Business Process Management

High-Performance Process Agility for Business Growth

Dave Bonaccorsi – STSM , BPM for System Z Architecture and Solutions

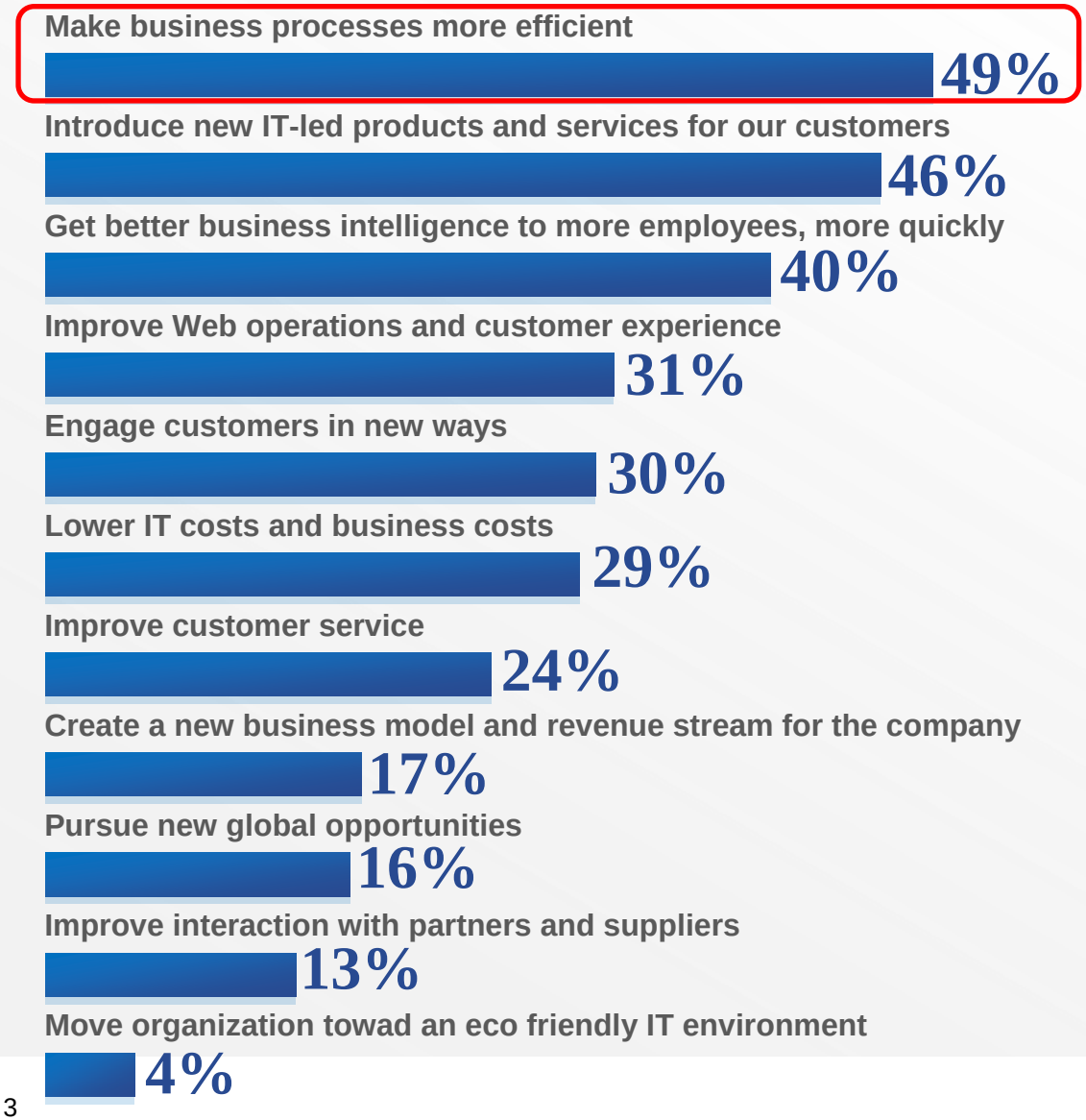
IBM zEnterprise EC12 (zEC12)
Next generation of hybrid computing

Agenda

- Introduction – BPM at work Today
- IBM BPM for z/OS V8 Update
  - Blending BPM and ODM
- IBM BPM for z/OS and zEnterprise Enterprise Solutions
  - Hybrid BPM and ODM Deployment Patterns
- Conclusion

Process Remains *THE* Top Priority

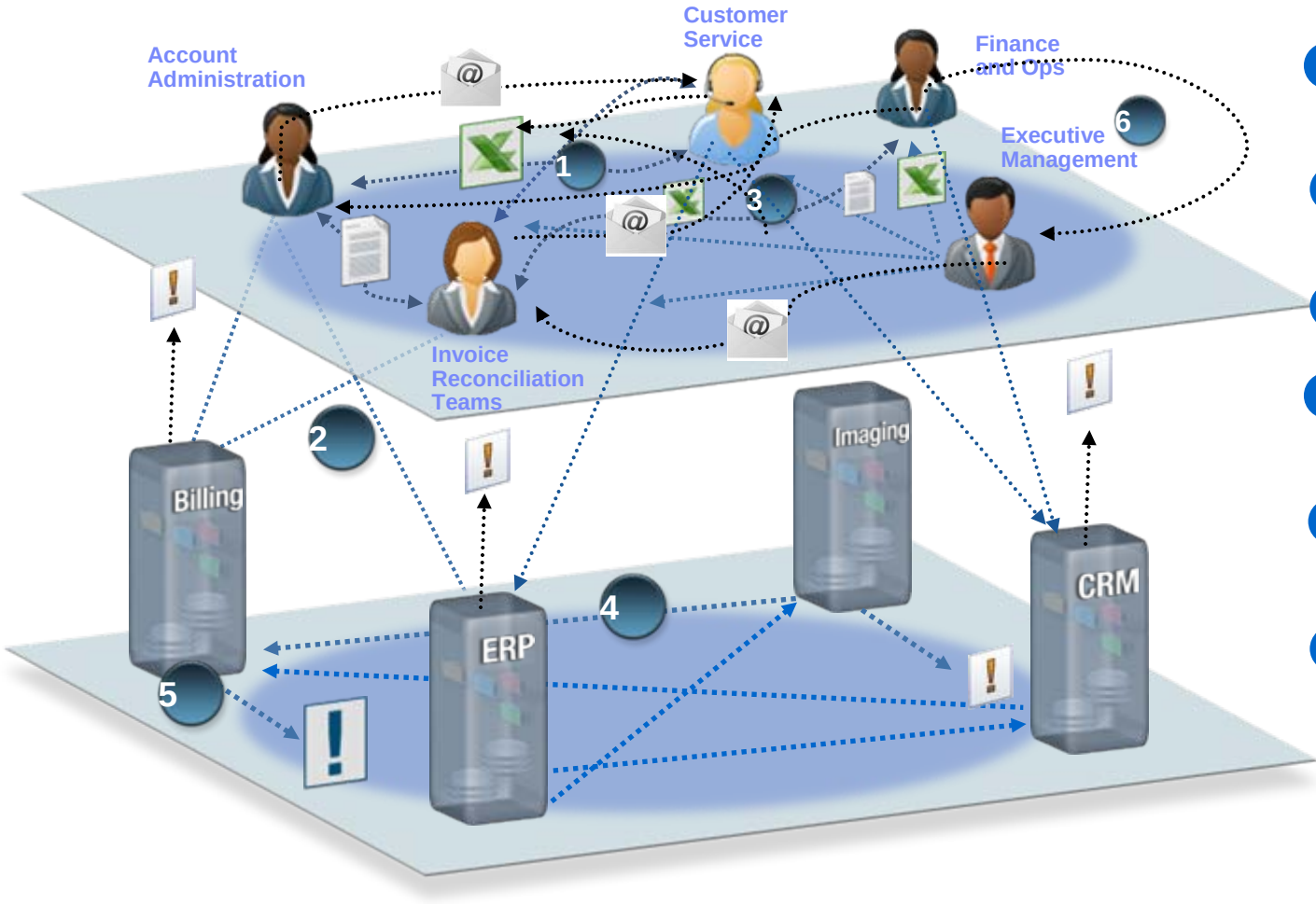
Plans to innovate this year



Making business processes more efficient is the **#1 priority**

2012 InformationWeek 500 Survey

“Business As Usual” Begs for Operational Improvement

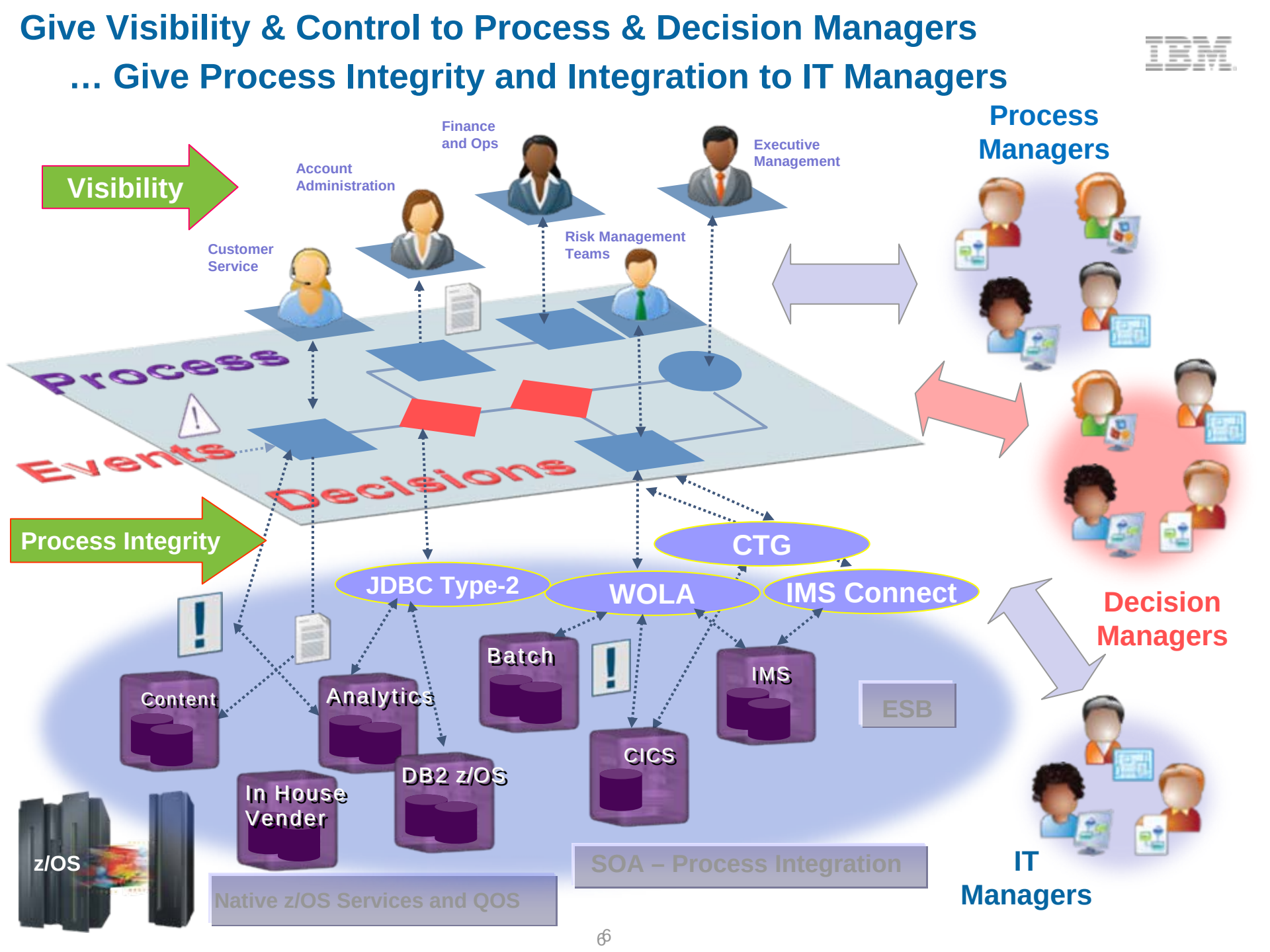


1. Unstructured Tasks and Communication (ex Paper or email)
2. Inefficient Working Environment Spans Systems
3. Inconsistent Prioritization
4. Incomplete or Inaccurate Data Flow Between Systems
5. Lack of Control Over System and Business Events (Exceptions)
6. Poor Visibility Into Process Performance

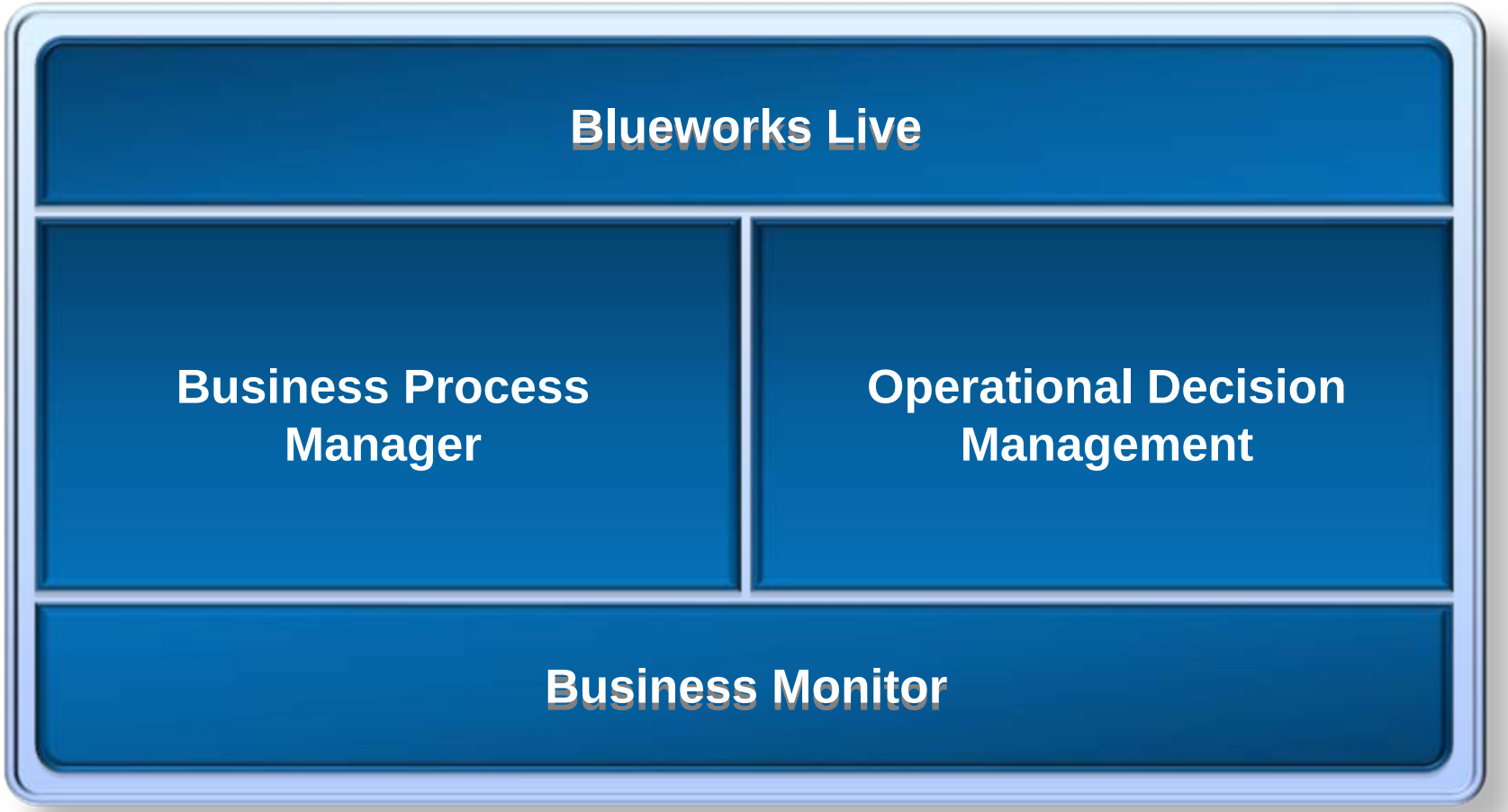
The Essential BPM Capabilities

- Modeling
- Monitoring
- Automation
- Governance
- Optimization
- Rules
- Information
- Cases
- Events
- Integration
- Collaboration
- Analytics

Give Visibility & Control to Process & Decision Managers
… Give Process Integrity and Integration to IT Managers



IBM Products for Business Process & Decision Management



Work together to deliver effective solutions for business operation improvement

In 2011 …

IBM BPM and ODM unified the tools for operational teams to build, deploy, govern, and scale process & rules applications …

IBM Business Process Manager

- Simplicity *for business & IT collaboration*
- Power *to scale from a project to a program*
- Visibility *to improve business outcomes*
- Governance *across BPM projects and programs*

Operational Decision Management

In 2012 …

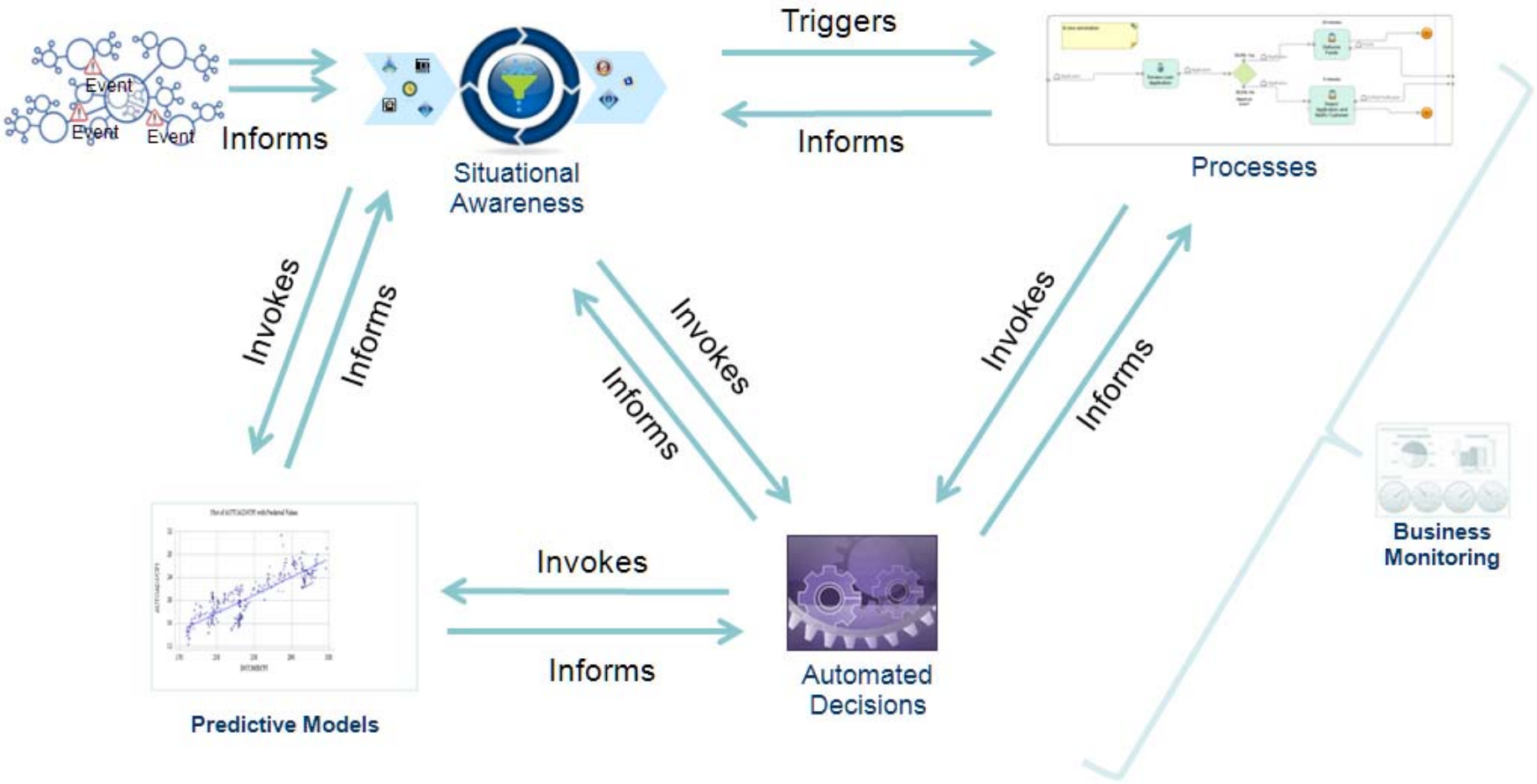
IBM BPM & ODM deliver innovative user interface tools for ***business users*** *to* ***collaborate in getting work done*** *…*

