

# System z Premier Executive Event



## Smart Steps for Increasing Business Agility with WebSphere

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Enterprise Platform Software

IBM Software Group



# Abstract

*WebSphere delivers capabilities to maximize business agility*

*WebSphere is a family of IBM products that empowers business and IT professionals to create an agile business through dynamic business processes and infrastructure technology.*

*This presentation is focused on the key parts of the WebSphere portfolio for System z in terms of infrastructure, connectivity and process management with specific attention to CICS, WebSphere Application Server, Business Events, ILOG and our supporting tools sets for CICS and Problem Determination.*

*This presentation will bring out the key value propositions for these products, especially how the products integrate and interact to create effective business solutions through innovation and performance. Included is the latest information on pricing options that encourage the deployment of even emerging workloads on z/OS.*

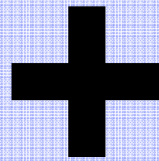
# Disclaimer

*Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.*

To Survive... To Thrive... To Succeed

### **Business Agility**

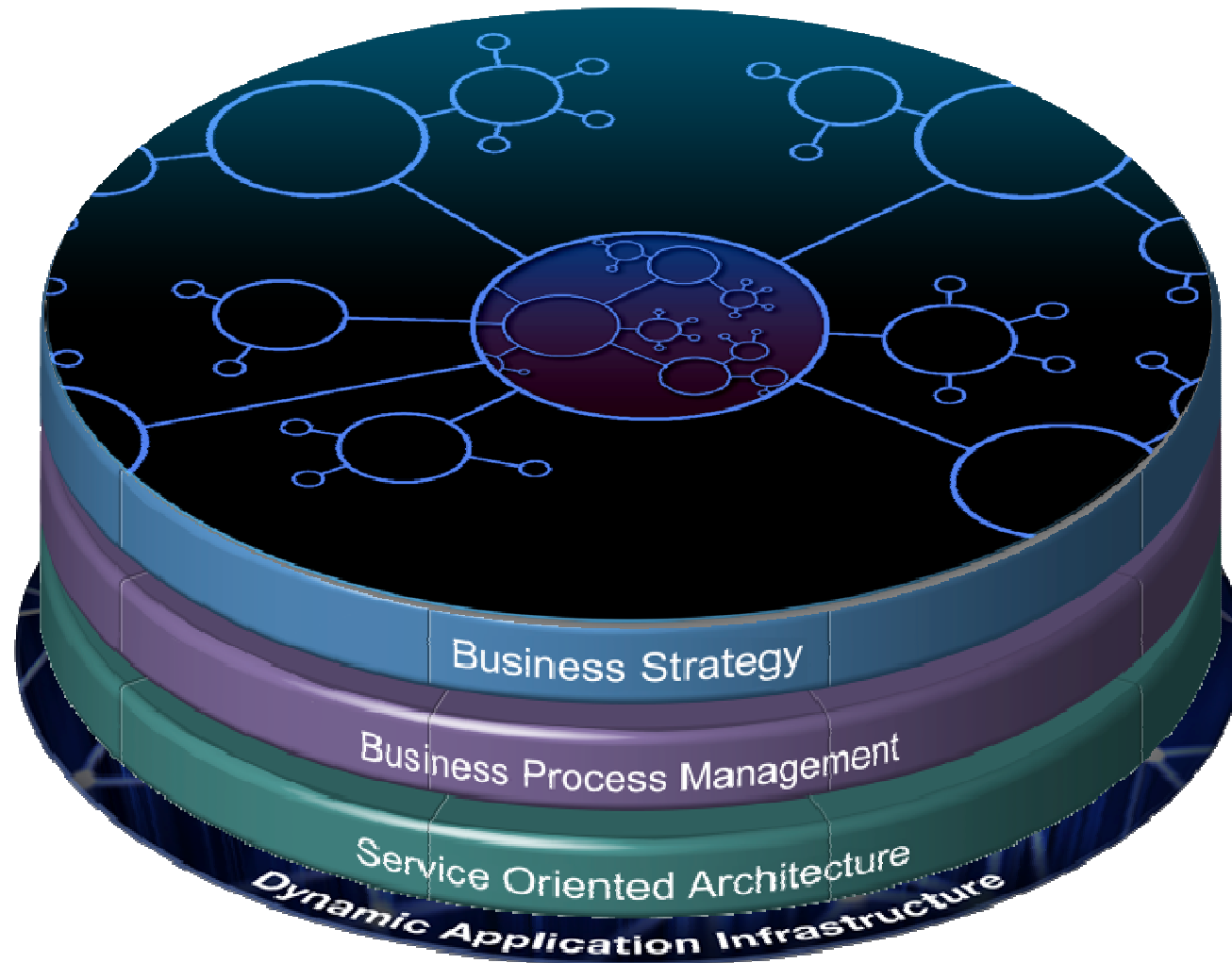
to take advantage  
of new revenue  
opportunities and  
address competitive  
threats



### **Cost Optimization**

to slash operational and  
maintenance expense  
and maximize efficiency  
necessary for all  
economic climates

A dynamic network requires business agility...



...supported by a Dynamic Application Infrastructure

## Three ways to drive agility while optimizing costs

### ***Business Needs***

“Ensure applications consistently deliver on business needs in all situations”



### ***Common Buying Scenarios***

**Dynamic  
Application  
Infrastructure**

“Adapt and respond to dynamic business situations”



**SOA  
Connectivity and  
Integration**

“Quickly respond to changing customer expectations and business demands”



**Business Process  
Management**

# The power of a Dynamic Application Infrastructure

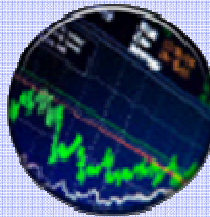


## Modernize Applications



Expand client offerings using existing business data with Web 2.0

## Execute High Volume Transactions



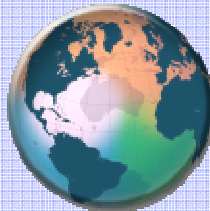
Reduce business risks with highly available, secure applications

## Capitalize on dynamic situations



Timely insight with low cost situational applications

## Manage worldwide operations

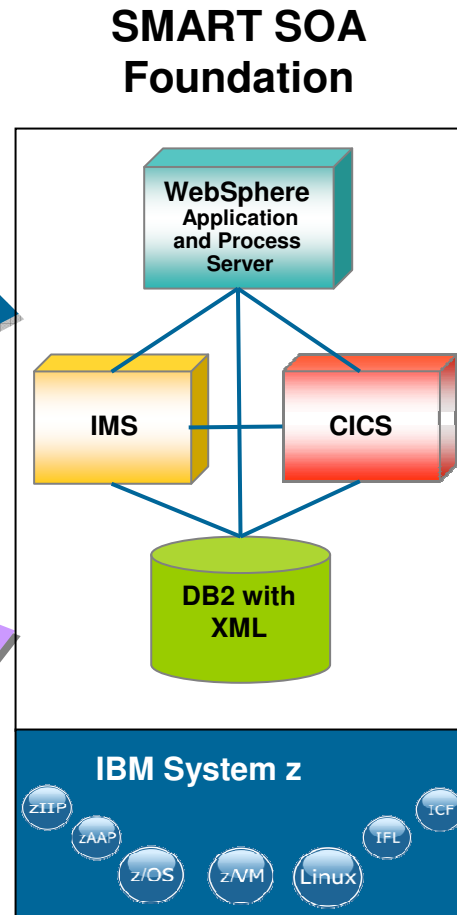
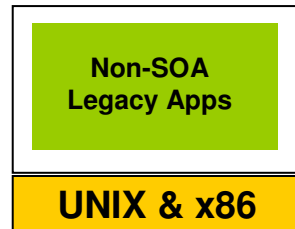
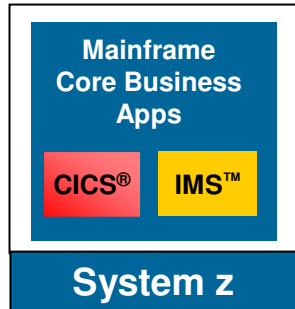


