



IBM Systems & Technology Group

# Announcement Overview



**INTRODUCING THE NEW IBM zSYSTEM 9**  
MORE THAN A SERVER, IT'S A HOLISTIC APPROACH  
TO SYSTEM DESIGN

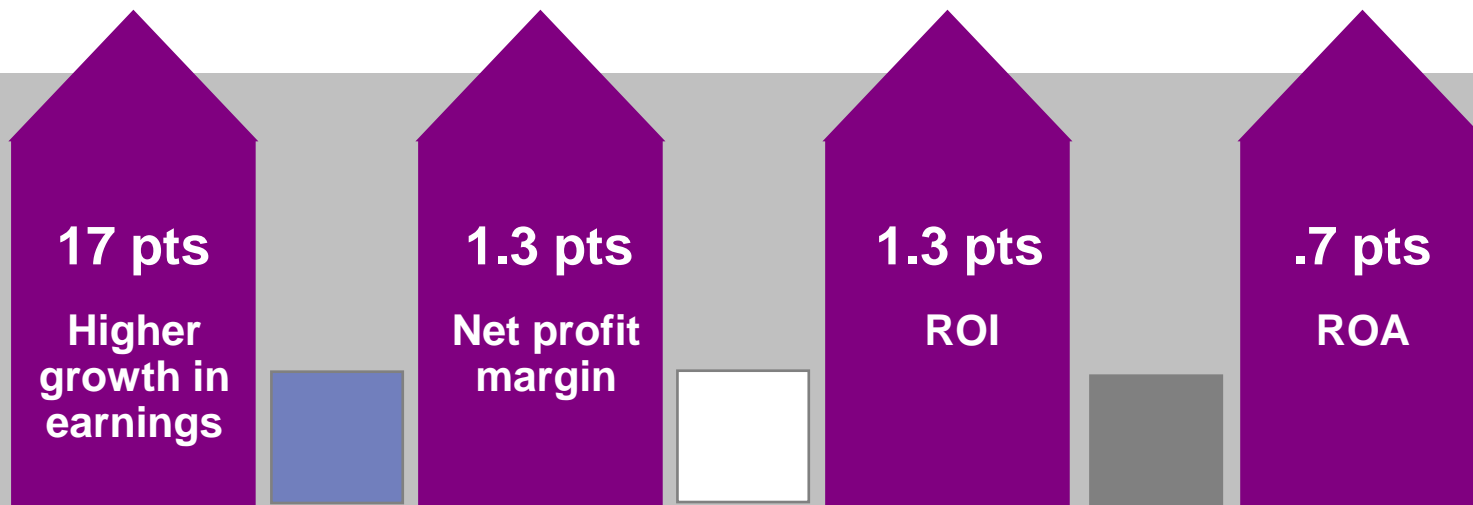
## □ An On Demand Business is:

An enterprise whose business processes—**integrated end to end** across the company and with key partners, suppliers and customers—can **respond with speed** to any customer demand, market opportunity or external threat.



# On Demand Business means superior results

## Improvement in performance metrics vs. industry peers\*



\*Source: IBM On Demand Business Impact Research Analysis, April 2005

## Time for a change, but...



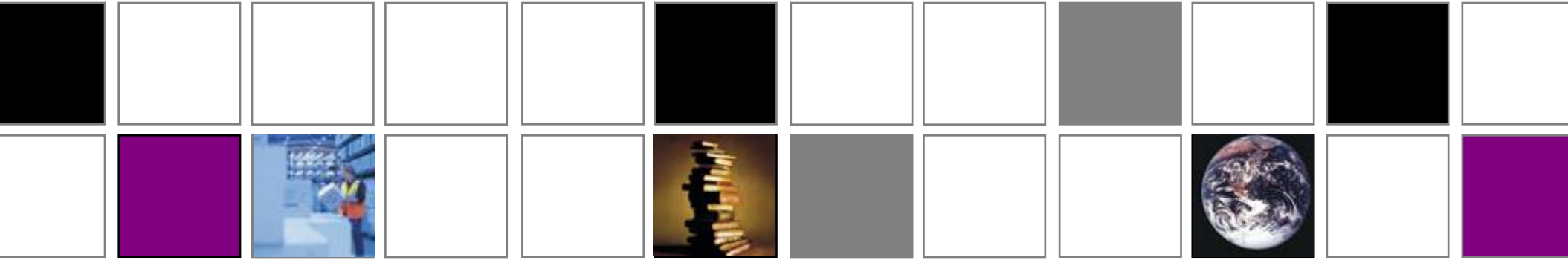
***Data centers have become so fragile that administrators are fearful to touch the existing infrastructure, since any changes may set off a series of events that can bring a company to its knees. Consequently, many enterprises are restricted in deploying innovative applications that could potentially create competitive advantage.***

—The Yankee Group. \*\* January 5, 2005



Source: The Yankee Group, "Considerable Savings Are Possible Using Grid Computing and Virtualization Technologies," Research Notes, January 2005.

# Client challenges with existing computing model



## Economics

- Utilization
- Operations
- Labor cost

## Risk

- Security
- Data integrity
- Sarbanes-Oxley

## Delivery

- Response time
- Availability
- Time to value

# On Demand Business demands a new computing model

- **Transforming the economics of infrastructure**
  - Delivering an exponential improvement over current IT economics
- **Reducing risk**
  - Fully integrating a simpler, more secure infrastructure
  - Relying on virtualized resources for more business flexibility
- **Easing delivery**
  - Enabling collaboration at every level—even beyond the company's door—  
with a system built on open and industry standards



# IBM applies a new way of thinking to systems

- **On Demand Business requires a focus on integration**
- **This requires a new, integrated computing model**
- **Why now?**
  - Open standards, virtualization and middleware are rapidly maturing
  - Technology and bandwidth enable a return to centralization
    - Customers find that the mainframe is a key integration point
    - Virtualization is a force for openness, integration and investment protection
    - New system approaches are gaining rapid client acceptance
  - Clients want simplification; they are experiencing diminishing returns from existing computing model



