Business Processes Management and the Foundational Tooling

Key Questions:

What is Business Process Management?

What IBM tooling is available to support BPM?

Why deploy on System z?

Business Process Management

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

Aligning IT and Business Goals
Top IT Management and Technology Priorities

Top IT Management Priorities for the year ahead

Priority	%
Aligning IT and business goals	**62%**
IT-enabled process improvement	53%
Business continuity / risk management	44%
IT staff development	43%
Improving internal user satisfaction	43%
Measuring and communicating IT value	38%
Improving project management discipline	36%
Controlling IT costs	35%
Regulatory compliance	26%
Revenue-generating services / products	23%
Data Privacy	22%
Internal IT knowledge management	21%
IT Governance	20%
Scaling IT globally	13%
Other	5%

Source: *CIO Magazine's "State of the CIO Survey". CXO Media Inc., 2007.*

Aligning IT and Business Goals
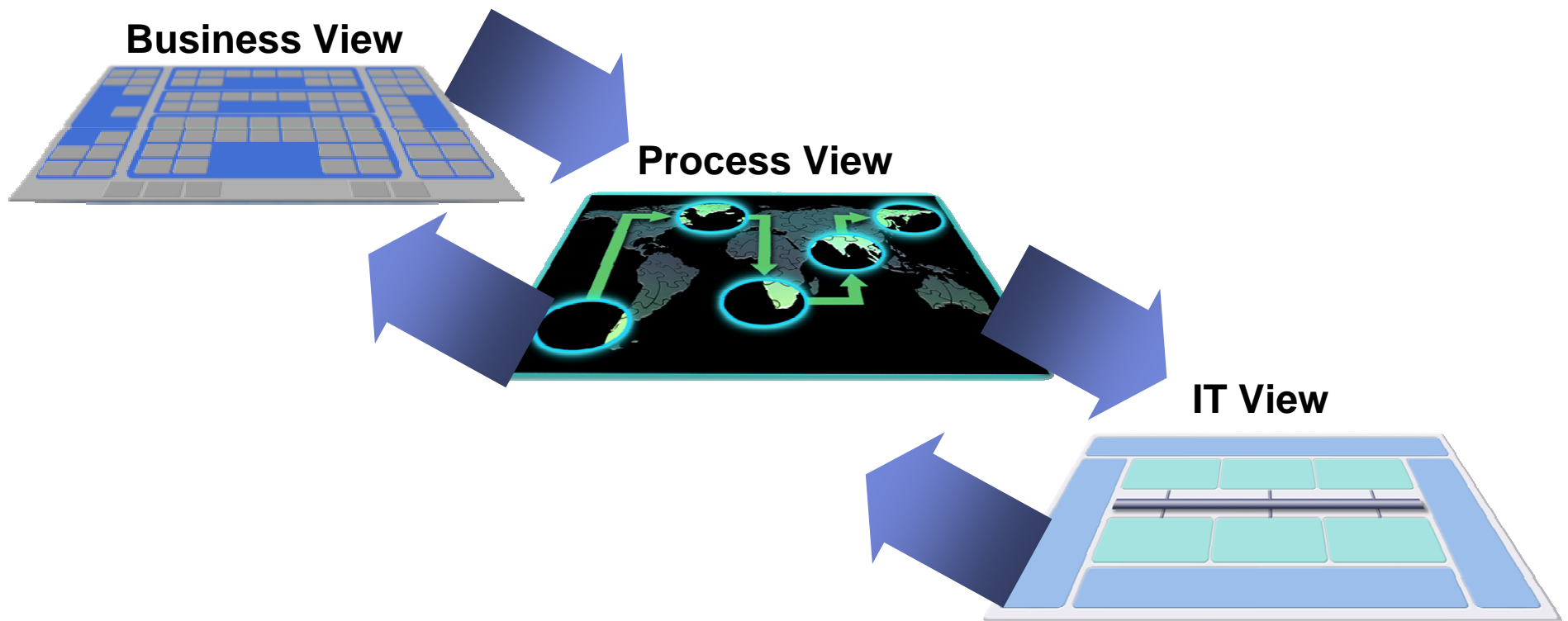## *Top IT Management and Technology Priorities*

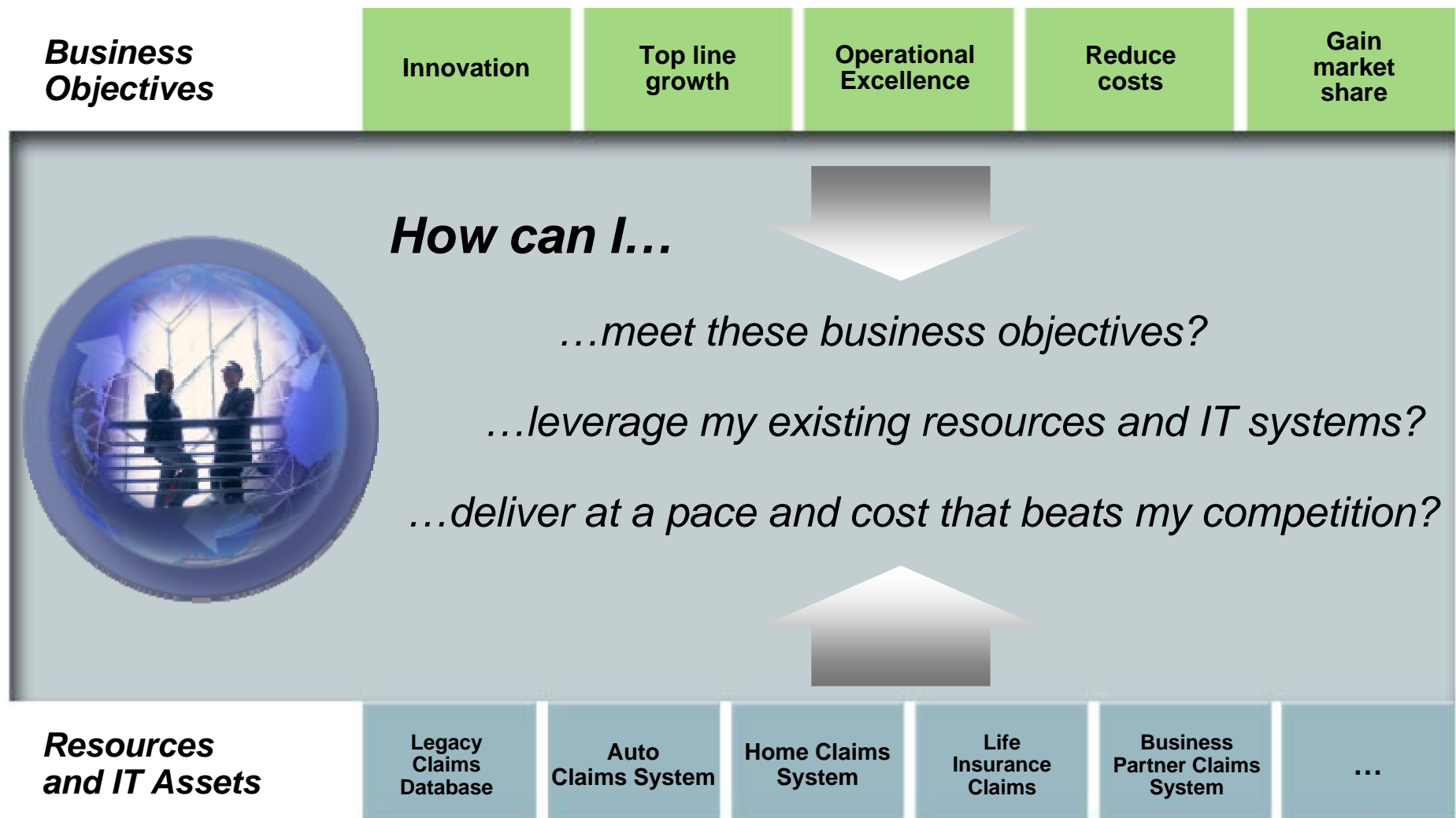### Top IT Technology Priorities for the year ahead

Priority	%
Integrating / enhancing existing systems and processes	**68%**
Ensuring data security and integrity	62%
Business intelligence	57%
New business services / products (i.e., Web Services)	52%
Mobile / Wireless	41%
External customer service	40%
New technologies	35%
Service-oriented architecture / enterprise architecture	33%
E-commerce	30%
Supply chain automation / visibility	20%
Other	12%
Open source software	9%
Don't know	1%

