Sun Java Composite Application Platform Suite

Java Forum Stuttgart, 4. Juli 2007

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Sun Microsystems

Agenda

- Sun Software Strategy
- Service-oriented Architecture
- Sun Java Composite Application Platform Suite (JavaCAPS)
  - eGate Integrator
  - eInsight Business Process Manager
  - eVision, eWay, eTL, eBAM, B2B, etc.
- What comes next?

Sun Software Strategy

The Global Power of Sun

Fortune
194
Company

Annual Revenues
$13+ Billion

U.S. Patents
5,000+

Java Devices
3.5 Billion

Java Developers
5 Million

Solaris
Licenses
7 Million

Annual Server Units
Up 14% Y/Y

Cash
$4.8 Billion

Annual Storage
Petabytes Shipped
410

Worldwide Employees
36,000

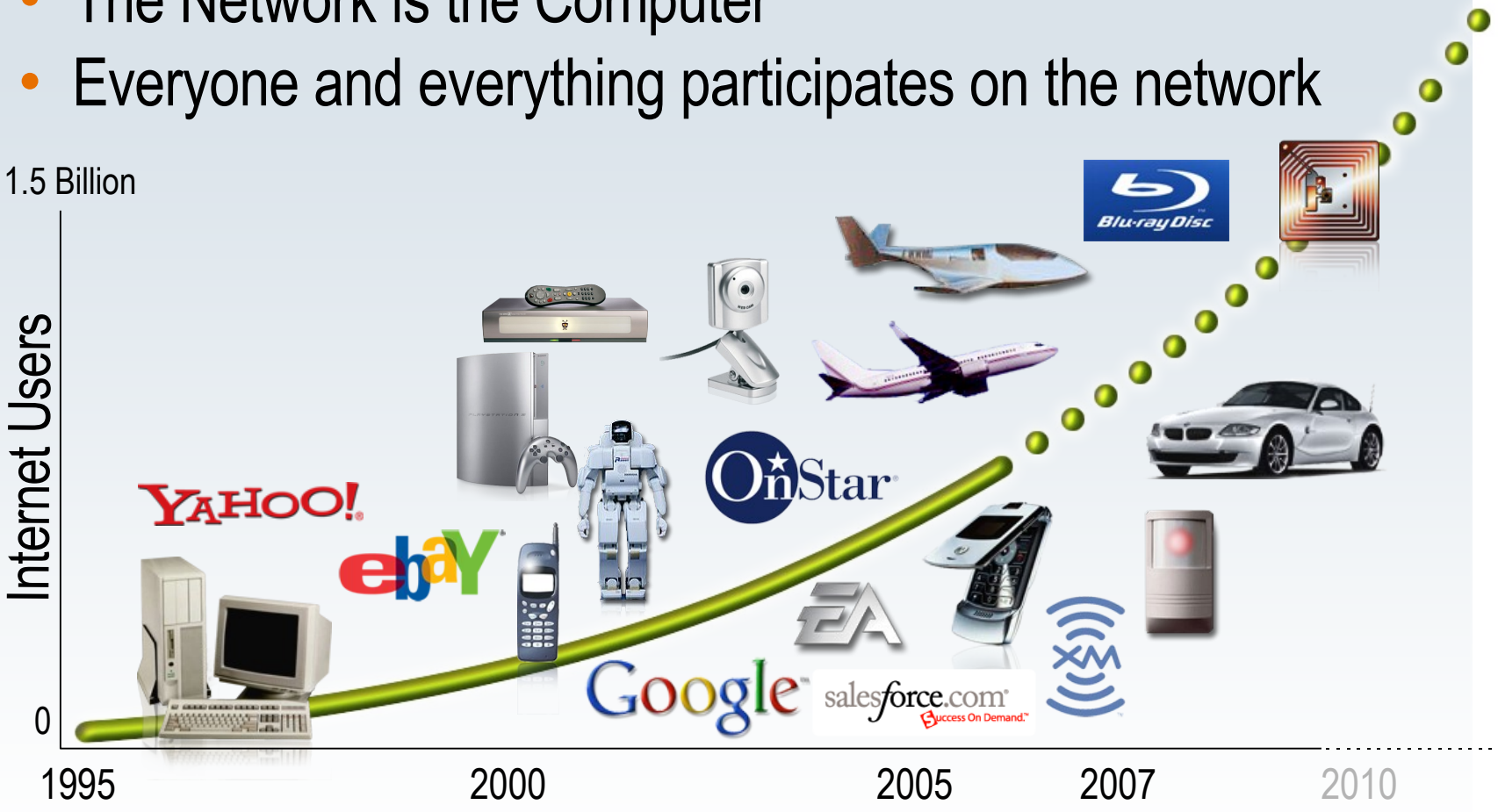
Annual R&D
$2+ Billion

Business Presence
100 Countries

Q4FY06

Our Vision

- The Network is the Computer
- Everyone and everything participates on the network



Our Strategy – Open Source

PostgreSQL

Roller

Project GlassFish

OpenDS
Open Source. Open Standards. Open Directory Service.

QSDL

"[Open source is] the most significant all-encompassing and long-term trend that the software industry has seen since the early 1980s."

IDC
Analyze the Future

"Sun is in the process of open sourcing almost all its software. Not even IBM – long friendly to the open-source Linux operating system—has gone that far."

BusinessWeek

NetBeans

opensolaris

Open ESB
The *Open* Enterprise Service Bus

OpenSSO
Open Access . Open Federation

mozilla

OpenOffice.org

Java™

Table 5: Estimate for FLOSS code contributed by firms

Top contributors

Rank	Name	Person-months	Cost (mil euro)
1	sun microsystems inc.	51372	312
2	ibm corp.	14865	90
3	red hat corp.	9748	59

Report on Open Source for the European Commission
http://ec.europa.eu/enterprise/ict/policy/doc/2006-11-20-flossimpact.pdf

"Every software asset we produce is open source. If it isn't today, it will be pretty damn quickly."