# IBM's holistic approach to systems design

*The computing model for the On Demand Business*

- **Bringing together industry-leading technologies**

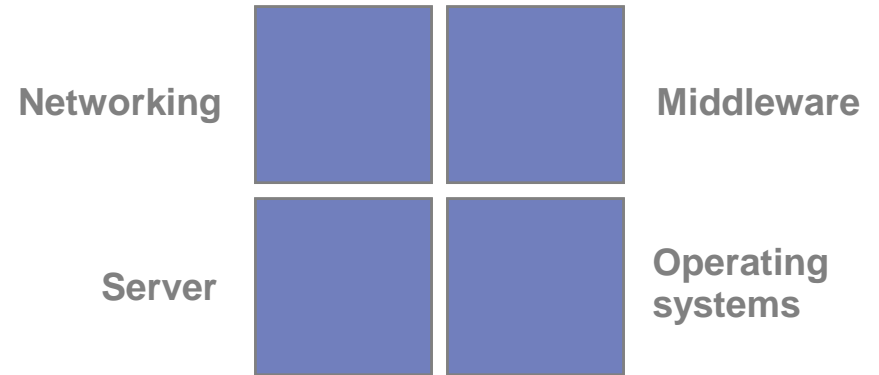
- Servers
- Operating systems and middleware
- Storage and networking technologies

- **Resilience and security built in across the entire system**

- **The system has intelligent capabilities to self-optimize**

- Across diverse resources
- Across multiple workloads
- As it constantly aligns with business priorities

- **Quality-of-service requirements drive platform selection**



**Holistic system design is at the heart of zSystem today**



*An approach where components are designed, developed and optimized to work together toward a common set of objectives*





# The integrated computing model

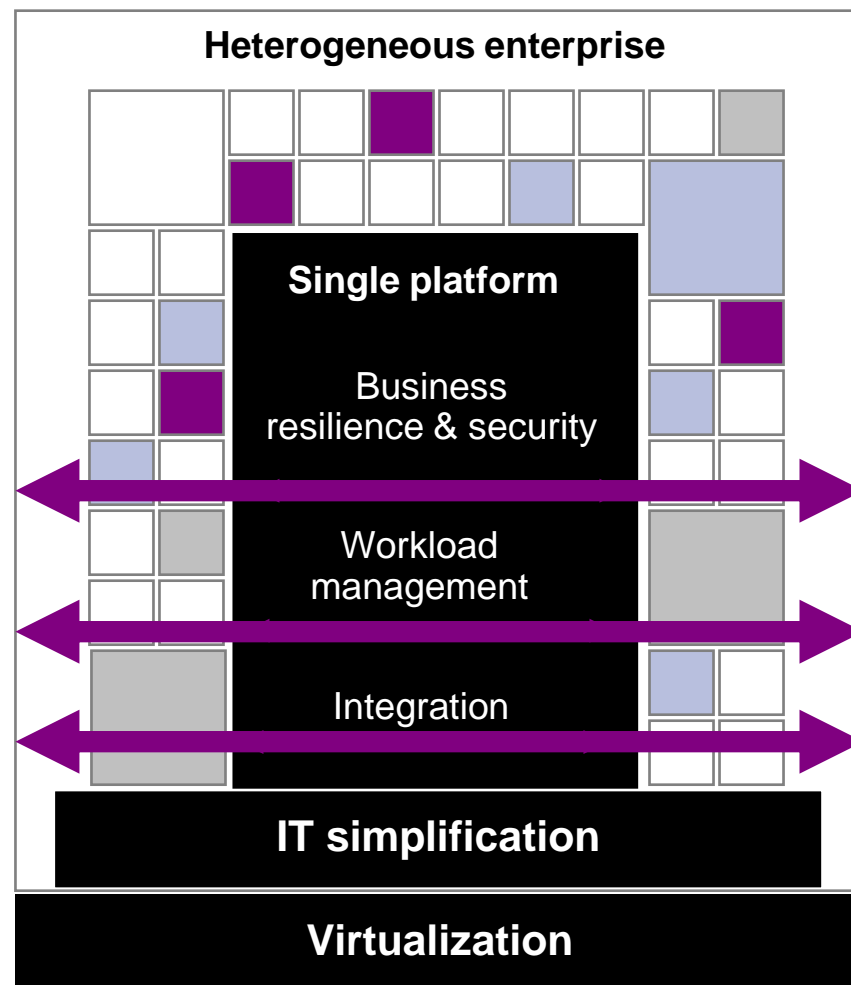
*A simplified, structured approach to managing your mixed environment*

## ▪ What does it allow you to do?

- Centrally integrate data, transactions and applications to better align with business processes
- Centrally manage the infrastructure, spanning heterogeneous platforms
- Optimize resource use across the infrastructure
- Allocate enterprise-wide resources according to business priorities
- Continue to build upon high levels of security and resiliency

## ▪ How is it enabled?

- A simplified, virtualized foundation
- Key open and industry standards throughout
- Key capabilities extended from homogeneous world
  - Business resilience and security
  - Intelligent workload management
  - Business integration



# IBM announces the IBM zSystem 9

*Delivered via a holistic approach to systems design*

## ▪ Built on IBM's industry-leading mainframe technologies

- Virtualization of key resources
- Resilience and security
- Intelligent workload management
- Data, transaction and application integration



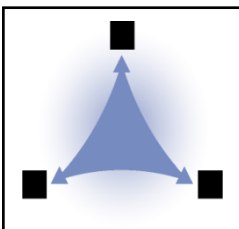
## ▪ Holistic systems design featuring

- An all-new server, that's more:
  - Secure
  - Available
  - Scalable
- Announcing new software designed to further:
  - Integrate applications and information
  - Enable resiliency across the enterprise
  - Manage the breadth of the infrastructure
  - Simplify IT operations
- Working with networking and storage to deliver:
  - Improved responsiveness
  - Lower costs
  - Higher availability
  - Better recoverability

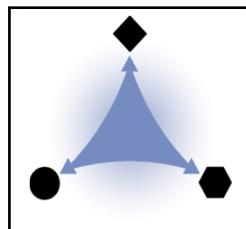
# z9 is built on IBM's industry-leading technologies

- **Nearly four decades of IBM virtualization heritage and technology enhancement**
  - Shares processors, memory and channels between mixed application workloads
  - Highly granular allocation and reallocation of resources on the fly according to business priorities
- **With virtualization comes simplification**
  - Create multiple virtual servers on a single system
  - Create virtual pools of storage not tied to any specific hardware
  - Run diverse applications, even multiple operating systems, simultaneously without necessarily investing in new hardware
- **IBM plans to extend technologies in z9 to intelligently manage virtualized resources**
  - Across multiple resource pools
  - Spanning heterogeneous platforms
  - Automatically across the entire infrastructure

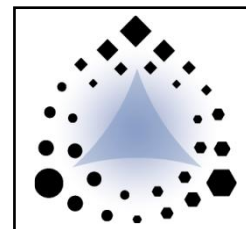
Virtualize like  
resources



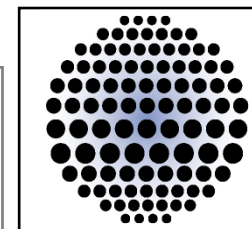
Virtualize unlike  
resources



Virtualize the  
enterprise



Virtualize beyond  
the enterprise



## z9 extends leadership in business resilience and security

- **Enhancing business resilience with systems designed to help:**
  - Reduce scheduled downtime
  - Reduce unplanned outages
  - Extend the industry-leading backup capabilities to specialty engines
  - Provide near-continuous data availability in a solution designed for enterprises of all sizes
  - Reduce recovery time from planned or unplanned disk outages
  
