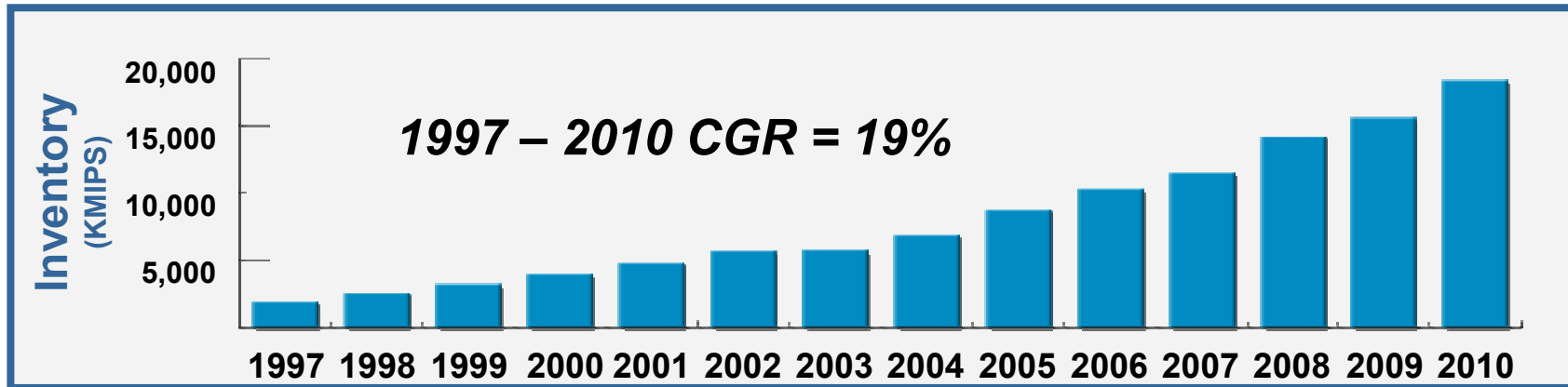# Welcome to DB2 for z/OS Modernisation

The future runs on System z

John Eagles

System z IM BUE

IBM Asia Pacific

System z – Dramatic growth with modern workloads

Inventory (KMIPS)

1997 – 2010 CGR = 19%

20,000 | 15,000 | 10,000 | 5,000

1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Strategic workloads

▶ Transaction Processing
▶ Virtualization
▶ Risk Management
▶ Business Intelligence and Analytics
▶ BPM
▶ Cloud computing

Developed an open development environment for modern architectures. Deployment which can be done both in Cobol and in Java, depending on the requirement and use.
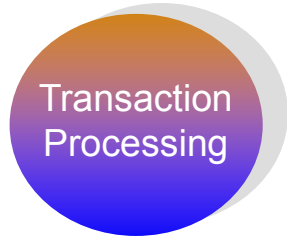**– Atos Origin**

37% New workloads YTY growth – the highest growth in decades

New customers since 4Q 2010 that implemented new workloads on System z **105**

Clients are moving strategic workloads to System z

Transaction Processing

Moved from HP to System z for a highly reliable processing of thousands transactions/second

Virtualization

Consolidated Intel servers to System z to guarantee high availability to their SaaS customers and support high business growth.

Risk Management

Used superior System z security to run a new operational risk management solution

Business Intelligence
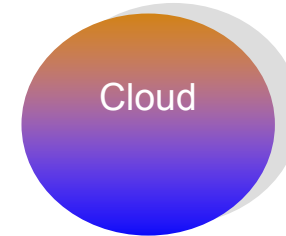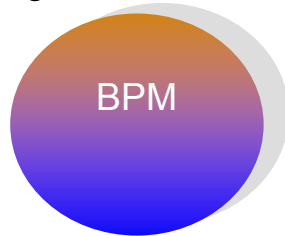
Used System z for direct access to operational data as it happens and as the data is created

BPM

Built a WebSphere based solution on System z for Internet banking and ATMs connected to core banking application

Cloud

Built a cloud-based solution by providing computing services to local community, enabling fishermen, wine growers, etc to contract for services

System z – the heart of Smarter Computing

Big Data: Designed for data
**System z** removes barriers to harnessing all available information and unlock insights to make informed choices.

Optimized Systems: Tuned to the task
System z removes financial barriers by driving greater efficiency and performance for each workload.

Cloud: Managed as a cloud
System z removes barriers to rapid delivery of new services and realize IT without boundaries to reinvent business processes and drive innovation.