Source: *CIO Magazine's "State of the CIO Survey". CXO Media Inc., 2007.*
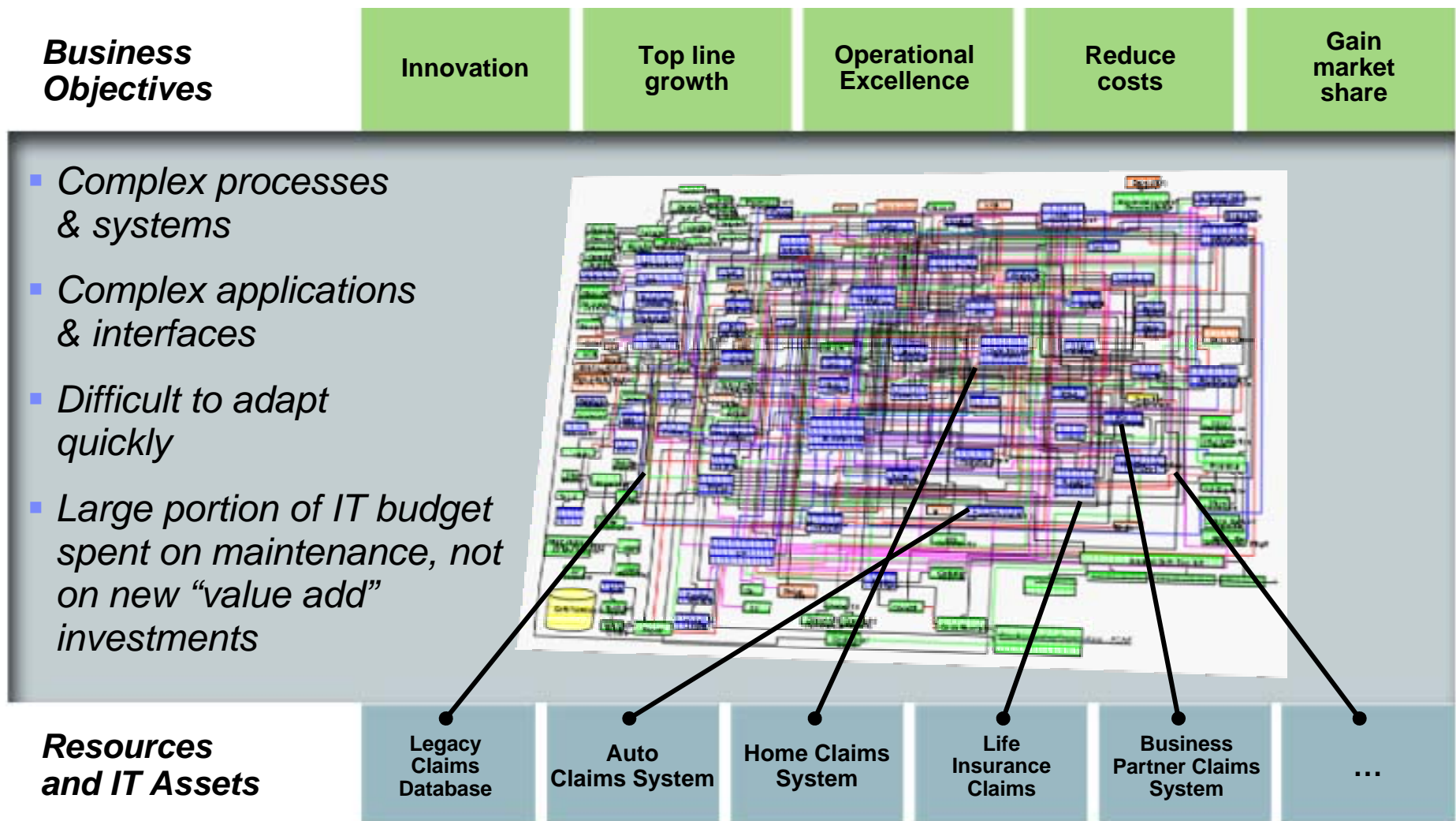
BPM—holistic approach to innovation and optimization
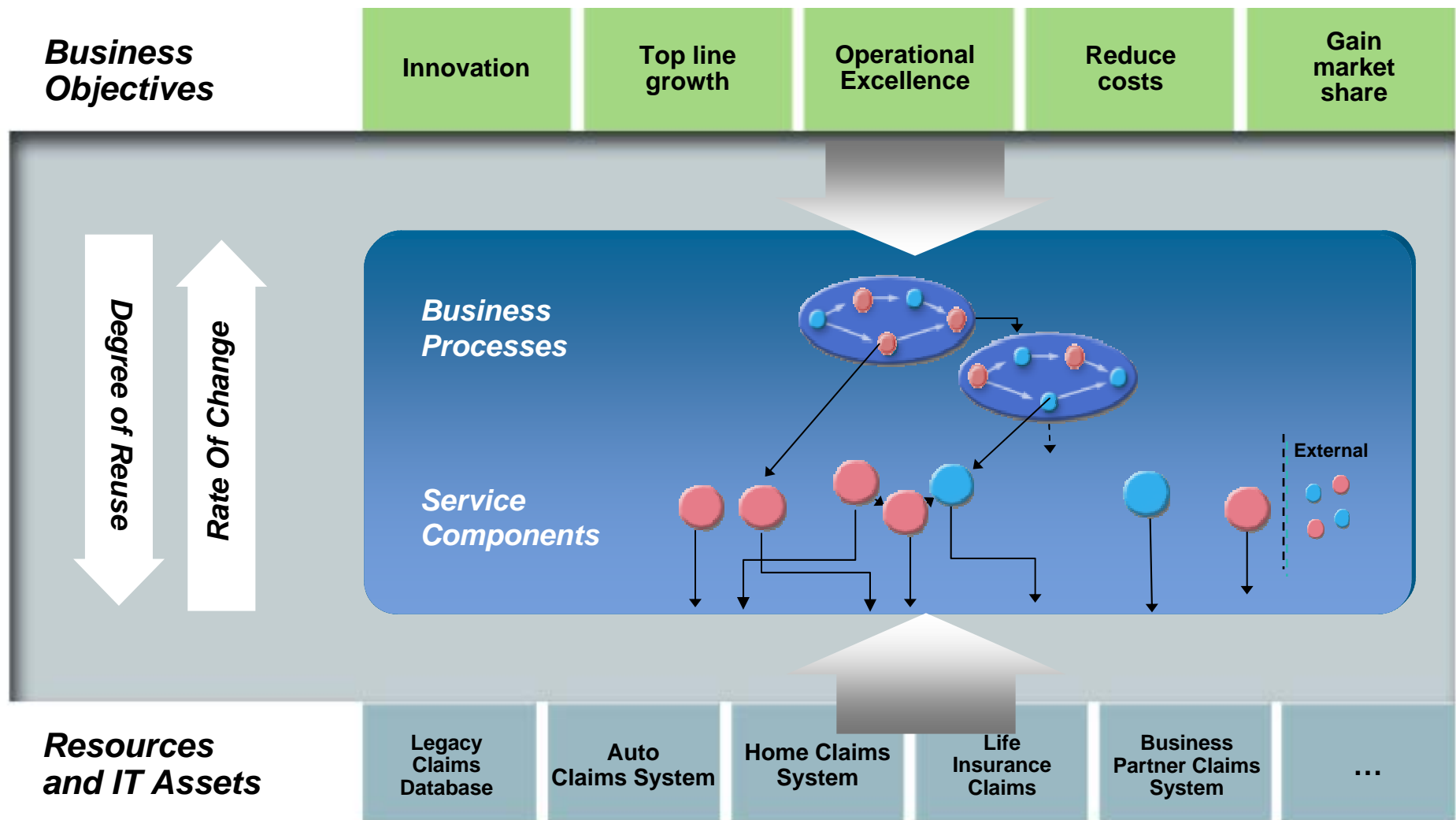*Globally aligning your strategy with business and IT execution*

Business View

Process View

IT View

Customer Business Objectives

Business Objectives	Innovation	Top line growth	Operational Excellence	Reduce costs	Gain market share

How can I…

…meet these business objectives?

…leverage my existing resources and IT systems?

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

Resources and IT Assets	Legacy Claims Database	Auto Claims System	Home Claims System	Life Insurance Claims	Business Partner Claims System	…

The Challenge

Business Objectives	Innovation	Top line growth	Operational Excellence	Reduce costs	Gain market share

- *Complex processes & systems*
- *Complex applications & interfaces*
- *Difficult to adapt quickly*
- *Large portion of IT budget spent on maintenance, not on new "value add" investments*

Resources and IT Assets	Legacy Claims Database	Auto Claims System	Home Claims System	Life Insurance Claims	Business Partner Claims System	…

BPM Enabled by SOA Addresses this Challenge

Business Objectives

| Innovation | Top line growth | Operational Excellence | Reduce costs | Gain market share |

Degree of Reuse *Rate Of Change*

Business Processes

Service Components

External

Resources and IT Assets

| Legacy Claims Database | Auto Claims System | Home Claims System | Life Insurance Claims | Business Partner Claims System | … |

Business Process Management Enabled by SOA

A discipline enhanced by a flexible architecture

What is Business Process Management?

