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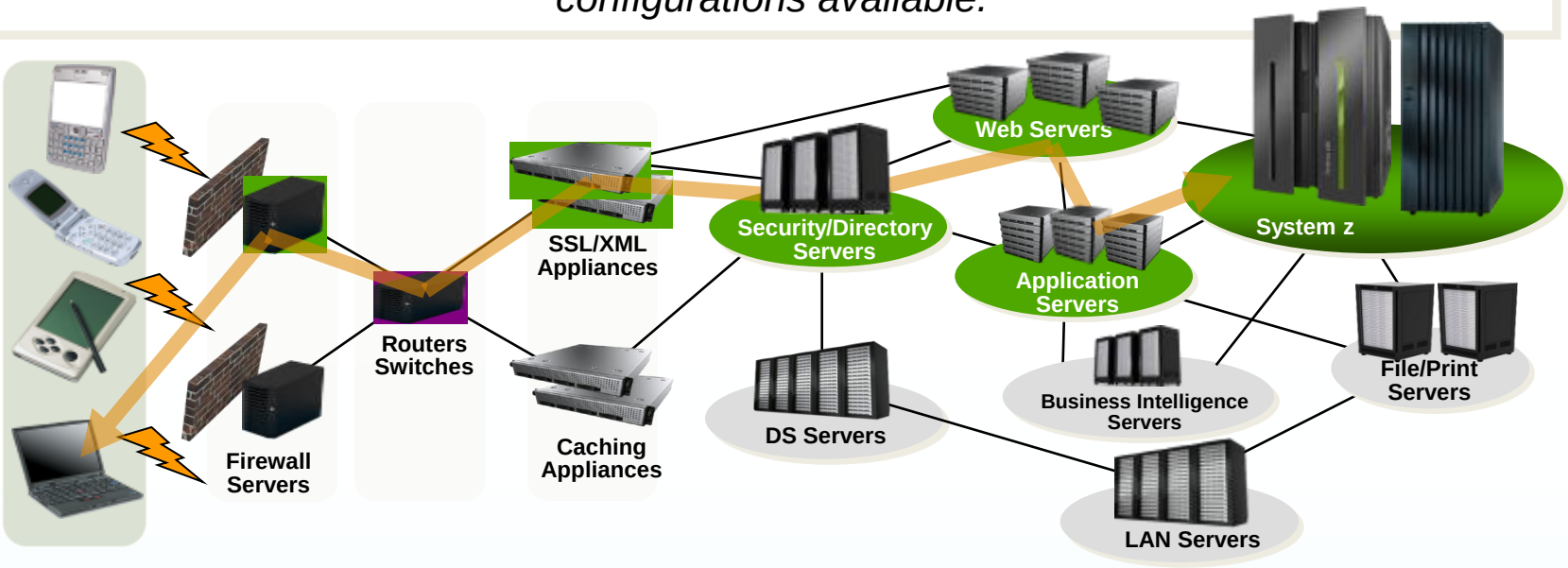
Innovate2011

IBM zEnterprise System Introduction

Jeff Kuo, zSW Sales Manager, IBM Taiwan

Information technology today: Limitations

Information technology today is limited by the technology and architecture configurations available.



- Business processes and the applications that support them are becoming more service oriented, modular in their construction, and integrated.
- The components of these services are implemented on a variety of architectures and hosted on heterogeneous IT infrastructures.
- Approaches to managing these infrastructures along the lines of platform architecture boundaries cannot optimize: alignment of IT with business objectives; responsiveness to change; resource utilization; business resiliency; or overall cost of ownership.
- **Customers need better approach: The ability to manage the IT infrastructure and Business Application as an integrated whole.**

zEnterprise: Focus on workloads is key!

Managing multi-tier workloads and extending System z governance

Transaction Processing & Database

- *Application Database*
- *Data Warehousing*
- *Online Transaction Processing*
- *Batch*

Analytics

- *Data Mining Applications*
- *Numerical*
- *Enterprise Search*

Business Applications

- *Enterprise Resource Planning*
- *Customer Relationship Management*
- *Application Development*

Web, Collaboration and Infrastructure

- *Systems Management*
- *Web Serving/Hosting*
- *Networking*
- *File and Print*

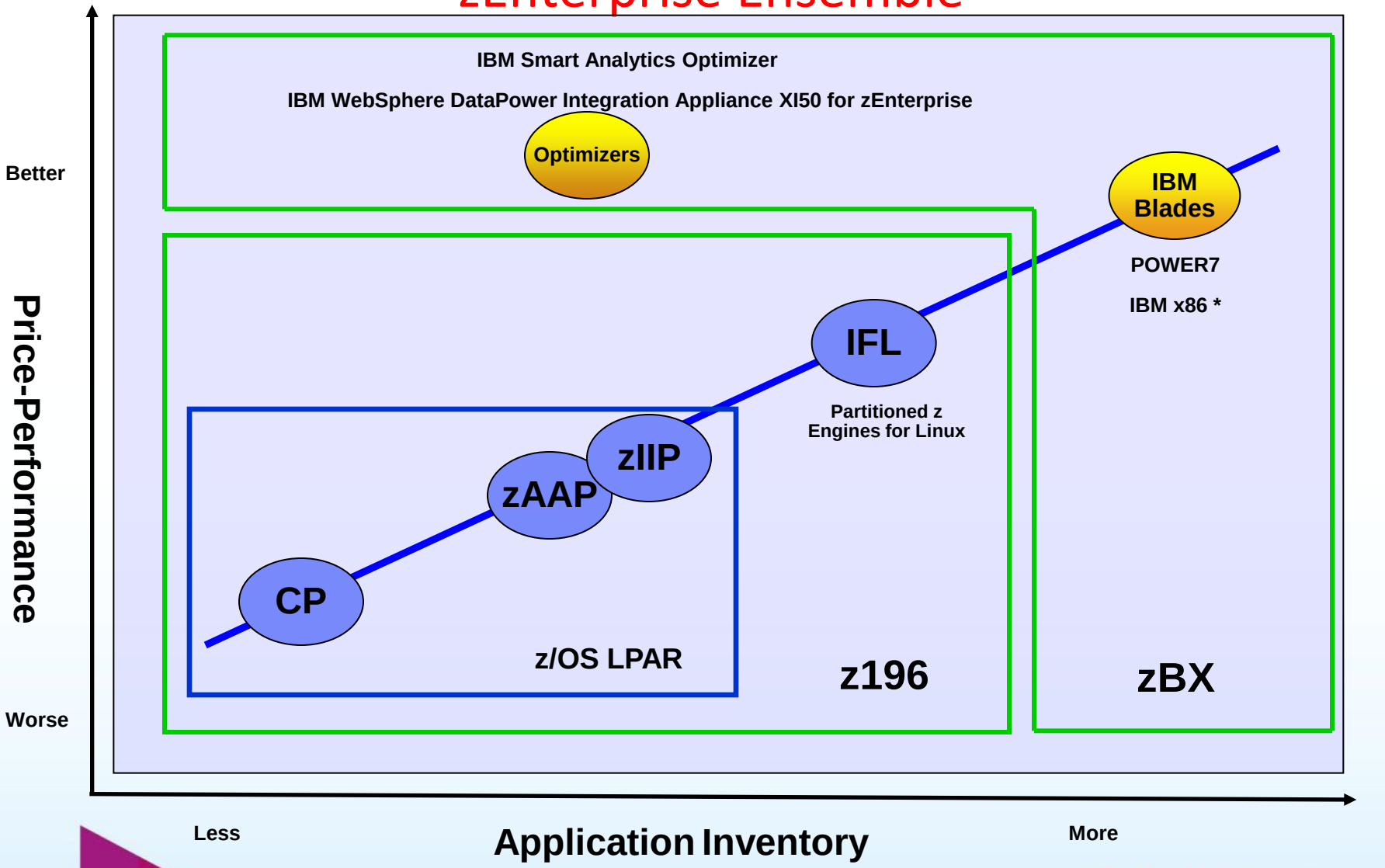
What is IBM zEnterprise System?

