



| IBM SOA

Keep It Simple. Model,
Optimize And Streamline
One Business Process At
A Time

Smart
SOA



Key Questions:

What is Business Process Management and how can it help me?

What IBM tooling is available to support BPM?

How do I get started – can I take a simple approach?

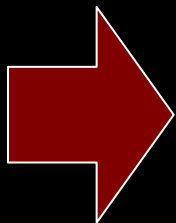
Why deploy on System z?

The Business Landscape is Changing

Forcing Companies of All Sizes to Respond to a 'Flat World'

Innovation that matters to CEOs:

- Extend the ability to collaborate inside & outside
- Innovate business models & processes
- Leverage information for business optimization
- Integrate globally
- Agile business processes



87% expect fundamental change in next 2 years
78% believe innovation requires business and technology

Business Leaders know what's needed from their Business Processes to achieve their Objectives

- Support **innovative business models** and new **differentiated products and services**
- **Change rapidly** and continuously **optimize operational capabilities**
- Provide a **real-time operational view** with the ability to **intervene fast**



Business Objectives



How can I...



...meet these business objectives?

...leverage my existing resources and IT systems?

...deliver at a pace and cost that beats my competition?



The Challenges

	Innovation	Top line growth	Operational Excellence	Reduce costs	Gain market share
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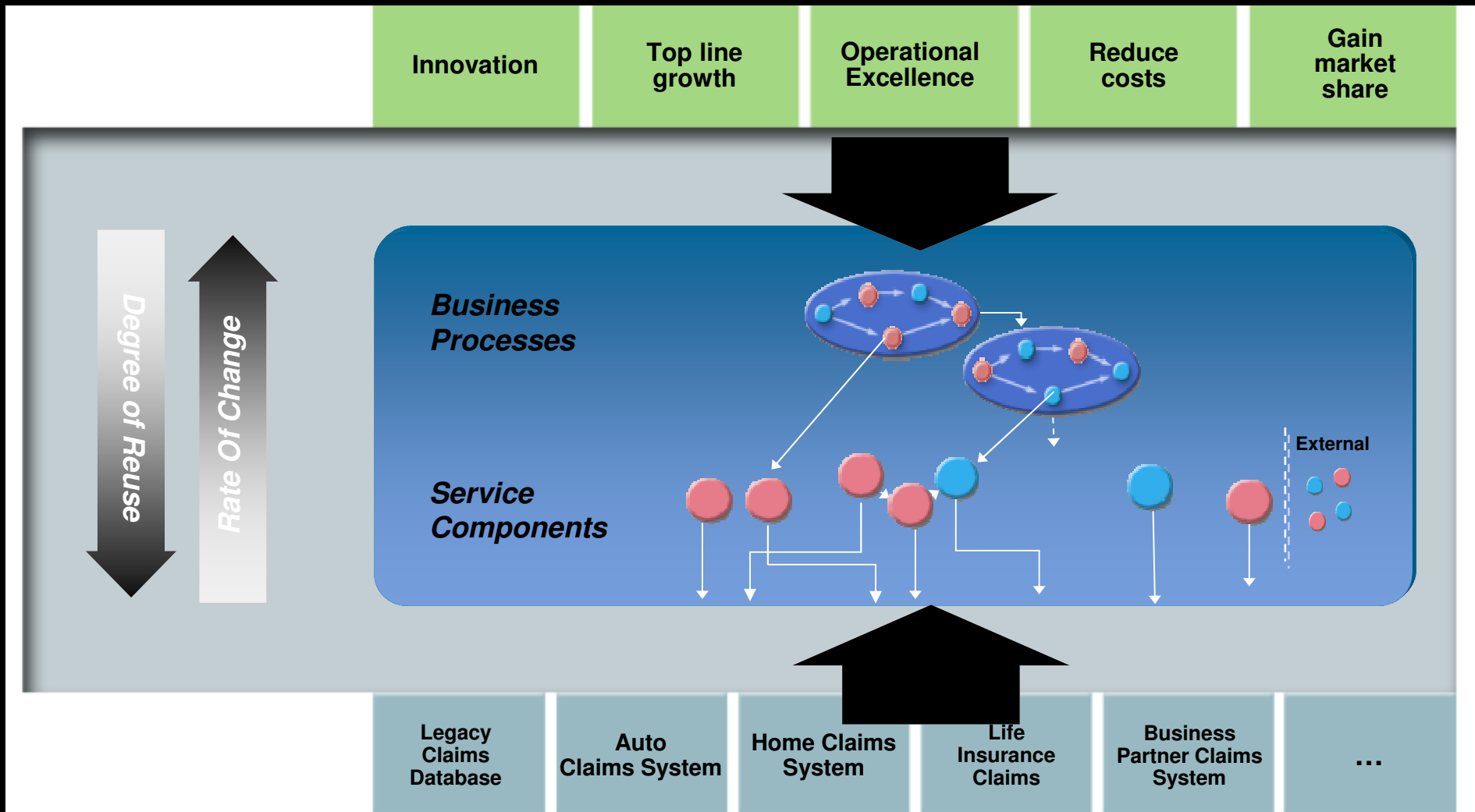
- *Complex processes & systems*
- *Complex applications & interfaces*
- *Difficult to adapt quickly*
- *Large portion of IT budget spent on maintenance, not on new “value add” investments*



Legacy Claims Database	Auto Claims System	Home Claims System	Life Insurance Claims	Business Partner Claims System	...
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BPM Enabled by SOA Addresses this Challenge

And using System z as the hub of your SOA transformation provides unique value



Common Business Problems Identified Across Industries

1. **Duplication of data entry**
 - From separate, unconnected legacy applications
 - Introduces human error
 - Results in loss of employee productivity and additional time to process info
2. **Using paper-based, sequential manual processes**
 - Requires additional time to process
3. **Human interaction required**
 - Sometimes necessary
 - Requires an escalation process
4. **Use of phone, fax or email**
 - Again requires human interaction
5. **Having to access unconnected multiple legacy applications for data**
 - Sequential process, requires additional time when data from one application is needed for the next

Common I/T Problems Identified Across Industries

1. Unconnected legacy applications

- May result in duplication of data or inconsistent data
 - May require synchronization
 - May require human intervention
- Slows down business processes

2. Maintenance

- Numerous multiplatform servers
- Increased I/T expenses for:
 - OS or application upgrades
 - new application installations
 - licensing fees or purchasing expenditures
 - system down time, application availability & customer satisfaction

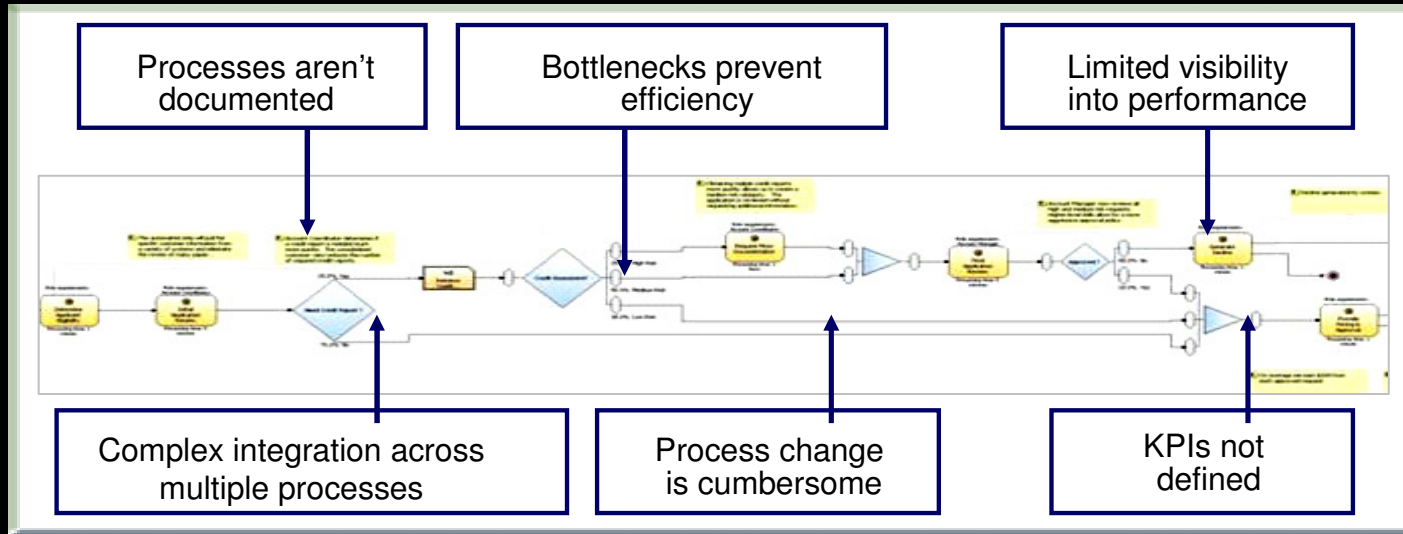
What are the solutions?