A discipline combining
business expertise** and **technology capabilities
to accelerate process improvement and
facilitate business innovation
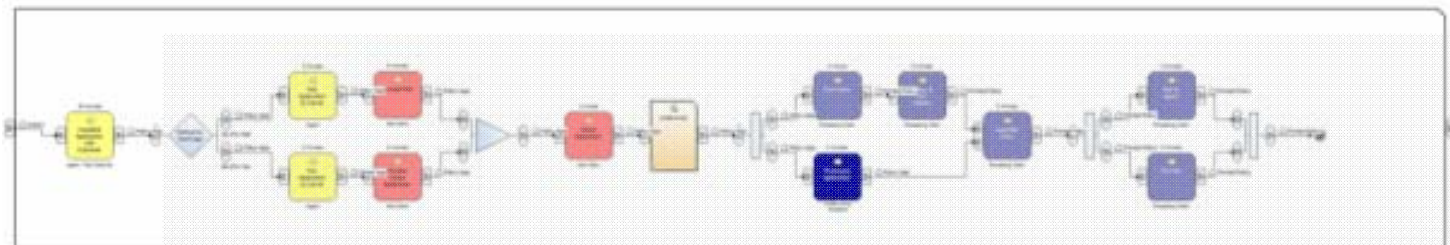
Expertise that Delivers BPM
- Process Knowledge
- Industry Methods and Models
- Business consulting expertise

Technology that Enables BPM
- Business Services
- Tools, Rules, Servers, Repositories
- Business Dashboards, Forms

What Can BPM Do For You?

- **Business Process Management can help you to:**

  - Create new business value and increase operational efficiency

  - Design, improve, manage, and optimize business processes

  - Understand and change operational processes quickly

  - Increase the agility and flexibility of your business

  - Achieve process integrity

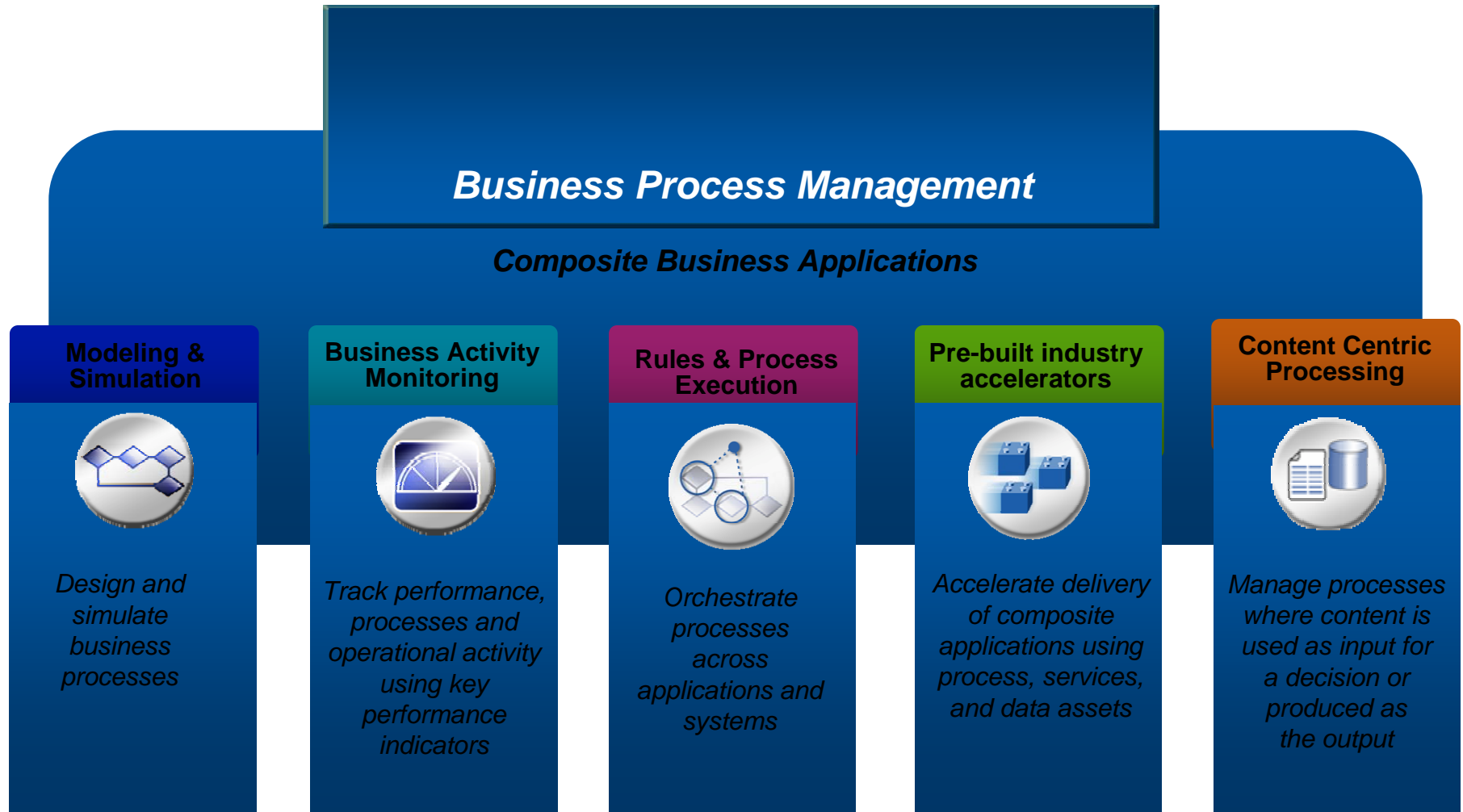# BPM covers the entire lifecycle of your business processes

