



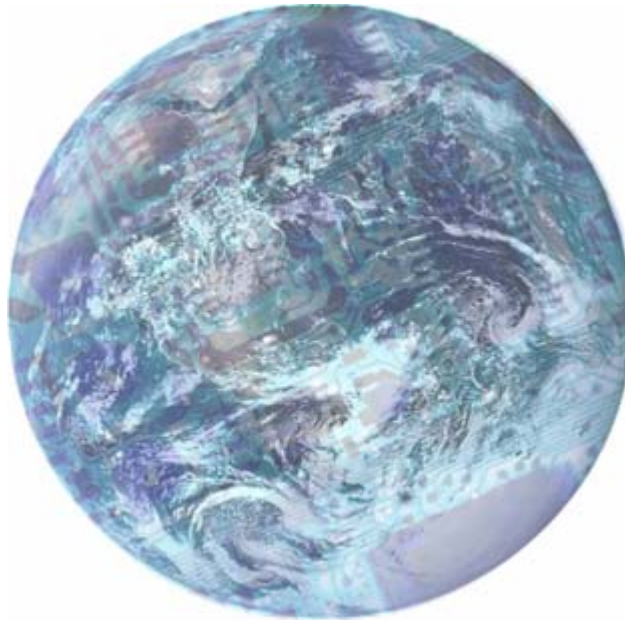


# **System z Enables Solutions For A Smarter Planet**

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...



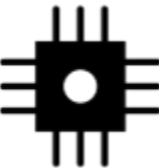
## INTERCONNECTED

- 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?*

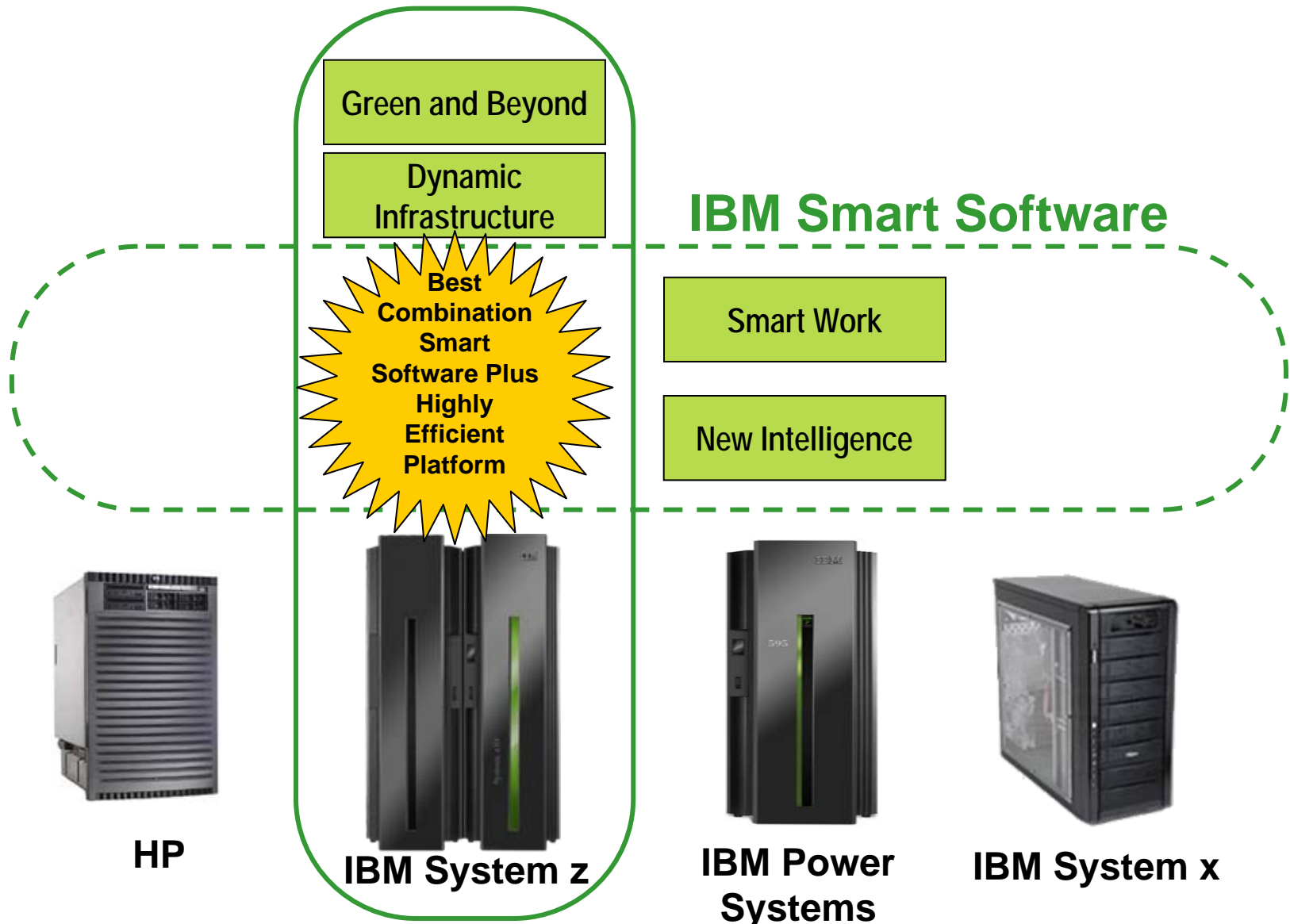
**Green and Beyond**

# 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!*

# A Smart Solution



# System z – A Superior Platform

- Tremendous efficiency in the usage of processors and storage
  - ▶ Scale
  - ▶ Virtualization
  - ▶ Quality of service
  - ▶ High utilization