Rapidly introduce new capabilities throughout the business with centralized administration



# Modernizing the enterprise through SMART SOA

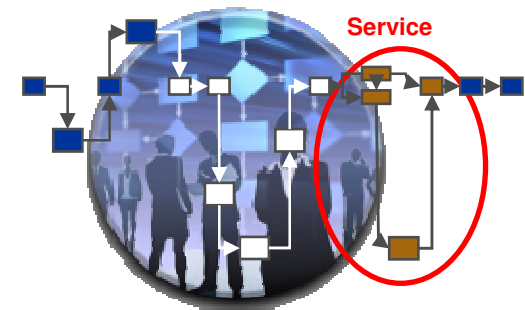
Static Business Assets



Optimized Assets, Skills, and Infrastructure



- Optimize cost
- Increase flexibility
- Boost productivity
- Maximize business agility





# HUK-COBURG



## Industry Pains

- Need to access more functionality and spread out its data processing load
- Reduce CPU usage to cut operating costs

## Smarter Business Outcomes:

- Reduces CPU usage for CICS technology by 400 million instructions per second (MIPS), for savings of \$320,000
- Cuts CPU usage in the internal coupling facility by 40%
- Achieve CPU savings through threadsafe functionality



## Why Dynamic Application Infrastructure?

Deliver on business objectives and reduce operating costs

# The right platform for any situation SOA-enabled agile integrated application environment

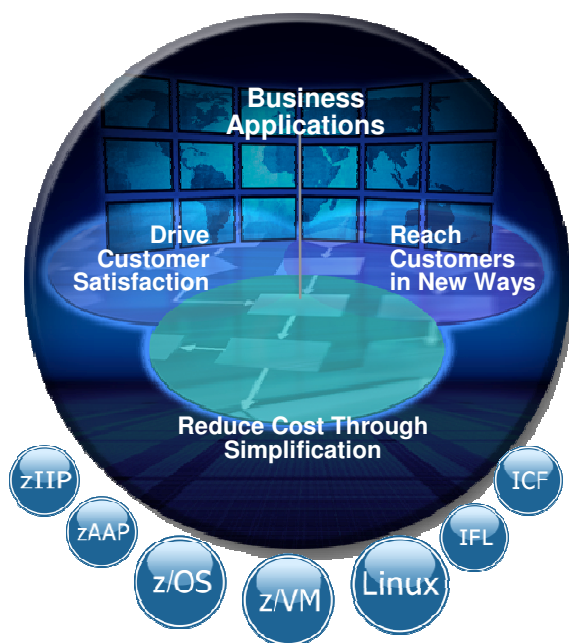


Modernize and transform your environment

**IBM WebSphere  
Application Server  
for z/OS**

Practical reuse of  
on-line Java assets  
in Batch

**IBM WebSphere  
Compute Grid for z/OS**



**IBM CICS Transaction  
Server and Gateway**

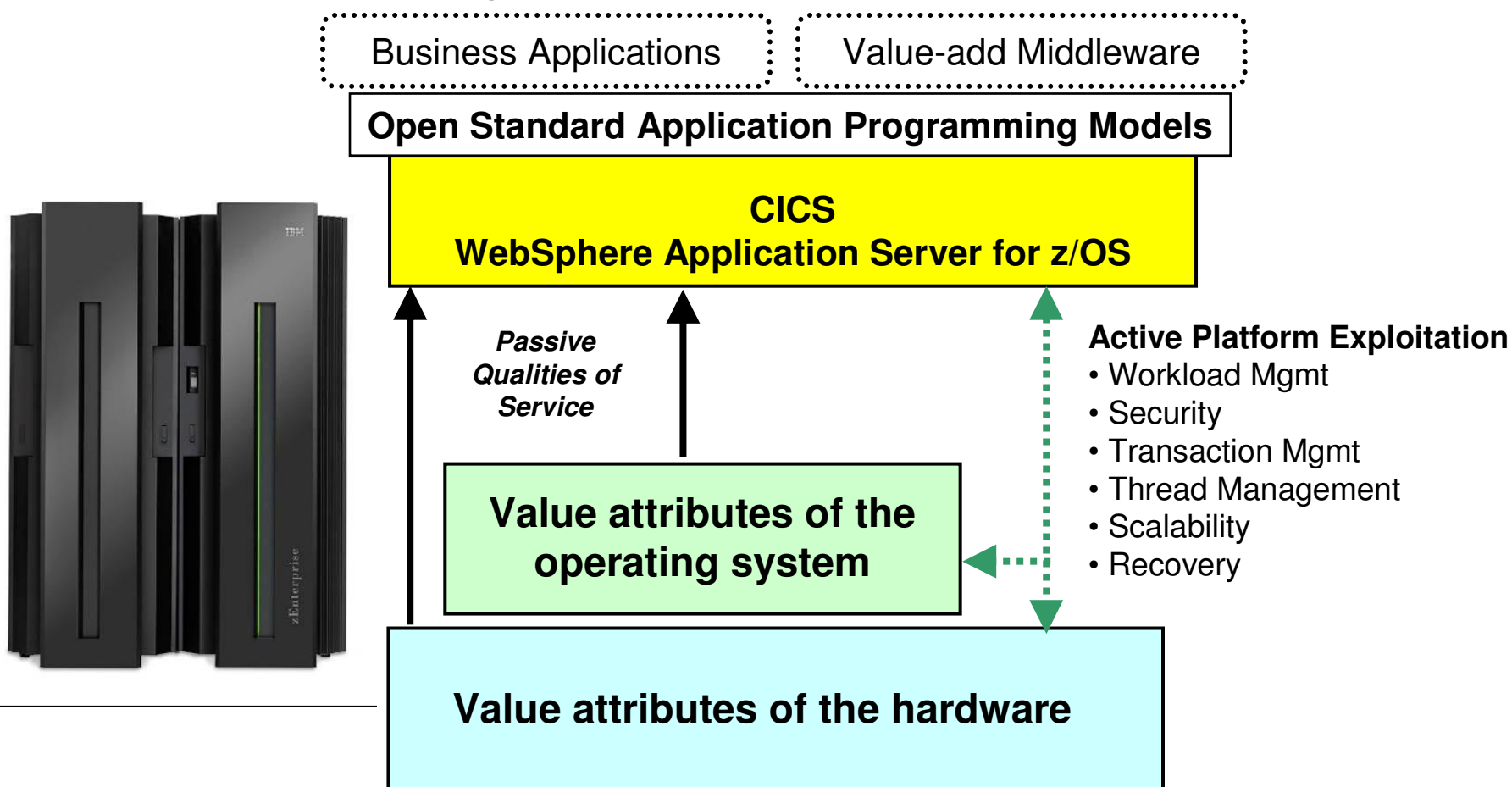
Understanding,  
Optimization  
and Control

