



# IBM System z Technology Summit

*Leveraging DB2 for z/OS for  
data warehousing and  
business analytics*

**Presenter Name**

**Title**





**Generate  
More Revenue**

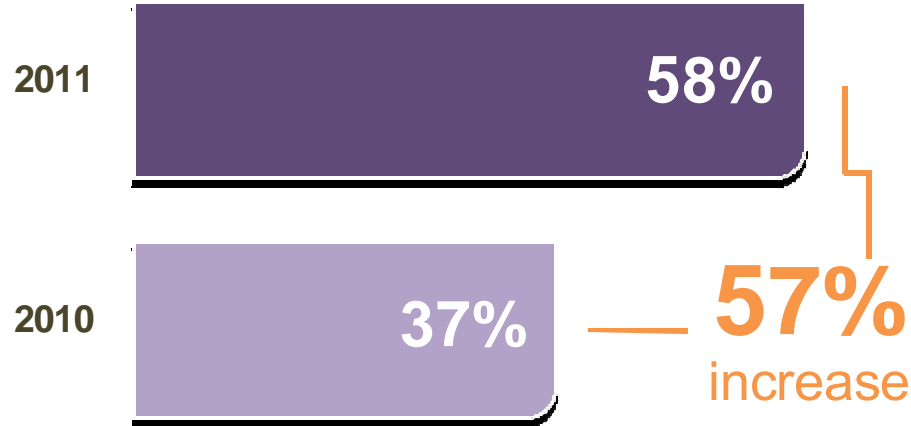
**Reduce Risk**

**Predict Future Outcomes  
with Greater Confidence**

**Lower Costs**

## The ability to create competitive advantage using analytics surged dramatically in 12 months; the bottom-line impact is clear

Respondents who say analytics creates a competitive advantage



Organizations achieving a competitive advantage with analytics are

# 2.2x

more likely to substantially outperform their industry peers

Source: The New Intelligent Enterprise a joint MIT Sloan Management Review and IBM Institute of Business Value analytics research partnership.  
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# Elevated demand for Business Analytics

*More users,  
with higher  
expectations*

- Needs to be employed in every function and department and shared with customers and suppliers
- Needs to support strategic, tactical and operational decisions
- Must be timely, accurate and integrated across the enterprise
- Must be protected with stringent levels of security