Social

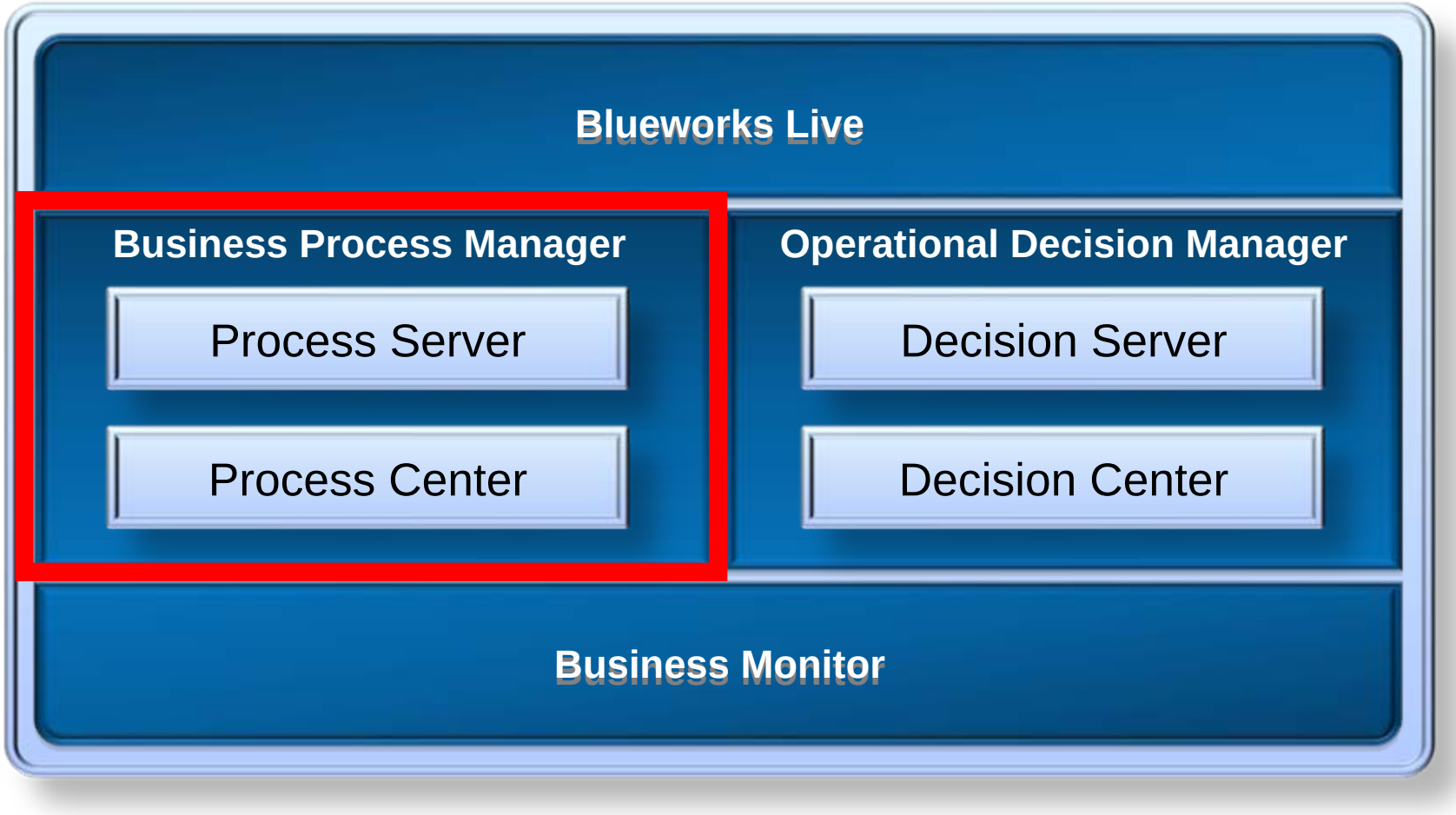
On-the-go

Collaborative

Processes, Decisions, Situations: a symbiotic system



IBM Products for Business Process & Decision Management



Work together to deliver effective solutions for business operation improvement

IBM Business Process Manager v8 for System Z

Social

Mobile

Coaches

Portal

Business Space

Optional Microsoft Add-ons

Process Server z/OS

BPMN | Process Rules | Performance Data Warehouse | BPEL | ESB | Adaptors

Core BPM | **Advanced Automation & Integration**

Governance / Visibility

Define

Improve

WOLA
CTG
IMSConnect
DB2 Type -2
WMQ Q Sharing

Process Center

zLinux , AIX, WIN

Shared Assets

Repository

DB2 V10 for z/OS

Versioned Assets

Server Registry

Network Multiple Process Centers

Process Designer / Optimizer

Process Center Console

Integration Designer

VISIBILITY

COLLABORATION

GOVERNANCE

in Action…

What's New in IBM Business Process Manager v8?

Social Collaboration

Mobile Access

Content Access

Cloud

Enhanced Governance

Simplicity for deep business user engagement

Process Designer

Process Designer provides a single model-driven design environment that simplifies collaboration on process design and analysis

- Simple ***standards-based*** tool allows every team member - including nontechnical users - to ***collaborate*** on process design and analysis
  - ***Graphical*** end-user view of process status to understand the current position in the process
    - Explicit event modeling defines ***workflow*** and ***exception handling***

Validate process requirements and changes faster
Built-in Playback

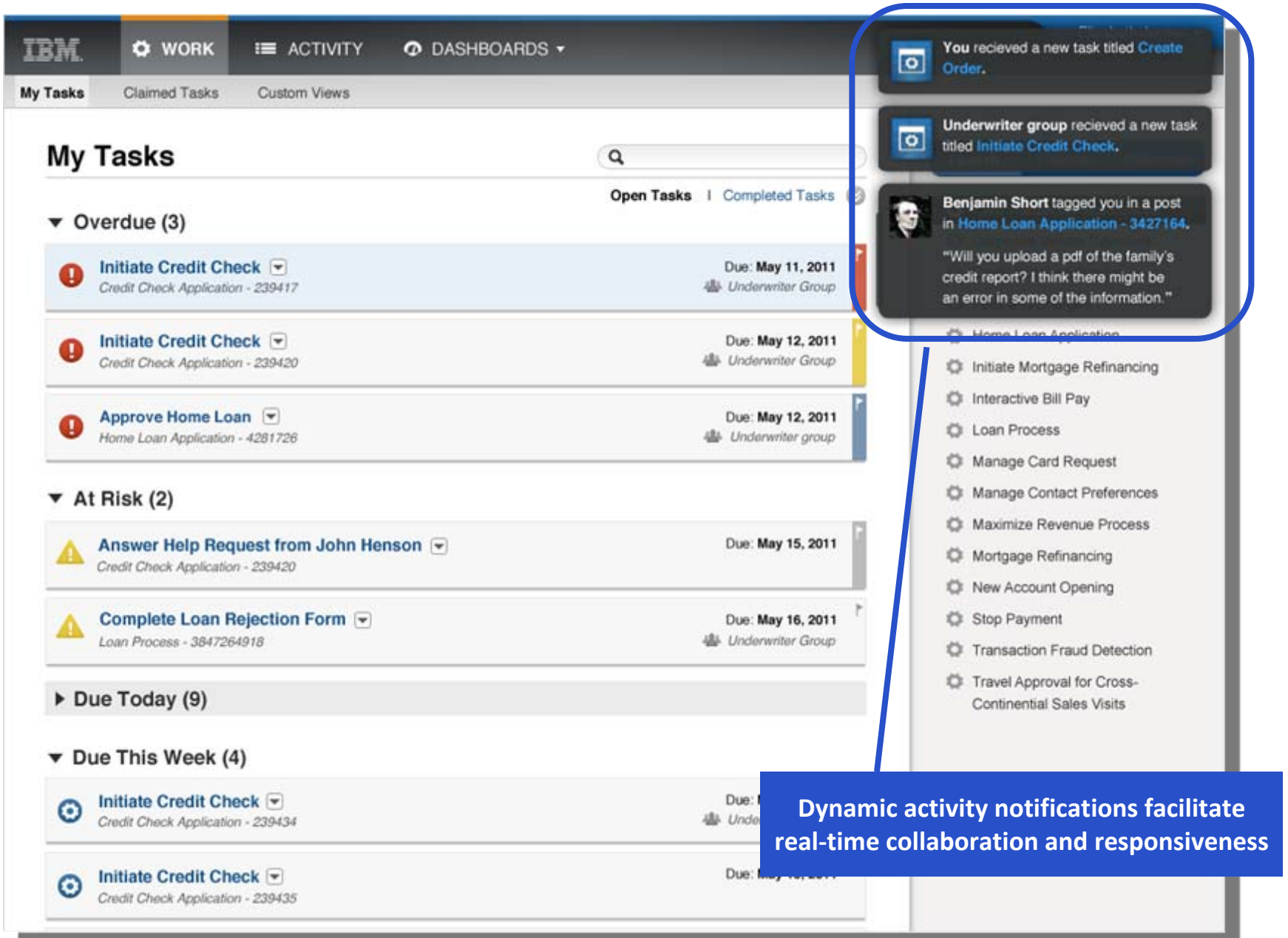
- ***Instantly*** step through and review the current process design by actually executing it
  - Playback executes with a ***single click***
  - ***Nothing*** to compile or install.
  - Allows playback of ***incomplete*** and ***completed*** processes

Social Collaboration

- **New Process Portal and Coaches** enable users to work together on the same tasks via **real-time interactions**.
- **Activity streams** provide a way for you to monitor and perform **ad-hoc actions** on your "favorite" processes and tasks.
- **Experts** – either pre-defined or discovered dynamically (using **social analytics**) – can help you complete process tasks.

Completely Revamped End User Experience

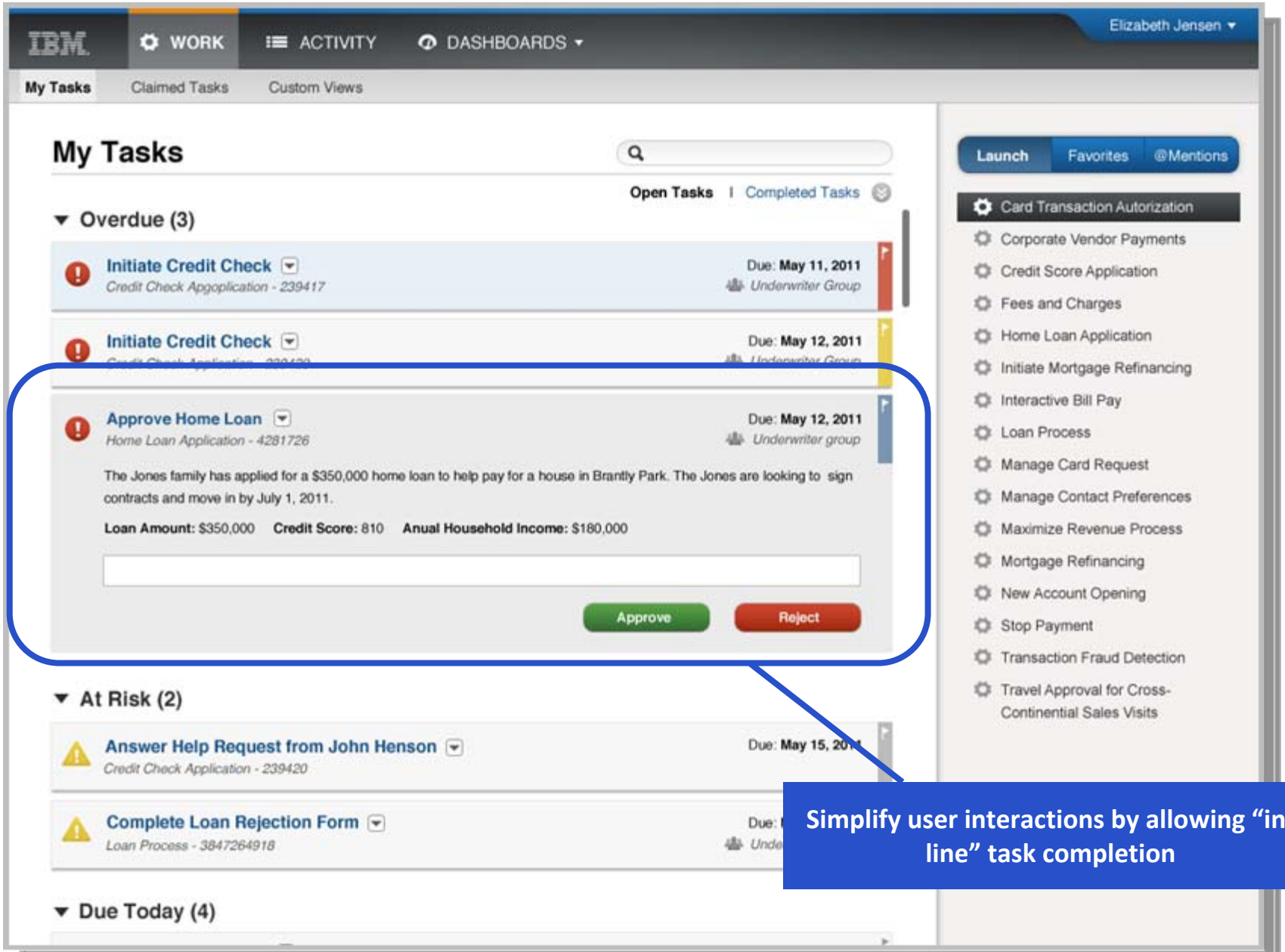
Change the way people work with tasks by making it social and accessible

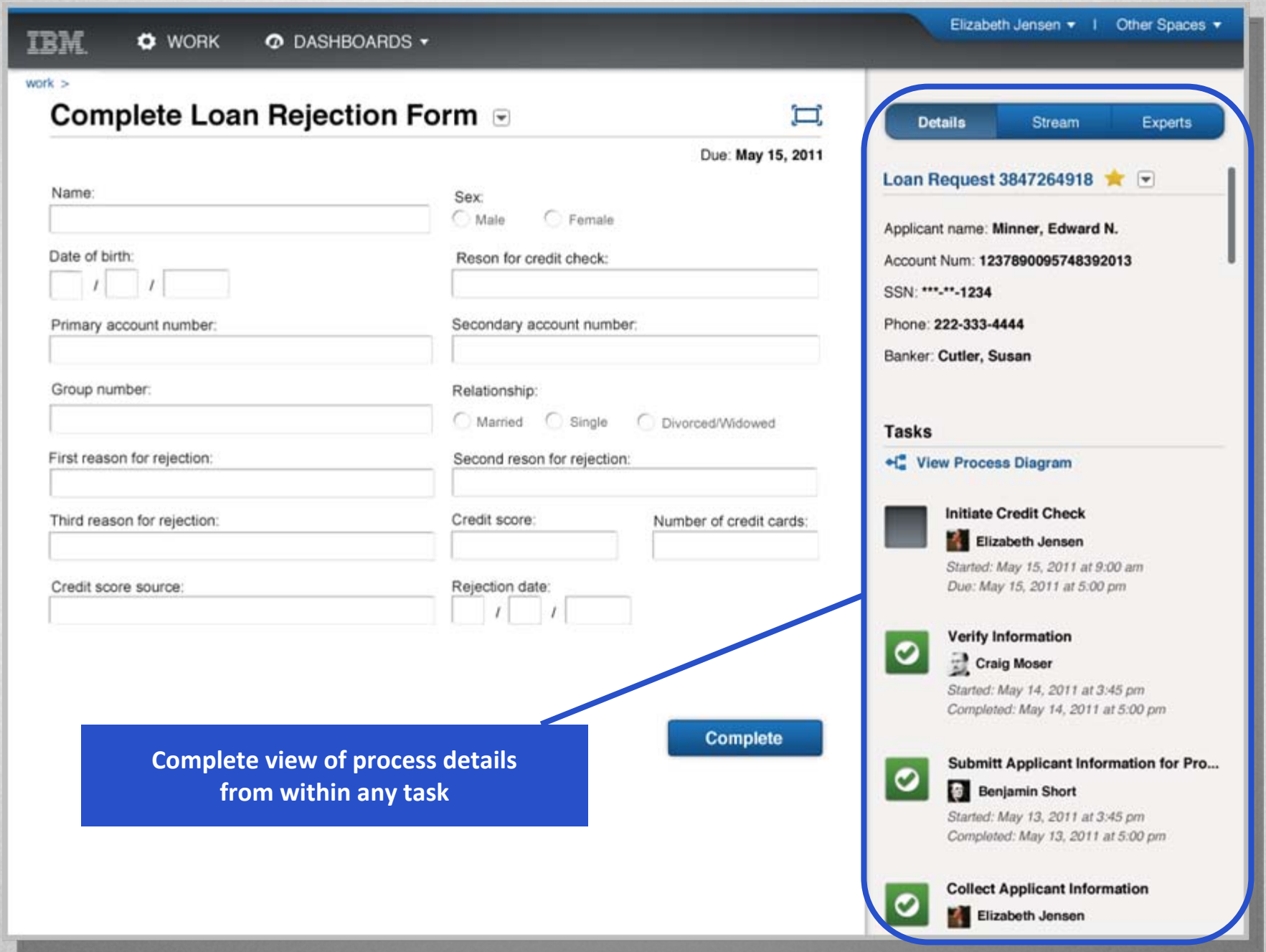


Dynamic activity notifications facilitate real-time collaboration and responsiveness

Completely Revamped End User Experience

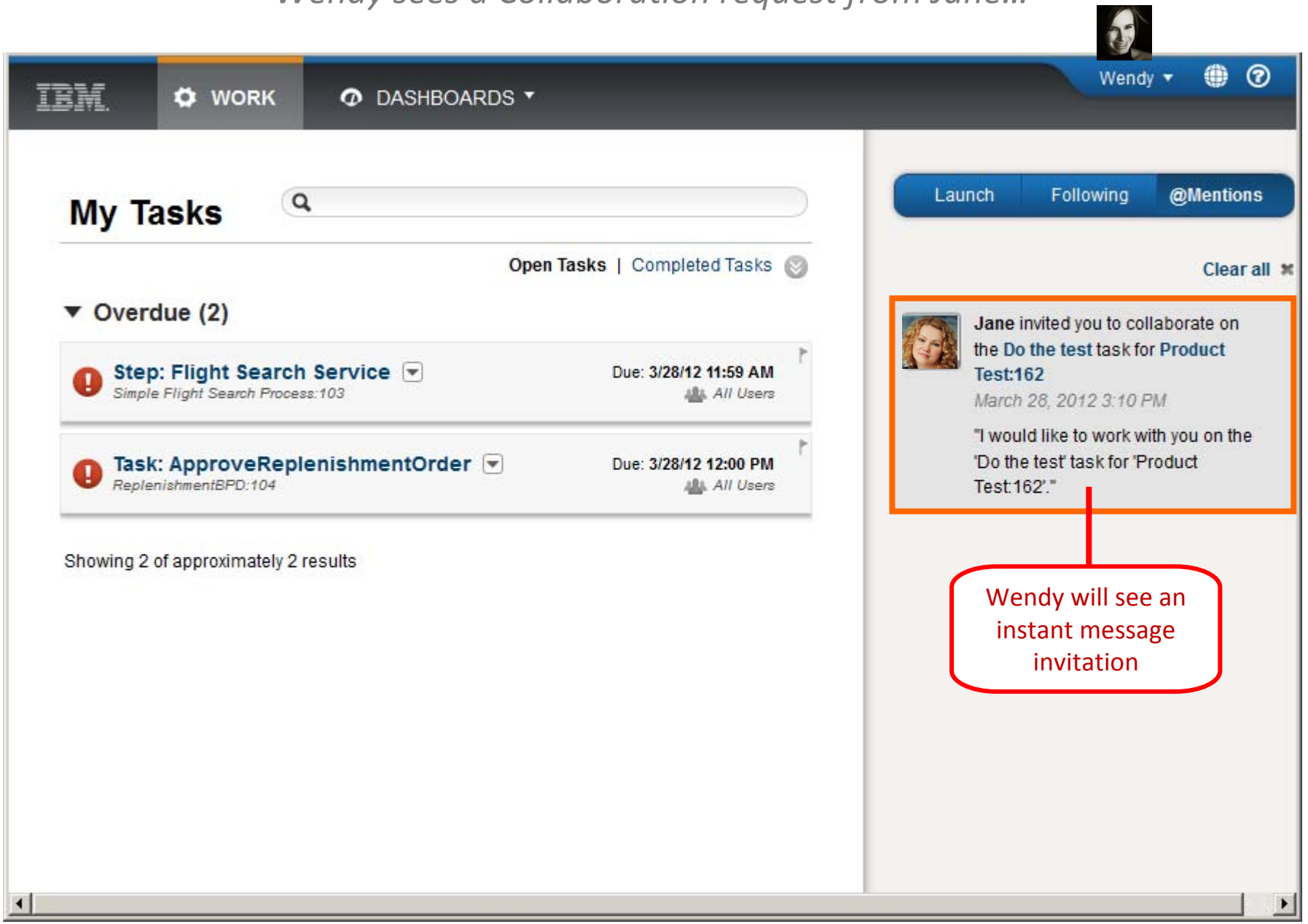
Change the way people work with tasks by making it social and accessible