Smarter Computing

Cloud

Optimized Systems

Virtuous Cycle

Enterprise

Big Data
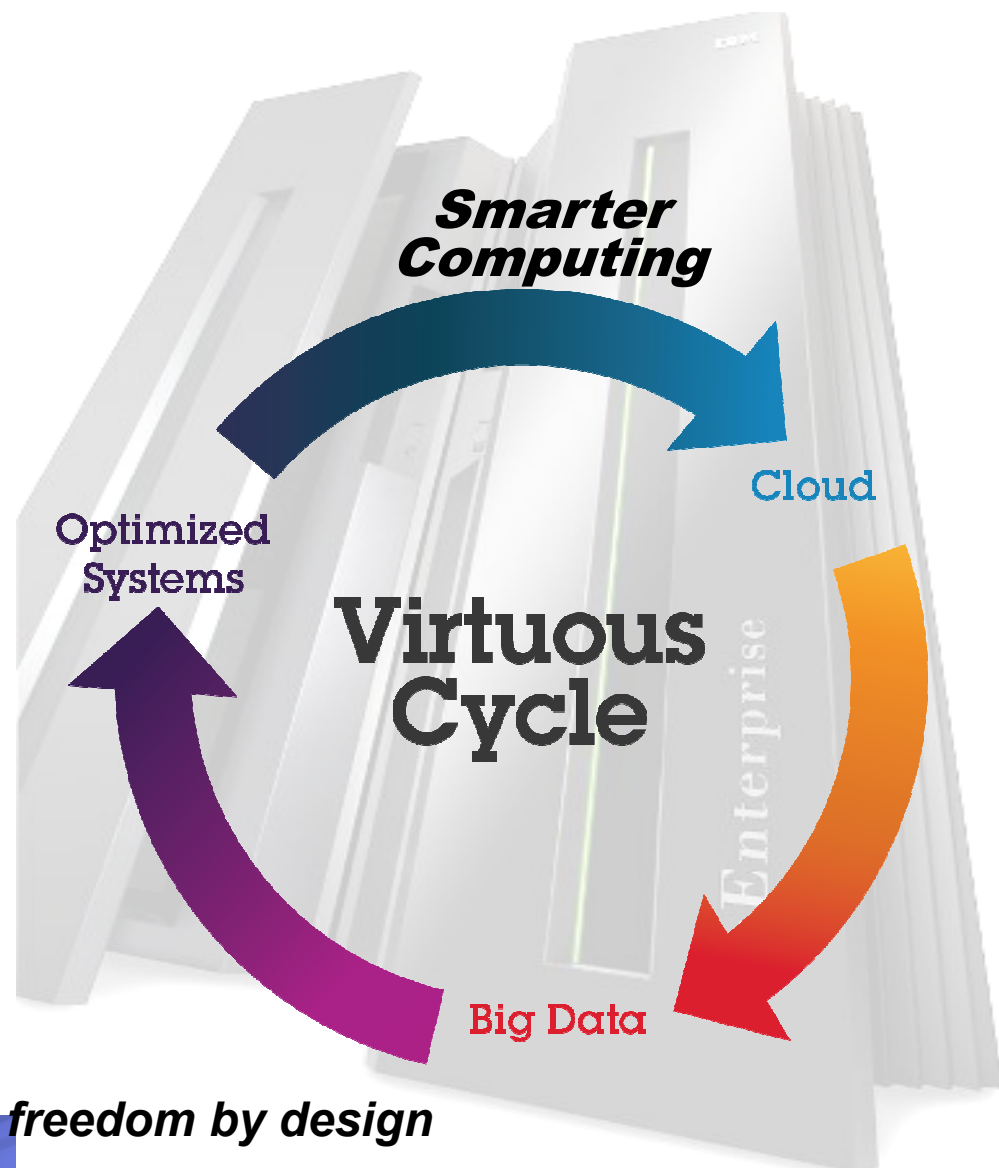
System z - freedom by design

The Explosion of Data is Creates New Challenges

91%

of CIO's believe that existing reporting processes do not meet future requirements for timely information.

$40 billion

Consumer product and retail industries lose about $40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.
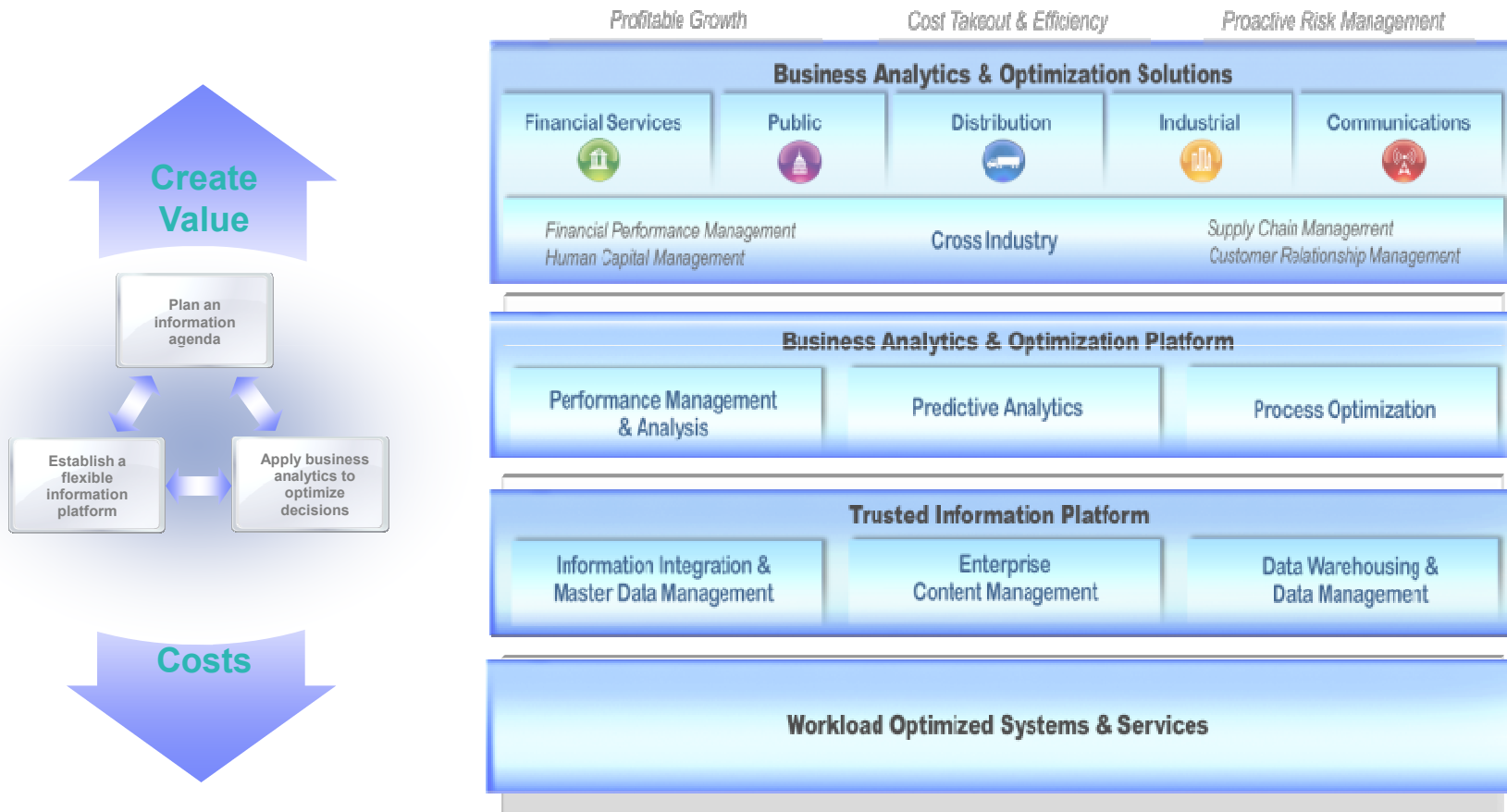
33%