Each of these business (B) and I/T (I/T) problems can be resolved. Reviewing customer activities, we observe the following:

Problem	Solution
(B, I/T) Sequential data processing & human input, using phone, fax or email (B) Takes a long time to process a customer application	Use a business rules engine to make decision instead of requiring human intervention . Create a portal application eliminating the need for companies to retrieve information over the phone or through the mail
(B) Paper-based processing	Use web-based forms processing for electronic data processing
(B, I/T) Accessing multiple applications to obtain all the necessary data	Use a front-end web or portal application to obtain data from integrated back-end systems
(I/T) Duplicate business logic	New solution design implementing reusable components
(I/T) Numerous legacy servers & applications from acquisitions & mergers	New front-end application which obtains all necessary data from legacy systems
(I/T) Servers at regional offices – maintenance issue	Use a front-end web or portal application at the regional office which connects to the company mainframe
(B) Inefficient use of company employees	Automate and reduce human intervention with applications and computer systems
(B, I/T) Inflexibility of current system	Using IBM WebSphere middleware, a new application which allows the customer to continuously update and add to its services and offerings quickly and efficiently.

Business Process Management is a Discipline...

BPM solves common business challenges . . .



BPM Includes

Integration	Modeling	Monitoring
Forms	Software	Workflow
	Rules Engine	

Models	Process Knowledge	Metrics
	Expertise and Assets	
Policies	Business Logic	Methodology

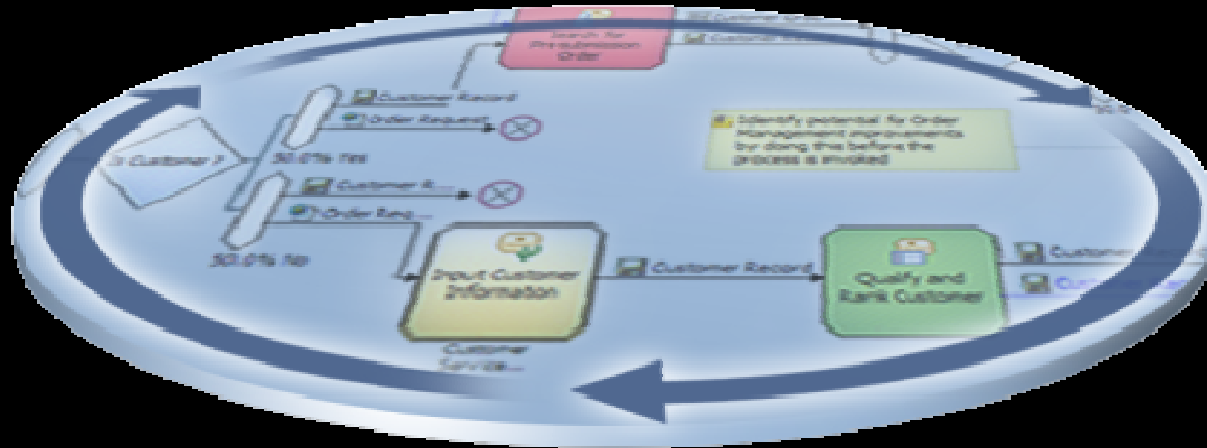
BPM governs organizational and operational activities

Business Process Management Enabled by SOA

BPM covers the entire lifecycle of your new business process

***Design, Model
and Simulate***

***Automate, Deploy
and Change***



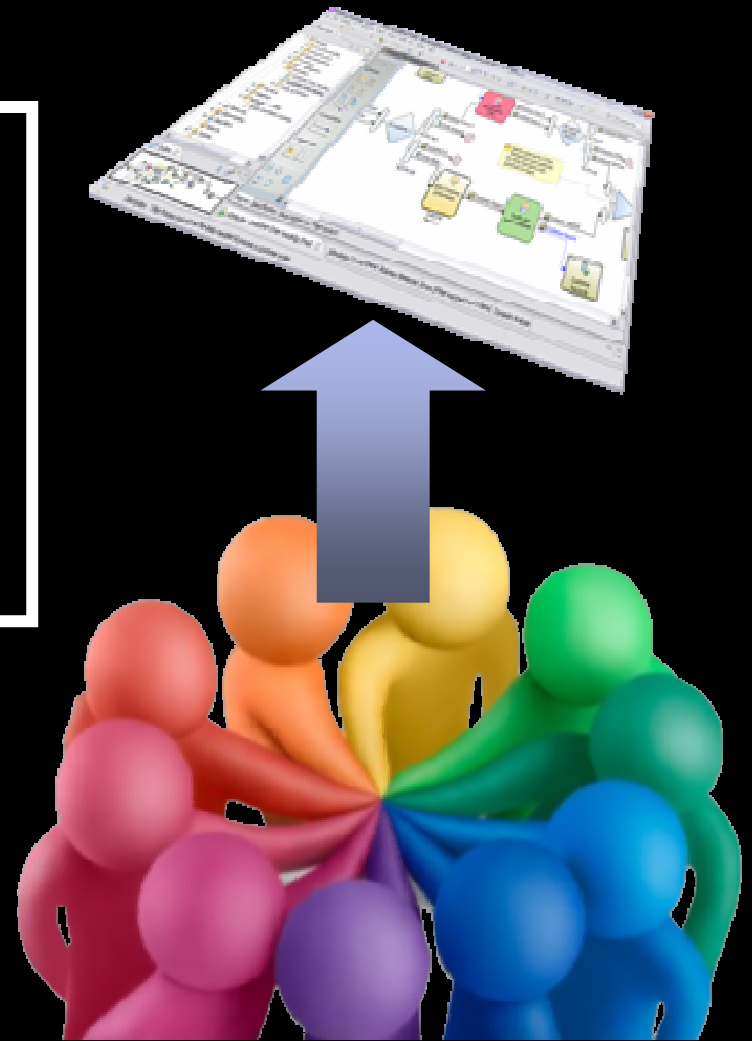
Monitor, Predict, and Act



Getting Started: The Collaborative Change Imperative

- Collaborate with Subject Matter Experts
- Predict and optimize outcomes
- Leverage best practices, metrics and real-time process performance data
- Maintain consistency of process models

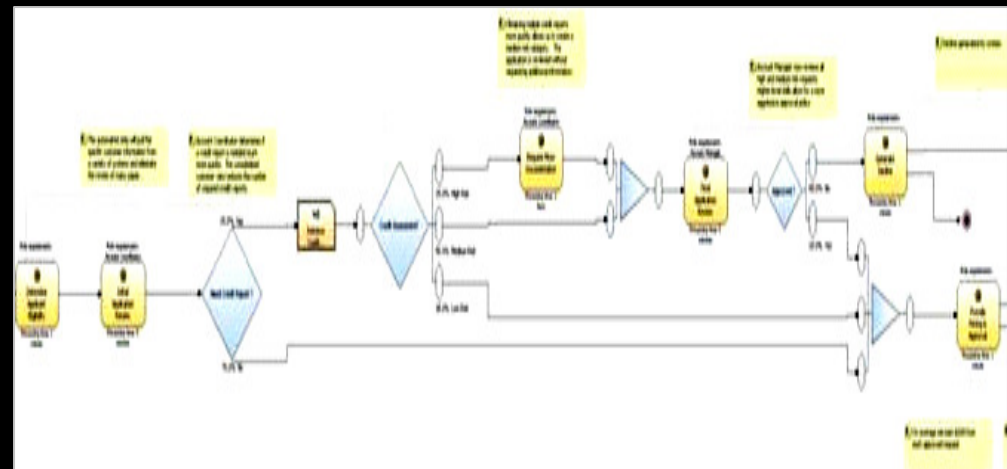
Business process modeling, simulation, analysis
Industry business process models, KPIs, KAIs



Change required...but how, when and what to change?