1. Design, Model and Simulate

2. Automate and Change Rapidly

Customer Presales

Account Application

Verification and Regulatory Compliance

Credit Check

Activation and Fulfillment

End-to-End Process

3. Monitor, Analyze and Optimize
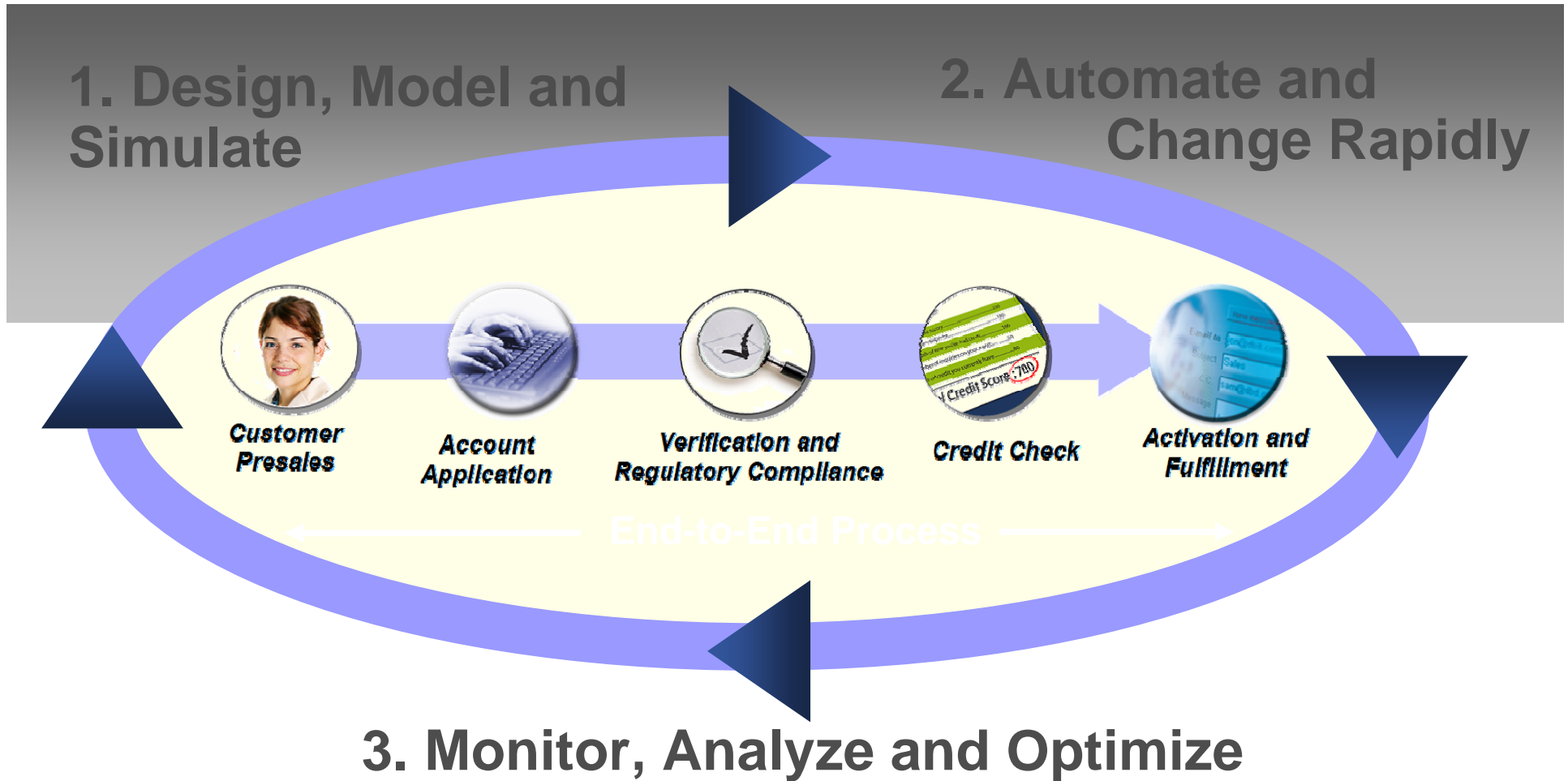
Representative Customer Scenarios

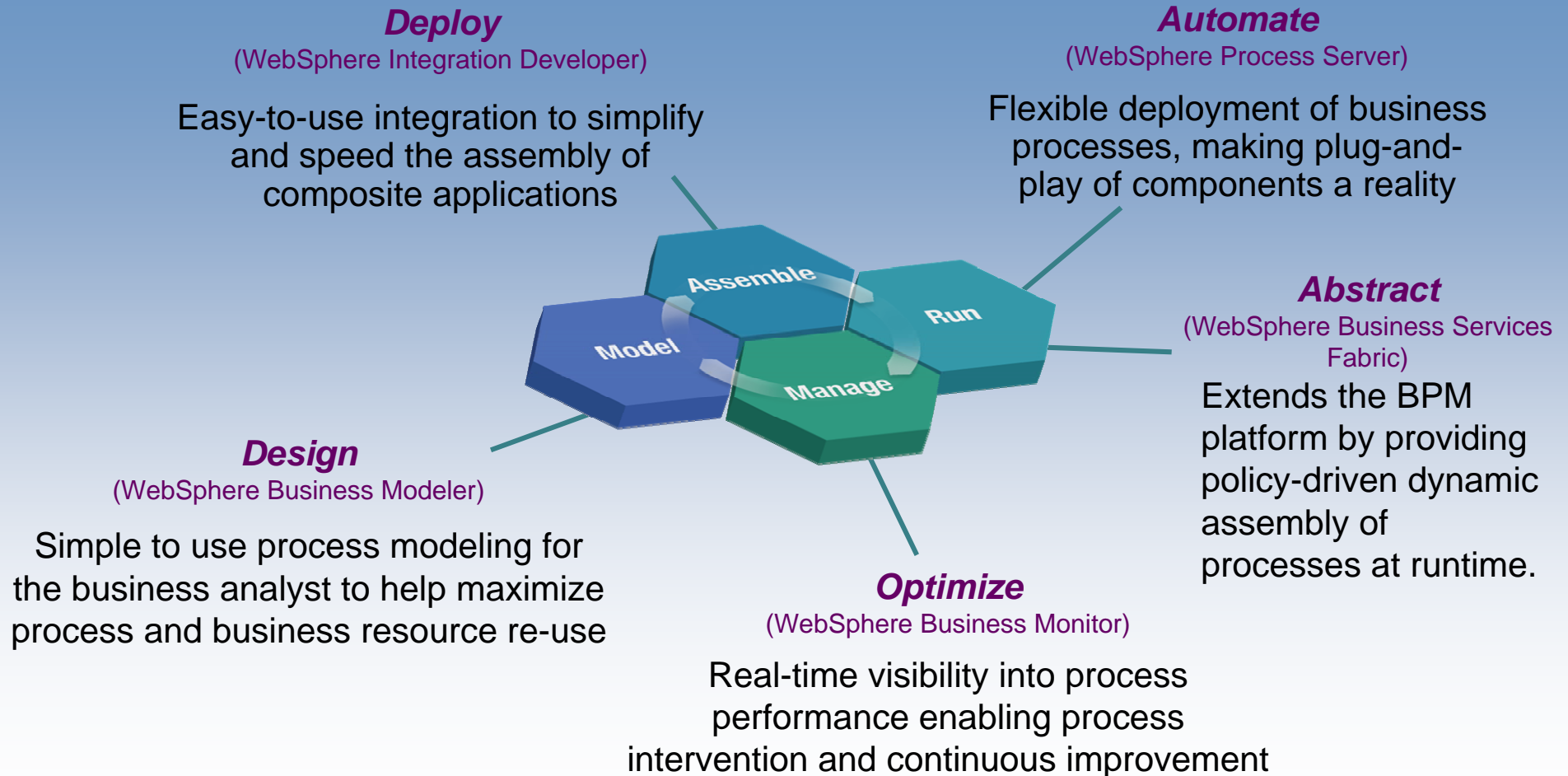| End-to-End	360 business view	Regulatory Compliance	Self Service Capability	Business Process Automation
Strategic capability for the business - Unifying Large Heterogeneous Environments	**Enterprise View of Customers, Partners, and Employees and Data**	**Documentation and assurance for Compliance**	**e-commerce self service for increased revenue and customer satisfaction**	**Elimination of redundant process.**
Visibility BAM	**Partner Collaboration**	**Workflow/Human Task**	**Business Process Analysis**	**Integrate systems of acquired company into common process.**
Monitor key business events across systems and processes	**Collaborate during and across process activity for consistency, efficiency, and productivity**	**Handle exception flows and manage expiring requests without manual intervention**	**Process model and analysis for documentation & design insight**	**Single sign-on access to operational capabilities while avoiding SW redevelopment costs.**
Assurance that business operates as planned under change				**Automated choreography of tasks, to replace manual systems**

Business Processes Management Tooling

IBM provides a comprehensive BPM platform

Business Process Management

Composite Business Applications

Modeling & Simulation	Business Activity Monitoring	Rules & Process Execution	Pre-built industry accelerators	Content Centric Processing
Design and simulate business processes	Track performance, processes and operational activity using key performance indicators	Orchestrate processes across applications and systems	Accelerate delivery of composite applications using process, services, and data assets	Manage processes where content is used as input for a decision or produced as the output

End-to-end Process Capabilities for BPM

Deploy
(WebSphere Integration Developer)

Easy-to-use integration to simplify and speed the assembly of composite applications

Automate
(WebSphere Process Server)

Flexible deployment of business processes, making plug-and-play of components a reality

Abstract
(WebSphere Business Services Fabric)

Extends the BPM platform by providing policy-driven dynamic assembly of processes at runtime.

Design
(WebSphere Business Modeler)

Simple to use process modeling for the business analyst to help maximize process and business resource re-use

Optimize
(WebSphere Business Monitor)

Real-time visibility into process performance enabling process intervention and continuous improvement

Three Critical BPM Success Factors

Manage Change by modeling and analyzing existing or new processes.	*Design*	**e.g. Reduce the inherent time and cost of processes**
Respond Quickly with processes based on a flexible infrastructure.	Automate	**e.g. Move compliant processes into production fast**
Enhance Efficiency by analyzing activity to ensure processes meet objectives.	Optimize	**e.g. View and understand real time business facts for rapid decision making**

Model: WebSphere Business Modeler 6.1
Business Level Modeling And Simulation

Model for innovation
- Import models directly from Visio
- Hundreds of process templates available (IFW, IAA)
- Optimize all aspects of your business – set KPI's and metrics
- Collaborate with subject matter experts through the Publishing Server

Predict results before deployment
- Enhanced analysis and simulation capabilities. Fully understand impacts before deploying.

