



2007 System z Summit

DESTINATION z





When and Why to Deploy New Workload to System z

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GM, Application and Integration Middleware

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Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

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Key Takeaways



- **Alignment of IT to Business drives SOA adoption**
- **Criticality of business services creates distinctions between deployment platforms**
 - All services differ in priority and impact to the organization
 - All servers provide graduated levels of service that must be matched with the requirements of the business processes.
- **Enhancements to the WebSphere® portfolio enable platform choice based on the customer's business drivers**
- **IBM System z™ adopters have put SOA into operation and are demonstrating business results with SOA Entry Points**
 - Over 1500 System z customers deploying SOA
 - WebSphere Application Server dominates System z market share
 - Fastest migration rate between CICS® releases ever
 - System z was the industry's fastest growing server in 2006
- **IBM continues to add skills to the SOA z community**

Innovation that Matters to CEOs

Top Innovation Priorities:

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



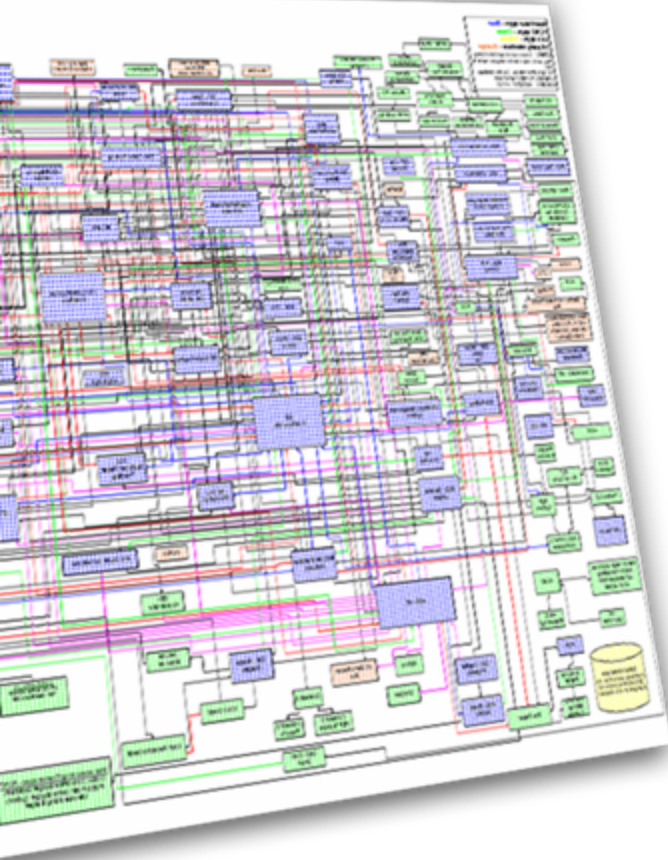
Source: 2006 IBM Global CEO Survey

87% expect fundamental change in next 2 years

78% believe innovation requires business and technology

Why SOA?

Customers want to improve this....



Why?

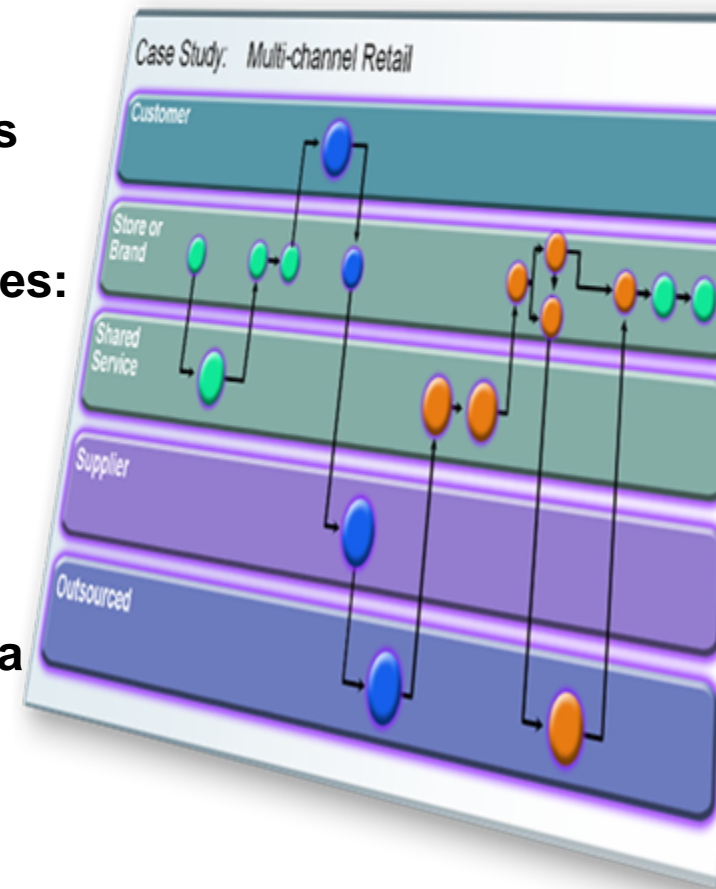
Economics:
Globalization demands flexibility

- **Business processes:**
Change quickly
- **Information:**
Greater availability

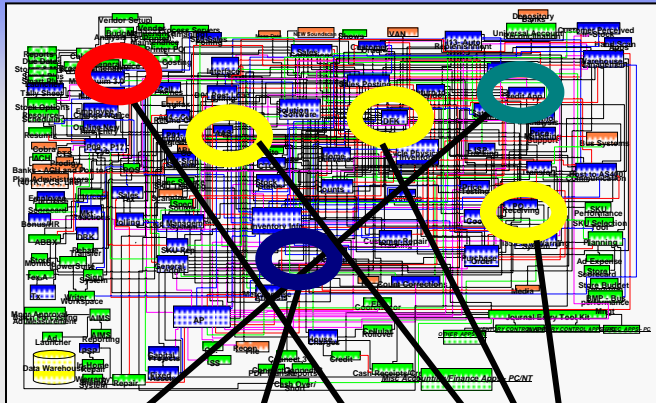
Growth:
Top of the CEO agenda

Reduce costs:
Reuse existing assets

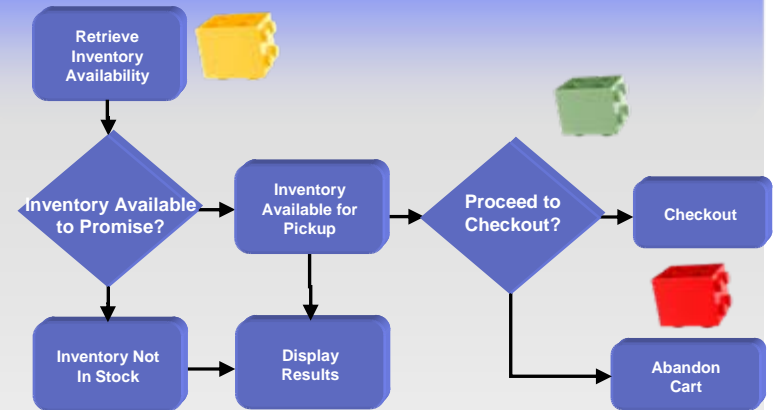
... to run their business like this.



