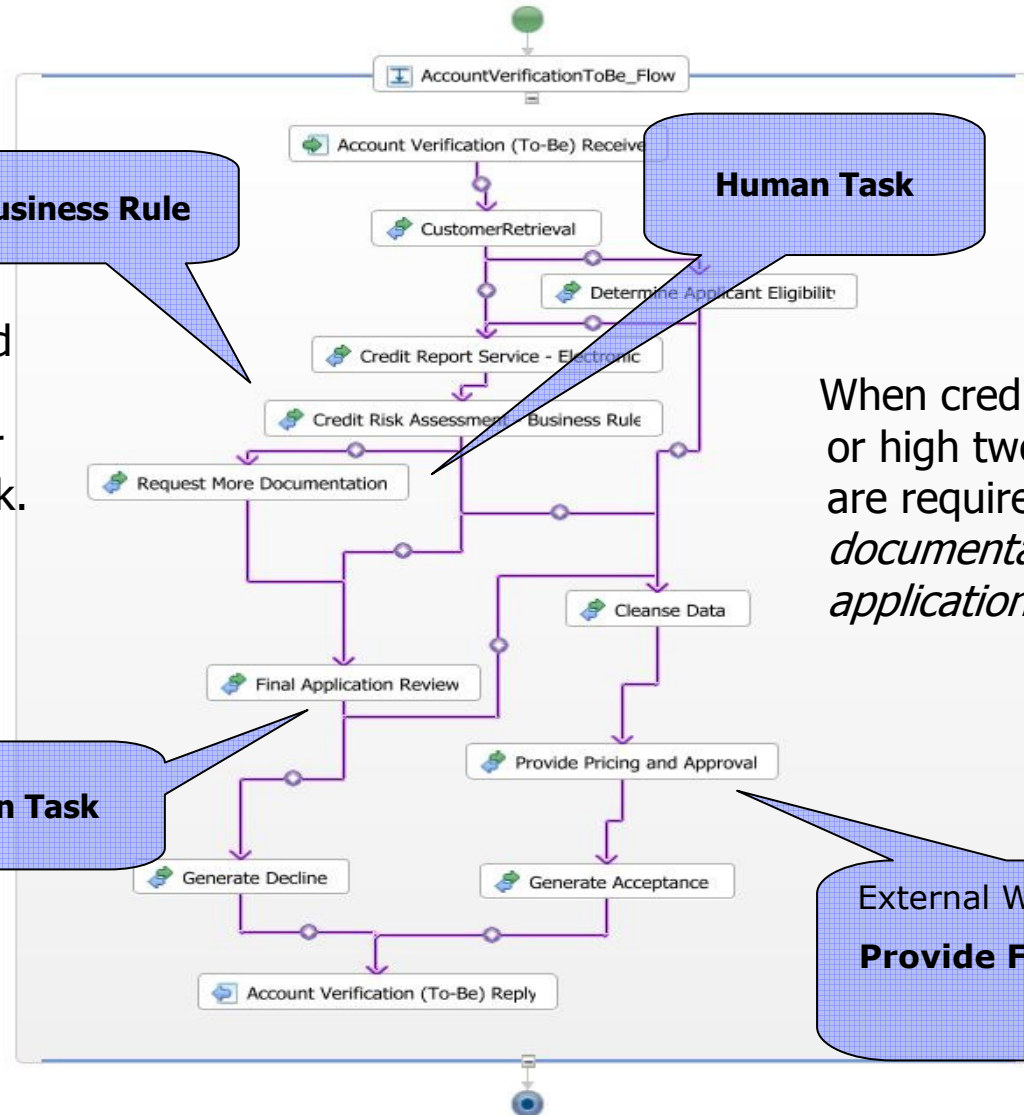
Business Rule

Human Task

When credit risk is medium or high two human tasks are required, *request more documentation* and *final application review*

Human Task

External WS invocation
Provide Final Pricing



Business Rules

- WebSphere Process Server can expose critical process properties through the use of Business Rules managed by its Business Rule Manager

▼ Rules

Name	Rule1
Presentation	
Action	Output = Input Output.creditRiskAssessment = "HIGHRISK"

Name	Rule2
Template	Template 1
Presentation	If credit score is greater than <input type="text" value="330"/> and less than <input type="text" value="589"/> then credit risk <input type="text" value="HIGHRISK"/>

Name	Rule3
Template	Template 1
Presentation	If credit score is greater than <input type="text" value="590"/> and less than <input type="text" value="749"/> then credit risk <input type="text" value="MEDRISK"/>

Name	Rule4
Template	Template 1
Presentation	If credit score is greater than <input type="text" value="750"/> and less than <input type="text" value="830"/> then credit risk <input type="text" value="LOWRISK"/>

Human Task – Request More Documentation

Request More Information

Customer Information

Customer ID Tax ID

Company Name

Address

Street

City

State/Province ZIP/Postal Code

Country

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Human Task – Final Application Review

Final Application Review

Application Details

Application ID Pricing Date Requested Limit

Credit History

Credit Score Report Required Yes NoApplication Decision Yes NoCredit Risk Assessment

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Start Process

Account Verification

New Customer Account

Please enter the Tax ID of the person you wish to create an account for:

Demo: Process actor accounts

Utente	Ruolo
admin	Administrator user
clerk	Start actor for the process
coord	Account coordinator
creditm	Financial manager

Demo: Casi di test e dettaglio budget uffici

Caso	Condizioni	Note	Esito
#1	▪ Customer Tax ID: 4	The customer is classified with a low credit risk assessment	Automatic processing
#2	▪ Customer Tax ID: 2	The customer is classified with a medium credit risk assessment	Credit Manager must approve the request (1 HT)
#3	▪ Customer Tax ID: 3	The customer is classified with a high credit risk assessment	In addition to previous case, Account Coordinator must supply further documentation (2 HT)
#4	▪ Business Rule Dynamic Change	The administrator changes the runtime business rules	The system will configure itself automatically to the new business rule values
#5	▪ Customer Tax ID: 4	Following the new Business Rules values, customer with ID 4 is now classified as a medium risk	As for customer with ID 2 the customer with ID 4 will require the Credit Manager approval (1 HT)

Benefits of using a SOI approach

■ **Riusability**

- It is intrinsic in the nature of the services, much more effective when services are modeled with the righth level of granularity

■ **Flexibility**

- Services interact by means of their interfaces (loose coupling)
- Process components can be easily replaced by other implementations and reconfigured according to the specific needs

■ **Modularization and progressive adoption**

- It is always possible to adopt a gradual approach to the SOA implementation:
 - Which are the starting applications to integrate
 - How integrate them

■ **Process integration enabler**

- SOI approach, by its nature, enable effective integration and future extensions of the process functions and implementation

Let's go...