Re-write the rulebook and set new standards for business-centric IT with IBM System z, to be the world's premier workload-optimized platform for enterprise applications.

Our Vision:

Deliver the best of all worlds - Mainframe, UNIX®, IBM x86 Blade and single function processors - integrated in a single system for ultimate flexibility and simplicity to optimize service, risk, and cost across multiple heterogeneous workloads.

System z “Specialty Engine” Evolution to the zEnterprise Ensemble



*Statement of Direction, 1H 2011

Service levels to match your business needs

Increased flexibility for your multi-architecture strategy when data is on z/OS

TCO Focus

TCA Focus

Distributed Systems

- ✓ Silo managed islands of computing
- ✓ Less dynamic than z virtualization
- ✓ Minimal resource sharing with z resources

zEnterprise System

Select IBM Blades in zBX

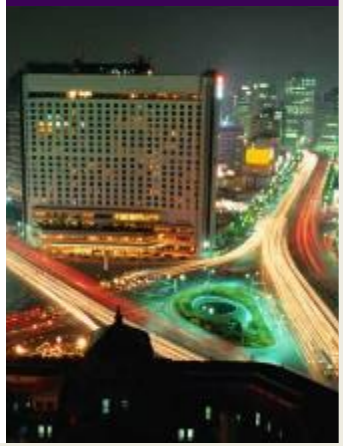
- ✓ Expanded ISV support for enterprise applications
- ✓ Targeted for applications that interact with mainframe data and transactions
- ✓ Provisioned and managed by System z

Linux on z/VM®

- ✓ Extreme consolidation of servers and networking
- ✓ Superior levels of virtual server provisioning, monitoring and workload management
- ✓ Industry-best virtual I/O bandwidth and reliability
- ✓ Fewer components and reduced complexity
- ✓ System z qualities of dynamic resource management and capacity-on-demand
- ✓ Seamless integration with z/OS backup and disaster recovery solutions

z/OS

- ✓ Extreme scalability and performance for transaction processing and data serving
- ✓ High availability and cross-system scalability with Parallel Sysplex® and GDPS®
- ✓ Leading policy-based capacity provisioning and workload management
- ✓ Pervasive, high-performance security support



LOWER — **SCALABILITY, SECURITY, DYNAMIC WORKLOAD MANAGEMENT** — **HIGHER**

[1] All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represents goals and objectives only.

IBM zEnterprise System – Best-in-class systems and software technologies

A "System of Systems" that unifies IT for predictable service delivery

IBM zEnterprise

- Optimized to host large-scale database, transaction, and mission-critical applications
- The most efficient platform for large-scale Linux consolidation
- Capable of massive scale-up
- New easy-to-use z/OS V1.12

zEnterprise Unified Resource Manager

- Unifies management of resources, extending IBM System z qualities of service end-to-end across workloads
- Provides platform, hardware and workload management

zEnterprise BladeCenter Extension (zBX)

- Selected IBM POWER7 blades and IBM x86 Blades* for tens of thousands of AIX® and Linux applications
- High-performance optimizers and appliances to accelerate time to insight and reduce cost
- Dedicated high-performance private network

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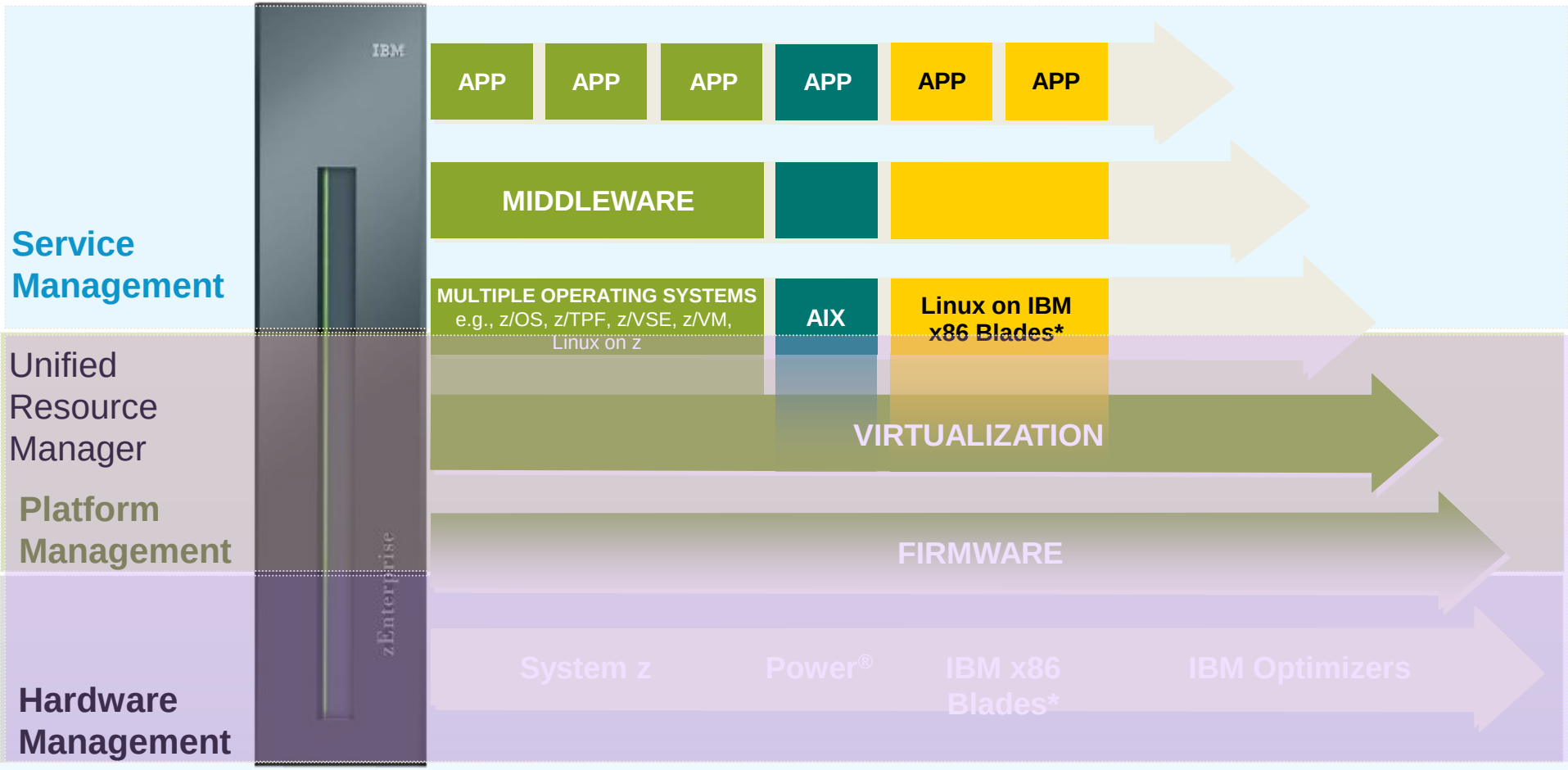
Built on this construct – zEnterprise – Innovation at every level



