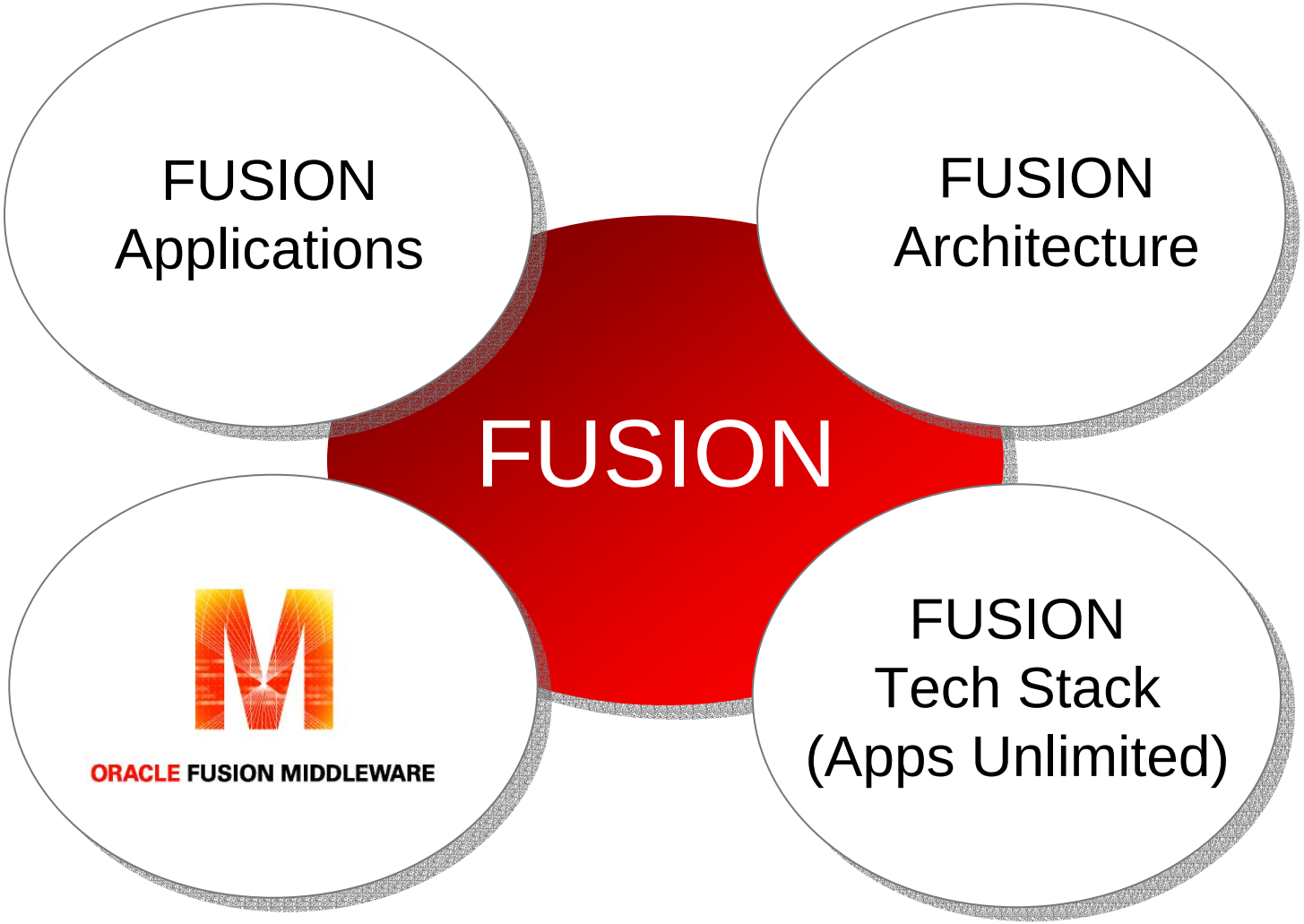
ORACLE

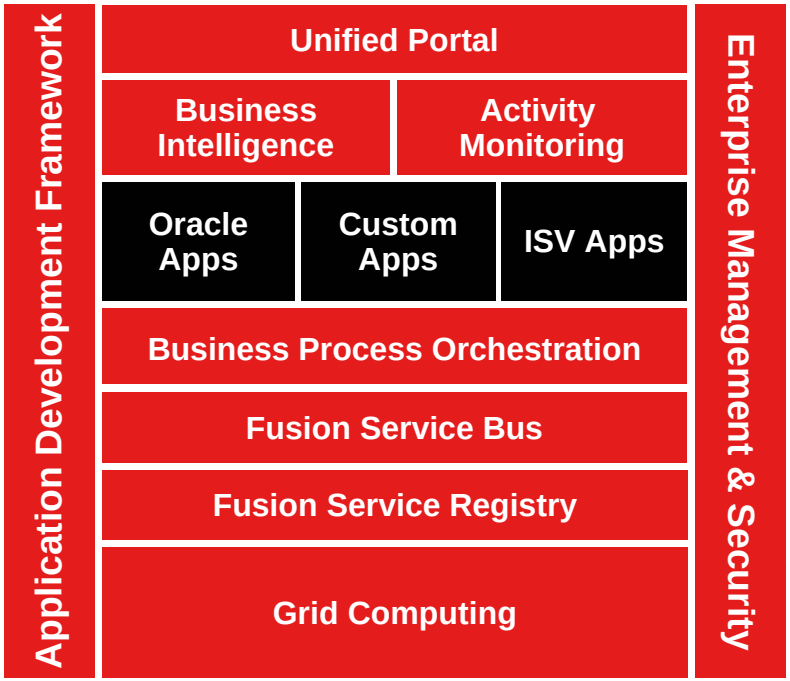
Service Oriented Architecture

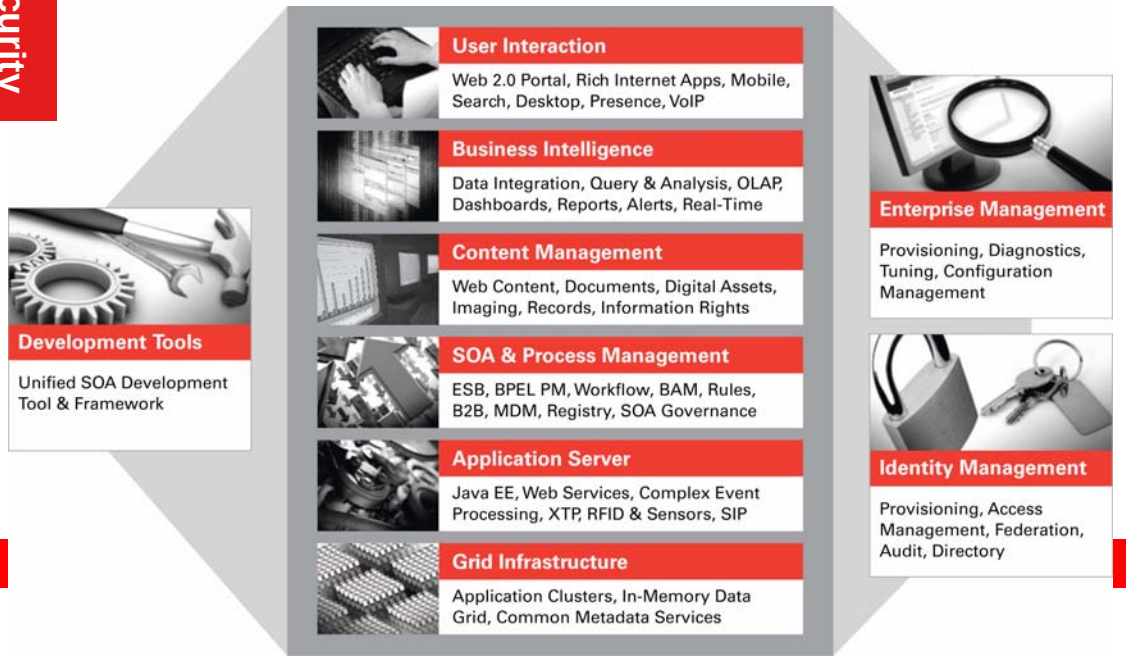
Sean Donahue

What does FUSION mean exactly?