- **Strengthening business security with systems designed to help:**
  - Improve client responsiveness by increasing secure transactions throughput
  - Strengthen security through enhanced encryption and hashing algorithms
  - Secure access control to all data and system resources
  - Respond automatically to external and internal network intrusions
  - Manage security and monitor compliance through a comprehensive set of security solutions
  - Deliver an integrated and certified Certificate Authority solution



*Helping secure and strengthen the enterprise*



# z9 extends leadership in intelligent workload management

- **A system designed to enhance workload management**
  - Improve alignment of enterprise-wide resources with business priorities
  - Provide visibility of enterprise-wide infrastructure resource associations by business process
  - Extend workload management scope across diverse, multitier server platforms by providing the ability for end-to-end transaction monitoring
  - Extend ability for external solutions to intelligently manage network traffic



*Working across the enterprise*



# z9 extends leadership in business integration

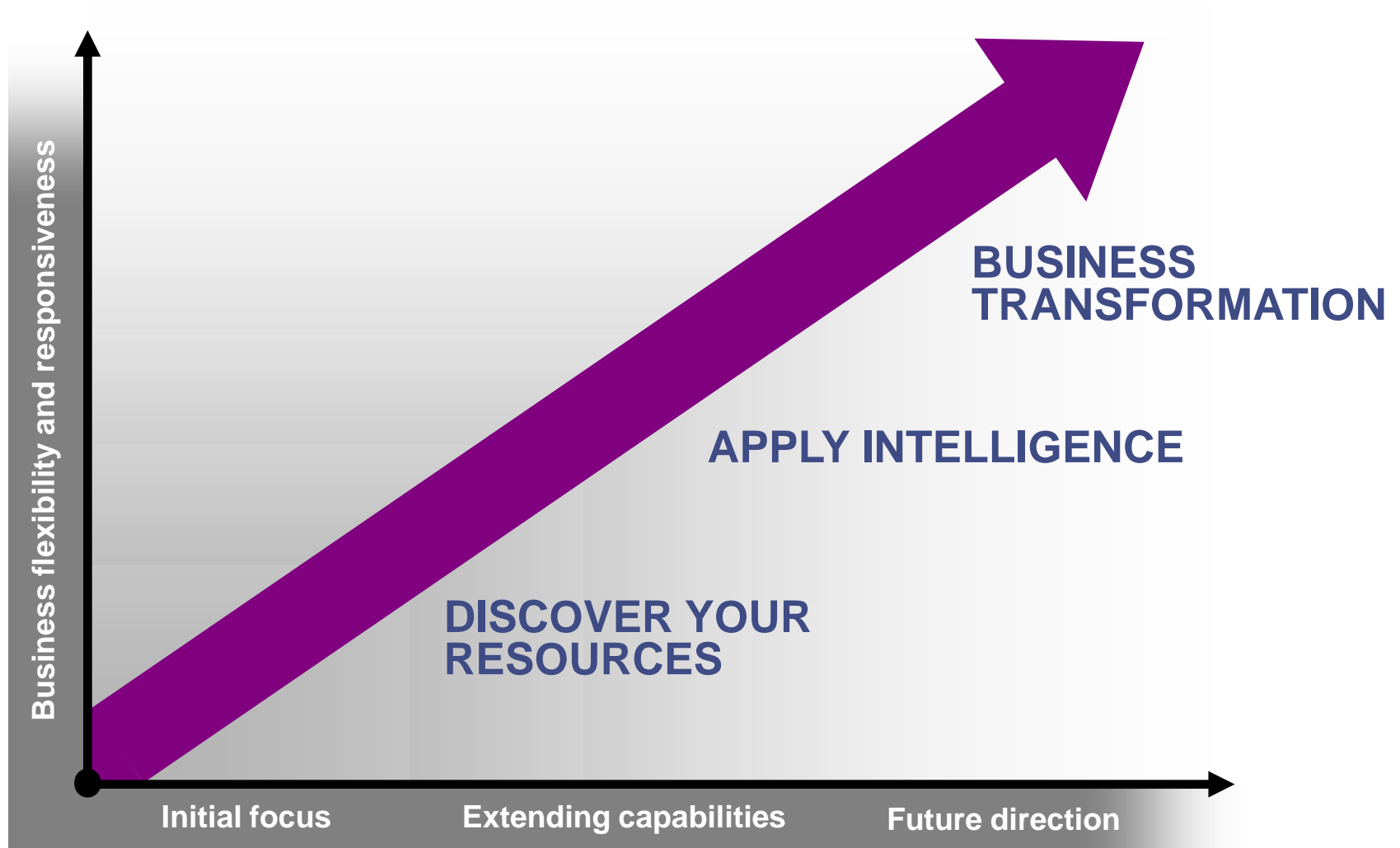
## ▪ **Helping better integrate across the infrastructure**

- Increasing flexibility and lowering costs through enhanced virtualization capabilities
- Expanding opportunities to integrate new and existing applications
- Providing broader support for Web services
- Enhancing the IBM WebSphere® product family to help:
  - Accelerate application development and improved flexibility
  - Enable enterprise-wide integration across 35 platforms
  - Enhance enterprise-wide information integration