Jonathan Schwartz

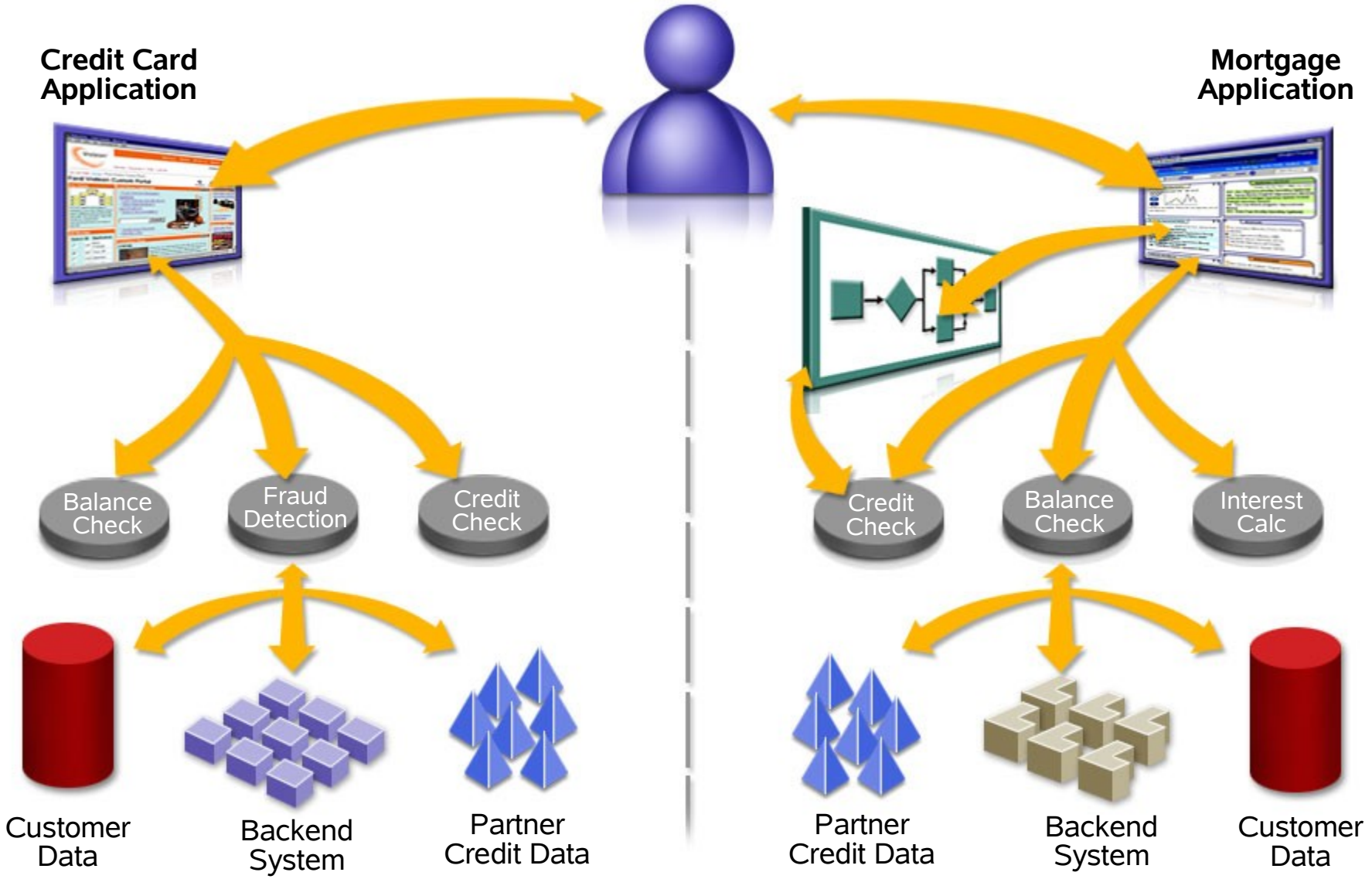
Sun microsystems

64 Bits. 32 Threads. OpenSPARC™

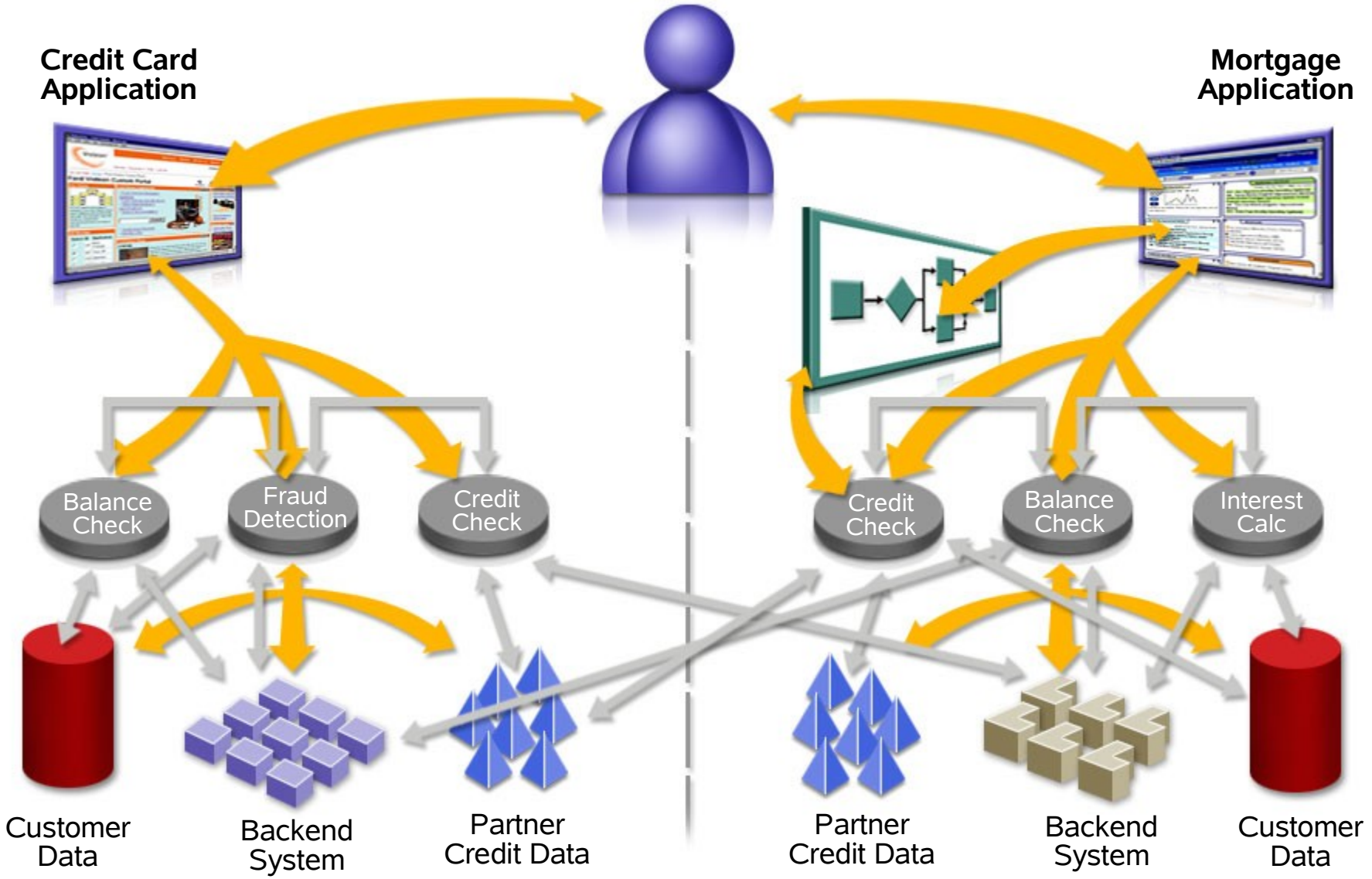
OpenJDK

Service-oriented Architecture

Traditional n-Tier Architecture



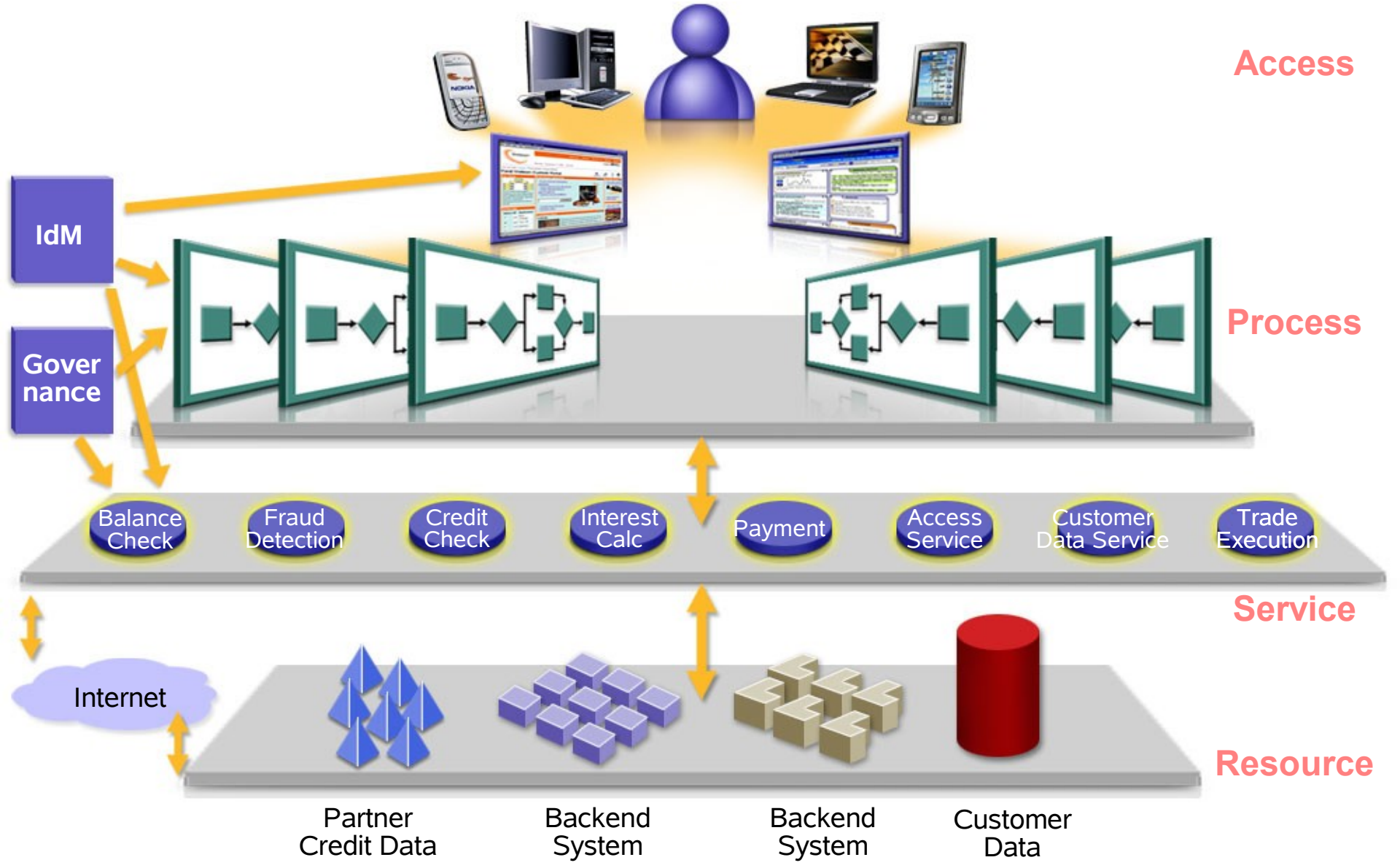
Accidental Architecture



The Service-oriented Approach

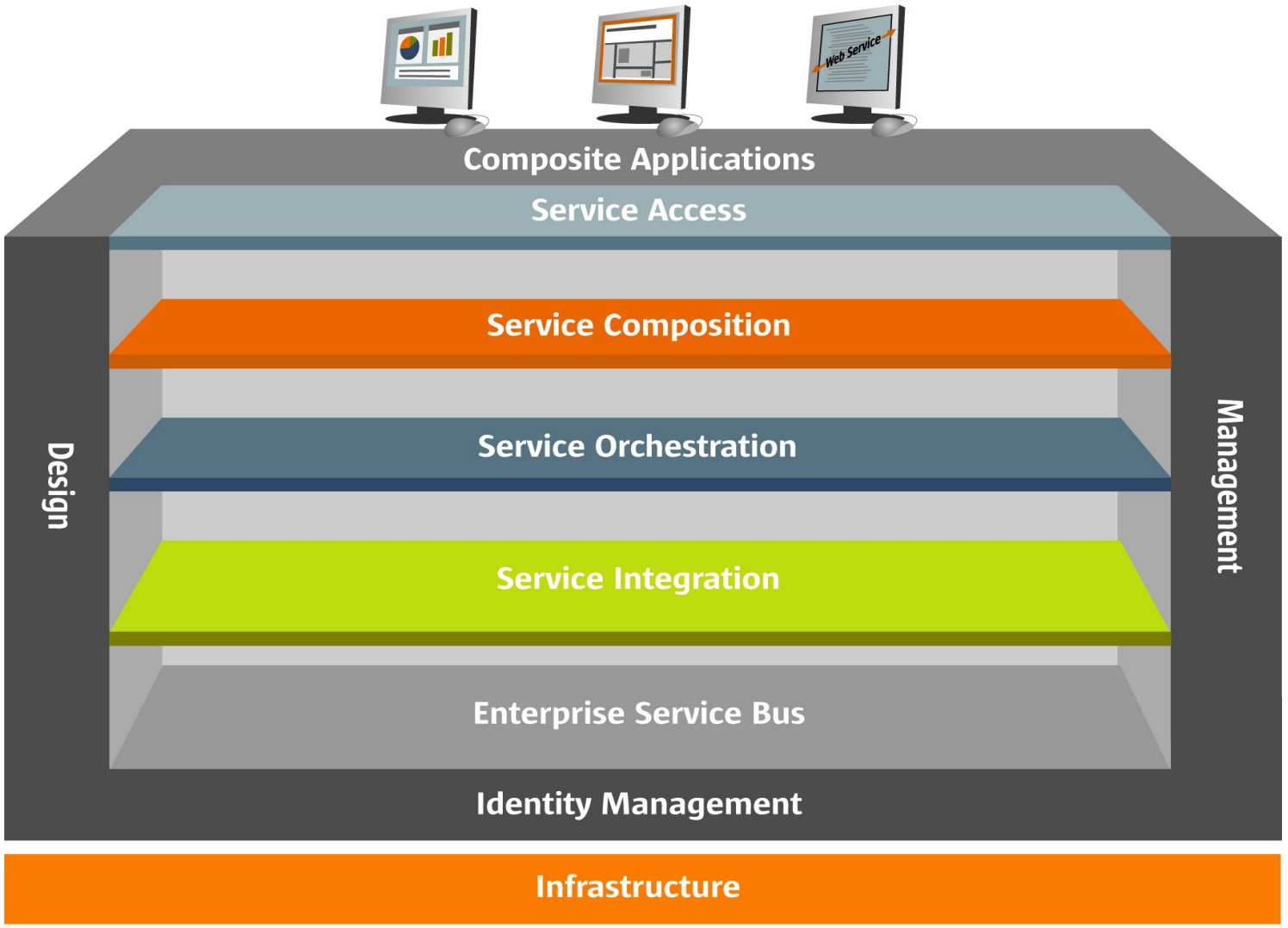
- Service-oriented Architecture
  - Create an application integration architecture based on reusable, independent services combined to deliver application logic.
- Composite Applications
  - Combine existing packaged and legacy applications, information stores, and newly developed services into a single solution.
- Business Process Management
  - Model, automate, manage, measure and optimize the flow of business process steps that span systems, people, customers and partners within and beyond your corporate boundaries