Oracle Fusion Architecture, Middleware





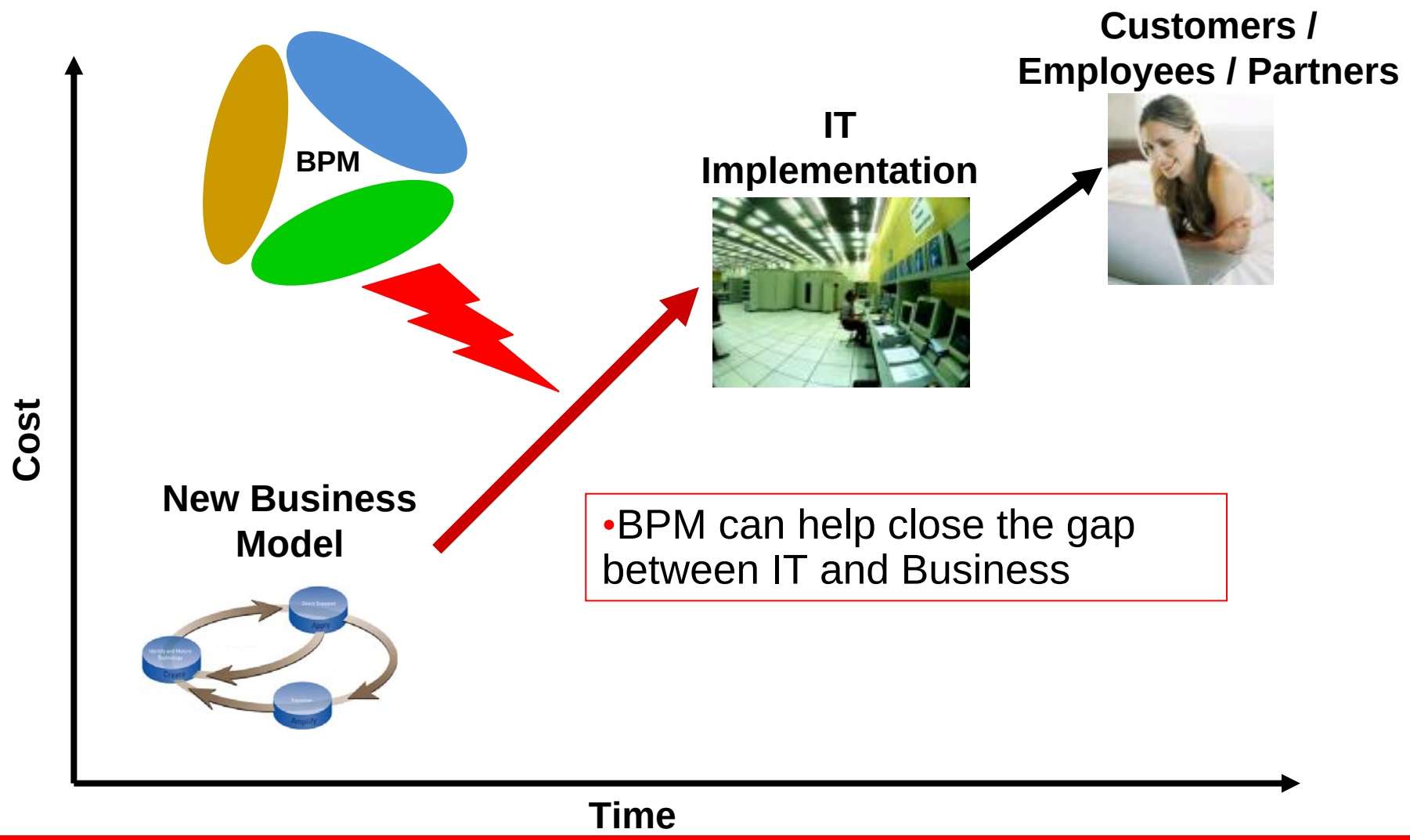
Fusion Middleware Guiding Principles

- ✓ **PROTECT** your Existing Investment
  - Ensure customer success for go lives and ongoing production
  - Extend performance, security, and compliance
  - Maintain current product capabilities and open platform support
- ✓ **EXTEND** the Value of your Applications
  - Enhance product to support new application products
  - Lower cost of ownership & continue to simplify platform
  - Add customer requested features
- ✓ **EVOLVE** you to the Next-Generation
  - Leverage standards and modernize Application technology
  - Build Fusion technology and concepts into Oracle's Applications
  - Simplify Application and Fusion upgrades

Acronyms…

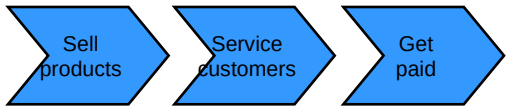
- What is BPM?
  - Business Process Management
- What is SOA?
  - Service-Oriented Architecture
- What is BPMN?
  - ***Business Process Modeling Notation***
- What is BPEL?
  - ***Business Process Execution Language***
- What is BPA?
  - Business Process Analysis
- What is BAM?
  - Business Activity Monitoring

“Strategy to Execution” Gap



Many BPM initiatives lack Business/IT collaboration

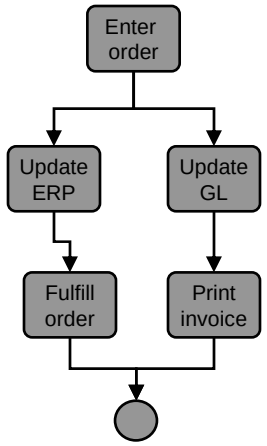
Business - Strategic modeling



- No visibility into IT ?
- Disconnect between conceptual model and implemented process
- Not sure how to improve process and reduce costs ?

Requirements, powerpoint, visio model, Export files

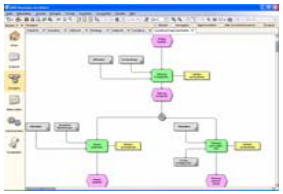
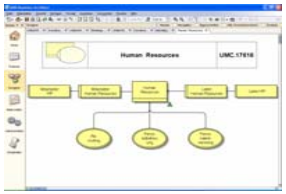
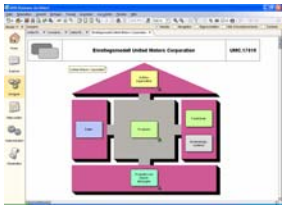
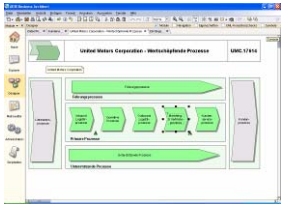
IT – Executable modeling



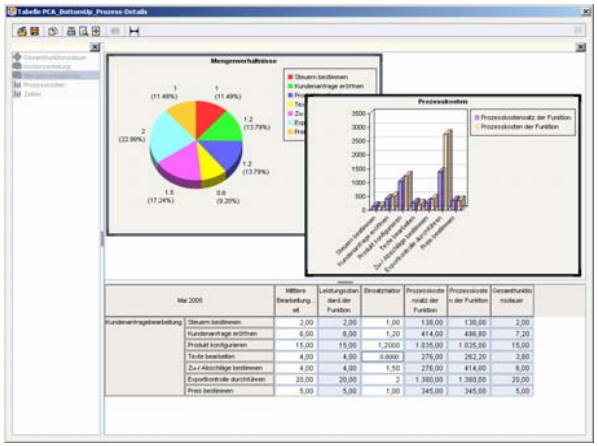
- Requirements not clear ?
- Business side is constantly asking for changes

