



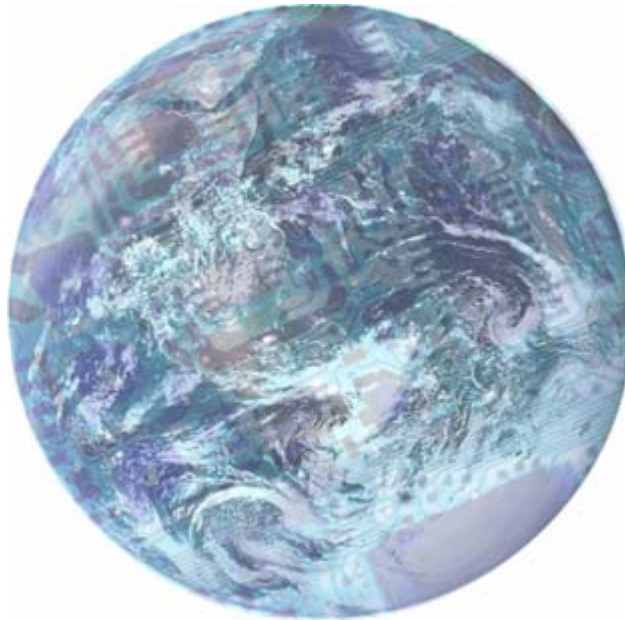


System z Enables Solutions For A Smarter Planet

The Smarter Planet And System z

Something Meaningful Is Happening

*“Every human being, company, organization, city, nation, natural system and man-made system is becoming **interconnected, instrumented and intelligent.** This is leading to new savings and efficiency—but perhaps as important, new possibilities for progress.”*



The world is getting smarter!

Consider How Our World Is Changing: Our World Is Becoming More...



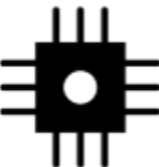
INTERCONNECTED

- 1/3 of the world's population on Web by 2011
- 4B mobile subscribers globally at end of 2010
- 37K cyber attacks in the US in 2007 (158% increase since 2006)



INTELLIGENT

- 15 petabytes of new information generated every day (8x more than the information in all U.S. libraries)
- 64B credit card transactions/year (up 35% YTY)
- New York Stock Exchange quote messages will be 400B/year by 2012 (up 900% from 2000)



INSTRUMENTED

- 30 billion embedded RFID tags by 2010
- 1/2 of all sensors in transportation, facilities and production equipment are smart sensors

Despite Progress – We Can Do Better

- US healthcare system losing > \$100B/year to fraud
- European retail sector wasted nearly €2B in 2006
- US Consumer Packaged Goods businesses lose \$40B/year due to supply chain inefficiencies
- \$11.5B/year of Indian produce is wasted
- 40% of insurance adjusters time wasted doing routine overhead functions
- For every 1,000 knowledge workers, \$5.7M/year worth of productivity is wasted reformatting information between applications

Growth Of IT Energy Usage In Data Centers Continues At An Alarming Rate

- Data centers have doubled in consumed power in the last five years.
 - ▶ At this rate, in 20 years (the average life of a data center) there will be 15 additional data centers for every one today
- Data centers consume 30-100 times energy/sq. ft. than typical office building. Many are close to power limits or running out of power. Why?
 - ▶ Vast infrastructure is needed to support microprocessors upon which computing is done. Consists of:
 - Power
 - Cooling
 - Floor Space

To Make Sense Of This New World, We Must Address Four Critical Questions

“New business and process demands ”

I Need to Work Smart

How can we work smarter supported by flexible and dynamic processes modeled for the new way people buy, live and work?

Smart Work

“Data is exploding and it’s in silos”

I Need Insight

How can we take advantage of the wealth of information available in real time from a multitude of sources to make more intelligent choices?

New Intelligence

“My infrastructure is inflexible and costly”

I need to respond quickly

How do we create an infrastructure that drives down cost, is intelligent and secure, and is just as dynamic as today’s business climate ?

Dynamic Infrastructure

“Our resources are limited”

I Need Efficiency

How do we drive greater efficiencies, compete more effectively, and respond more quickly by taking action now on energy, the environment, and sustainability?