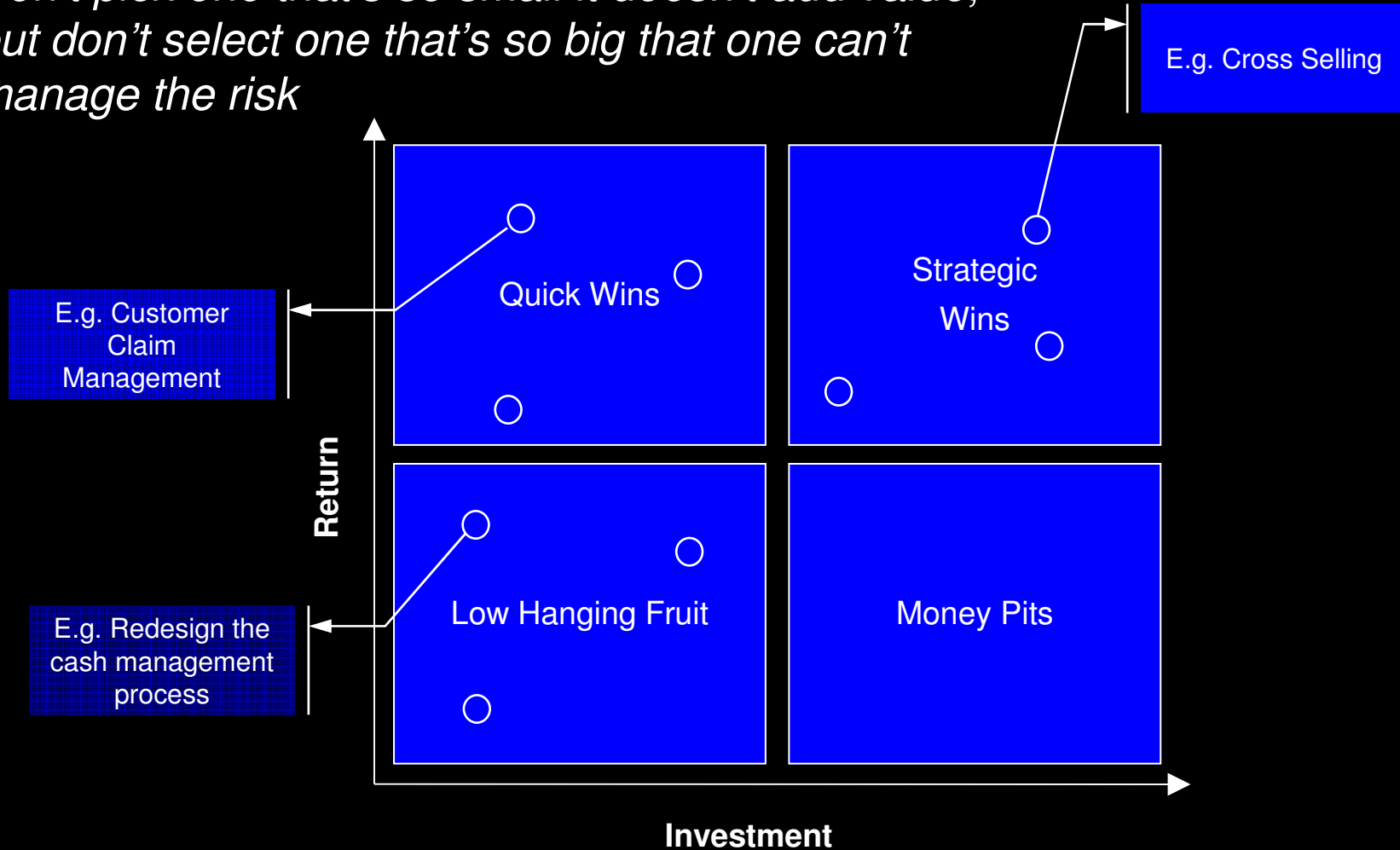
Improvement is possible and starts with understanding where you are today

- Business architects and analysts can help, but they need a way to create view, a model of the business...
- Visibility leads to understanding the current process model
 - Understand core processes that “run the business”
 - Allowing you to see where deficiencies and bottlenecks are occurring
 - Shows where changes can be made for efficiency and streamlining



Find the Process that will Differentiate The Business

Don't pick one that's so small it doesn't add value, but don't select one that's so big that one can't manage the risk



Industry: Education
URL: <http://cms.bsu.edu/>

“SOA has been such a gift to us. It enables us to embrace a new technology that provides services at a level that we couldn’t even imagine before.”

–Dr. O’Neal Smitherman



Ball State University

Ball State University bridges disparate systems and solves key administrative issue with IBM SOA solution.

CHALLENGES

- Coordinate 40 name and address systems to streamline administrative processes and ensure information integrity for users
- Minor unpaid student fees and fines prevented student from registering and paying tuition for upcoming semester

SOLUTION

- SOA with Enterprise Service Bus to connect siloed applications without hand-coding individual API calls
- WebSphere Process Server to orchestrate and streamline business processes and perform workflow automation

BENEFITS

- Ability to develop and implement services in an SOA environment for resolving name and address discrepancies in 10 months, as opposed to several years for hand-coding individual application connections
- Streamlining and automation of business processes in student registration
- Confidence that IBM solution can lead to wider use of SOA to further streamline administrative business processes
- Services created for this project can be reused in later SOA efforts

Extended Education Integration Project

BALL STATE UNIVERSITY EDUCATION REDEFINED

Registration Summary
Do not use this form for on-campus courses.

Below is a summary of your transaction. Please verify the information is correct. If you choose to pay now by credit/debit or e-check please click 'Pay using Cardinal QuickPay' button below. If you have any questions or concerns, please contact the School of Extended Education at either 265-1581 or 1-800-872-0369. Please print this form for your records and close all Internet browser windows. Thank you.

General Information

Date:	3/12/2008 6:04:14 PM
Student Name:	Brian Means
Program:	Distance Education
Term:	Spring 2008
Daytime Phone:	765-524-1240
Email:	bmeans@bsu.edu

Unsuccessful Registrations

The following registrations were unsuccessful. You may click on the link to the right of each status to view the reason for the unsuccessful registration.