Focused, collaborative innovation

A "complete systems" approach

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WAS on zEnterprise

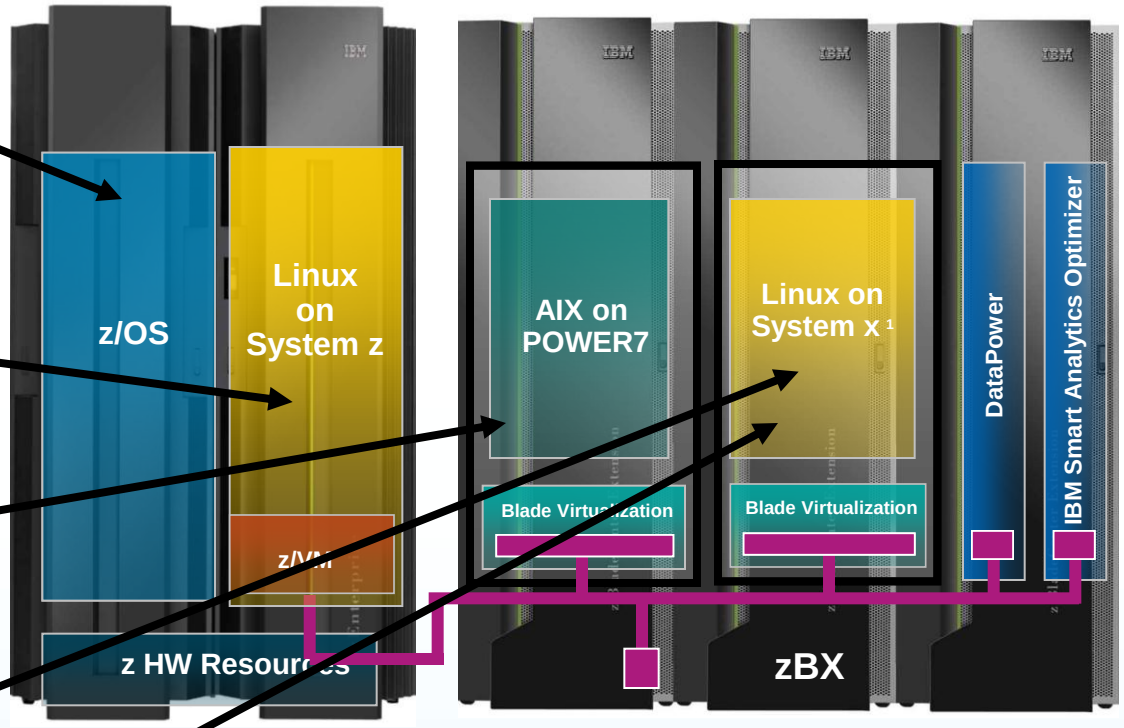
WAS collocated with CICS, IMS, DB2
- Best performance

WAS virtualised dev/test environment
WAS Portal

WAS applications with high CPU intensive workloads

WAS applications not z/OS certified and that need lower QOS

HTTP servers

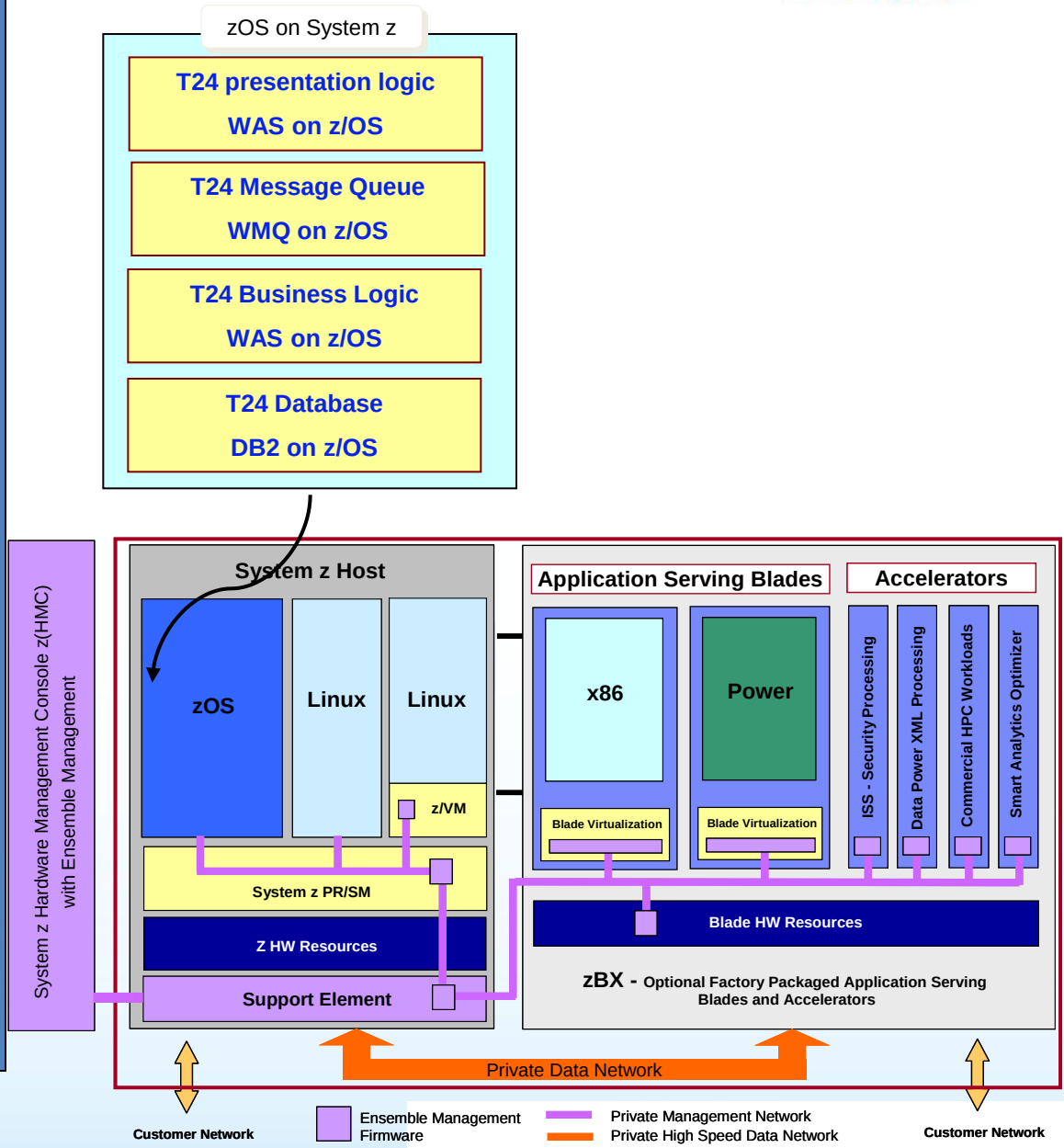


Servers are usually optimized to one of the workload types but never all.