Oracle BPA Suite – Powered by ARIS

Business Process Architect

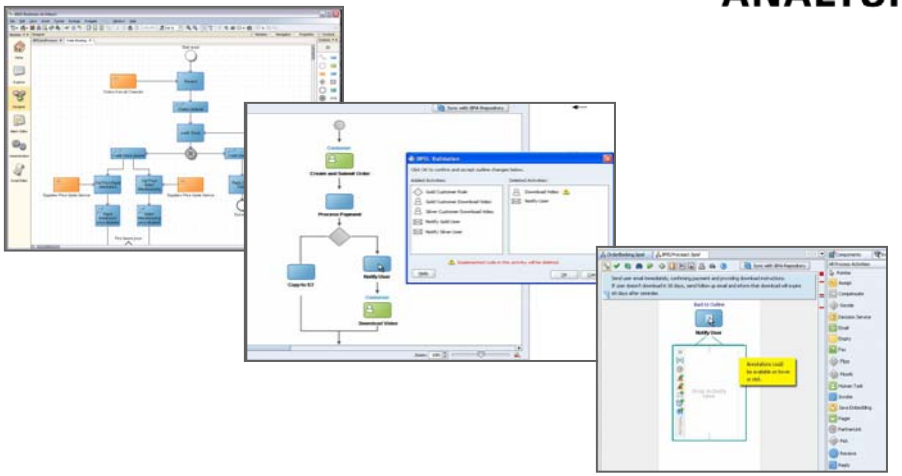
Business Process Simulator



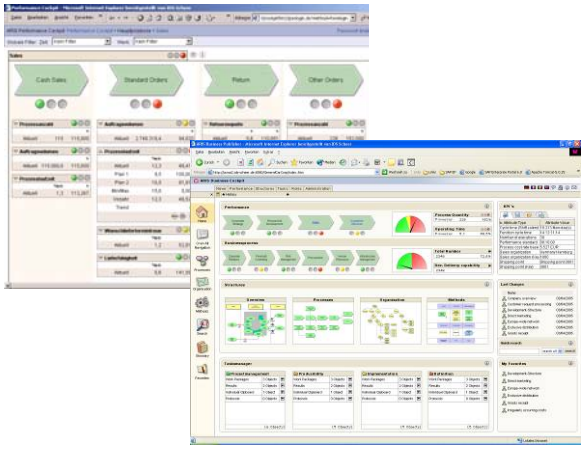
ORACLE

BUSINESS PROCESS ANALYSIS SUITE

Oracle SOA Extensions

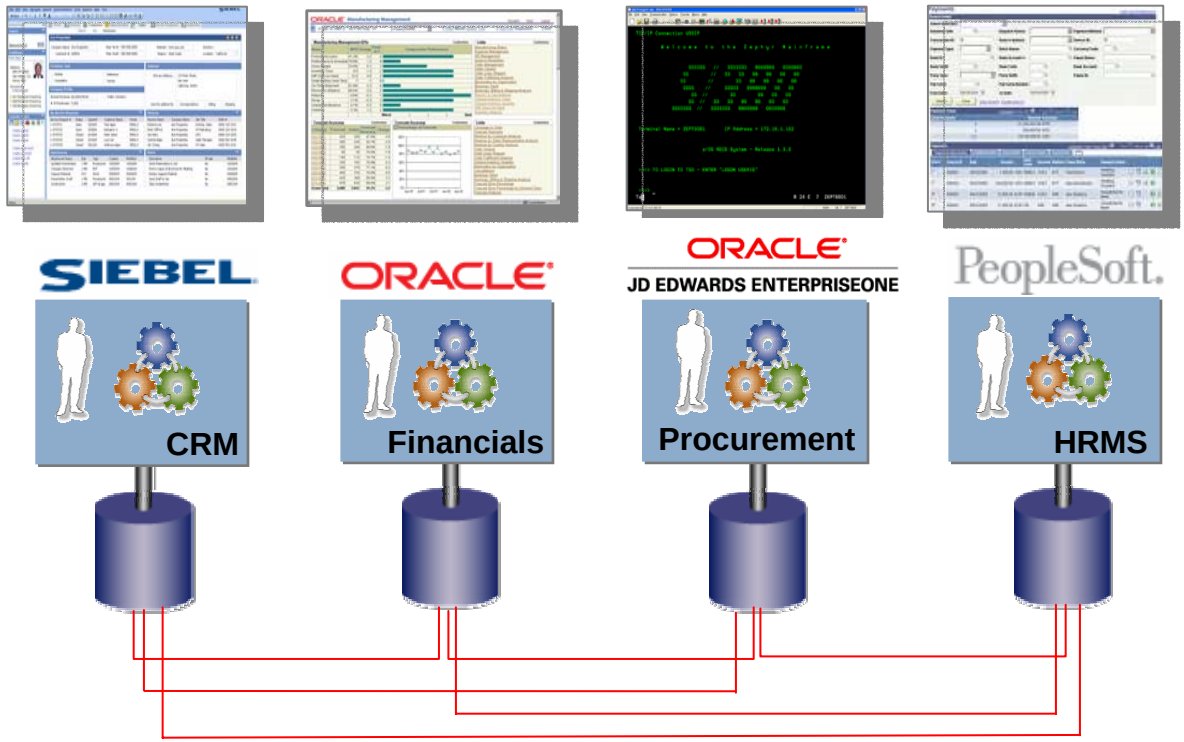


Business Process Publisher

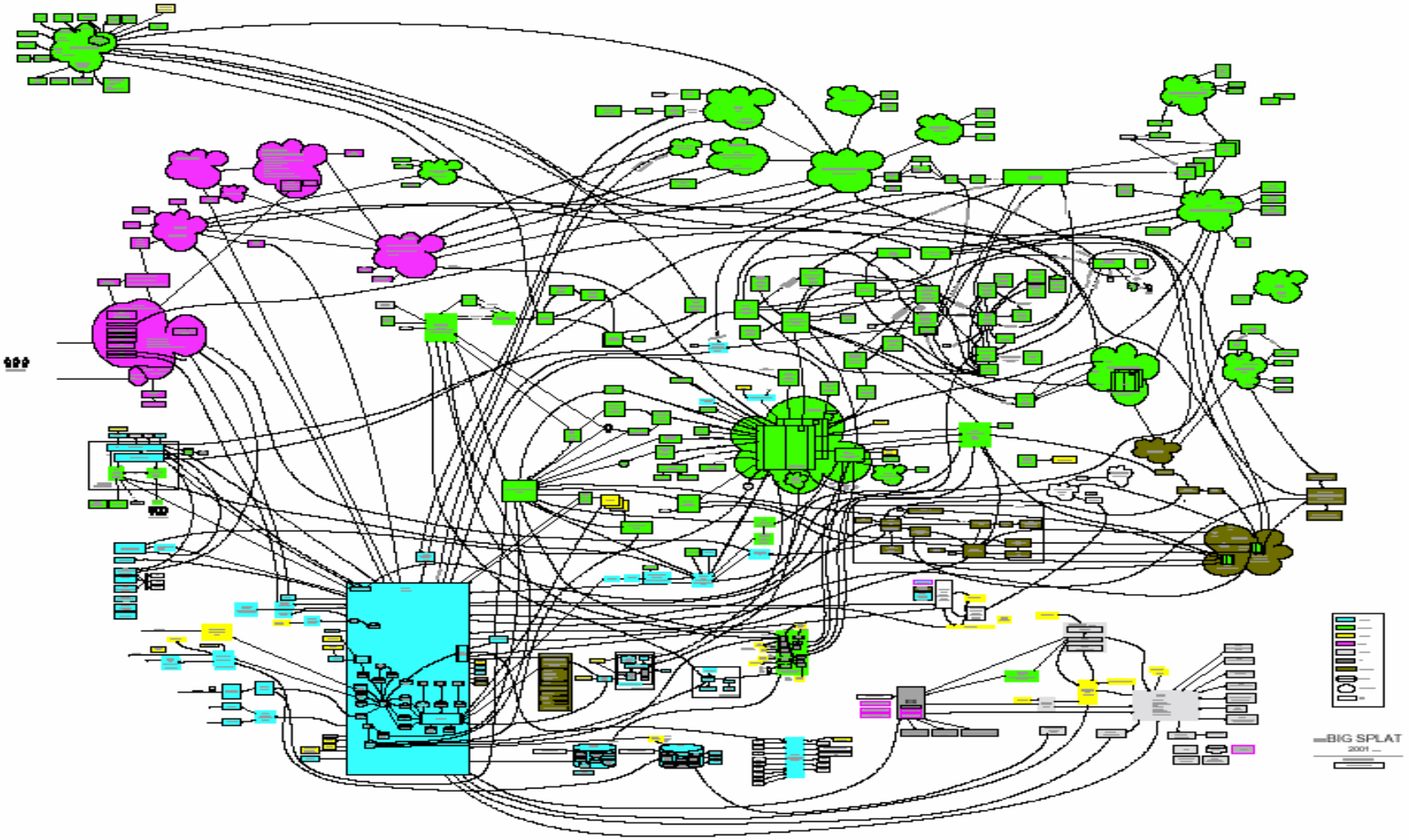


Growth & Change

Typical Scenario

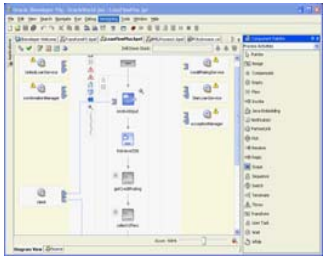


The Architectural Challenge



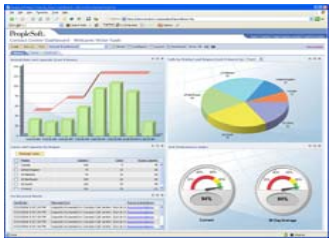
Service Orchestration

Design