Service-oriented Architecture

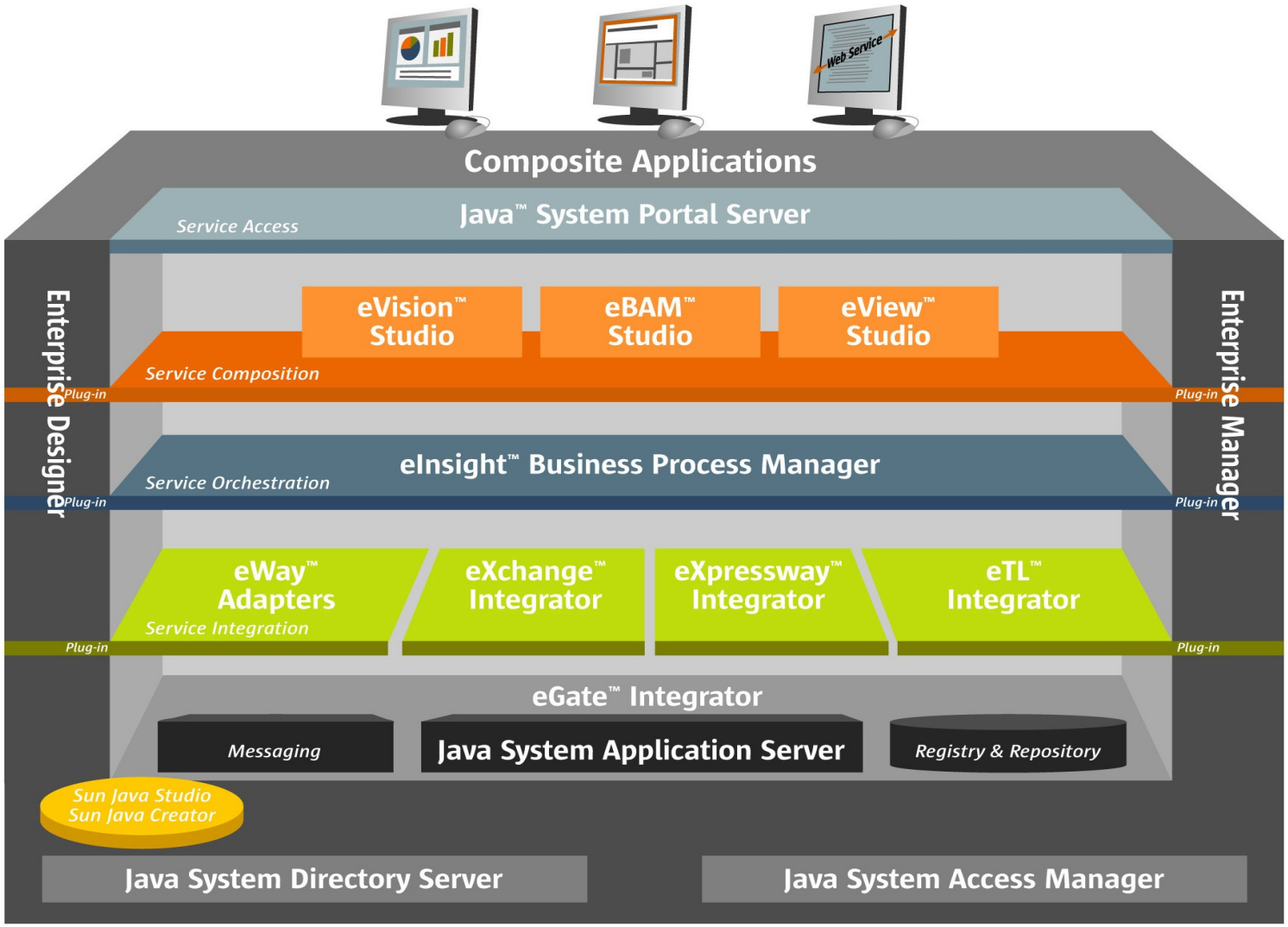


Sun Java Composite Application Platform Suite

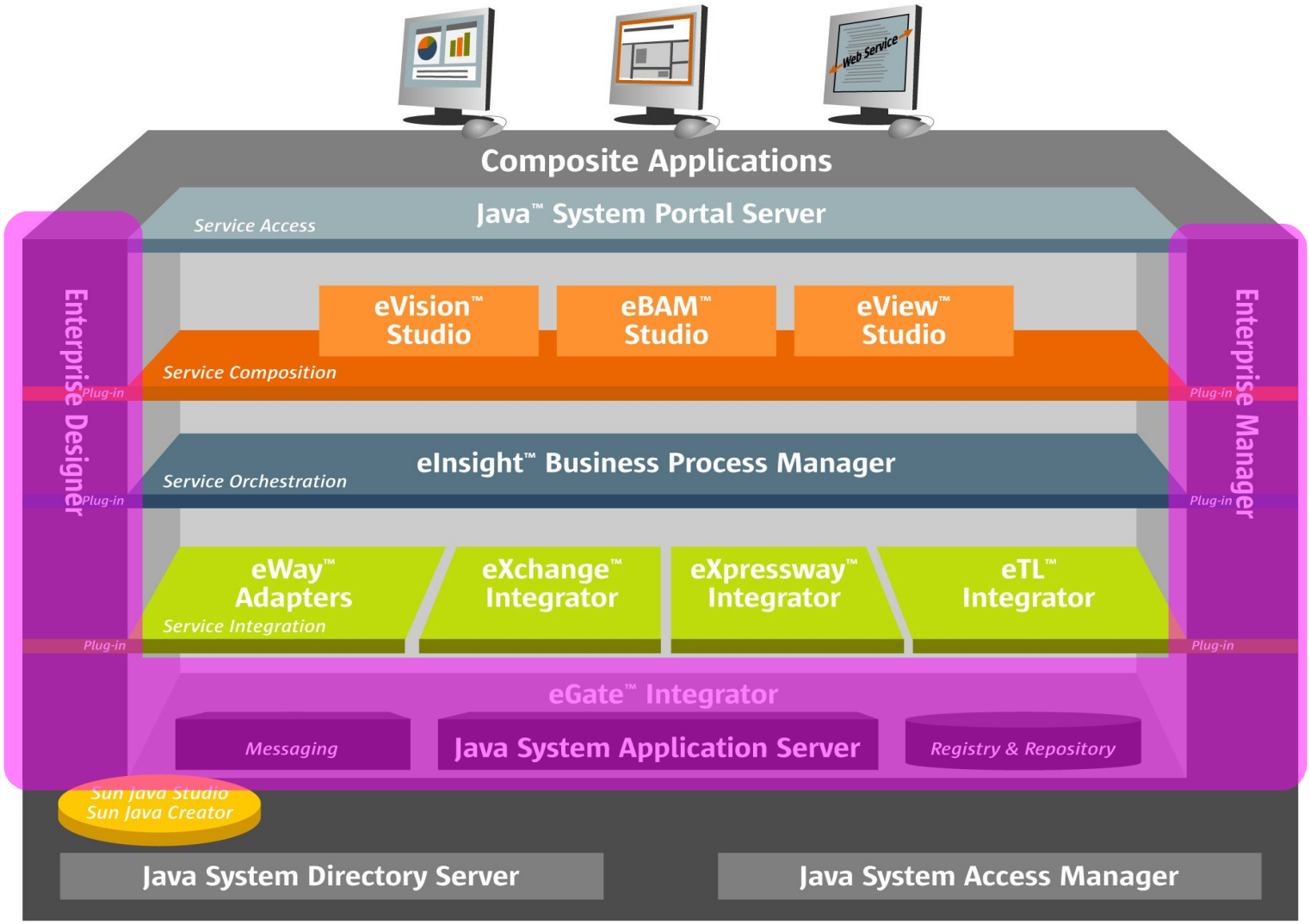
Technical SOA Architecture



Sun JavaCAPS



eGate Integrator

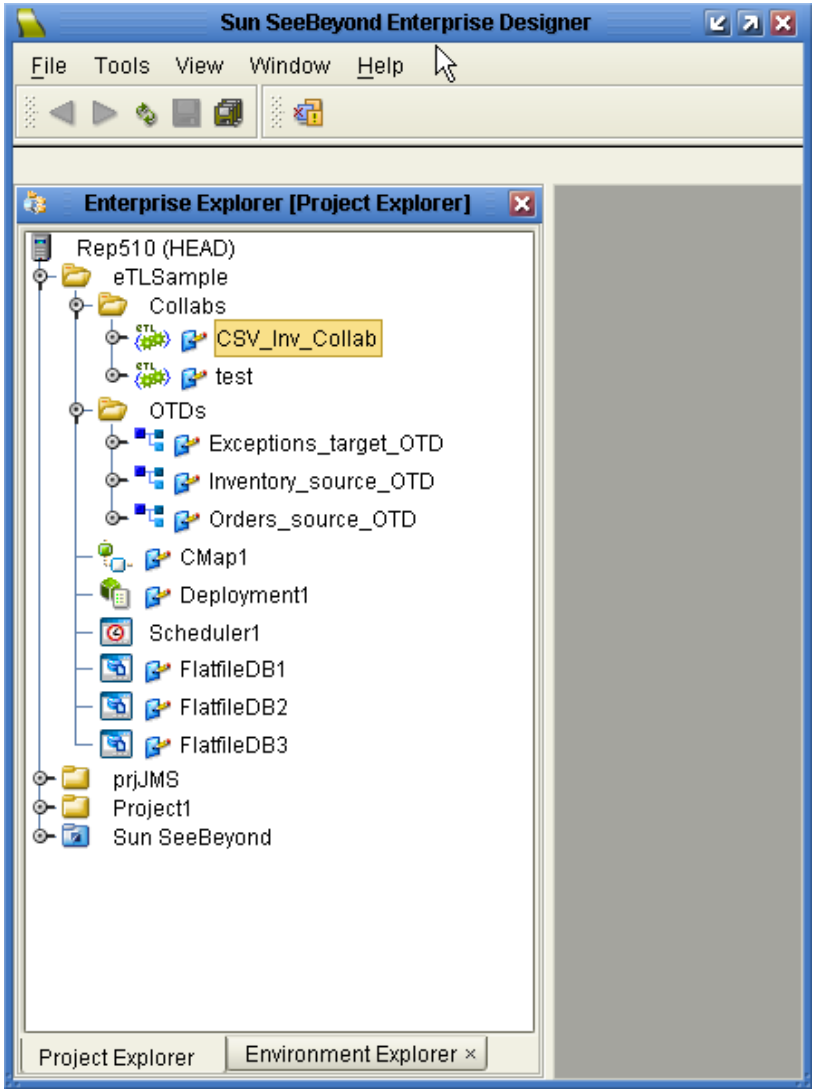


eGate Integrator

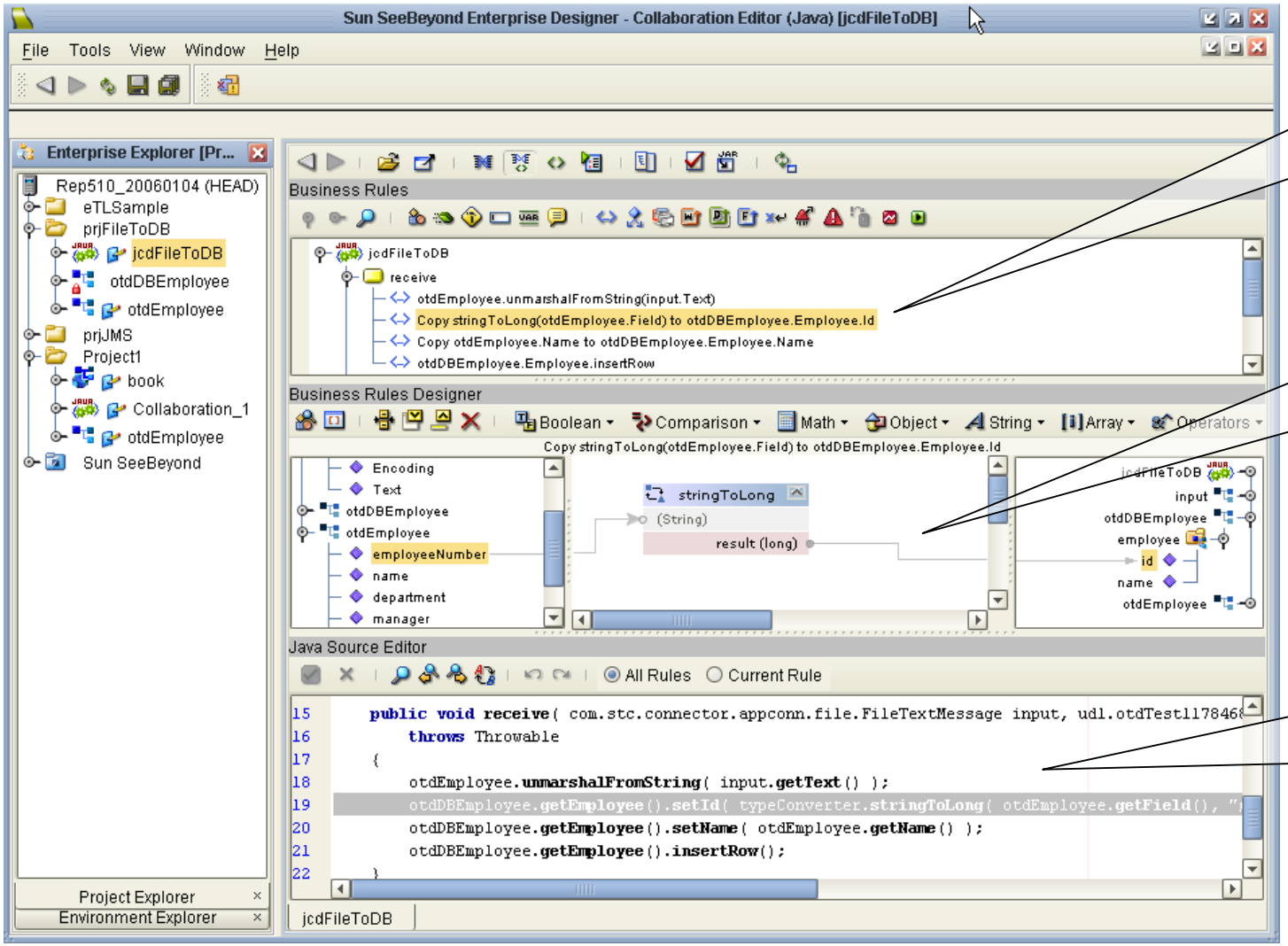
- Common J2EE 1.4 compatible run-time for
  - Application connectivity
  - Data transformation
  - Guaranteed transactions
  - Messaging
  - Web service enablement of all components
- Common Development Environment
  - Enterprise Designer
- Common Management Environment
  - Enterprise Manager
- Common Repository

Enterprise Designer

- Unified development environment for all JavaCAPS components
  - > Application to application
  - > Business to business
  - > Business process management
  - > Business activity monitoring (BAM)
  - > Workflow
  - > Extract, transform, load (ETL)
  - > Customer data integration (CDI)
  - > XML, XSD, WSDL Editors
- Project Explorer
  - > Project organization
  - > Access and version control



Collaboration Editors



Business Rules

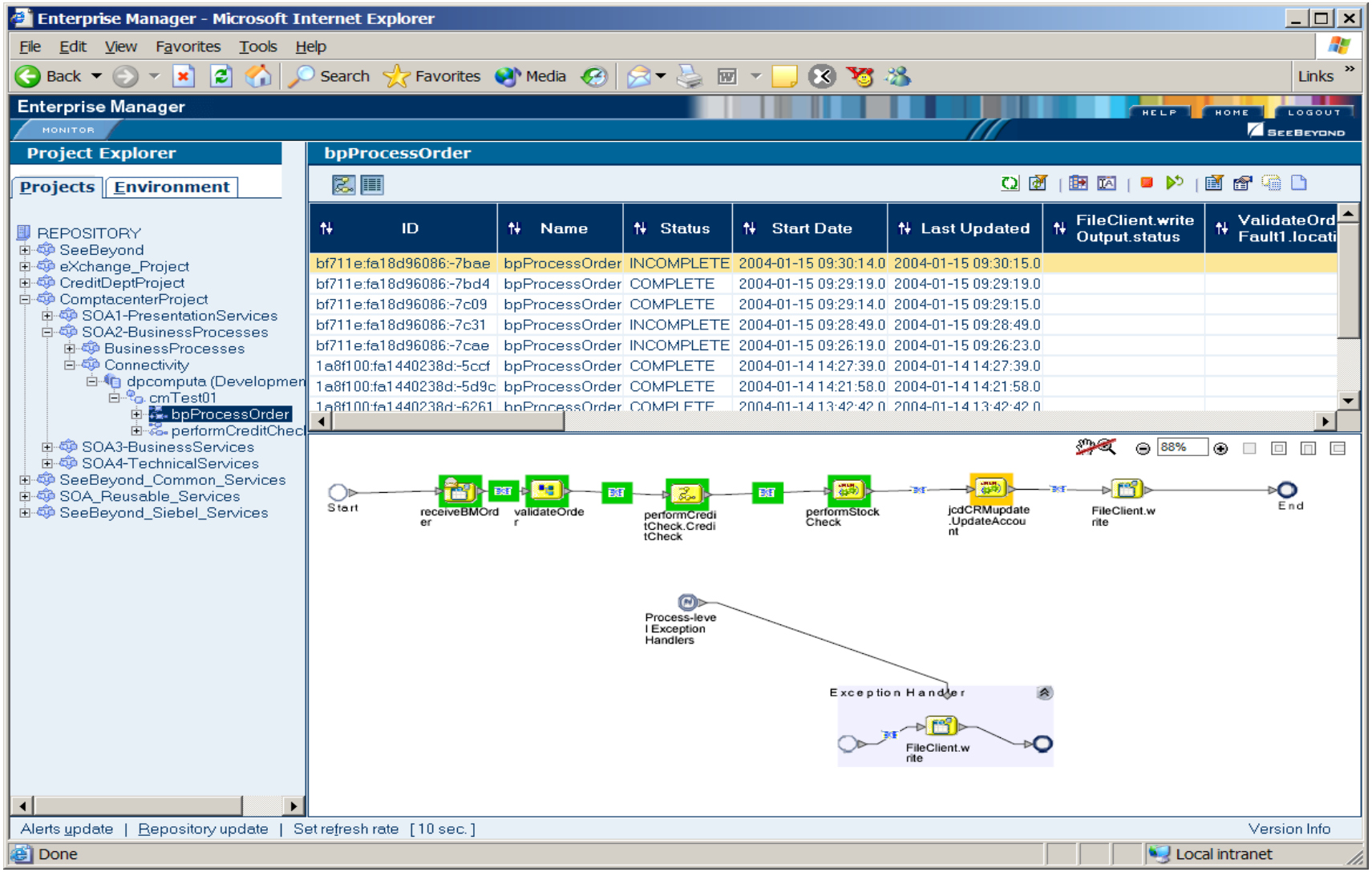
Mapping for an individual Business Rule

Java source view

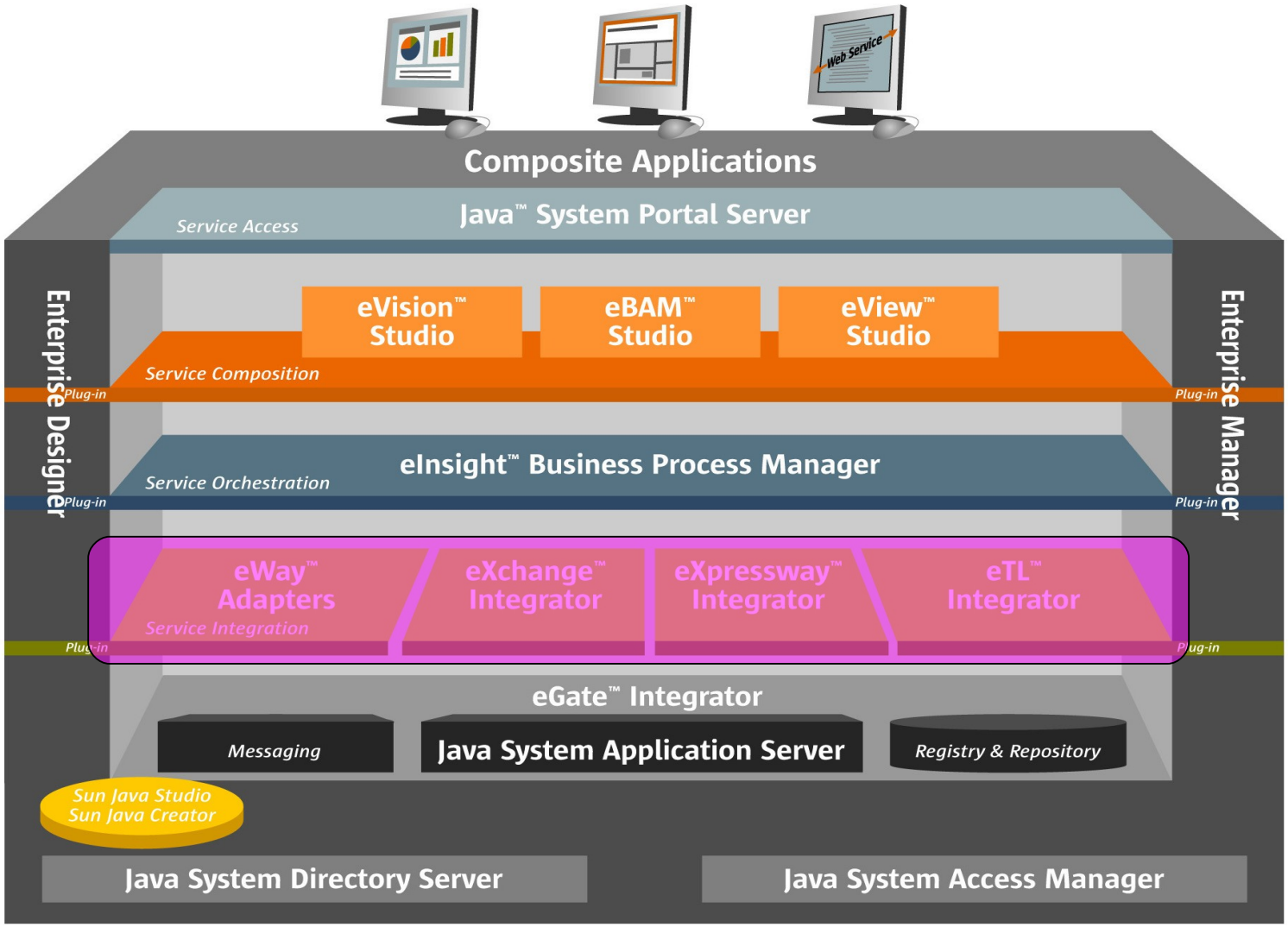
Run-time Environment

- J2EE 1.4 compatible integration server
  - JMS compliant message server
  - Support for building and deploying applications to third party application servers
  - All JavaCAPS applications are J2EE 1.4 EAR files
- Management and Monitoring
  - Enterprise Manager is the browser-based common management and monitoring tool
  - Provides single login consistency for administration, monitoring and control of all artefacts in JavaCAPS
  - JMX-based

