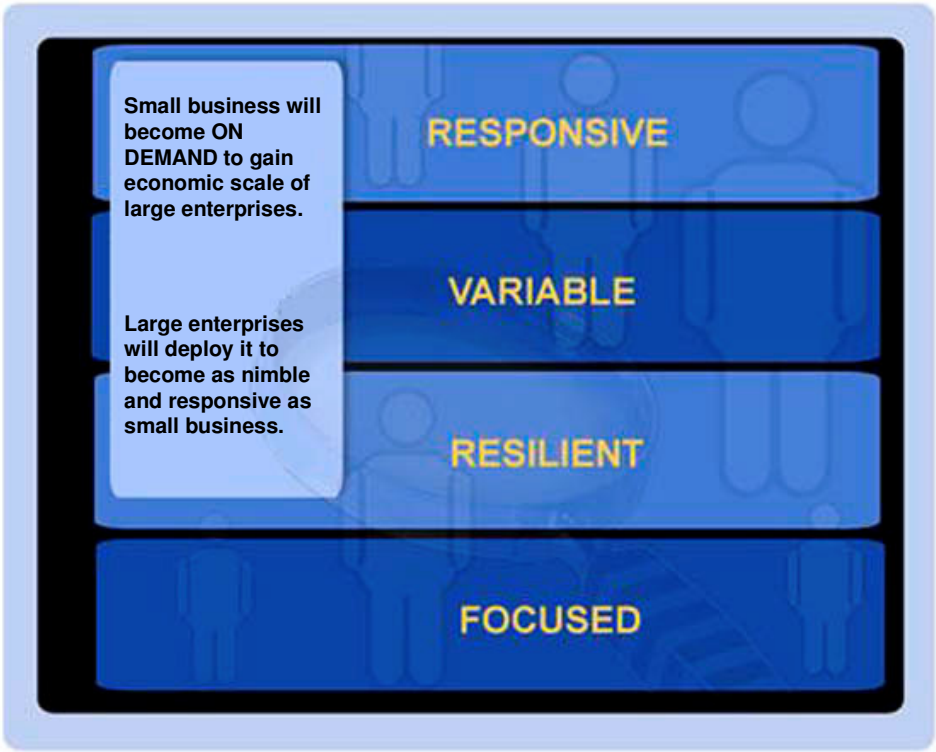
IBM eServer zSeries
Designed for today's On Demand Solutions

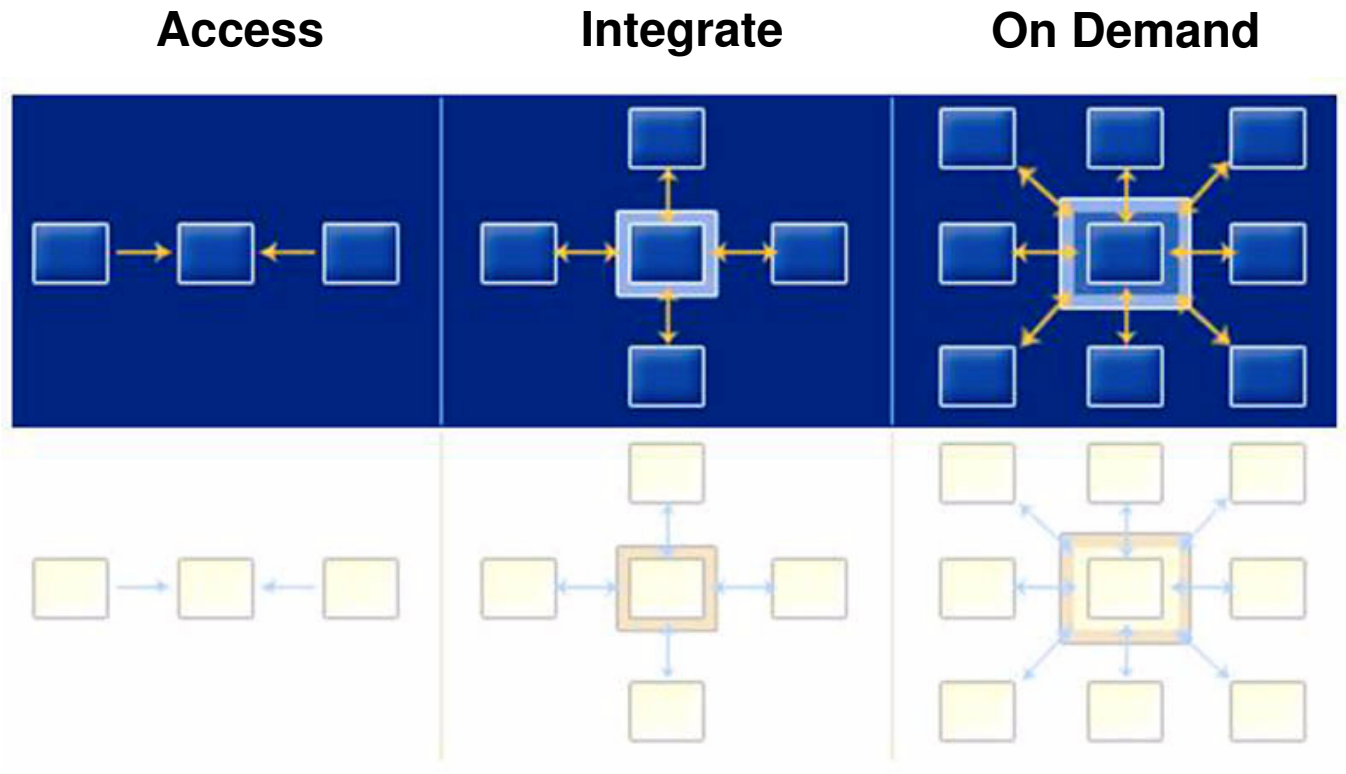
An On Demand Business

"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"