Ref.	Course	No.	Sec.	Cr.	Time	Repeat	Status
1.	70435	AHSC	233	800C	4	ARR, 0000-0000	No
2.	70516	AHSC	242	800C	3	ARR, 0000-0000	No
3.	70524	AHSC	251	800C	4	ARR, 0000-0000	No

Billing Information

Description	Quantity	Total
Undergraduate Credit Hours	0	\$0.00
Graduate Credit Hours	0	\$0.00
Professional Malpractice Insurance Fee	0	\$0.00
Clinical Fees	0	\$0.00
Grand Total		\$0.00

Holds (points to the 'Status' column in the Unsuccessful Registrations table)

Permissions (points to the 'Status' column in the Unsuccessful Registrations table)

Wait Lists (points to the 'Status' column in the Unsuccessful Registrations table)

Business Process Modeling: Current-State Processes

Modeling for documentation and compliance

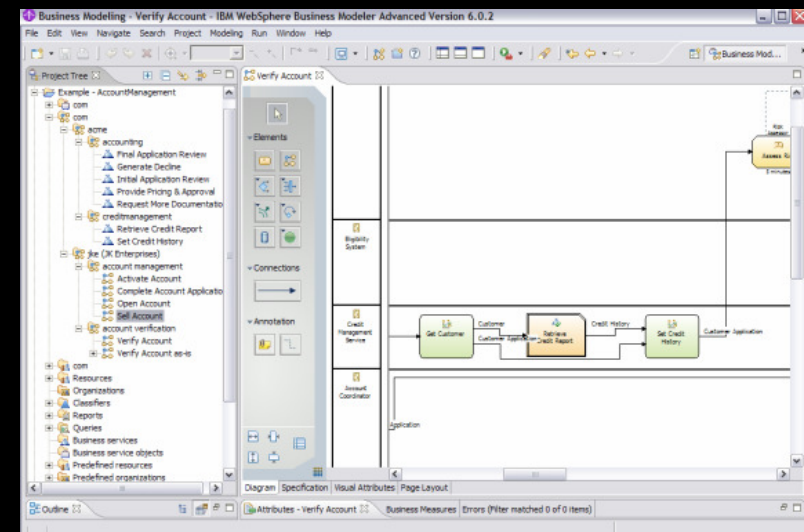
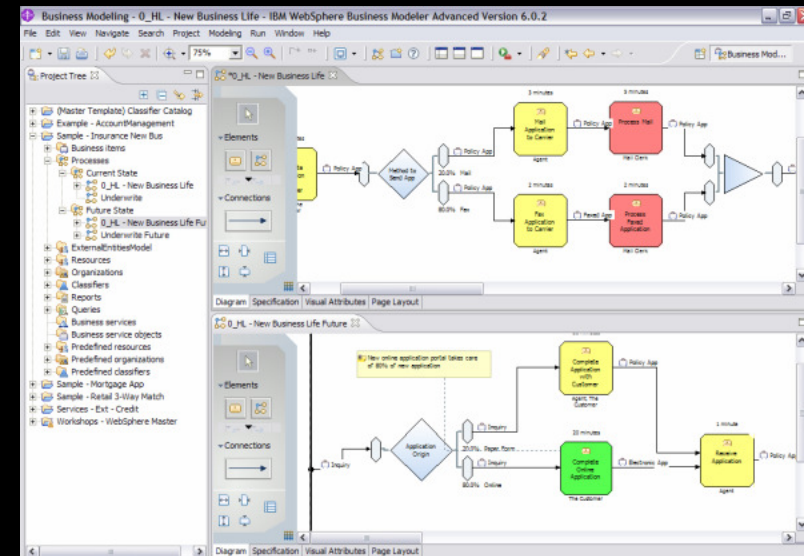
- Document current processes to map how they work
- Document for training and communication

Modeling for analysis, design and redesign

- Analyze to discover areas for process improvement
- Document both the current and future-state business processes and compare to validate enhancements and efficiencies before committing resources
- Identify process metrics for performance

Modeling for automation and implementation

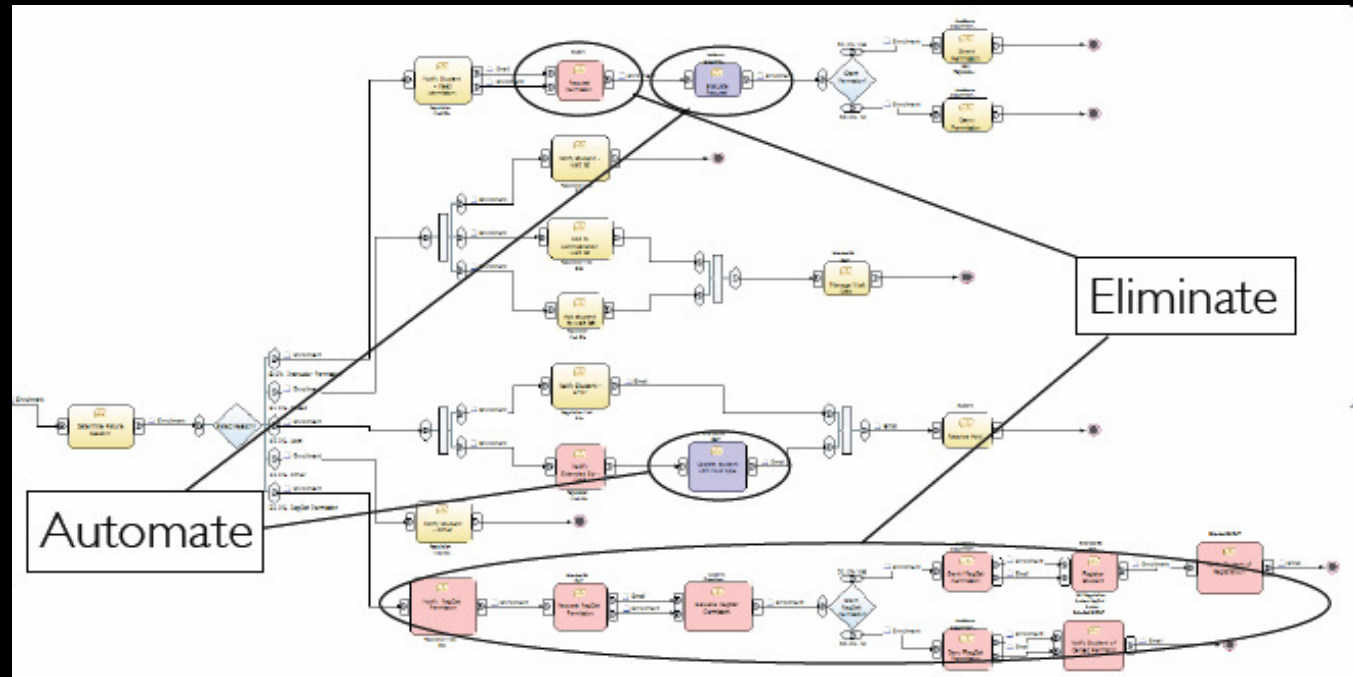
- Create a clear requirements definition “contract” between LOB and IT
- Ready the process model to be passed to application, workflow and business process development tools



Extended Education Modeling: Current-State Model

The current process includes many manual steps performed by extended education staff.