IBM
WORK
DASHBOARDS
Elizabeth Jensen
Other Spaces
work >
Complete Loan Rejection Form
Due: May 15, 2011
Name:
Sex:
Male
Female
Date of birth:
Reson for credit check:
Primary account number:
Secondary account number:
Group number:
Relationship:
Married
Single
Divorced/Widowed
First reason for rejection:
Second reson for rejection:
Third reason for rejection:
Credit score:
Number of credit cards:
Credit score source:
Rejection date:
Complete
Details
Stream
Experts
Loan Request 3847264918
Applicant name: Minner, Edward N.
Account Num: 1237890095748392013
SSN: ***-**-1234
Phone: 222-333-4444
Banker: Cutler, Susan
Tasks
View Process Diagram
Initiate Credit Check
Elizabeth Jensen
Started: May 15, 2011 at 9:00 am
Due: May 15, 2011 at 5:00 pm
Verify Information
Craig Moser
Started: May 14, 2011 at 3:45 pm
Completed: May 14, 2011 at 5:00 pm
Submitt Applicant Information for Pro...
Benjamin Short
Started: May 13, 2011 at 3:45 pm
Completed: May 13, 2011 at 5:00 pm
Collect Applicant Information
Elizabeth Jensen
Complete view of process details from within any task

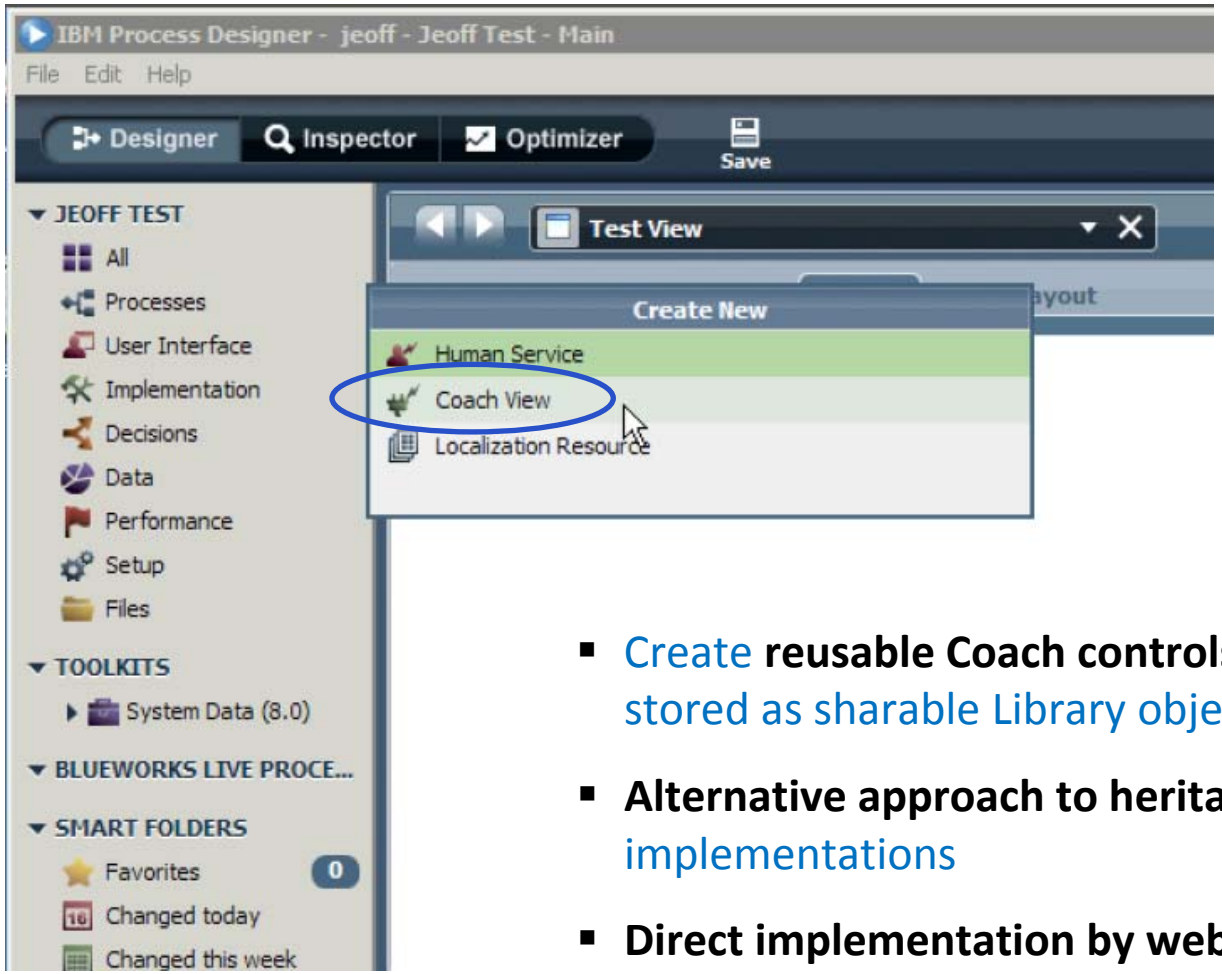
In-Task Collaboration

Wendy sees a Collaboration request from Jane…



New Reusable “Coach Views”

Implement reusable UI components that look & behave exactly as you want



- Create **reusable Coach controls and templates**, stored as sharable Library objects
- **Alternative approach to heritage** “modeled” Coach implementations
- **Direct implementation by web developers** using familiar HTML, Javascript, CSS, Ajax, JSON, …

What's New in IBM Business Process Manager v8?

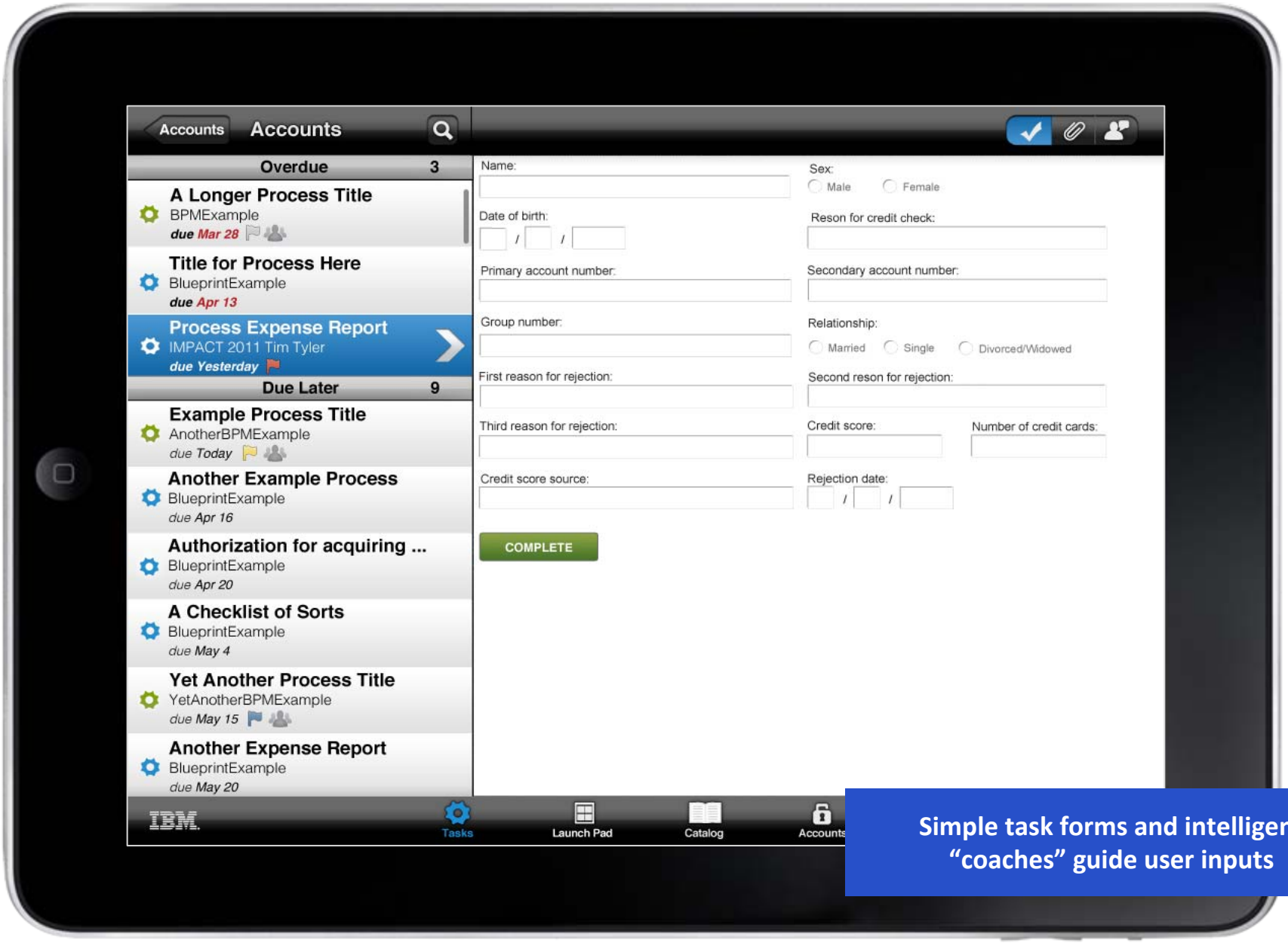
Mobile Access

- **Native mobile app for iPhone / iPad** promotes broader adoption and easy access to Blueworks Live & IBM BPM tasks
- **Consolidates all of your process related work** into a unified view
- **Extensive REST APIs & examples** enable customized integration of IBM BPM and Blueworks Live content into your own mobile experiences

IBM Corporation © 2011

iOS App for Mobile Users: Tasks & Coaches

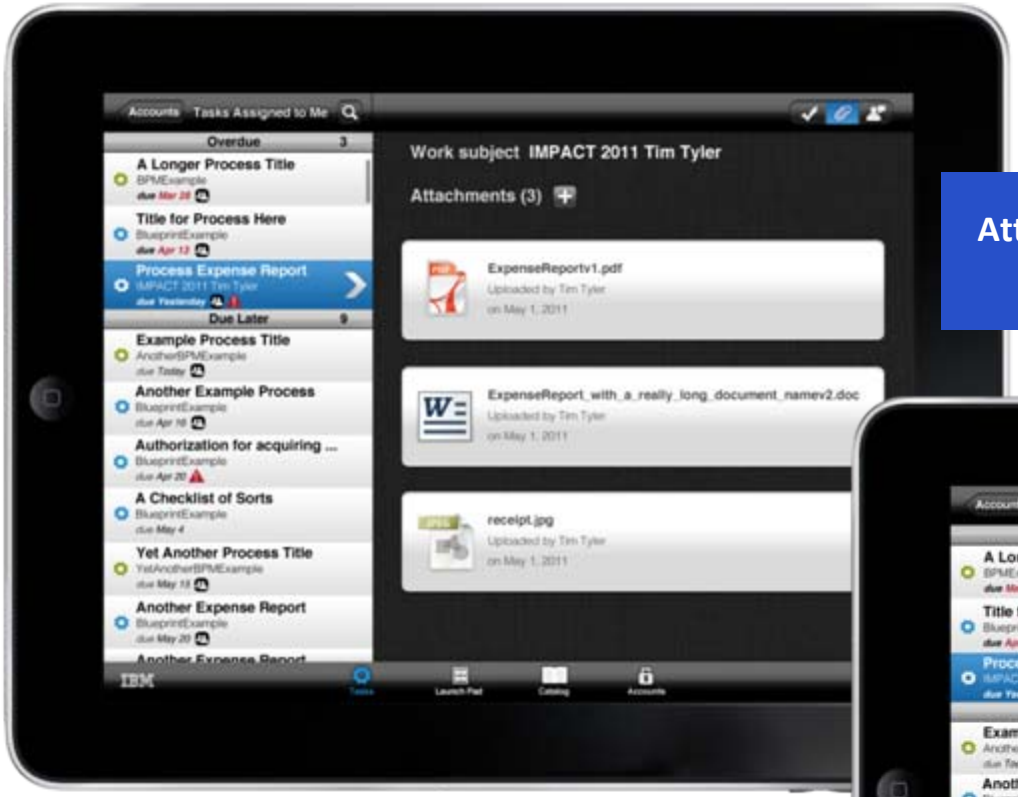
Flexible access to promote broader adoption



Simple task forms and intelligent "coaches" guide user inputs

iOS App: Dynamic Activity Stream Communication

Improve productivity with collaborative communication



Attach supporting documents and images to any process task

Improve productivity among business stakeholders through dynamic communication of activities – reduce 'back channel" emails, messages, etc.

Extensive REST APIs with API Tester

Business Process Manager | REST API Tester — Call Tester — Service Runner

Result Type: JSON (Javascript format)

Select API Call:

- Process API
- Service API
  - Retrieve Model
  - Start Service
  - Resume Service
  - Evaluate JavaScript
  - Get Data
  - Set Data
  - Stop Service
  - Currently Running
  - Exposed Services
- Task API
  - Task Details
  - Start Task
  - Assign Task To User
  - Assign Task To Group
  - Assign Task To Me
  - Assign Task Back
  - Update Due Date
  - Update Priority
  - Finish Task
  - Cancel Task
  - Task Client Settings
  - Task Actions

Task Details
Retrieves the details of a task

Task ID: 3

Parts: data

Execute Call

Request: http://localhost:9080/rest/bpm/wle/v1/task/3?parts=all

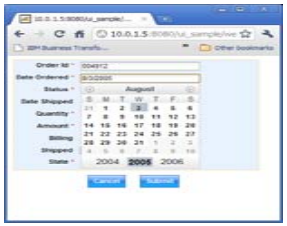
Status: 200 - OK

Header:
Content-Type: application/json Content-Encoding: gzip Content-Language: en-US Transfer-Encoding: chunked Date: Thu, 17 Nov 2011 15:43:45 GMT Server: WebSphere Application Server/7.0

Result:


```
{
  status: "200",
  data: {
    activationTime: "2011-11-17T15:43:29Z",
    clientTypes: [
      "IBM_WLE_Coach"
    ],
    completionTime: null,
    containmentContextID: "3",
    description: null,
    displayName: "Step: This is my name",
    dueTime: "2011-11-17T16:43:29Z",
    kind: "KIND_PARTICIPATING",
    lastModificationTime: "2011-11-17T15:43:29Z",
    name: "This is my name",
    originator: "tw_admin",
    owner: null,
    priority: 30,
    startTime: "2011-11-17T15:43:29Z",
    state: "STATE_READY",
    tkiid: "3",
    piid: "3",
    status: "Received",
    priorityName: "Normal",
    assignedTo: "All Users_T_da7e4d23-78cb-4483-98ed-b9c238308a03.75514b8f-2015-4dc2-892e-f61a35fc11c0",
    assignedToDisplayName: "All Users",
    assignedToType: "group",
    data: {
      variables: {
        taskId: null,
        bpdName: null,
        userName: null,
        bpdInstanceName: null
```


Desktop Browsers



Smartphones

Tablets

WebSphere Portal

WebSphere Application Server

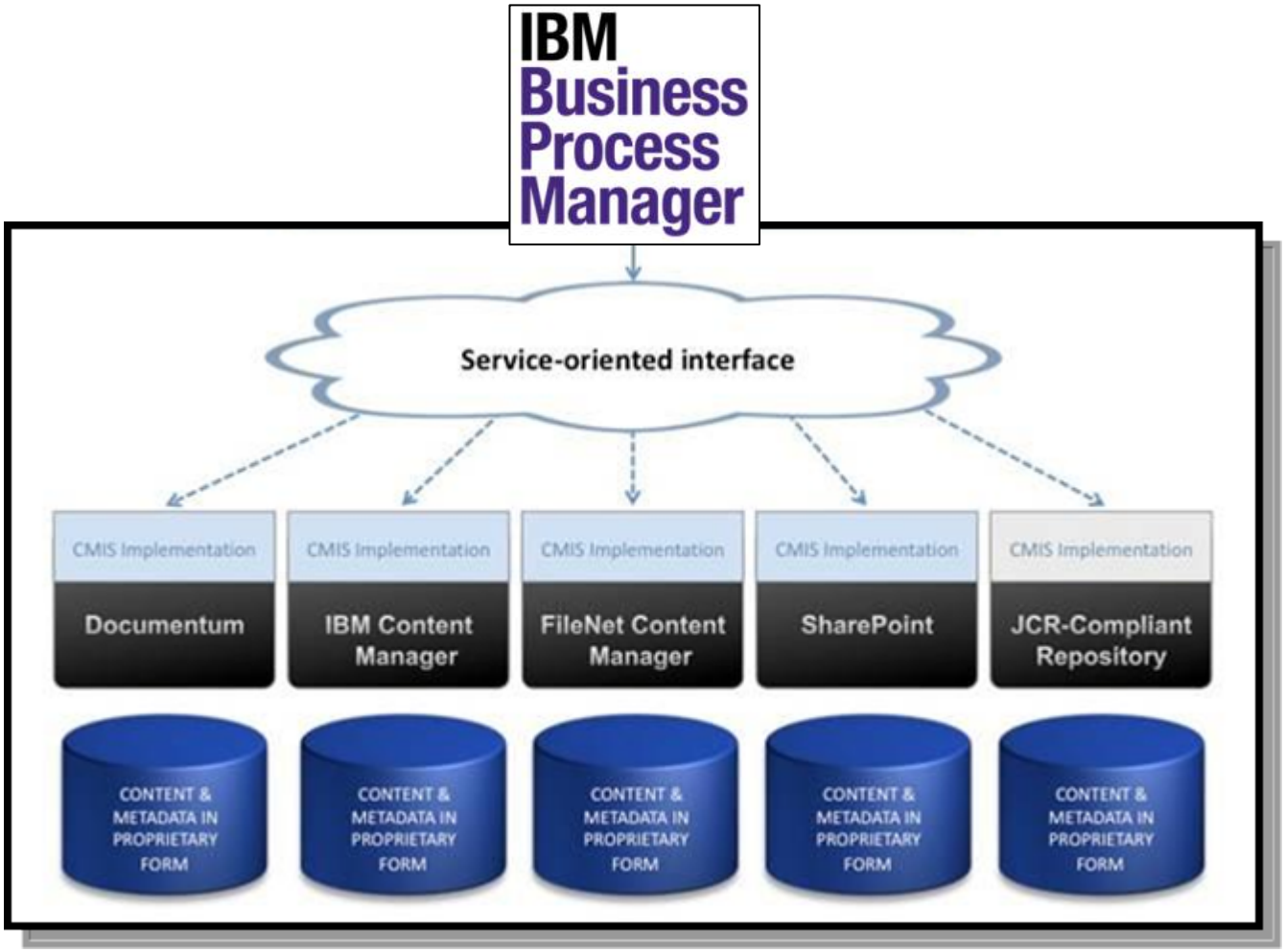
New Process Portal and iOS Mobile App use this API

Content Access

- **Leverage shared business documents and images** within process tasks
- **Simplify access to content in any ECM repository** using Content Management Interoperability Services (CMIS)
- **Search, browse, and display the "right documents at right time"** within Process Coaches
- **Directly interact with document content** – create, retrieve, update, delete

New in IBM BPM v8: Content Management Interoperability Services (CMIS)