SOA Addresses the Barriers to Flexibility



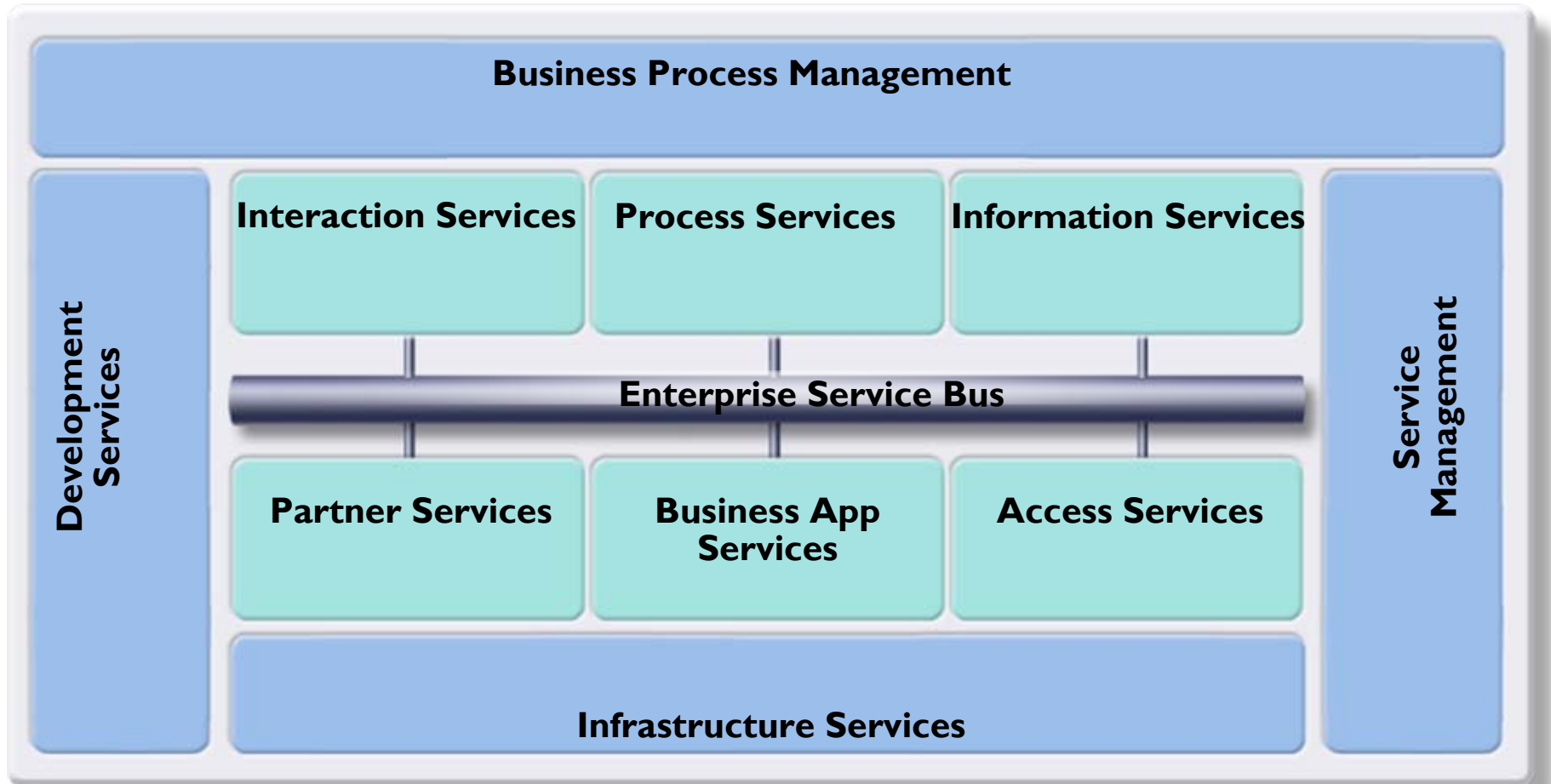
- A business-driven IT architectural approach to build a flexible infrastructure



- Enable reuse of IT systems
- Standards based connectivity and integration

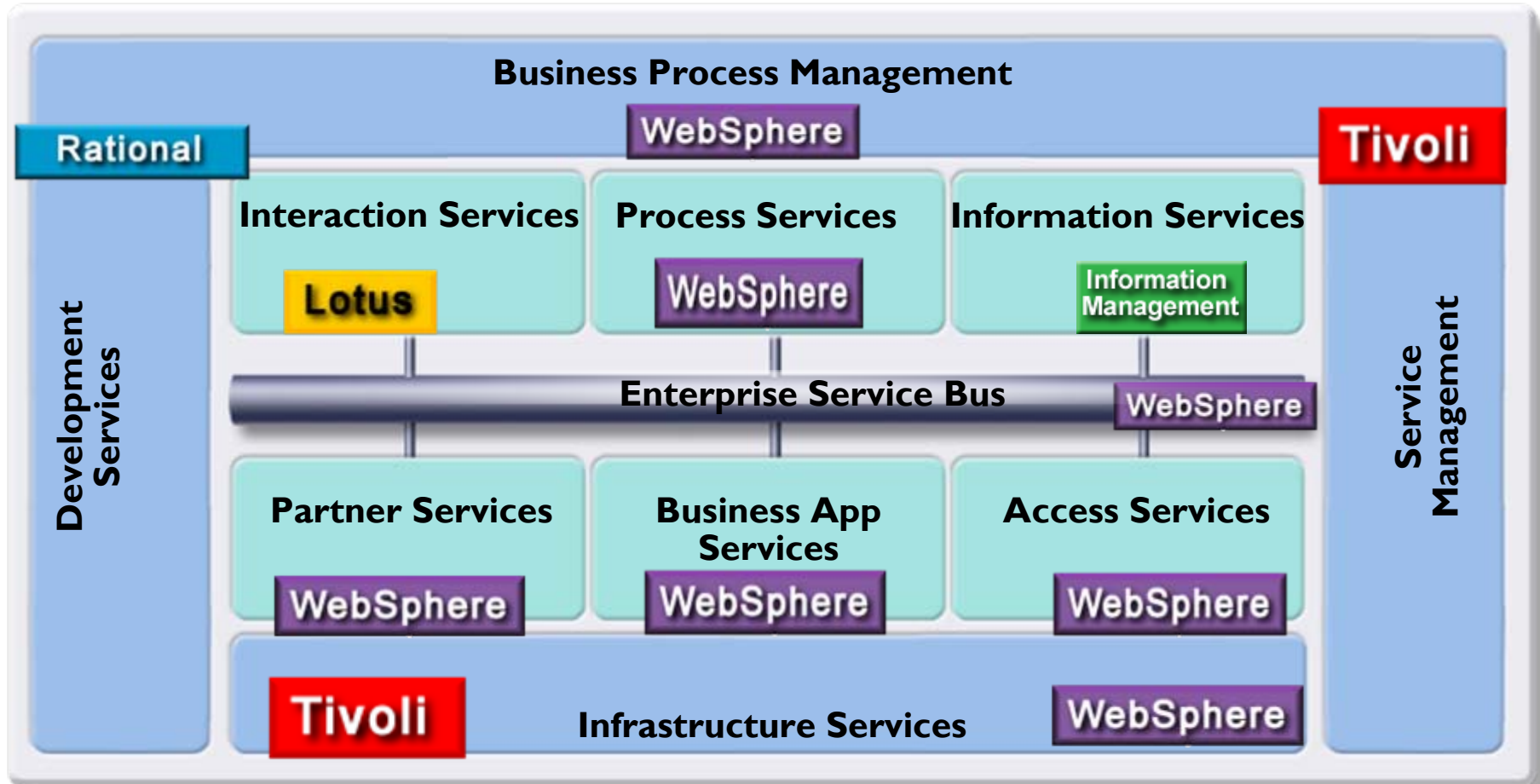
SOA Reference Architecture

The enabling foundation for our product strategy



SOA Reference Architecture

With WebSphere at the core of our strategy



Deploying on System z provides differentiated value

Enabling intelligent IT that works for your business



The IBM Mainframe.