Enterprise Manager



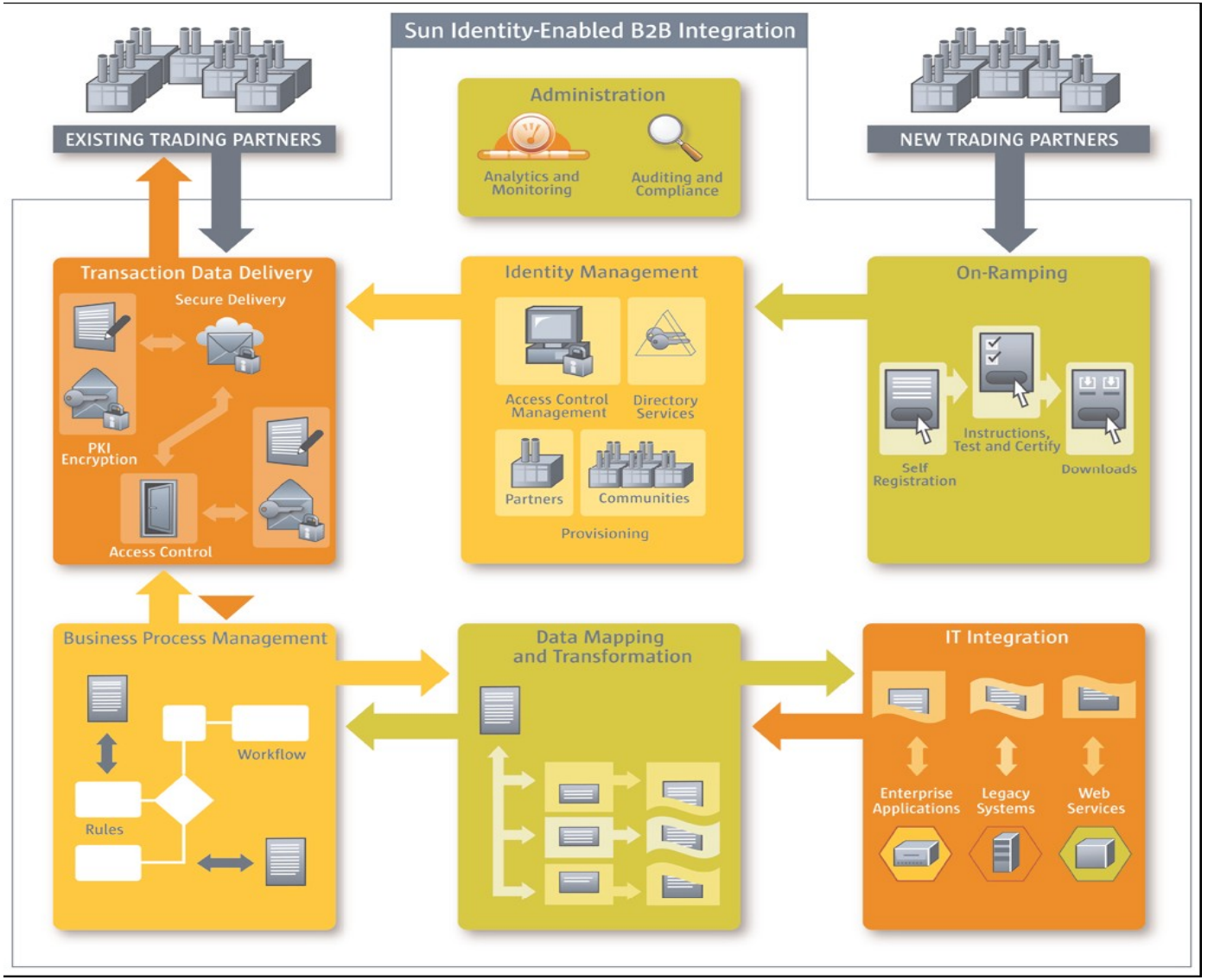
JavaCAPS Integration Tools



eWay – Adapters and Connectors

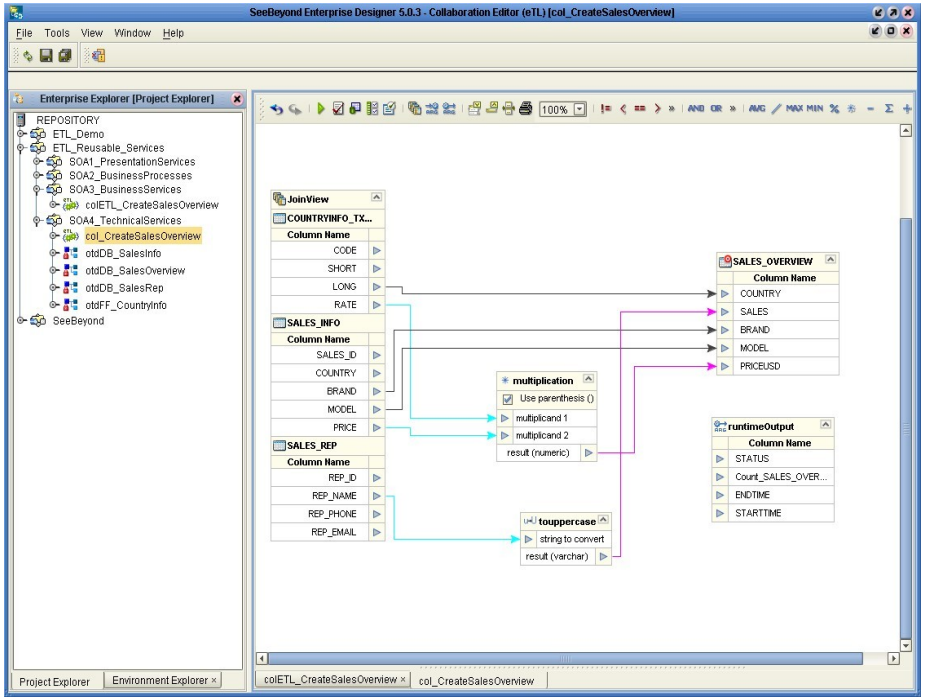
- Over 80 adapters & connectors available
- Java Connector Architecture 1.5
- Adapters for
  - Applications (SAP, PeopleSoft, Siebel, Lotus, ...)
  - Communications (File/FTP, e-Mail, CICS, IMS, COM/DCOM, CORBA, HTTP(s), SOAP, MQSeries, ...)
  - Databases (Oracle, DB/2, Sybase, MS SQL Server, JDBC, ...)
  - Web servers (Apache, WebSphere, MS IIS, ...)
- Tools, libraries & protocol managers (Cobol CopyBook, UNI/EDIFACT, AS2, ebXML, ...)

eXchange Integrator – B2B

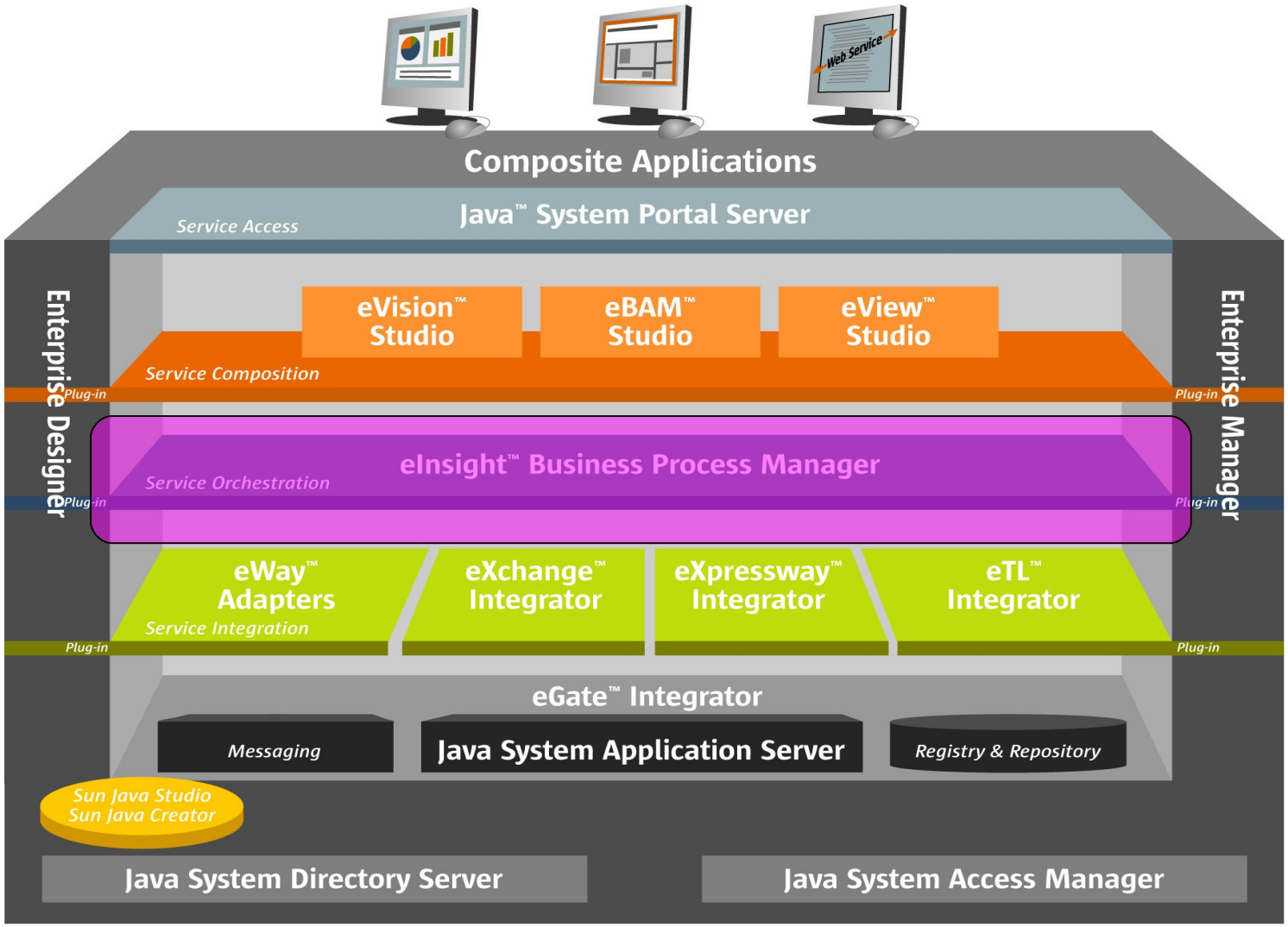


eTL – Extract, Transform, Load

- Graphical ETL editor
  - > Automatic code generation
  - > Graphical representation of the table
- High Speed Concurrent ETL Engine
  - > Large record sets vs. transactions
  - > Bulk data operations vs. messages
  - > Source filtering, staging and “upsert” merging
  - > Inner, left, right and full outer joins
- Data Quality
  - > Integrated pre-deployment testing
  - > Data parsing, validation, cleansing and monitoring