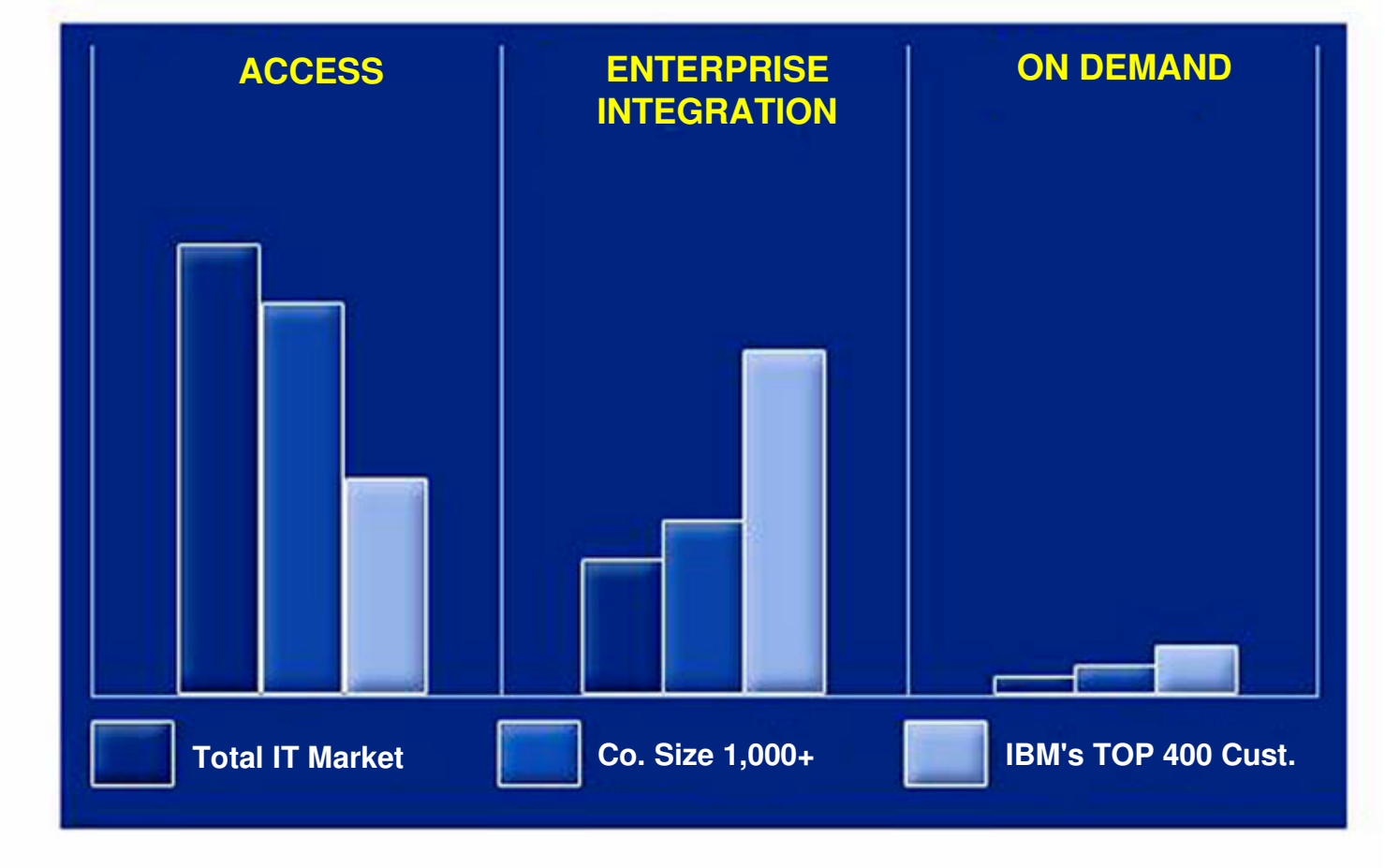
Sam Palmisano, Oct 2002



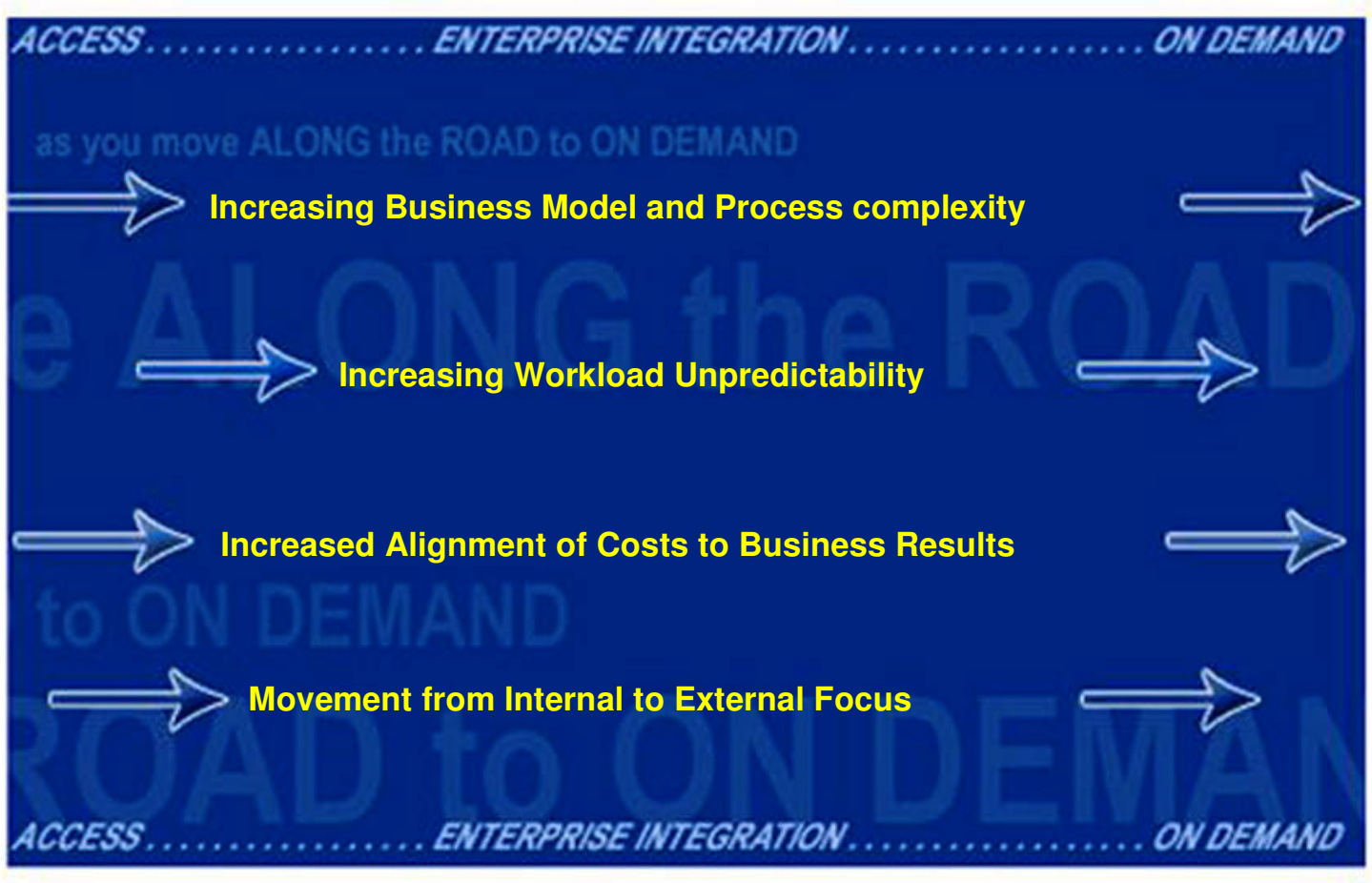
Stages of e-business on demand™ Adoption