Holds
Permissions
Wait Lists

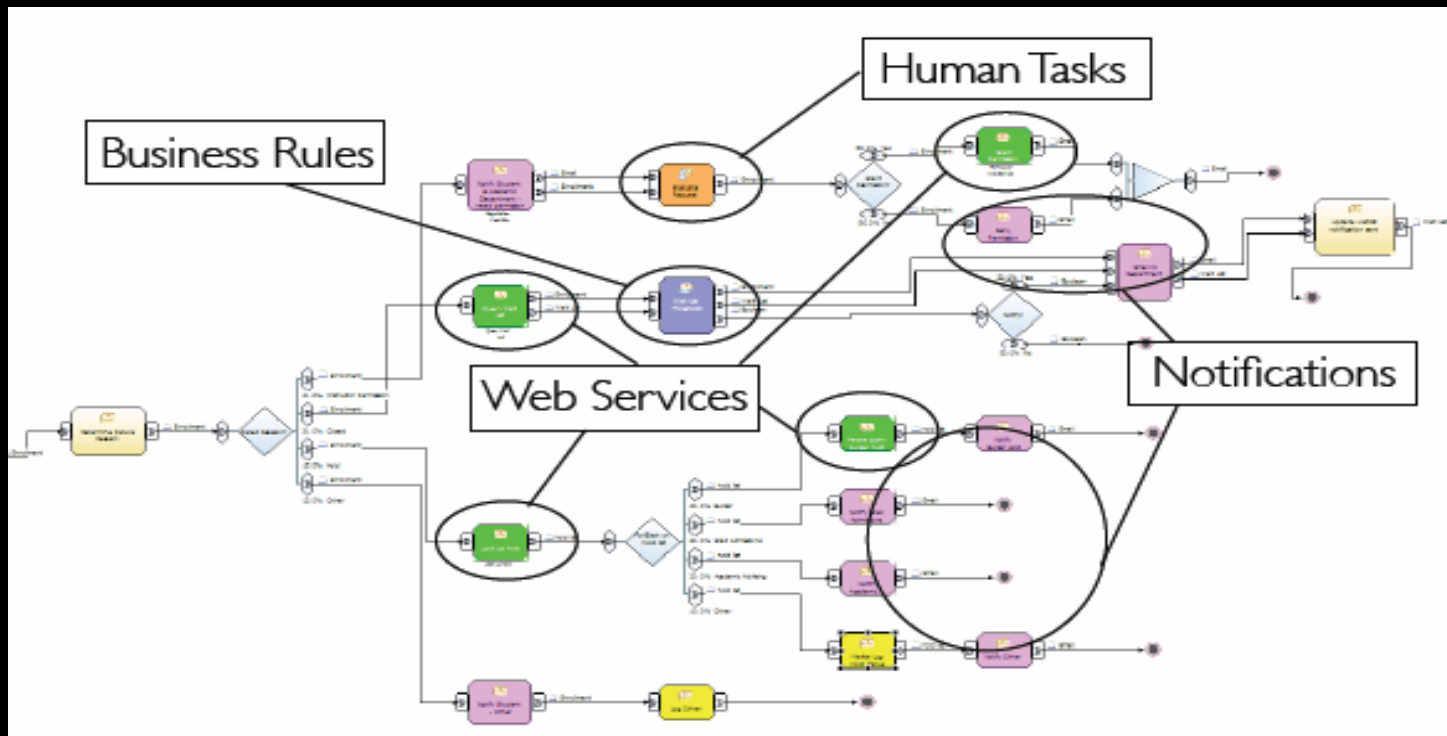


Current-state Issues

- Manual processes can benefit from automation
- Need to decrease work of extended education staff
- Need to increase service to students
- Need to reduce denied enrollments and/or reduce time required to resolve the reason why enrollment cannot be completed

Extended Education Modeling: Future-state Model

In the to-be process unnecessary steps were eliminated



To-be State Benefits

- Student involvement reduced
- Automation reduces staff work and increases information sent to students
- Human Task simplifies work for academic departments
- Business Rule makes wait list management flexible

Extended Education Integration: Project Timeline

1 Week:

WebSphere Business Modeler

- As Is model
- To Be model
- Export to BPEL (business process execution language)

2 Weeks:

WebSphere Integration Developer and Testing

- Import BPEL from Business Modeler
- 3 Process components (BPEL)
- 1 Human task component – built-in escalation feature
- 3 HATS web services
- 2 Stored Procedures – MS-SQL 2005 - built-in JDBC adapter
- 1 Email Component – built-in email adapter within WID
- 1 Business rule

2 Weeks:

Deploy to Process Server on z/OS

- Performance and stress testing
- Final end user testing
- Deploy

BSU Project Observations:

Selecting the right process

- Keep focus on the business issues
- Find the SME that can define business needs
- Be patient

Fast payoff – from problem definition to initial beta testing – 3 weeks

Business value

- Reduce time to enrollment into courses
- Moved the gatekeeper issues to the gatekeeper creators (Bursar, Departments, etc...)

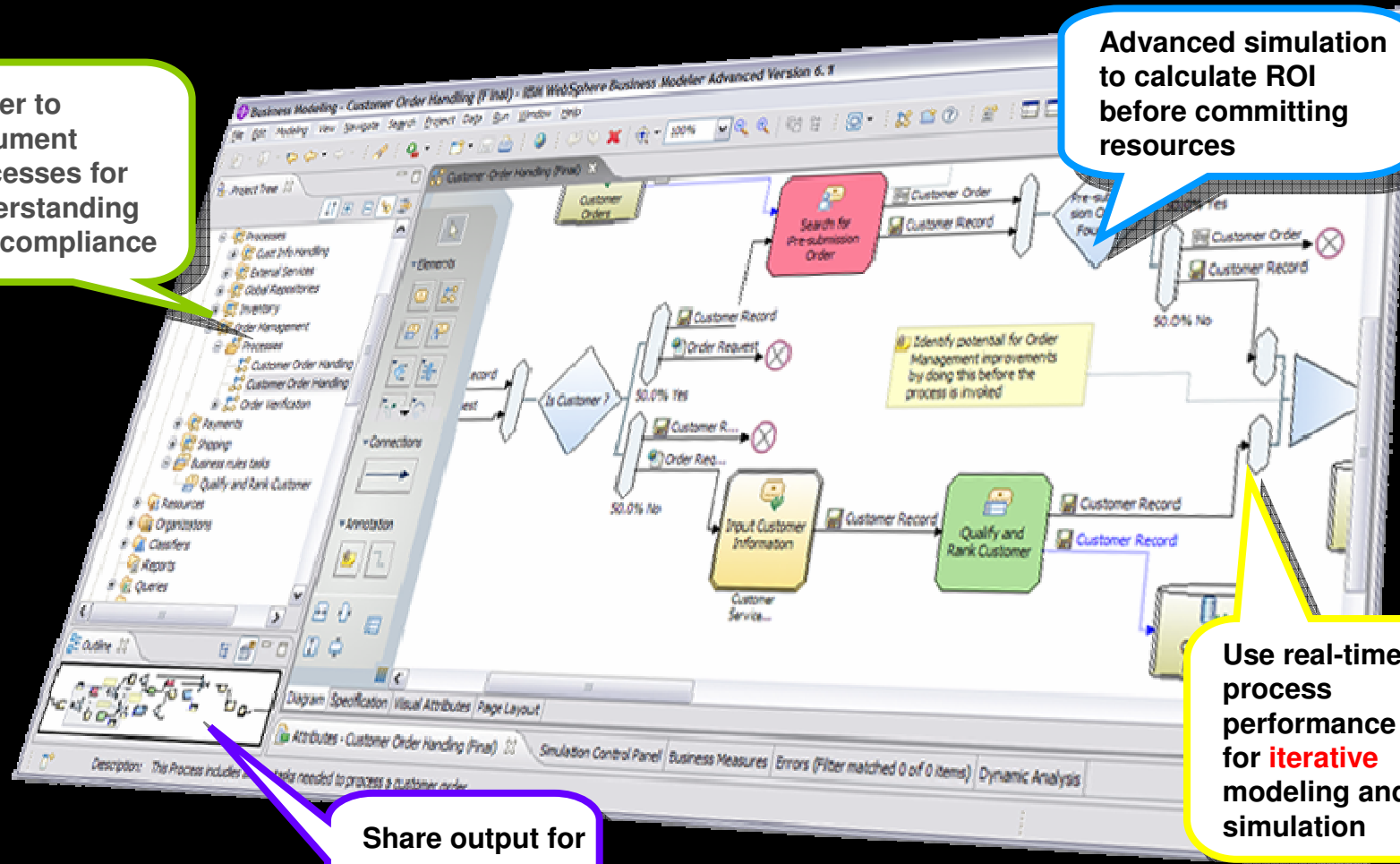
Entire process are self documenting

- 300+ page PDF document consumer ready

Collaborative design and simulation for strong execution

Easier to document processes for understanding and compliance

Advanced simulation to calculate ROI before committing resources



Share output for training and collaboration

Use real-time process performance data for **iterative** modeling and simulation

WebSphere Business Modeler 6.1.2

Collaborative Business Process Design

- Use a teaming repository to provide multi-user access to models
 - Work can be performed in parallel, speeding time to value
 - Experts in each process area can define the process areas that pertain to them
 - Models are versioned, allowing for rollback

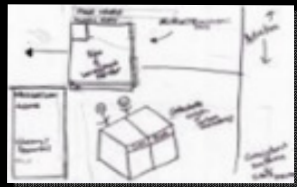
The screenshot displays the IBM Business Process Design tool interface. The top navigation bar includes 'Welcome', 'Review Draft Project', 'View Released Project', and 'Administration'. The main workspace is divided into several panels:

- Draft Project Tree:** A hierarchical view of the project structure, including 'Draft Projects', 'ABCProject', 'Library', 'Data catalogs', 'Organization catalogs', 'Process catalogs', 'Processes', 'Repositories', and 'Processes'. The 'Customer Order Handling' process is selected.
- Model Elements:** A central workspace showing a workflow diagram. It includes a 'Customer Order' data store, a 'Search for Pre-submission Order' task, and a 'Determine Requester Status' task. Data flows are indicated by arrows between these elements.
- Outline:** A list of process elements, including 'Customer Order Handling', 'Stop Node', 'Determine Requester Status', 'Search for Pre-submission Order', and 'Is Customer?'. 'Determine Requester Status' is currently selected.
- Comments:** A section for managing comments on the selected task. It includes a 'Filter by' dropdown set to 'Local task:Determine Requester Status' and buttons for 'Add Comment', 'Add Response', and 'Delete comment'.
- New Comment For: Determine Requester Status:** A dialog box for adding a new comment. It contains fields for 'Subject' (with the value 'Name change'), 'Type' (set to 'Problem'), 'Priority' (set to 'Medium'), and 'Status' (set to 'Open'). A 'Details' text area contains the message 'This is not the right name for this task'. There are 'Submit' and 'Cancel' buttons at the bottom.

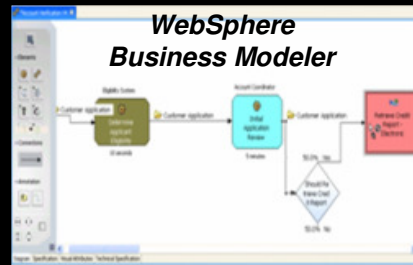
- Reviews by experts who are not actively editing the models

WebSphere Business Publishing Server 6.1.2

Use Simulation to Identify High Impact Process Changes



Existing Processes



Run simulation to estimate savings and support the business case for the process change

- Define and optimize processes thru simulation
- Justify process changes through ROI calculations
- Understand impact of process changes to the business
- Example: Simulation results showing areas of greatest opportunity

Current State - Times & Costs

Case Analysis with Unlimited Resources

Probability	Average Process Time (min:sec)	Average Cost
32.91%	10:11	\$5.40
32.10%	3:11	\$1.67
15.01%	14:11	\$7.56
15.20%	3:21	\$1.77
4.78%	11:11	\$5.93

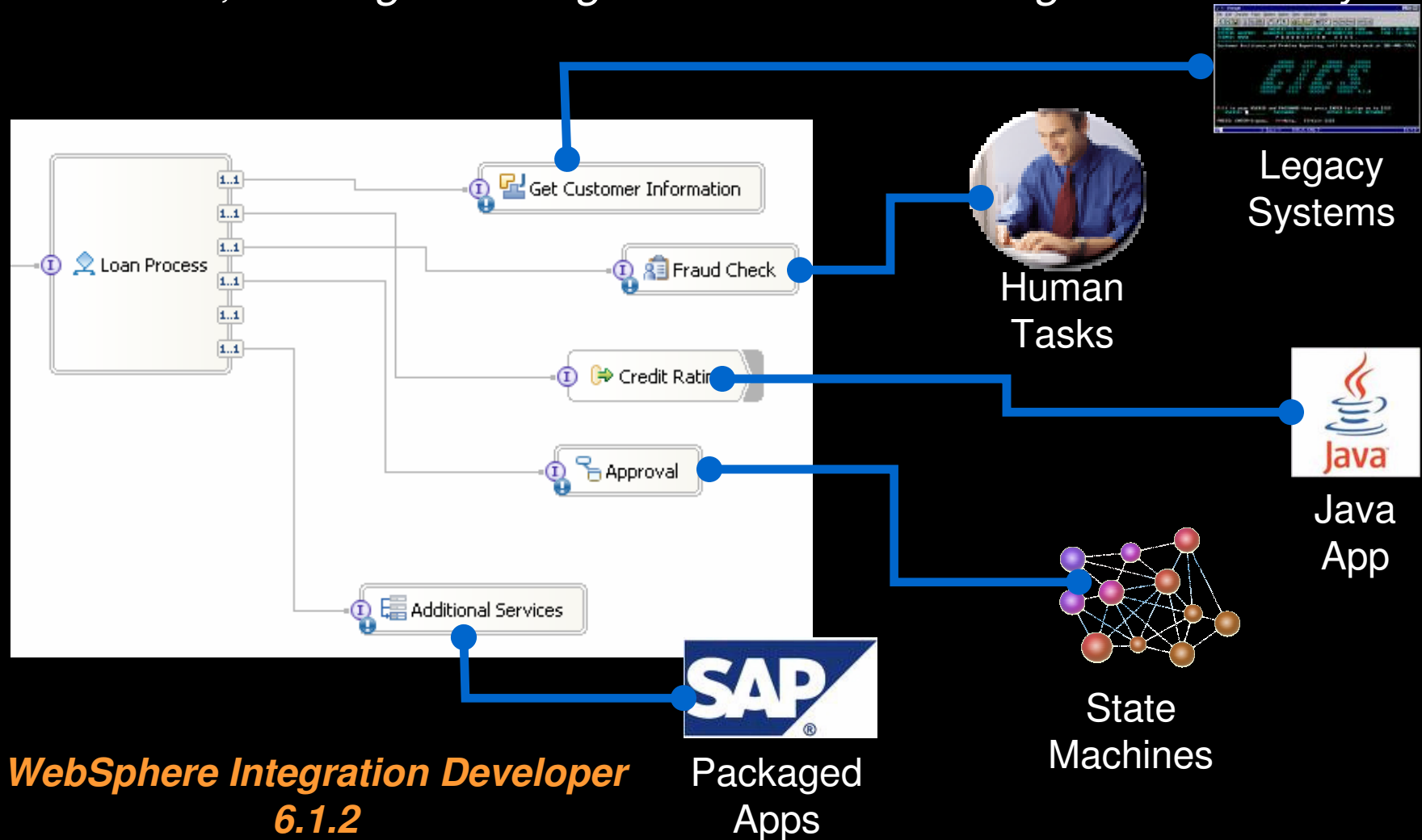
Future State - Times & Costs

Case Analysis with Unlimited Resources

Probability	Average Process Time (min:sec)	Average Cost
35.57%	8:16	\$4.38
33.03%	1:51	\$0.96
13.51%	7:51	\$4.16
14.50%	1:54	\$0.96
2.39%	8:16	\$4.38