33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible.
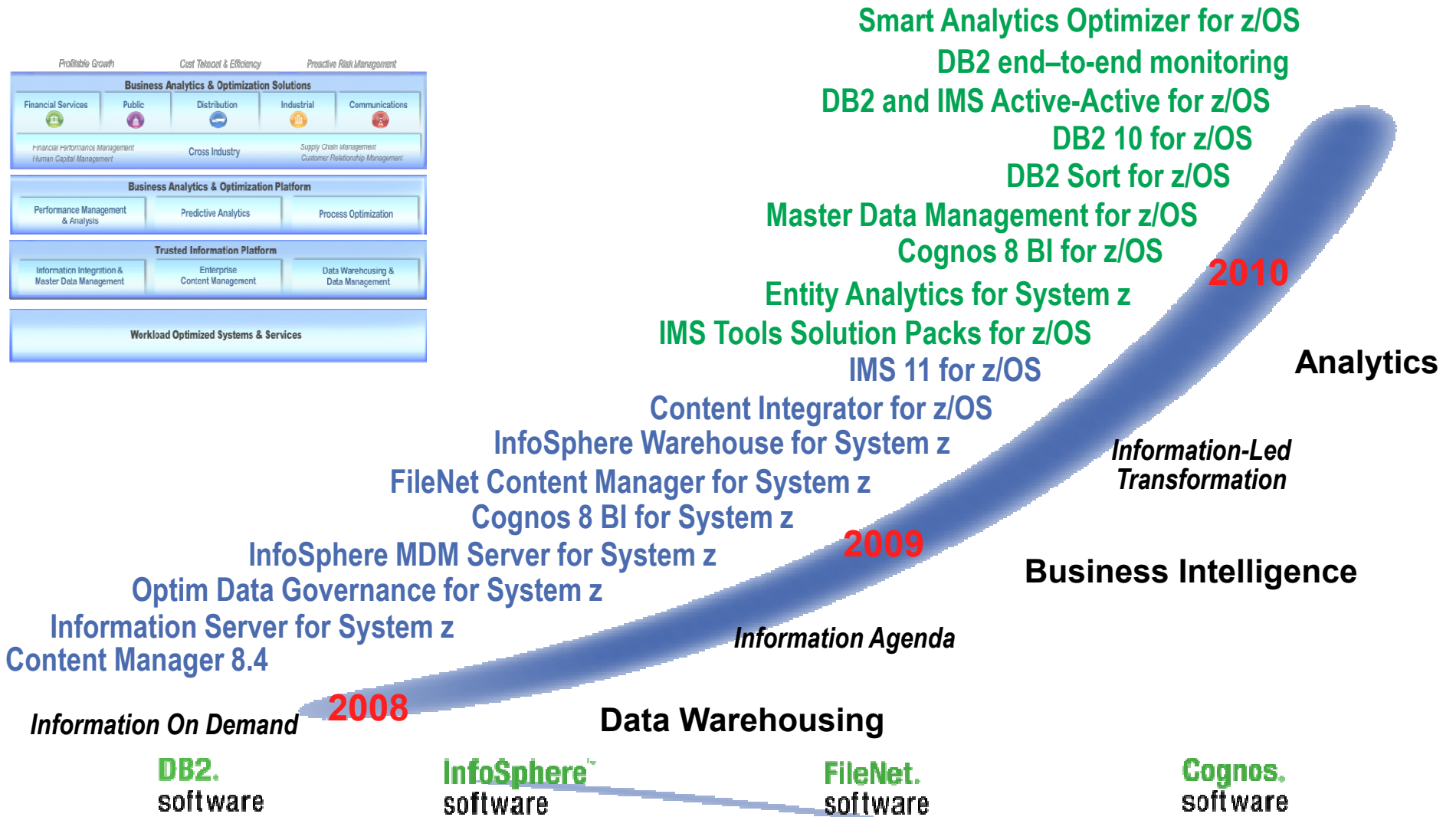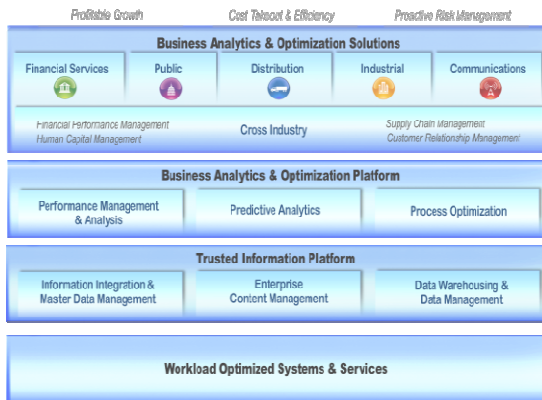
75%

of data is replicated – over 50% of the time to more than one system.