And Our Customers are Responding

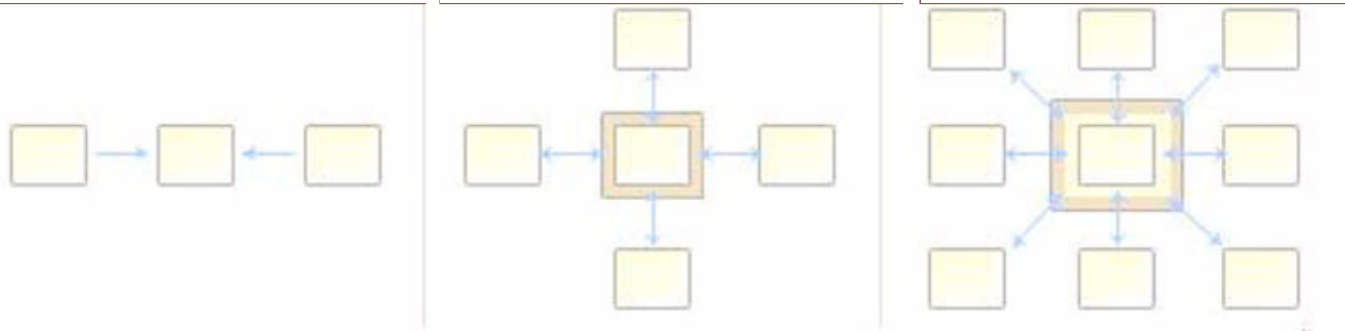


Changing Business Dynamics



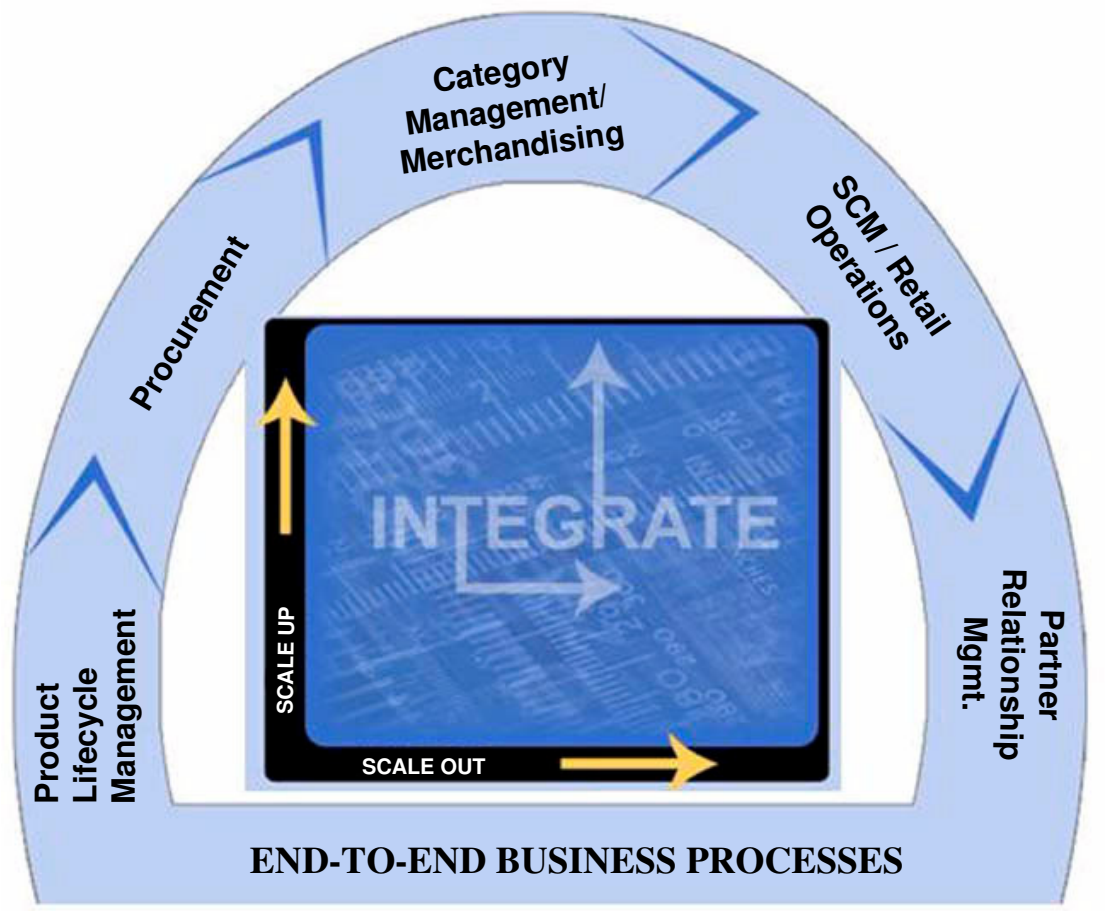
Scope of Business Requirements for IT

End-to-End Implementation	• Application or single business process	• Enterprise level	• Open to all external partners
Manageability	• Application level	• Mature systems management and consolidation	• Self-managing systems
Scale	• Size of single database or application	• Size of integrated applications or databases; more dynamic	• Resources must scale across infrastructure dynamically on demand
Downtime impact	• Entire business process; lost productivity	• Multiple business processes across enterprise; lost business	• Across entire infrastructure; Impact to revenue, customer satisfaction, and image
	• Fixed costs within budget	• Optimized investment; low TCO	• Variable costs aligned to workload demands