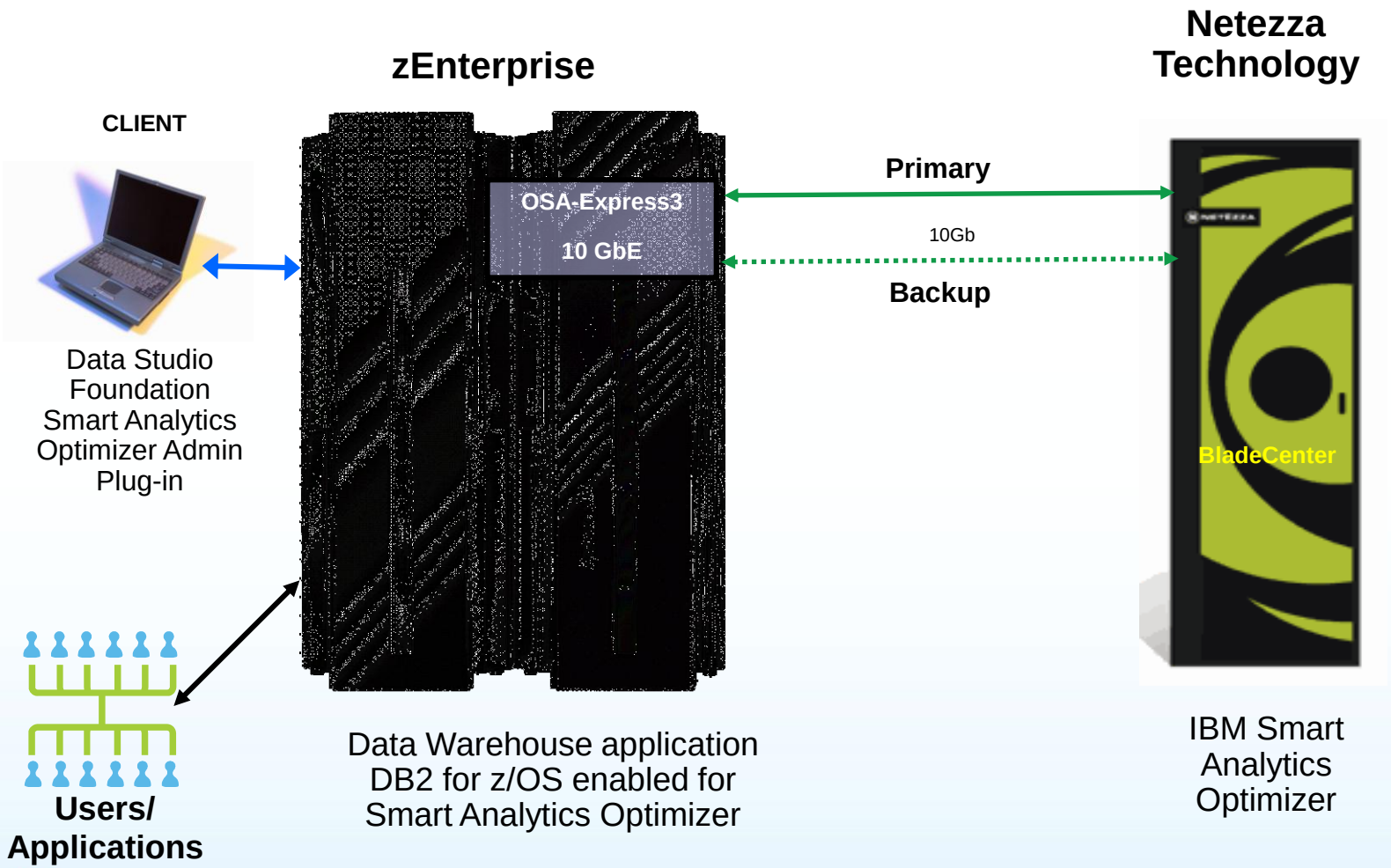
With zEnterprise, you have multiple systems operating in a secure, private network

– *everything on z/OS* Temenos T24 JAVA Deployment

- **Unmatched continuous availability, disaster recovery**
  - Active exploitation elements take direct advantage of Parallel Sysplex and the shared data clustering capabilities of the technology
- **Simpler to manage , using existing tools/skills**
  - Exploits proven and mature technologies.WebSphere z/OS uses and exploits well known and understood system services- no need to develop new tools for operations, capacity planning, performance management, etc.
- **Flexible , high performance**
  - The active exploitation of z/OS interfaces provide dynamic operations at the OS level against the operating WAS servers.
- **Affordable and efficient**
  - zAAP specialty engine for Java offload, efficient sharing of resources.



Smart Analytics Optimizer V2 Product Components



Extending Smart Analytics Optimizer with Netezza technology

- Still is a Smart Analytics Optimizer
- Uses Netezza technology to perform high speed query
- Access to data in terms of authorization and privileges (security aspects) is controlled by DB2 and z/OS (Security Server).
- Uses DB2 for z/OS for updates, logging, fast single record look-ups
- DB2 for z/OS does backup and recovery and
- DB2 for z/OS remains the system of record
- There is no external communication to the Smart Analytics Optimizer beyond DB2 for z/OS

Tailored to your needs

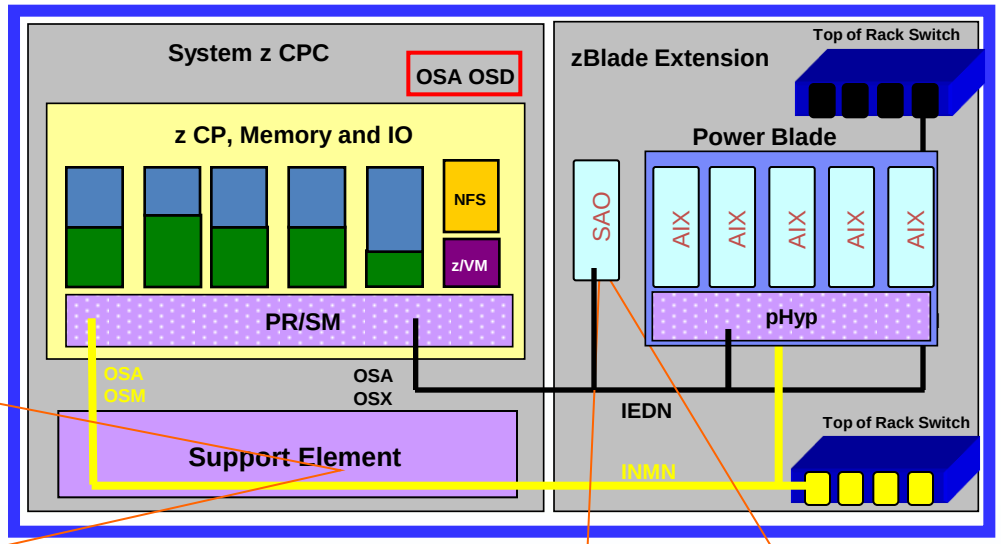
A Hybrid Solution

IBM Netezza	IBM System z with Smart Analytics Optimizer
Focused Appliance	**Mixed Workload System**
• Appliance with a streamlined database and HW acceleration for key warehouse functionality • Price/performance leader • Speed and ease of deployment and administration • Optimized performance for a specific workload range	• Mixed workload system z with operational transaction systems, data warehouse, operational data store, and consolidated data marts. • Unmatched availability, security and recoverability • Natural extension to System z to enable pervasive analytics across the organization. • Speed and ease of deployment and administration