Getting started with an information-led transformation

Create Value

- Plan an information agenda
- Establish a flexible information platform
- Apply business analytics to optimize decisions

Costs

Profitable Growth — Cost Takeout & Efficiency — Proactive Risk Management

Business Analytics & Optimization Solutions

| Financial Services | Public | Distribution | Industrial | Communications |

Financial Performance Management
Human Capital Management

Cross Industry

Supply Chain Management
Customer Relationship Management

Business Analytics & Optimization Platform

| Performance Management & Analysis | Predictive Analytics | Process Optimization |

Trusted Information Platform

| Information Integration & Master Data Management | Enterprise Content Management | Data Warehousing & Data Management |

Workload Optimized Systems & Services

Information-Led Transformation for System z

More new capabilities delivered in the past 3 years than at any point in the mainframe's history

Smart Analytics Optimizer for z/OS
DB2 end–to-end monitoring
DB2 and IMS Active-Active for z/OS
DB2 10 for z/OS
DB2 Sort for z/OS
Master Data Management for z/OS
Cognos 8 BI for z/OS

2010

Entity Analytics for System z
IMS Tools Solution Packs for z/OS
IMS 11 for z/OS

Analytics

Content Integrator for z/OS
InfoSphere Warehouse for System z
FileNet Content Manager for System z
Cognos 8 BI for System z
InfoSphere MDM Server for System z

Information-Led Transformation

2009

Optim Data Governance for System z
Information Server for System z
Content Manager 8.4

Business Intelligence

Information Agenda

2008

Information On Demand

Data Warehousing

DB2 software

InfoSphere software

FileNet software

Cognos software

DB2 10 for z/OS – An Incredible Release

- CPU reductions for transactions, queries, & batch

- Ten times more users by avoiding memory constraints

- More concurrency for catalog and utilities

- Additional online changes for data definitions, utilities and subsystems

- Improved security with improved granularity for administrative privileges, data masking and audit capabilities

- Temporal or versioned data

- pureXML and SQL enhancements improve portability

- Productivity improved for database administrators, application programmers, & systems administrators

Why Migrate to Current DB2 for z/OS?

- **Business needs to save money**
  - **Reduce CPU time**
  - Service Oriented Architecture

- **Application developers need improved productivity and integration**
  - pureXML for a faster, more capable interface to XML data
  - Powerful new SQL temporal enhancements & portability
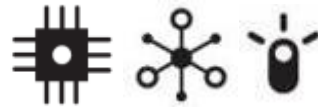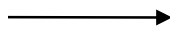
- **Database Administrators need**
  - Improved performance
  - Availability, scalability & memory management
  - Simpler security and   regulatory compliance
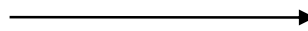 - More productive database administration
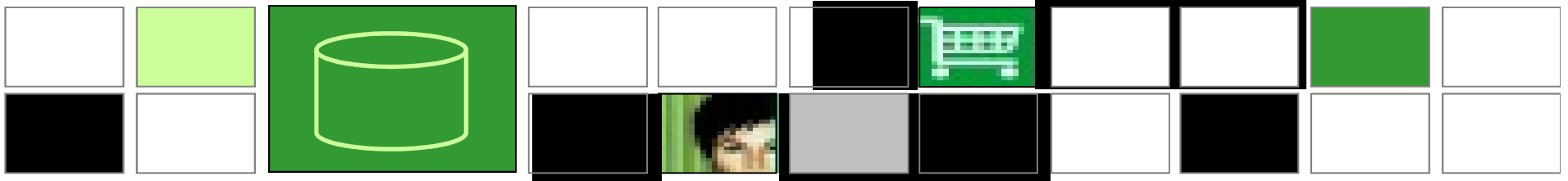
Business Analytics Software Conversation

The world is changing.

It's becoming increasingly instrumented, interconnected and intelligent, creating an explosion of information.

Business Analytics

That exposition of information holds the potential to deliver actionable insights for decision makers at all levels of your organization so they can optimize performance.

Optimizing performance is the ability to line up resources, opportunities and execution for optimized outcomes. It's the ability for every decision maker to have up-to-the minute information to understand how their business is doing and why. Predictive modelling and "What if" analysis provides them with the ability to predict opportunities and threats and confidently take action. Financial and operational planning, budgeting and forecasting puts resources in the right place and sets targets for those allocations.
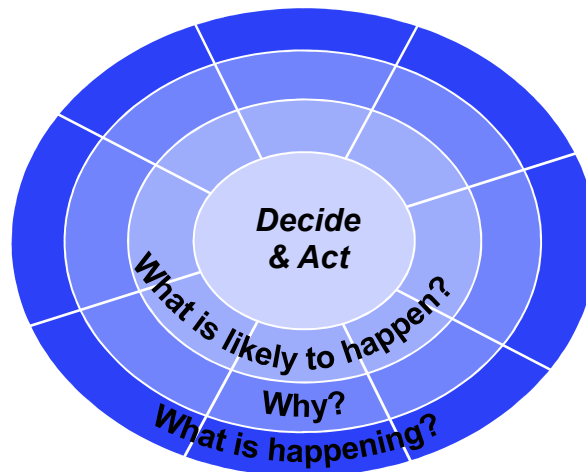
CIO/IT

CFO/Finance

LOB / EXEC

Decide & Act

What is likely to happen?