Any CMIS compliant ECM systems can be integrated with IBM BPM



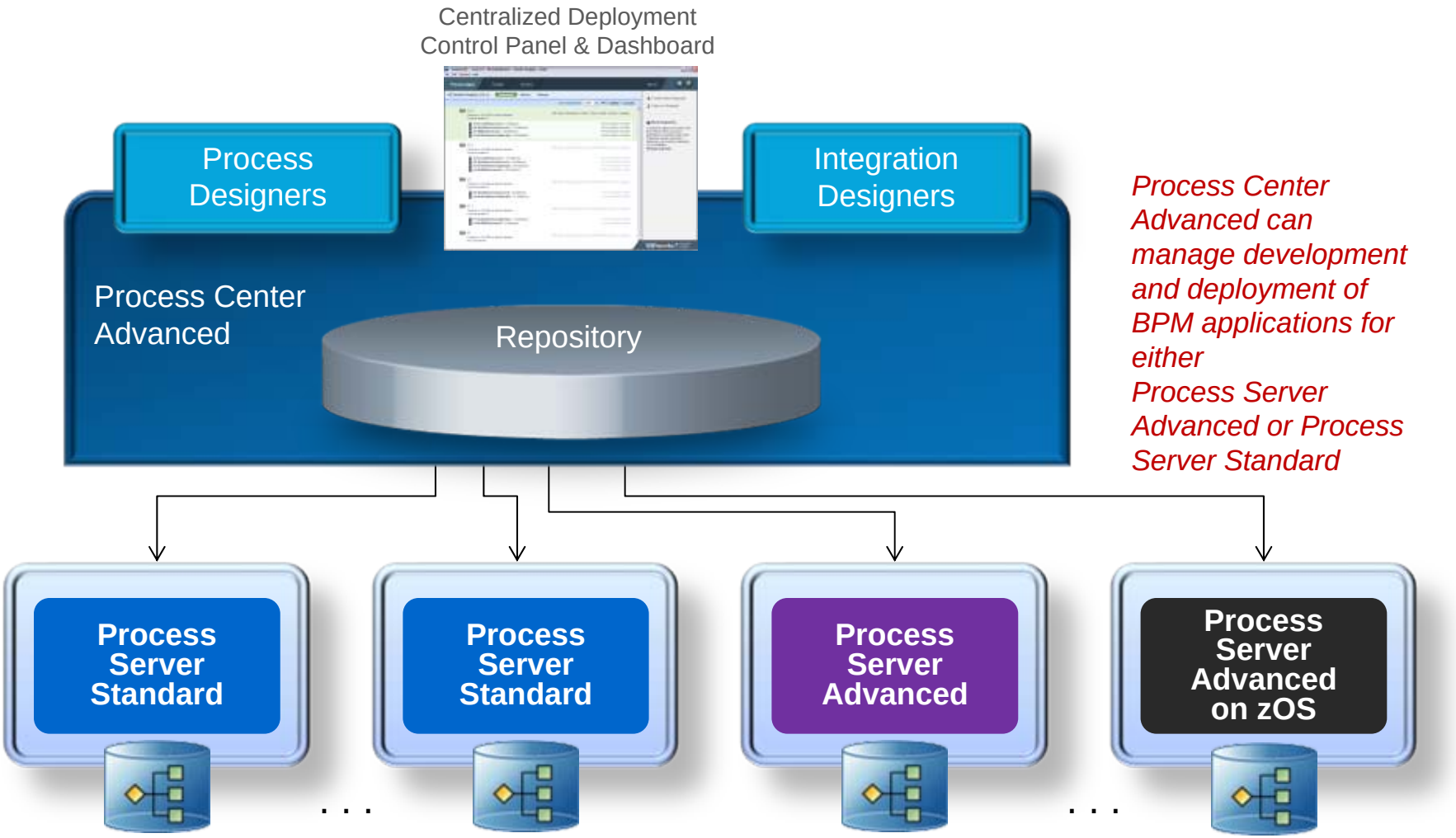
- FileNet V5
- IBM CM8
- Documentum
- SharePoint
- Alfresco
- OpenText
- Vignette

… and more!

Enhanced Governance

- **Networked Process Centers** enable sharing of process assets & toolkits to accelerate expansion "from project to program"
- **Automated governance processes** triggered by process life-cycle events for increased consistency & control
- **Active links to other development assets & tools** (including **Rational**) via Open Services for Lifecycle Collaboration (OSLC)

Centralized governance of mixed IBM BPM environments

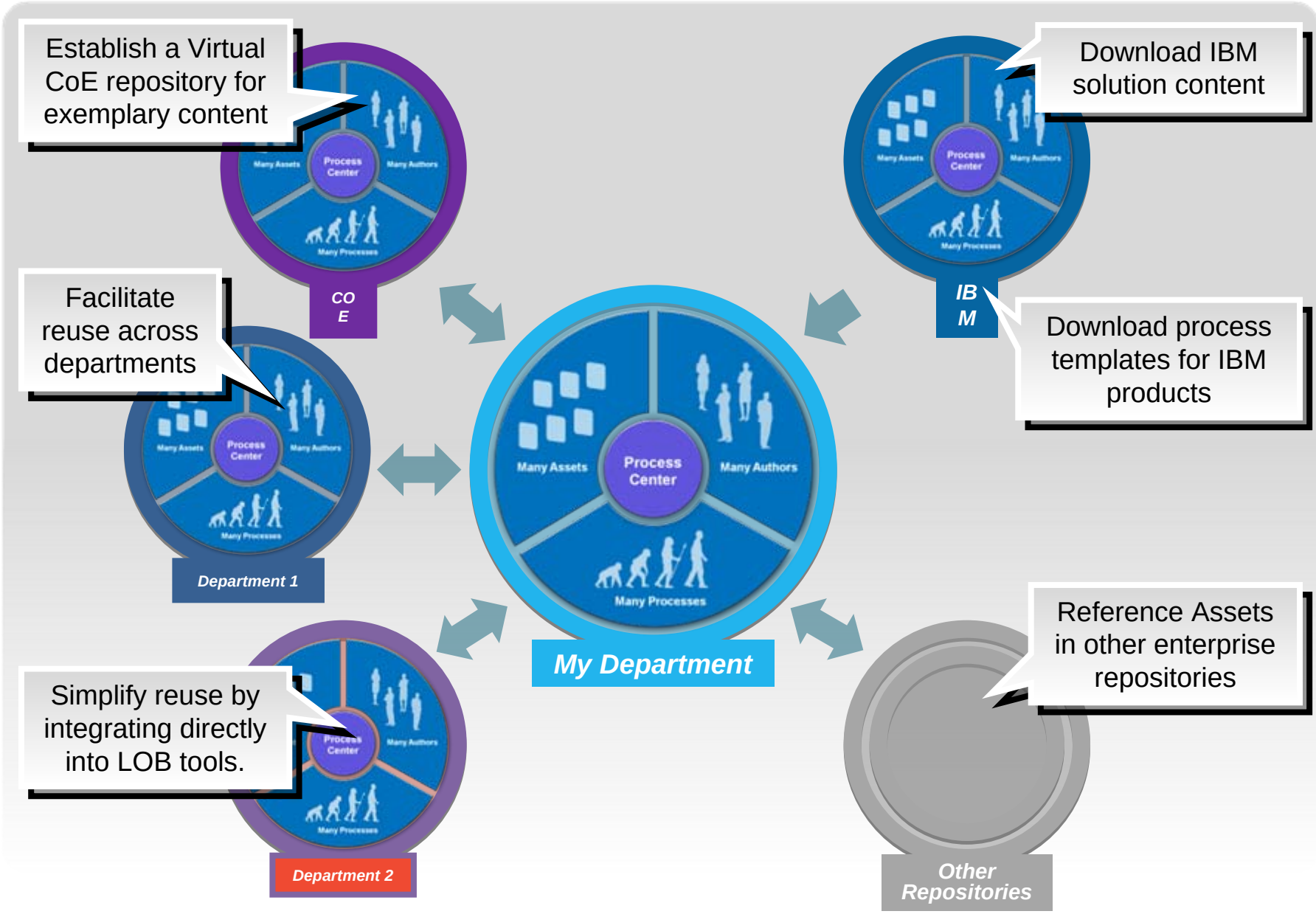


Process Center Advanced can manage development and deployment of BPM applications for either Process Server Advanced or Process Server Standard

Process Server Standard is backward-compatible with Lombardi BPM applications, preserving those investments

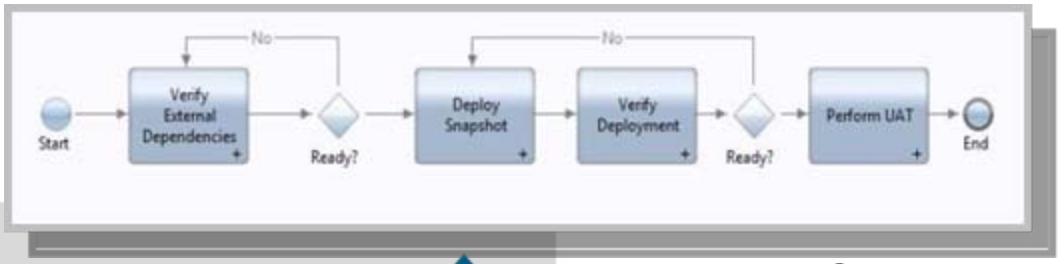
Process Server Advanced includes WPS technology that can be utilized when you also need advanced integration capabilities

Process Centers network for cross-group sharing

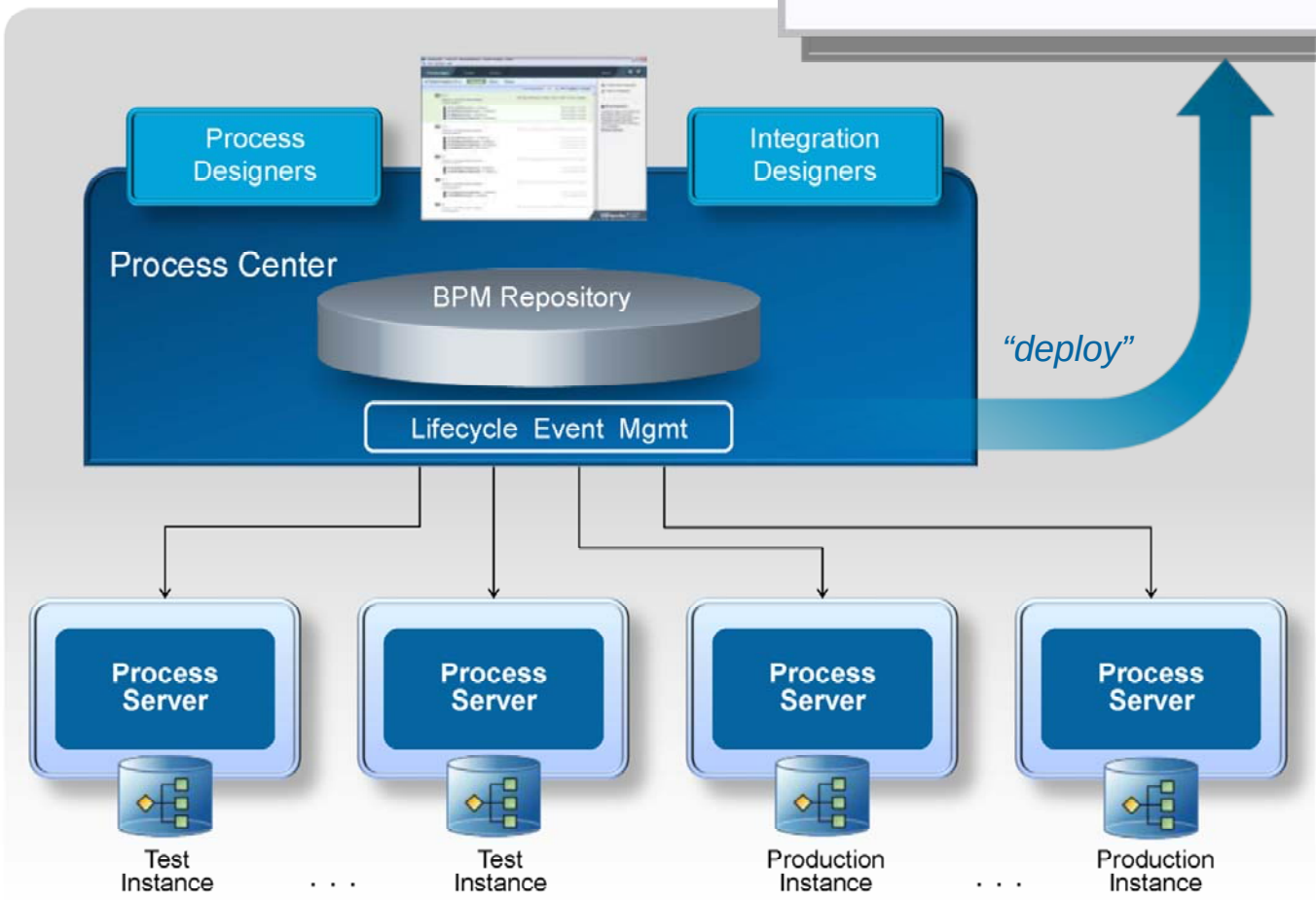


Use governance processes to control process lifecycle

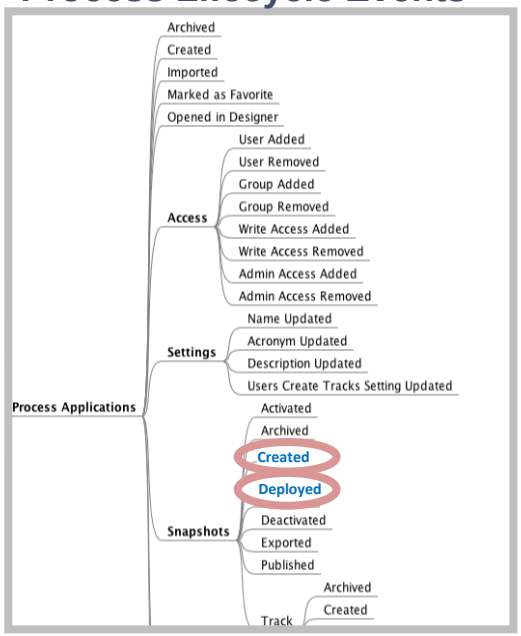
Trigger governance processes associated with specific lifecycle events



Governance process for deploying Snapshots

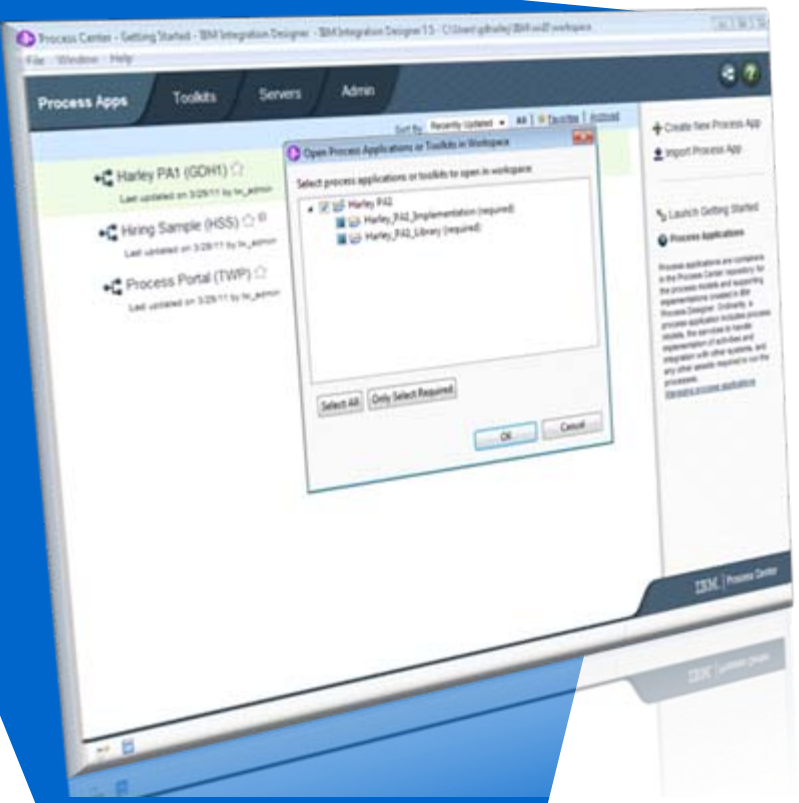


Process Lifecycle Events



Powerful integration capabilities

Integration Designer



- Eclipse-based tool that ***simplifies integration*** with visual editors and built-in test support
- Simplifies integration development through ***pattern-based authoring***
  - ***Visually construct reusable SOA services***, data transformations, BPEL orchestrations, and integration to applications and backend systems
    - Intuitive drag-and-drop editors enable ***rapid building*** of business integration solutions

Easily build *reusable* SOA services, orchestrate services, and access backend systems

Confidently execute mission-critical solutions
Process Server

- Execute processes ***consistently, reliably, securely***, and with ***transactional integrity***

Single BPM runtime to support the full range of business processes, service orchestration, and integration

- High ***scalability and availability*** with extended support for ***high-volume*** process automation and ***high quality-of-service***
- Rich ***repair and recoverability capabilities***, such as automatic retries, manual repair, compensation, store & forward

Simplicity for business decisions
Integrated rules authoring

Built-in rules authoring based on Decision Server BAL language

- Expresses business logic in an accessible manner using syntax that is ***easily understood***
  - Easily ***export rules*** content to Decision Server JRules

Connect application and information assets
Integration Adapters and ESB

- Accelerate business integration projects with ***rapidly deployable***, enterprise-ready connections based on ***best practices***

- A comprehensive set of capabilities to ***service-enable your assets***, including packaged, custom, and legacy applications, technology protocols, and databases

- ***Built in SOA components*** - flexible enterprise service bus (ESB) connectivity infrastructure for integrating applications and services

IBM Business Process Manager v8 for z/OS

Dramatically Improve the Way Work Gets Done

- Manage mission-critical business processes at scale
- Ensure transactional integrity
- Enable social collaboration to manage business change

Maximize Agility in zEnterprise Business Applications…

- ***Resiliency*** through workload management & co-location
- ***Simplicity*** of process complexity through high-performance process automation
- ***Modernization*** of existing applications with shared and reusable enterprise process services

What's New in IBM Business Process Manager v8 for System Z ?

z/OS and zEnterprise

IBM zEnterprise EC12 (zEC12)
Next generation of hybrid computing

WAS V8.0 for z/OS

- **Further refinement of proven base**
- **Enhanced commonality across platforms**
- **Greater z/OS exploitation**

IBM BPM PS V8.x for z/OS

- **Common IM Based Streamlined Install**
- **WOLA Support**
- **DB2 V10 for z/OS Optimization**
- **Performance and Tuning**
- **Hybrid Deployment Patterns**

The Key Technical Messages for:

WAS V8.x for z/OS

Further refinement of proven base

- Updated specifications (Java EE 6, EJB 3.1, Servlet 3.0, JSP 3.0, etc)
- Enhanced web services: JAXB, JAX-RS, JAX-WS
- Feature packs rolled in: SCA, XML, OSGi, JPA, WOLA, Batch
- Continued focus on tightening and refining programming

Enhanced commonality across platforms

- Common installation process using Installation Manager
- Common high-performance logging function

Greater z/OS exploitation

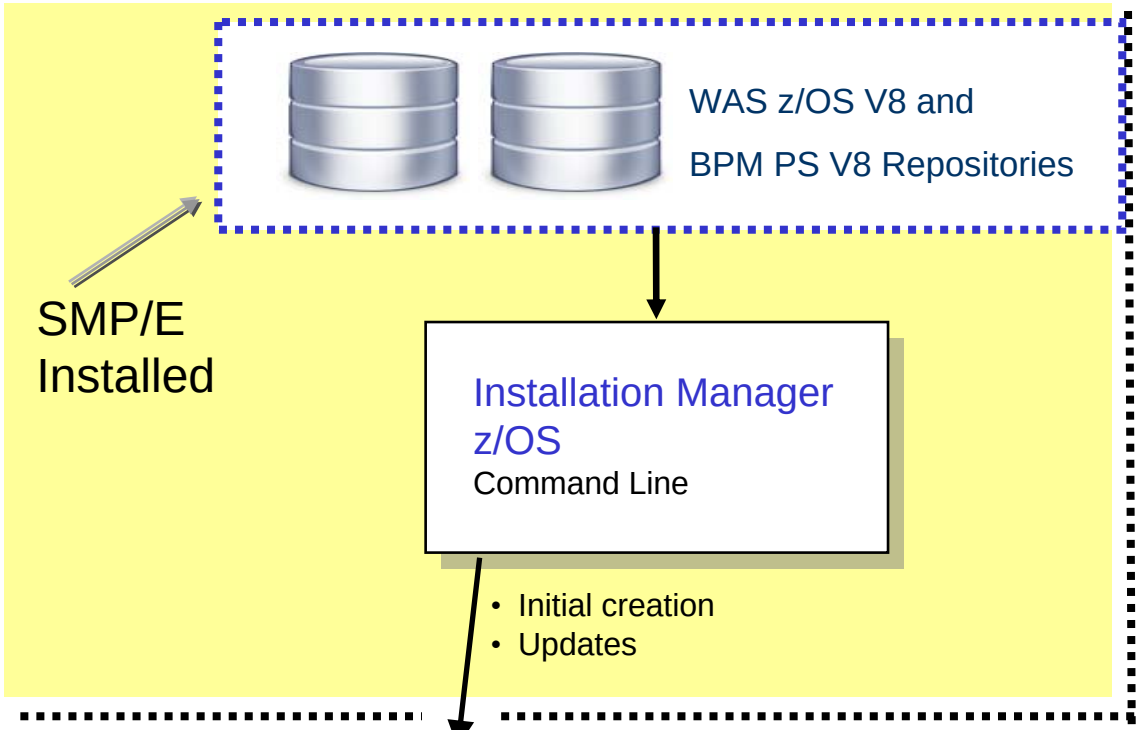
- More granular settings for timeouts and tracing w/ dynamic control
- Resource routing for data source and connection factories