Clean hand-off to I/T
- Rapid and accurate deployment of your solutions
- Business modeling is the starting point for IT deployment (WID)
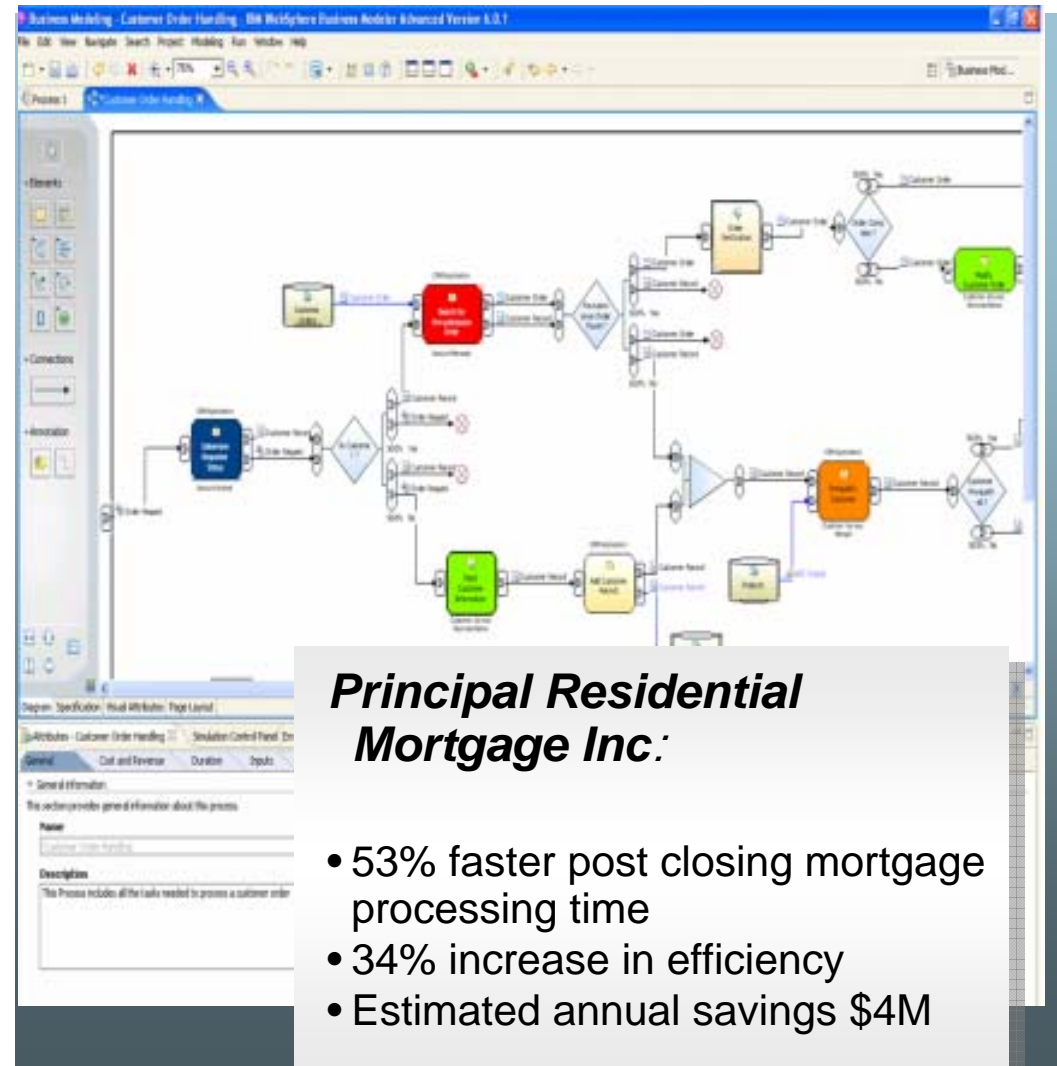
Principal Residential Mortgage Inc:

- 53% faster post closing mortgage processing time
- 34% increase in efficiency
- Estimated annual savings $4M

Three Critical BPM Success Factors

Manage Change by modeling and analyzing existing or new processes.	Design	**Business level modeling and simulation**
Respond Quickly with processes based on a flexible infrastructure.	*Automate*	**Robust, high performance, assured execution for the full spectrum of BPM**
Enhance Efficiency by analyzing activity to ensure processes meet objectives.	Optimize	**Business process monitoring and optimization**

Accelerated Solution Assembly
WebSphere Integration Developer

- **Complete toolbox for process automation**

  – Assembly Editor for solution assembly

  – All the tools you need for building solution components (Editors for BPEL, Business Rules, Mediations...)

  – One, easy to learn end user interface based on Eclipse

- **Architected for reuse, flexibility, agility**

  – Simplified service component interfacing through Service Component Architecture

  – Simplified business data access and mapping through Service Data Objects

  – Clear separation between process and application concerns through Common Business Object Models
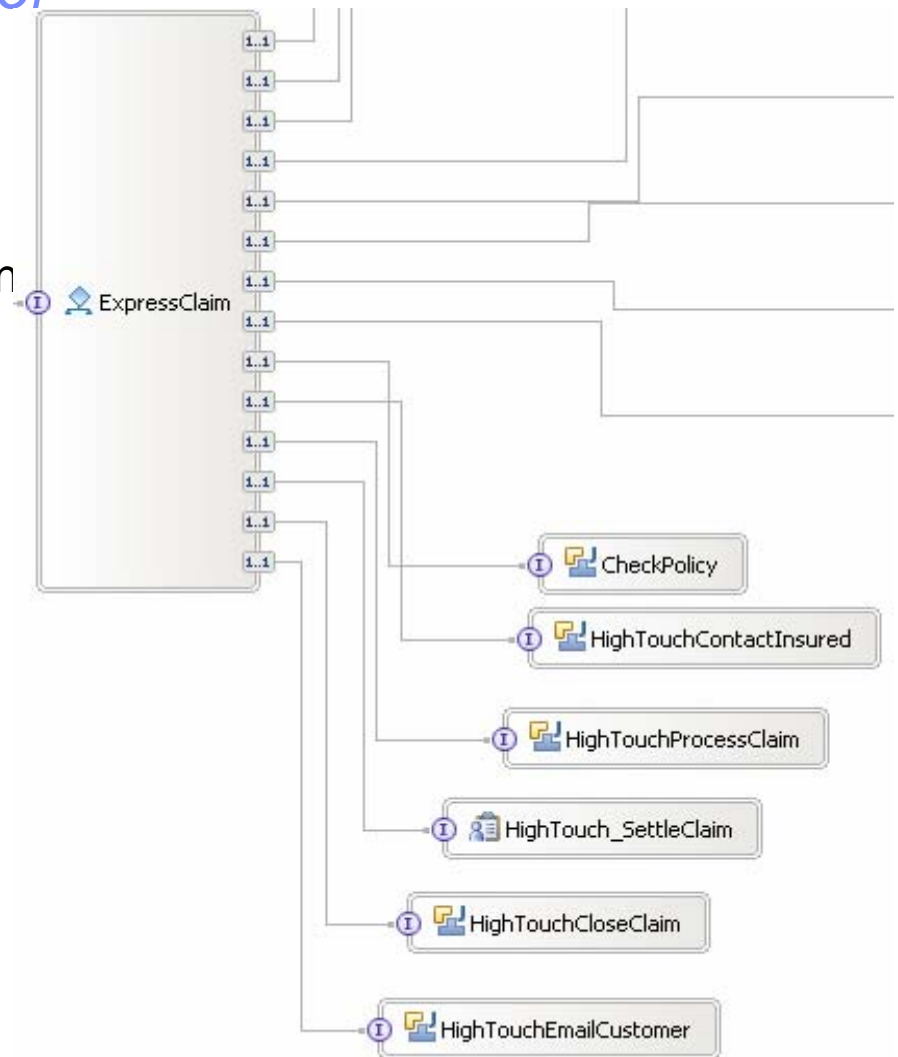
Deploy: WebSphere Process Server 6.1
Component Architecture

Service Components

Business Processes	Human Tasks	Business State Machines	Business Rules

Supporting Services

Mediation Flows (ESB)	Interface Maps	Business Object Maps	Relation-ships	Dynamic Service Selection