Why?

What is happening?

IBM Software Categories:
- ✓ Business Intelligence
- ✓ Financial PM and Strategy Mgmt
- ✓ Analytic Applications
- ✓ Advanced Analytics
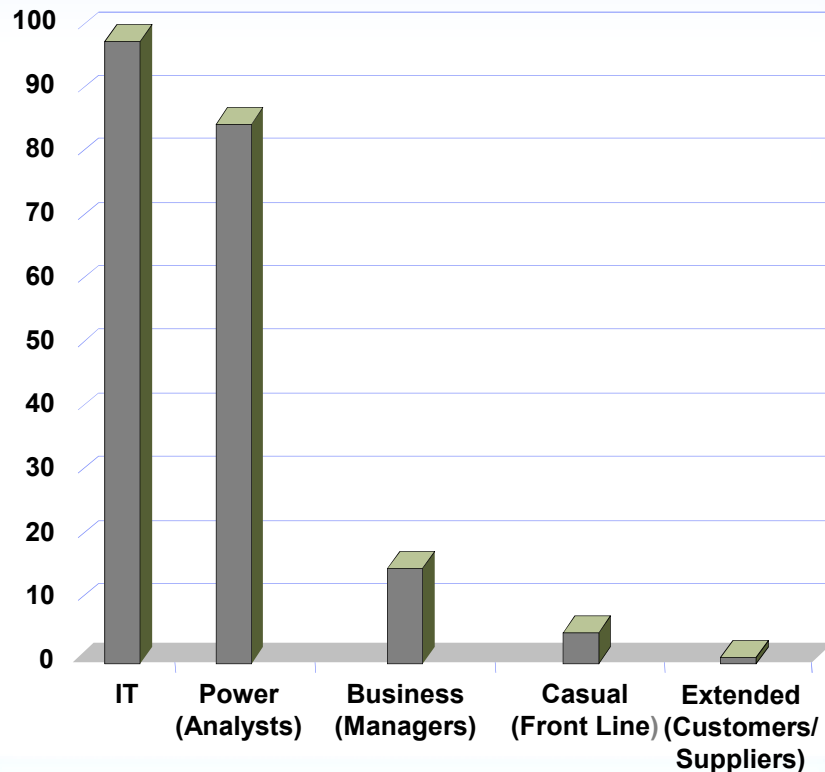
Cognos. software
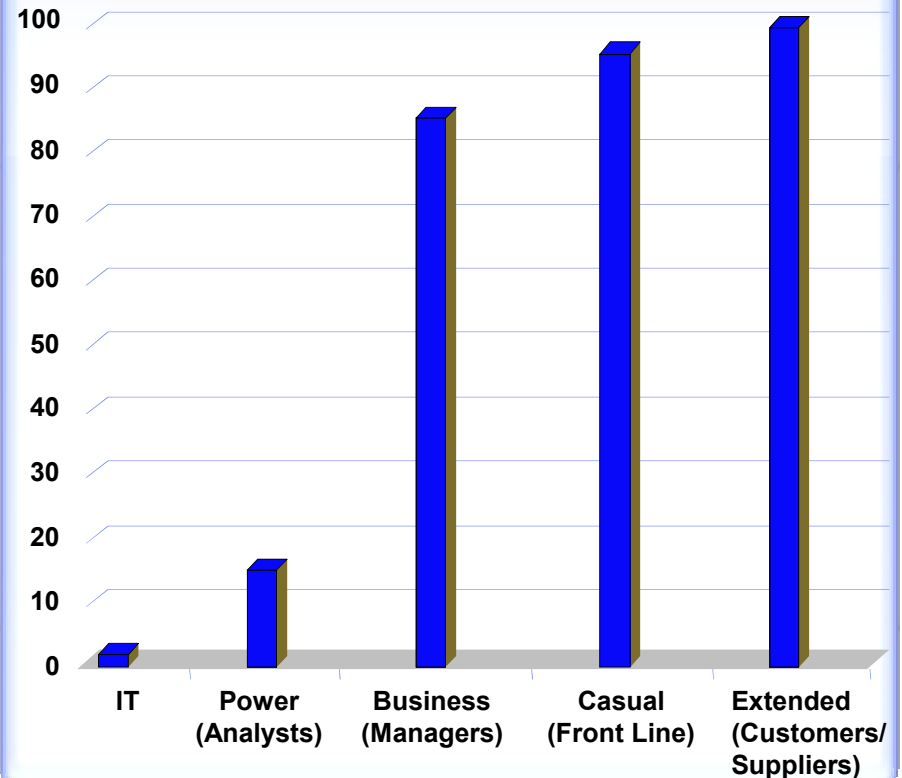
+...

