



System z - Strategy and Futures
“Leveraging technology for new workloads”

Mark Anzani, VP, Chief Technology Officer, System z



System z: The right technology...

45 years of market leadership



IBM System z

The world's most powerful enterprise computing platform

Improved price/performance

100s of Capacity choices for the right size server

Business Resilience

LOW COST OF OWNERSHIP

Leadership capabilities with IBM Systems software

The future runs on System z and the future begins today



Just in Time Capacity

Permanent capacity for non-disruptive growth

Temporary capacity for fluctuating workloads

Interim capacity for continued operation

Policy based automation capabilities

Offerings can be replenished dynamically



Secure and Resilient

Mitigate the risk of security breaches

Dedicated cryptographic processors

Industry leadership capabilities and certification



World-Class Virtualization

Large scale consolidation for savings of up to 80% in total cost of ownership compared to distributed platforms

Deploy servers, networks, and solutions fast

Support for multiple operating systems

Dynamically optimize resources according to business priorities

Industry perspectives

Growth and Innovation

*"...IBM has reinvented the mainframe. The **pursuit of new workloads** has been a critical aspect of the resurgence, while at the same time protecting and nurturing the installed base. The introduction of **specialty engines** has been a catalyst to the growth but represents only the first step toward a significant change in architecture during the next five years."*

Source: Gartner Data Center Conference, Dec. 2008 (Gartner The IBM Mainframe Platform Ongoing Challenges, New Opportunities)

*"Enterprises seeking to build the industry's **most cost effective service-oriented datacenters** need to look closely at IBM's hardware platforms, software products, and professional services offerings in particular – and IBM's z10 in specific. -- serves as the ideal platform for service-oriented data centers of the future".*

Joe Clabby, Clabby Analytics, Feb 2008

Cost Effective and Modern

Simplifying IT

*"For those IT organizations that have seen the light and are moving their emphasis from the never-ending challenge of trying to optimize their IT infrastructure to the more important **optimizing of the delivery of IT services, nothing beats the mainframe,**"*

Mike Kahn, The Clipper Group, February 2008

System z remains a growing product line for IBM because, during the past decade, it has morphed historical strengths into new forms aligned with today's languages, operating environments, and computing standards. And, in fact, **System z strengths such as mitigating business risk** in many forms have once again shoved their way to the fore of many IT departments' priorities. This includes protecting against hardware and site failures, managing a company's security policies and credentials, acting as a focal point for integrating the myriad applications that make up a business process, and being able to adapt to sharp spikes in load.

Gordon Haff, Illuminata, January 2009

Manage Risk

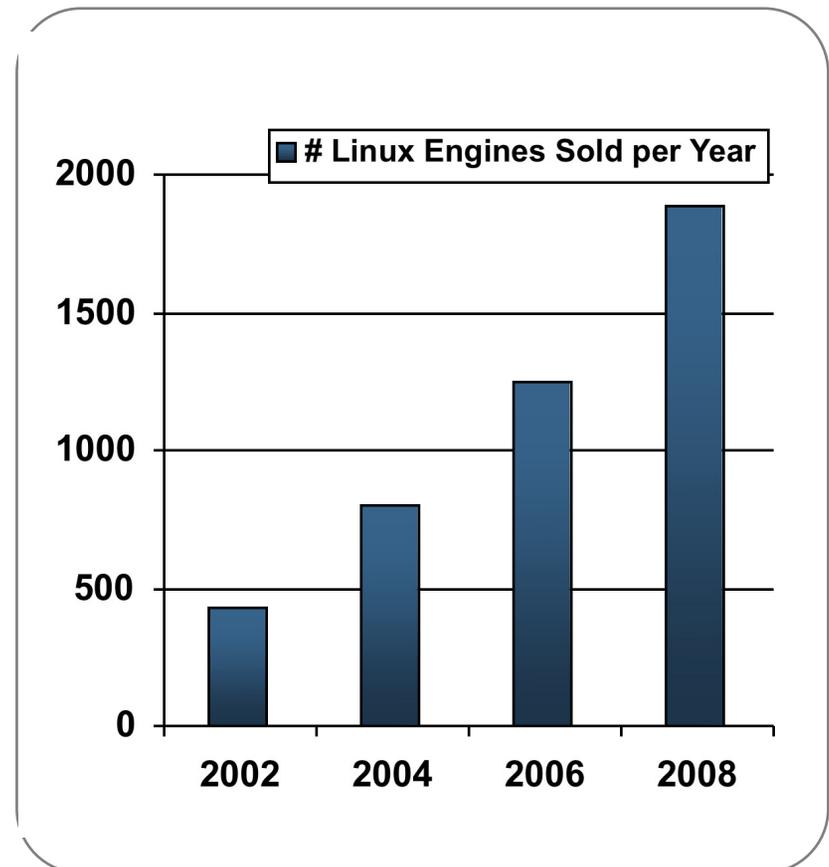
IBM System z: The renaissance continues...