*Integrating the enterprise*

# Creating an integrated infrastructure starts now

*The transformation roadmap over the next five years protects your investment*



**Expanding the role of IBM zSystem 9**

# A foundation of excellence and a plan for the future

	TODAY	FUTURE
<b>Business resilience and security</b>	<ul style="list-style-type: none"> <li>• Designed to prevent electronic theft</li> <li>• User identity assurance</li> <li>• Data protection</li> <li>• Virus immunity</li> <li>• Backed by the highest levels of certification</li> <li>• Availability built in across the platform stack</li> <li>• Designed for less than five minutes of planned or unplanned downtime per year</li> </ul>	<ul style="list-style-type: none"> <li>• Single user identity</li> <li>• Centrally define security rules across workflows</li> <li>• Central source for enterprise-wide security, privacy and availability policy management</li> <li>• Predictive resource failure detection and end-to-end business process recoverability</li> <li>• Flexibility for granular recovery</li> </ul>
<b>Intelligent workload management</b>	<ul style="list-style-type: none"> <li>• Capable of intelligently managing multiple diverse workloads simultaneously on a single system</li> <li>• Designed to reallocate resources on the fly</li> <li>• Typical utilization rates of 70 to 90 percent</li> </ul>	<ul style="list-style-type: none"> <li>• Automatically disperse applications and transactions prioritized by business need</li> <li>• Optimize utilization of enterprise-wide resources</li> <li>• Business policy and infrastructure synchronization</li> <li>• End-to-end workload balancing across virtualized resources driven by business priorities, cost and SLA targets</li> </ul>
<b>Business integration</b>	<ul style="list-style-type: none"> <li>• Deep integration across the platform stack</li> <li>• Optimized to integrate multiple workloads</li> <li>• Platform of choice for: <ul style="list-style-type: none"> <li>– <i>Corporate data server</i></li> <li>– <i>Mission critical, enterprise-wide applications</i></li> <li>– <i>Integration of legacy and new workloads</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Centralized integration point for enterprise-wide business applications and data</li> <li>• Integration and autonomic management across an SOA better enables enterprise data, business processes and infrastructure resources</li> <li>• Simplify, integrate and automate application deployment across the enterprise</li> </ul>

## Virtualization and IT simplification



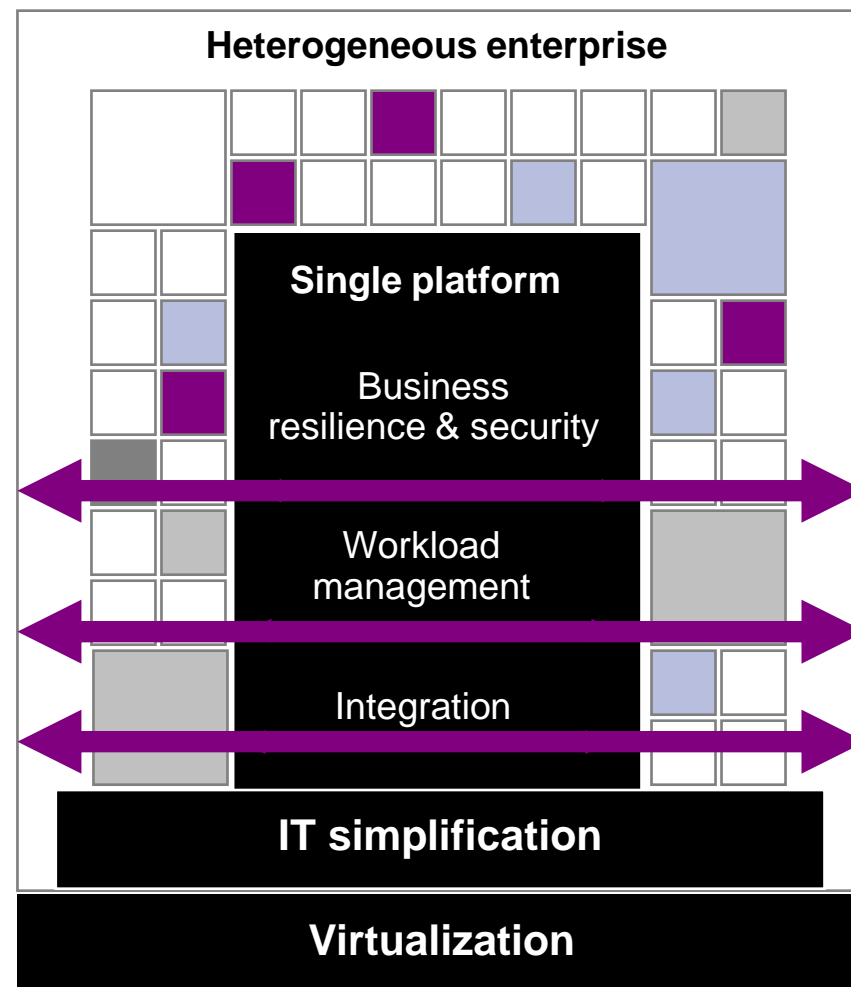
# IBM zSystem 9

*Meeting business needs today, providing a foundation for the future*

- **Extending its leadership in**
  - Business resilience and security
  - Intelligent workload management
  - Business integration
- **Designed with a holistic systems approach**
- **Able to intelligently manage across the enterprise**

*“Leadership is not only about technology innovation, but also delivering value and actively supporting the mainframe.”*

*IBM Mainframe Charter*

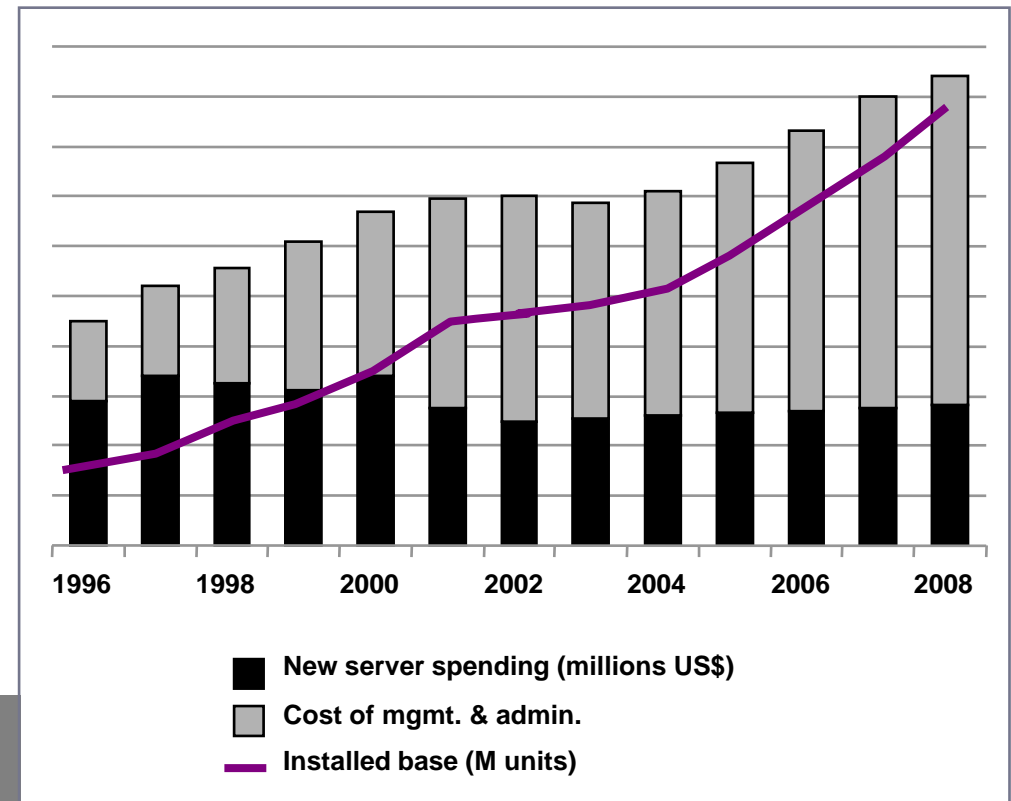


# Getting the most value from your IT

*Wringing costly complexities out of an untamed environment*

- **Simplifying and integrating today's environment to drive our costs**
- **Driving down costs requires taking control**
  - Simplify and consolidate
  - Manage key infrastructure capabilities end to end
  - Automate resource optimization
  - Get the most out of your IT investments

## Expenditures for people vs. new systems



Source: IDC, *On-Demand Enterprises and Utility Computing: A Current Market Assessment and Outlook*, IDC #31513, July 2004.