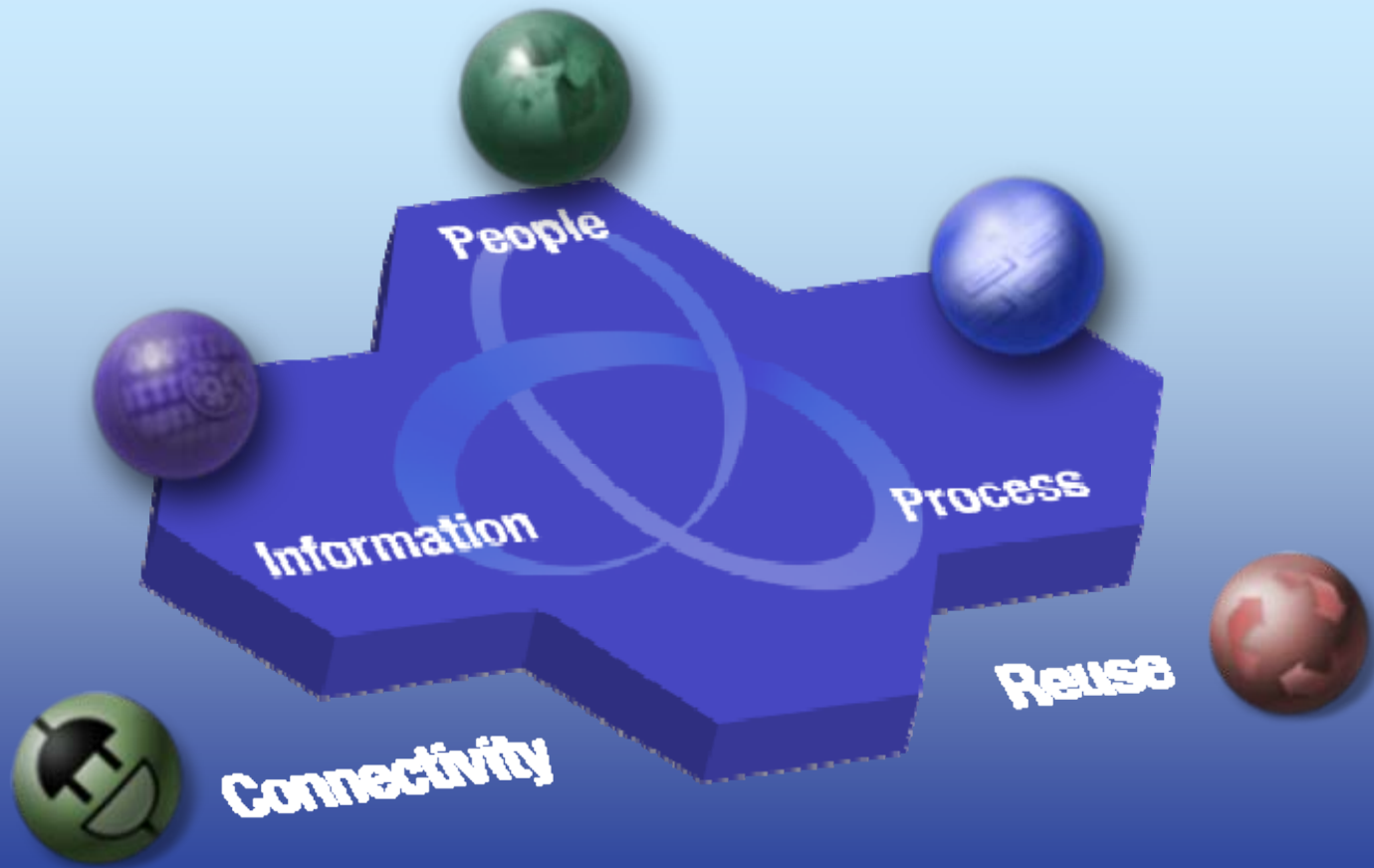
Building on the past, defining the future.

Server Leadership: 40+ years in the making!

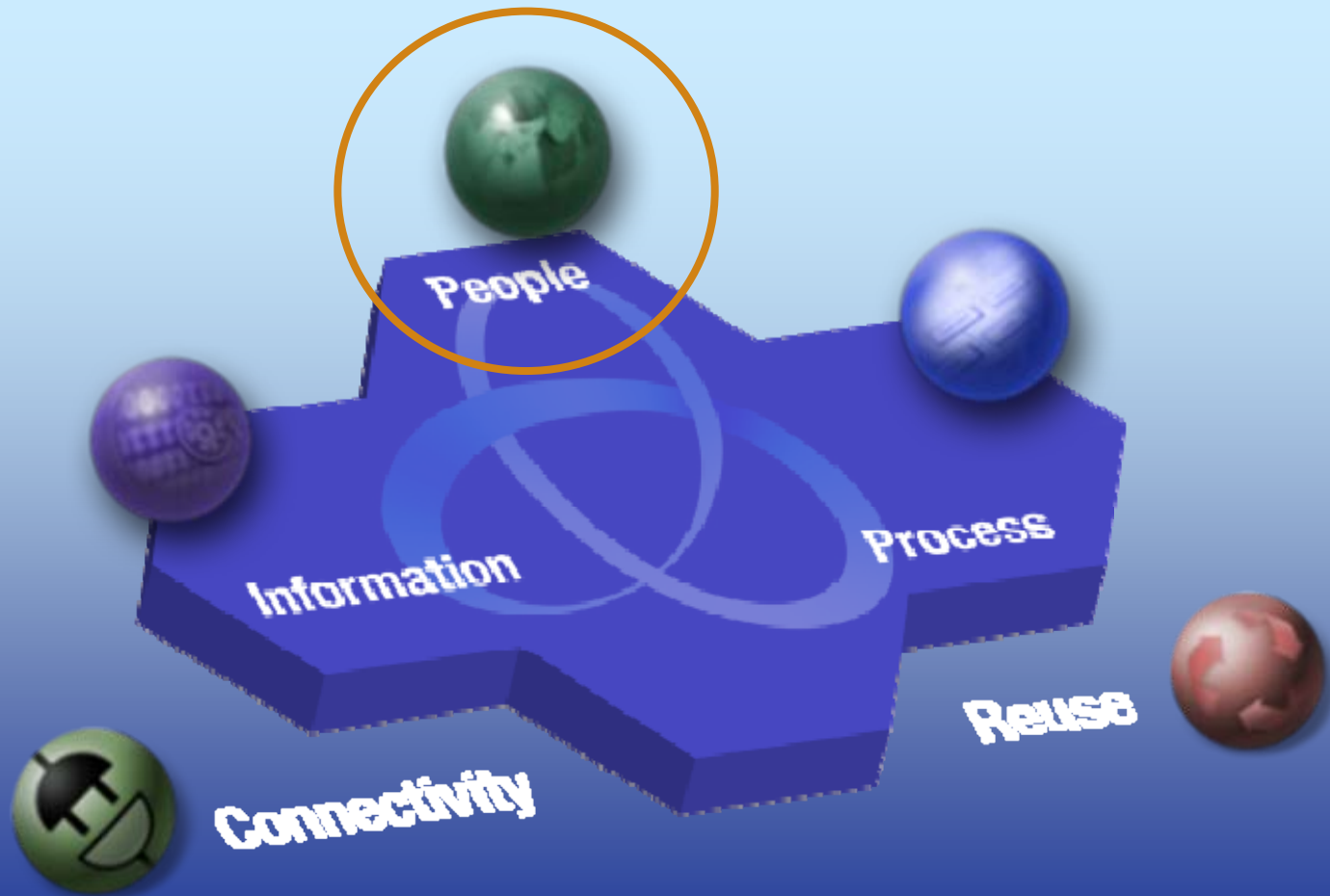
Mainframe utilization rates often exceed 80%, and are designed to handle sustained peak workload utilization of 100% without service level degradation.

- **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**

SOA Entry Points



SOA Entry Points: Announcements



Why WebSphere Portal on System z for SOA?