SPSS AN IBM COMPANY

Usage Patterns for Business Intelligence are Shifting

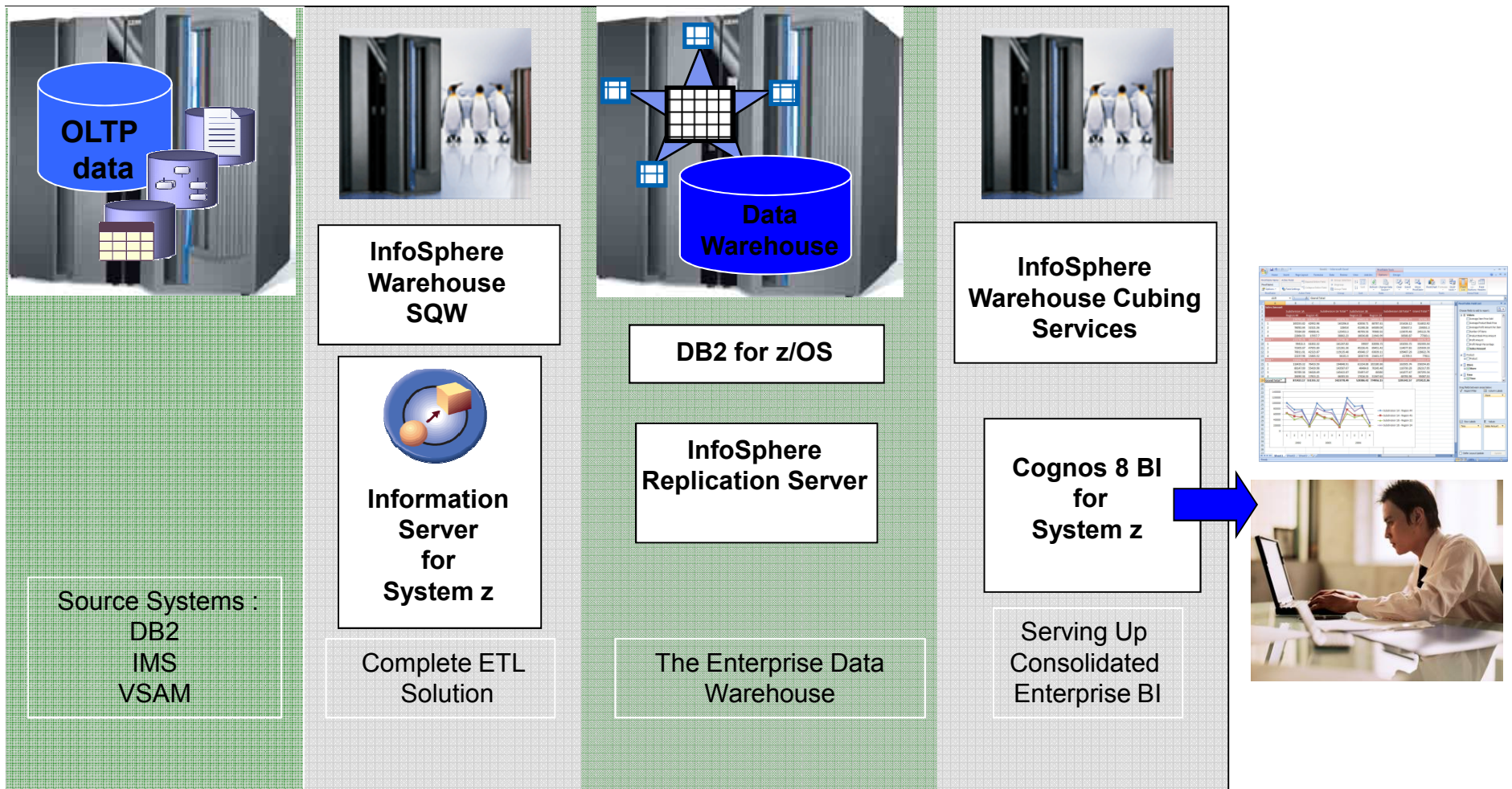*Business intelligence is needed across and beyond the enterprise*

Who is using business intelligence tools today?

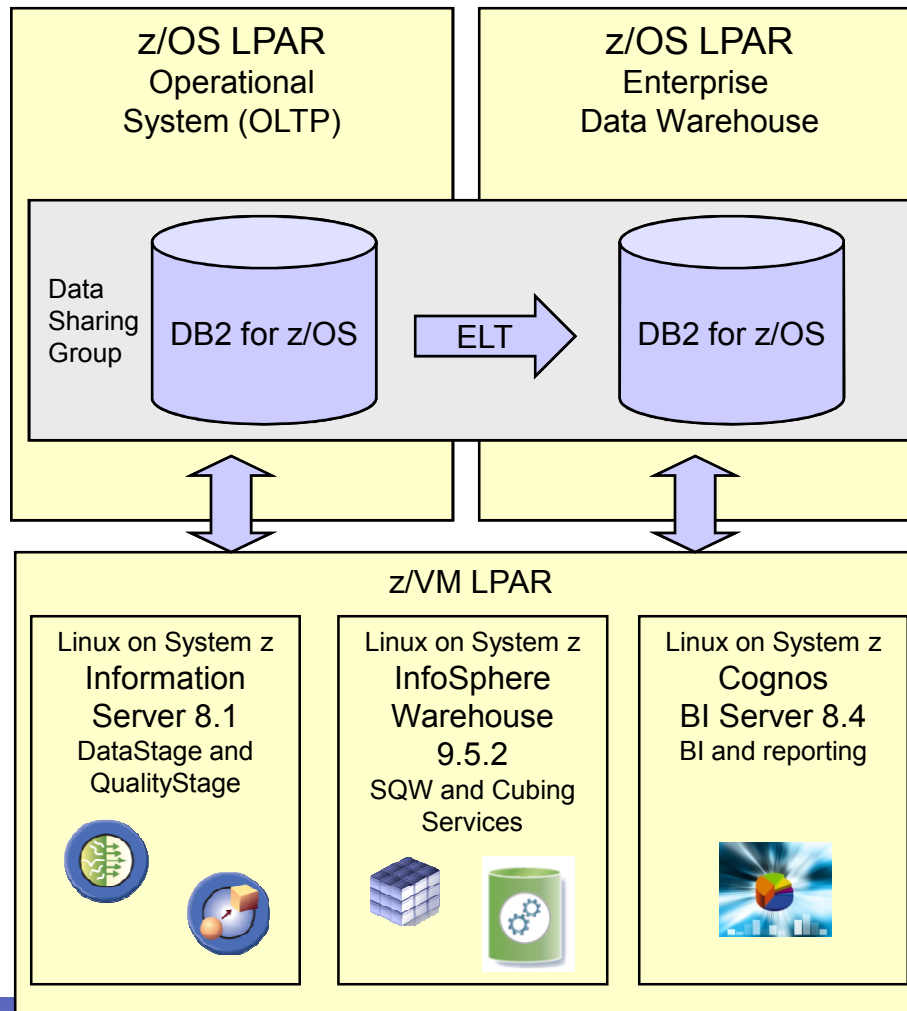**Who can get most value out of business insights?**