System z Highlights	Full Year 2008
Hardware Revenue	11% YTY @ CC
MIPS Growth	+25% YTY
Specialty Engine MIPS	+68%
New Accounts	54
University Program	130 New Universities
ISVs	>150 New ISVs, >1000 apps

System z Linux

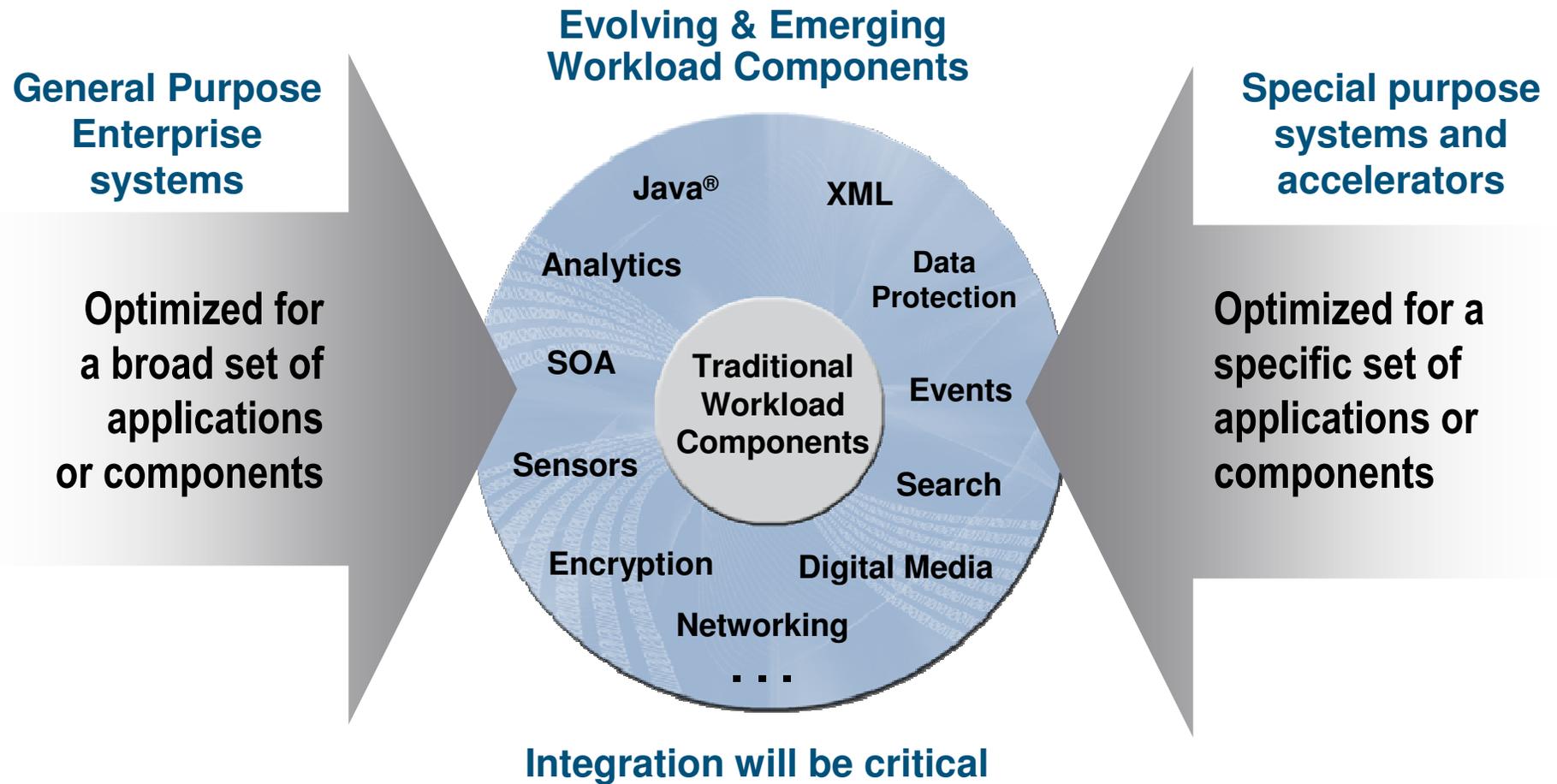
2008 New Linux Capacity on System z = ~40-60,000 x/86 cores