**IBM CICS Tools**

**IBM Problem Determination  
Tools for z/OS**

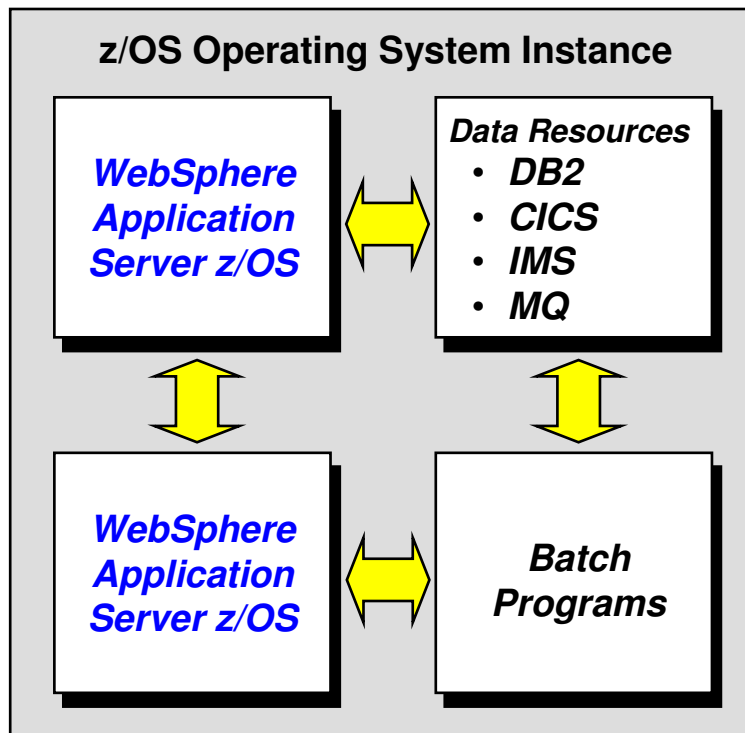


# Combining industry-leading runtimes and z/OS to deliver superior customer value





## Collocation Benefits



- ***Extremely* fast data transfer**
- **Tightly controlled by z/OS authorization processes**
- **Eliminate need to serialize and deserialize data and objects**
- **Eliminate need for encryption overhead**
- **Propagate several forms of user identity**

***Efficient -- very low overhead so scalability can be addressed***

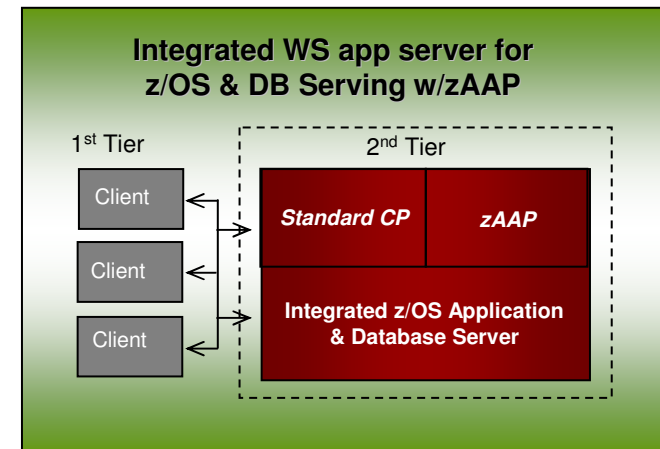
***Secure -- no network, can't be sniffed or hacked***

***Fast -- for very high volume workloads***

# WebSphere Application Server for z/OS V7



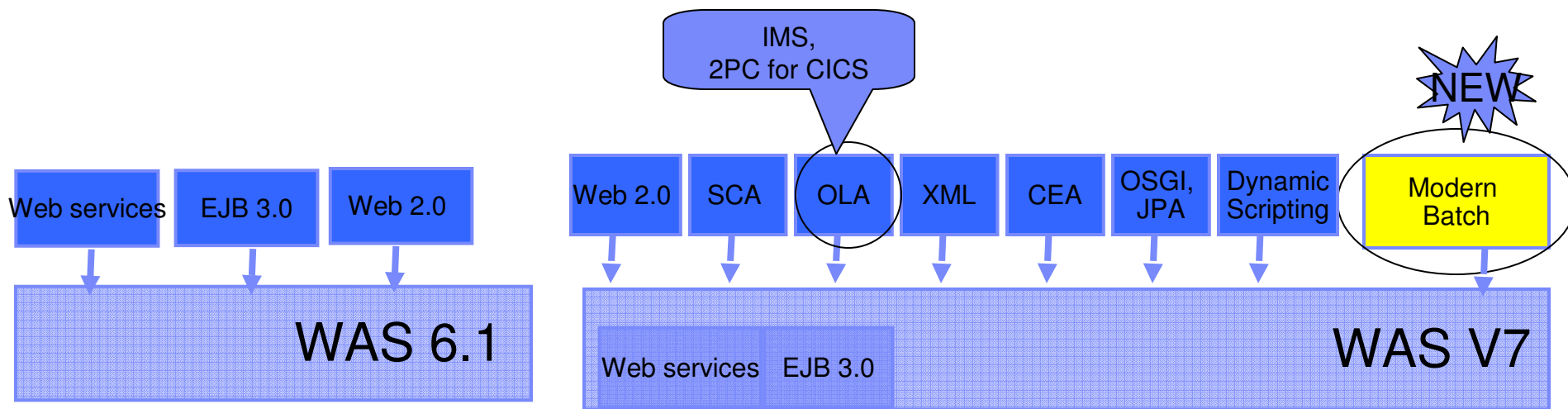
- Reduced cost of ownership and enhanced agility
  - Common code and industry standards (JEE, Web Services, etc.)
  - zAAP enabled for low cost Java application deployment collocated with mission critical data
  
- Innovation that matters
  - Feature Packs for ongoing functional enhancements
  
- The unique value of WAS for z/OS and its active platform optimization and exploitation
  - Replicated Server cluster architecture leveraging shared data for scale and availability
  - Native OS support: RRS, RACF, zWLM, SMF, ARM, Parallel Sysplex
  - Optimization features designed to provide performance, security and data interaction, including FRCA, thread hang recovery, etc.
  - Collocation advantages when connecting to traditional mainframe subsystems – CICS, IMS, DB2
  - Other “Hidden Gems” documented in White Paper (WP101138) on Techdocs at [www.ibm.com/support/techdocs](http://www.ibm.com/support/techdocs)