Green and Beyond

System z Delivers The Capabilities Required For A Smarter Planet

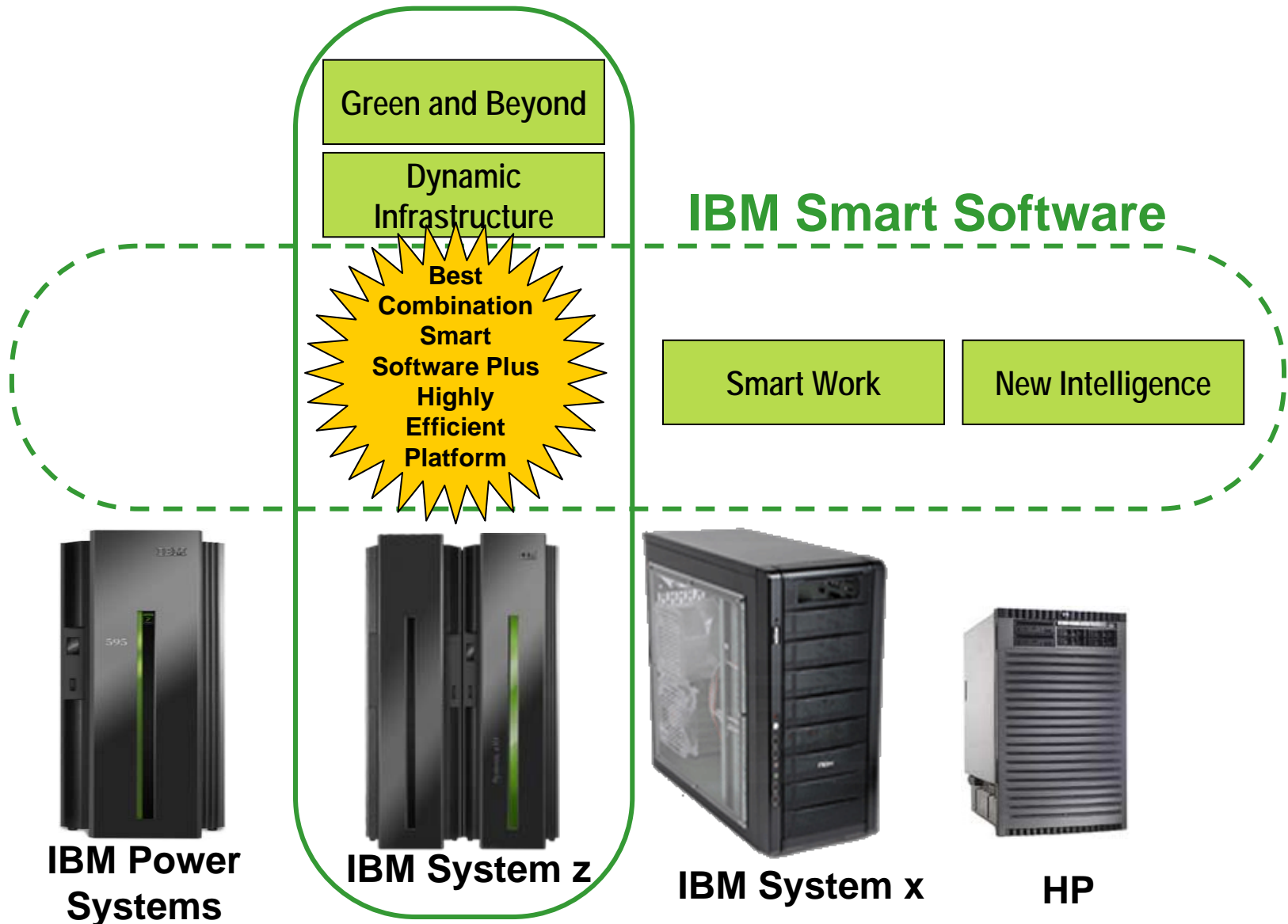
- **Smart Work** – Execute business models that meet the needs of changing businesses
- **New Intelligence** – Create new and profitable insights from available data
- **Dynamic Infrastructure** – Deliver IT services quickly and at the lowest cost
- **Green and Beyond** - Embrace an environmentally responsible policy with a data center platform that minimizes energy usage

System z – the hardware is great...the software makes it smarter!