- **77% increase in System z Linux MIPS in 2008:**
 - **+53% in Q1**
- **22 of 54 new New System z Clients installed Linux in 2008**
- **Approximately 1,300 System z customers are now using Linux on System z**
- **Linux is ~15% of the customer System z install base (MIPS)**



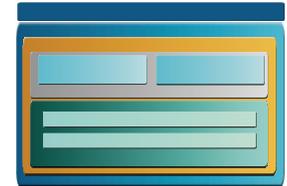
Emerging applications . . . with hybrid transactions

Future objectives include complete application integration in an optimal fashion

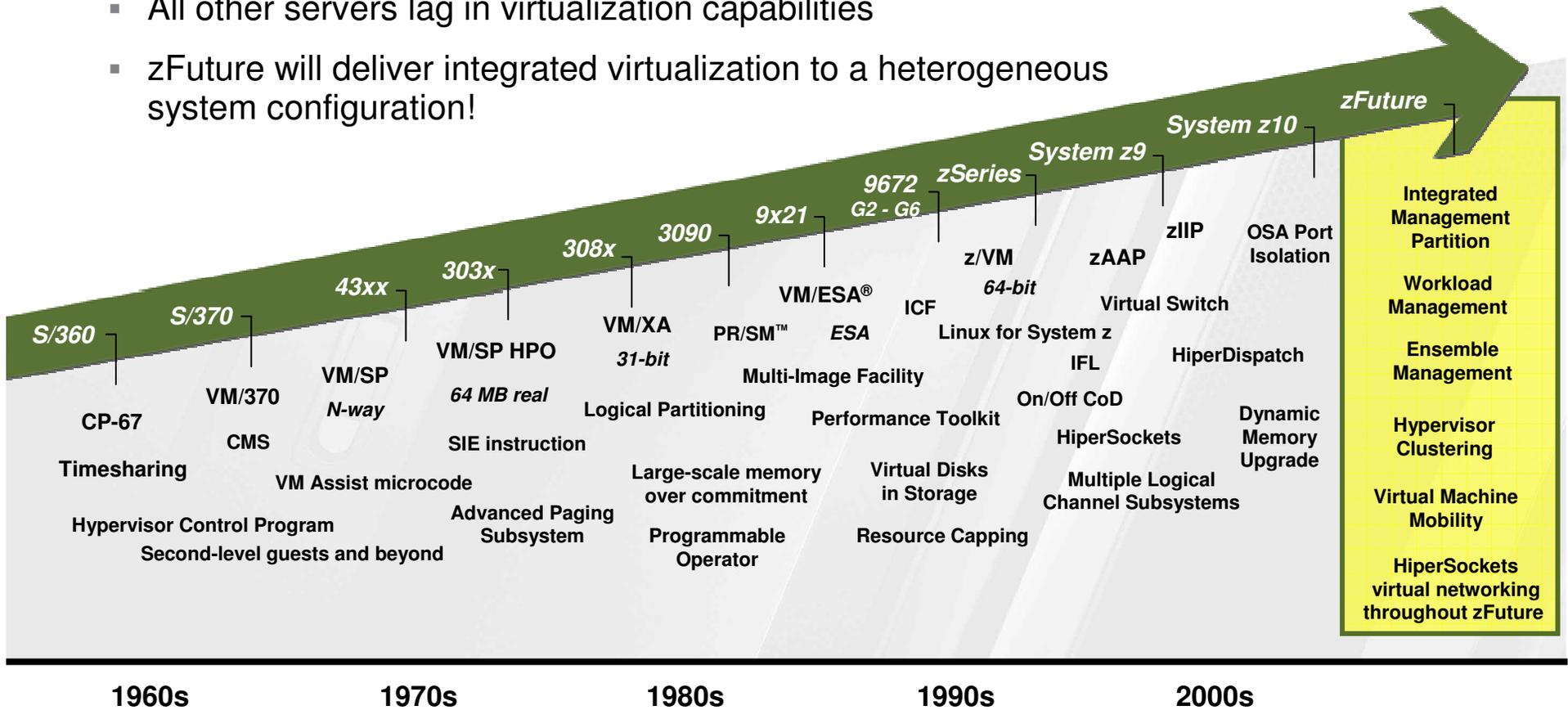


Both General and Special Purpose capabilities needed because of increasing transaction variability

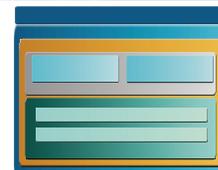