# Innovation that Matters – Feature Packs



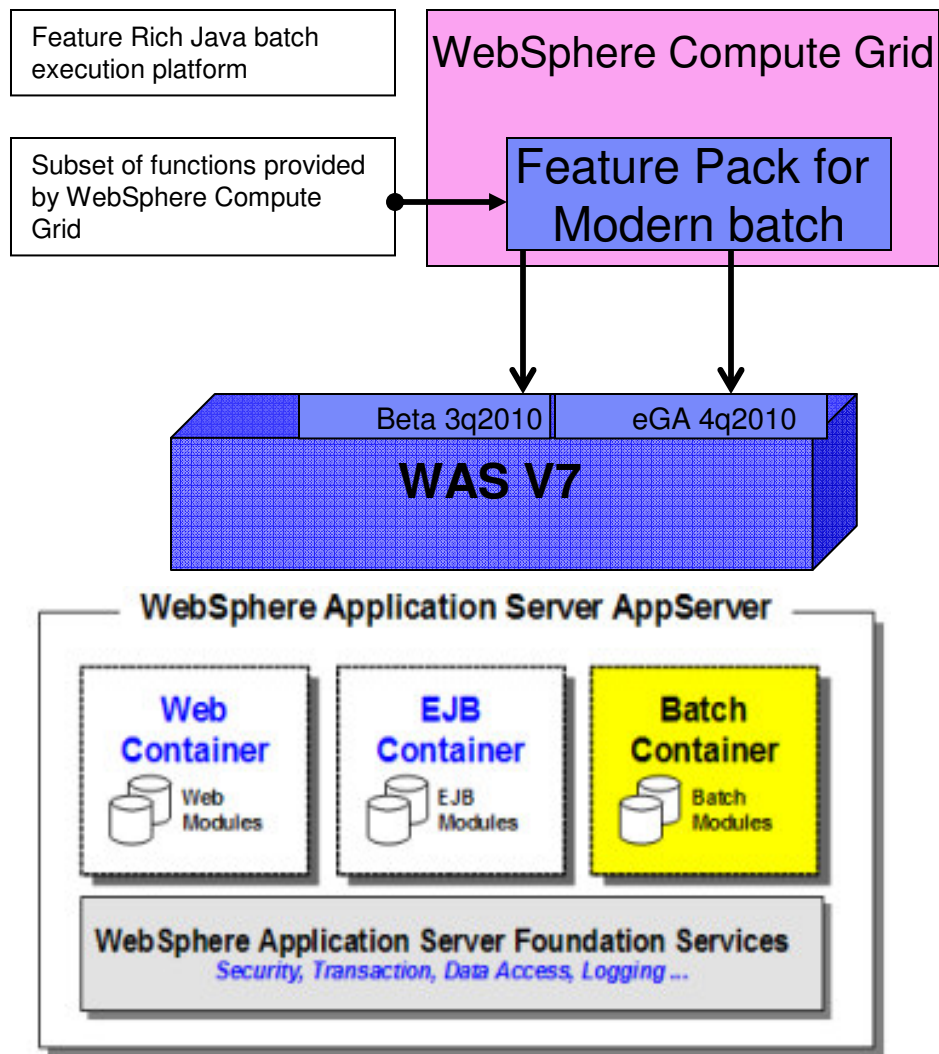
Revolutionizing the way customers consume application server technology now and in the future



1. Choose the application server technology you need.
2. Install additional functionality on core WAS 7
3. Build the Application Server you want without waiting for new releases.

*As new technology evolves, so does WAS – get the technology you need now without waiting for a new release!*

# Jumpstart “Batch” Development and Deployment



## What is it?

Pre-integrated application framework to help increase developer productivity and time to value for Java batch applications allowing sharing of business logic between batch and OLTP applications

## Value proposition

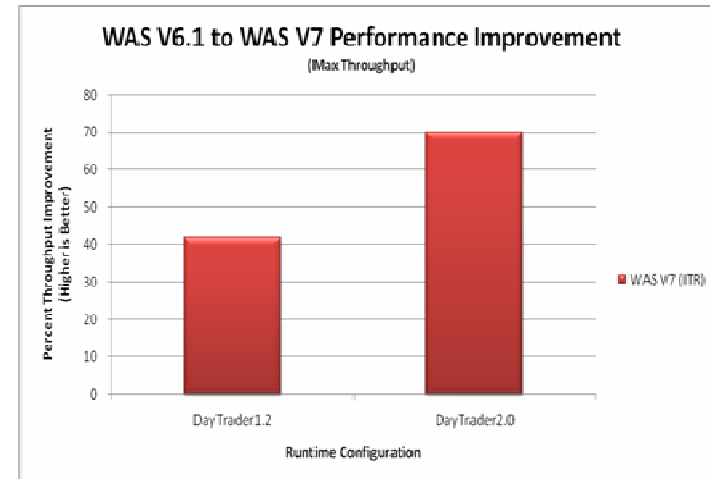
- Reduce cost of infrastructure due to concurrent execution of batch and OLTP workloads using shared business logic on a shared infrastructure integrated with WebSphere Application Server
- Reduced operational cost due to integrated administration of OLTP applications and batch jobs
- High throughput and low resource consumption on z/OS for Java Batch when collocated with data subsystems

# Achieving maximum performance through currency



## Runtimes

- *WAS V7 vs V6.1 up to:*
  - 42% faster for legacy apps
  - 47% faster for Web Services
  - 70% faster for Java EE apps



## Compilers

- *z/OS XL C/C++ v1.11*
  - Improved a customer application ~20%
  - Enhanced system programming capabilities
  - Supporting latest Middleware and tools

## Hardware

- Generation to generation price / performance gains
- Unique value of specialty engines
- Ability to reduce energy costs by up to 80%



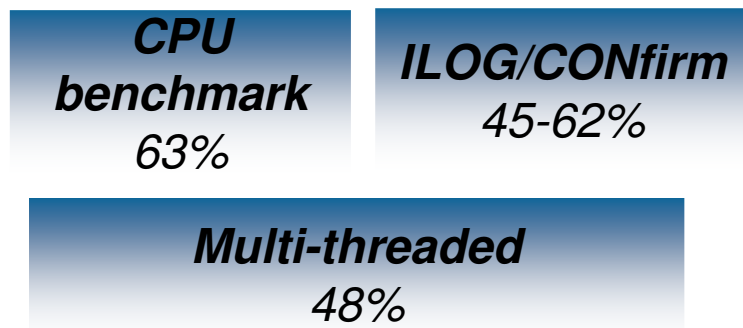


# Java and WAS Performance with zEnterprise



## Java6SR8

World class per-thread performance yields outstanding results:

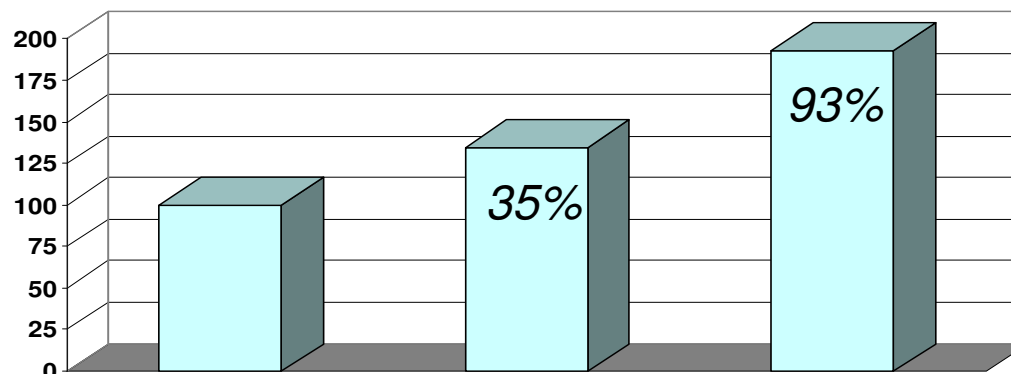


## WebSphere V7

System z10  
Announce

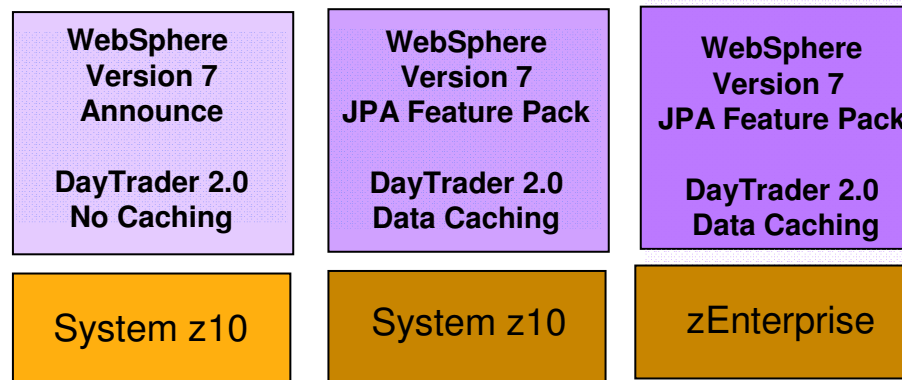
Uplevel  
Software

zEnterprise  
Hardware



Extensive hardware and software collaboration delivers deep platform synergy

- New out-of-order pipeline design
- 70+ instructions
- Java runtime environment general optimizations