What's New

- Web 2.0 - Build highly responsive Web 2.0 based composite applications that leverage AJAX-enabled portlets
- WebSphere Dashboard Framework
- 64-bit Linux® for System z support

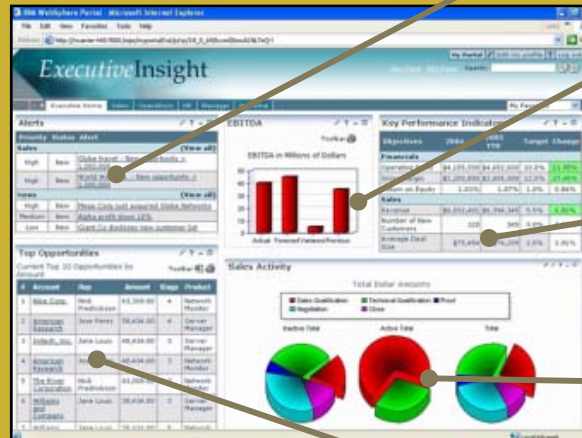
Value Proposition

- Provides System z customers with a complete set of portal services from industry's leading portal platform
- Optimized for IBM z/OS®; exploits platform's availability, security, serviceability and scalability to provide the highest Quality of Service (QoS)
- Allows customer to modernize legacy applications with access to backend systems, data and applications through a consistent, integrated and personalized user front end.
- Close proximity and tight integration with DB2®, CICS, IMS™ provides superior access to data and transaction systems

Web 2.0-based Composite applications

Enable rapid assembly of situational applications with WebSphere Portal

Composite application framework



External feeds and services

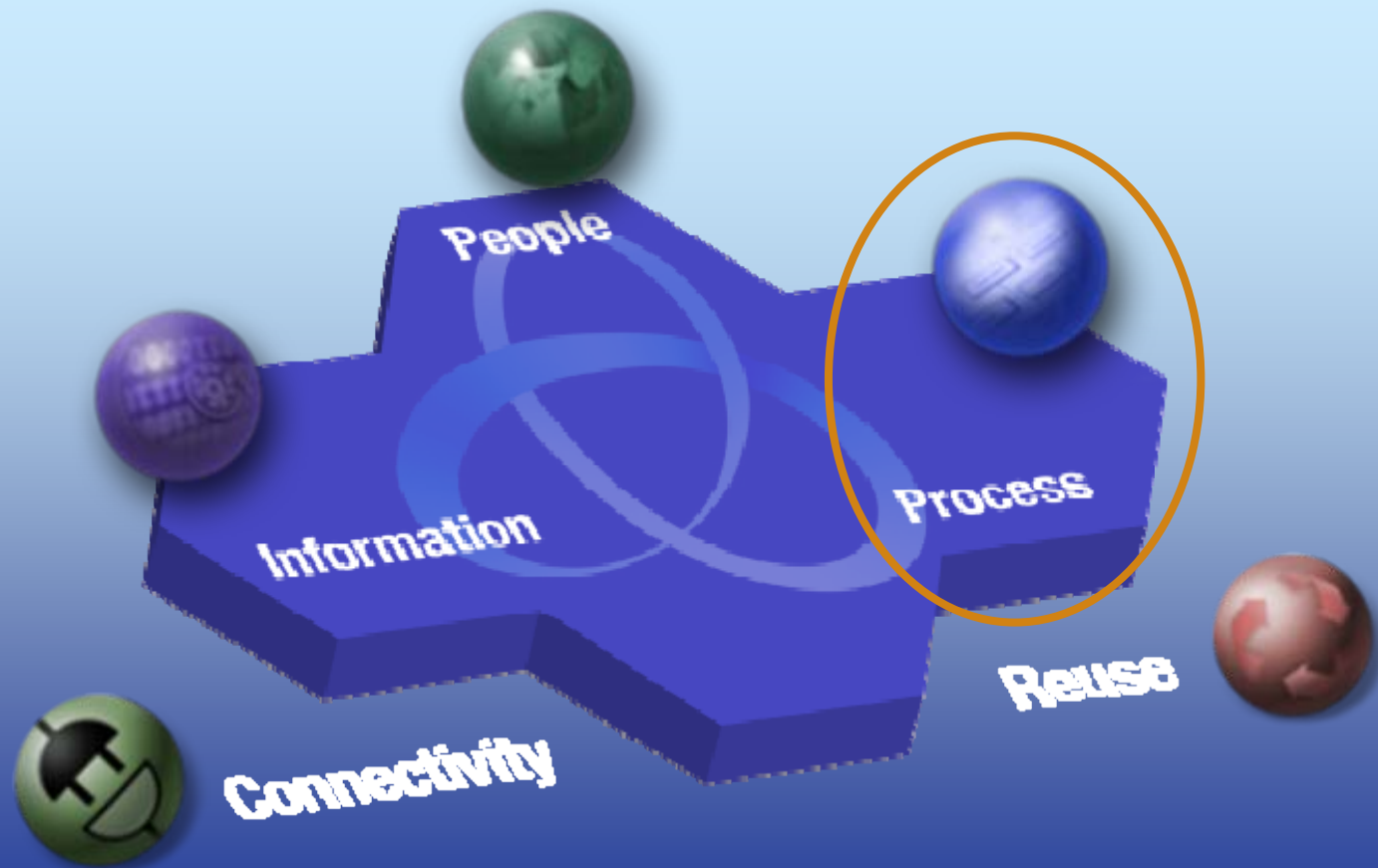
Business Partner / supplier information

Ad hoc as needed Google Gadget

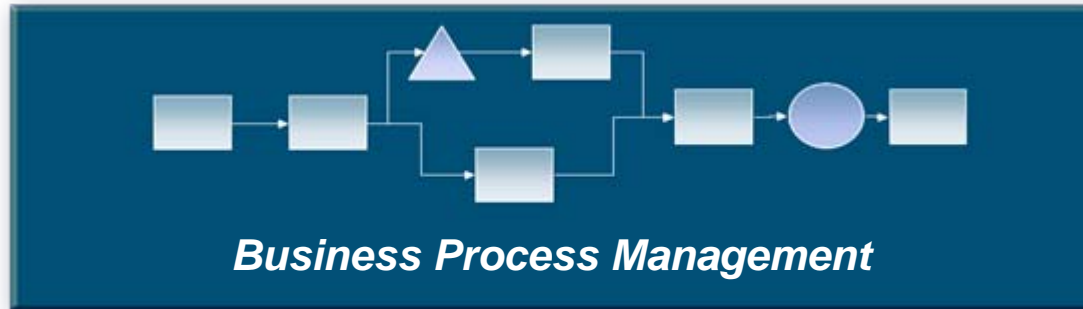
Business intelligence

Long-lived corporate IT applications

SOA Entry Points: Announcements



Customers can start Business Process Management in different ways



Modeling & Simulation

Design and simulate business processes



Business Activity Monitoring

Track performance, processes and operational activity using key performance indicators



Process Choreography

Choreograph processes across applications and systems



Rules and Pre-built Frameworks

Manage process rules and accelerate design and implementation time



Content Centric Processing

Manage processes where content is used as input for a decision or produced as the output

What's new - Business Process Modeling and Monitoring



Modeling & Simulation

WebSphere Business Modeler

IBM Industry Process Models

- Industry-Specific Process Models based on IBM best practices and the standards-based Process Classification Framework
- Helps clients kick-start process-optimization engagements.

Modeling in the Classroom

- University of Southern California uses WebSphere Business Modeler in its Information Systems class
- 279 courses, 9,763 students, 97 Institutions



What's coming

- Provides support for content centric business process modeling
- Support for IBM FileNet eXtensible Process Definition Language (XPDL) format
- Enabled to send models to the FileNet Process Designer



Business Activity Monitoring

WebSphere Business Monitor

Expanded BAM

- Monitoring any application that can submit events to the Common Event Infrastructure (CEI)
- Providing adapters and support for pulling information from a variety of sources.

Industry Templates

- Templates for three industry verticals including key methodologies
- Predefined, fully configurable dashboard templates

Human Task Management

- BPM Dashboards for human task monitoring and management
- Monitor human tasks in process
- BPM Dashboards will provide an human-centric experience for those who are responsible for managing the people side of process.