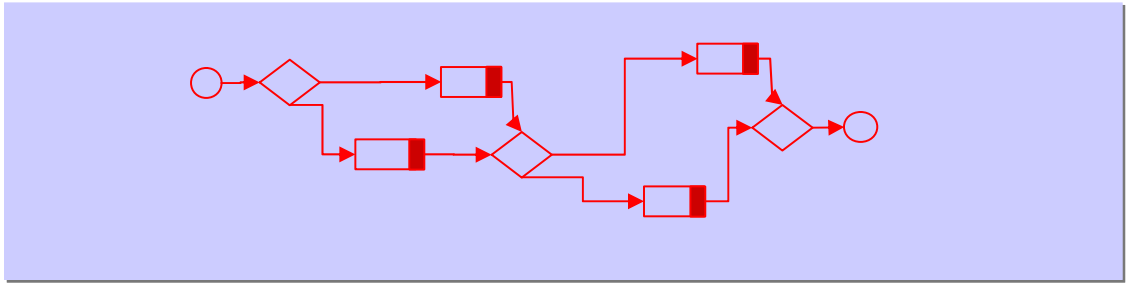


Monitor

Optimize



Execute & Optimize Business Processes



Cross-Application Business Process Automation

SIEBEL

ORACLE

ORACLE JD EDWARDS ENTERPRISEONE

PeopleSoft.

CRM

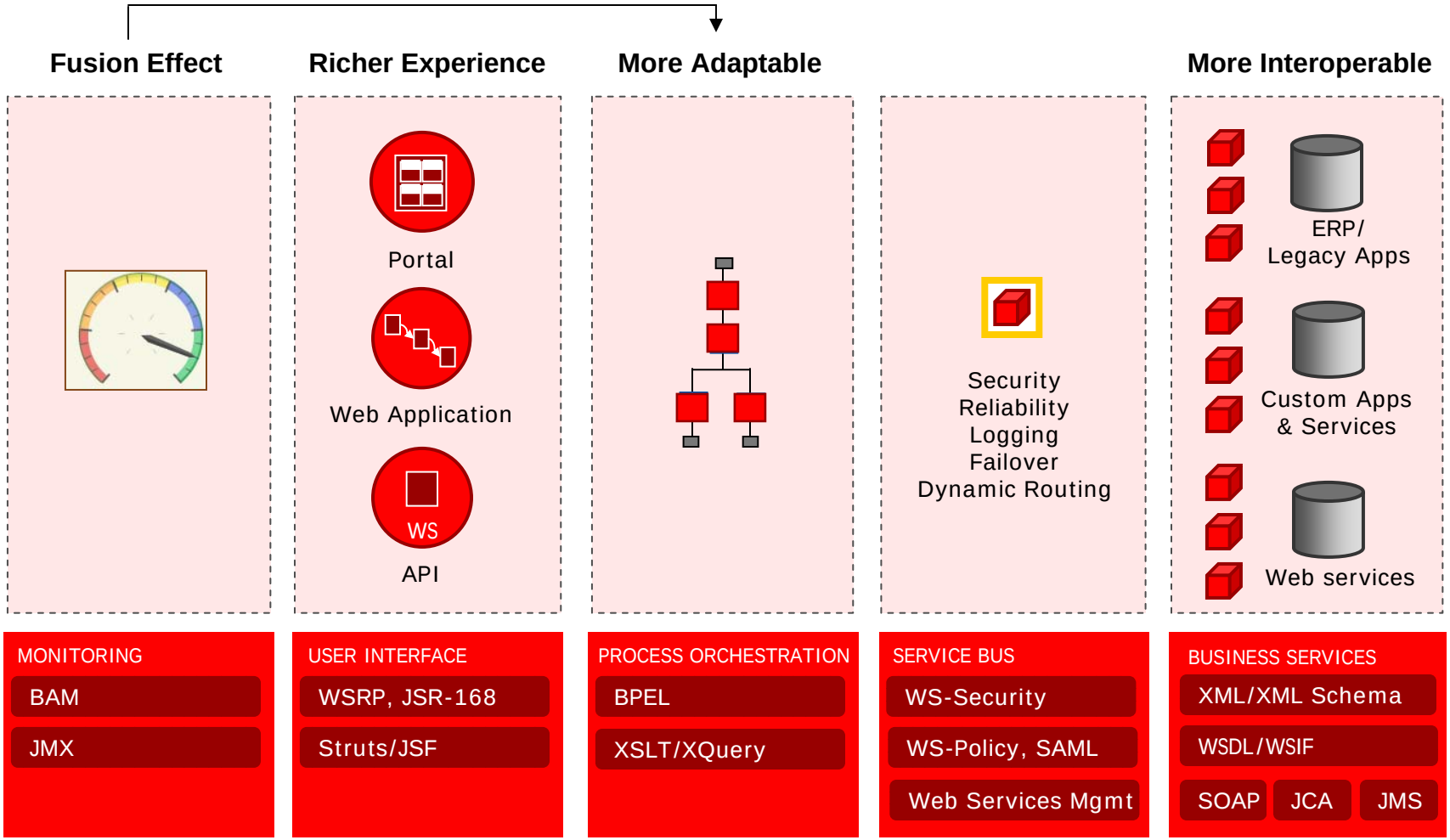
Financials

Procurement

HRMS

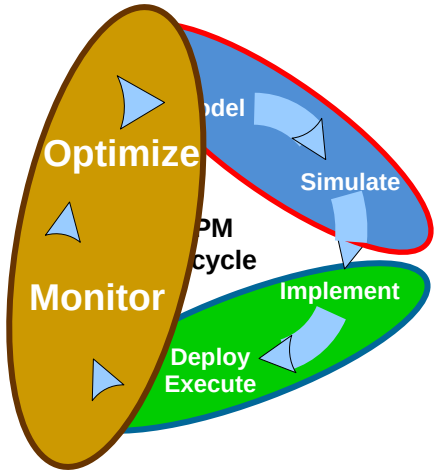
Application Services

Key SOA Standards



Business Activity Monitoring

Real-time Process Feedback & Optimization



Monitor a Process

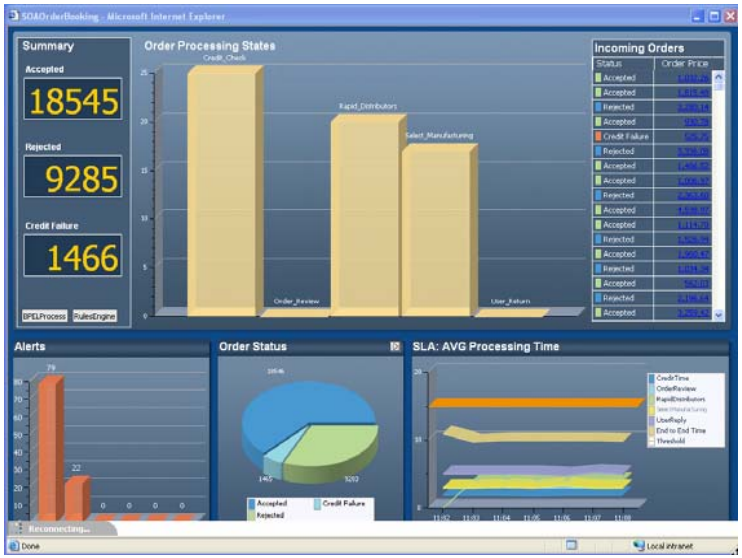
- Track each process step
- Identify failures