*Control spiraling costs without compromising flexibility*

# Getting the most value from your IT

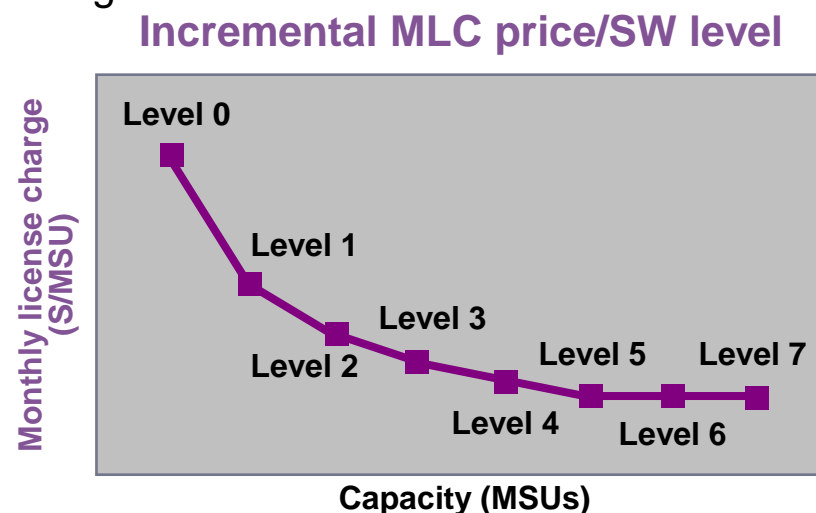
*Innovative technology and pricing that helps protect your investments*

## ▪ With innovative technology...

- Industry-leading resilience practically eliminates costly downtime
- World class workload management capabilities can put resources where needed, driving the highest utilization versus UNIX® and Intel® technology
- Intelligent systems management capabilities detect and fix problems on the fly, freeing up resources
- Open platform allows modernizing and leveraging existing applications and data
- Specialty engines help to better integrate with and leverage existing assets
- Broad upgradeability helps protect your investment

## ▪ With flexible pricing and financing terms...

- Subcapacity pricing better aligns software costs with usage
- Excellent economies of scale
- Capacity on demand offerings provide new ways to grow
- High residual values ease upgrade costs
- IBM Global Financing leasing can optimize total cost of ownership, tax advantages and available cash for reinvestment



# Getting the most value from your IT

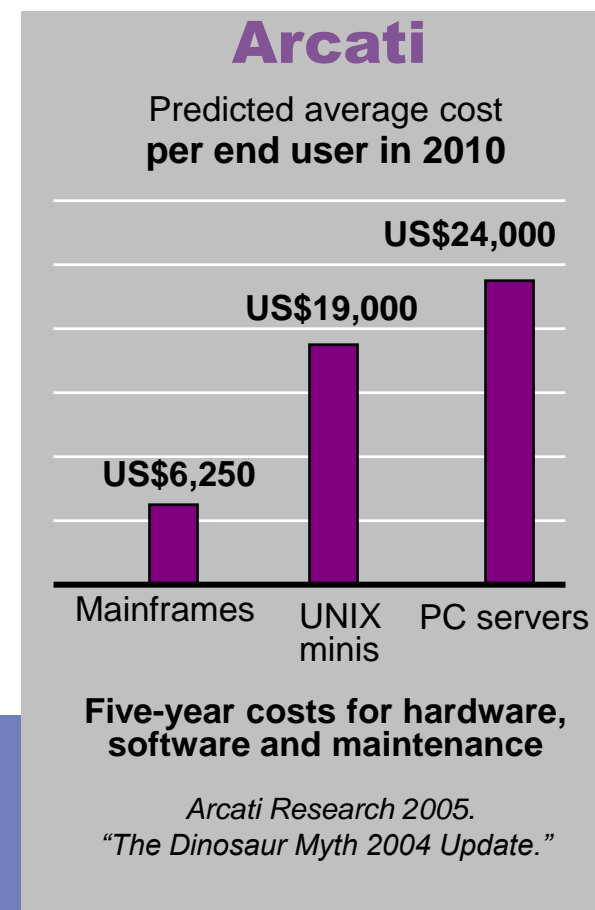
*Delivering value today and tomorrow*

## ▪ The mainframe charter recognized the need to continually improve price performance

- Lowering costs across the board with each successive generation
    - z9 hardware cost down 58 percent from IBM <sup>®</sup> zSeries<sup>®</sup> z900 server
    - Specialty engines delivered a 114 percent price performance improvement from z900
    - No charge MES for specialty engines
    - z9 memory pricing now at US\$8,000 per gig
    - z9 hardware maintenance cost down 53 percent from z900
  - Delivering better value out of your software
    - z9 delivers at 19 percent reduction in chargeable MSUs from z900
    - Innovative integration solutions with zAAPs
    - Competitive tools portfolio
  - Delivering aggressive pricing to enable new workloads
- The mainframe charter will continue with innovative and flexible pricing, providing solid value
- Further refinement in utilization pricing metrics
  - Further leveraging specialty engines to improve integration and provide differentiating value

**Prediction:** *The five-year cost of mainframes will be one third of UNIX mini environments and one quarter of PC server environments.*

*Arcati Research 2005. "The Dinosaur Myth 2004 Update."*



## Continued investment in skills for the IBM zSystem 9 community

### ▪ **Enhancing mainframe skills today**

- “In-house” training for clients
- Global z9 road shows and workshops build client’s design skills
- Significant investment in Technical Skills Vitality initiative and certifications