Enhancing our BPM Capabilities



Process Choreography

WebSphere Process Server



BPM for the Mainframe

- New business user client generation in WID for processes deployed on z/OS
- New Adapters for z/OS: e-mail, JDBC, FTP, Flat File, SAP
- BPM and SOA governance on the Mainframe through WSRR
- IBM Content Manager with Process Server for content-centric capabilities



Rules and Pre-built Frameworks

WebSphere Business Services Fabric



- National Language Support
- Alignment with IBM SOA Foundation

- Additional Standard Operation Environments

- Industry Content Packs



- Business Service Templates to accelerate deployments
- Expanded industry coverage for Banking and Telecommunications

- Industry Frameworks

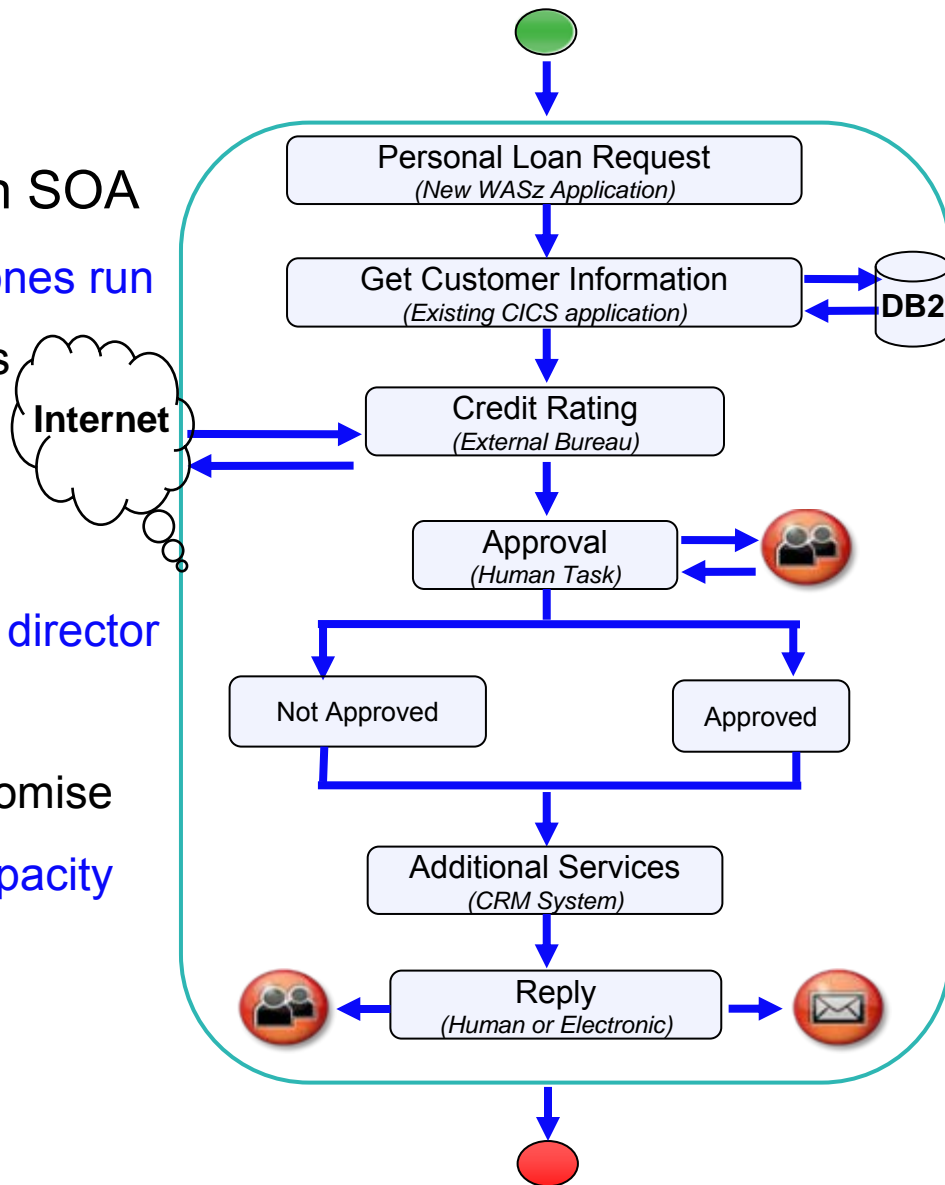


- Service-Oriented Business Solutions Frameworks
- Based on Industry Standards
- Combination of IBM and Business Partner Assets

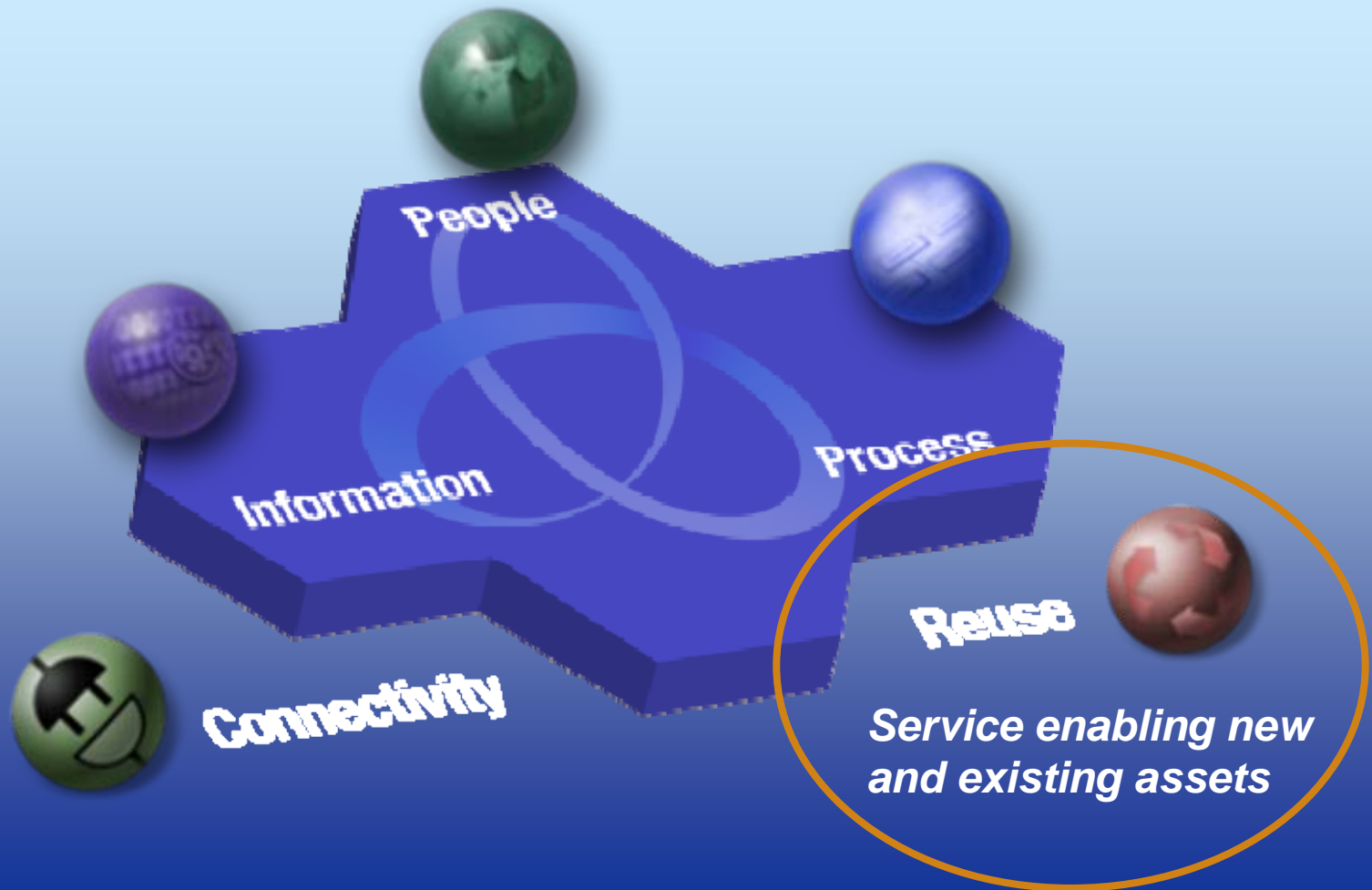
When to Use System z for Process Serving

System z – The choreographer for an SOA

- Efficiency: Control processes **where the ones run**
- Integration: **Improve the flow** of processes
- Automation: 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



SOA Entry Points: Announcements



Service enabling existing applications

CICS Transaction Server V3.2

- Extend existing applications
- WSDL 2.0 standard
- Better performance and manageability
- Enhanced Web Services capabilities and SOAP standards including WS Trust
- New message formats (XOP & MTOM)
- Manage large runtime configurations

* Enhanced!