# New requirements have emerged

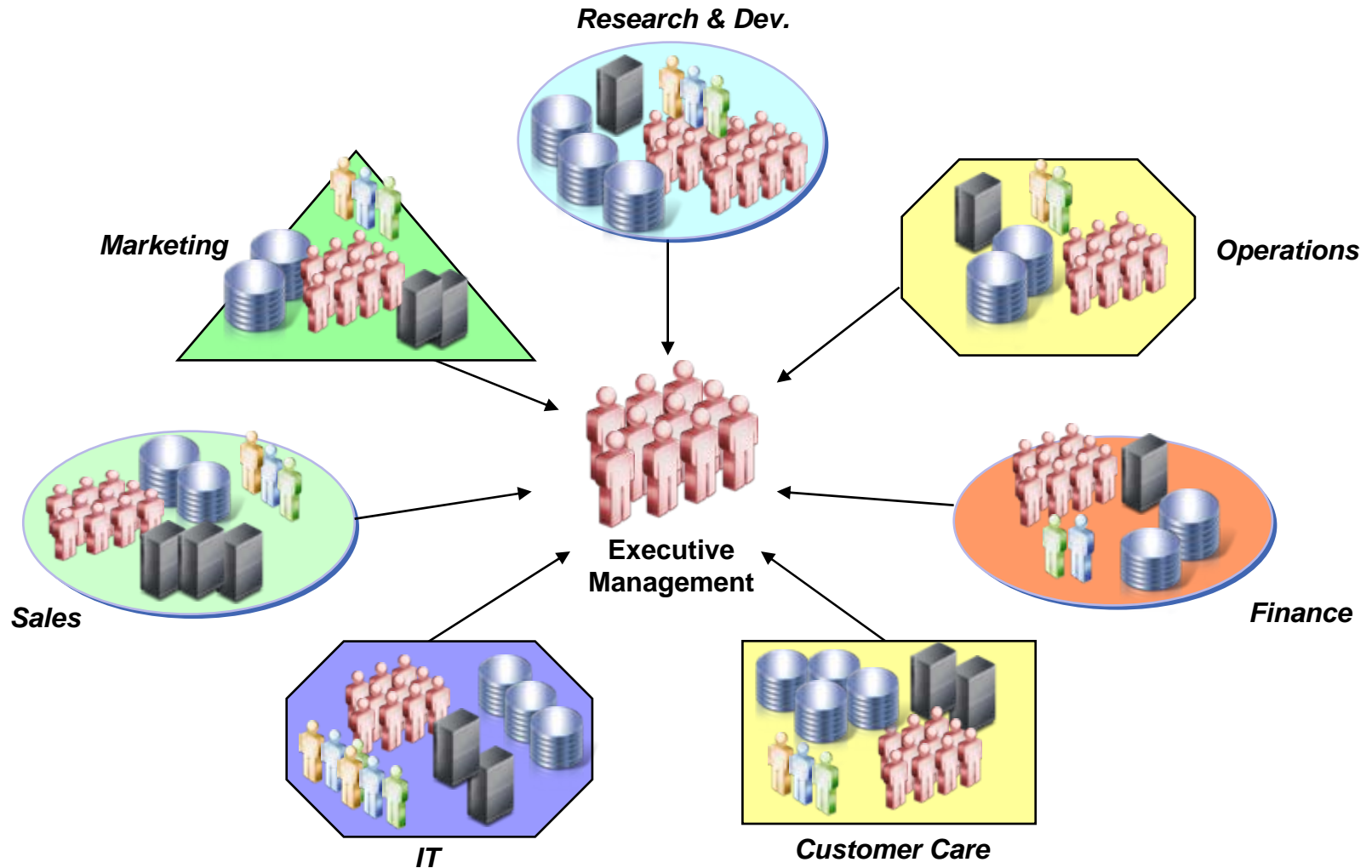
## *More aggressive requirements*

- Enterprise-level scale & performance
- Mission critical availability
- Faster access to operational data
- Rapid, cost effective deployment & expansion
- More integrated view of data across the environment

## *Driving new focuses*

- Modernization
- Standardization & Consolidation
- Operational BI
- Data Governance
- Cloud Computing

# Current State of Affairs: Execution by Department



# What's hindering success?

Growth = re-engineering

Each depart. needs to finance & acquire the HW, SW admin, facilities, training & support to meet demand

Insufficient processing power to support large or complex queries

Servers are run at sub-capacity

Duplicate environments needed for dev., test, prod., HA, DW, DM etc. are multiplied over applications and lines of business

Data transfer is limited to off peak times

Multiple copies of the data are being created

Complexity of multiple infrastructures is impacting effectiveness of DR, admin., audit ability, compliance, etc.,