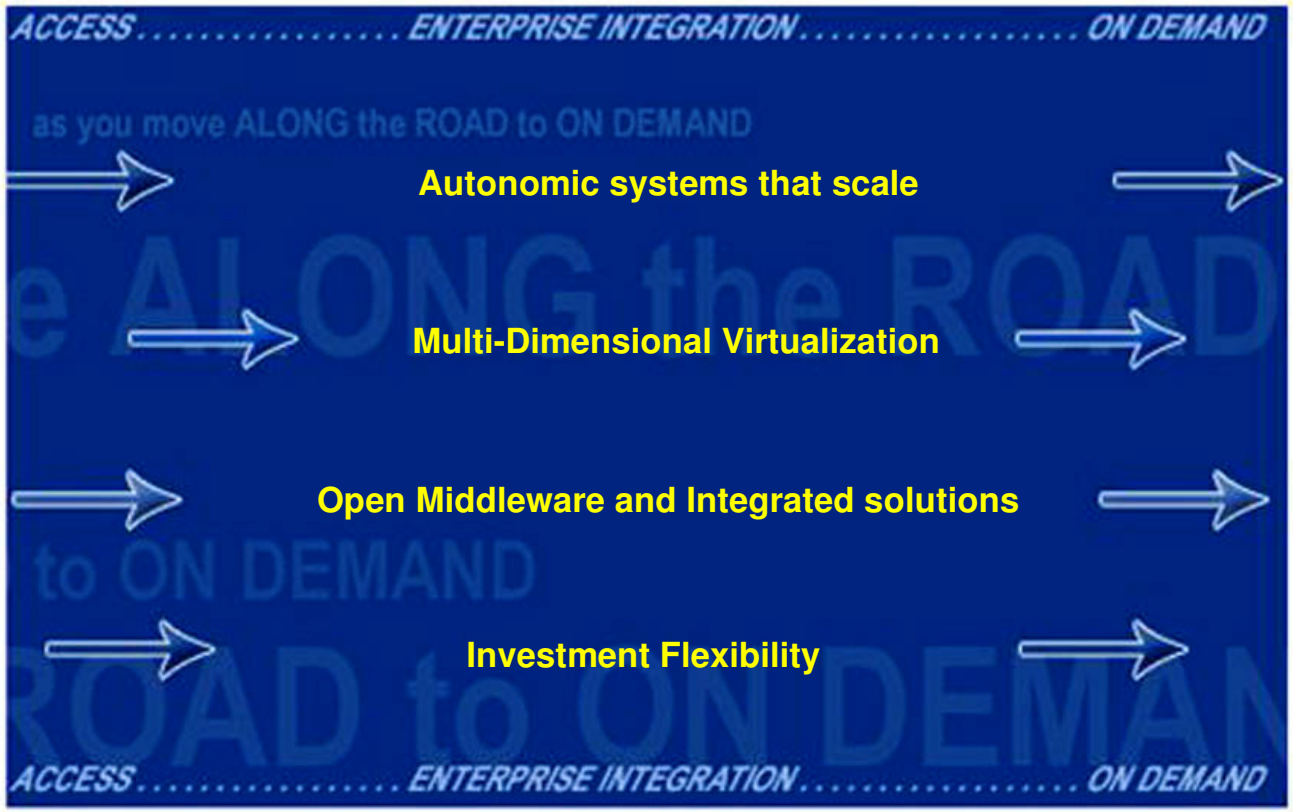


As Your Business Becomes More Integrated

Your IT Needs to be Integrated to Support it

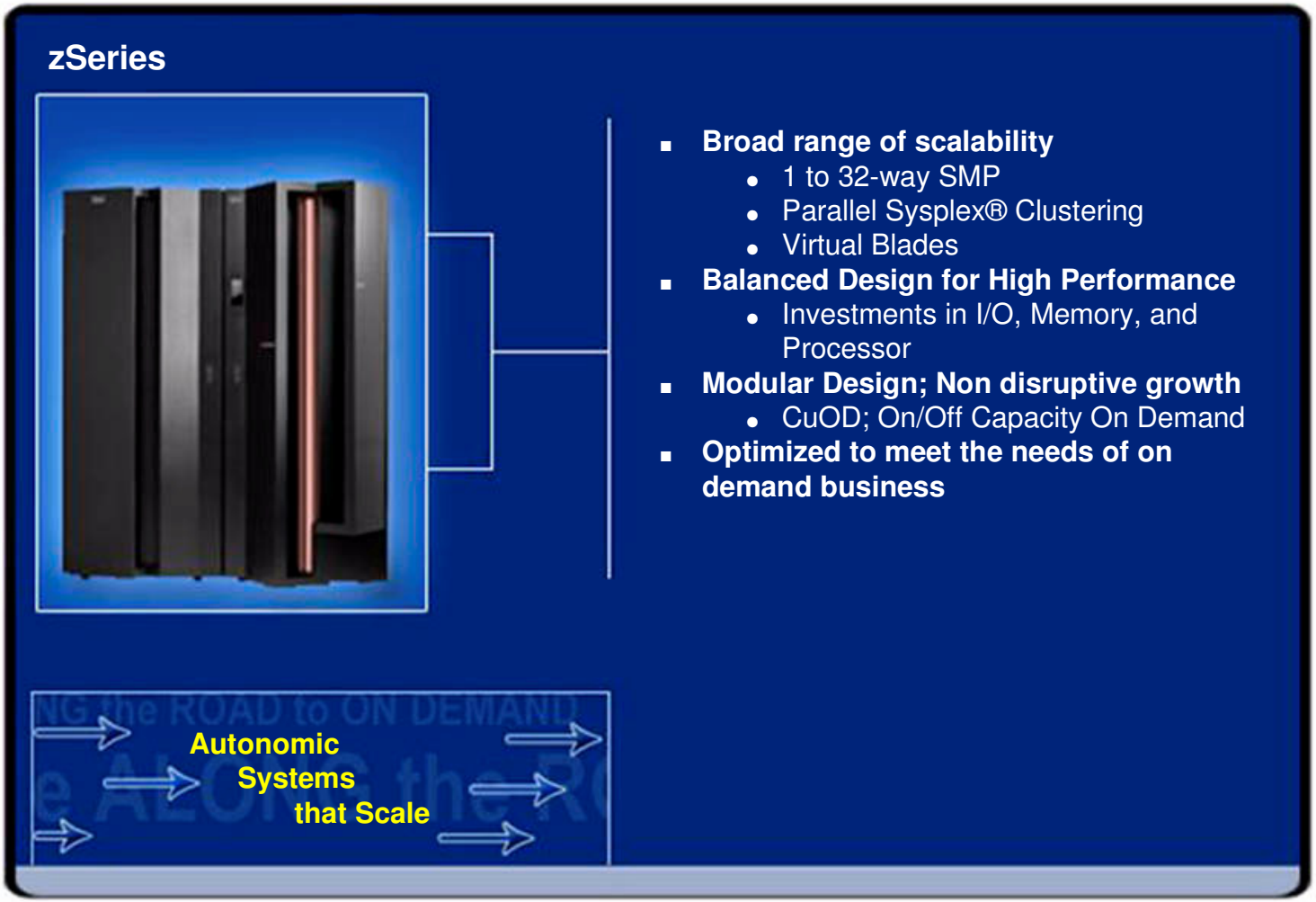


There are Profound Differences in Architecture and System Design that Distinguish IBM eServer™ zSeries™ as the serve for On Demand Solutions