Process Aggregation

- Averages, KPIs, SLAs
- Identify bottlenecks

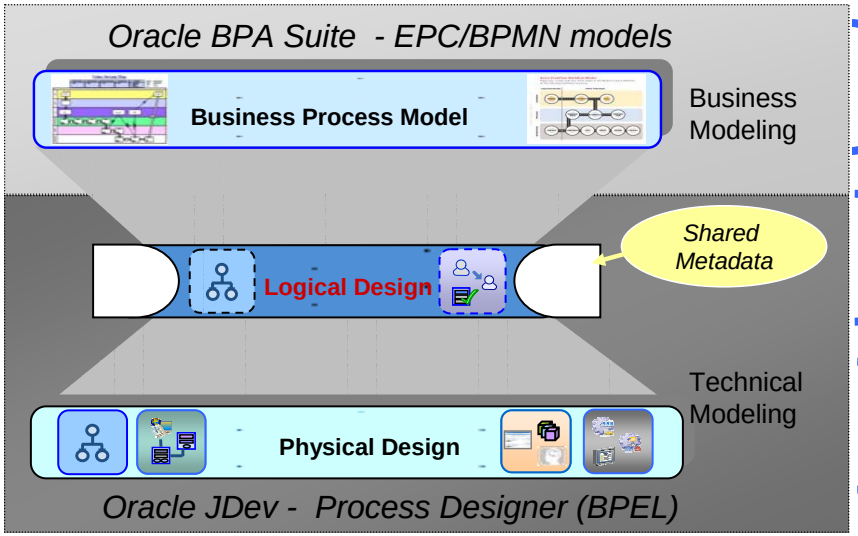
Complex Event Processing

- Correlate events
- Identify threats & opportunities

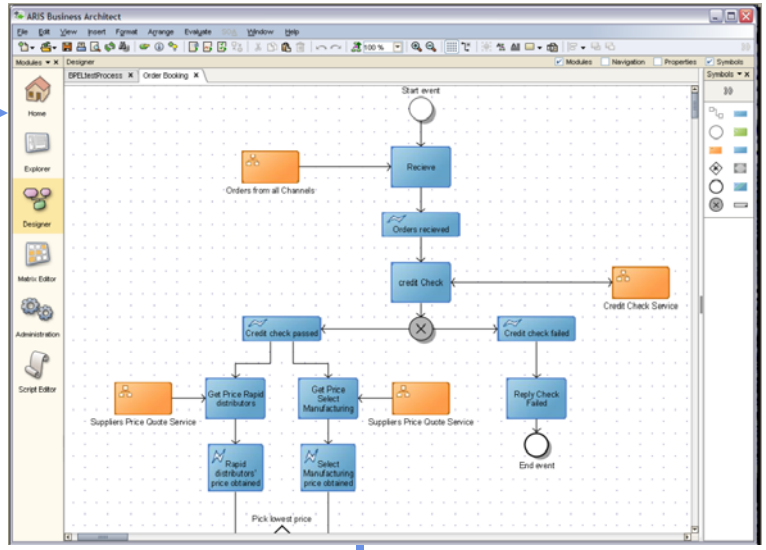


SOAOrderBooking - Microsoft Internet Explorer
Summary
Accepted
18545
Rejected
9285
Credit Failure
1466
BPELProcess
RulesEngine
Order Processing States
Credit_Check
Order_Review
Rapid_Distributors
Select_Manufacturing
User_Return
0
5
10
15
20
25
Incoming Orders
Status
Order Price
Accepted 1,032.26
Accepted 1,815.48
Rejected 3,280.14
Accepted 930.78
Credit Failure 525.75
Rejected 3,336.08
Accepted 1,486.52
Accepted 1,006.97
Rejected 2,363.60
Accepted 4,538.97
Accepted 1,114.70
Rejected 1,526.94
Accepted 1,960.47
Rejected 1,034.34
Accepted 562.03
Rejected 2,196.64
Accepted 3,259.42
Alerts
79
22
0
0
0
0
10
20
30
40
50
60
70
80
Order Status
18546
1465
9283
Accepted
Credit Failure
Rejected
SLA: AVG Processing Time
0
10
20
11:02
11:03
11:04
11:05
11:06
11:07
11:08
CreditTime
OrderReview
RapidDistributors
SelectManufacturing
UserReply
End to End Time
Threshold
Reconnecting...
Done
Local intranet