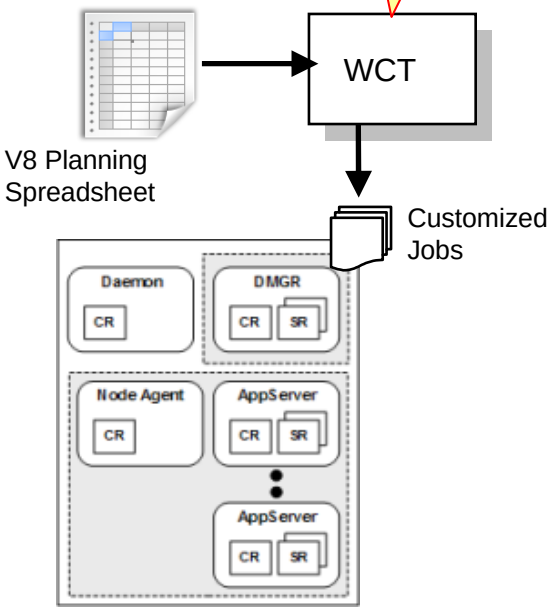
IBM BPM PS V8 for z/OS

- **Streamline and Simplified Install using Install Manager for z/OS (Common to BPM family)**
- **Enhancements to WCT Tool to support multiple Version of IBM BPM V7, V8, V8.x**
- **WOLA for CICS, IMS Integration Tooled Integration out-of-box adapters with support for hi-speed, 2-way WOLA integrations with IMS**
- **DB2 V10 Install refinements and Performance Optimization (i.e. in Line LOBS)**
- **Exploit above WAS 8.x for z/OS features (Servant and Thread PD and optimization)**
- **Greater focus on H/A, SIB Failover and Cross-System Recovery Participation**
- **z/OS-specific Monitoring, problem determination, system administration**
- **Optimization & tuning of IBM BPM performance on z/OS Java 6**

Installation Manager for WAS V8 and BPM V8 for z/OS

This is entirely new for WAS z/OS V8 … the use of command line IM on z/OS to create maintain the hlq.SBBOHFS file product file system:





WAS and BPM V8
for z/OS Runtime

Symlinks to hlq.SBBOHFS
product file system

"Copied Out"

SERVICE.hlq.SBBOHFS
/SERVICE/usr/lpp/zWebSphere/V8R0

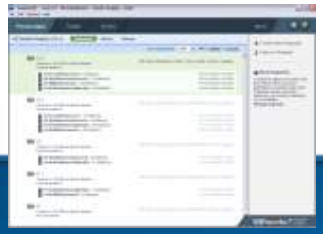
Essentially same process as before

hlq.SBBOHFS
/usr/lpp/zWebSphere/V8R0

Essentially same process as before

Centralized governance on System Z

Centralized Deployment
Control Panel & Dashboard



Process Designers

WINDOWS

Integration Designers

WINDOWS

Process Center

Repository

DB2 V10 for z/OS

zLinux

Centralized repository

- One-click snap shots of toolkits* and apps

Centralized deployment

- One-click deployment and in flight upgrade

Centralized registry

- Single server registry and dashboard of deployments

Process Server
Distributed Test

Process
Distributed Server Q/A

Process Server Production Human Services

Process Server Production
Open Account

Windows Development Test Cell Instance LOB A

. . .

z/Linux Q/ A Cell Instance LOB A

z/linux Production Instance
(e.g., LOB Bank)

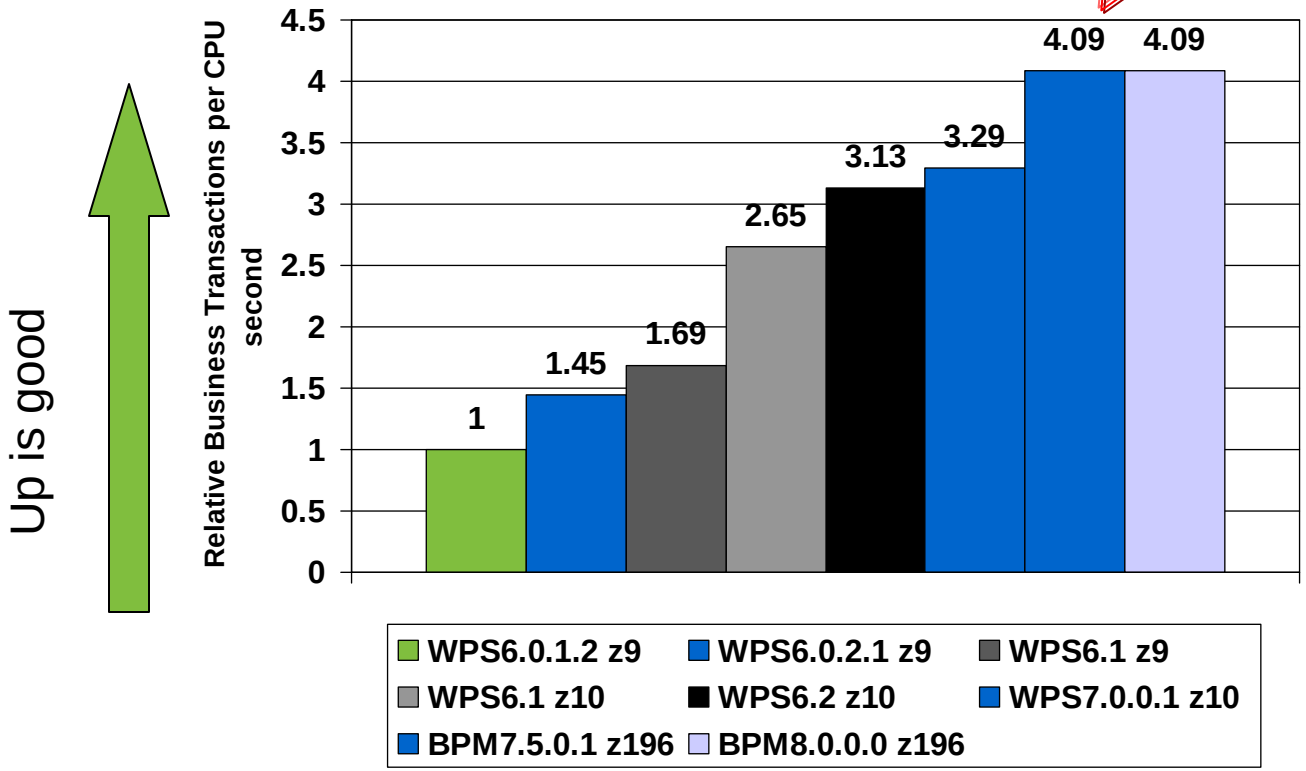
. . .

z/OS Production Instance Enterprise Bank EIS Integration

* artifacts that can be reused across multiple business process diagrams

PVT1 – IMS PriceChange Process (Microflow)
BPM V8.0.0.0 performance improvement

BPM for z/OS Plans to provide EC12 measurements In 4Q2012

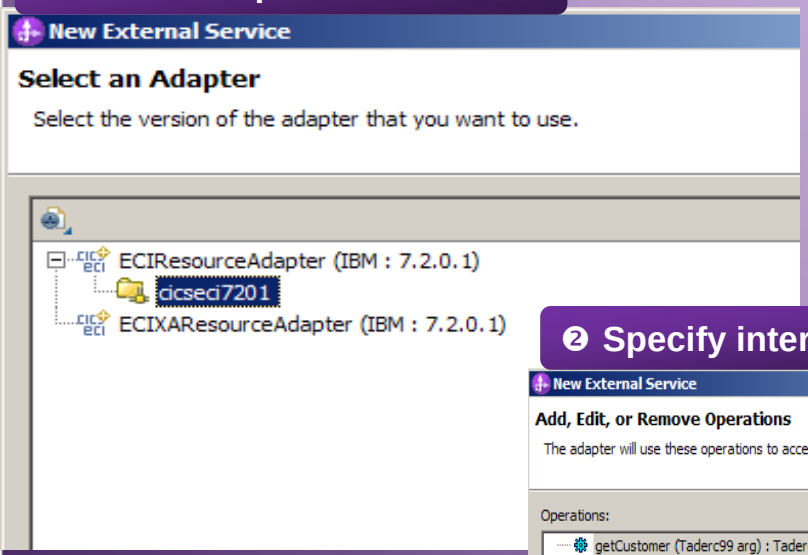


BPM8.0.0.0 on z196 throughput is improved by about 309% as compared to WPS6.0.1.2 on z9

Hardware: 4-way z9 @1.7GHz
4-way z10 @4.4 GHz
4-way z196 @5.2 GHz
Software: WPS6.0.1.2 on z/OS 1.6, Java 1.4.2, IMS 9.1, DB2 8.1
BPM8.0.0.0 on z/OS 1.13, Java626SR1, IMS 12.1, DB2 10.1

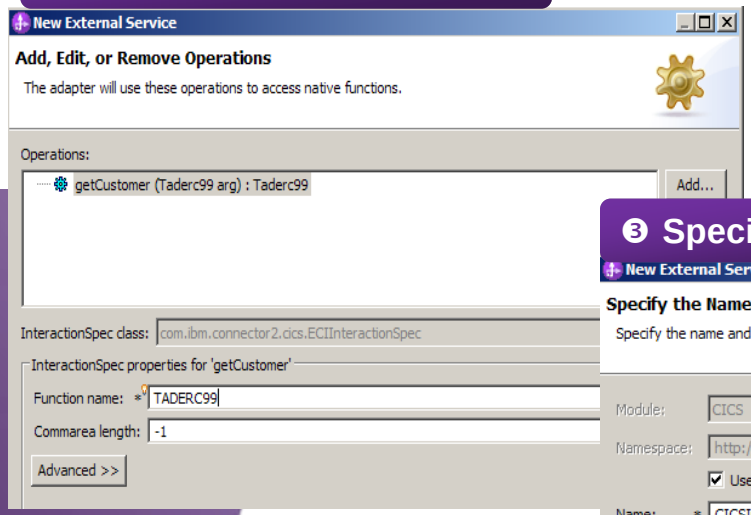
Connect to CICS and IMS z/OS services

❶ Select Adapter

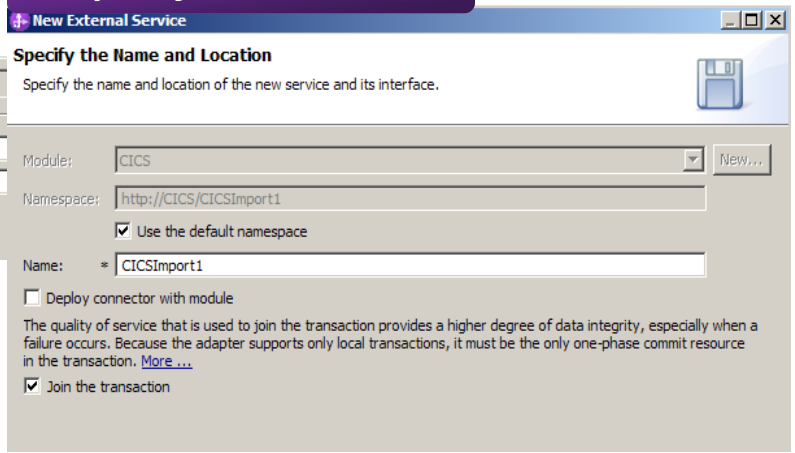


Designers interact with applications on zOS using familiar COBOL data structures

❷ Specify interaction Info

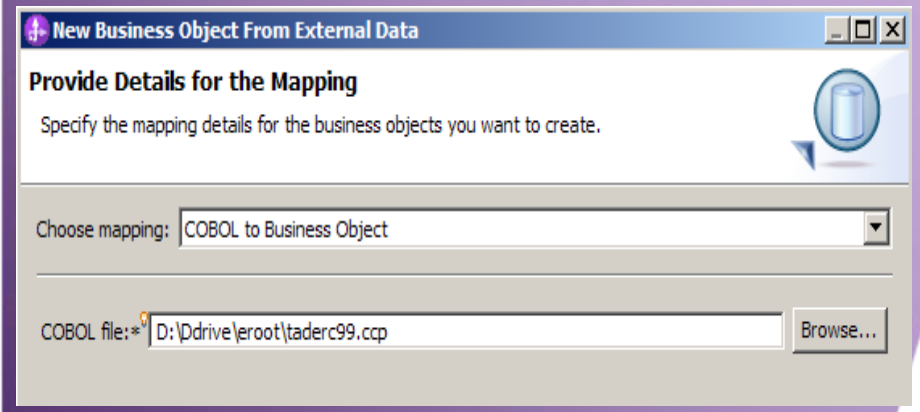


❸ Specify Service name

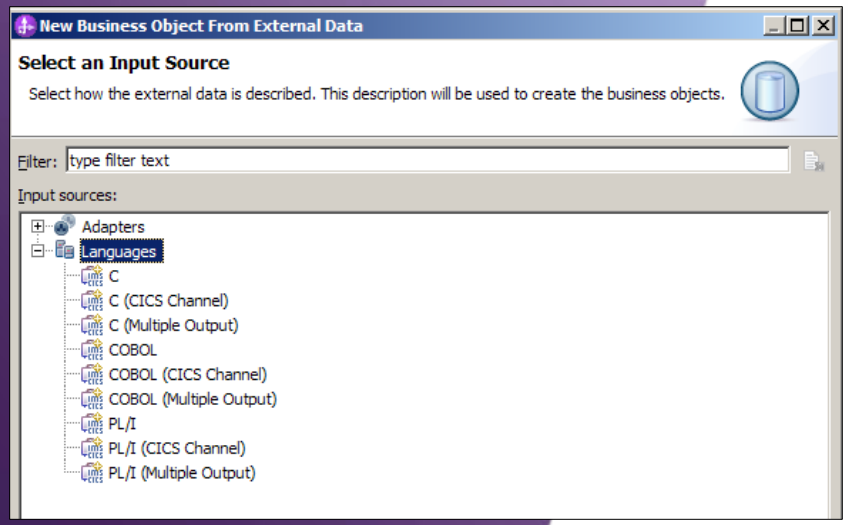


© 2011 IBM Corporation

Leverage native z/OS data structures



Reference data from COBOL copybook



Support for Language such as C, COBOL, PL/1, Channel Records, Multiple output

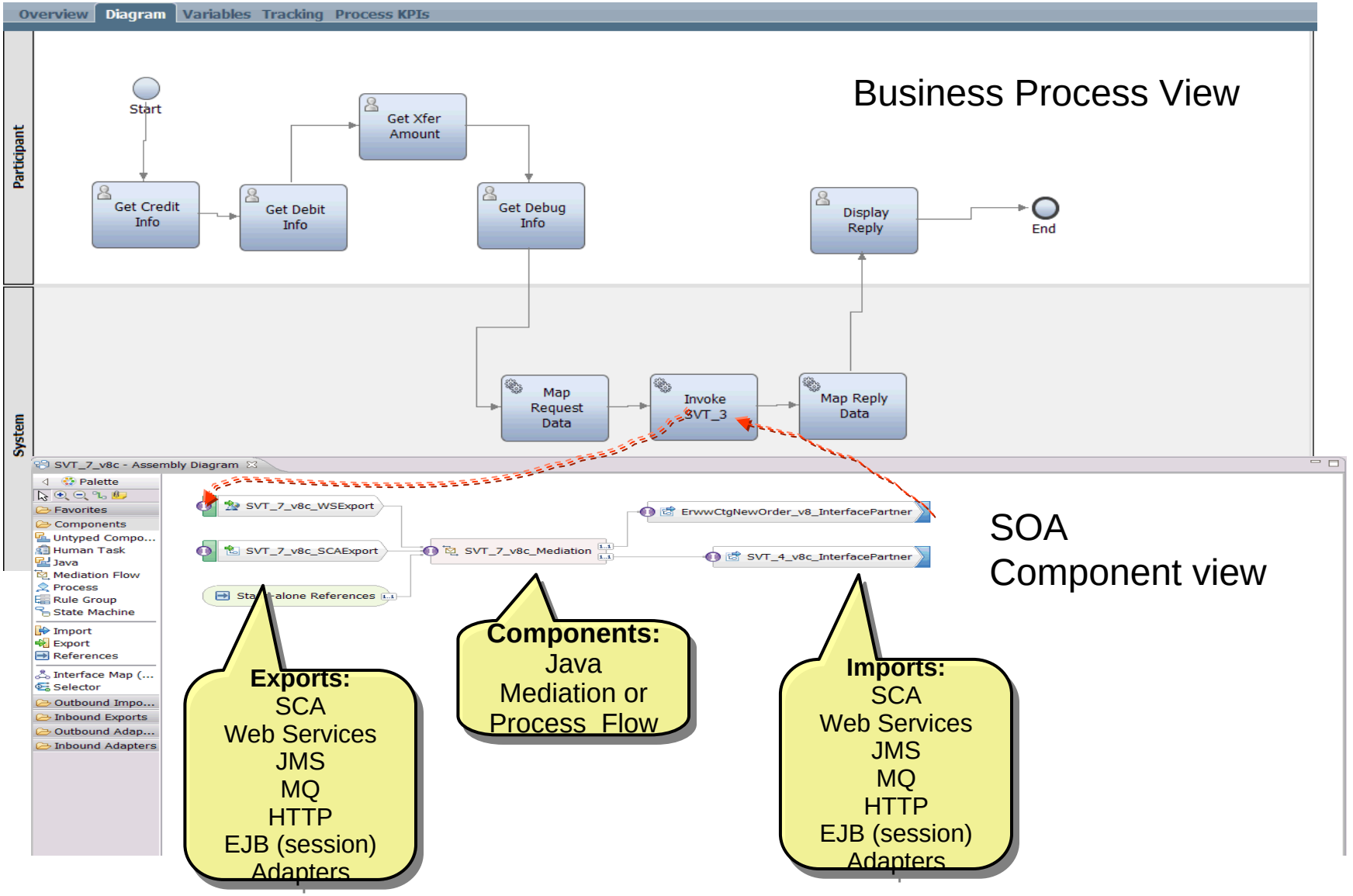
© 2011 IBM Corporation

IBM BPM and Service Component Architecture (SOA)

Components are implemented by different kinds

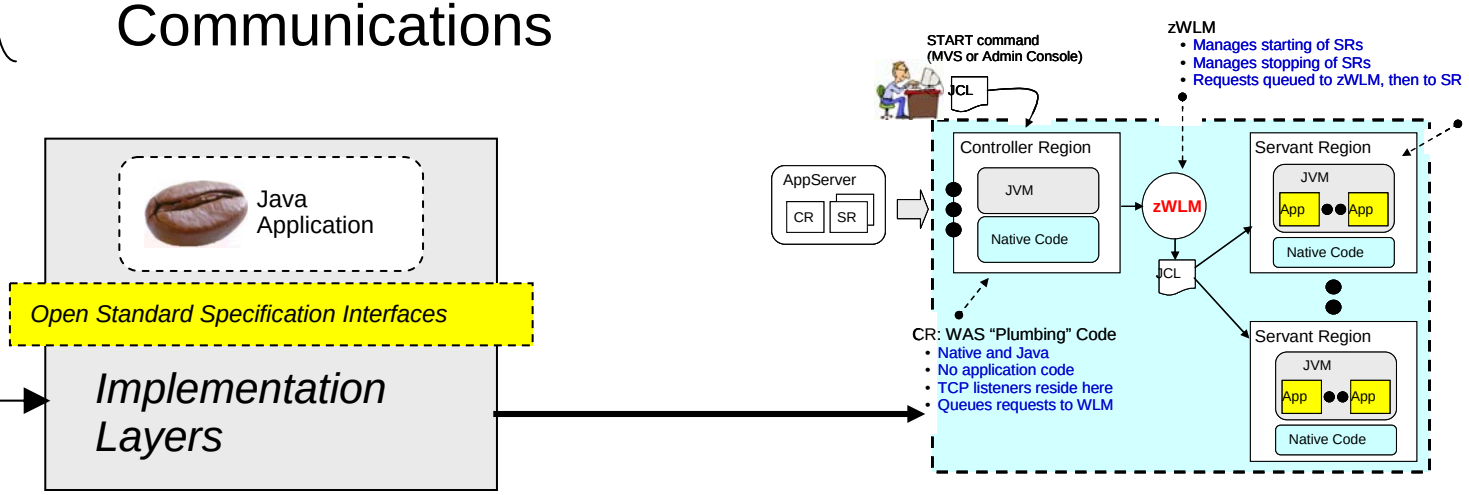
Imports and **exports** support different protocols supporting ESB and