SOA Core

Service Component Architecture	Business Objects	Common Event Infrastructure

WebSphere Application Server ND (J2EE Runtime)
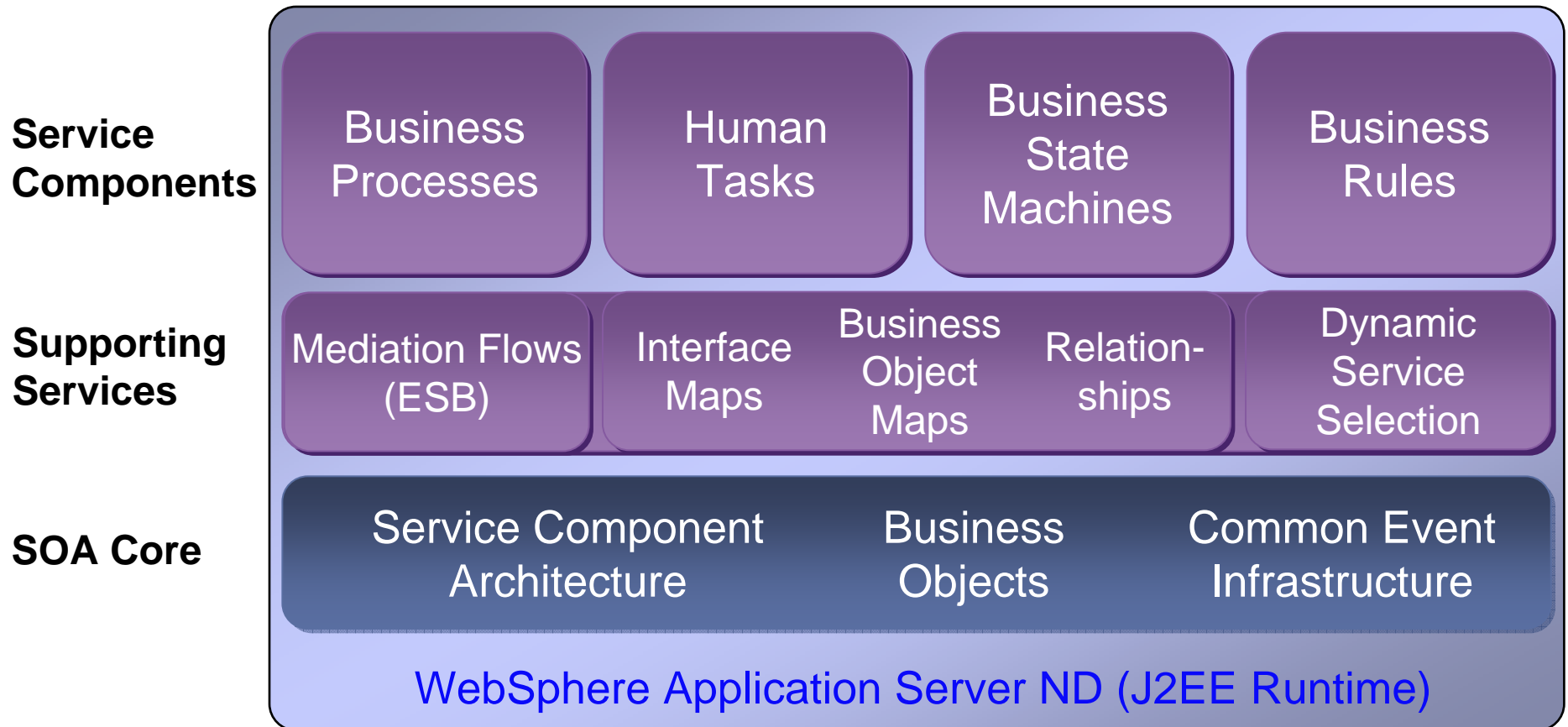
Simple integration of processes without coding
With SOA, leverage existing assets and achieve greater flexibility

Legacy Systems

Human Tasks

Java App

State Machines

Packaged Apps
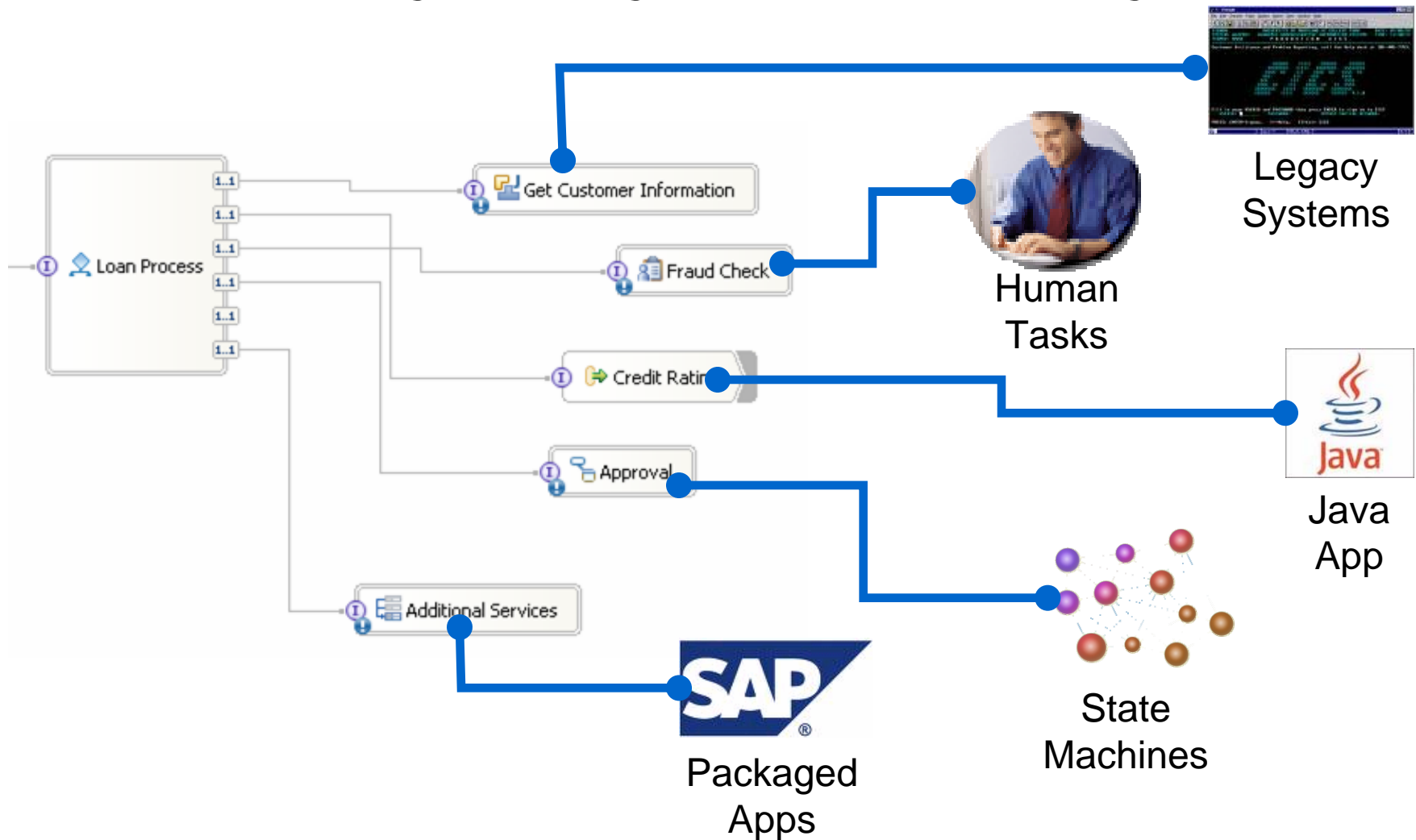
The Construct of a Business Process
Common Choreography enabled by BPEL

Accessible capabilities for fine-tuning business processes to address need for change dynamically

Constructing a dynamic process using WS-BPEL

Choreographed Services
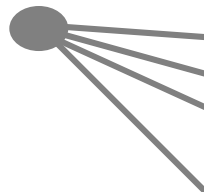
… while service implementation details stay hidden:
- *Human tasks*
- *Business rules*
- *ESB Mediations*
- *External services*
- *…*

✓ **Long-running**

✓ **Straight-through**

✓ **Compensation**

✓ **Transaction handling**

✓ **Event handling**

✓ **Fault handling**

✓ **Parallel paths**

Reply

Human Tasks as Service Components
Rapidly define interfaces for human tasks as you model
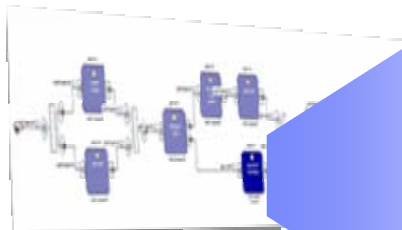
IBM is positioned in the leaders quadrant: *Gartner, Inc., "Magic Quadrant for Forms"*

Lotus Forms embedded in WebSphere Business Modeler and deployable in WebSphere Process Server flows.

Business Rules as Service Components

- **Rule Set**

  - Consists of a set of if/then rule statements

  - The developer defines
    - The rules (conditions and actions)
    - Which aspects can be modified at runtime
    - The user interface to modify rules

  - Multiple actions can be triggered

- **Decision Table**

  - Rule Set in a table format

  - One and only one action is triggered

Rules

Name	Rule2
Template	Template 1
Presentation	If the assets are greater than 2000000 and the liabilities are less than 500000, then the rating is A.

Name	Rule1
Template	Template 1
Presentation	If the assets are greater than 2000000 and the liabilities are less than 1000000, then the rating is B.