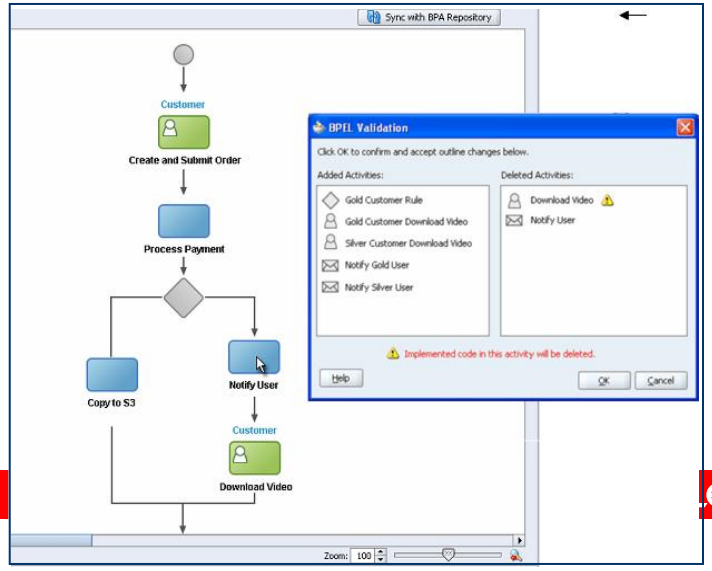
Process Models – continuous refinement



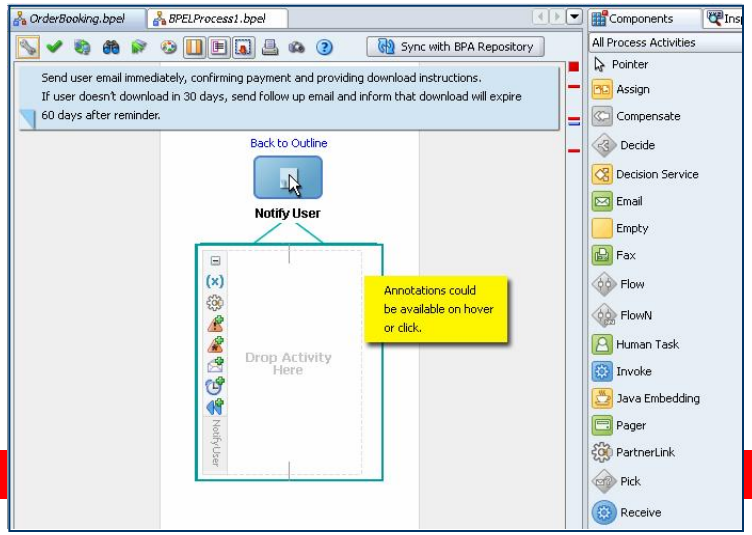
1. Business Process model



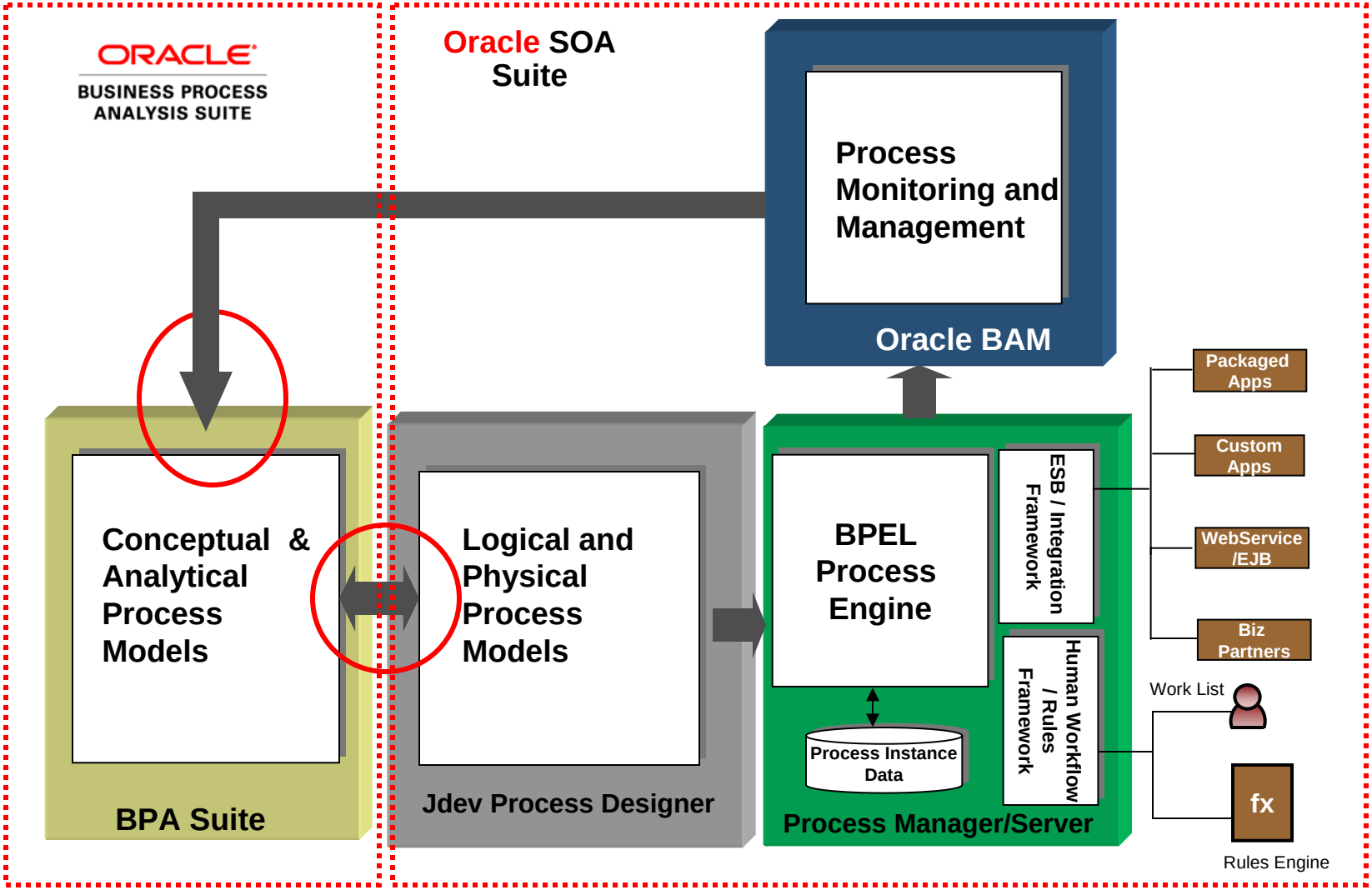
2. Process Blueprint (Logical Design)