Data Warehouse and BI System z Solution

OLTP data

Source Systems :
DB2
IMS
VSAM

InfoSphere Warehouse SQW

Information Server for System z

Complete ETL Solution

Data Warehouse

DB2 for z/OS

InfoSphere Replication Server

The Enterprise Data Warehouse

InfoSphere Warehouse Cubing Services

Cognos 8 BI for System z

Serving Up Consolidated Enterprise BI

Combining the Reliability and Availability of DB2 for z/OS with Cost Effective Applications running on Linux for System z
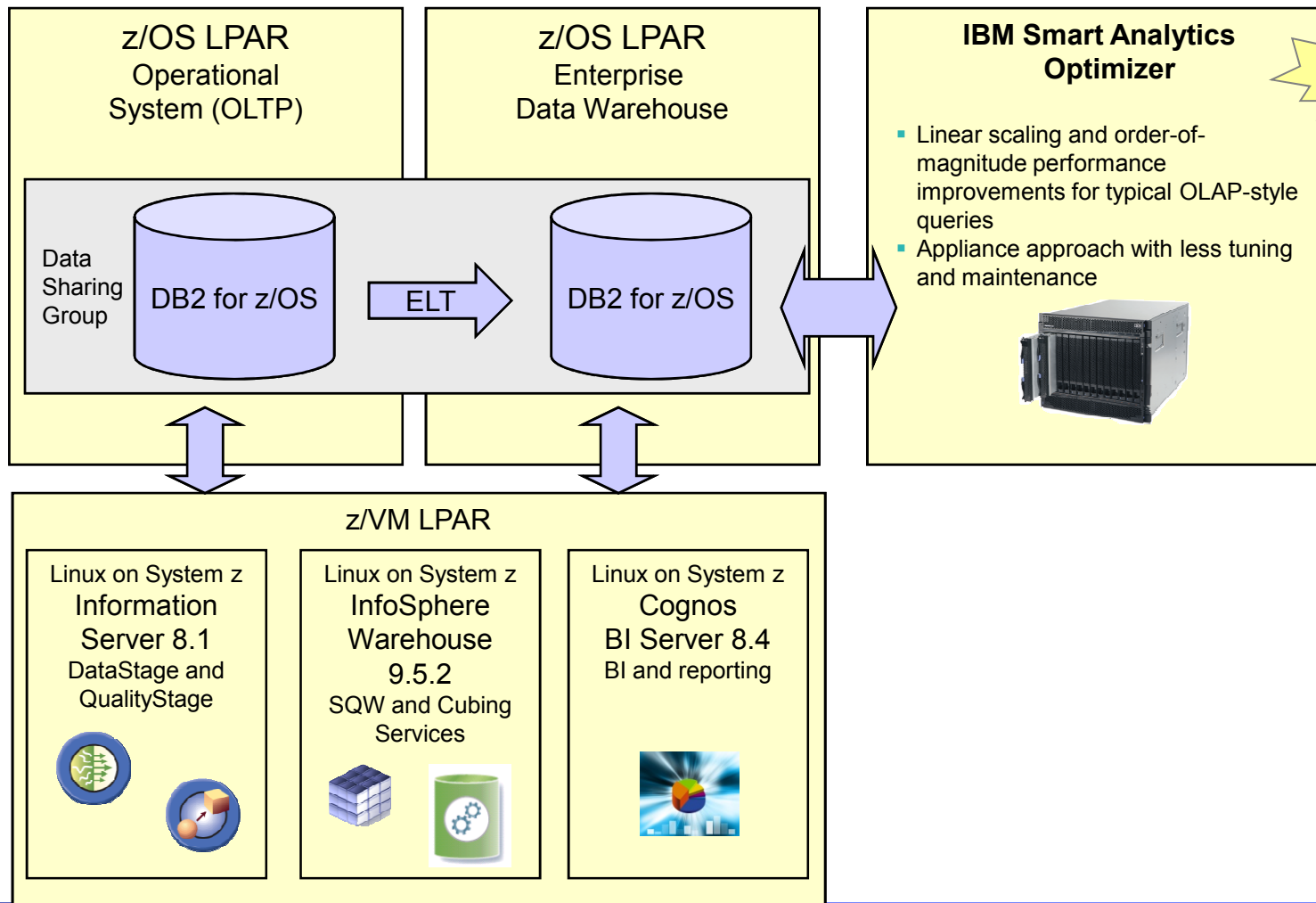
The IBM Data Warehouse Solution on System z