Process components and the ability to define their interaction QOS



Remember - WAS and BPM PS on z/OS - Exploits

1. Exploitation of JES and common z/OS facilities
2. Exploitation of zAAP specialty engines
3. Exploitation of WLM
4. Exploitation of RRS
5. Exploitation of SAF and Crypto
6. Exploitation of SMF
7. Exploitation of z/OS exclusive Cross Memory Communications

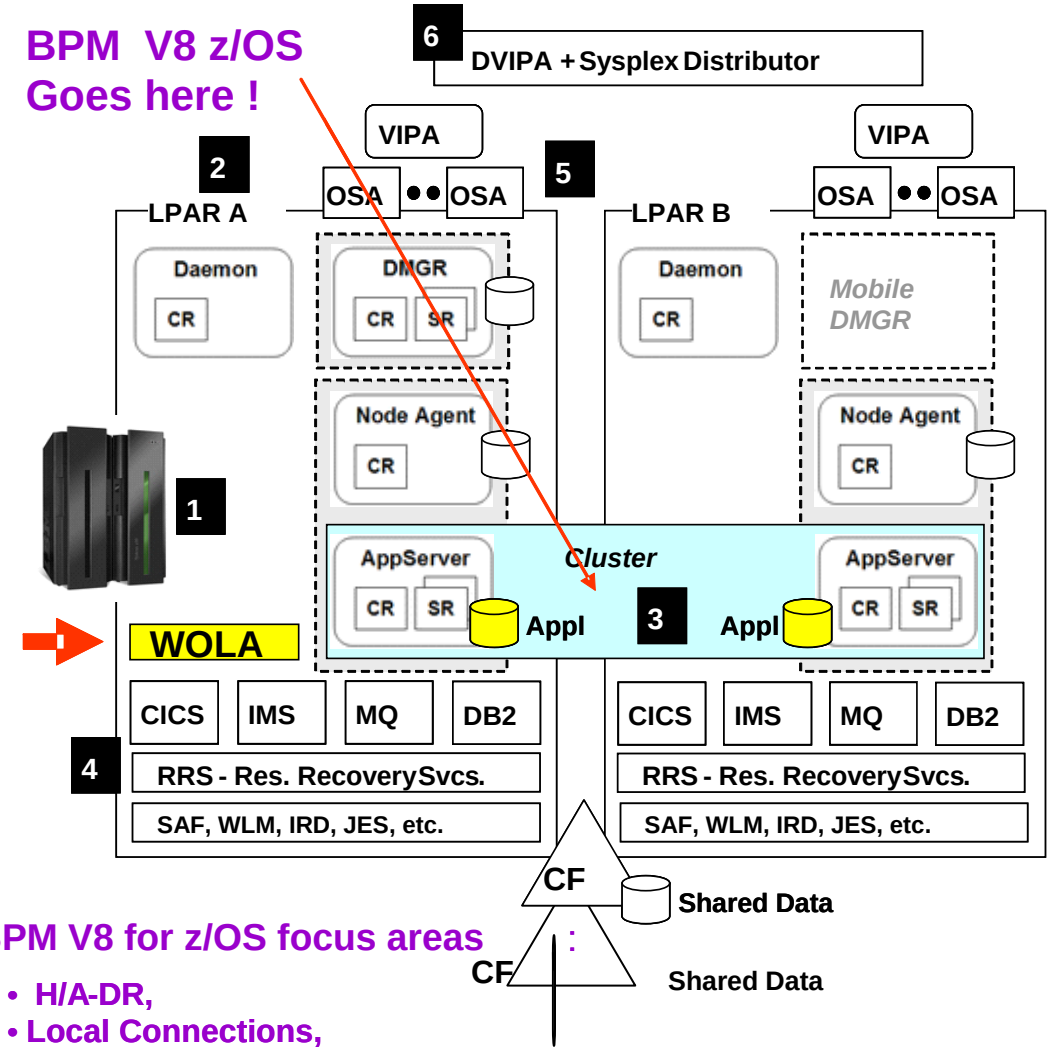


WebSphere is WebSphere up here
It's all based on accepted standards

Exploitation taking place below the open standard interface line

The Big Picture of WAS and BPM V8 z/OS in Parallel Sysplex

It's all about redundancy *and* integration with platform HA / DR function



BPM V8 for z/OS focus areas :

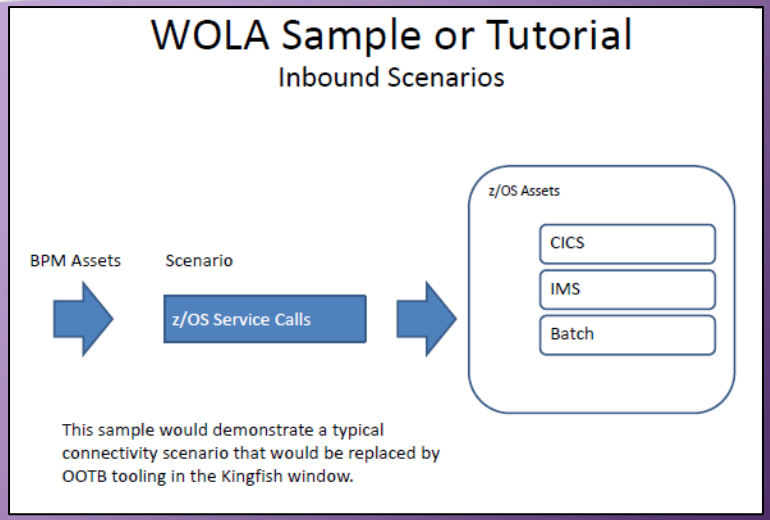
- H/A-DR,
- Local Connections,
- DS and DB2 v10 for z/OS strengths
- WMQ Q Sharing

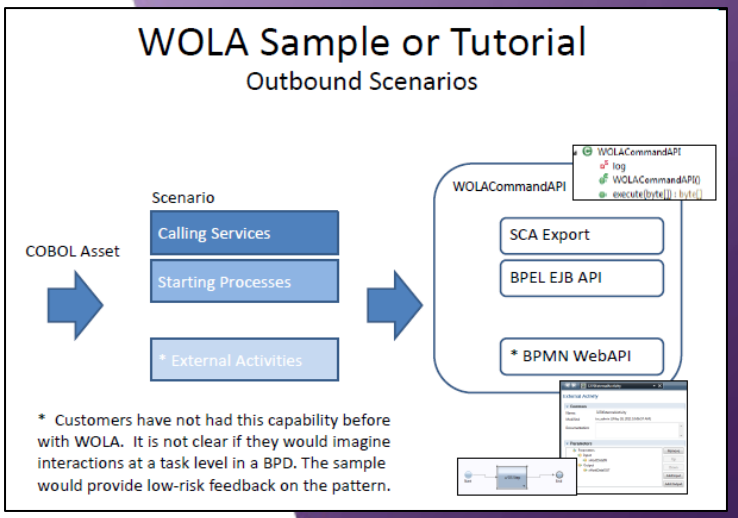
1. **Redundant and fault-tolerant hardware**
   System z hardware design has many layers of fault tolerance and redundancy.
2. **Redundant z/OS instances**
   Either through logical partitioning (LPAR) or separate physical machines.
3. **Clustered WebSphere z/OS servers**
   Multiple application servers grouped into a logical unit for application deployment and management
   z/OS exclusive: dynamic SR expansion (more coming up)
4. **Redundant data resource managers with Sysplex shared data**
   Multiple resource managers instances with shared data in CF and a global syncpoint manager (RRS)
5. **Redundant network adapters hidden behind Virtual IP address**
   On the front end, multiple network interfaces with a moveable virtual IP address protecting against outage
6. **Workload distribution hidden behind distributed virtual IP and Sysplex Distributor**
   Further abstraction of real IP addresses behind a virtual IP that can be swapped across images in a Sysplex, with Sysplex Distributor providing TCP connection distribution based on WLM

Fast communication with z applications

- The WebSphere z/OS “Optimized Local Adapters” is a function provided with WebSphere Application Server for z/OS
- Cross-memory local communications between BPM processes and external address spaces
  - CICS
  - IMS
  - batch programs
  - Unix Systems Services (USS) programs
  - Airlines Line Control (ALCS) programs

Tutorial for WOLA





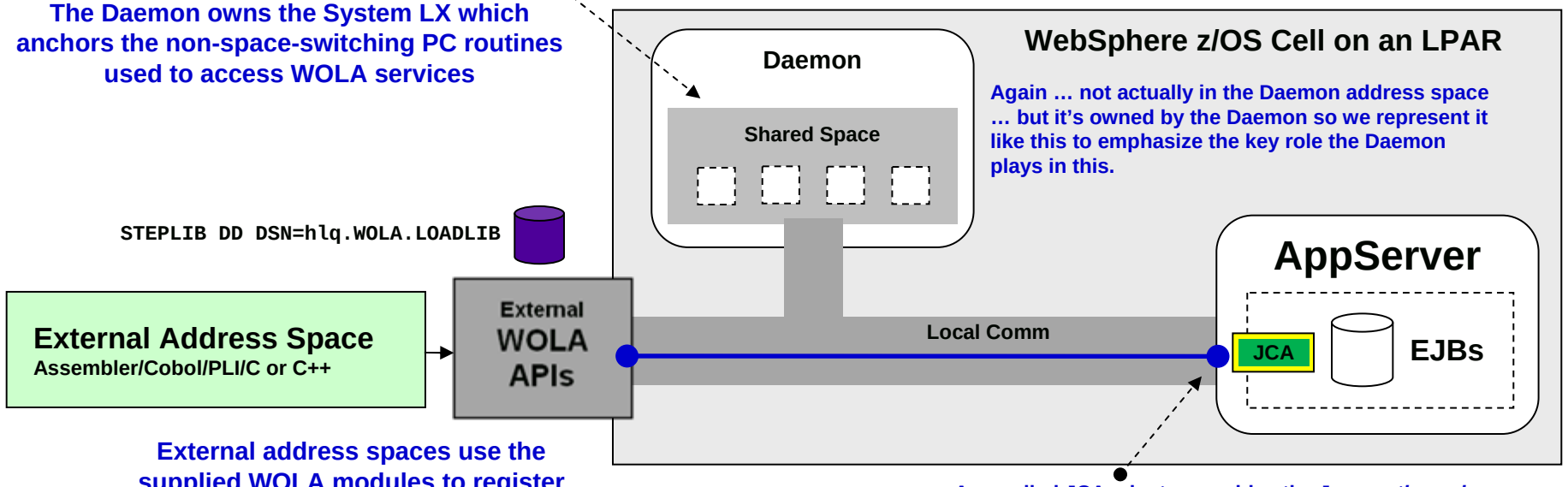
© 2011 IBM Corporation

Very High Level Picture of WOLA

This is just a schematic, but it helps position some key concepts:

The Daemon owns the shared above-the-bar storage where WOLA registrations live and that data buffers flow through

The Daemon owns the System LX which anchors the non-space-switching PC routines used to access WOLA services



External address spaces use the supplied WOLA modules to register to the Daemon and access Local Comm

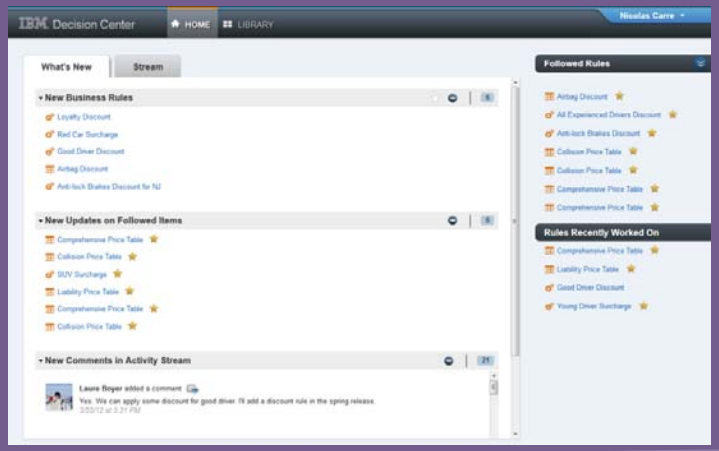
A supplied JCA adapter provides the Java *outbound* interface to completes the connection

For *inbound* communications, EJB does not require WOLA JCA

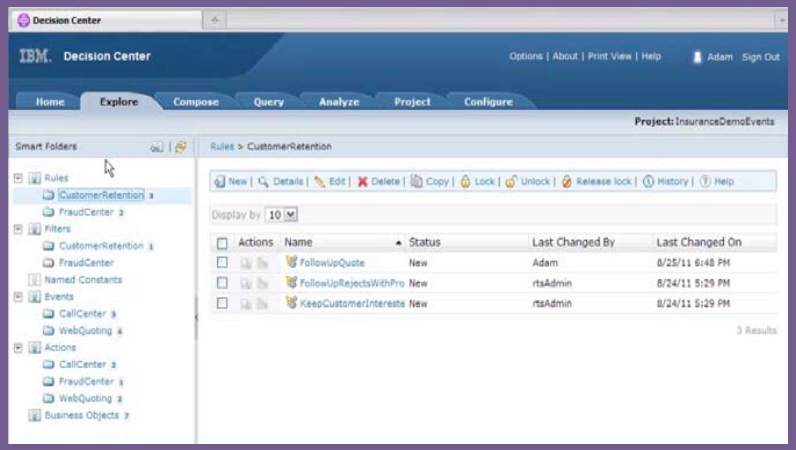
Essentially this is a set of APIs that externalizes the Local Comm function that is already in use within a WebSphere cell on an LPAR

Decision Center

Decision Center *Business* Console



Decision Center *Enterprise* Console



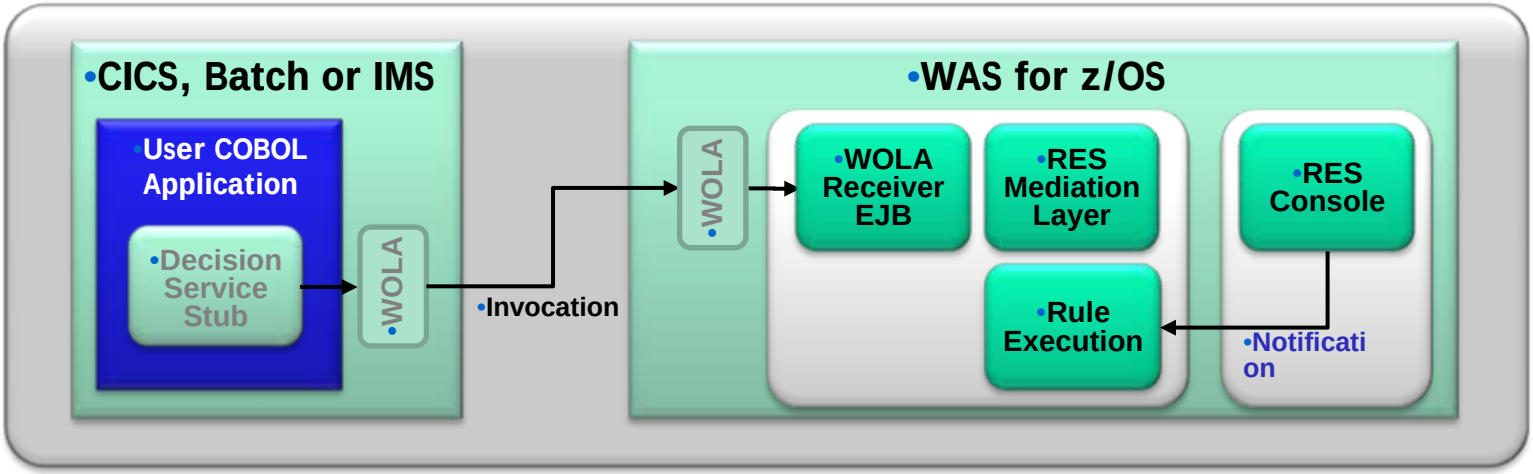
Decision Artifacts Versioning Access and Control

Decision Center Repository

Business Console (new) functionality for business experts to understand, manage and collaborate on evolving decision logic

Enterprise Console (current) functionality for advanced business analysts and administrators to fully govern the decision lifecycle

Decision Server on zOS



- **Built-in support for WebSphere Optimized Local Adapter (WOLA)**
- **Use standard zRES API from COBOL application**
- **No user Java coding required**
- **Easy to reconfigure client for any supported rule execution options**
- **Simple configuration only change, no recoding or compiling**

End-to-End Real Time Visibility with Business Activity Monitoring

IBM Business Monitor V8.0
IBM Business Monitor V8.0 for System z

Enhanced!

- **Increases ROI** through real time operational visibility and low implementation costs
- **Enterprise mobility** enables views of reports, KPIs, metrics, and alerts through Web interfaces, mobile devices, and corporate portals.
- Fully integrated **Cognos Business Intelligence v10.1.1** for dimensional analysis and reporting
- **What's new?**

– Automatically generated dashboards
  – Facilitates **rapid development and playback**
– Generated business-level milestone diagrams
  – Business users can see current state **at a glance**
– Advanced correlation across event sources/products
  – Track **end-to-end flow** even with no common key
– Improved detection of current or **predicted** SLA violations
  – Simpler, more efficient **time-based SLA** detection
  – **Graphical visualization** of on-track/at-risk/overdue

Provides visibility into real-time, end-to-end business operations, transactions, and processes to increase revenue, lower costs, and improve service

Optimized for z/OS: *event processing scales as you add servant regions*

Lots of things are ‘hybrid’ designs, or deployments, because they eventually make sense !