eInsight Business Process Manager



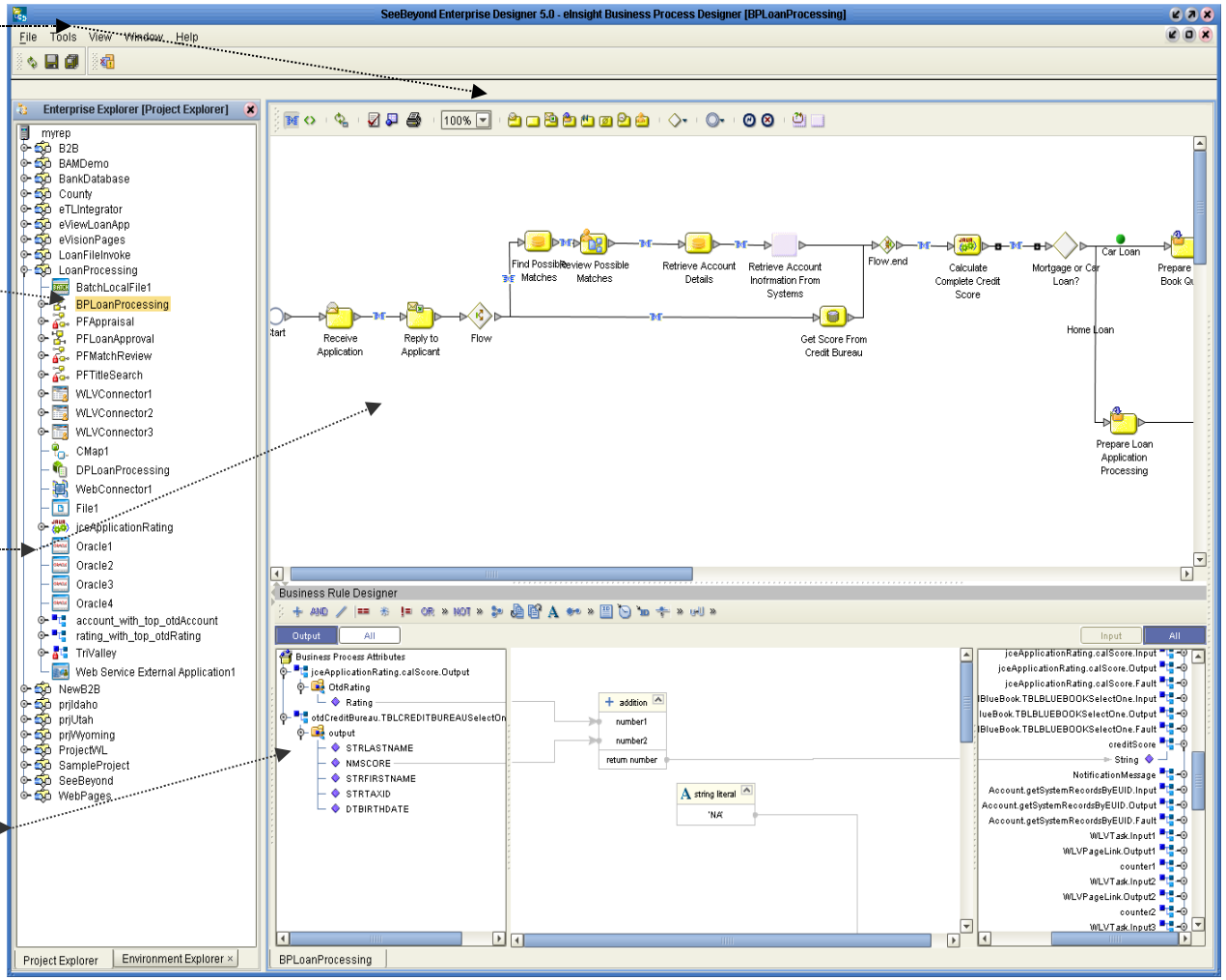
eInsight Business Process Designer

Modeling Objects from the toolbar can be used to frame out the business process

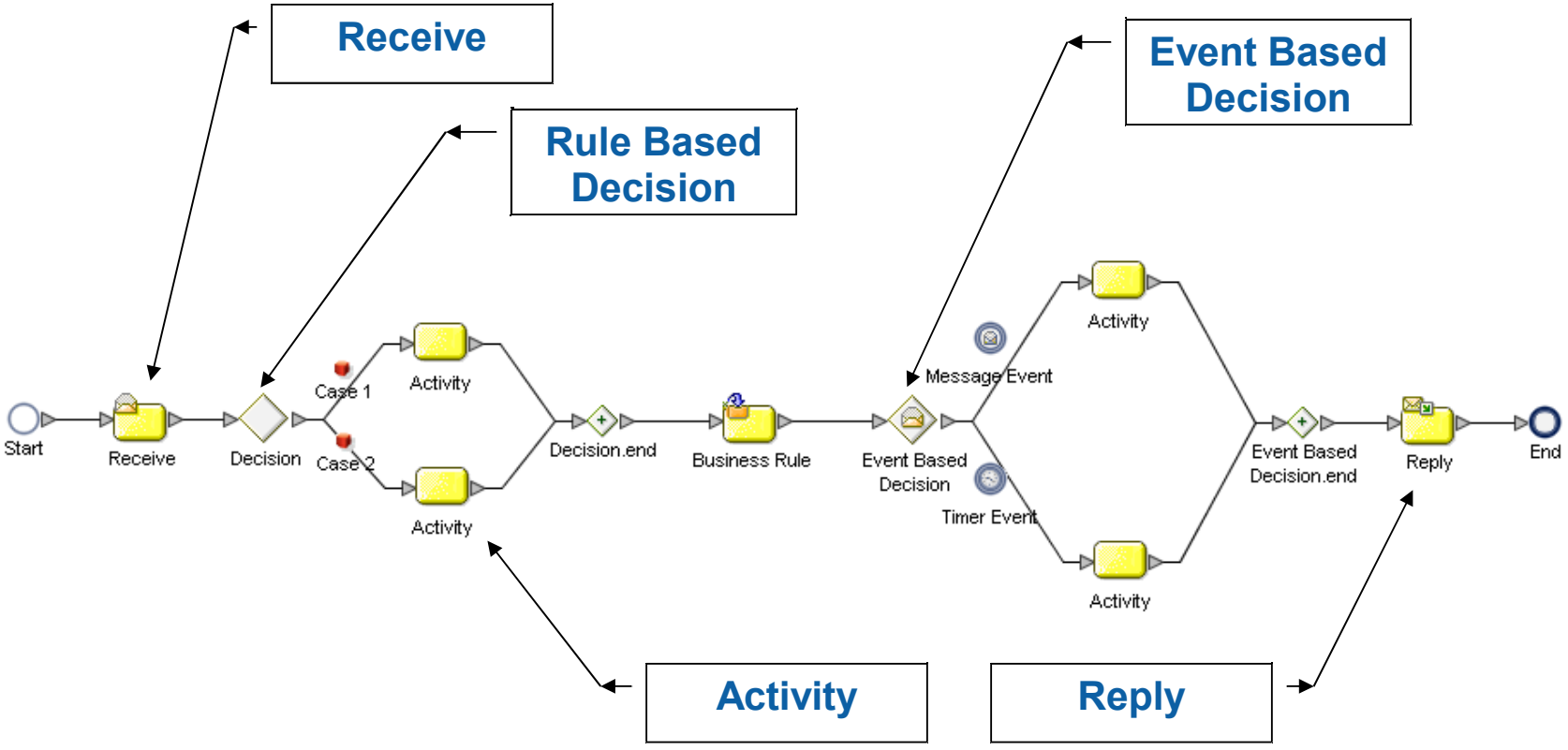
Business Processes appear in the Project Explorer

Business Process Designer

Business Rules Designer



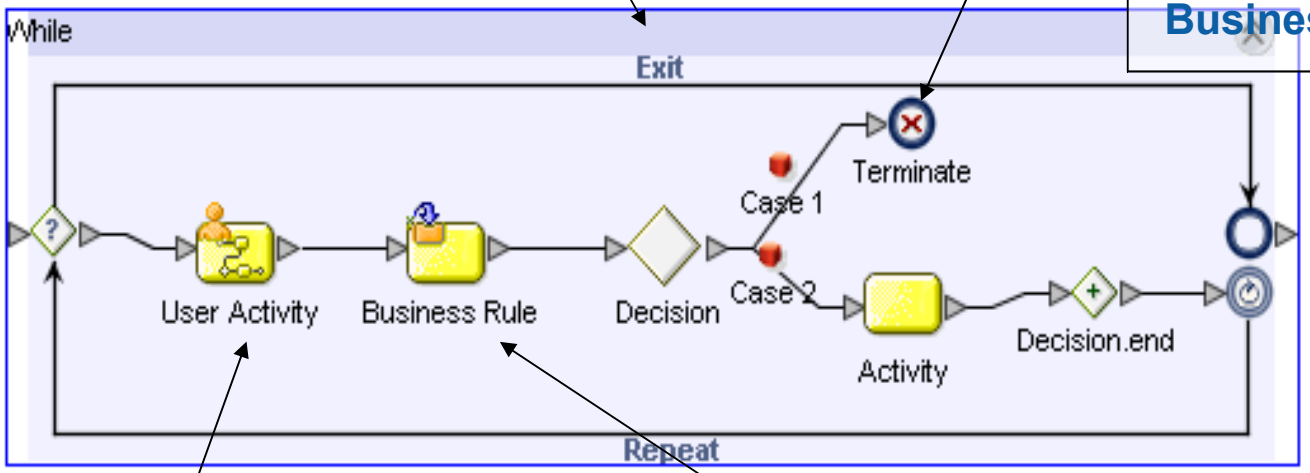
Basic Modeling Elements



Other Modeling Elements

While Loop – Pre-packaged modeling element used to create looping logic

Terminate – automatically stops all processing for an instance and completes the Business Process



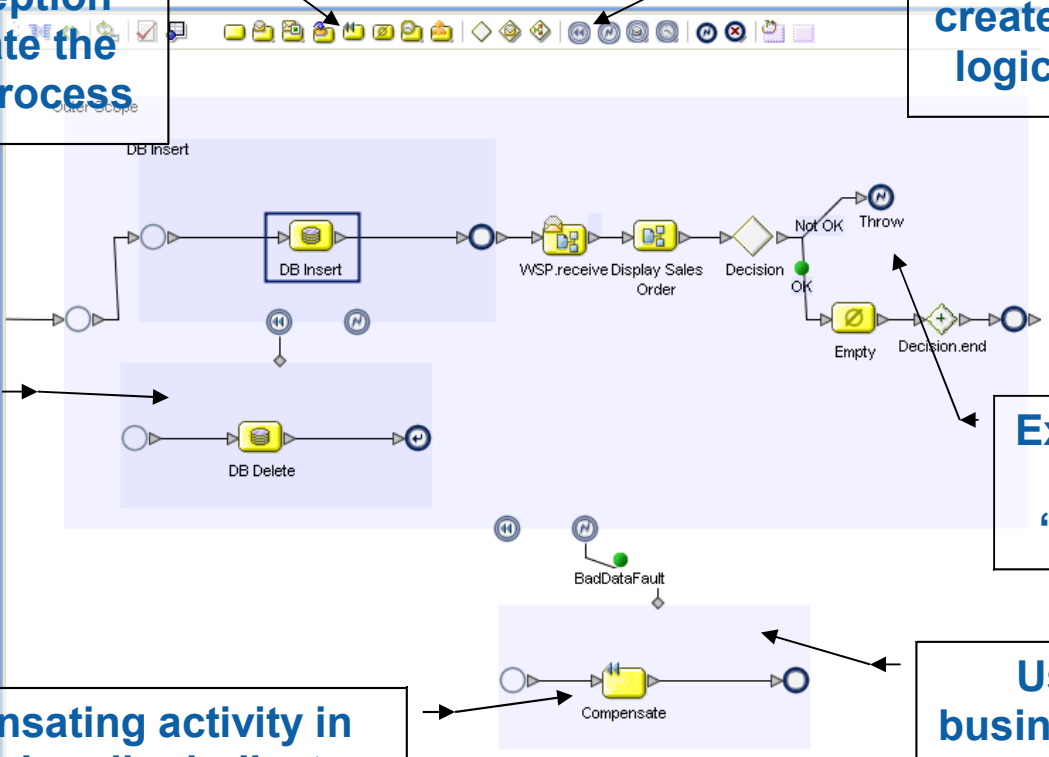
User Activity – represents human intervention in a Business Process

Business Rule – create mappings into and out of Activities

Scope, Exception, Compensation

Compensation activity – used in an exception handler to initiate the compensation process

Compensation handler – drop within a scope to create the compensation logic for a given scope



Model the compensation as a Business Process

Example of manually modeled "Exception" throw

This Compensating activity in the exception handler indicates the compensation for "DB Insert" should be initiated

Users can model business logic to handle thrown exceptions

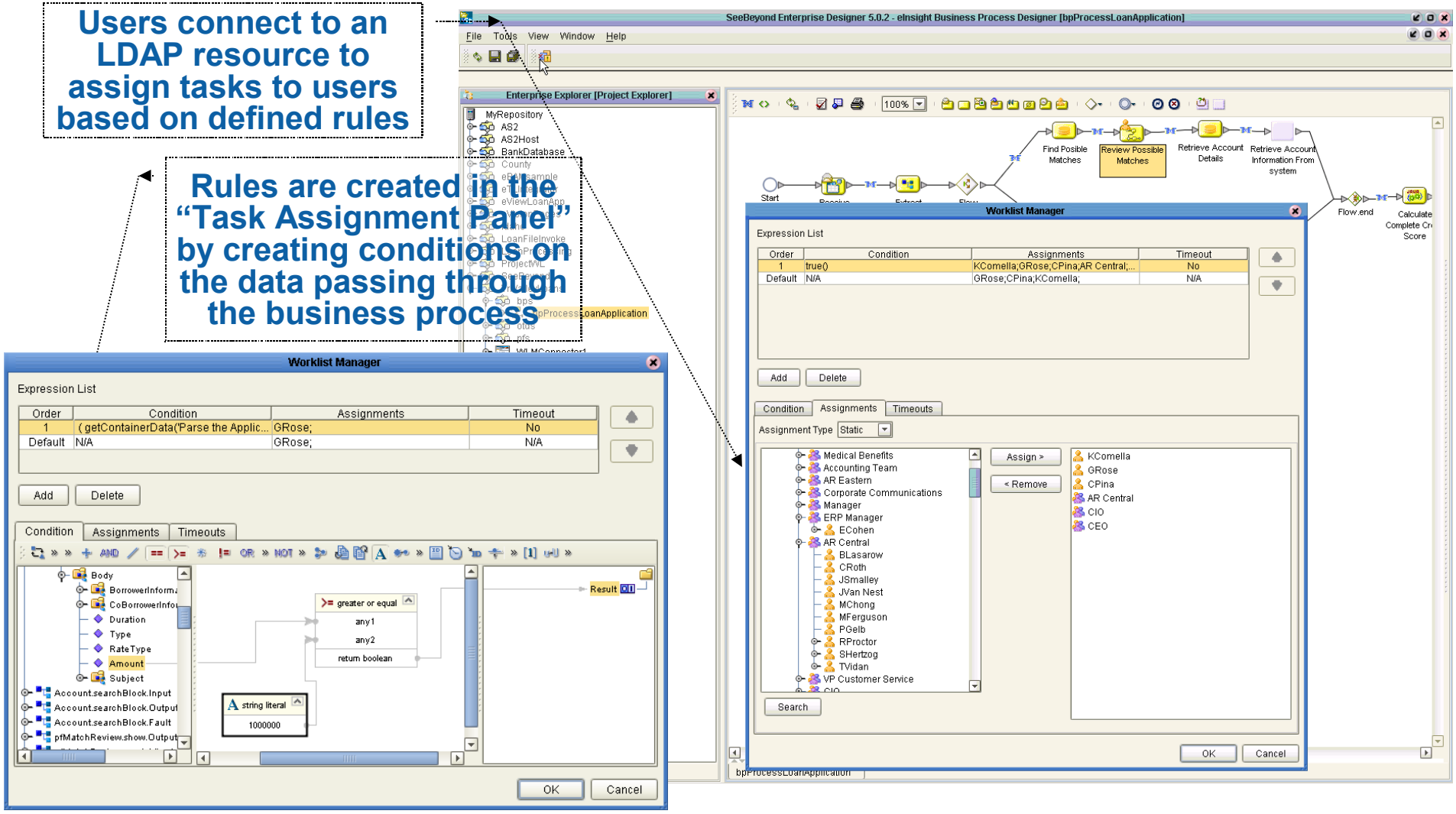
Modeling Concepts

- Drag and drop
- Roundtripping between model and BPEL code
- Correlations
- Complex Data Structures
  - XPath
- Business Rules Designer
- Use all web service enabled components
  - Java Collaborations, XSLT Collaborations, eTL Collaborations, eWays, sub processes, eBAM, eView Applications

Human Workflow – Design Time

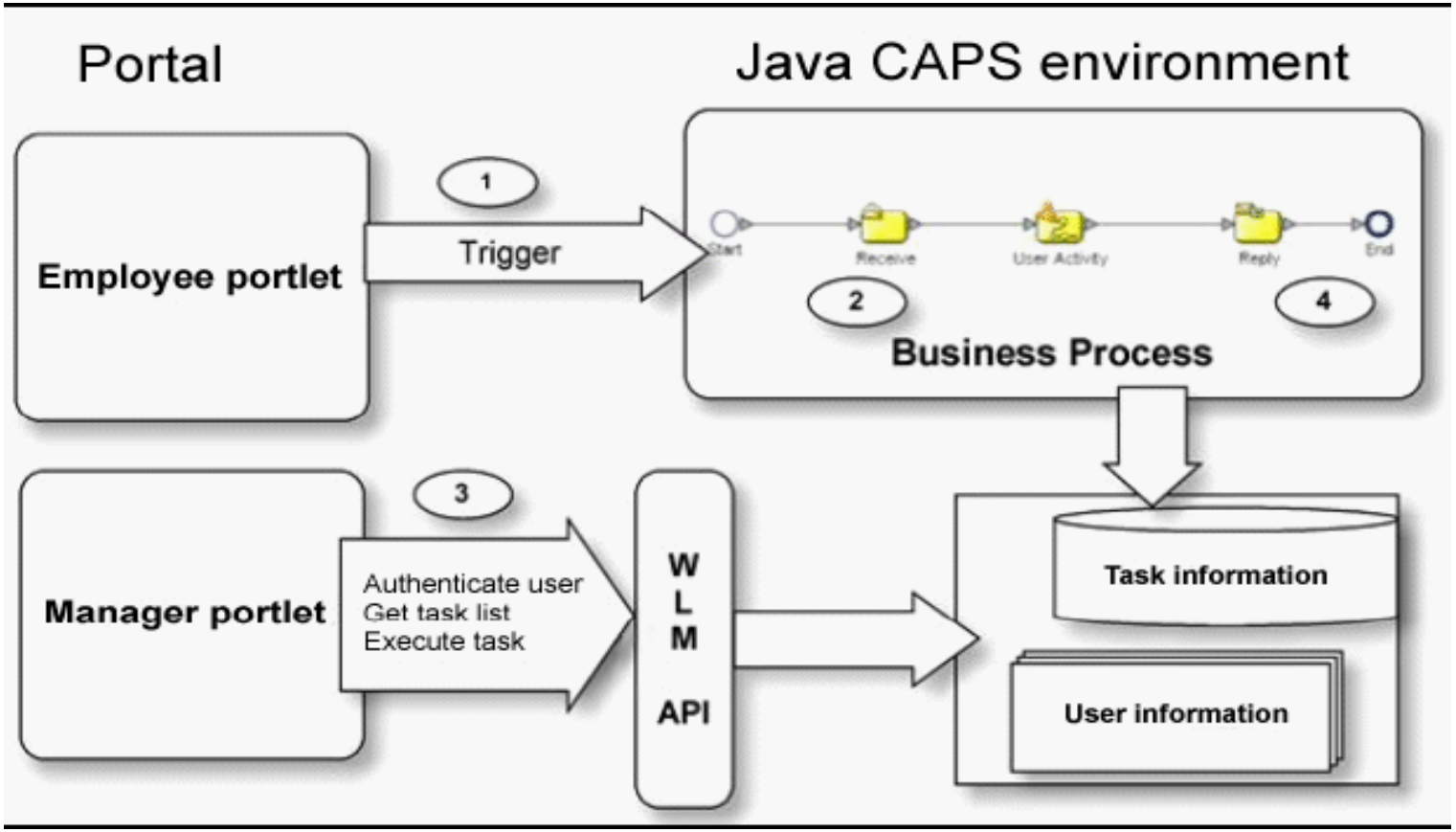
Users connect to an LDAP resource to assign tasks to users based on defined rules