3. Complete Executable Process

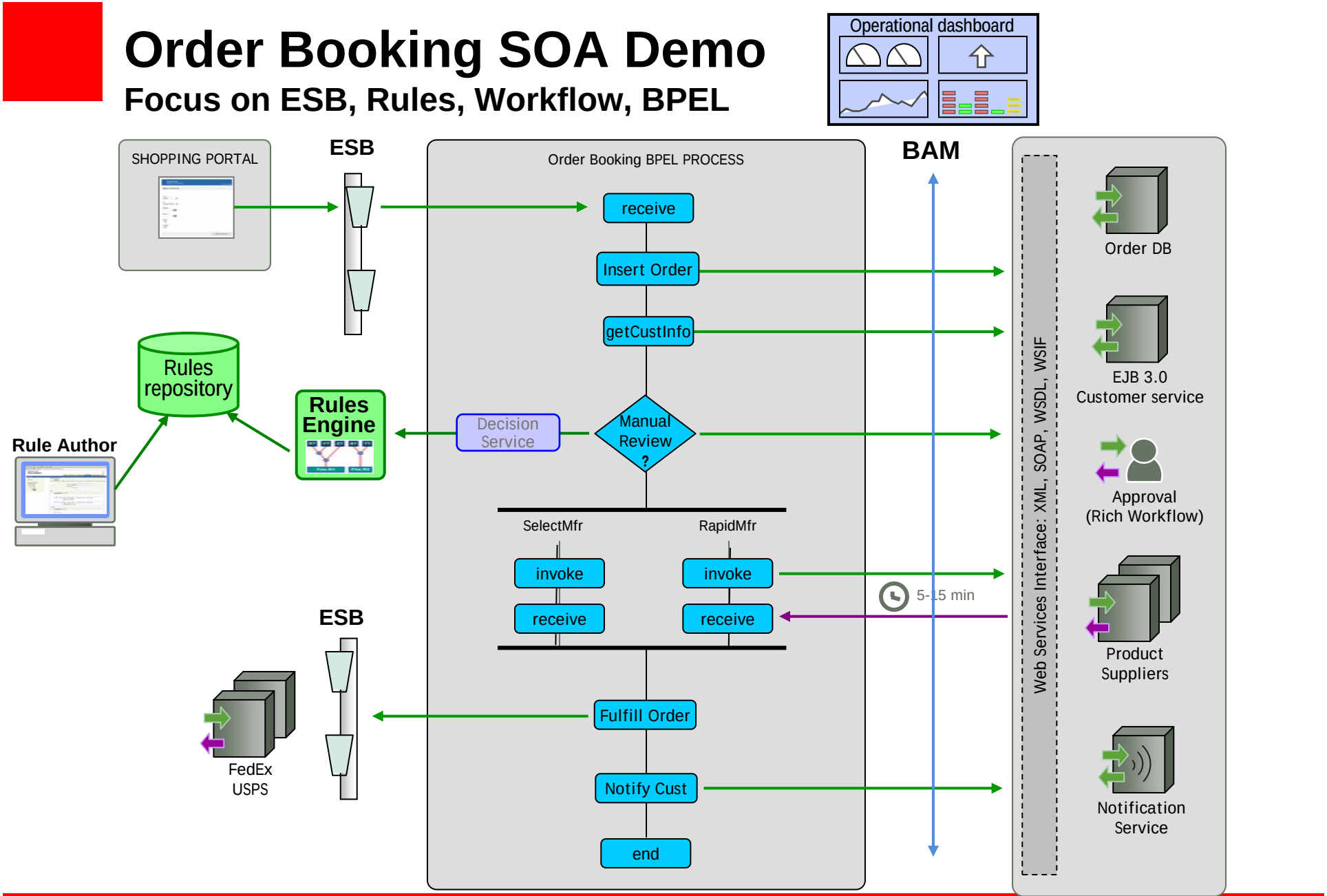


Integration Philosophy for Closed Loop BPM

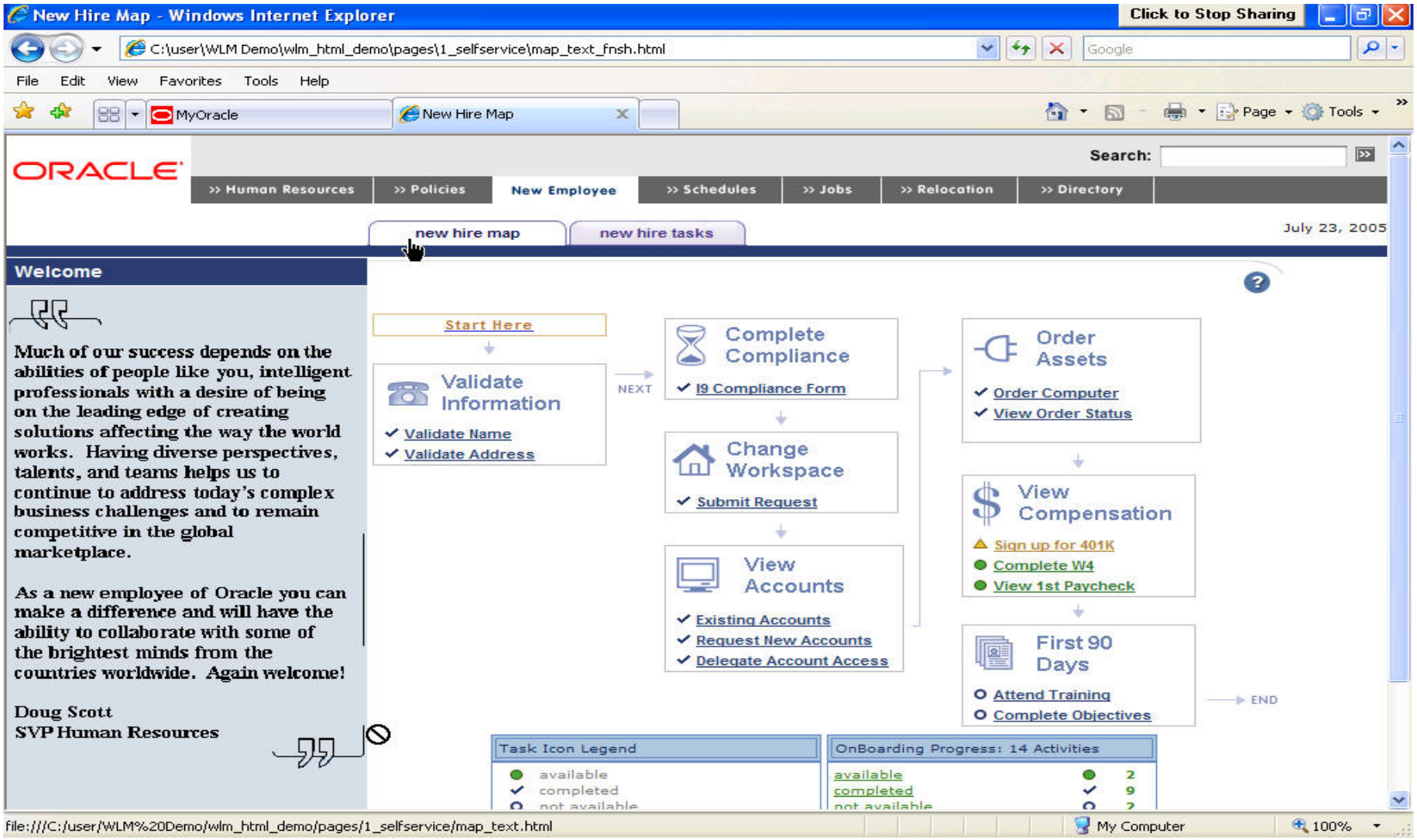


Order Booking SOA Demo

Focus on ESB, Rules, Workflow, BPEL



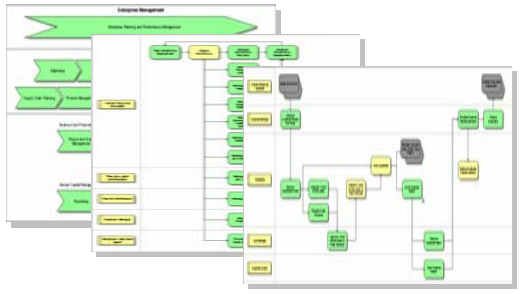
HR On-Boarding Process



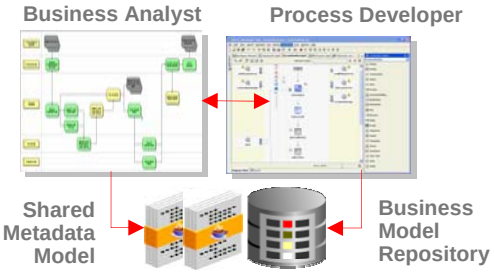
SOA & Business Process Management

Service Architecture For Simple Integration

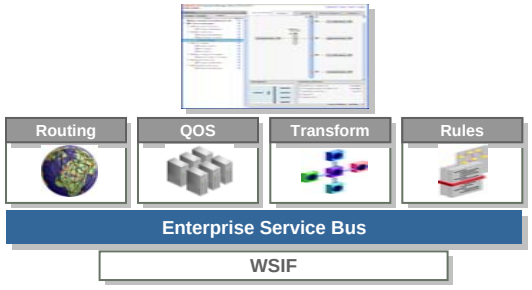
Business Process Analysis Suite
Model & Analyze



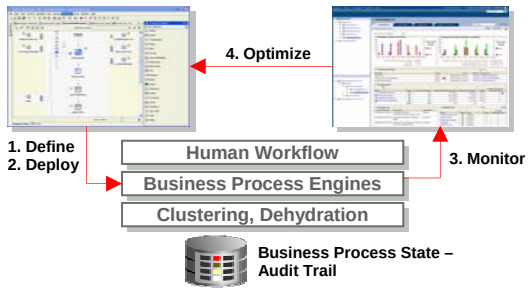
Business Process Designer
Generate & Capture



Enterprise Service Bus (ESB)
Connect & Route

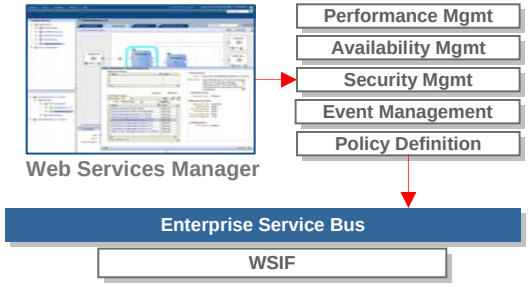


Business Process Manager (BPEL)
Orchestrate & Transform



Business Activity Monitoring (BAM)
Visualize & Optimize

Web Services Manager
Manage & Govern



BPEL Adoption within Oracle

APPLICATIONS

Peoplesoft

CRM 9 release uses BPEL PM and BAM internally (see next slide)

8.48 Peopletools certified with BPEL PM 10gR2 to orchestrate services. 8.51 now being certified with 10gR3.

iFlex

BPA Suite to model financial services processes and BPEL PM to execute them

Application Integration Architecture (AIA)

Predefined integration processes between apps implemented with Oracle ESB and BPEL PM

Retek

BPEL for synchronizing Retek sales data with Oracle Financials

Oracle JMS and ESB to replace SeeBeyond

Siebel

Distributed Order Orchestration

JD Edwards

Oracle BPEL and ESB to replace Web Methods

Fusion Applications

BPEL PM and SOA Suite 11g as the foundation for the next generation of Applications

MIDDLEWARE

Oracle Content Services

BPEL PM for document workflows

BPEL PM for invoice processing solutions

WebCenter

BPEL Worklist portlet

Identity Management

BPEL PM for identity provisioning workflows

Business Intelligence

Analytics over BPEL “Dehydration Store”

Initiate BPEL processes from BI dashboards

Enterprise Manager

SOA Management pack – BPEL PM mgmt

OPERATIONS

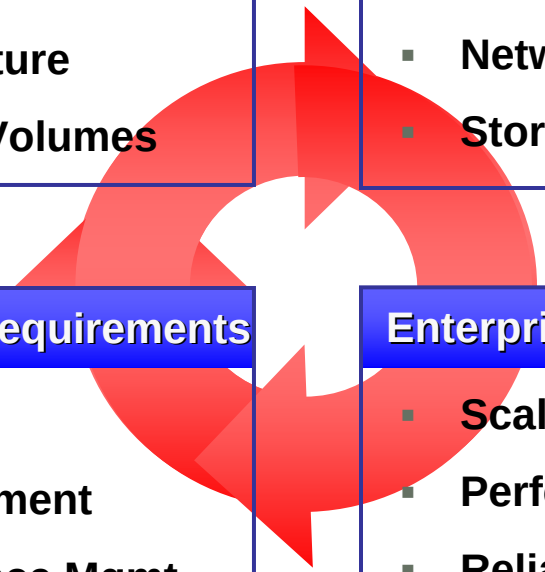
Internal Global IT

BPEL PM for Oracle Alerts workflows

OnDemand

Oracle SOA Suite for Integration as a Service

Re-Thinking Application Infrastructure



Software Framework Pressures

- Service Oriented Architecture
- Web 2.0
- Event Driven Architecture
- Extreme Transaction Volumes

Hardware Capacity Impact

- Compute Power: SMP/Multicore
- Memory Arrives: “In Memory Option”
- Network Speed: Gbe/10G/IB
- Storage: Flexibility