Highly Efficient Platform

- Tremendous efficiency in the usage of processors and storage
 - ▶ Fewer processors required per workload
 - ▶ Processors are virtualized and shared
 - ▶ Virtualized storage is built in
 - ▶ Dedicated and virtualized I/O subsystem offloads
 - ▶ Virtualization and consolidation
 - ▶ Multiple workloads run concurrently
 - ▶ Intelligent workload management
 - ▶ Run with high utilization of resources
 - ▶ Shared memory
 - ▶ Huge I/O bandwidth

A Smart Solution



Smart Work With System z

- Business processes need to be flexible and changeable
 - ▶ Create processes that can be easily adapted to variations in local requirements
 - ▶ Change existing processes easily as conditions change

- IBM WebSphere software on the mainframe can do both
 - ▶ **WebSphere Process Server**
 - ▶ **WebSphere Enterprise Service Bus**
 - ▶ **WebSphere Message Broker**
 - ▶ **ILOG**
 - ▶ **WebSphere Business Services Fabric**
 - ▶ **WebSphere Business Events**

- ✓ *Do you have the ability to adapt workloads and processes to local conditions?*
- ✓ *Are you able to make changes to your business processes quickly?*

New Intelligence With System z

- Capture, store, and access all relevant business data
 - ▶ Real-time access to all information - operational and analytical
 - ▶ **DS8000 Enterprise Storage, I/O Subsystem, DFSMS, HFS (Unix)**
 - ▶ **DB2 for z/OS, IMS, Filenet**
- Integrate data and manage content
 - ▶ Enterprise-wide view of critical business data
 - ▶ **InfoSphere Information Server**
- Analyze data and communicate new insights
 - ▶ Monitor dashboards, analyze data, create and distribute reports
 - ▶ **Cognos Business Intelligence, WebSphere Portal**
- ✓ *Are you still working with data on paper?*
- ✓ *Are you able to provide a consistent, enterprise-wide view of critical customer data?*

Dynamic Infrastructure With System z

- Provide IT service quickly, at the lowest cost
 - ▶ Tremendous efficiency in the usage of processors and storage
 - ▶ Reduce operational cost with consolidation and virtualization
 - **System z virtualization, z/VM, Linux on System z, Specialty Engines**
 - ▶ Request driven provisioning of server environments
 - **Tivoli Service Automation Manager**

- Handle workload growth easily and quickly
 - ▶ **Capacity on Demand**
 - ▶ **Sysplex Architecture**

- Deliver unmatched platform availability, security and business resilience
 - ▶ **System z architecture, Parallel Sysplex, GDPS**

- ✓ *Are you operating your data center at the lowest possible cost?*
- ✓ *Are your clients satisfied with your response time for new service requests?*

Green And Beyond

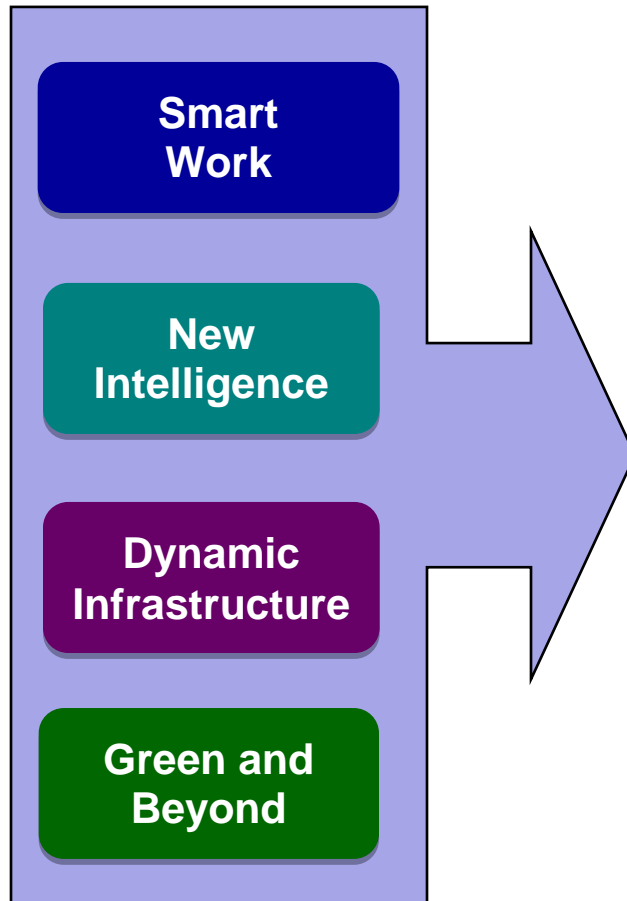
- Consume less energy per unit of work
 - ▶ **System z Virtualization/Consolidation**
 - ▶ **System z Storage Virtualization**
- Provide foundation for a Green Data Center by monitoring energy usage across all platforms
 - ▶ **Tivoli Monitoring for Energy Management, Systems Director Active Energy Manager**

✓ *Are you wasting energy?*

✓ *Are you reaching the limit of your data center capabilities?*

✓ *Can you monitor your energy consumption?*

Today's Seminar Will Demonstrate Why System z Is The Smart Platform For The Smarter Planet



Innovation ...