Simplicity *The right mix of simplicity and flexibility* **Flexibility**

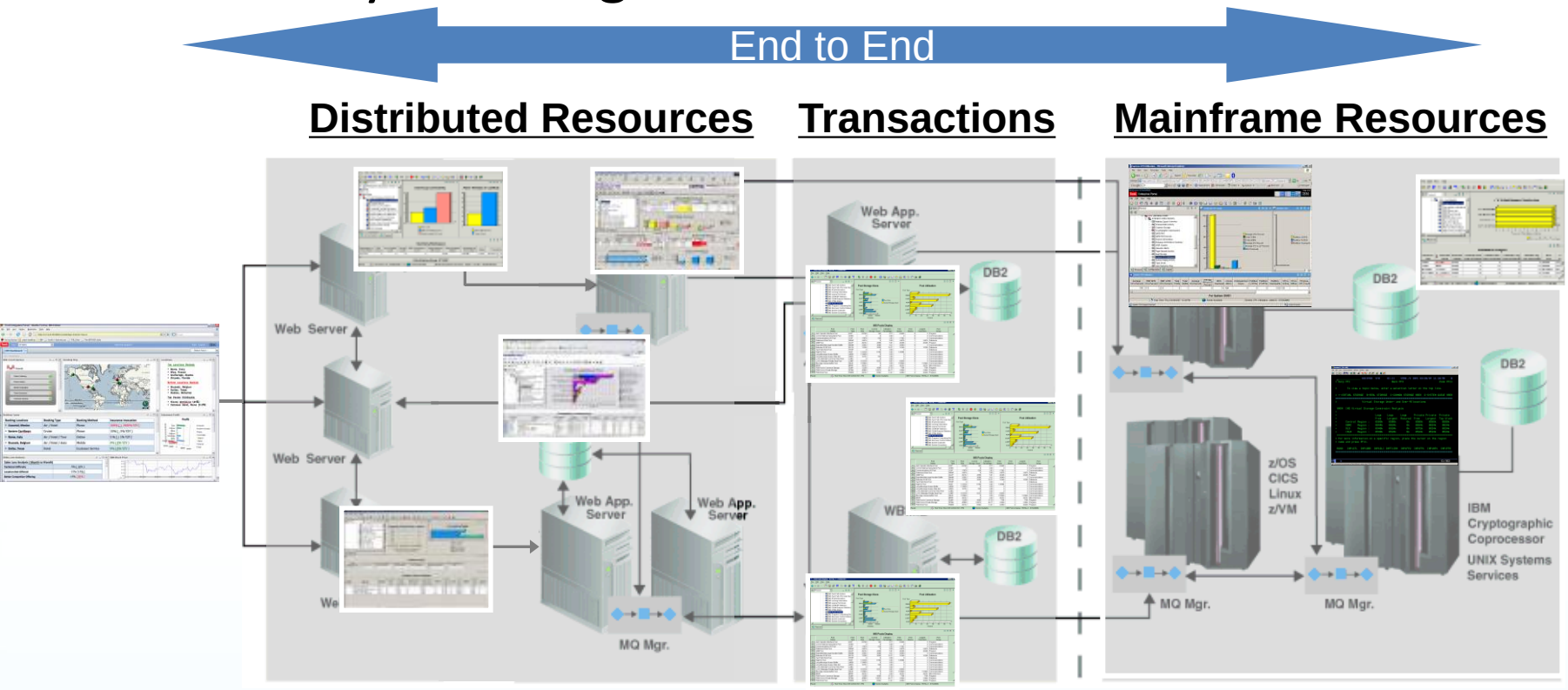
New Integrated Service Management capabilities that exploit zEnterprise

Tivoli OMEGAMON XE for Mainframe Networks provides the visibility into the OSA CHPID types and interface types specific to zEnterprise Management Network (support network)



Tivoli OMEGAMON XE for DB2 will provide visibility into the offload of DB2 on z/OS warehouse queries to the **Smart Analytics Optimizer**

Today's Management Needs to be End to End



- In today's environment applications span End-to-End
- A variety of Domain tools to help manage these applications
- When an event is received they have no idea of the impact to the business

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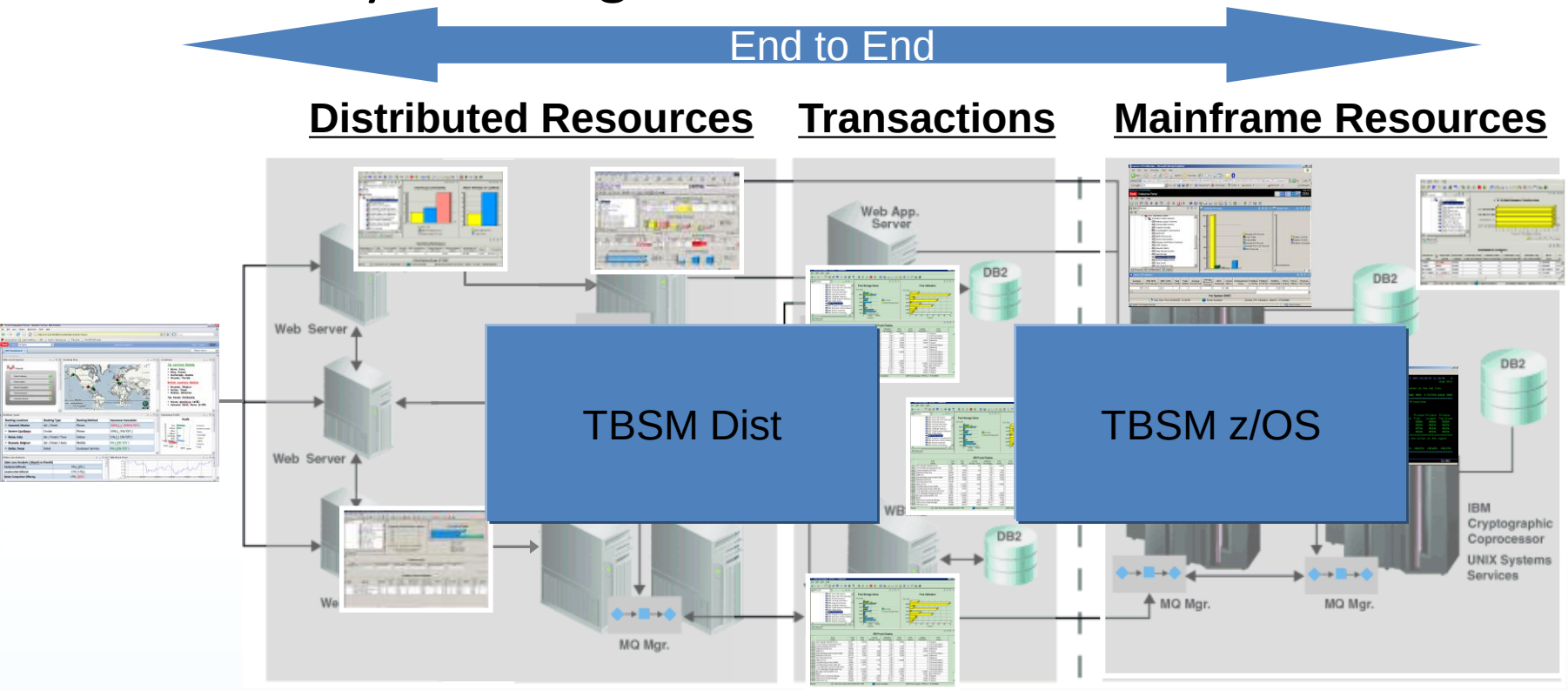