Templates

Name	Template 1
Presentation	If the assets are greater than {0} and the liabilities are less than {1}, then the rating is {2}.

Parameters	Index	Name	Type	Constraint
	{0}	var1	double	None
	{1}	var2	double	None
	{2}	var3	string	None

If	all of the following are true ● info.assets > var1 ● info.liabilities < var2
Then	rating = var3

Decision Table

info.assets	> 500000		<= 500000	
info.liabilities	< 10000	>= 10000	< 10000	>= 10000
rating	"A"	"B"	"C"	"D"

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Three Critical Success Factors

Manage Change by modeling and analyzing existing or new processes.	Design	**Business level modeling and simulation**
Respond Quickly with processes based on a flexible infrastructure.	Automate	**Robust, high performance, assured execution for the full spectrum of BPM**
Enhance Efficiency by analyzing activity to ensure processes meet objectives.	*Optimize*	**Business process monitoring and optimization**

Monitor: WebSphere Business Monitor 6.1
Achieve Real-time Visibility into Processes and Actionable Insight

Scorecards
Key Performance Indicators
for business units

Collaboration
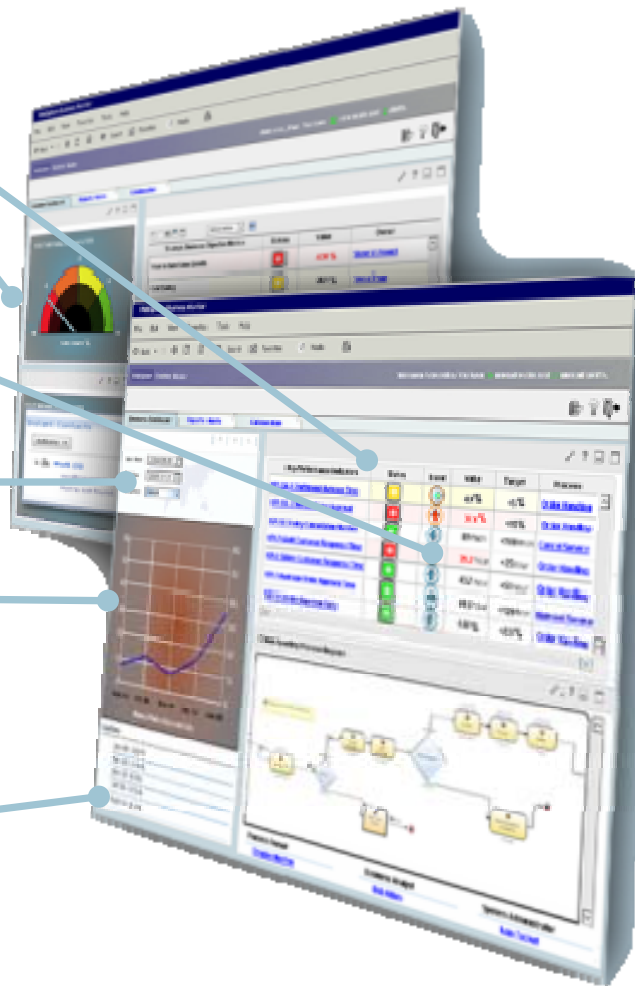Work with teams to
resolve situations

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

People

Process

Information

Abstract: Improve Your Agility with WebSphere Business Services Fabric 6.1

Dynamically composes and manages your business processes so they respond to changing business conditions.

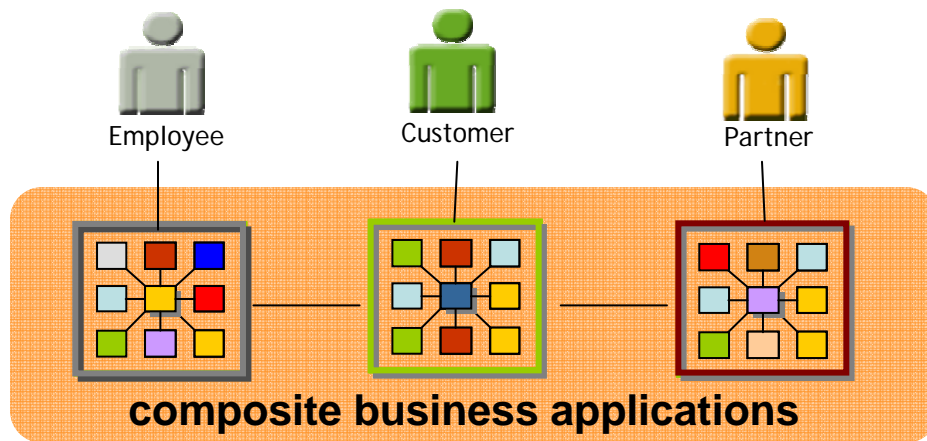Assemble, manage composite business applications with business services

Easily modify, dynamically execute business services through business policies

Abstract from technical infrastructure instead of coding, redeployment

SOA at the core of BPM
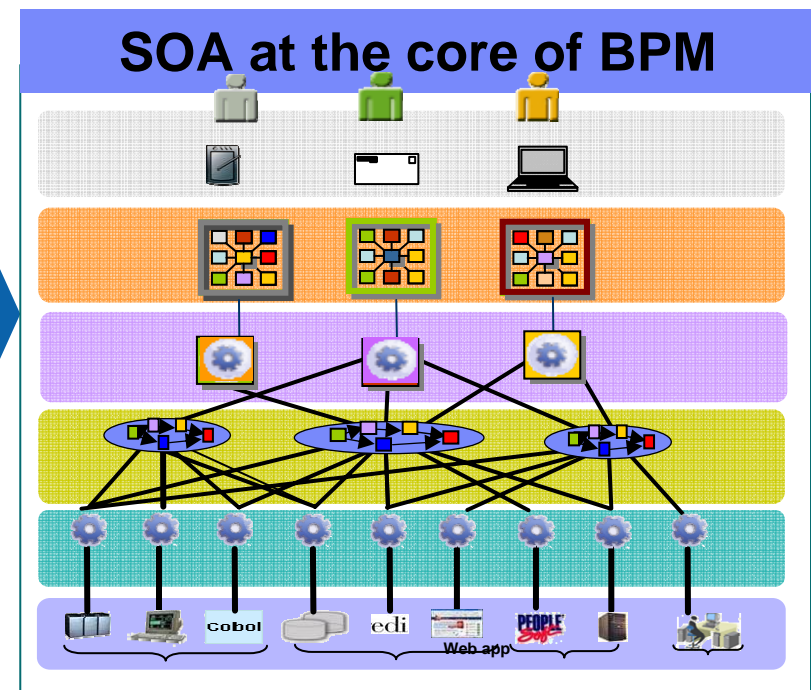
Optional Industry Content Packs
Speed time to deployment for composite business applications

Employee   Customer   Partner

composite business applications

- Contains pre-built SOA accelerators
- Based on industry & technical standards
- Speeds time to market
- Extensible and configurable
- Increases reuse of services

Telecom Operations

Banking Payments

Healthcare Payor US
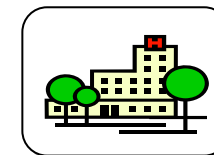
Insurance Property & Casualty

System z

Deploying on System z provides differentiated value
Enabling intelligent IT that works for your business

The IBM Mainframe.
Building on the past, defining the future.

Server Leadership: 40+ years in the making!

Mainframe utilization rates often exceed 80%, and are designed to handle sustained peak workload utilization of 100% without service level degradation.