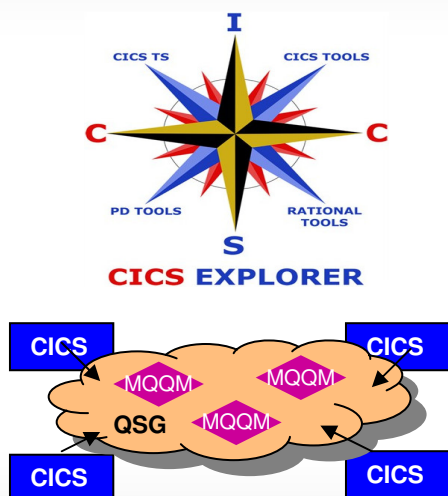
CICS is at the heart of smart business



## Revitalize Business

“Real-time visibility for smarter decisions and actions”

### Integrated Tool Solutions

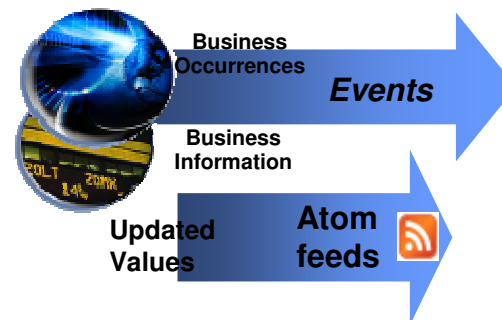


Tighter MQ Integration



### Event source for Dynamic Business Networks

CICS Business Applications



Integration for LOB and COBOL business rule mgmt.

## Revitalize Infrastructure

“Greater efficiency and reduced costs”

## Revitalize Applications

“Faster and easier to respond to change”

# CICS Explorer – The new face of CICS Transaction Server

Reduce the need for multiple interfaces



Before...

Now ...

Web



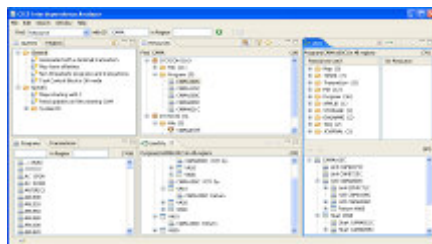
ISPF



CICS 3270



Eclipse



Response measurement	Time (avg)	Count	%Overall
Response time:	0.005008	-	-
User Dispatch time	0.002816	2	56%
User CPU time	0.000608	2	12%
CICS Key 8 TCB CPU time	0	0	-
J8 TCB CPU time	0	0	-
L8 TCB CPU time	0	0	-
S8 TCB CPU time	0	0	-
T8 TCB CPU time	0	0	-

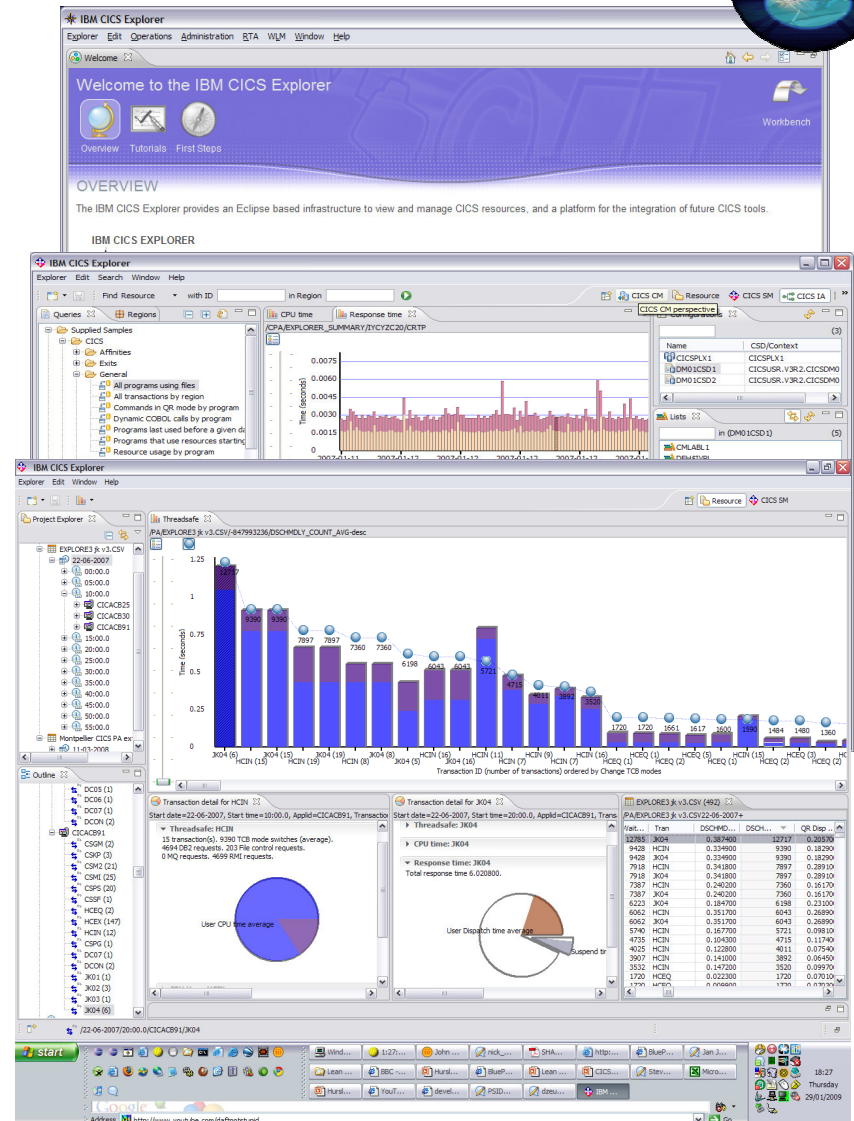
More info and downloads at [ibm.com/cics/explorer](http://ibm.com/cics/explorer)

# Increase productivity with integrated tools



- CICS Performance Analyzer V3.1
- CICS Interdependency Analyzer V3.1
- CICS Configuration Manager V2.1
- CICS Transaction Gateway V8
- OMEGAMON XE for CICS V4.2
- Rational Developer for System z V7.6