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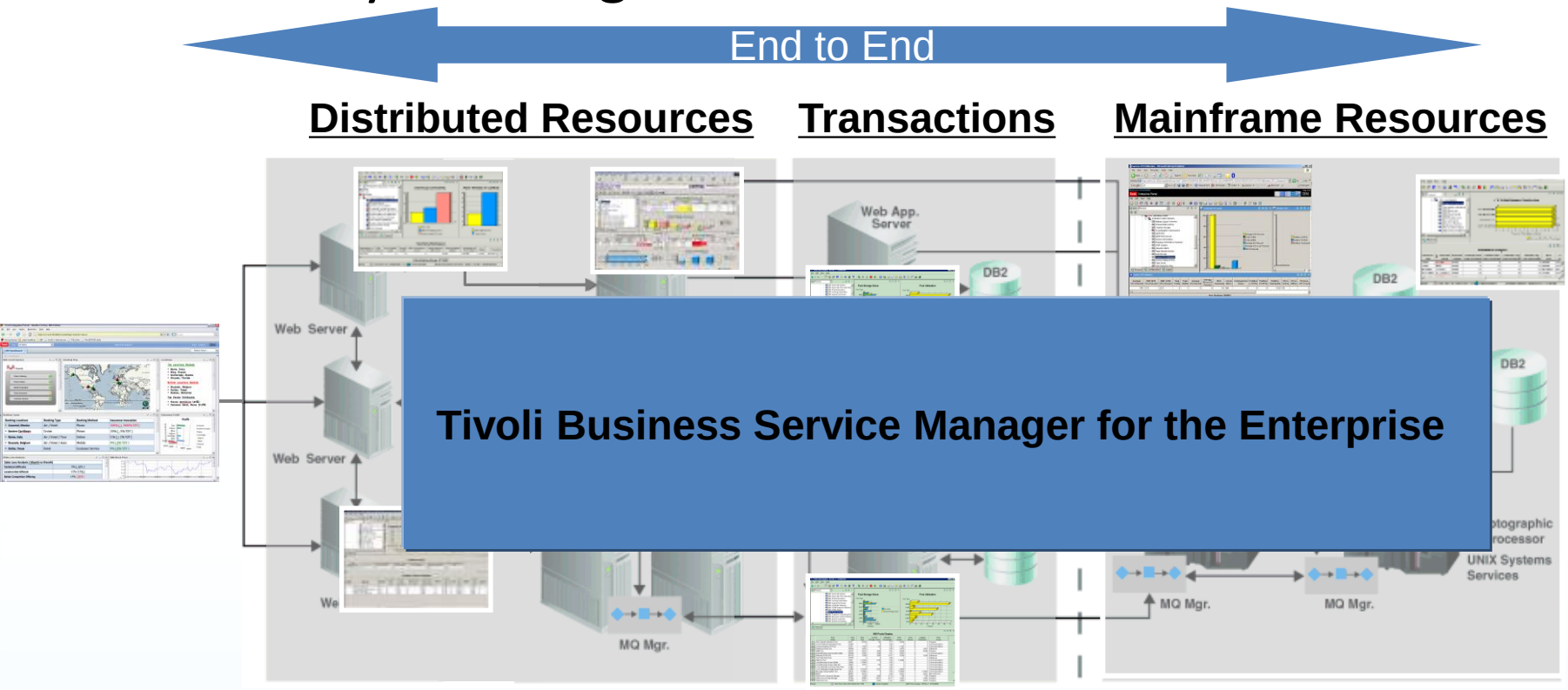

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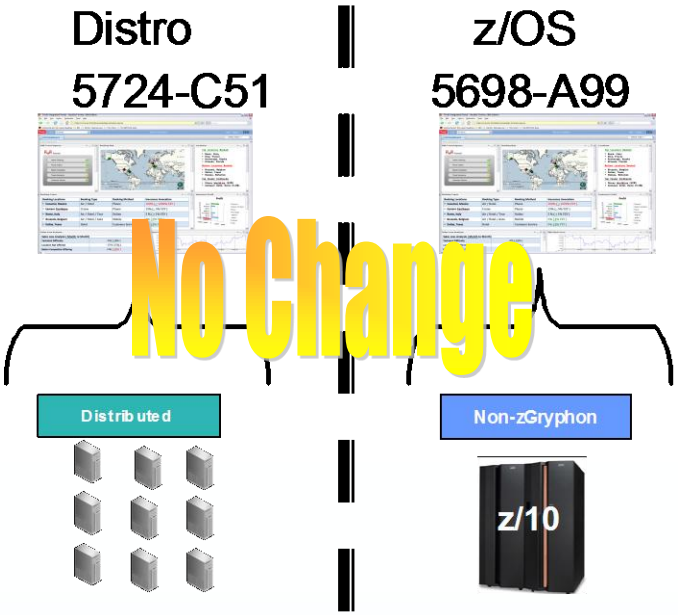
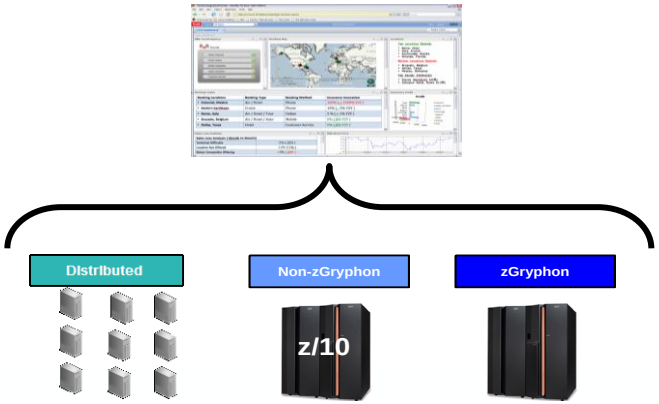
TBSM Today (3 Offerings)