Inconsistency of security controls across duplicated data

# What role can you play to help overcome these barriers?

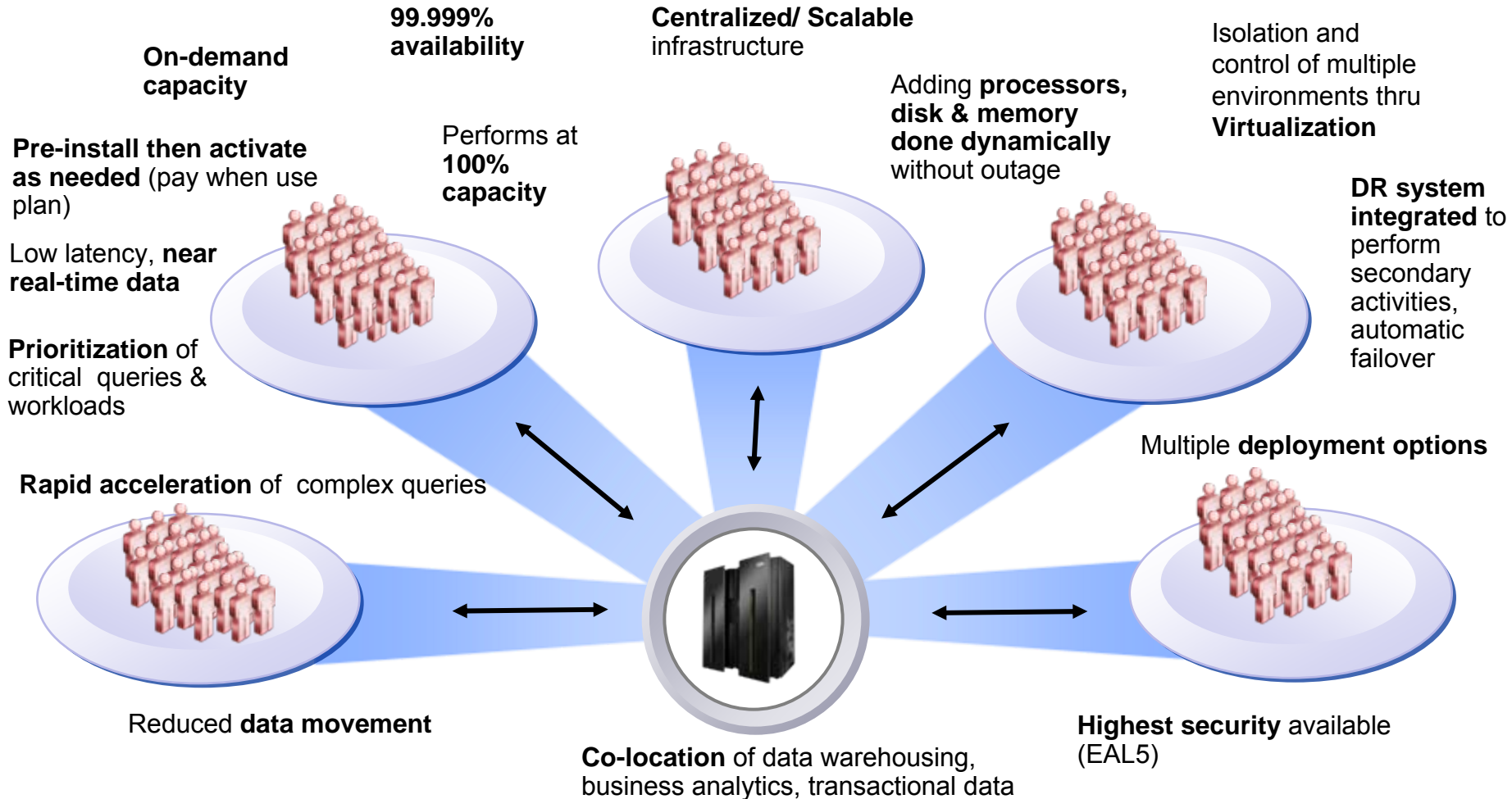
- Help meet new requirements by extending the characteristics of the transactional systems to data warehousing and business analytics
- Enable operational business analytics by co-locating data warehousing and business analytics closer to the transactional data
- Help minimize cost and reduce complexity by supporting a centralized, scalable infrastructure
- Respond quickly to data warehousing and business analytic needs by enabling rapid deployment and expansion

*An average of 70% of transactional data that sources today's informational systems originates on System z*