Simple integration of processes without coding

With SOA, leverage existing assets and achieve greater flexibility



WebSphere Integration Developer
6.1.2

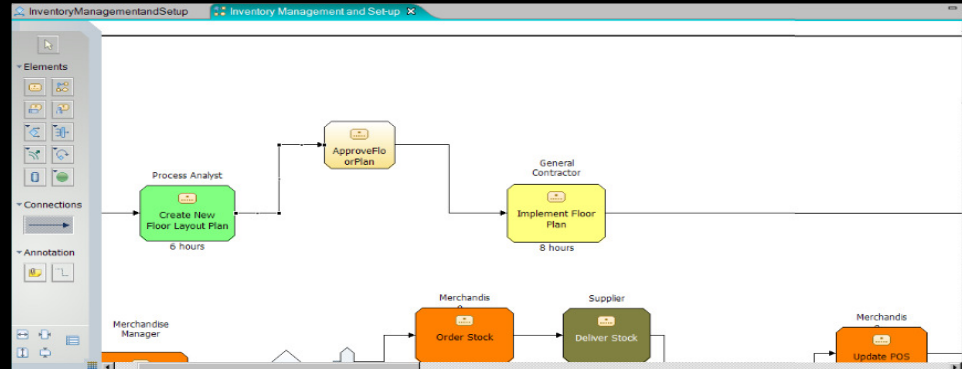
Packaged
Apps

State
Machines

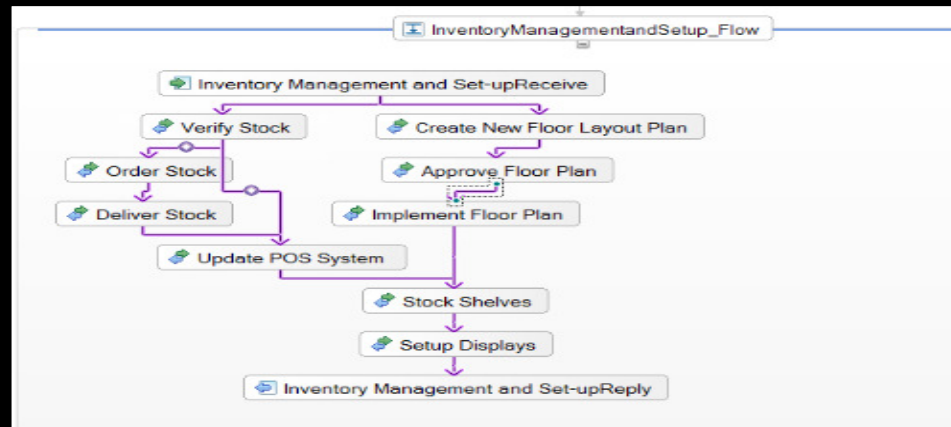
Enabling **Iterative** Development Environment

Bridging IT and LOB

- Changes made in the Modeling Environment are automatically reconciled in Assembly Environment
- Change Log provided to Modeling User to synchronize model with implemented process



Process Analyst



IT Developer

Deploy: WebSphere Process Server

The Engine Room of Business Process Management

- **Robust execution of business processes**
 - Reliable, scalable, secure, open standards
 - Single integrated runtime for all SOA based process automation
 - Configurable worklists and detailed work item view
 - Ad hoc task creation
 - Graphical process view for business user for viewing and interacting with tasks
- **Provides flexibility for modifying in-flight process instances**
 - Ability to skip activities, as well as to jump forward and backward between activities
 - Modify data for a running process
- **Supports all aspects of process integration**
 - Process flows
 - Business rules
 - Human steps
 - Forms
 - State machines
- **Rapid process change ensuring business agility**
 - **New Web 2.0 BPM client for business users**
 - Reuse existing services that you already have and create new services for future use.
 - Build process flows without knowing where the information is coming from (late binding of services)
 - Business rules control the execution sequence of the process and can change dynamically

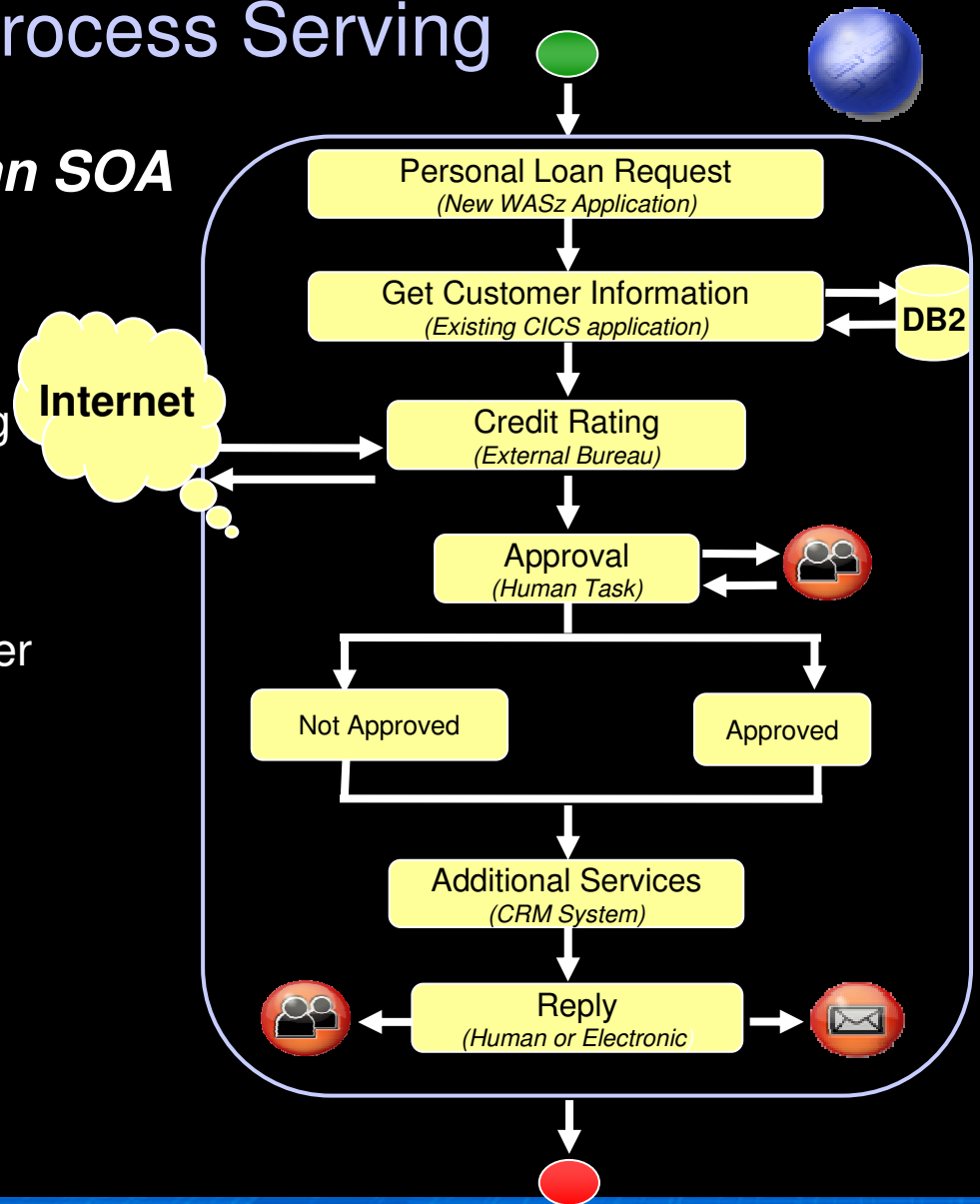


WebSphere Process Server 6.1.2

When to Use System z for Process Serving

System z—The choreographer for an SOA

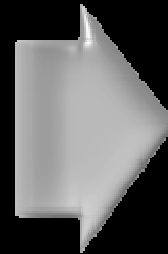
- **Efficiency:** Control processes where they run
- **Integration:** Improve the flow of an existing process
- **Automation:** Remove the human enter keys
- **Reliability:** Guaranteed connections deliver automated processes
- **Workload Management:** Integration with workload manager / intelligence resource director
- **Security:** built into all system layers
- **Availability:** (zero downtime)/OS brand promise
- **Performance:** Full utilization of system capacity with same class of service



Insight helps incremental process improvement



- **Real-time** information aggregated from disparate sources onto dashboards.
- **Business leaders** monitor KPIs to manage their operations and staff more effectively.



- Business leaders can **take action** from real-time **process visibility** and insight to address problem areas quickly.