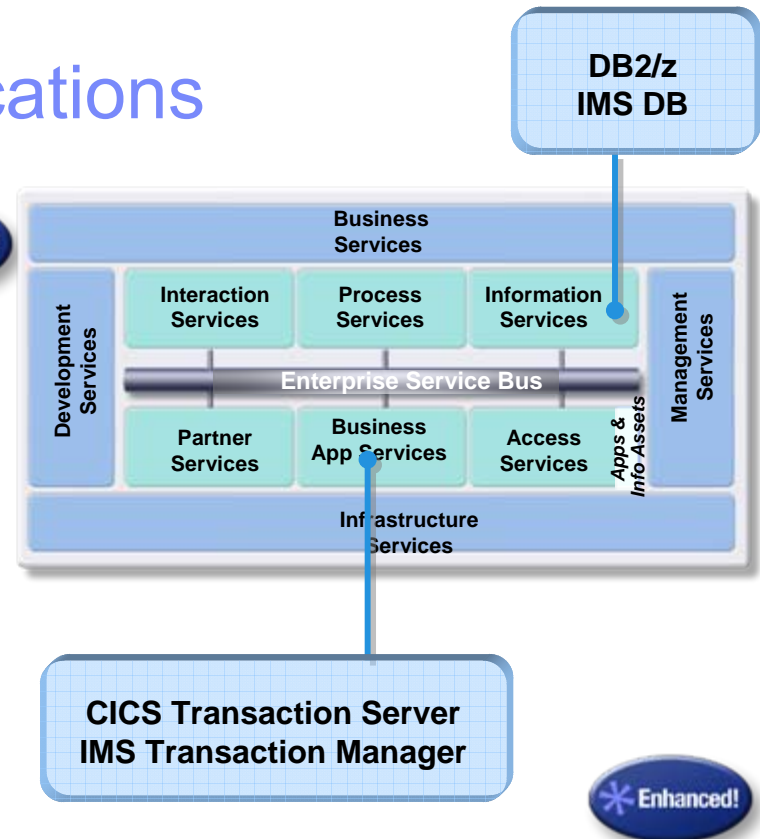
IMS 9 +

- High performance access
- Universal information exchange
- Better business integration
- Ultra-high scalable/available data
- Lower cost development/deployment/management

* Enhanced!

IMS 10 – coming soon

- Extended B2B Data Interchange
- Expanded client and application interoperation
- Simplified installation and management

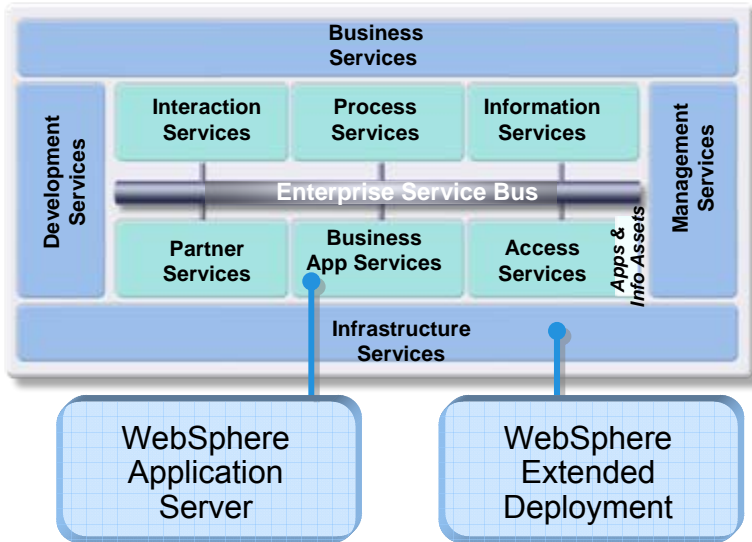


DB2 9 optimized for SOA

- Business insight and flexibility with pureXML
- WebSphere integration for trusted applications and Web serving
- Security & SOA governance capabilities



Deploying new services on System z



WebSphere Extended Deployment V6.1

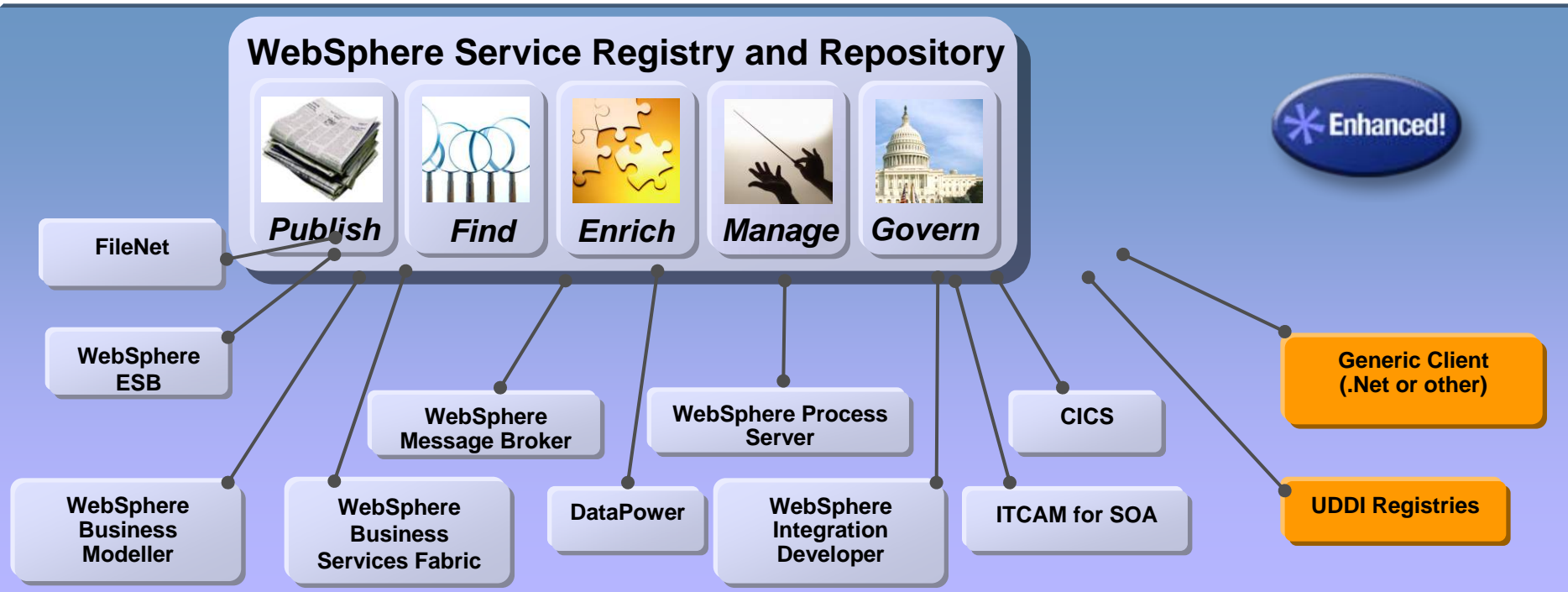
- **New packaging**
 - Flexible purchase and deployment options
 - Reduced price
- **Java® for batch programming and modernization**
 - Unify batch & OLTP development environments
 - Single code base for batch & OLTP environments
 - Cost savings using zAAP for Java batch
- **Integrate with z/OS WLM**
 - Execute Java batch jobs on demand
 - SMF accounting records for Java batch
- **Application edition management**
- **Participate in flexible data fabrics and unlock data in z/OS using ObjectGrid**

WebSphere Application Server for z/OS

- **Full 64-bit support**
 - Eliminates the 1 GB heap for larger applications
- **New IBM HTTP Server powered by Apache**
 - The industry's leading Web server to z/OS to simplify administration and reduce the need for specialized skills
 - Completes unification



WSRR supports a number of current environments used in an SOA production framework