Rules are created in the "Task Assignment Panel" by creating conditions on the data passing through the business process



Human Workflow – Worklist Manager

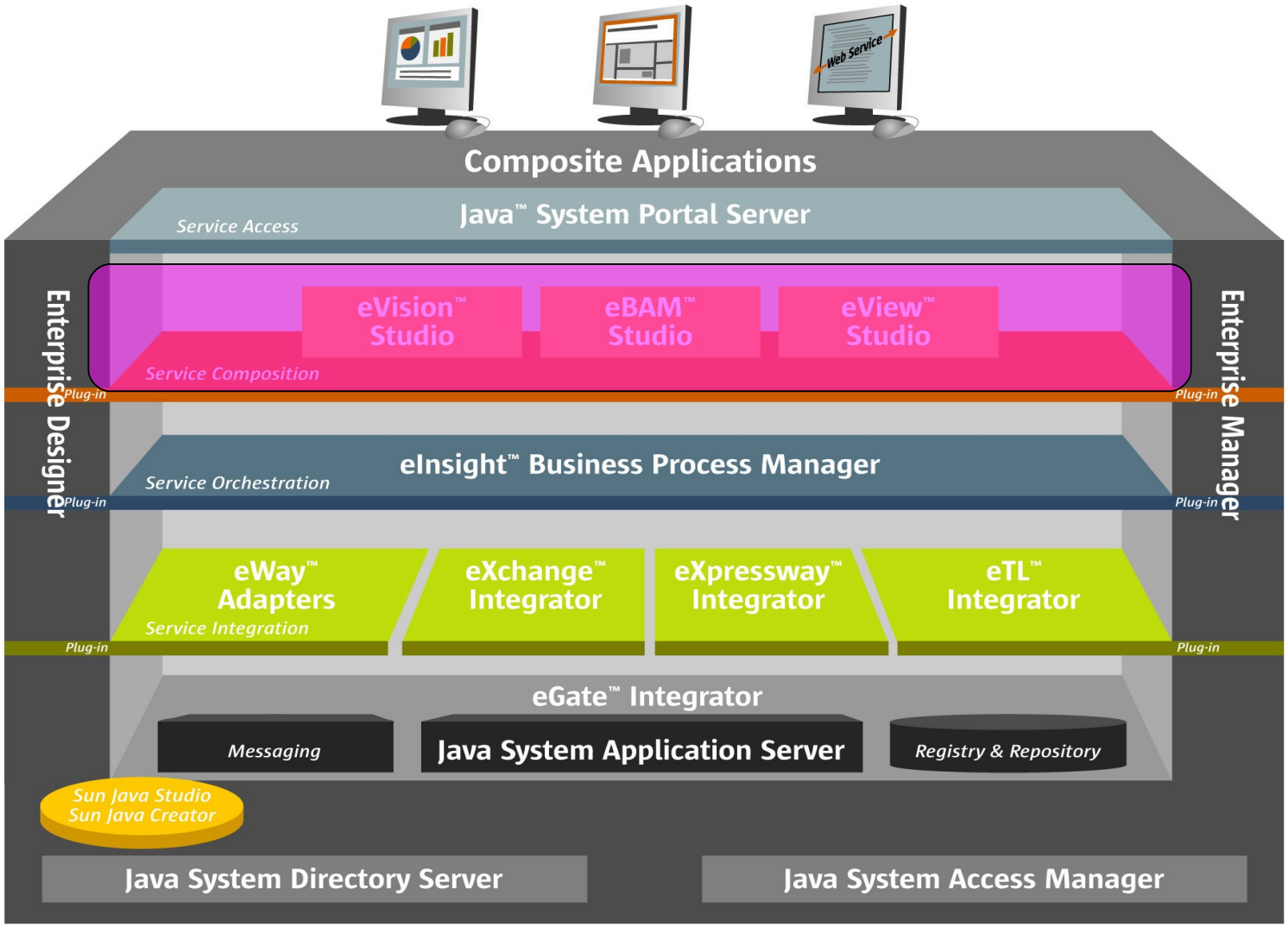
Business Process → Task Submission → Task Handling → Business Process (continued)



Persistence and Security

- eInsight Engine can persist running business process instances to a database
  - Enables recovery of business process instances from the last point of persistence in the case of system failure
  - Multiple databases are supported
- Business Process exposed as and invoking Web Services can be secured
  - Transport Level
    - Encryption – HTTPS
    - Authentication – HTTP Basic Authentication
  - Message Level
    - Authentication – WS-Security Username Token Profile

eVision, eBam, eView Studio



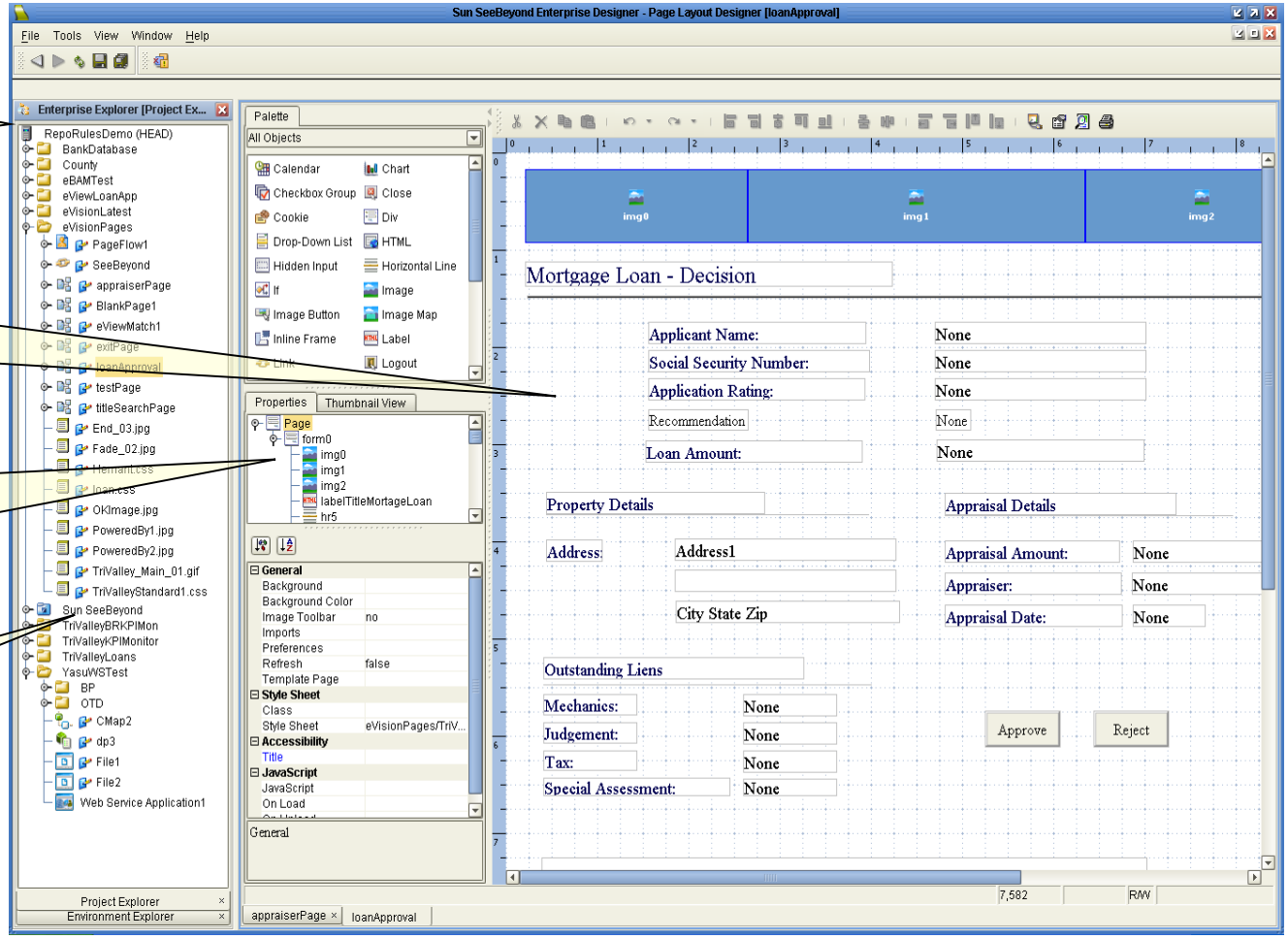
eVision Studio

Pages are built in the WYSIWYG Page Layout Designer

Users drag and drop prepackaged design objects from the Form Object palette

For each selected object in the designer, the properties appear for context and editing

Inventory of defined pages appear in the Project Explorer, organized by project

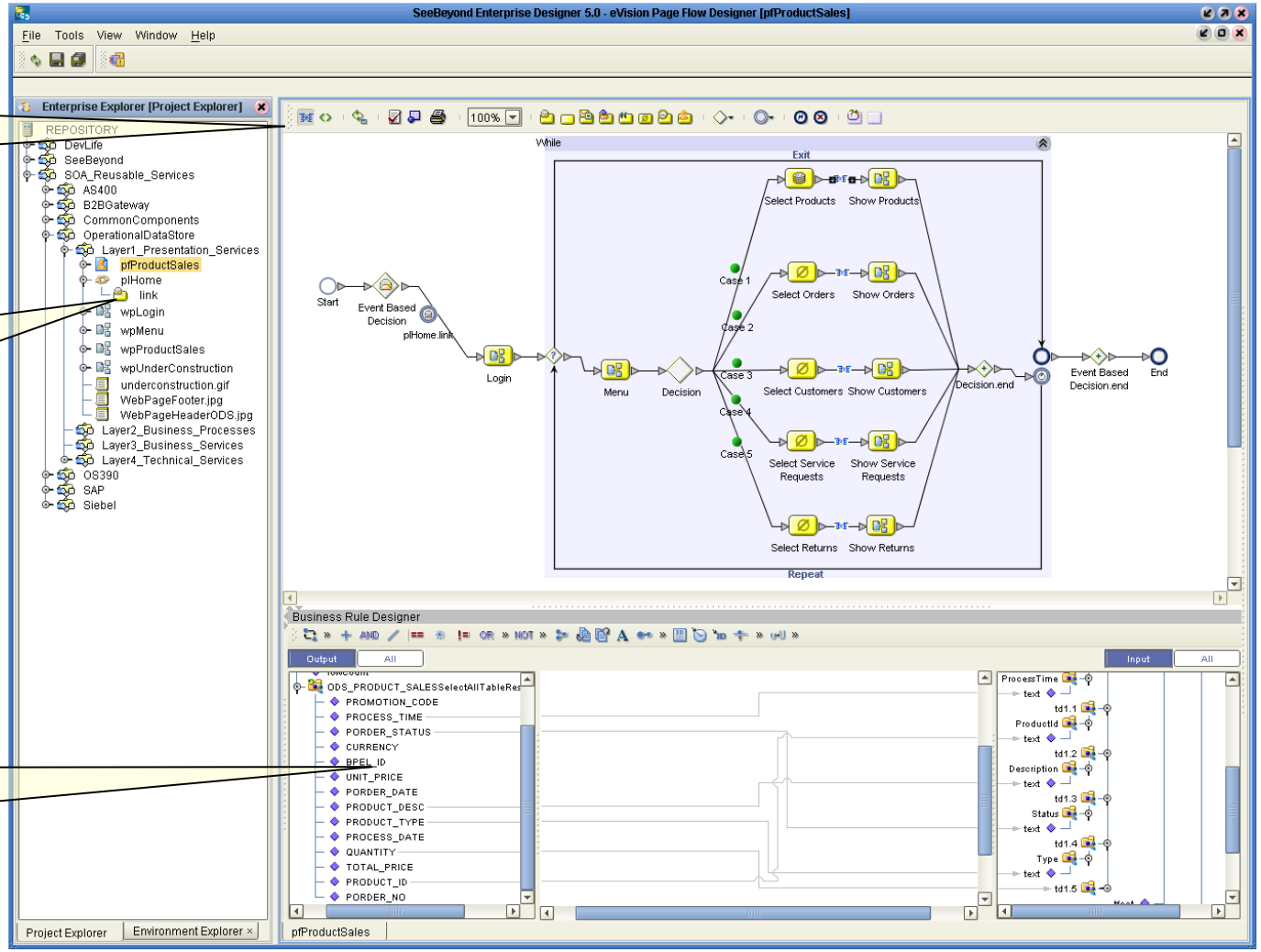


eVision Studio

Users add website components from a drag & drop toolbar.