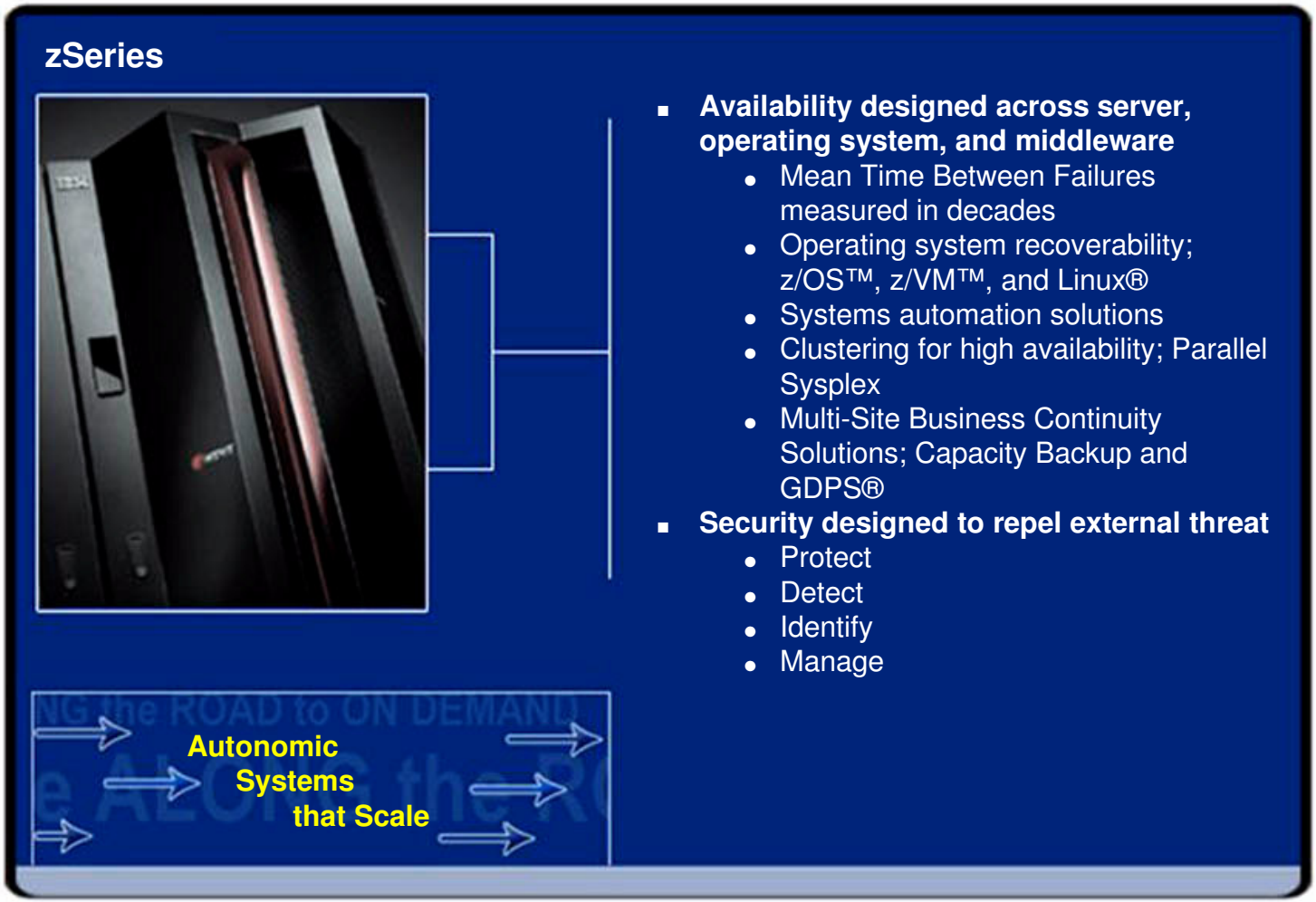
Autonomic Systems that Scale:

Broad Range of Scalability Optimized to Meet High Performance Needs



Autonomic Systems that Scale:

Security and high availability to build customer confidence



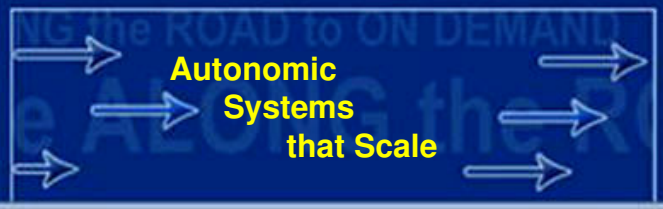
- **Availability designed across server, operating system, and middleware**
  - Mean Time Between Failures measured in decades
  - Operating system recoverability; z/OS™, z/VM™, and Linux®
  - Systems automation solutions
  - Clustering for high availability; Parallel Sysplex
  - Multi-Site Business Continuity Solutions; Capacity Backup and GDPS®
- **Security designed to repel external threat**
  - Protect
  - Detect
  - Identify
  - Manage

Autonomic Systems that Scale:

Automatic sense and respond capabilities for Fluid Management of Resources

zSeries

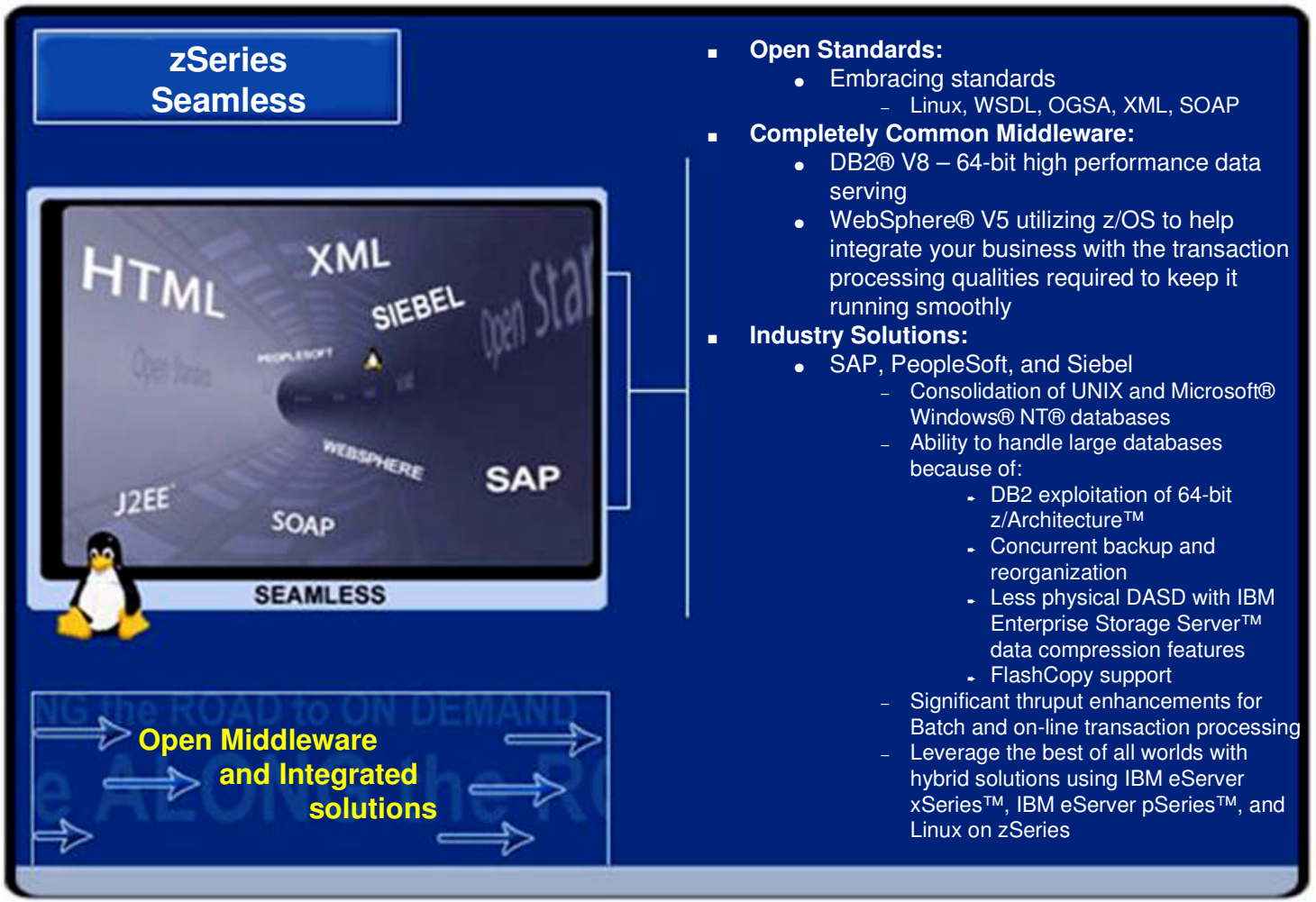
- **Dynamic resource sharing across mixed application workloads**
  - Workload Manager (WLM)
  - Intelligent Resource Director (IRD)
- **End to end prioritization of workload**
  - Intelligent load balancing
  - Prioritization by transaction type, user, time of day
- **Efficient server utilization drives low TCO**
  - Prime-shift utilization*
    - 70% Mainframe
    - 10-15% UNIX®
    - 5-10% Intel