<http://ibm.com/cics/explorer/download>

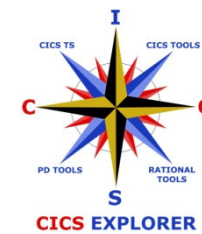
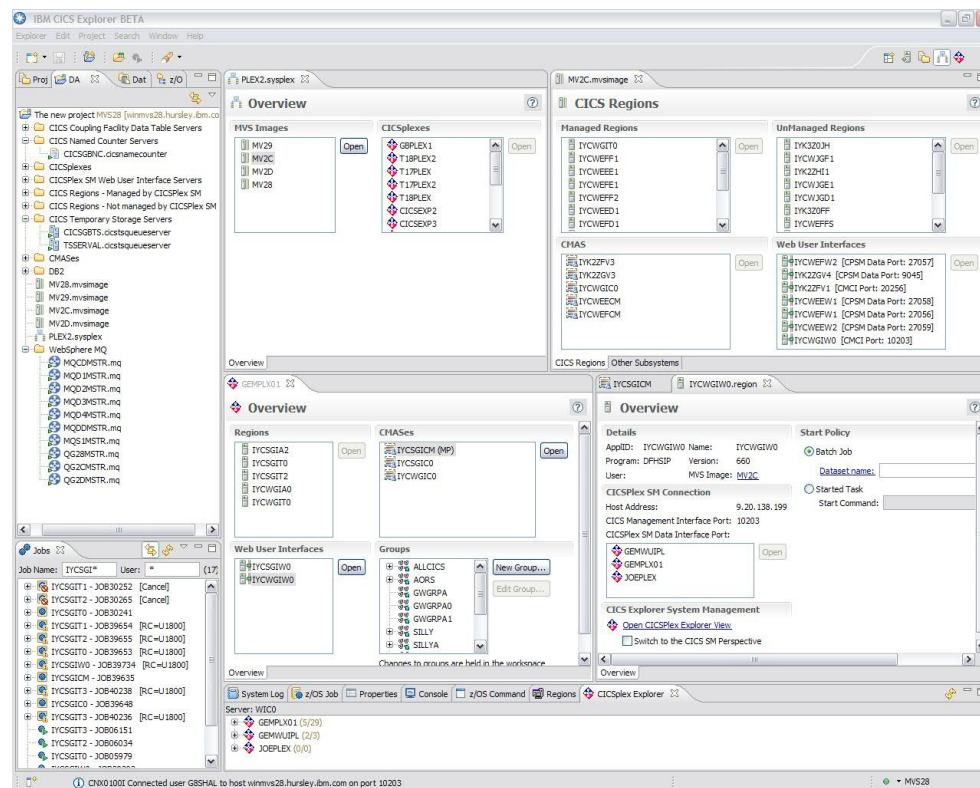


# Accelerating return on your CICS investments

## *IBM CICS Deployment Assistant for z/OS*

- New Deployment perspective integrates with CICS Explorer
- Discover and View CICS system Topology Model
- Automated creation, deployment, customization, and control of CICS regions
- Edit files, submit JCL, view output
- Simplify tasks, save time, and reduce risk
- More info at <http://ibm.com/software/http/cics/deployment/>

– Features and benefits, data sheet, announcement letter ...



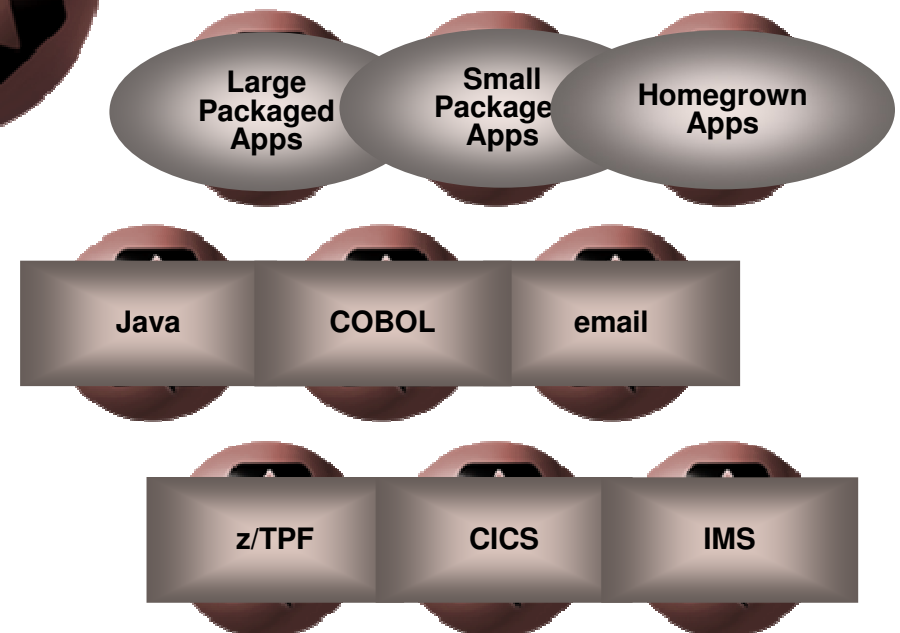
# Reuse business applications

-- Enable agility required for smart business outcomes



## Get More Value from Applications & Expand Business Opportunities

- Service-enable existing packaged and existing apps
- Create new, reusable services
- Extend reusable services to the web
- Consume external reusable services



## Benefits

- Extend ROI by reusing prior investments
- Reduce risk and costs by leveraging robust applications
- Speed time to market with faster development cycles

## Three ways to drive agility while optimizing costs

### ***Business Needs***

“Ensure applications consistently deliver on business needs in all situations”



### ***Common Buying Scenarios***

Dynamic  
Application  
Infrastructure

“Adapt and respond to dynamic business situations”



**SOA  
Connectivity  
and Integration**

“Quickly respond to changing customer expectations and business demands”



Business Process  
Management

# An edge in the market – SOA Connectivity and Integration



**Confirmed Flight Booking**



**Lower process disruptions with reliable data movement**

**Central Airport Checkpoint**



**Create new revenue-generating services from current core business applications**

**Routing Bank Transactions**



**Adapt business faster by easily connecting services & apps**

**Centralized Information Source**



**Reduce cost and duplication by leveraging existing assets**





## Highmark, US health insurer



HIGHMARK

### Industry Pains

- Develop IT system dexterity to serve a new business model: packaged services tailored to customers' individual insurance requirements

### Smarter Business Outcomes:

- Replace rigid point-to-point integration with flexible SOA framework
- "Simplify integration between platforms to speed up and lower cost of new consumer service development"