Enterprise Manageability Requirements

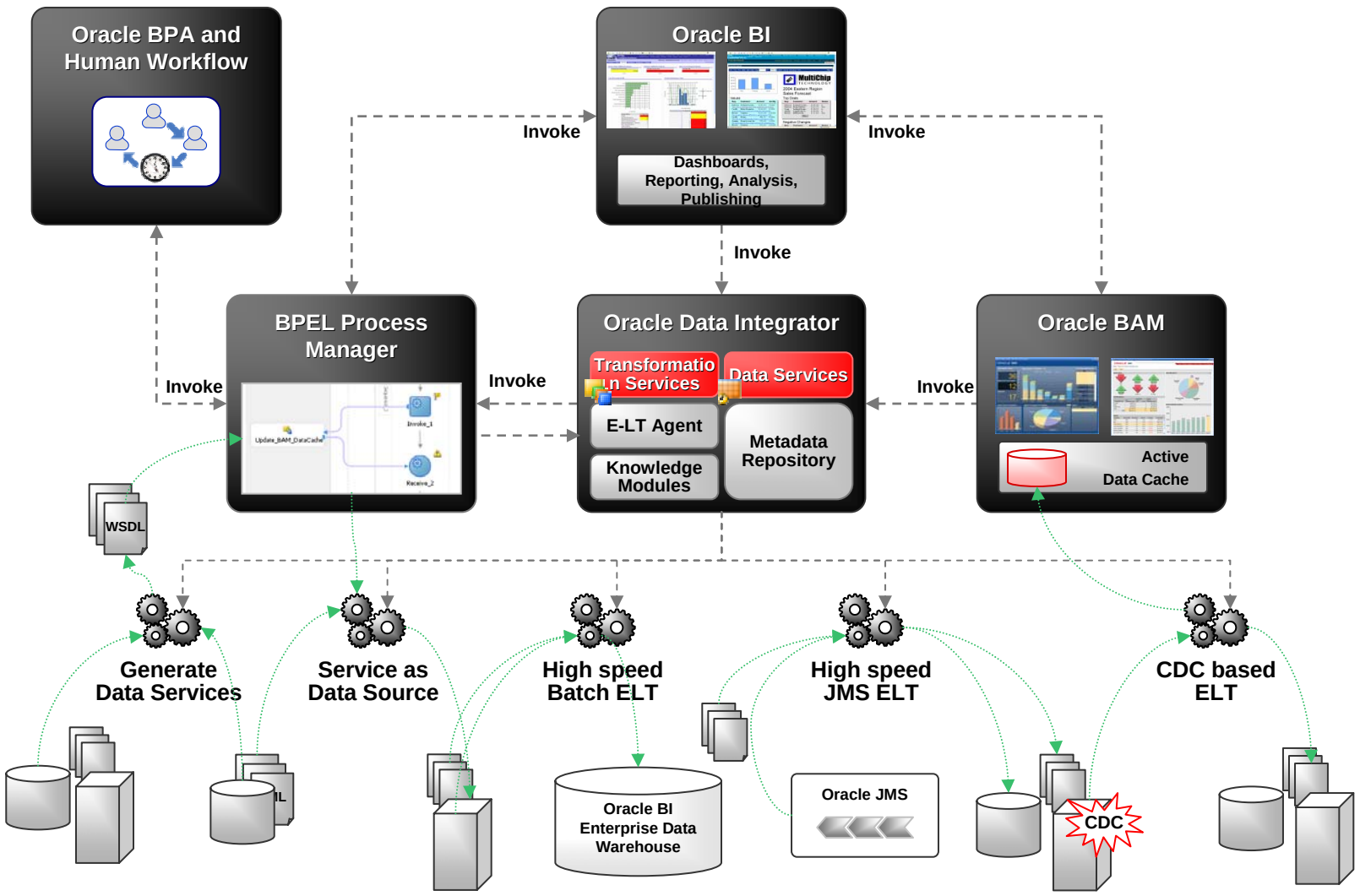
- Grid Automation
- Service Level Management
- Application Performance Mgmt
- Provisioning

Enterprise Infrastructure Requirements

- Scalability – Capacity on Demand
- Performance – Zero Latency
- Reliability – Transactional Integrity
- Availability – Continuous

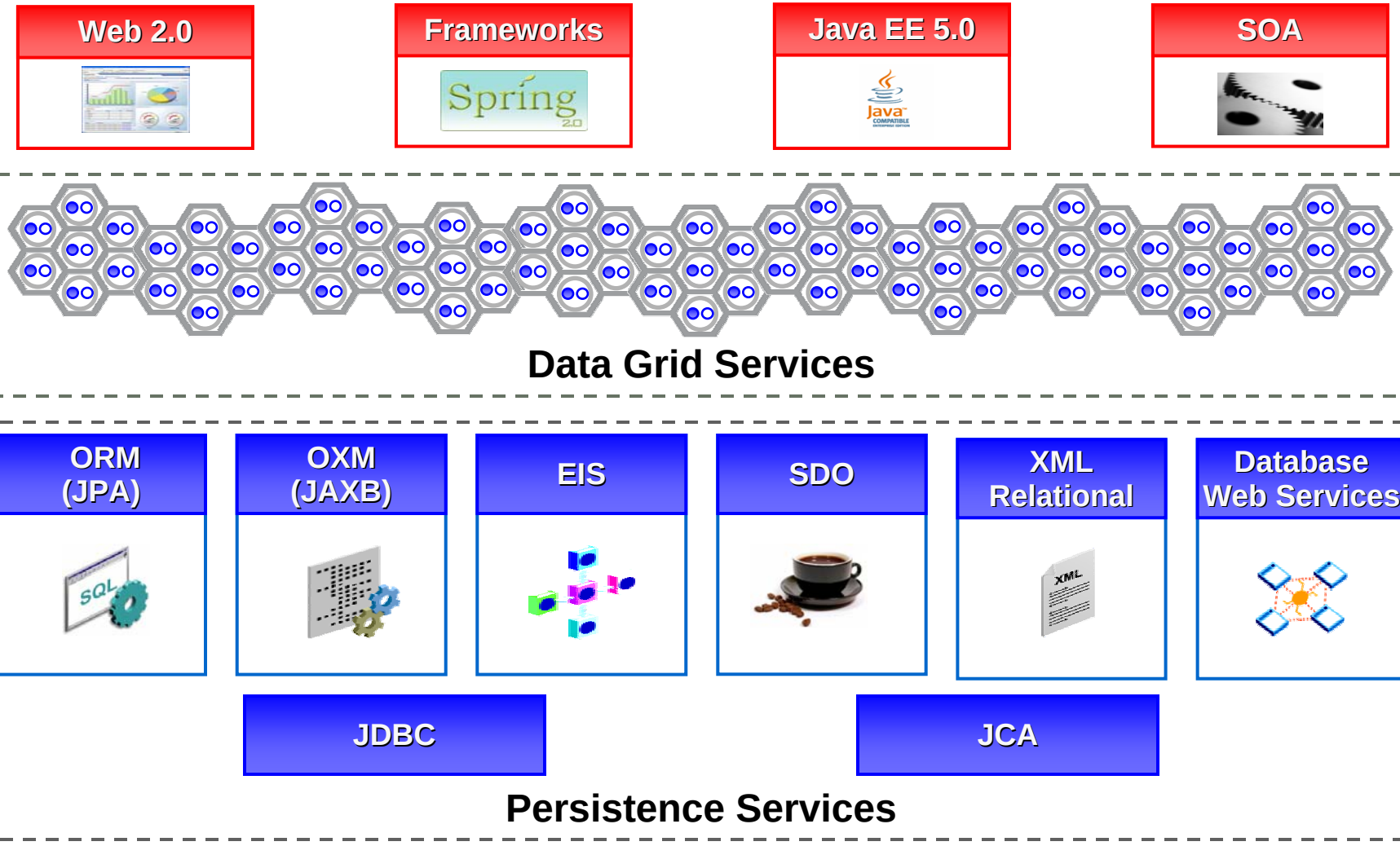
SOA + BI + ODI Integrated Environment

Examples of Event-Driven BI



Application Grid Persistence Services

Via Flexible and Standards-Based Persistence Platform



General Business Requirements

- Close the Business to IT Gap: How can I quickly respond to, and implement, processes from business analysts? How can I improve brand recall and become synonymous with the industry?
- Infrastructure Optimization: How can I utilize IT systems to help optimize costs? What advantages can I derive by integrating business processes? How can I enable employee productivity throughout the employee lifecycle?
- Adhere to Government Regulations: How can I comply with various regulatory requirements while reducing associated costs?

Q&A