* Source: IBM Scorpion Whitepaper: Simplifying the Corporate IT Infrastructure

Open Middleware and Integrated Solutions:

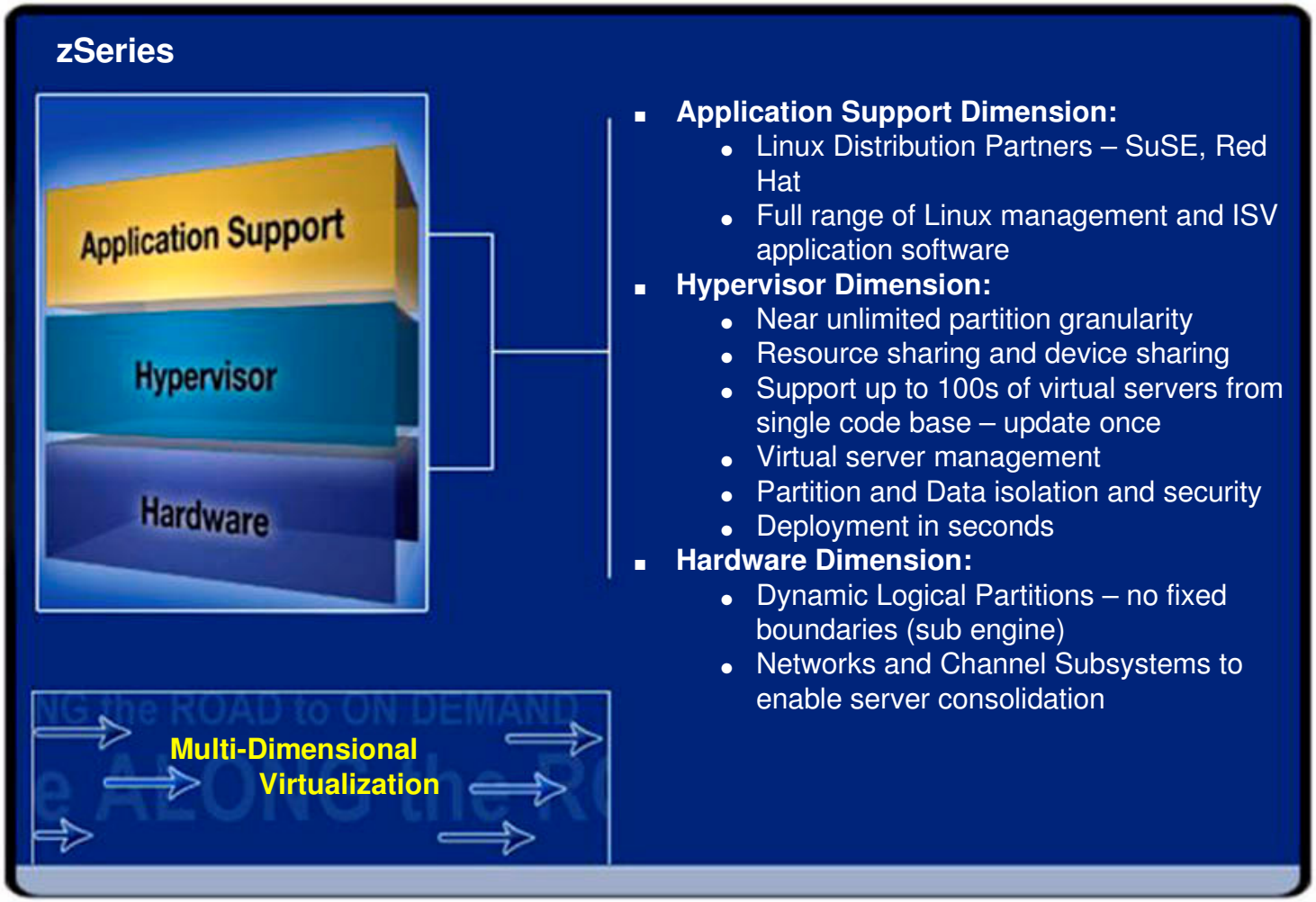
Seamless Integration and Maximum Choice



- **Open Standards:**
  - Embracing standards
    - Linux, WSDL, OGSA, XML, SOAP
- **Completely Common Middleware:**
  - DB2® V8 – 64-bit high performance data serving
  - WebSphere® V5 utilizing z/OS to help integrate your business with the transaction processing qualities required to keep it running smoothly
- **Industry Solutions:**
  - SAP, PeopleSoft, and Siebel
    - Consolidation of UNIX and Microsoft® Windows® NT® databases
    - Ability to handle large databases because of:
      - DB2 exploitation of 64-bit z/Architecture™
      - Concurrent backup and reorganization
      - Less physical DASD with IBM Enterprise Storage Server™ data compression features
      - FlashCopy support
    - Significant thruput enhancements for Batch and on-line transaction processing
    - Leverage the best of all worlds with hybrid solutions using IBM eServer xSeries™, IBM eServer pSeries™, and Linux on zSeries

Multi-dimensional Virtualization:

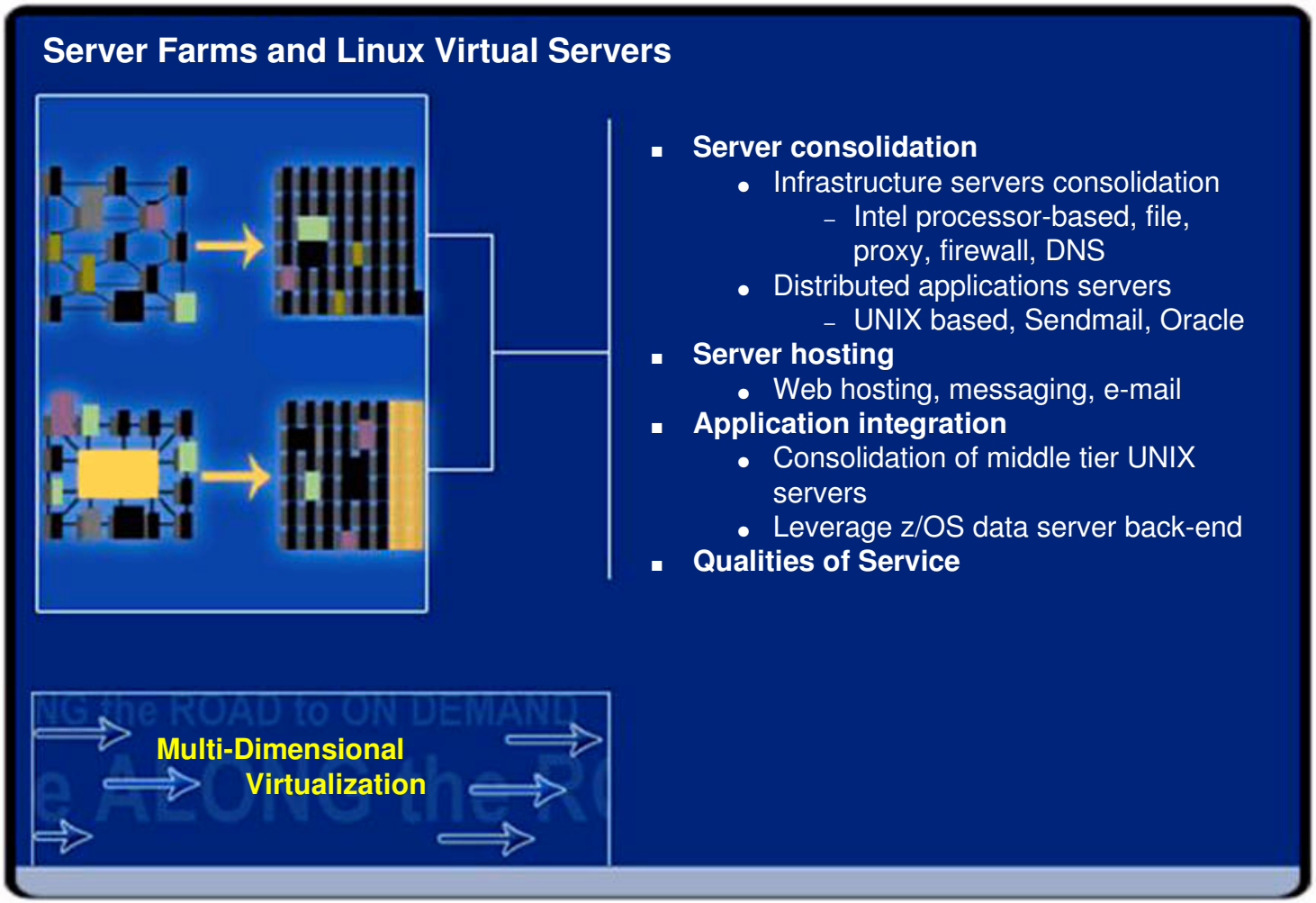
Comprehensive Support for an Effective "Scale Out" Virtual Blade Solution



- **Application Support Dimension:**
  - Linux Distribution Partners – SuSE, Red Hat
  - Full range of Linux management and ISV application software
- **Hypervisor Dimension:**
  - Near unlimited partition granularity
  - Resource sharing and device sharing
  - Support up to 100s of virtual servers from single code base – update once
  - Virtual server management
  - Partition and Data isolation and security
  - Deployment in seconds
- **Hardware Dimension:**
  - Dynamic Logical Partitions – no fixed boundaries (sub engine)
  - Networks and Channel Subsystems to enable server consolidation

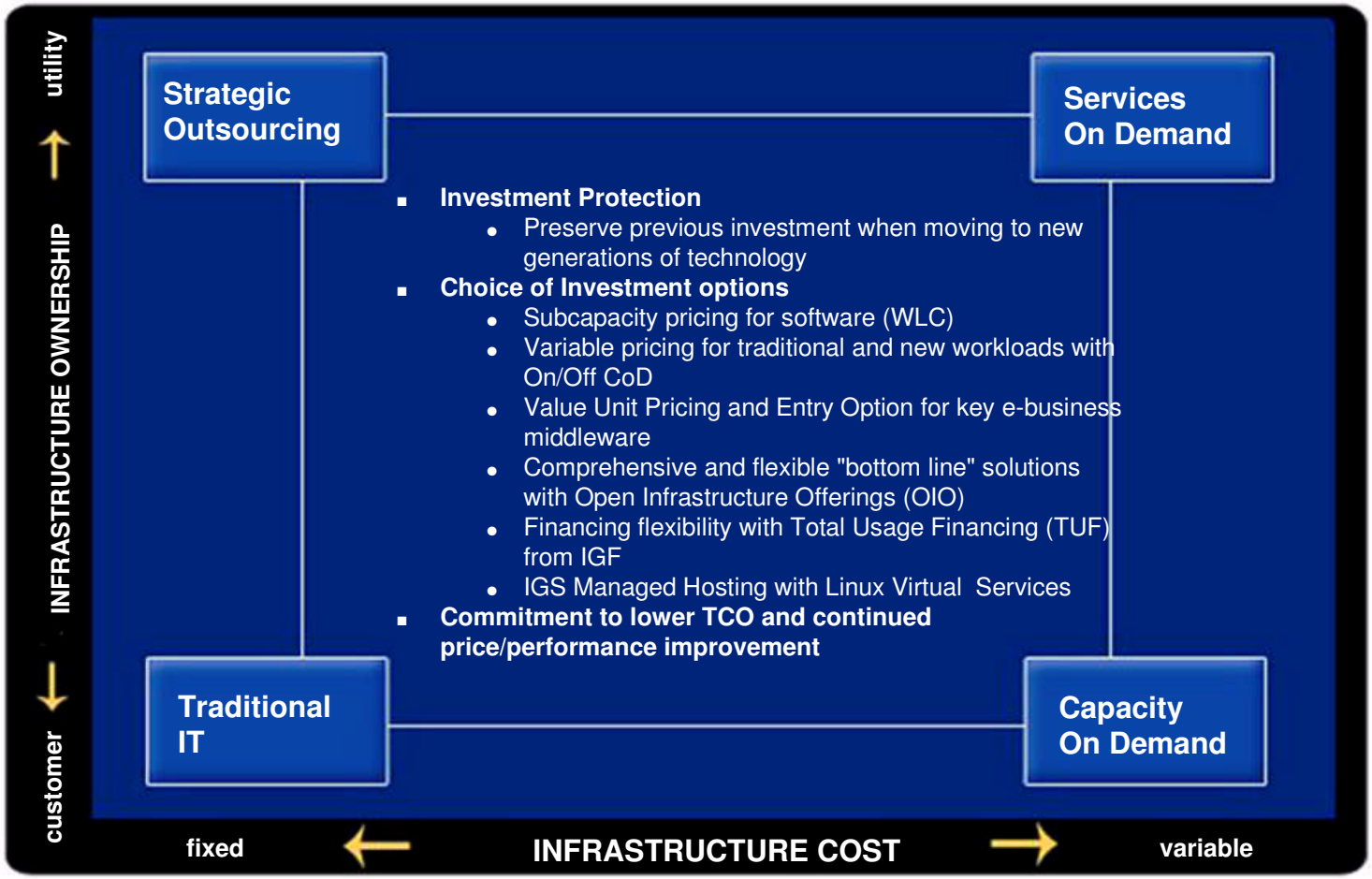
Multi-dimensional Virtualization:

Efficient, Cost Effective Consolidation and Integration



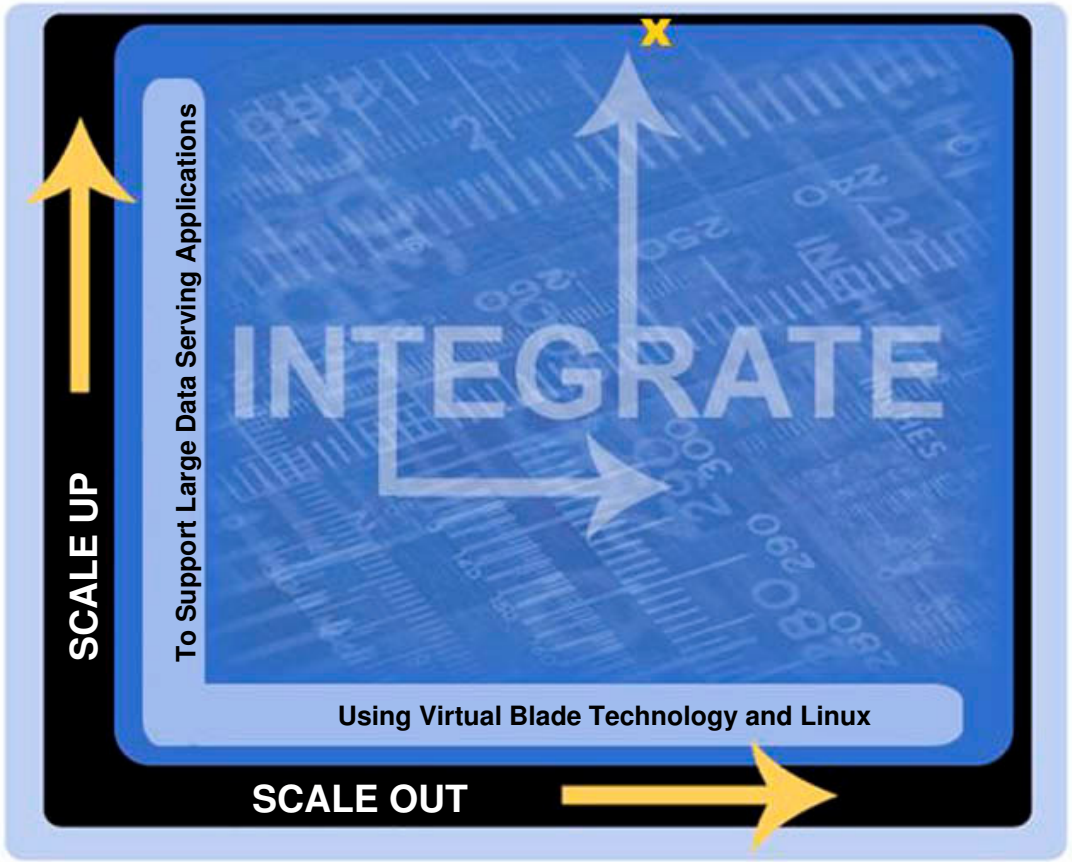
Investment Flexibility for the On Demand Business

More Choices to Meet Challenging Business Demands



IBM eServer zSeries:

Outstanding versatility, efficiency, and resilience



- Flexibility to “scale up” to support large data serving applications…
- “Scale out” using virtualization technology and Linux…
- And integrate your on demand business

There are Profound Differences in Architecture and System Design that Distinguish zSeries as the server for today's On Demand Solutions

"Big Iron retains lustre: Demand for hefty computing power is still healthy and innovations continue apace"

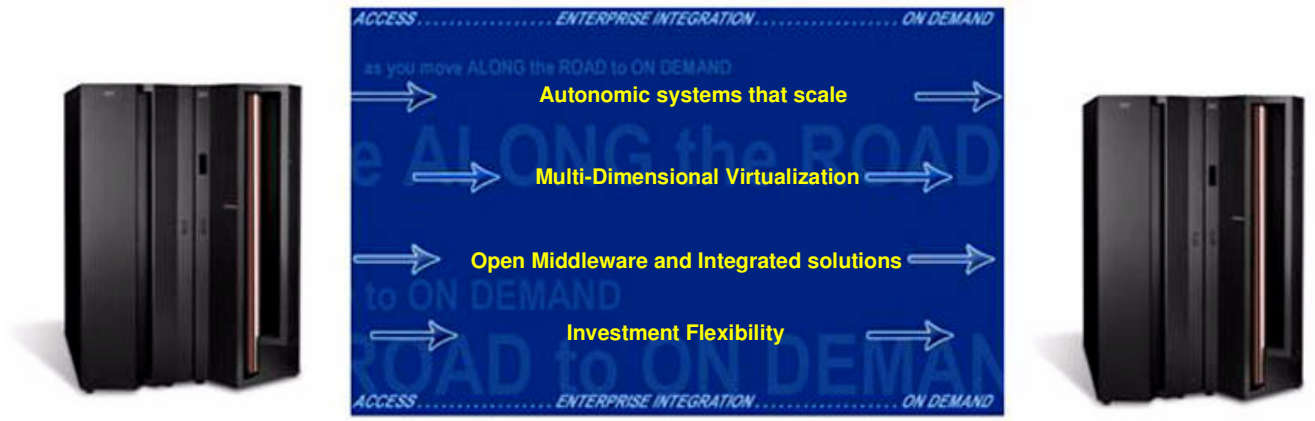
Financial Times; April 4th, 2003

"Mainframes are Still a Mainstay; …support for Linux, autonomic computing, and Capacity on Demand is attractive"

InformationWeek, October 21st , 2002

"IBM Service Will Test Vision of Computing Power as Utility"

Wall Street Journal, July 1, 2002



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