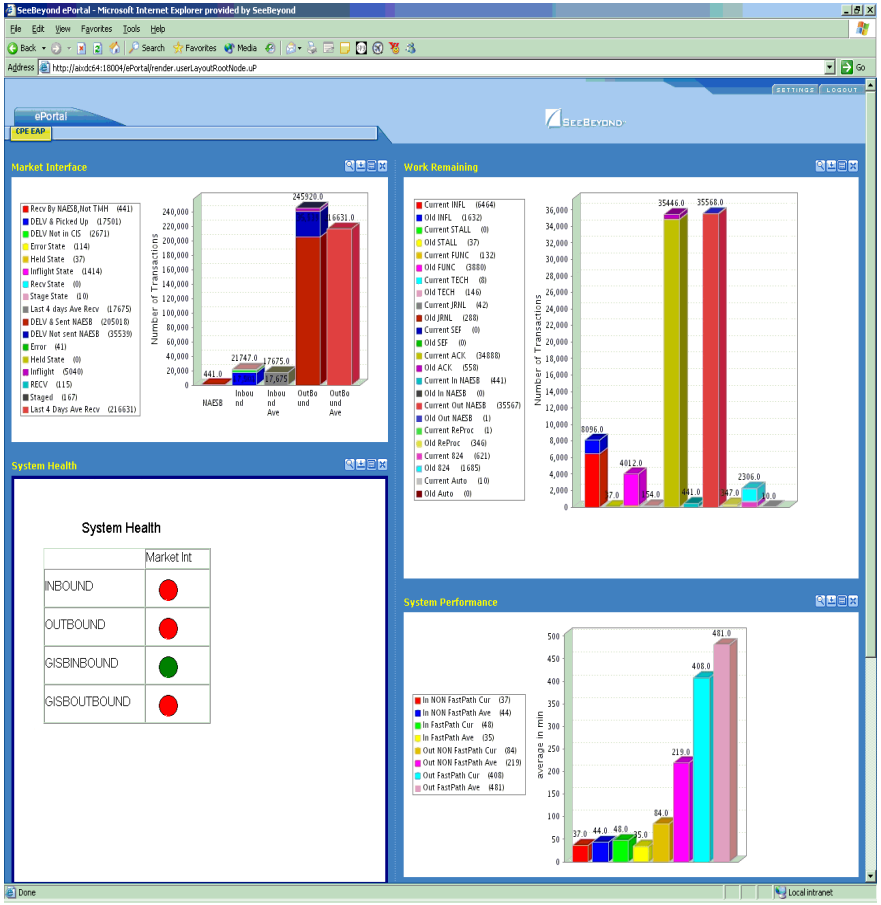
Page content is populated by sharable, re-usable components.

Fields on the web-page can be directly mapped to Object Types in the Dataflow.

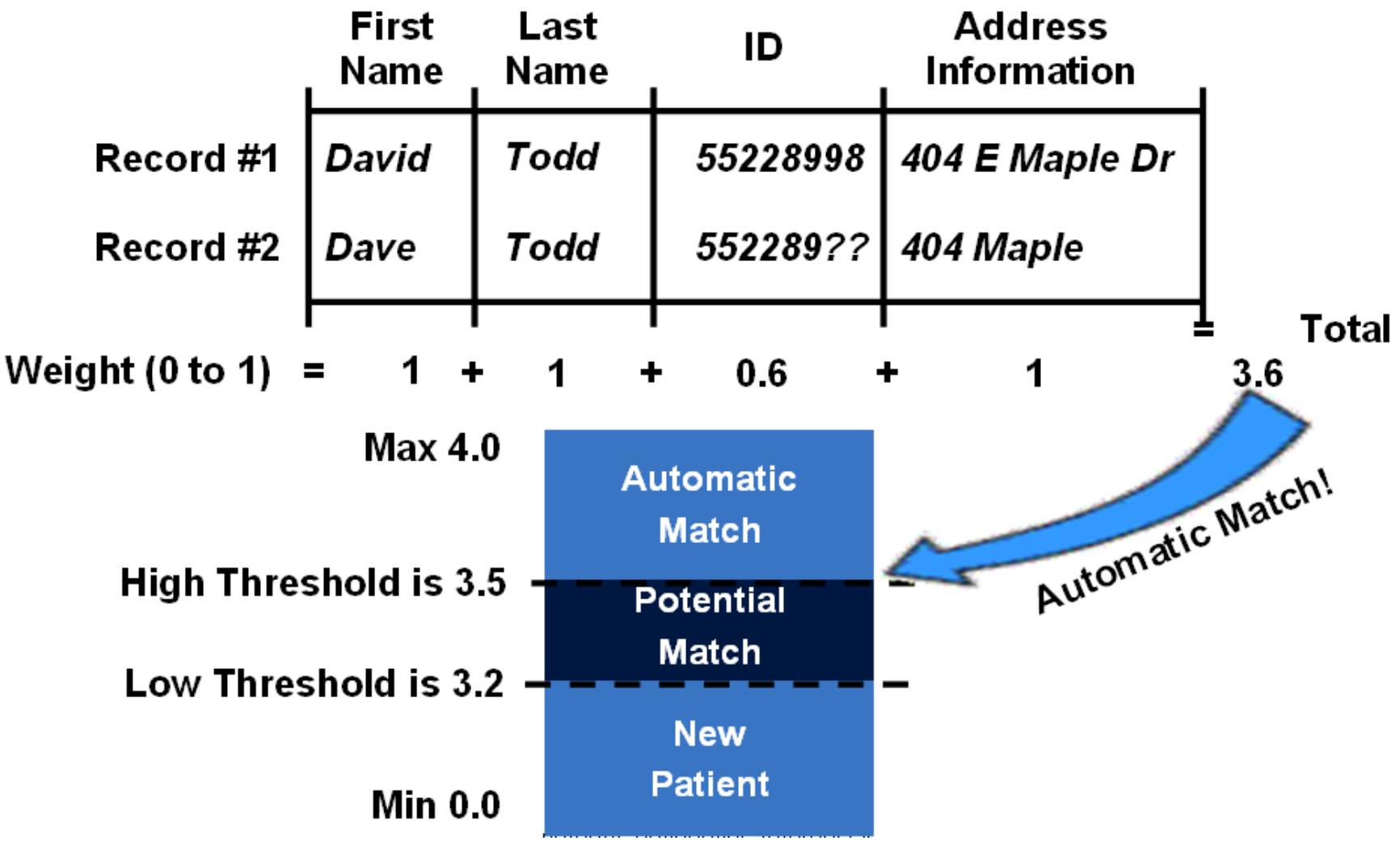


eBAM Studio

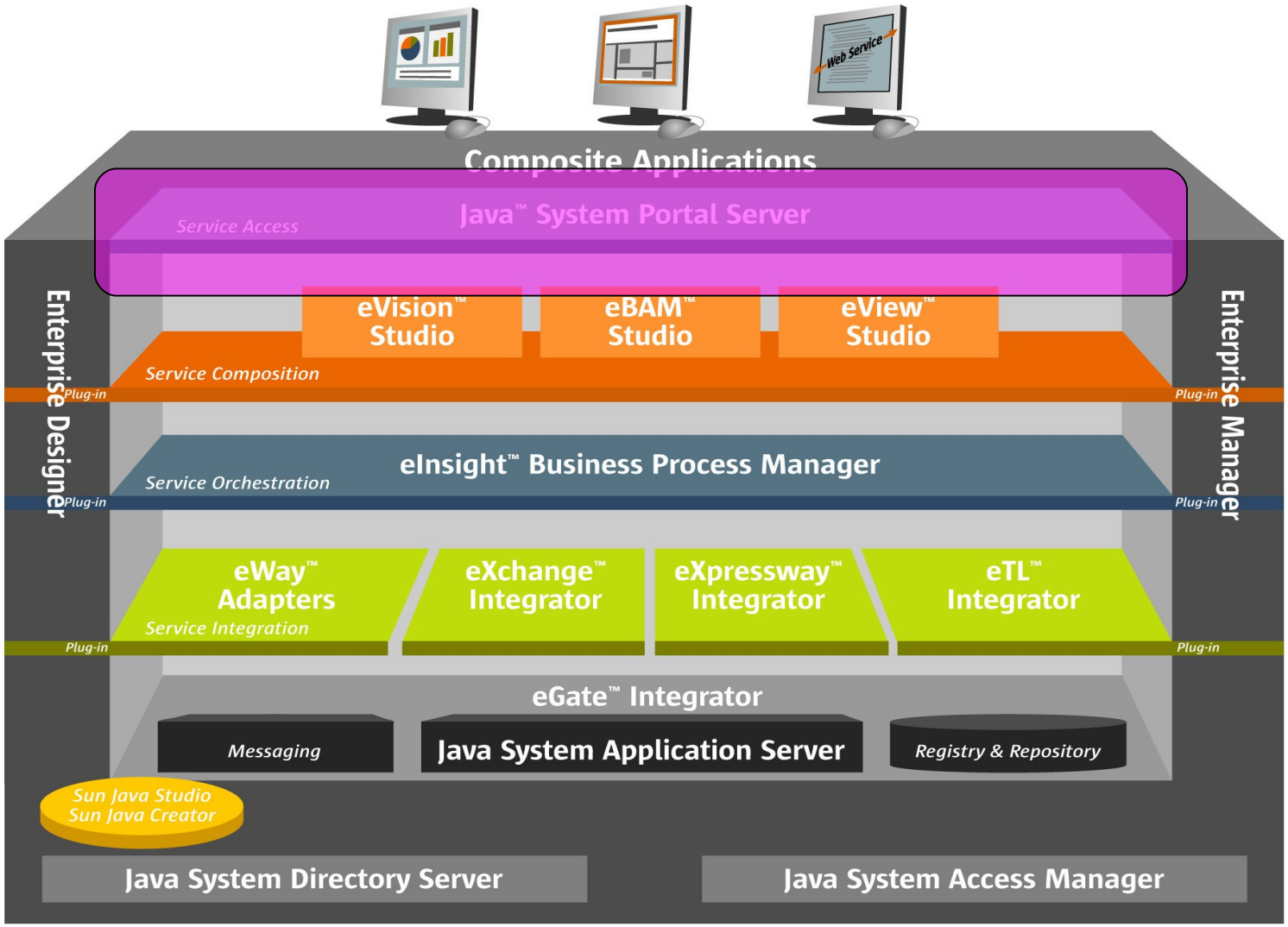
- Business Activity Monitoring dashboards tracking realtime Key Performance Indicators (KPI) and providing proactive exception management
- Automatic generation of data collection services for inclusion in business processes
- Access to any external application publishing events to the service bus
- Wizards for the generation of custom dashboards
- Aggregation and correlation