zFuture: The next leap in virtualization



- Virtualization was pioneered and perfected on IBM mainframes
- System z continues to set the gold standard in virtualization
- All other servers lag in virtualization capabilities
- zFuture will deliver integrated virtualization to a heterogeneous system configuration!



System z ensemble

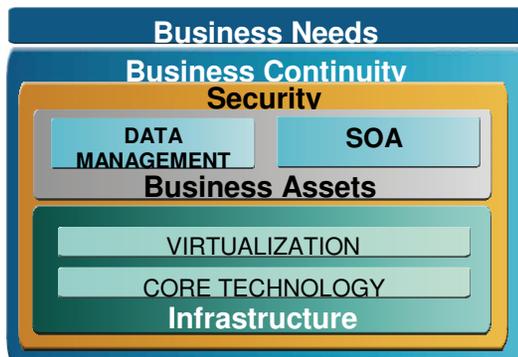
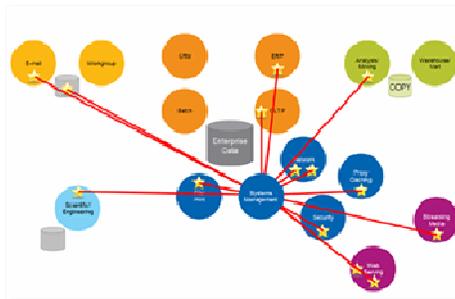


System z Future

System z Mainframe



Integrated Systems Management firmware



- Integrate, monitor, and manage multi-OS resources as a single, logical virtualized system
- Single WLM, Security, and System Management interface across all resources