Monitor: WebSphere Business Monitor

Achieve Real-time Visibility into Processes through customized dashboards

Scorecards

Key Performance Indicators for business units

Collaboration

Work with teams to resolve situations

Business Alerts

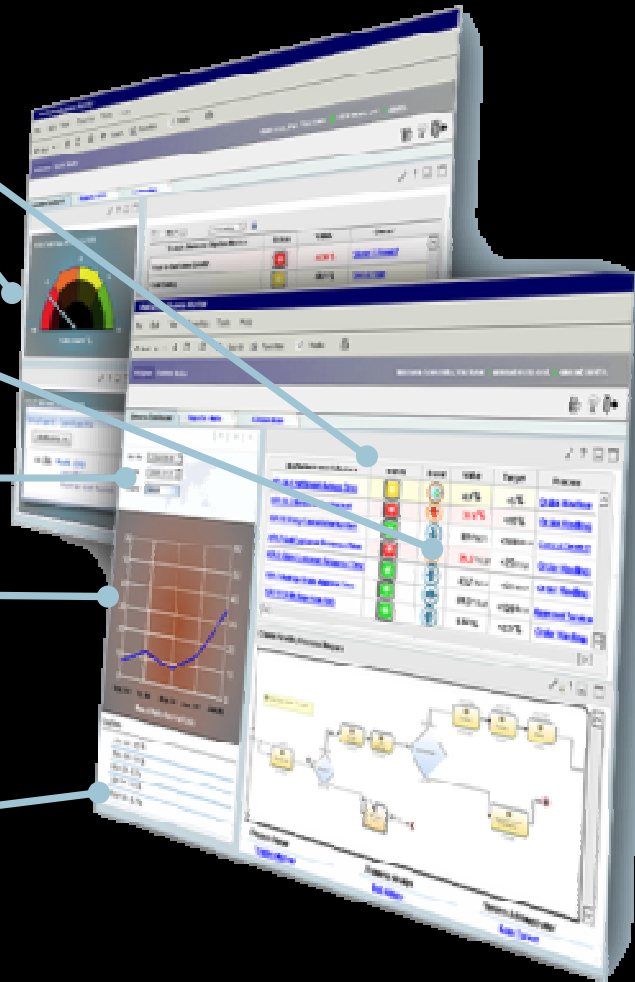
Notification of situations that require response

Reports & Analyses

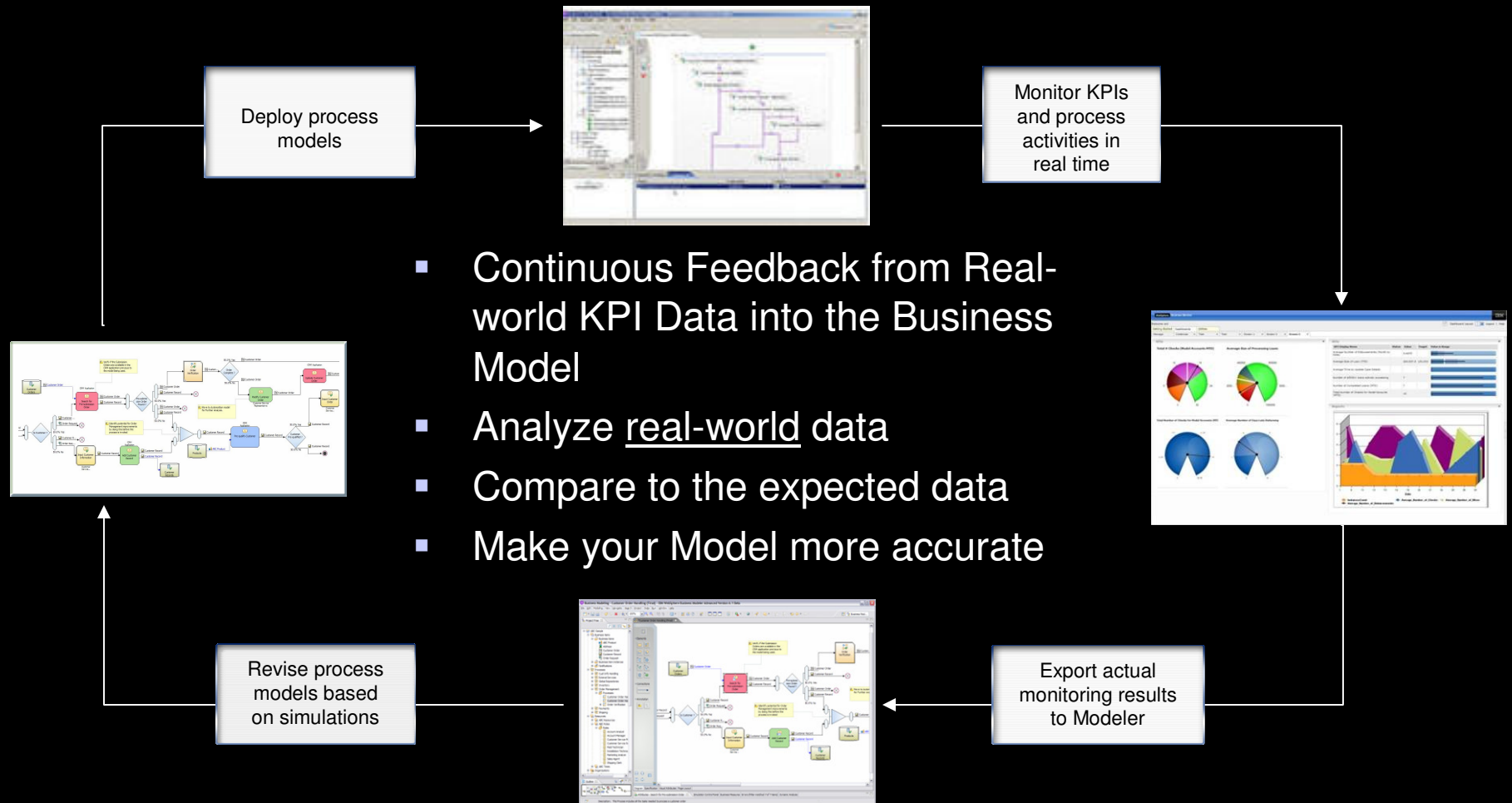
Understanding trends by combining real-time performance and historical information

External Information

Information affecting performance



Analyze and optimize your Business Processes for maximum Efficiency



- Continuous Feedback from Real-world KPI Data into the Business Model
- Analyze real-world data
- Compare to the expected data
- Make your Model more accurate

How Do You Build a Pyramid?

- *One brick at a time!*
- Key best practice: take an *iterative* approach
 - Obtain stakeholder buy-in
 - Resolve one business problem at a time
 - Optimize one business process at a time
 - Model, simulate and deploy *incrementally*
- Don't expect to do everything on day one
- Evaluate the business value at each step



The Value of System z for SOA and BPM



Customers Turn to IBM

Unmatched Breadth of BPM Capabilities and Expertise

#1 in BPMS market share*

Over 2850 BPMS customers in over 30 countries and growing...

Depth of BPM Expertise

- 10,750+ IBM GBS/GTS practitioners
- 1,770+ systems integrator and reseller partners
- World-class BPM methodologies, process templates, industry best practices, and benchmarks
- BPM Competency Centers
- BPM value assessments and workshops
- 1000+ BPM consultant specialists
- 4000+ ISV partners
- 20+ BPM training and education courses

Breadth of BPM Software

- Collaborative business process modeling and simulation
- Best-in-class integration tools, technologies, and adaptors
- Comprehensive asset repositories for BPM-related reuse
- Dynamic, policy-based process personalization with composite business application
- High performance, scalable process execution engine
- Real-time activity monitoring and response
- Pre-built industry solution accelerators and industry models

“The IBM [BPM] software that we now use has encouraged better business practices throughout our organization, making our company as well as our customers more profitable.”



* Gartner, Inc., “Market Share: Portal, Process and Middleware Software, Worldwide, 2004-2006” by Michele Cantara et al, June 27, 2007

Why IBM?

Trusted, experienced guidance based on 6550 customers*



of Customers using our SOA offerings

How You Can Get Started with BPM

Steps to Help You Prepare for Success

Explore

- Work with your local WebSphere sales representative to arrange a **Business Process Management Workshop** at your facility
- Conduct a detailed **BPM Business Value Assessment** to identify and score specific BPM opportunities within your organization

Learn

- Attend a **local industry or technology event** with IBM's BPM team (contact your WebSphere sales representative for the latest event calendar)
 - ibm.com/software/systemz/seminar/aibpm
- Download additional information from the **IBM BPM web site** including demos and whitepapers



ibm.com/software/innovate

THANK
YOU