eView Studio – Single Entity View



Java System Portal Server



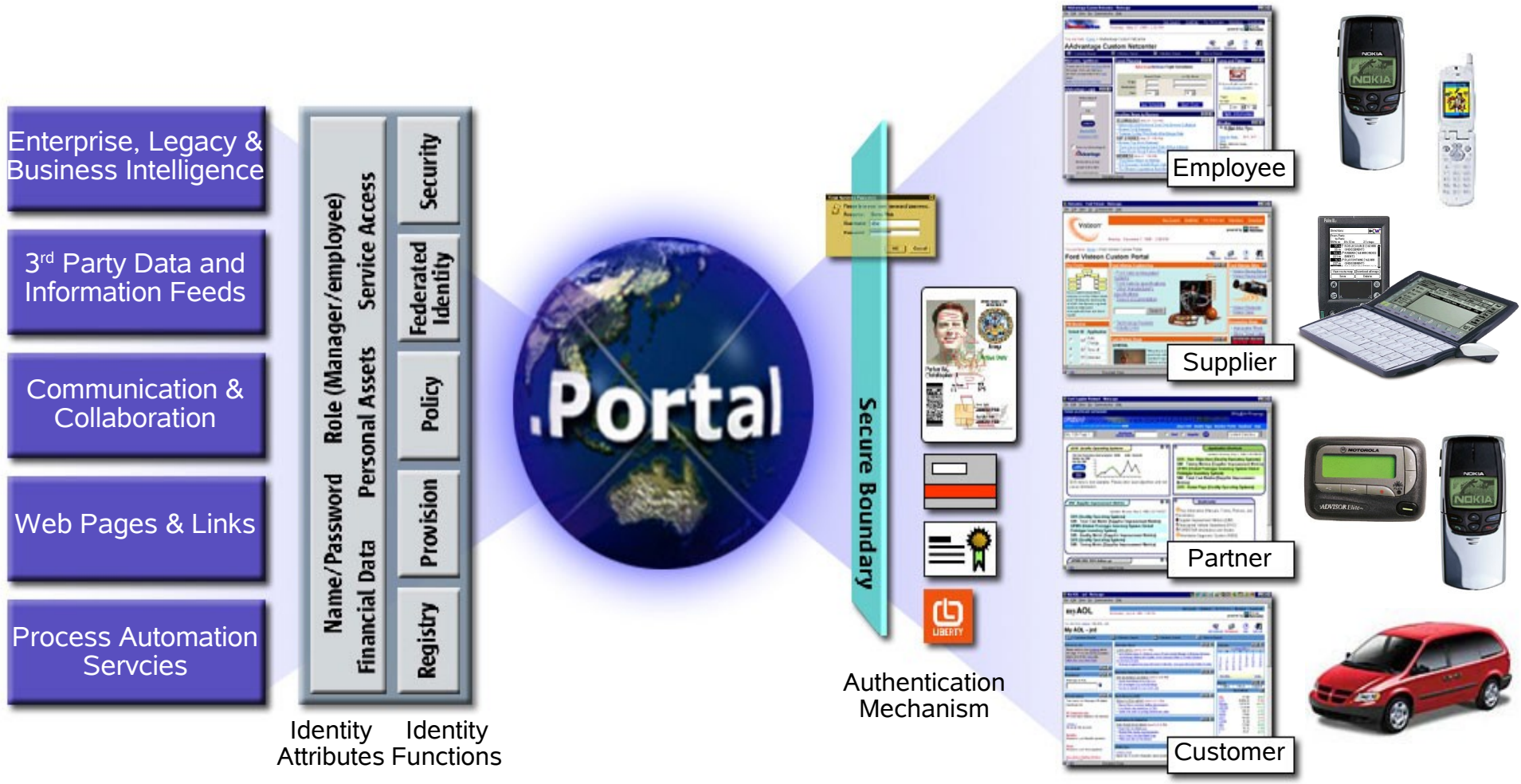
Java System Portal Server

Data No Matter Where It Resides

Securely Aggregated and Personalized

Targeted Communities

Any Device



Java System Portal Server

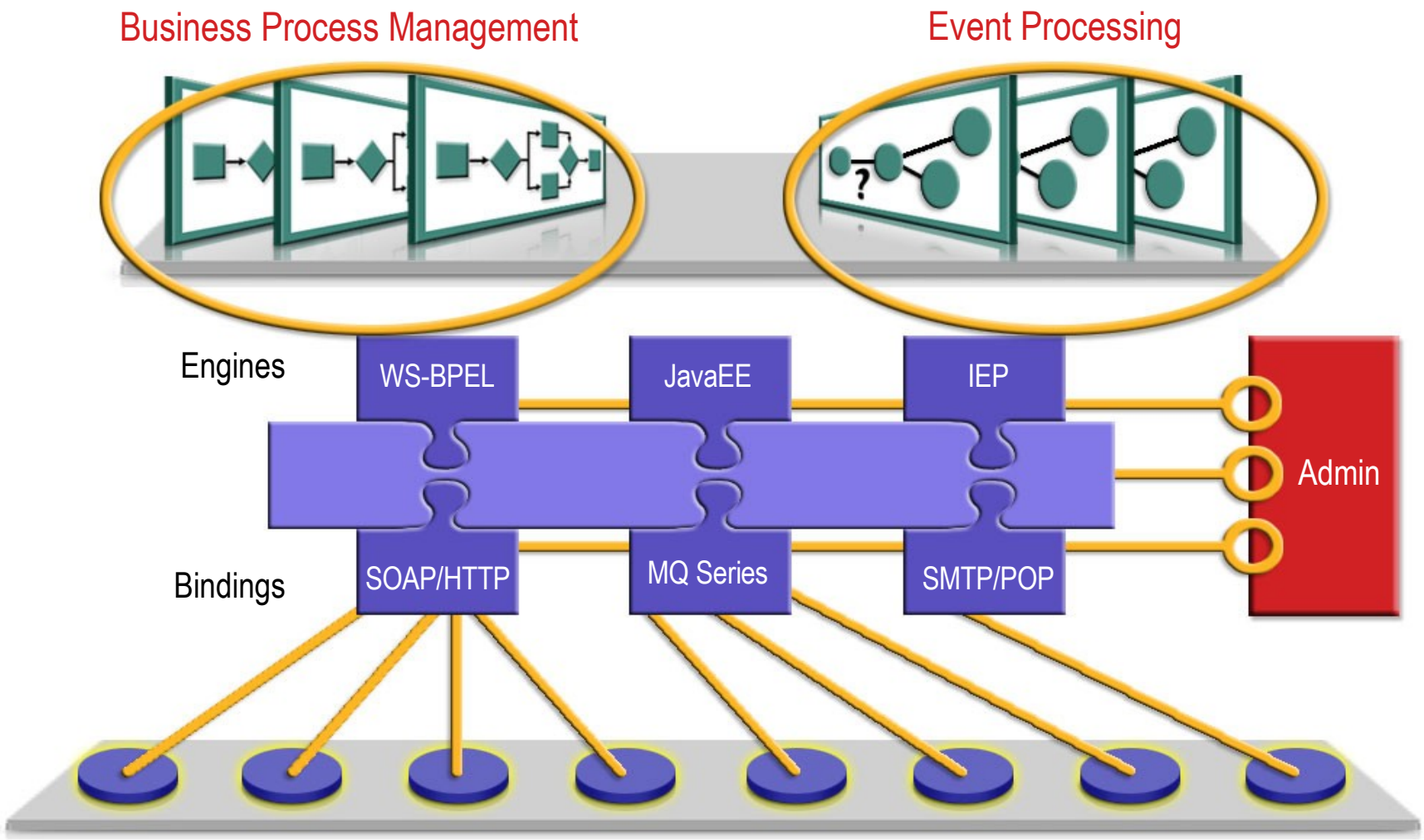
- Identity&User Management
  - Policy&Profile
  - Single Sign-On
  - Roles&Groups
  - Delegated Administration
- Personalization
  - Aggregation
  - Identity-based Content
  - Tab-based Grouping
  - User-defined Preferences
- Search
  - Google
  - LDAP
  - RDBMS
  - Remote Search Servers
- Collaboration
  - Email&Calendar
  - Communities (Wikis, File Sharing, Forum, Surveys, Polls)
  - Instant Messaging
  - Tasks

Java System Portal Server

- Enterprise Application
  - Siebel
  - PeopleSoft
  - Oracle Applications
  - SAP
- Mobile Access
  - Intelligent Rendering
  - Mobile Groupware Connectivity
  - Voice Access
  - Print to FAX
- Secure Remote Access
  - Browser-based VPN
  - SSL VPN on the fly
- Development
  - WSRP
  - JSF
  - Struts
  - Page Flow
  - Web Services
- Administration
  - JMX-based
  - Separate Admin-GUI
  - Multiple Portals
  - User-based Tracking
  - Granular Logging

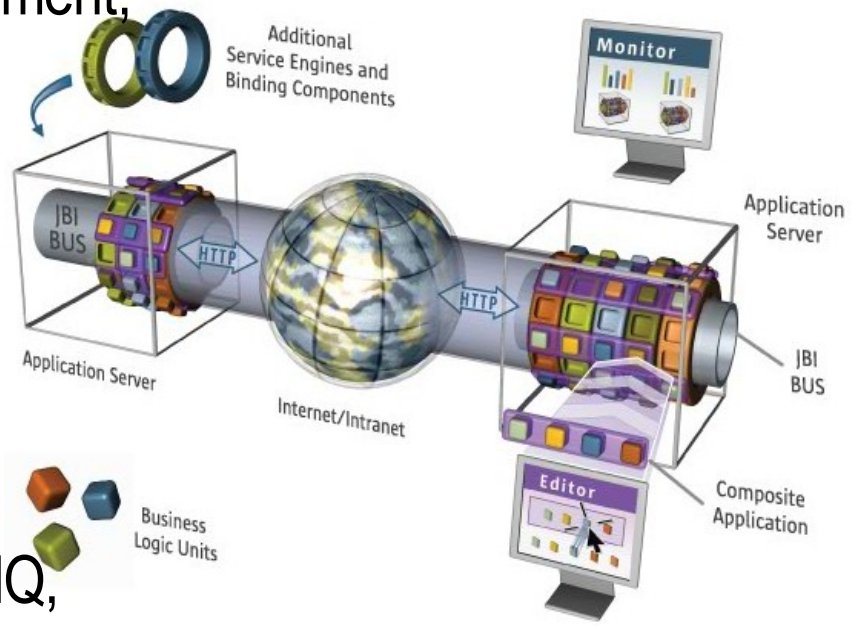
What comes next?

Java Business Integration



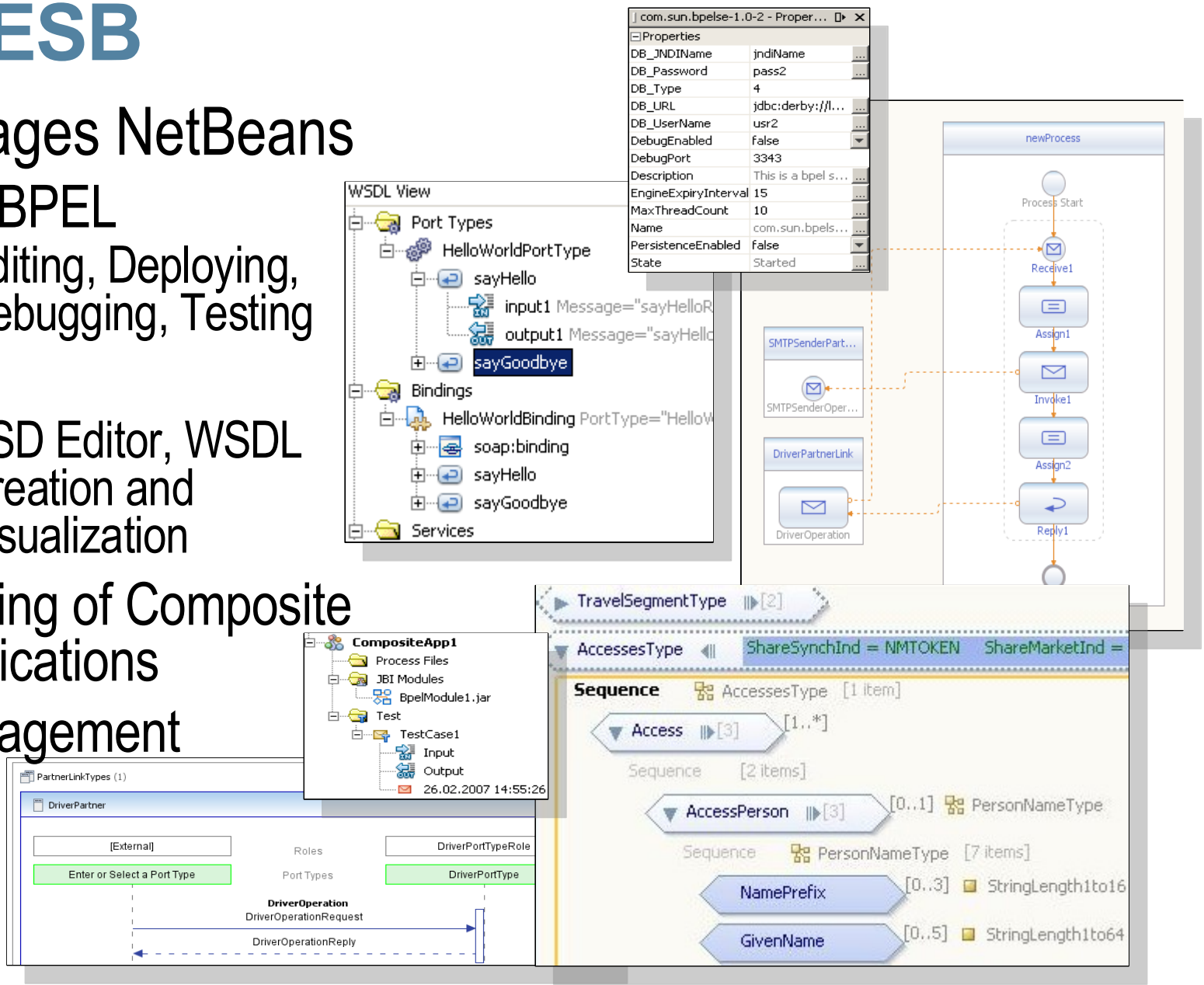
OpenESB

- Leverages GlassFish
  - Support for JavaEE 5, Security, HA, Clustering, Transactions, Management, Monitoring, ...
- Leverages WSIT
  - WS-Security, WS-Reliable-Messaging, WS-Atomic-Transaction, WS-Coordination, ...
- BCs & SEs
  - HTTP/SOAP, JMS, Websphere MQ, File, FTP, CICS, HL7, SAP, ...
  - WS-BPEL with HA and Persistence, JavaEE, XSLT, IEP, SQL, ETL, Workflow, ...

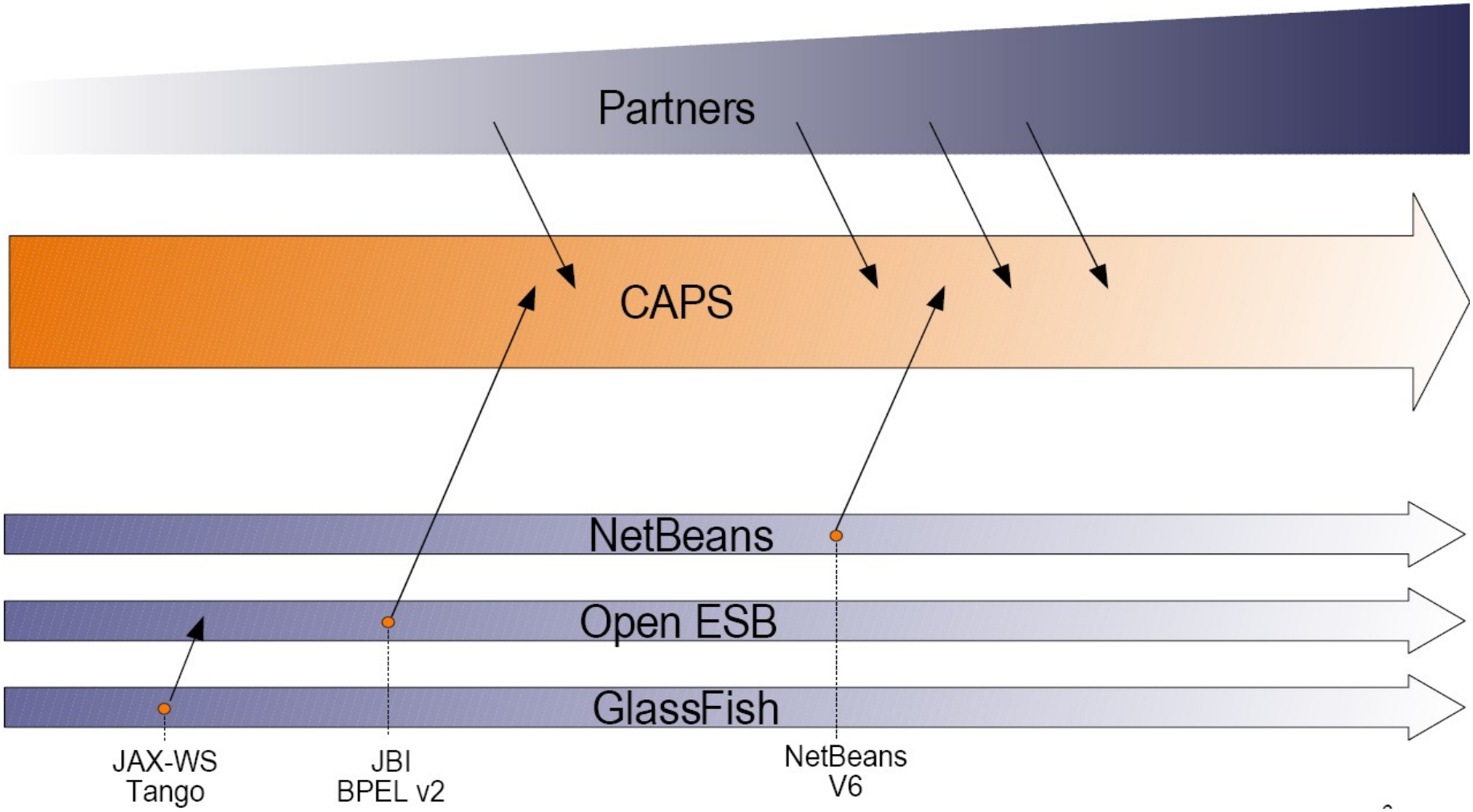


OpenESB

- Leverages NetBeans
  - > WS-BPEL
    - – Editing, Deploying, Debugging, Testing
  - > XML
    - – XSD Editor, WSDL Creation and Visualization
  - > Testing of Composite Applications
  - > Management

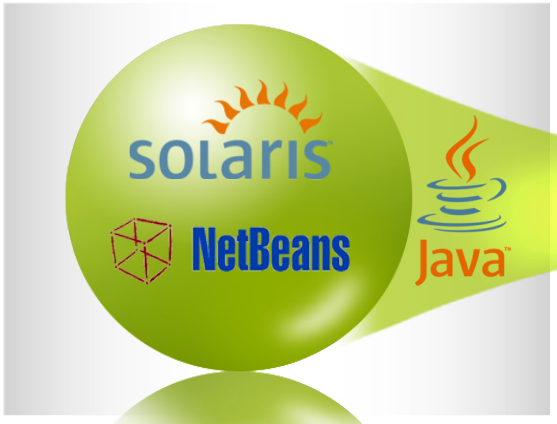


JavaCAPS and OpenSource



Choice, Transparency and Value

Open Source
Choice



- NetBeans
- GlassFish
- OpenESB

Free Access
Transparency

- Community Support
- Developer Support
- Developer tools & tips

Business Deployment
Value

- JavaCAPS
- 24x7 Production Support
- Training
- Services
- Indemnification

Summary

Why
Sun microsystems
Complete and Advanced
Comprehensive
Pre-tested and Integrated
Based on Open Standards
Unified
Secure and Manageable
Open

Thank you!

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Sun Microsystems