### ▪ **Advancing toward goal of 20,000 skilled mainframe professionals in marketplace by 2010**

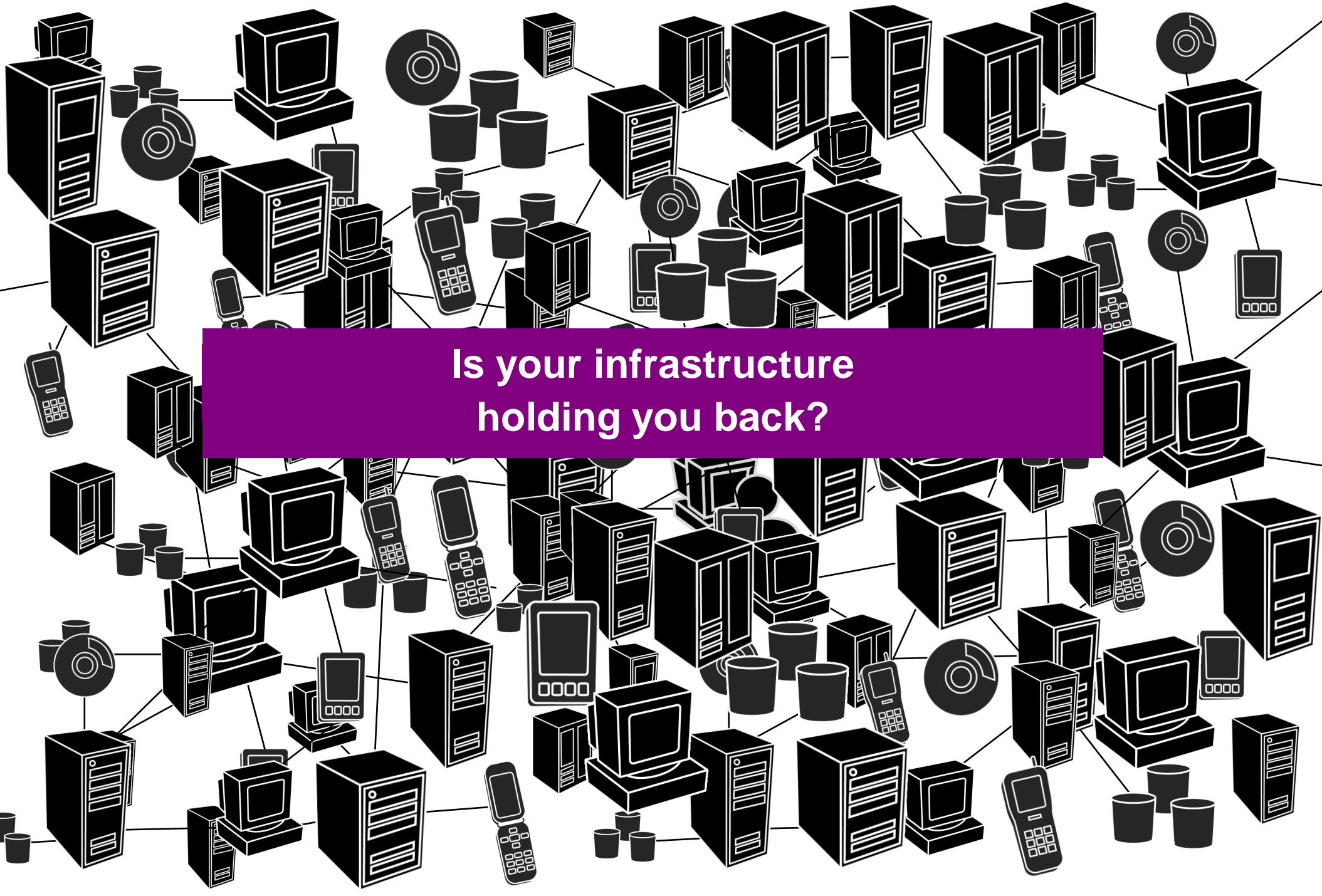
- Exponential growth in IBM Academic Initiative for z9
- Ten new or updated courses and more by end of year
- Educating university students worldwide

### ▪ **Simplifying IBM z/OS<sup>®</sup> management for next generation of IT professionals**

- Automated tasks include operations, problem determination and configuration
- Easy to use and learn z/OS management portal
- z/OS “basics” information designed for new users
- Integrated with IBM Tivoli<sup>®</sup> software and other systems management products

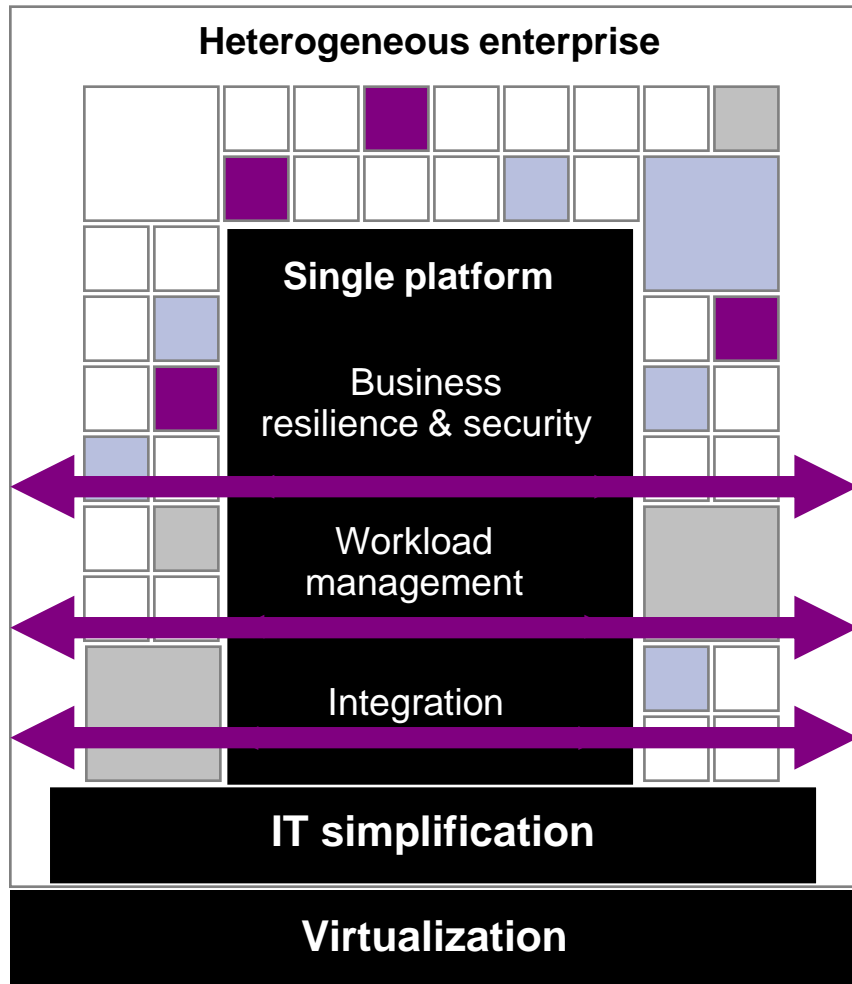
## Improved solutions and deployment through the IBM zSystem 9 community