# 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

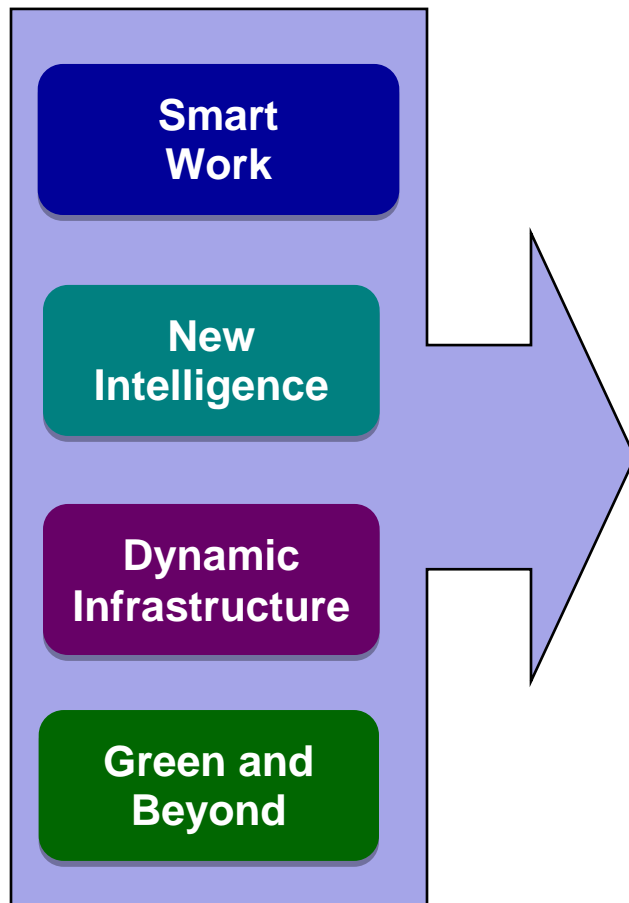
- Consume less energy per unit of work
  - ▶ **System z Virtualization/Consolidation**
  - ▶ **System z Storage Virtualization**
- Provide foundation for a Green Data Center by monitoring energy usage across all platforms
  - ▶ **Tivoli Monitoring for Energy Management, Systems Director Active Energy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

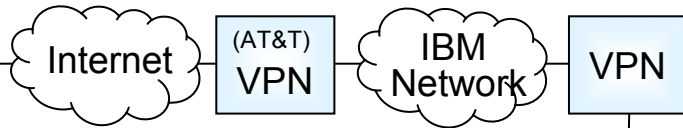
**We had to cut staff.**

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



**Service Oriented Finance  
CIO**

# DEMO: Architecture



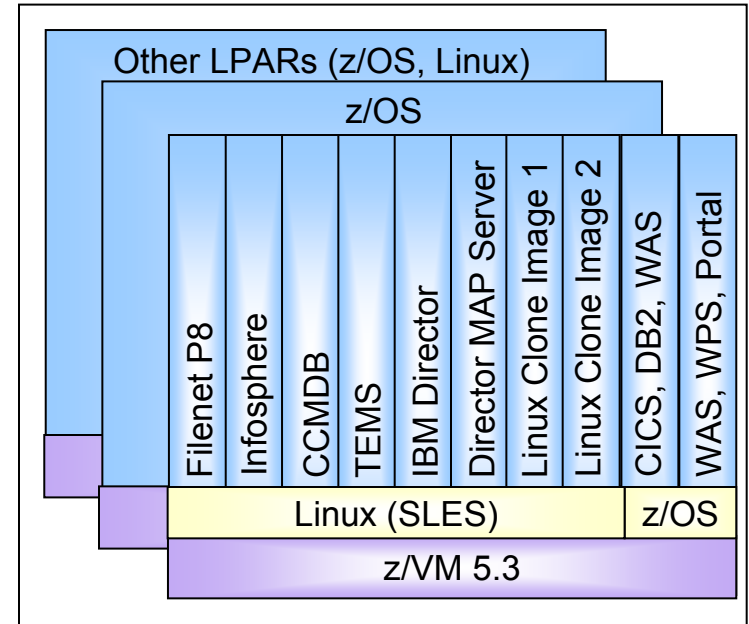
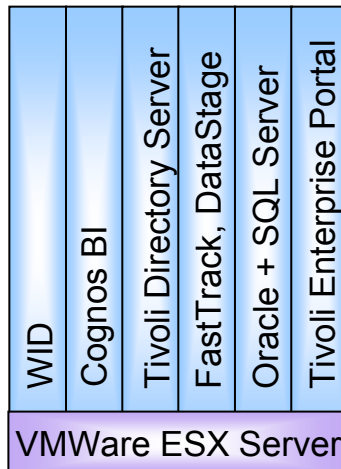
Remote Desktop  
to System x client  
images



**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	<b>Break</b>
40 Minutes	Handling the Information Explosion
40 Minutes	Making Smarter Business Decisions
60 Minutes	<b>Lunch</b>
40 Minutes	Dynamic Infrastructure With System z
40 Minutes	Enterprise Systems Management
20 Minutes	<b>Break</b>
40 Minutes	The Smart Platform
40 Minutes	The Rule of Three