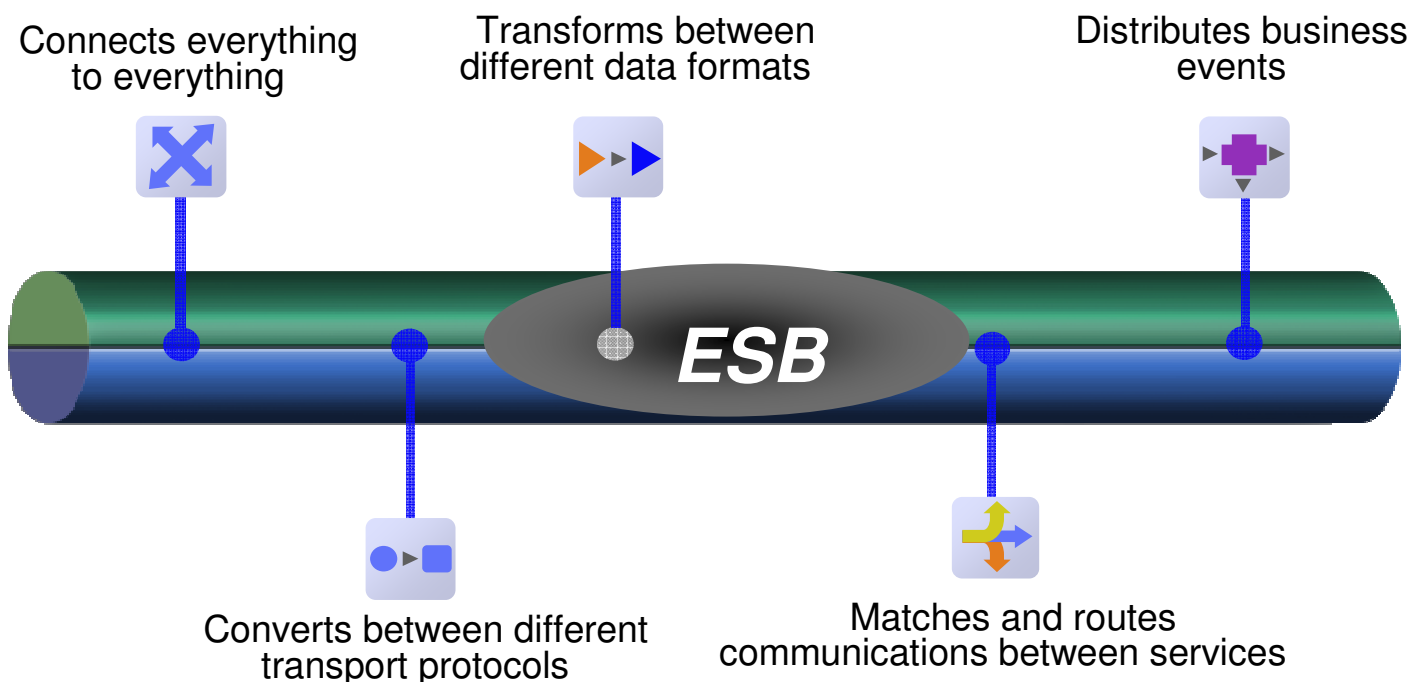


## Why SOA Connectivity and Integration?

Use WebSphere Message Broker to create an ESB between various applications as part of SOA implementation

# Agility and savings begin with integration

## --The Enterprise Service Bus (ESB)



**Optimize Costs by:** Integrating new customers and partners up to 80% faster, Improving performance more than 10x - with lower costs, and Achieving full ROI within as few as 6 months

IBM WebSphere  
Message Broker for z/OS

IBM WebSphere  
Enterprise Service Bus

IBM WebSphere  
MQ for z/OS

## Service visibility and governance



- **Trust:** Publish & find Your Services to extend business applications
- **Manage** and govern your ESB messaging and services
- **Secure:** Ensure consistent policy enforcement

IBM WebSphere MQ File  
Transfer Edition for z/OS

IBM WebSphere Service  
Registry & Repository for z/OS

# Governance for File Transfers

## *WebSphere MQ File Transfer Edition*



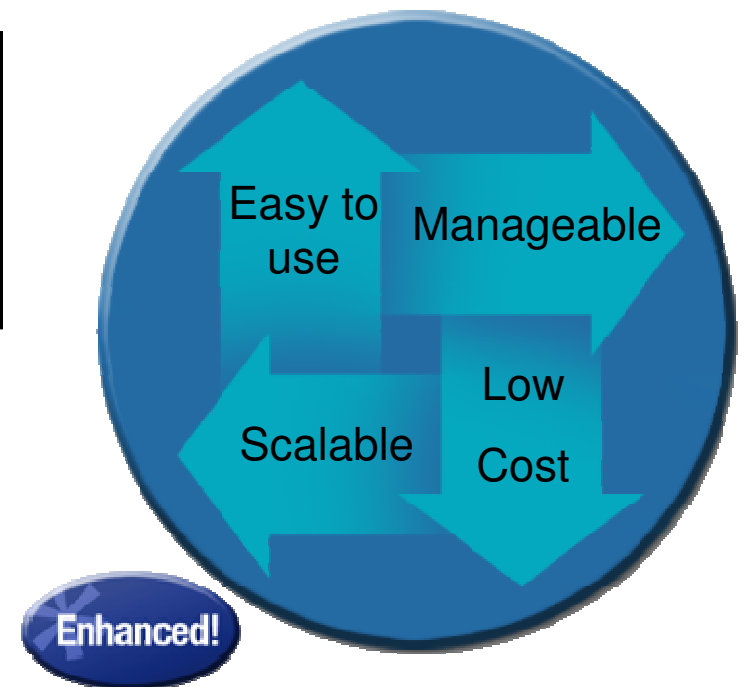
- Most data moves from application to application using file transfers
  - Lowest common denominator for Integration
- Provide the visibility & manageability to move key business data reliably & securely
  - Inside and outside the Enterprise

### *Reducing Costs*

- Lower maintenance upkeep by 15%-25%
- 50% to 70% reduction in file management cost

### IBM WebSphere MQ File Transfer Edition

- Builds upon MQ's proven transport
- Delivers robust solution for Managed File Transfer
- Purpose-built to integrate with IBM's SOA portfolio



## Three ways to drive agility while optimizing costs

### ***Business Needs***

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**Business  
Process  
Management**

# The power of Business Process Management



## Supply Chain Management



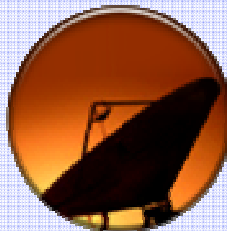
Automatically adjust forecasts and shipments to increase accuracy and reduce costs

## Retail Inventory



Detect and respond to inventory changes in real-time to meet customer demands

## Telecom Services



Quickly deliver more compelling and profitable service bundles to increase customer retention

## Insurance Claims Processing



Improve productivity and customer satisfaction by automatically routing claims to the right knowledge worker

# Ball State University



## Industry Pains

- The need to create an end-to-end Web-based registration system for 20,000 students

## Smarter Business Outcomes:

- SOA with BPM bridges siloes between .NET and mainframe
- Near real-time information regarding availability and requirements of courses yields greater revenue from successful enrollments and higher user satisfaction



## Why Dynamic Business Processes?

With WebSphere Business Modeler and Process Server, there is no application or information that cannot be reached.

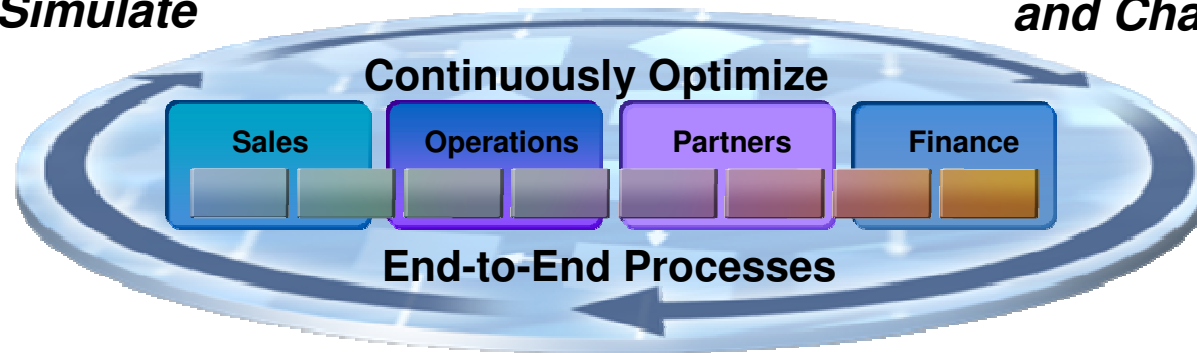
# Process Automation

*Improves operating efficiency and reduce costs*



**Model and Simulate**

**Rapidly Deploy and Change**



**Monitor, Predict and Act**



Streamline business activities

Complement and extend existing applications

Leverages reusable process components

Lower Costs

Reduce cycle time

Easier to Manage

**IBM WebSphere Process Server for z/OS**

**IBM WebSphere Business Monitor**

**IBM WebSphere Business Modeler**



## Business events all around us: How to take action



### What is a business event?

An action that has occurred, or the absence of it occurring, which has relevance to the business

Nearly **4 Trillion** RFID events are emitted each day



Large companies can experience up to **800 Billion** business events (shipments, weather, customer contacts, delays) daily