- Application and data availability for business resiliency

- Rock solid security and privacy

- Massive scalability for non-disruptive growth

- Higher utilization and balanced system design

- Advanced virtualization

- Responsive, autonomic and intelligent workload management

- Open and industry standards

- Modernization of legacy applications

- Specialty engines lower cost of ownership

- World-class support

Management of a complex server infrastructure
The cost equation is changing

- Server proliferation continues, and costs rise along with the numbers
- The greatest cost item for servers is people management

Spending (US$B)

Installed Base (M Units)
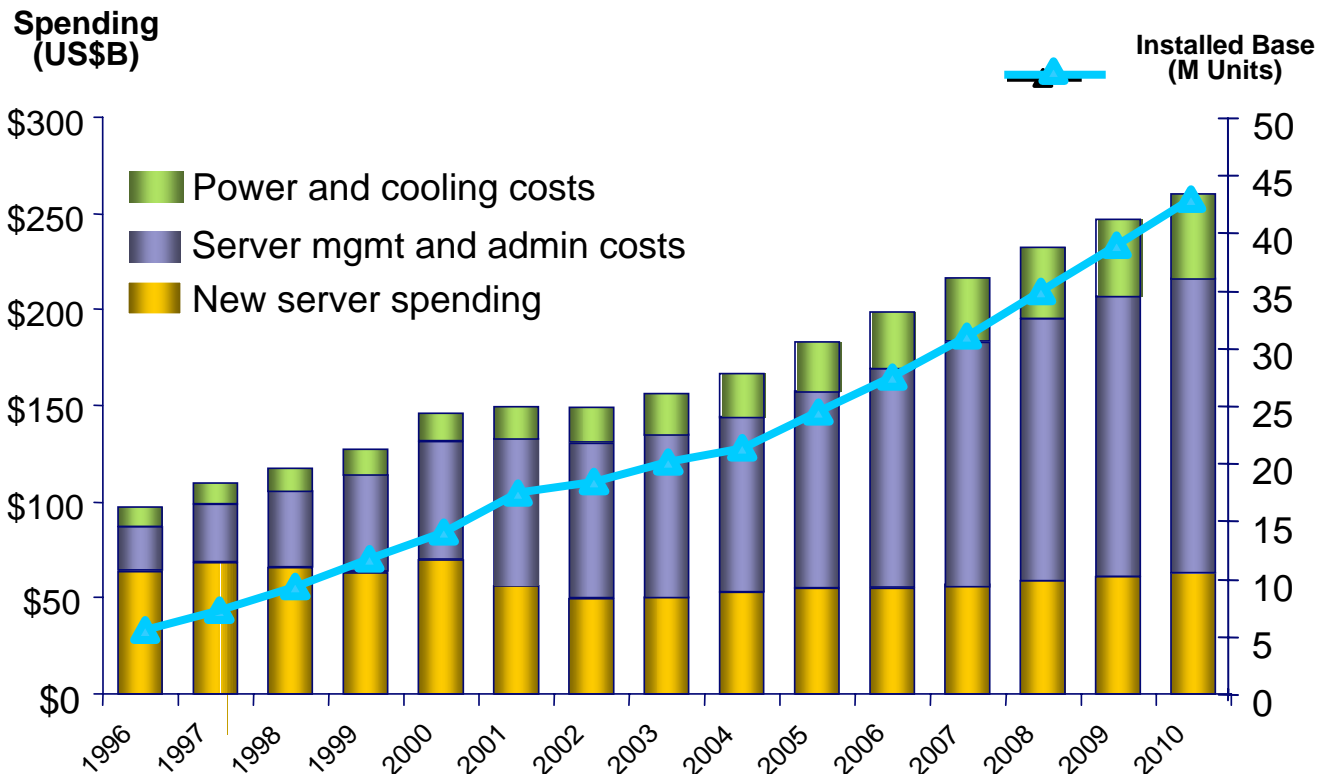
Source: IDC, Virtualization 2.0: The Next Phase in Customer Adoption, Doc #204904, Dec 2006

Legend:
- Power and cooling costs
- Server mgmt and admin costs
- New server spending

IT budget trends…

1995	
HW	= 65%
SW	= 14%
People	= 14%
Other	= 7%

2004	
HW	= 18%
SW	= 28%
People	= 45%
Other	= 9%

System z management cost decline as capacity grows
Volumes of workload processed have never been larger

13,272 MIPS

289 Ops Staff

5,994 MIPS

260 Ops Staff
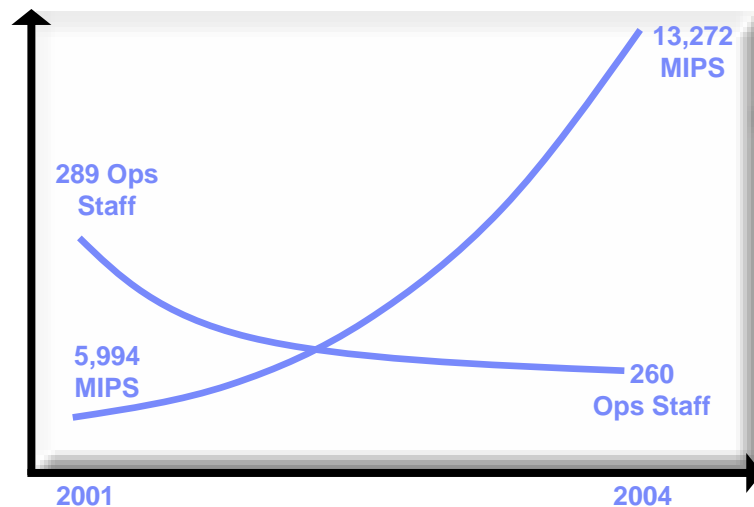
2001

2004

Gartner

"**Since we published our last high-level perspective of the ratio between MIPS and head count in 2001, the largest z/OS installations have more than doubled their 'MIPS to head count' ratio.**"

L. Mieritz, M. Willis-Fleming – Gartner, 2004

Mainframe *data center staffing levels have not significantly changed despite large increases in workload volumes.*

First National Bank of Omaha
Their disparate computing environment was becoming extremely expensive, requiring FNBO to hire more people as more boxes were brought online. "I looked at our infrastructure in 2002 and saw we were growing servers at a rate of 30 percent per year. For every application I had, I needed another one to five servers behind that, for things like development and application and Web serving. And every 20 servers translates to another body to administer them."
Ken Kucera, senior vice president and division head of FNBO Enterprise Technology Services

SOA and System z: creating value from your z assets while taking advantage of the platform strengths.

- **Designed for integration**

  Designed for the consolidation of multiple diverse applications that must interact with one another against a common data source.

- **Flexibility**

  SOA is designed for change and System z is a great platform for BPM with robust queue management and high I/O bandwidth for data movement

- **Reuse is 5x less expensive that re-write**

  Bulk of enterprise transactions and data reside on System z today as candidates for reuse.

- **Co-location of workloads**

  Co-location of applications and data for better response time, integrated security, high performance.

- **Highest Qualities of Service**

  Availability, reliability, security, scalability, WLM, systems management, disaster recovery.

Recent data indicates that 41% of mainframe customers are building or deploying new applications on System z - up from 31% a year ago.

The Value of System z for SOA, BPM & Process Integrity

- **Strategic platform for mission-critical business processes, core business applications and data**

  - **Proximity**: Fewer physical components and network connections result in less complex infrastructure

  - **Integrity**: System-managed resource recovery and transaction coordination

IBM System z™

- **Highest possible Qualities of Service**

  - **Security**: Most stringent access control and asset protection

  - **Availability**: z(ero downtime) /OS brand promise
    - 99.999% availability at the application and data level
    - Managed workload sharing toward achievement of business goals
    - Dynamic application of software changes

  - **Efficiency**: Full utilization of system capacity with same class of service
    - Less people to configure, monitor and adjust workload
    - Best Total Cost of Computing
    - System z Application Assist Processors (zAAPs) to execute java workloads under z/OS

z/OS

Customers turn to IBM for an unmatched breadth of BPM Software and deep BPM and Industry Expertise

#1 in BPMS market share*
Over 2850 BPMS customers in over 30 countries and growing…

Depth of BPM Expertise

- **World-class BPM methodologies, process templates, industry best practices, and benchmarks**
- **BPM Competency Centers**
- **BPM value assessments and workshops**
- **1000+ BPM consultant specialists**
- **1,770+ systems integrator and reseller partners**
- **4000+ ISV partners**
- **10,750+ GBS/GTS practitioners**
- **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 customization using composite business application**
- **High performance, scalable process orchestration and 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."

ACI GLOBAL

* Gartner BPMS market share, June, 2007, Michele Cantera

Why IBM?

Trusted, experienced guidance based on 5700 customers*

Basic to advanced to grow as your needs evolve

Simplicity & robustness for consumability and confidence

Pioneering metrics for SOA and agility

Smart SOA

Investment protection through open standards

Only vendor across people, process, and information

End-to-end processes based on industry best practices

# of Customers using our SOA offerings

TALKING
PUTS YOU IN A
CONFERENCE ROOM.
DOING
PUTS YOU AT THE SMART SOA
CONFERENCE IN VEGAS.

2008 IMPACT

Get ready for the 2nd annual SOA conference. The defining SOA event is getting Smarter.
Get these days covered: April 6 – 11, 2008.

Join IBM and industry leaders at the MGM Grand in Las Vegas. Impact 2008 brings together real customer success stories, industry expertise and WebSphere technical training. Whether your business needs are simple or advanced, it's all the know-how you need to stop talking about enabling business flexibility and start doing it with Smart SOA. This five-day educational conference brings together the most cutting-edge information that you can put to work right away.

Customize your event experience by choosing tracks, technical labs, detailed discussion groups and seriously Vegas-worthy rock performances.

**Register Now
and save $150. >**

Register online at

Ibm.com/soa/impact2008

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IBM

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