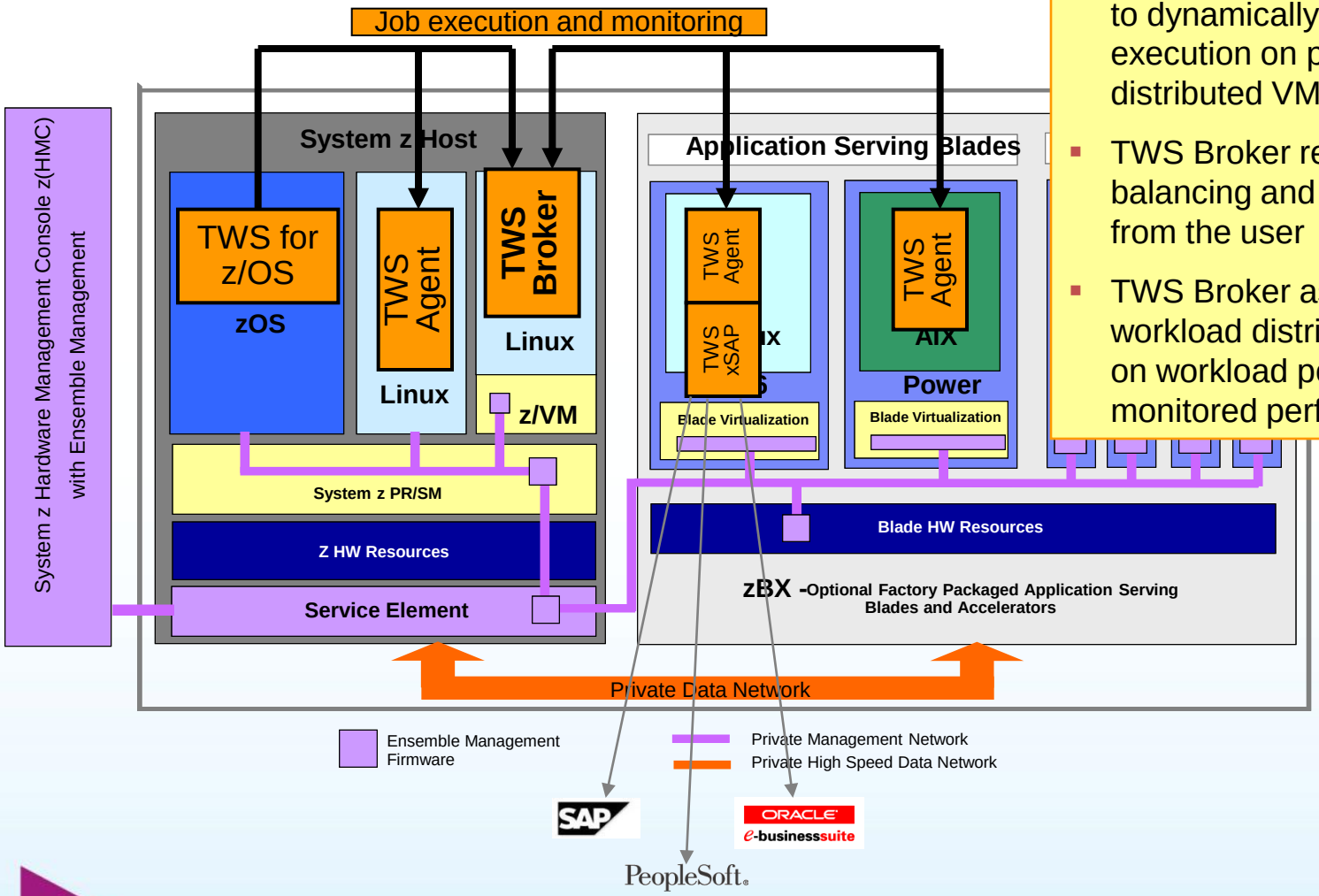
- 2 BSM Products / 2 Pricing Models
- Not Competitively Positioned
- Limiting end-to-end BSM Traction

Tivoli Business Service Manager for the Enterprise 5725-C55



- Clean External Message
  - One BSM product: Consumabilty
  - 1 BSM Solution / 1 Pricing model
  - IBM zEnterprise Aligned
    - Purchase of z196 not required
- Better Competitively Positioned
  - Price and Packaging
- Opens up broader customer base

Dynamic workload automation on zNext



- Leverage Broker technology to dynamically distribute job execution on pool of distributed VMs
- TWS Broker receives load balancing and other policies from the user
- TWS Broker assess the best workload distribution based on workload policy and monitored performances

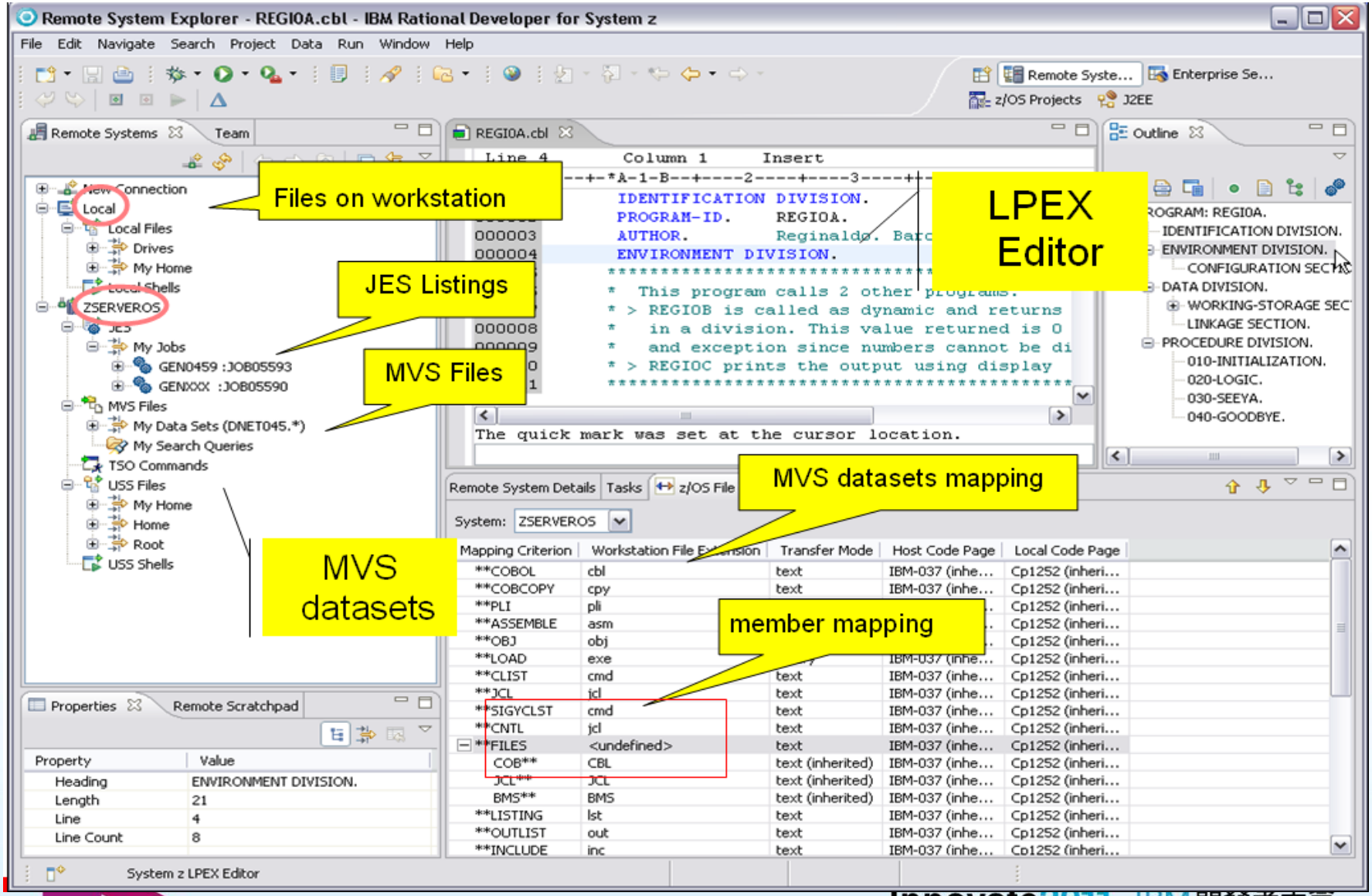
Boost productivity and accelerate innovation with modern skills