Evolution of hybrid computing with IBM System z

For BPM on Z, we have been experimenting with "fit for purpose" positioning for a while now; zBLC workgroups ,Industry Solutions etc. We should consider "hyrbid" BPM Solutions on zEnterprise

July 2010

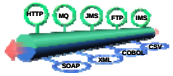
IBM zEnterprise® 196 (z196) First ever multiplatform computer – mainframe and distributed with single management

Nov 2010

Availability of zBX with IBM POWER7® blades and IBM Smart Analytics Optimizer

Mar 2011

DataPower® XI50z within the IBM zEnterprise BladeCenter® Extension (zBX)



Jul 2011

Announce IBM zEnterprise 114

Sep 2011

Availability of Linux® on IBM System x® on HX5 blades in the zBX

Oct 2011

IDAA – evolution of IBM Smart Analytics Optimizer – coming out of the zBX and into Netezza technology

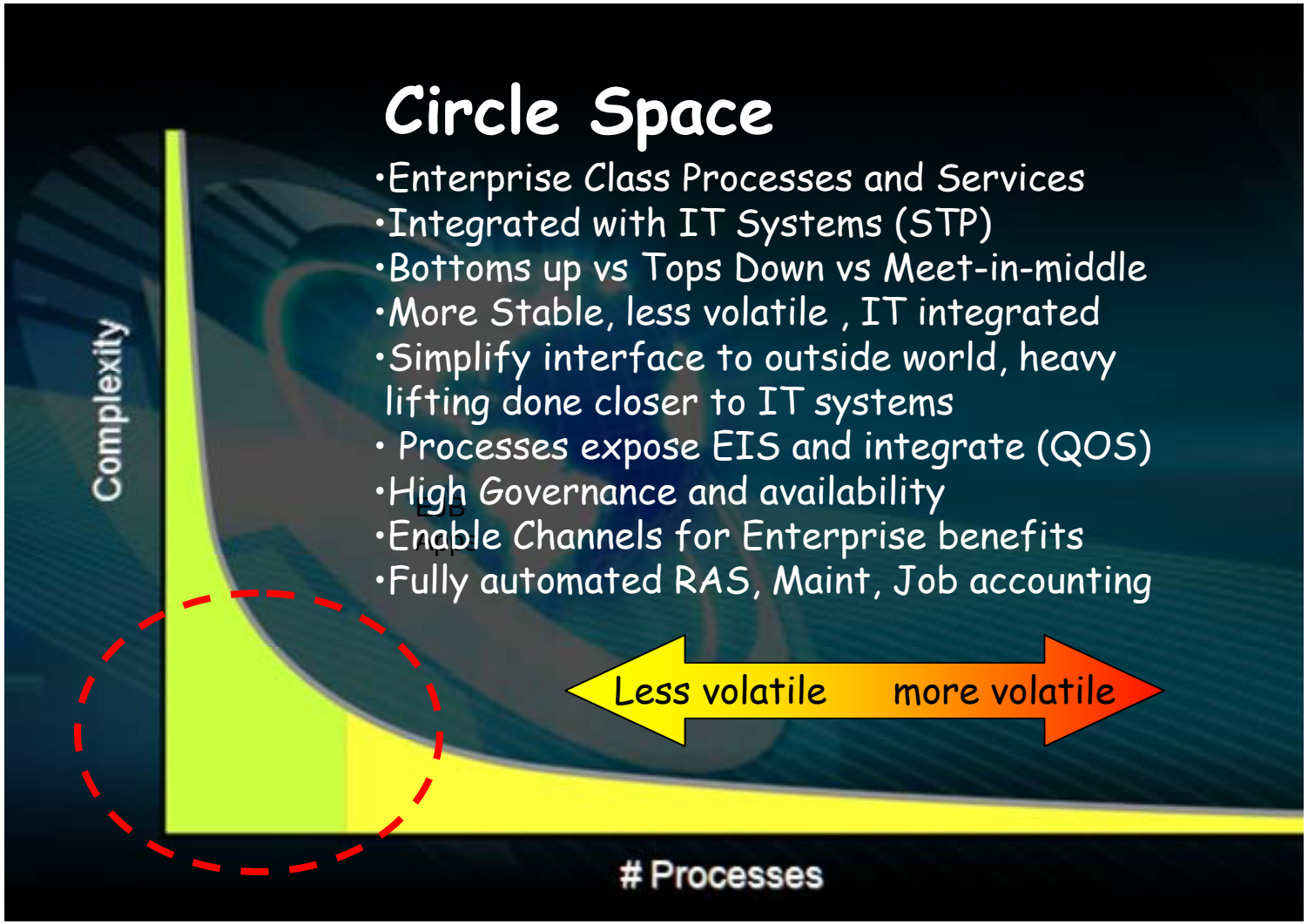
Dec 2011

Availability of Microsoft® Windows® on System x blades in zBX and APIs

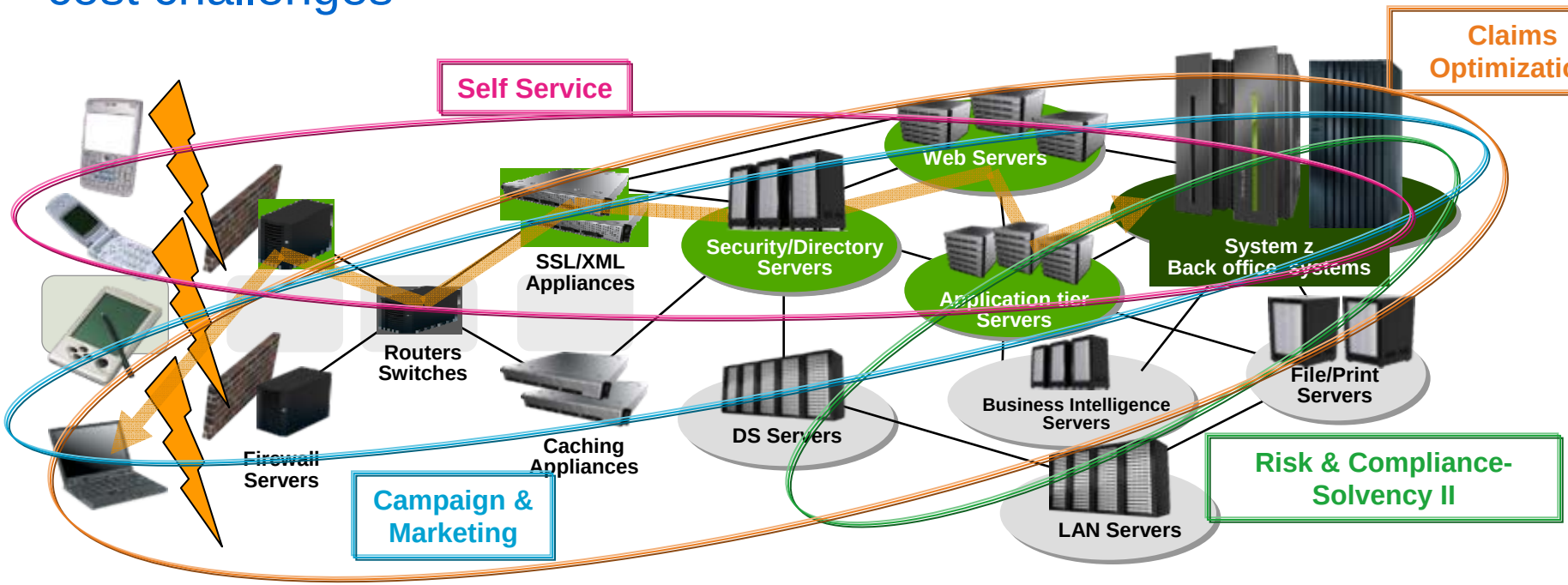
Aug 2012

IBM zEnterprise EC12 (zEC12) Next generation of hybrid computing

Long Tail – Process placement and Hybrid Deployments



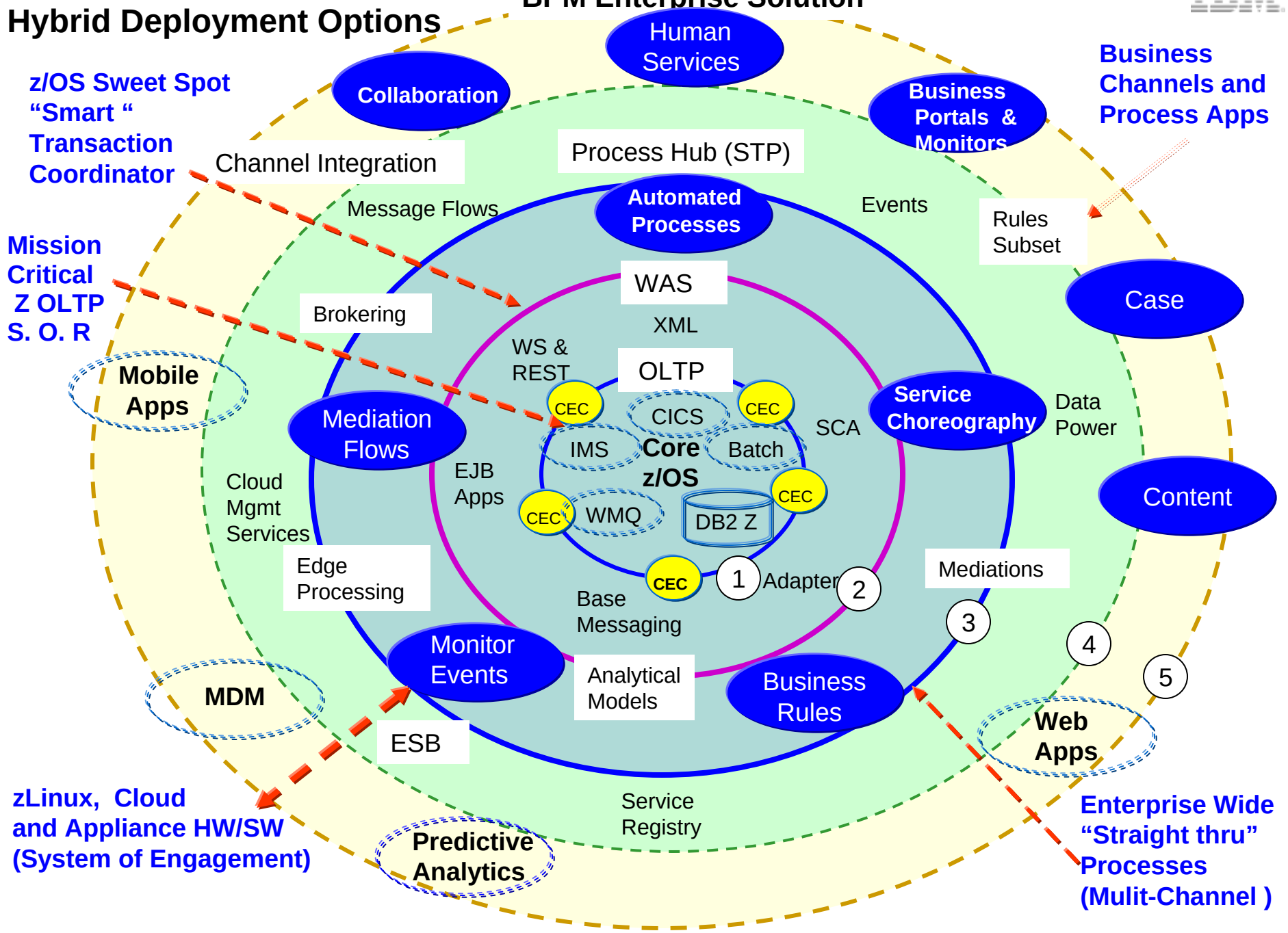
Insurance Business Processes require a mix of platform technologies which provide multiple business, technical and cost challenges



- Business processes and the applications that support them are becoming more service oriented, modular in their construction, and integrated.
- The components of these services are implemented on a variety of architectures and hosted on heterogeneous IT infrastructures.
- Approaches to managing these infrastructures along the lines of platform architecture boundaries cannot optimize the alignment of IT with business objectives, responsiveness to change, resource utilization; business resiliency, or overall cost of ownership.

Customers need better approach: The ability to manage and leverage the IT infrastructure and Business Applications as an integrated whole.

IBM BPM and ODM for System Z Hybrid Deployment Options



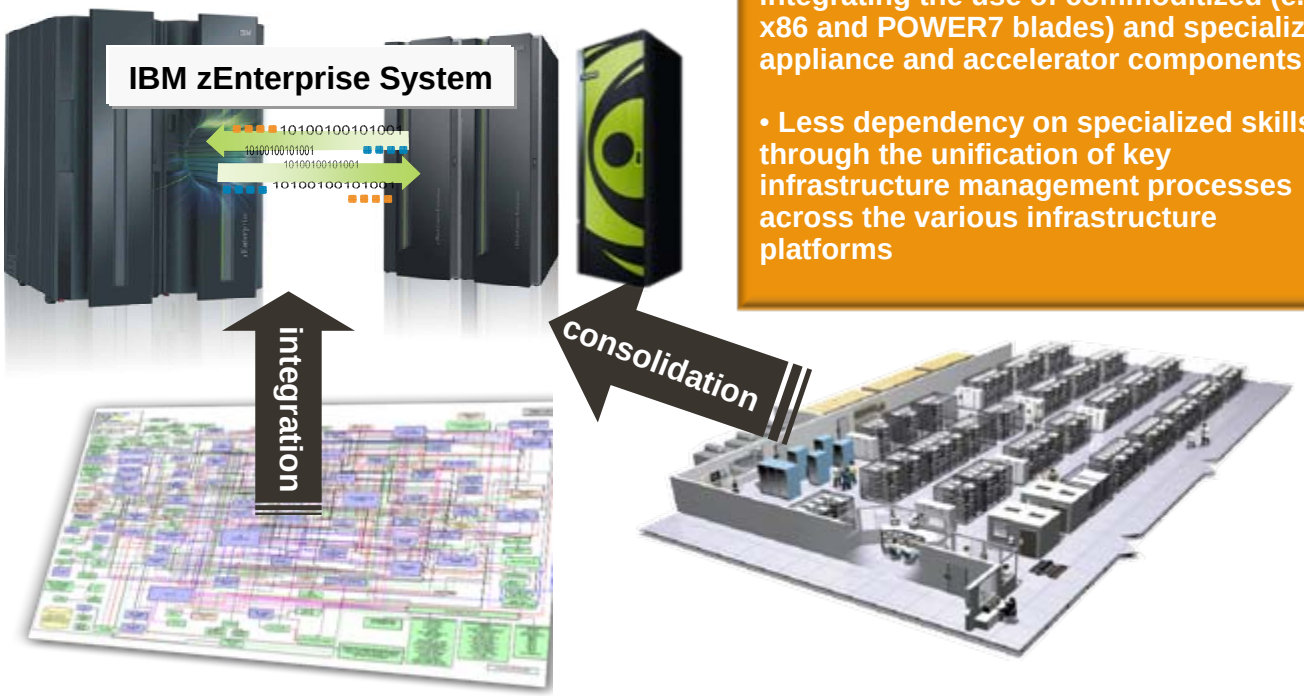
Cost effectively simplify the Integration and Optimization of Insurance Line of Business application modernization to meet growth objectives

Solution summary

The **zEnterprise Insurance Integration Hub Solution** offers architectural guidance on how to leverage the zEnterprise System to integrate Core Insurance, Customer Care and Insight, Distribution and Integrated Risk Management hybrid application workloads to optimize business application process integration while consolidating infrastructure and management for lower costs

Business Outcomes

Combining faster, more powerful IT infrastructure with an innovative approach that efficiently and dynamically exploits IT resources to cost effectively better manage integration across heterogeneous insurance workloads from a single point of control.

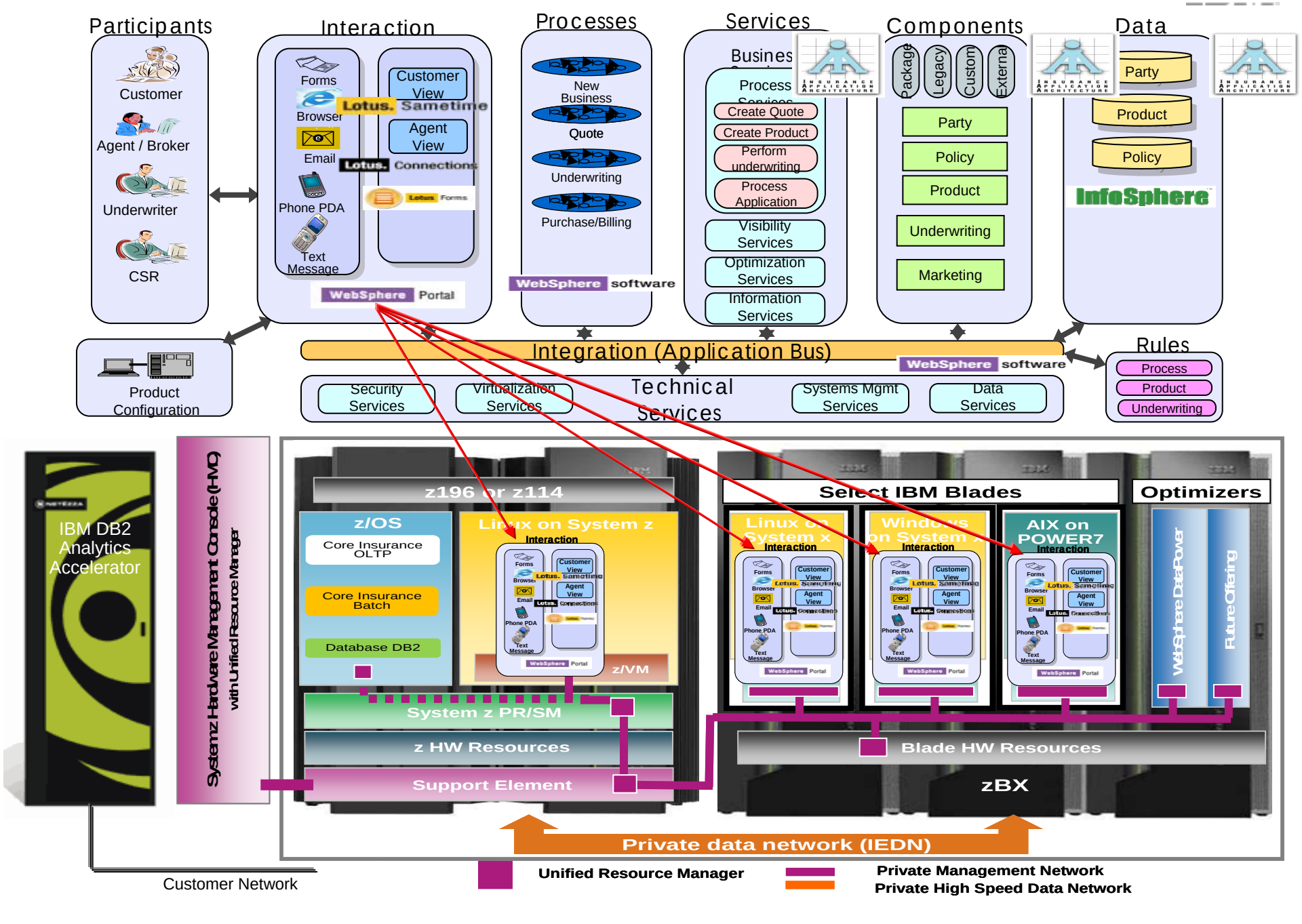


Solution Benefits

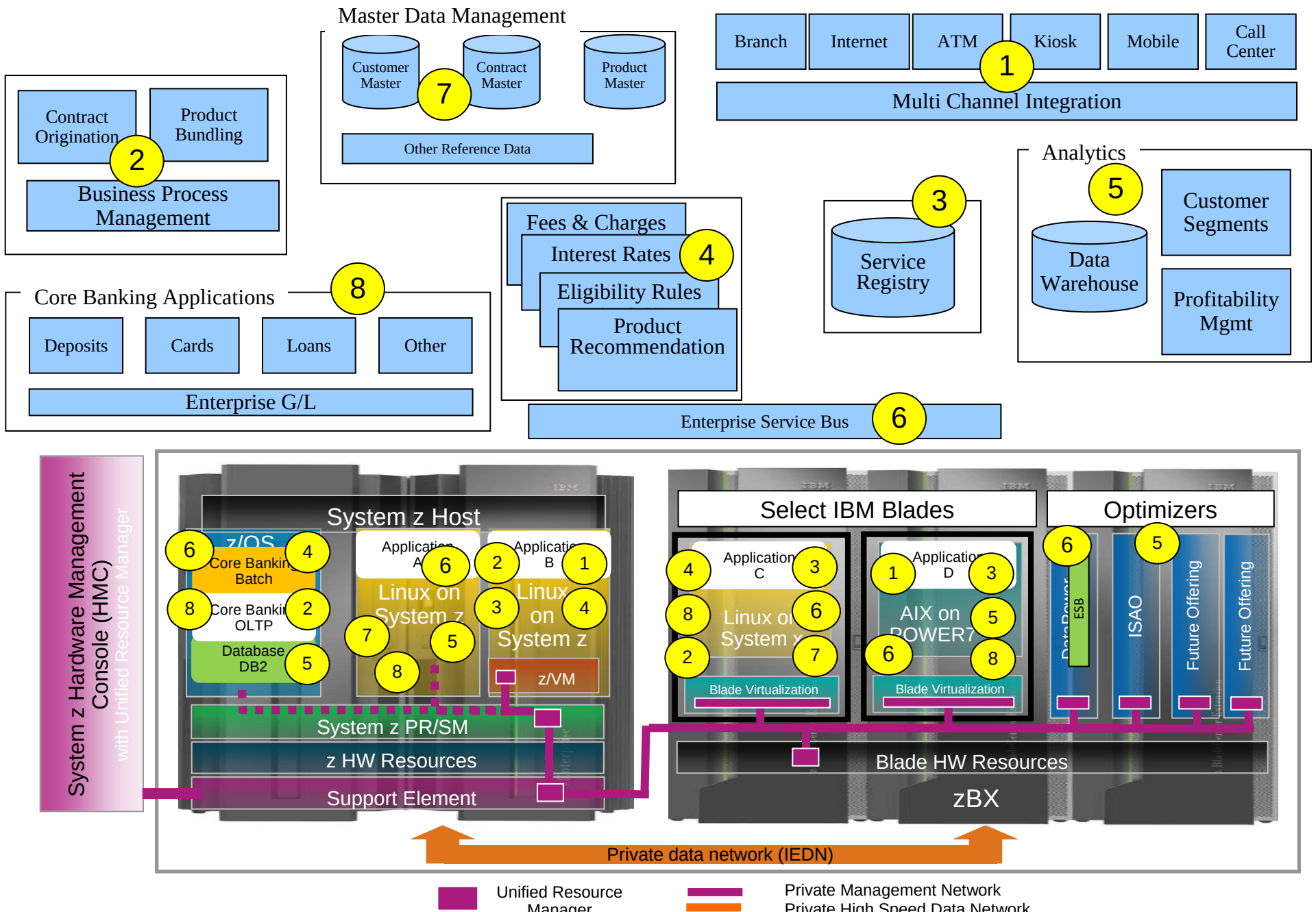
- Enterprise class capabilities that extend across LOB application processes and workload types under an integrated environment with lower risk
- Lower service delivery costs and improve service levels through the provisioning of powerful resource management rationalization features
- Lower workload and platform costs by integrating the use of commoditized (e.g. x86 and POWER7 blades) and specialized appliance and accelerator components
- Less dependency on specialized skills through the unification of key infrastructure management processes across the various infrastructure platforms