- **Extending application choice in z/OS and Linux® operating systems— 50 new ISVs and 150 new applications per year**
  - Double-digit growth of WebSphere applications on z/OS systems
  - Over 40 percent growth in Linux technology-supported software
  - Strategic partnerships enrich portfolio in business intelligence and security
  - Networking alliance with CISCO for enterprise infrastructure transformation
- **Leveraging reference architectures to help build better industry solutions**
  - Core banking and financial market stock exchange plus new stock exchange and brokerage, insurance and social services reference architectures
- **Enhancing technical support to aid z9 deployments, while focusing on customer relationships**
  - Strengthened support structure in emerging markets, such as China
  - New high availability centers and roadmaps provide recommendations to achieve better levels of availability
  - Increased specialized resource for SAP, Siebel and PeopleSoft deployments



**Is your infrastructure holding you back?**

# Innovation that is right for today and ready for tomorrow



Secure

Resilient

Intelligently managed

Integrated

## IBM zSystem 9





# Roadmap details

# Extending IBM zSystem 9 security and business resiliency strengths

## *Security and business resiliency management hub of the enterprise*

### Today's capabilities

- Up to 99.999 percent availability across all zSystem resources by avoiding planned and unplanned outages
- Minimizes interruption through intelligent management of system resources based on business priorities
- Enables zSystem end-to-end integrity of data with capability to secure at granular user level



### *Future direction\**

- z9 becomes the enterprise-wide business resiliency and security **manager**, enforcing end-to-end regulatory compliance and security policies **enabling** predictive failure detection and the ability to initiate intelligent recovery actions **without intervention**.



### *Extension of capabilities\**

- Enable z9 to **monitor and track** security compliance and resiliency across the enterprise with the ability to identify compliance issues, points of failure and the scope of recovery to be managed for mission critical business processes.



### *Initial focus\**

- Simplify enterprise-wide adherence to a common regulatory compliance and privacy policy.
- Enable enterprise-wide asset and infrastructure resource associations to be **discovered and mapped** by business process.

\*All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

# Extending IBM zSystem 9 security and business resiliency strengths

## *Security and business resiliency management hub of the enterprise*

### **Real world scenarios... bringing the vision to life**



#### **Initial focus\***

- The ability for a bank to leverage simplified cross-platform security control, audit and reporting tools to satisfy consumer privacy and regulatory compliance needs (Sarbanes Oxley, HIPAA, etc.).
- The ability to identify all the pieces of an ATM business process from zSystem 9 server through other servers all the way to the Web.



#### **Extension of capabilities\***

- z9 monitors banking transactions for potential security and compliance issues. Recommendations to resolve the issues are identified, enabling the business to continue to achieve its privacy and compliance objectives.
- Complaints indicate that ATMs are running slowly. The ATM business process is performing as required on z9, and recommendations to resolve the issue elsewhere are presented by z9.



#### **Future direction\***

- The enterprise is able to achieve business objectives, regulatory compliance and privacy requirements for all business processes (ATM, loan, payroll, etc.) through z9 monitoring, detecting and correcting potential issues without intervention.

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# Extending IBM zSystem 9 security and business resiliency strengths

## *Security and business resiliency management hub of the enterprise*

### **The enabling technologies... making the vision a reality**



#### **Initial focus\***

- Resource Dependency Services: End-to-end topology of business applications
- Capacity BackUp for Specialty Engines
- Improved concurrent capabilities: Dynamic Book replacement, Enhanced ECC, Dynamic Oscillator failover
- GDPS/PPRC HyperSwap Manager and HyperSwap extensions; GDPS Global Mirror
- TCP/IP Load Balancer Integration with WLM & EWLM
- DVIPA Reclamation
- Synchronize identity across data sources in real time with IBM Tivoli Directory Integrator – z/OS
- Simplify cross-platform authentication and access control on z/OS: Tivoli Federated Identity Manager – z/OS native
- Identify, track and correct security threats and regulatory compliance with key ISV solutions: Consul, Vanguard, Beta
- Certifications and compliance with industry standard specifications: CAPP, LSPP, EAL3,4,5, FIPS 140-2 HW, Indetrus – FSS



#### **Extension of capabilities\***

- OD BR Autonomic Manager; Initial integration of z/OS BR policy with ODBR; Integrate GDPS and BR Framework
- Standard and reusable model of application and infrastructure resources; Dynamic RDS topology updates
- Enable z/OS operating system as business resilience management server
- GDPS Multiplatform Resiliency for z9 support for Native Linux on z9 and SCSI
- Enable business modeling tools to generate availability policy
- TCP/IP Sysplex autonomies
- IBM DB2® – Entity Analytic Solution – applicable to Oracle and Microsoft® systems
- Cryptographic modules certified to the latest standards
- LDAP rebrand as Tivoli Directory Server for z/OS
- Reduce help desk and IT administration with better control over resource access and audit-ability Tivoli Identity Manager for z/OS
- Secure access to business-critical applications and data spread across the extended enterprise utilizing z/OS user registry
- z/OS system supported as collection end point for TSCM



#### **Future direction\***

- Integration of other availability solutions into OD Framework
- Industry-specific solutions
- Coordinated integration with service providers
- Complete and integrated mapping of business goals to infrastructure deployment
- Predictive failure detection
- Common source of enterprise-wide audit and compliance designed to satisfy and simplify enforcement of government regulations across heterogeneous platforms
- Enterprise-wide security audit subsystem responsible for capturing, analyzing, reporting, archiving and retrieving records of events and conditions
- Standardize cross-platform authentication and access control
- More easily implement and revoke access to servers across IBM platforms
- Provide enterprise-wide privacy policy management
- Secure stored data from unauthorized access

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# Extending IBM zSystem 9 workload management strengths

## *Intelligent business director for heterogeneous environments*

### Today's capabilities

- Autonomic management of diverse zSystem workloads and system resources based on business policies and workload performance objectives
- Intelligent management of resources to enable resource utilization levels of up to 100 percent
- World class virtualization capabilities, backed by over 35 years of experience



### *Future direction\**

- z9 delivers **predictive management** and **intelligent workload balancing** of business processes across the heterogeneous environment.
- **Autonomic provisioning and intelligent allocation** of virtualized On Demand Business resources driven by business priorities, cost and SLA targets.