Accelerators

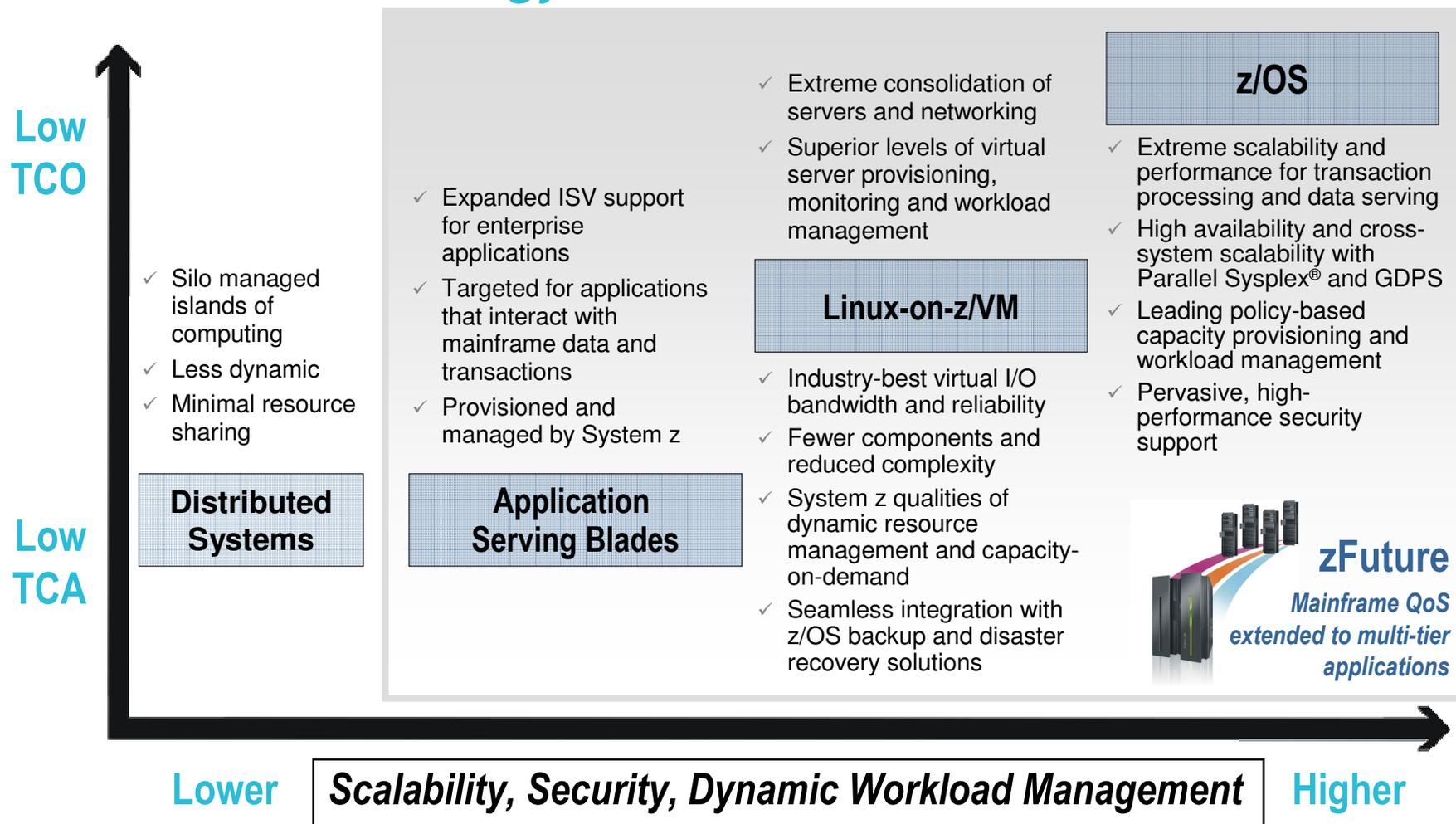
- Extend and accelerate System z workloads
- Lower cost per transaction while improving application response time for CPU intensive applications

Application Serving Blades

- Logical device integration between System z resources and application serving commodity devices
- Providing competitive price-performance and improved QoS for applications with a close affinity to mainframe data

Service Levels to Match Your Business Needs

Increased flexibility for your multi-tier, multi-architecture strategy



The Next Generation System z:

Delivering exceptional business value to help our clients



Compete: Accelerate Insight and Results

- Accelerate critical transactions and queries
- Gain insights from critical operational data with real time analytics

Respond: Increase Business Agility, Security, and Resiliency

- Automated policy based platform management for the entire application stack
- Simplified infrastructure speeds change and recovery

Save: Lower capital and operating expenses

- Heterogeneous simplification and virtualization reduces hardware, software, and operational costs
- Mainframe class utilization reduces datacenter energy usage
- Enjoy the mainframe experience at a fraction of the cost for thousands of applications, without any software changes