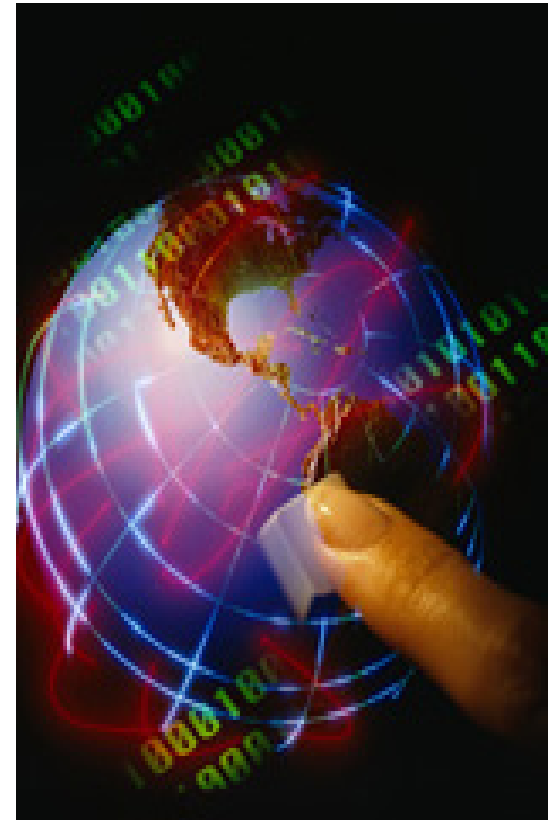


- Intuitive and easy to get started capabilities
- Scalable and reliable infrastructure
- Federated service metadata
- Enhanced SOA Governance
- Improved service document representation
- Policy Validation and Enforcement Technology preview
- Early Access Program driving collaborative development approach with customers

When to Deploy New Services on System z

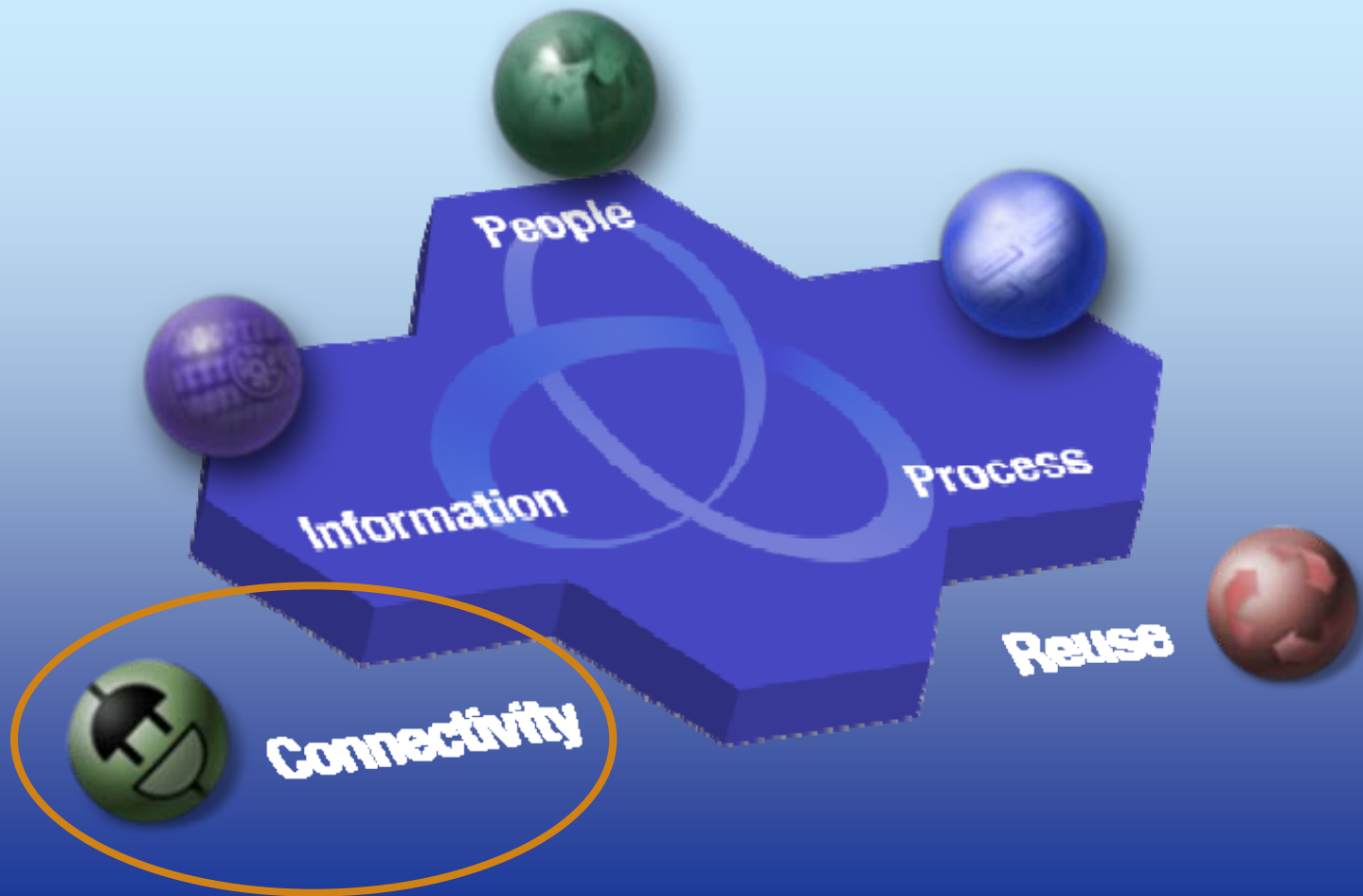
Combine the availability, scalability and security of System z with the industry leading Application Server for:

- **Integration with existing mainframe assets**
- **High performance access to customer information**
- **Server consolidation and simplification of spiraling server assets**
- **Zero downtime for services that drive the business**
- **Exploitation of Java/J2EE programming skills**
- **Uninterrupted support of unpredictable workloads**
- **Lowest TCO for the lifetime of the application environment**



Hardware, operating system, and middleware working together to bring true 99.999% application availability to your business critical services.

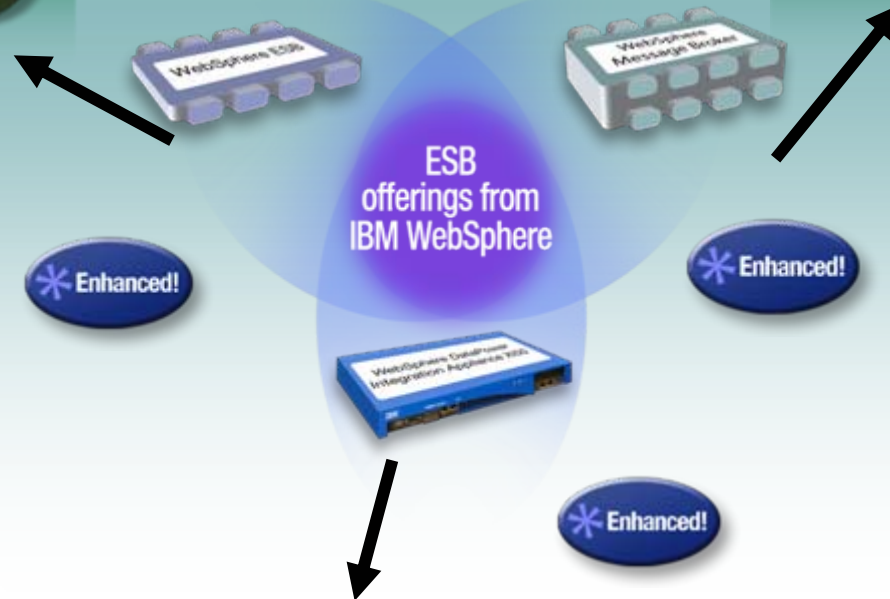
SOA Entry Points: Announcements



WebSphere ESB

- Dynamic endpoint selection, administration and configuration
- Increased performance and throughput
- Enhanced connectivity with WebSphere MQ and Message Broker
- Integration with WebSphere Service Registry and Repository
- Enhanced support for ITCAM for SOA and WebSphere Business Monitor
- Supports new Adapters for z/OS