# How can System z help?



# Florida Hospital

## *Strengthens Data Warehousing Strategy with DB2 for z/OS*

- Created a clinical dimensional data warehouse that incorporates **billions of patient diagnostic records** used by researchers and clinicians
- Delivers the **high performance and 24x7 availability** vital to hospital processes
- Meets requirements for **consistent uptime, superior scalability and recoverability**



FLORIDA  
HOSPITAL

*The skill to heal. The spirit to care.*

*“System z is a very **agile platform** for us. We have the **highest-performance utilities** in the world, we have a **platform that will scale**, and the best disk in the world. It’s just not fair to the other platforms, but that’s **where you want to be** if you need to respond **in the warehouse space.**”*

Bob Goodman, Senior Database Administrator, Florida Hospital

# Marriott International

*Leverages predictive analytic content within their operational environment*

- Matches room prices to availability and customer type **using IBM zEnterprise**
- **Maximizes inventory yield** for room bookings
- Delivers best price, best yield for both Marriott and the customer **in less than one second**



*“The goal is to book inventory down to the last room available to maximize yield. We can expeditiously do this from a centralized reservations system, no matter where in the world the reservation is requested.”*

*Misha Kravchenko, Vice President, Global Enterprise Mainframe Systems for Marriott International*

# Zürcher Kantonalbank

*IT staff relies on IBM DB2 for z/OS data warehousing to improve operational efficiencies*

- DB2 for z/OS is central to ZKB's strategy to **securely deliver information** to branches and customers
- System z supports a **timely, accurate, state-of-the-business data warehouse** while running more than 4,000 batch jobs during the day and 8,000 in the evening
- Extensively leverages workload management facilities to **meet business critical requirements for timely, accurate information**



**Zürcher  
Kantonalbank**



*“Running our data warehouse platform on System z allows us to achieve **consistent performance and reliable uptime**, which are crucial for maintaining the **highest degree of customer confidence** in the bank and its services.”*

Hermann Schelling, Head of Database Engineering,  
Zürcher Kantonalbank

# Miami-Dade County

## *Selects IBM System z platform to expand their IBM Cognos 8 BI enterprise infrastructure*

- **Deployed rapidly** from a distributed model to a System z environment in just over a week
- **Reduced complexity and cost** of Business Intelligence deployments by consolidating onto a single platform
- **Consolidated multiple disparate data sources** onto a single platform to enhance ROI
- Significantly improved **availability and disaster recovery** capabilities



*"We are now able to expand the usage of our Business Intelligence reporting. We have users from over 42 county departments with **over 1500 users creating and consuming reports with stable environments on System z.**"*

Jaci Newmark, Project Lead,  
Enterprise Business Intelligence Architecture, Miami-Dade County

# System z responds to modern analytic demands

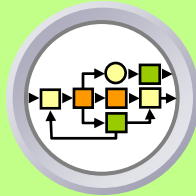
- Supports strategic, tactical and operational decisions
- Helps reduce uncertainty in decision making
- Helps improve competitive positioning
- Enhances business performance

Delivers an end-to-end solution on a single platform...



Data warehousing  
Business intelligence  
Predictive analytics

Combines innovative capabilities & platform strengths to support...



Timely, accurate and secure information  
Superior availability, scalability and performance  
Reduced costs and complexity  
Rapid deployment and expansion

Evolves with your business...