Solution: Comprehensive, multiplatform IDEs

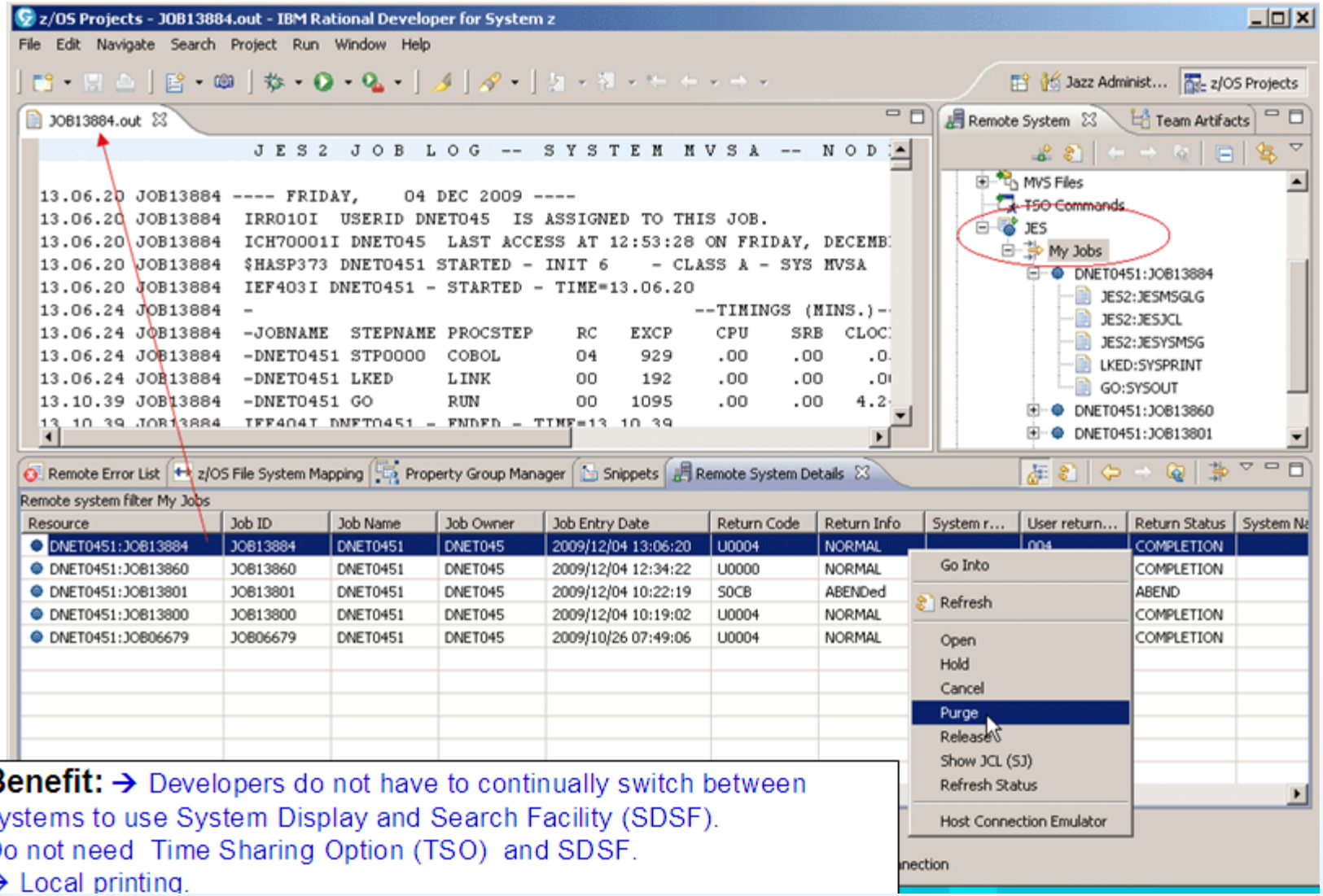
Upgrade to modern Eclipse-based tools to develop and maintain enterprise applications spanning multiple platforms, languages, and technologies

- Rational Developer for System z NEW!
- Rational Developer for zEnterprise
- Rational Developer for Power Systems
- Rational Application Developer
- Rational Business Developer
- Rational Programming Patterns for System z NEW!

RDz : Interactive access to z/OS (local + remote resources)

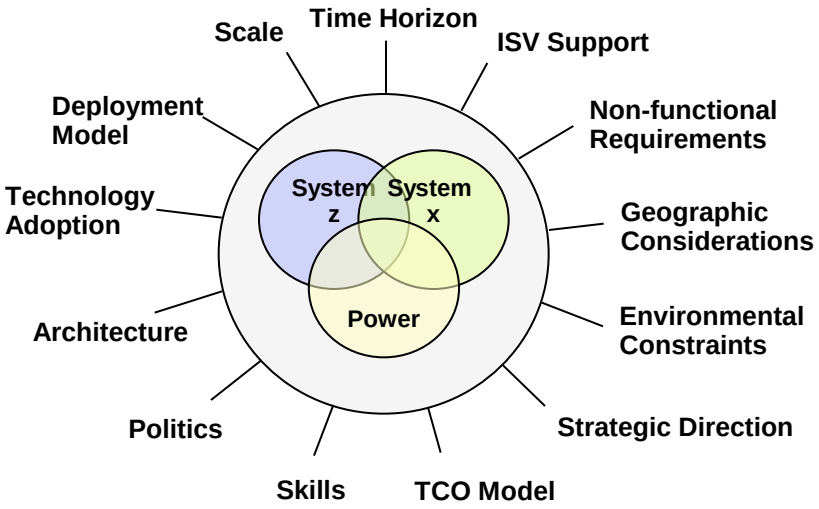


Monitoring Job Output

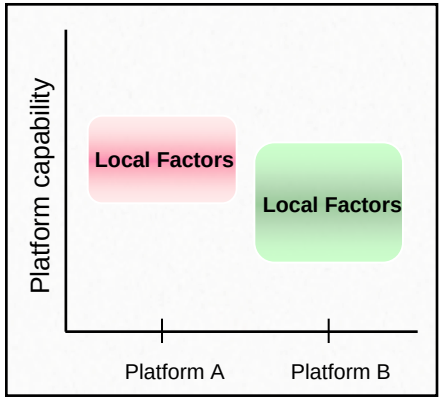


Benefit: → Developers do not have to continually switch between systems to use System Display and Search Facility (SDSF).
Do not need Time Sharing Option (TSO) and SDSF.
→ Local printing.

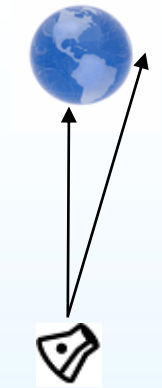
Fit for purpose is Key:



Local Factors Matter
- Skills
- Technology adoption
- Management
- Volume of servers
- Organizational



Infrastructure Size Matters
- Changes people dynamics
- Increases handoffs
- Affects testing, patching, etc



Thank
You