State of the art software for smarter planet solutions

Efficiency ...

Lowest total cost of ownership

Performance ...

Delivers unrivaled qualities of service

Introducing Service Oriented Finance

We are a traditional bank with branch offices throughout the country.

This has been a difficult year. Survival is our a top priority.

We need to cut costs!



**Service Oriented Finance
CEO**

Service Oriented Finance

**We never got ahead of
all the changes that
were forced upon us.**



COO

Service Oriented Finance

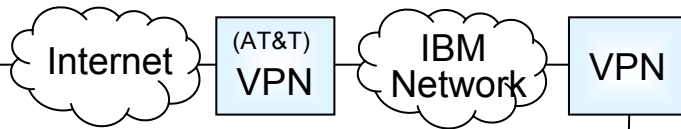
We had to cut staff.

**So how can we make changes,
while maintaining our current
operations?**



**Service Oriented Finance
CIO**

DEMO: Architecture



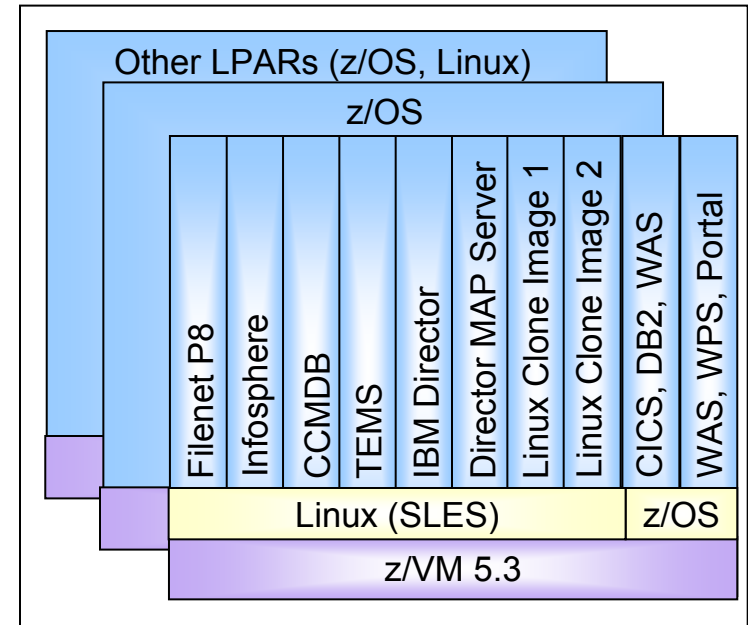
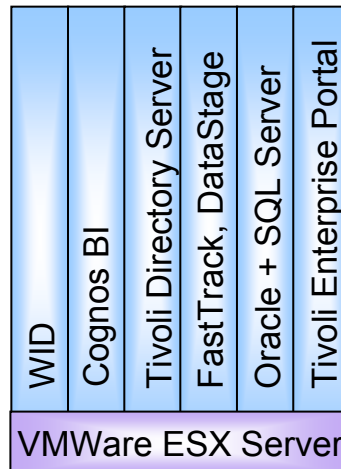
Remote Desktop to System x client images



**z10-EC
2097-E64
640GB RAM**

**System x 3850
4 x 3.66GHz Xeon MP
12GB RAM**

System x VMWare images running as desktop or server clients to System z



Our Agenda Today

Agenda	
40 Minutes	The Smarter Planet and System z
40 Minutes	Smart Work on System z
20 Minutes	Break
40 Minutes	Handling the Information Explosion
40 Minutes	Making Smarter Decisions
60 Minutes	Lunch
40 Minutes	Dynamic Infrastructure With System z
40 Minutes	Enterprise Systems Management
20 Minutes	Break
40 Minutes	The Smart Platform
40 Minutes	The Lean Green Machine