Ultimate Consolidation Opportunity

z/OS LPAR Operational System (OLTP)	z/OS LPAR Enterprise Data Warehouse

Data Sharing Group

DB2 for z/OS → ELT → DB2 for z/OS

z/VM LPAR

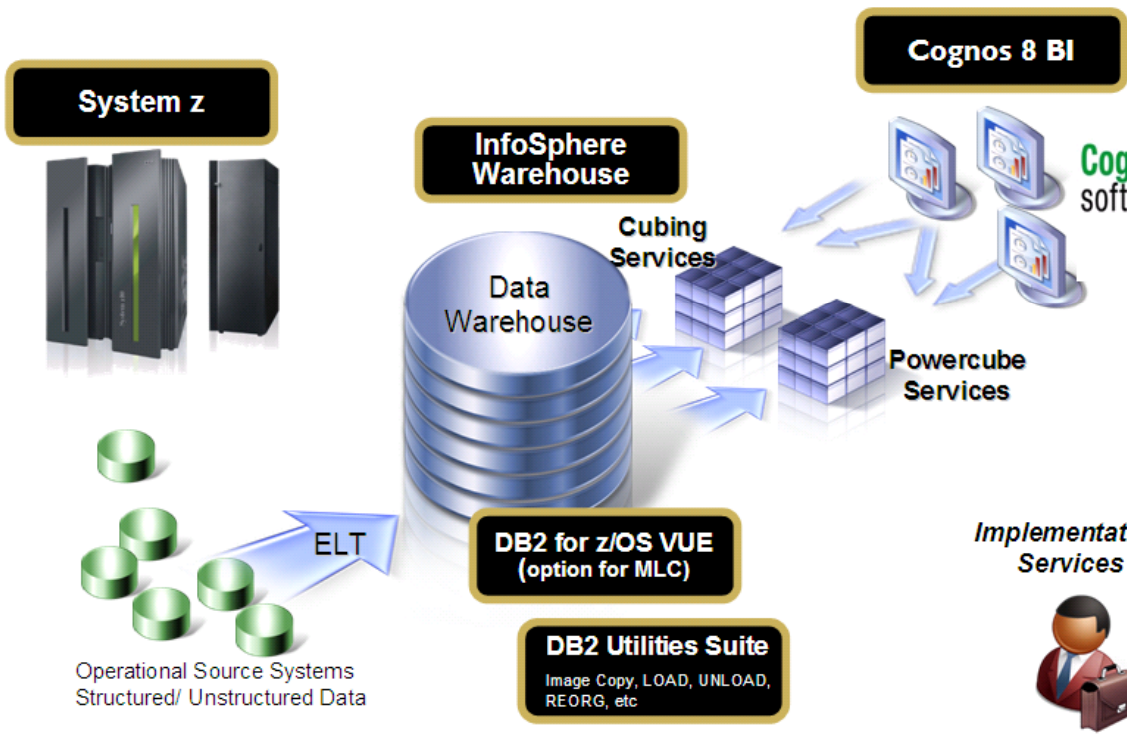| Linux on System z Information Server 8.1 DataStage and QualityStage	Linux on System z InfoSphere Warehouse 9.5.2 SQW and Cubing Services	Linux on System z Cognos BI Server 8.4 BI and reporting

- Consolidation of mission-critical data on System z

- Ability to leverage existing environment, high availability, backup and governance procedures as well as skills

- Efficient data movement within a data sharing group (no network)

- Performance and TCO improvements through cubing services (data marts) and DB2 enhancements

- Complex transformations and data quality driven from Linux on System z with Information Server

IBM Smart Analytics Optimizer
Adding Industry Leading Performance

z/OS LPAR
Operational
System (OLTP)

z/OS LPAR
Enterprise
Data Warehouse

IBM Smart Analytics Optimizer

New!

Data Sharing Group

DB2 for z/OS → ELT → DB2 for z/OS

- Linear scaling and order-of-magnitude performance improvements for typical OLAP-style queries
- Appliance approach with less tuning and maintenance

z/VM LPAR

Linux on System z
Information Server 8.1
DataStage and QualityStage

Linux on System z
InfoSphere Warehouse 9.5.2
SQW and Cubing Services

Linux on System z
Cognos BI Server 8.4
BI and reporting

IBM Smart Analytics System 9600

DB2 for z/OS and Utilities
– Range Partitioned Data
– CPU Parallelism
– Data and Index Compression
– DB2 Data Sharing

InfoSphere Warehouse
– SQW and Cubing Services

Cognos 8 BI for Linux on System z
– Consolidated and high server utilization rates

z/OS
– Workload Management
– Storage Management System
– Hardware-Assisted compression, I/O and availability

System z10
– Hardware gold standard
– Reduced costs via specialty processors
– Single-Server reduced complexity, failure points, and latency
– Enterprise Class Storage

Implementation Services
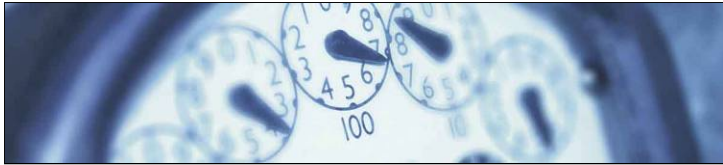– Rapid deployment and time to value
– Ensure customer success

System z: The platform for the future

"You cannot think seriously about your longer-term IT architecture without thinking equally seriously about what today's mainframe environment has to offer"

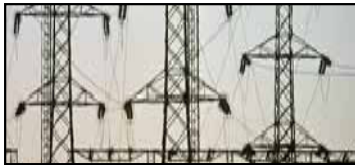*CIO Magazine: Mainframe computing is set for a rebirth – September 29, 2009*

Typical Utilization for Servers

Windows: 5-10%   Unix: 10-20%   **System z: 85-100%**

System z can help **reduce** your floor space
up to **75%-85%** in the data center

Thank You

System z can lower your total cost of ownership, requiring **as little as 30%**
of the power of a distributed server farm running equivalent workloads

The cost of storage is typically **three times more** in
distributed environments