Over **190 Billion** emails are sent daily

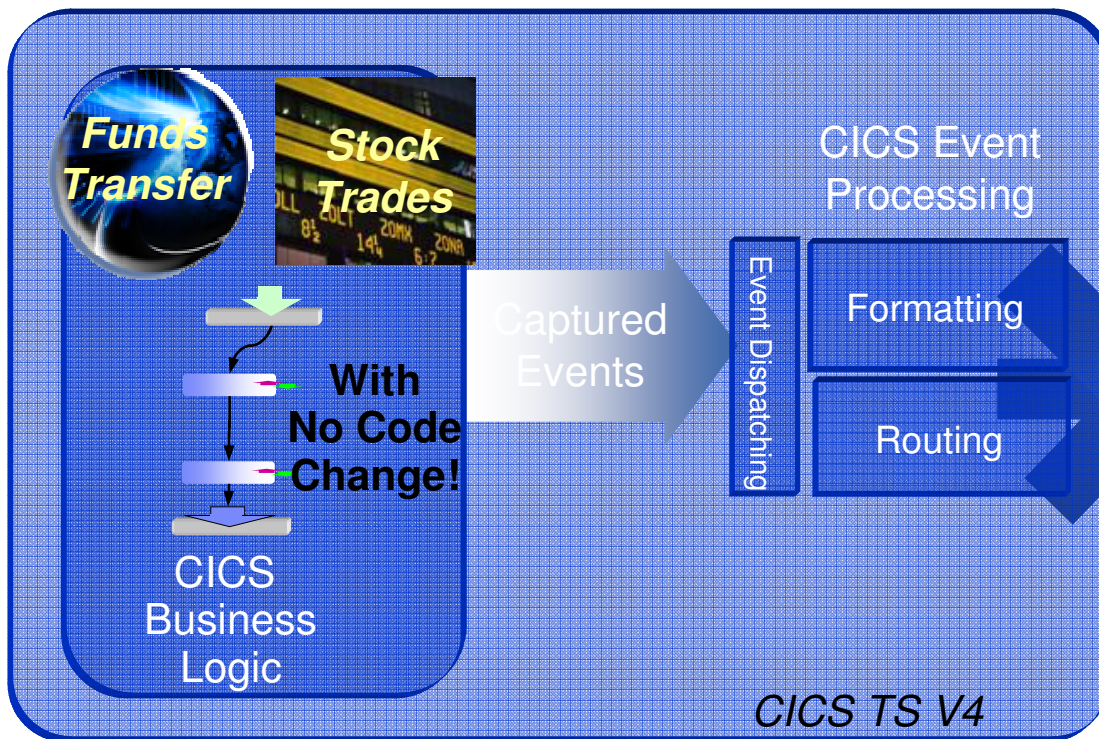


# Capture mainframe events for smarter business outcomes



## CICS Event Sources

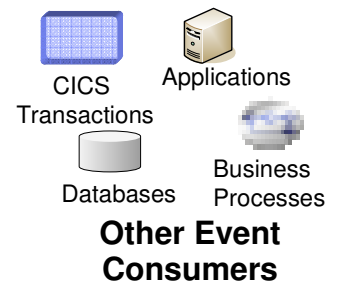
## Detect fraud and take action



WebSphere  
Business Monitor

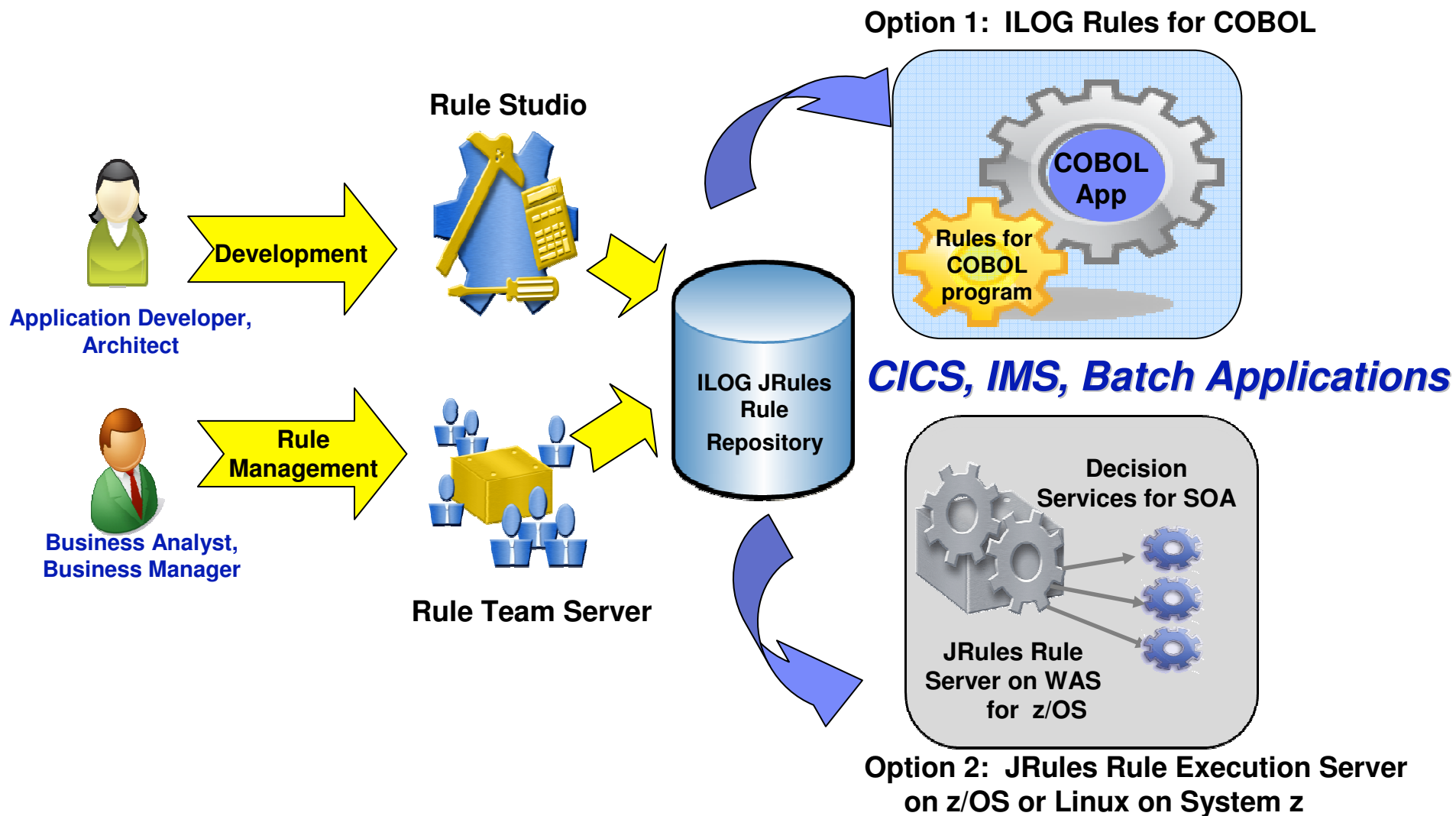


WebSphere  
Business Events





# ILOG Business Rule Management Solutions on System z



## Benefits of a Dynamic Application Infrastructure on System z

- Integration with Existing Assets
- High performance
- Server consolidation
- Dynamic scalability
- 99.999% Availability
- Exploitation of Java/J2EE
- Uninterrupted support
- Low TCO of applications
- Performance Optimization through collocation



# Let's Build a Smarter Planet on System z