The right ESB offering for the full range of connectivity needs



WebSphere Message Broker

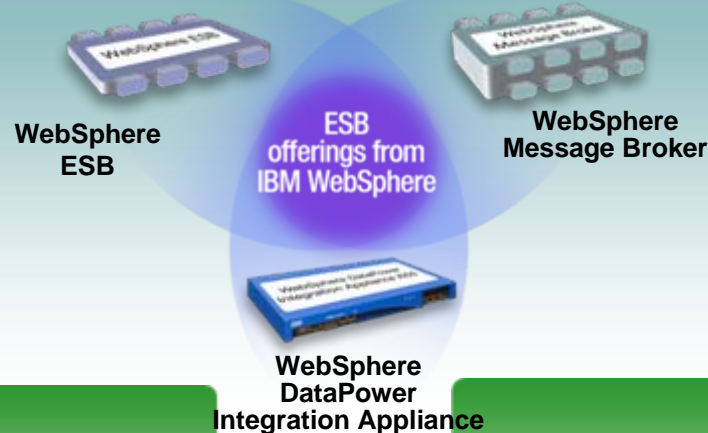
- Advances in development toolkit
- Integration with WebSphere Service Registry and Repository
- Single administration console with MQ Explorer
- New graphical performance analyzer
- Built-in configuration console to exploit DataPower for WS-Security scenarios

WebSphere DataPower Integration Application

- Enhanced integration with WebSphere MQ on z
- New integration with WebSphere Service Registry and Repository and Transformation Extender
- Better protocol mediation and bridging
- ITCAM SE for WebSphere DataPower for simplified policy management and clustering

Transforming and Adapting for Mission Critical SOA

The right ESB offering for the full range of connectivity needs



New and Enhanced!

Universal Transformation and Industry Support

- Common tooling with WebSphere TX Design Studio across the IBM Connectivity portfolio enabling improved ESB federation
- Support for industry solutions – WebSphere Transformation Extender Packs for SEPA

New and Enhanced!

Accelerate service enablement with Adapters

- New and enhanced and adapters for z/OS:
 - e-mail, JDBC, Flat File, FTP, and SAP
- Enhanced Toolkit for developing custom adapters
- Integration with common tooling – WebSphere Integration Developer

When to use System z as the Hub for your ESB

ESB requirements

Integration:

- Complex transactions and roll back
- Monitor end-to-end transactions in complex configurations
- Allocate resources according to business goals
- Provide single point of control across the enterprise
- Meet security and regulatory requirements

Business criticality:

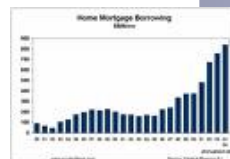
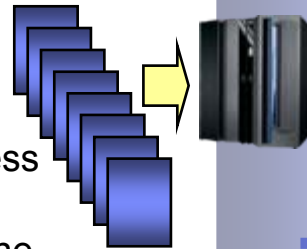
- QoS is a high-priority factor for shared services
- Need to handle unpredictable workloads
- Business services are reused by an increasing number of critical applications
- Security is key

Performance:

- Key applications and data reside on System z

Growth:

- Quickly add new services and capacity with no disruption to apps or users



System z benefits for ESBs

Virtualization

- High resource utilization
- Massive consolidation and simplification
- Enterprise-wide workload management
- Workload isolation and security
- Leverage existing infrastructure and skills

Handling business critical workloads

- Up to 99.999% availability
- Recovery of whole systems across vast distances
- Automated recovery from failures
- Dynamic workload balancing
- Simplification of security management

Performance

- ESB performance improvements when co-locating with z/OS data.
- Customer PoC example - Average CPU time **reduced by over 77%**

Efficient growth

- Pay for what you use, add capacity and applications quickly and automatically, avoid proportionate people costs growth

Continued focus on skills for System z Practitioners



Business Partner Program



University Program

NC STATE UNIVERSITY



- New SOA advanced practitioner certification
 - New ISV support for IBM SOA Industry Roadmap
 - Enhanced SOA Business Catalog
 - 218+ new and enhanced SOA product courses
-
- 82 additional universities delivering IBM SOA, BPM & Service Science curriculums by year end
 - 11 new courseware offerings for SOA
 - Launched the Student Opportunity System for Service Science
-
- **Challenge:** Prepare engineering and computer science students for jobs with System z business systems
 - **Solution**
 - Introduce SOA curriculum into courses
 - Developing a specific SOA for System z curriculum
 - **Value:** Students exposed to SOA and gained experience applicable to future employment

Introducing...



Dr. O'Neal Smitherman

VP for Information
Technology and CIO

Ball State University

Muncie, Indiana





Questions and Answers

Case Study: WebSphere Portal Makes the Grade

Saskatchewan Wheat Pool



▶ **Business Challenge:**

Existing application was not meeting the needs of customers, employees, and producers for delivering timely information. Their 24% of the Canadian Prairie Provinces' wheat market meant they needed to find a reliable and responsive solution.

- ▶ **Solution:** Provide customers and partners access to real-time information on the Web
- ▶ **Results:** High customer satisfaction; Greater employee satisfaction; Framework for implementing new services; Web-based access to its application environment; Expandable portal infrastructure
- ▶ **Implementation Details:** WebSphere Portal Enable, Tivoli® Access Manager for e-business, Tivoli Identity Manager, WebSphere Application Server Network Deployment on Linux on System z, IBM System z9™

Case Study: Customer deploys on System z because of inherent QoS

Federação das Empresas de Transportes de Passageiros do Estado do Rio de Janeiro

▶ **Business Challenge:**

Replace costly and slow paper based ticketing with a smartcard based e-ticketing solution, with Web purchasing; reduce fraud and cut costs



FETRANSPOR
FEDERAÇÃO DAS EMPRESAS
DE TRANSPORTES DE PASSAGEIROS
DO ESTADO DO RIO DE JANEIRO

- ▶ **Solution:** Streamline its ticketing operations, reduce fraud and cut costs, and at the same time improve the customer experience.
- ▶ **Results:** Reduction in fraudulent travel; Lower ticketing administration costs; New information-gathering capabilities to assist business management; Reduced time spent in line for customers; Better total traveler experience
- ▶ **Implementation Details:** Working with Montreal Informática and IBM Business Partner Ingram Micro, implemented an IBM eServer™ zSeries® 890 (z890) server, WebSphere Application Server for z/OS, DB2 Version 8 for z/OS and a suite of DB2 Tools for z/OS

Case Study: New channel provides competitive edge

EBS Building Society



▶ **Business Challenge:**

Add a new distribution channel for selling mortgage loans by using information technology to deliver a more compelling offering to brokers

- ▶ **Solution:** New online channel for reaching broker community that enables brokers to connect seamlessly with EBS from within their own companies' online business systems
- ▶ **Results:** Mortgage application processed in just hours compared with 2-3 days taken by competitors; EBS now sells through the top 180 independent mortgage brokers in Ireland
- ▶ **Implementation Details:** CICS Transaction Server, Rational® Application Developer for WebSphere Software, Rational Unified Process, WebSphere Process Server, SUSE Linux Enterprise Server, IBM eServer 890

Case Study: Easy linkage between time-proven core business processes and new business models

University of Florida

- ▶ **Business Challenge:** Develop administrative framework for packaged student health program



- ▶ **Solution:** Administrative support for health education mandated by university to reduce student problem behavior
- ▶ **Results:** Lower total cost of ownership than any other implementation on campus; subsecond responses on Web; ability to complete implementation in a fraction of the time required by other platforms; seamless integration with existing, locally written CICS Web-based UF Student Records System
- ▶ **Implementation Details:** CICS Transaction Server for z/OS, Version 3, DB2 for z/OS, Version 7.1, Tivoli OMEGAMON XE for z/OS, IBM System z9 Business Class (z9 BC), IBM System Storage™ DS8100

Case Study: An innovative approach to online games

Hoplon Infotainment

- ▶ **Business Challenge:** Offer a robust, streamlined, open standards-based deployment platform for a new online game

HOPLON
Infotainment is our Game

- ▶ **Solution:** Create a game deployment platform with a modular structure that was scalable and flexible
- ▶ **Results:** System z provides outstanding speed, availability, reliability, scalability and performance; System z provides highest available levels of security, protecting the game from hackers as well as preserving Hoplon's investment and market presence
- ▶ **Implementation Details:** Linux, WebSphere, Rational Purify; DB2 based TaikoDom game is hosted by IBM on an IBM eServer 900 (z900)

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