Start with what you need

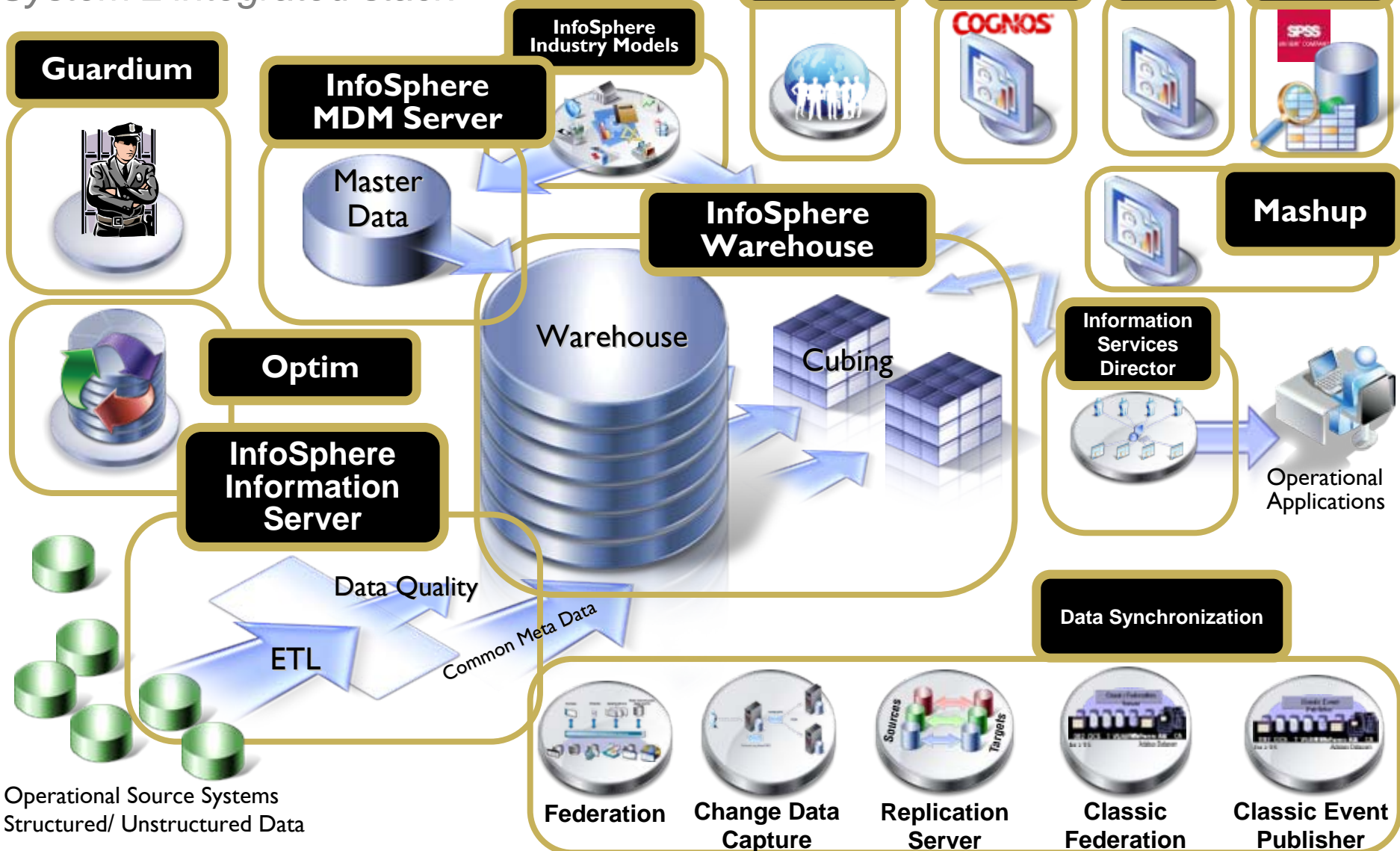
- Functionality
- Application
- Department
- Enterprise