Self service solution summary example

Insurance Industry Architecture Sample

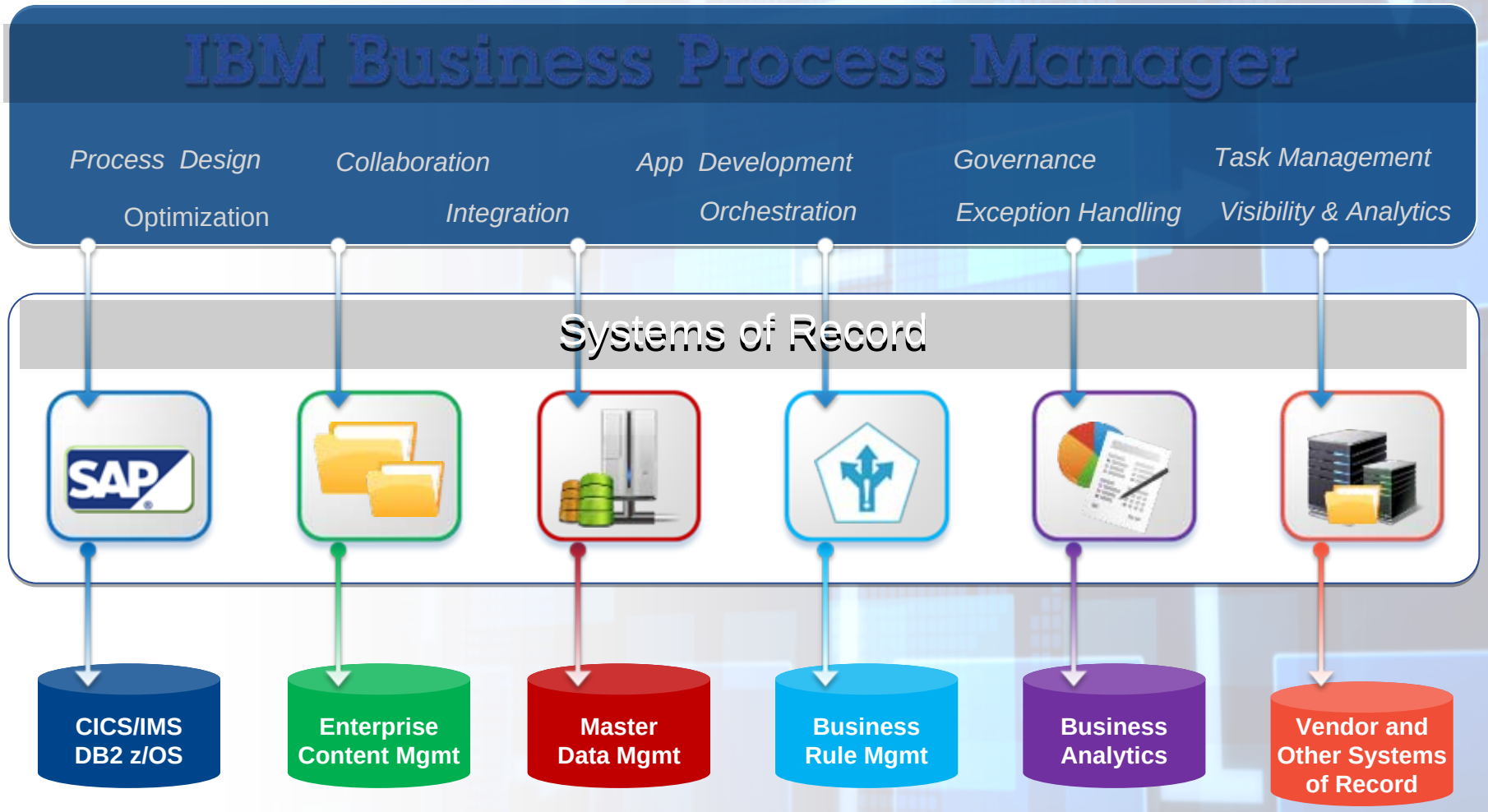


Core Banking Workload Deployment Options on zEnterprise



BPM is the System of Engagement for Enterprise Processes

An Integrated Platform to Manage Change & Business Operations



Adoption is Becoming Mainstream

Horizon

- ***Reduces*** processing time for stand claims by ***20-30 minutes each***
- Generates an average ***ROI of 300%*** for each internal process improvement project
- Increases customer & provider satisfaction

VISA Europe

- System ***handles 30,000 rules*** and ***500 transaction types for 4,000 institutions***
- 3x faster time-to-market
- 25% cost reduction to maintain business logic

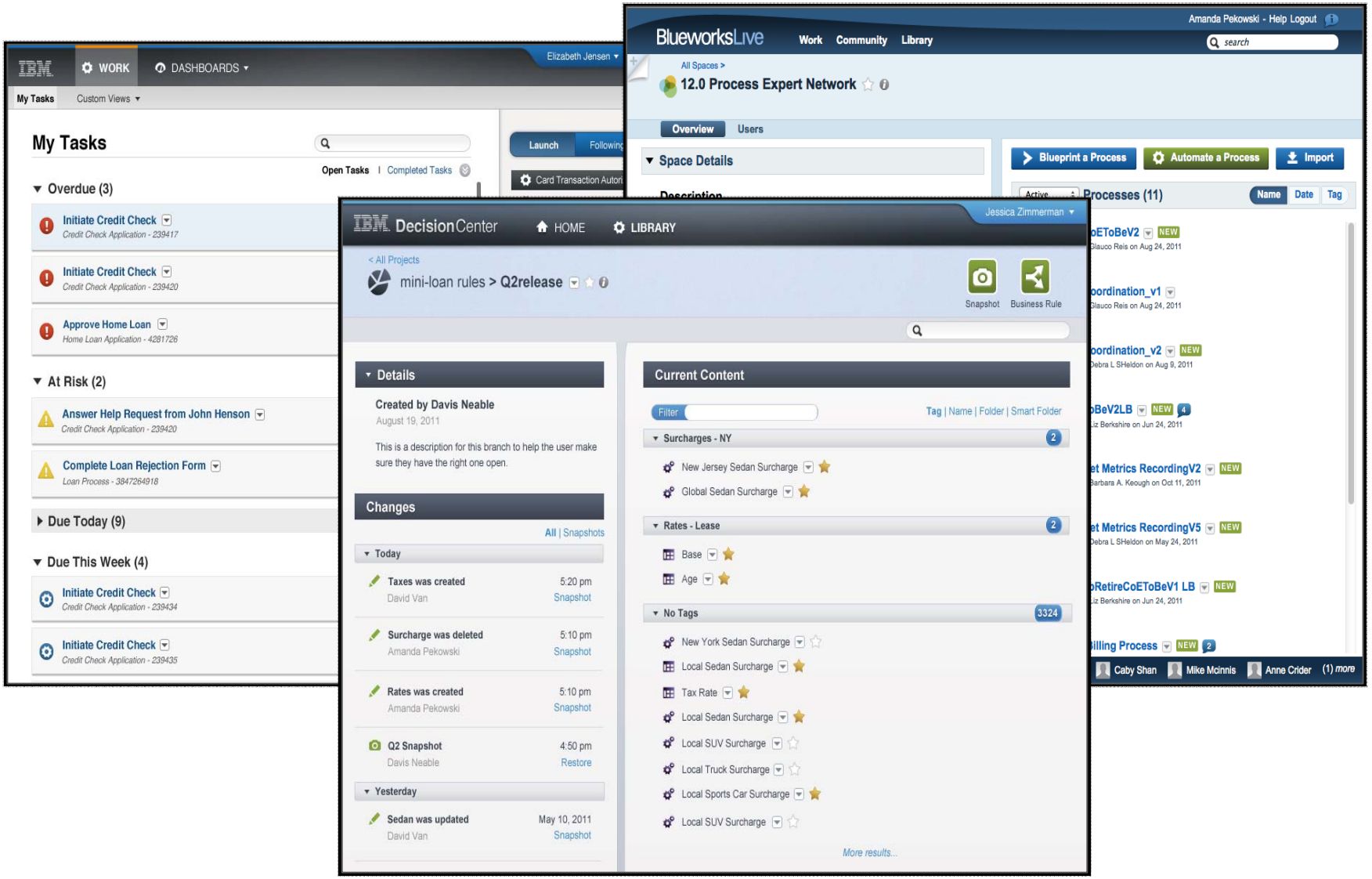
BANCO ESPIRITO SANTO

- Company-wide adoption by business users
- ***> 200 simple processes*** built by business users in production within 18 months
- ***> 40,000 tasks*** assigned to users per month within first 6 months
- ***> 80,000 process instances*** created in first half of 2010, surpassing total for 2009
- Average 3000 users per day

Home Office
UK Border Agency

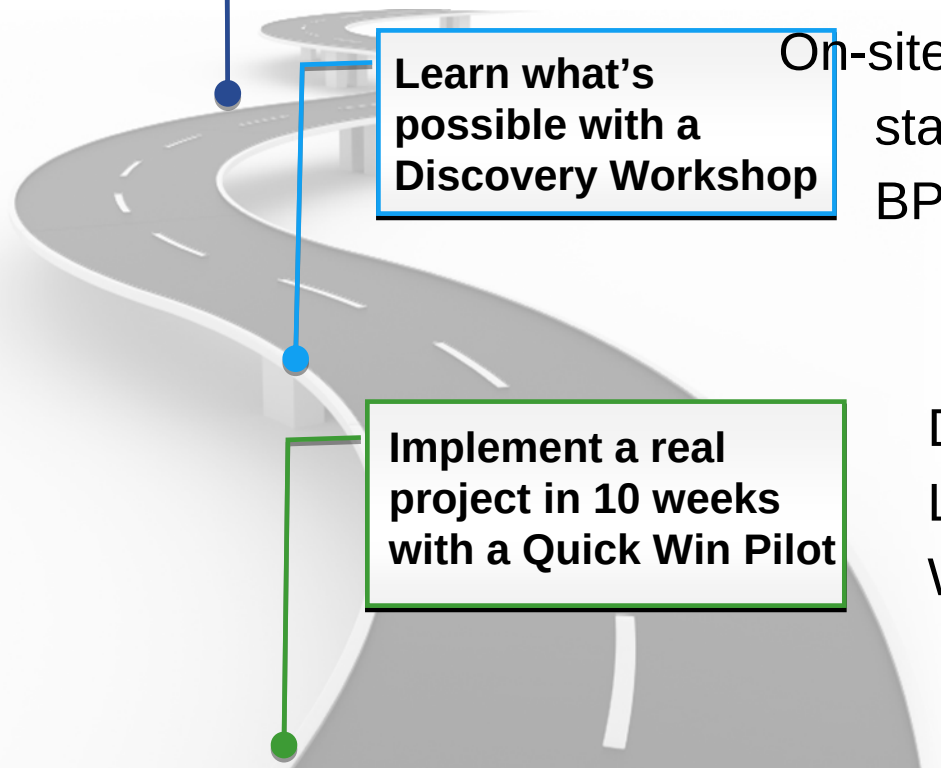
- System ***handles over 120 million*** passenger cross-border movements per annum.
- Enables the agency to identify threats sooner so they can focus attention on high-risk situations
- A near-real-time risk assessment provides enhanced security and speeds up processing

Works Together. Works the Same.



IBM Confidential

Next Steps



See BPM in Action

Ask your sales representative to see the solution live

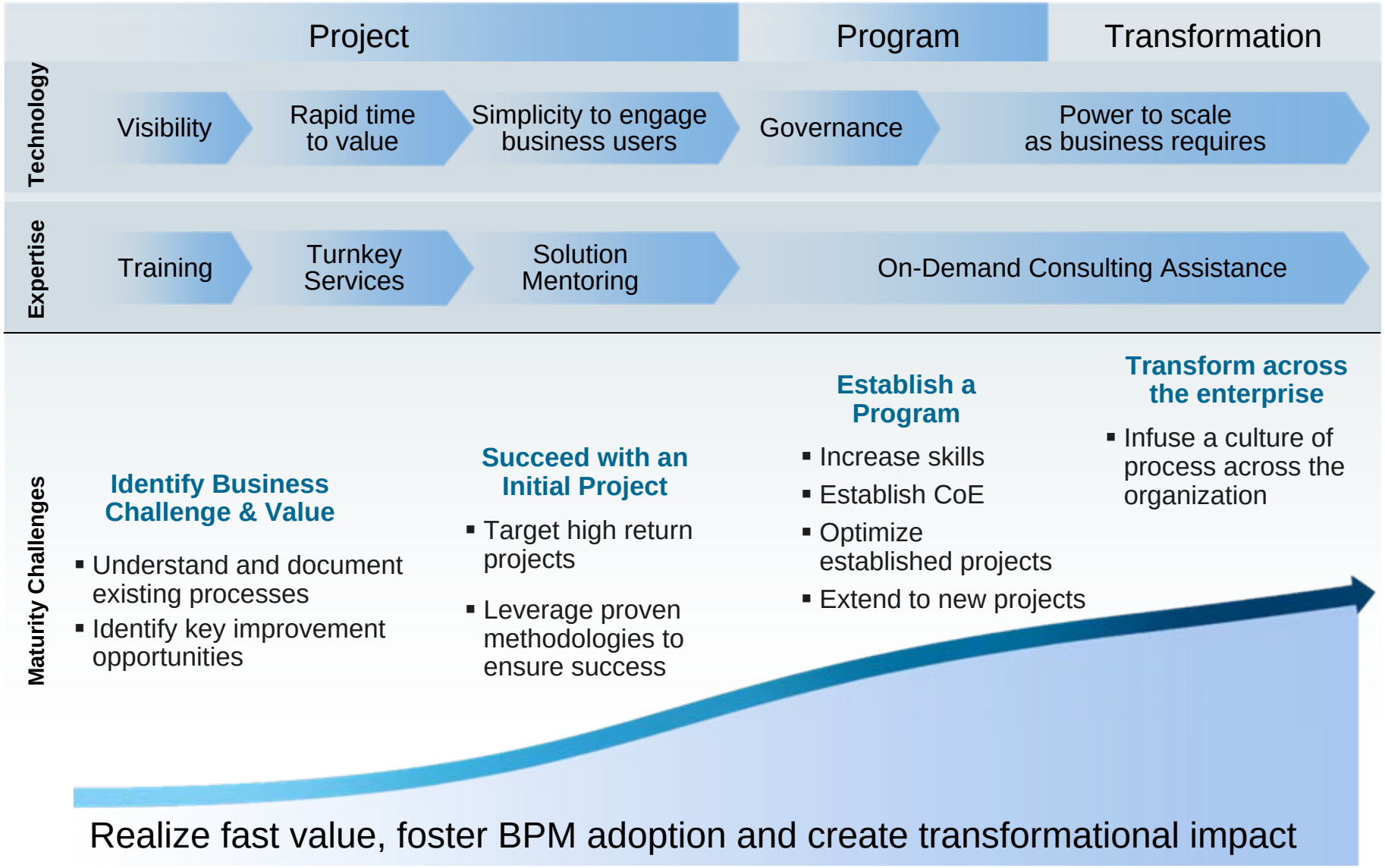
Learn what's possible with a Discovery Workshop

On-site workshop with business and IT stakeholders to evaluate the applicability of BPM for your project

Implement a real project in 10 weeks with a Quick Win Pilot

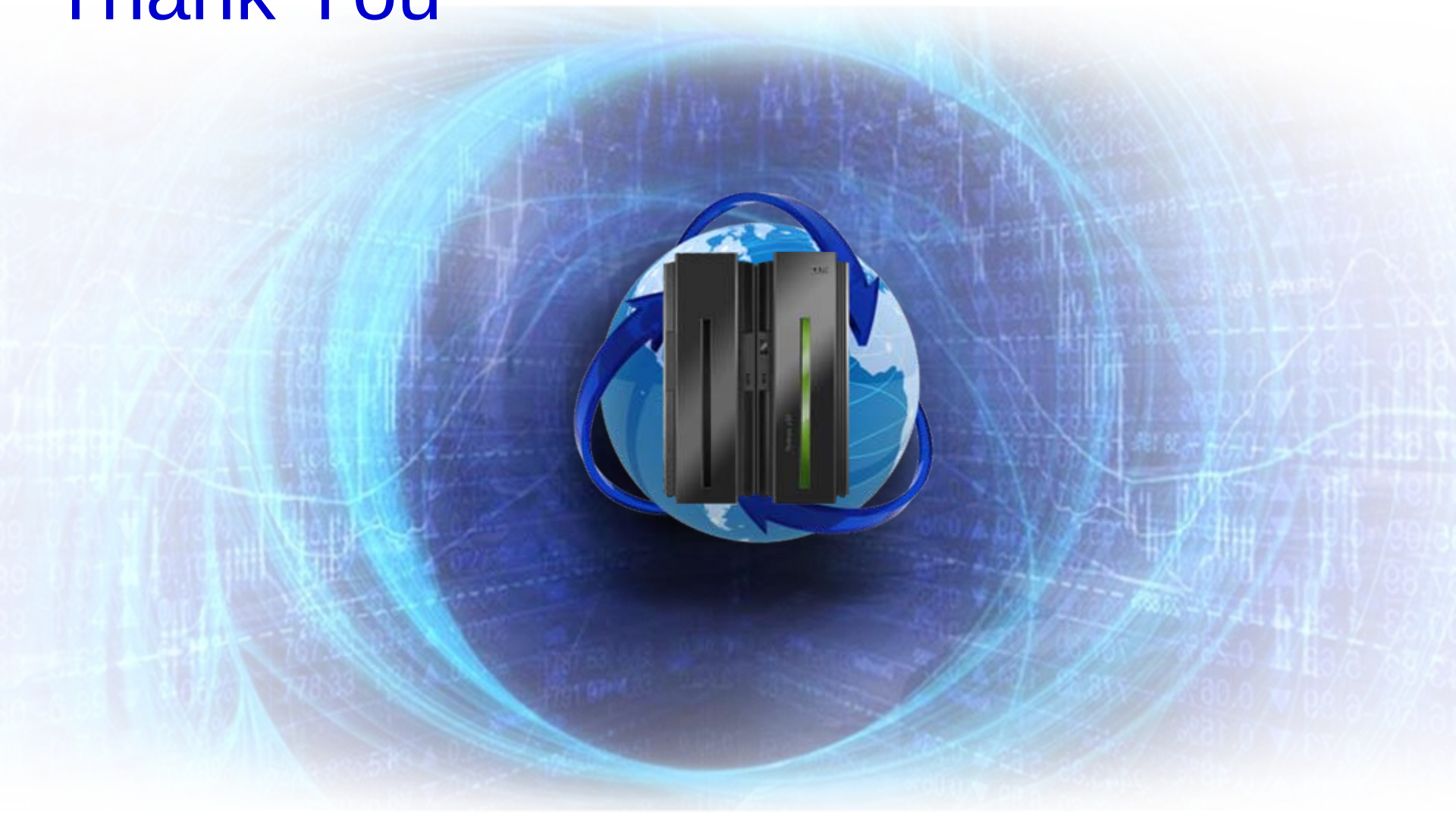
Demonstrate immediate value to your LOB end-users with your first 'Quick Win' in 10 weeks

Ensure success with a proven approach for adopting BPM



© 2011 IBM Corporation

Where can I find out more?

- Business Process Management
- **White papers & tech docs**
  - Optimizing process management with IBM System z
  - WebSphere z/OS – The Value of Co-Location
  - Brief introduction to WebSphere Optimized Local Adapters
  - WebSphere for System z Prescriptive Use Cases (Oct. 28, 2011 Addendum)
- **Redbooks**
  - Batch Modernization on z/OS
- **Demos**
  - IBM BPM In Action demos
- System z pricing

Thank You