### *Extension of capabilities\**

- **Monitor and manage** applications end to end across platforms according to business goals, policies and workload performance objectives.



### *Initial focus\**

- **Discover and monitor** end-to-end workload transaction paths across all infrastructure resources involved.

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# Extending IBM zSystem 9 workload management strengths

*Intelligent business director of the enterprise*

## ***Real world scenarios...bringing the vision to life***



### ***Initial focus\****

- Look at all resources in a Web-based ordering system and monitor as a single transaction—from front-end Web servers to WebSphere and DB2 software running on z/OS systems. Detect bottlenecks when SLA is not being met.



### ***Extension of capabilities\****

- z/OS system can recommend corrective actions for workloads running on z9 as well as on other servers, and can distribute work to underutilized servers or dynamically reallocate and provision computing resources as required when a promotion drives the ordering system beyond its preconfigured capacity.



### ***Future direction\****

- The enterprise becomes able to achieve business objectives because characteristics from the order management system are captured by z9 so patterns can be detected, predicted and acted upon automatically.

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# Extending IBM zSystem 9 workload management strengths

*Intelligent business director of the enterprise*

## **The enabling technologies... making the vision a reality**



### *Initial focus\**

- EWLM Domain Manager for z/OS
- EWLM for Linux on zSystem
- WAS and DB2 EWLM support
- Resource Dependency Services: end-to-end topology of business applications
- IBM Director Multiplatform for Linux on zSystem
- TCP/IP Load Balancer Integration with WLM & EWLM
- Tivoli Workload Scheduler 8.2 (TWS/WLM integration)
- Cross platform technologies for systems mgmt (CIM) in z/OS, IBM z/VM® & Linux on zSystem
- WLM DB2 Stored Procedures enhancements
- TBSM & TEC for managing business service levels



### *Extension of capabilities\**

- OD Global Business Policy
- ODI RM – Autonomic Manager for z/OS
- EWLM and ODI RM - Autonomic Manager for z/OS
- EWLM for IBM CICS®, IBM IMS™ and MQSeries® software
- Service Class Correlation
- Automatic provisioning of spare processors and system resources; CPU Provisioning
- Dynamic channel path management (DCM) for IBM FICON®
- Real-time I/O subsystem self-tuning
- TBSM and TEC for managing business service levels of composite applications.
- End-to-end z9 infrastructure management and automation
- Common, open infrastructure for management and automation



### *Future direction\**

- Business policy and infrastructure synchronization
- Real-time, end-to-end z9 autonomic and predictive management of heterogeneous workloads
- Storage provisioning
- Integrated network resource management

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# Extending IBM zSystem 9 business integration strengths

## *Flexible business integrator for heterogeneous environments*

### Today's capabilities

- An industry-leading hub for mission-critical data and transaction processing for the enterprise
- An industry leader allowing seamless integration of assets across a zSystem mixed workload environment
- Deep hardware, software and middleware stack integration and optimization



### *Future direction\**

- Extend tooling to ensure business requirements are carried throughout the application development and deployment process.
- ***Provide an optimized intelligent hub for mission-critical applications and data by enabling the integration and management of business processes, resources and data across the enterprise—according to predefined business priorities.***
- Extend On Demand Business resource management capabilities to intelligently transform service requirements, as defined in the concept phase, into the optimal deployment scenario.



### *Extension of capabilities\**

- Expand SOA capabilities of z9 to cover a broader array of workloads and extend tooling to simplify, integrate and automate the deployment of applications across the enterprise.
- Enable z9 as an integration point for the enterprise services bus with capabilities to manage applications across platforms according to business priorities and workload performance objectives.



### *Initial focus\**

- Enable a flexible SOA platform with enhanced quality of service for optimum resource utilization and responsiveness.
- Drive deeper integration between the hardware, operating system, middleware and application stack.

\*All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.



# Extending IBM zSystem 9 business integration strengths

## *Flexible business integrator for heterogeneous environments*

### **Real world scenarios... bringing the vision to life**



#### **Initial focus\***

- New business function, such as an ATM application, that is tightly tied to existing zSystem applications and data is developed and seamlessly deployed without using separate tooling to manually ship the code, insert in the correct libraries, update system and environments, etc.



#### **Extension of capabilities\***

- Key components of the Java™ 2 Enterprise Edition (J2EE) technology-based ATM application are reused in a batch environment and integrated with a Microsoft .NET front end. Programmers focus on business logic without worrying about specific communications protocols, interfaces and interactions with other applications and resources.
- z9 acts as the protocol-agnostic enterprise interchange/communications broker allowing applications running across the organization to collaborate seamlessly with one another without knowing the underpinnings of the communications vehicle.



#### **Future direction\***

- Business requirements for the ATM application are identified and maintained strictly throughout the development lifecycle. At deployment the application's quality of service requirements drive the automatic provisioning and configuration of the proper resources—including z9—that satisfy these nonfunctional requirements.

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# Extending IBM zSystem 9 business integration strengths

## *Flexible business integrator for heterogeneous environments*

### **The enabling technologies... bringing the vision to life**



#### **Initial focus\***

- Flexible, market leading application infrastructure based on open-standard J2EE 1.4 with advanced deployment and scaling capabilities (WebSphere Application Server V6) including Java platform messaging.
- Embed SOA enablement directly into CICS, IMS and DB2 subsystems for zSystem data and apps to be consumed directly.
- Build, publish, discover and utilize zSystem services in an SOA using Web services.
- Comprehensive, standards-based development environment (IBM Rational® Software Development Platform).
- Enhanced access to integrated information (WebSphere Portal v5, WebSphere Information Integrator).
- Optimized enterprise modernization tools (e.g., HATS, WSED).
- Integrated, computing power dedicated to Java workloads (zAAPs) and free of IBM software charges.



#### **Extension of capabilities\***

- Next-generation Web services in WebSphere and z9 subsystems.
- WebSphere batch constructs that foster reuse of Java services.
- More flexible management of WebSphere Application Server applications (WAS XD, admin. enhancements, tooling and deployment enhancements).
- Advanced WebSphere technologies in support of process and flow programming models (WebSphere Business Integrator).
- Application integration and portfolio management tools such as WebSphere Business Integrator Modeler, WSAD enhancements, RAD for zSystem, Rational ClearCase® software, etc.
- Improvements to native Java batch support
- Hardware-based optimizations for CPU-intensive operations such as XML parsing and compression.
- Native z/OS XML processing services.



#### **Future direction\***

- z9 participates and extends system resources to the WebSphere Business Grid environment.
- Autonomic connectors.
- Differentiated deployment of SOA applications onto z/OS systems.
- Optimized and integrated enterprise service bus.
- Native SOAP services.

\*All statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

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