Deploy the *way you need*

- Turnkey optimized
- Private cloud
- Services and education

# A Comprehensive Solution

System z integrated stack



**Guardium**



**InfoSphere MDM Server**



**InfoSphere Industry Models**



**Global Name Recognition**



**Cognos BI**



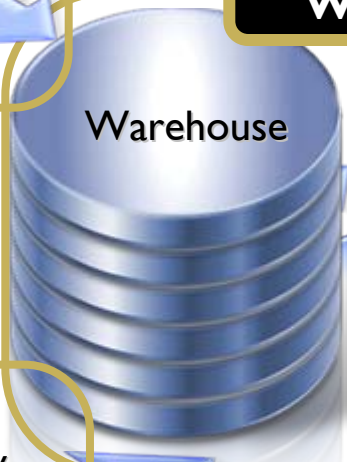
**QMF**



**SPSS**



**InfoSphere Warehouse**



**Cubing**



**Mashup**



**Optim**



**InfoSphere Information Server**

**Information Services Director**



**Operational Applications**



**Data Quality**

**ETL**

**Common Meta Data**

**Data Synchronization**

**Federation**



**Change Data Capture**



**Replication Server**



**Classic Federation**



**Classic Event Publisher**



# Cognos BI on System z

Now available on  
z/OS &  
Linux for System z



- **Delivers information where, when and how it is needed**
  - Self-service reporting and analysis
  - Individualized by user
  - Automated delivery of information in context
  - Author once, consume anywhere
- **Full range of BI capabilities**
  - Query, reporting, analysis, dashboarding, realtime monitoring
- **Purpose-built SOA platform**
  - Fits client environments and scales easily



# IBM SPSS for Linux on System z

- Full breadth of predictive analytics
  - Data collection, statistics, data mining, predictive modeling, deployment services...
- Putting prediction in hands of the business
  - Decision Management
- Driving better business outcomes
  - Attract and retain more profitable customers
  - Detect and prevent fraud
  - Improve resource allocation



# Flexible Deployment Options



## Smart Analytics System 9700

- *Integrated solution of HW, SW and services based on zEnterprise 196 platform*
- *Enables customers to rapidly deploy cost effective game changing analytics across their business.*



## Smart Analytics System 9710 (NEW!)

- *Integrated solution of HW, SW and services based upon the new zEnterprise 114 platform*
- *Delivers the quality of service of System z at an entry level cost*



Private Cloud

## IBM Smart Analytics Cloud

- *IBM Smart Business - services with industry leading hardware & software*
- *A private cloud computing solution for business intelligence (BI) & analytics*

# DB2 Analytics Accelerator **(NEW!)**

*Accelerating decisions to the speed of business*

*Blending System z and Netezza technologies to deliver unparalleled, mixed workload performance for complex analytic business needs.*



## Get more insight from your data

- Fast, predictable response times for “right-time” analysis
- Accelerate analytic query response times
- Improve price/performance for analytic workloads
- Minimize the need to create data marts for performance
- Highly secure environment for sensitive data analysis
- Transparent to the application

# Performance & Savings

			DB2 Only		DB2 with IDAA		Times Faster
Query	Total Rows Reviewed	Total Rows Returned	Hours	Sec(s)	Hours	Sec(s)	
Query 1	2,813,571	853,320	2:39	<b>9,540</b>	0.0	<b>5</b>	1,908
Query 2	2,813,571	585,780	2:16	<b>8,220</b>	0.0	<b>5</b>	1,644
Query 3	8,260,214	274	1:16	<b>4,560</b>	0.0	<b>6</b>	760
Query 4	2,813,571	601,197	1:08	<b>4,080</b>	0.0	<b>5</b>	816
Query 5	3,422,765	508	0:57	<b>4,080</b>	0.0	<b>70</b>	58
Query 6	4,290,648	165	0:53	<b>3,180</b>	0.0	<b>6</b>	530
Query 7	361,521	58,236	0:51	<b>3,120</b>	0.0	<b>4</b>	780
Query 8	3,425,29	724	0:44	<b>2,640</b>	0.0	<b>2</b>	1,320
Query 9	4,130,107	137	0:42	<b>2,520</b>	0.1	<b>193</b>	13

## Queries run faster

- Save CPU resources
- People time
- Business opportunities

Actual customer results, October 2011

DB2 Analytics Accelerator: “we had this up and running in days with queries that ran over 1000 times faster”

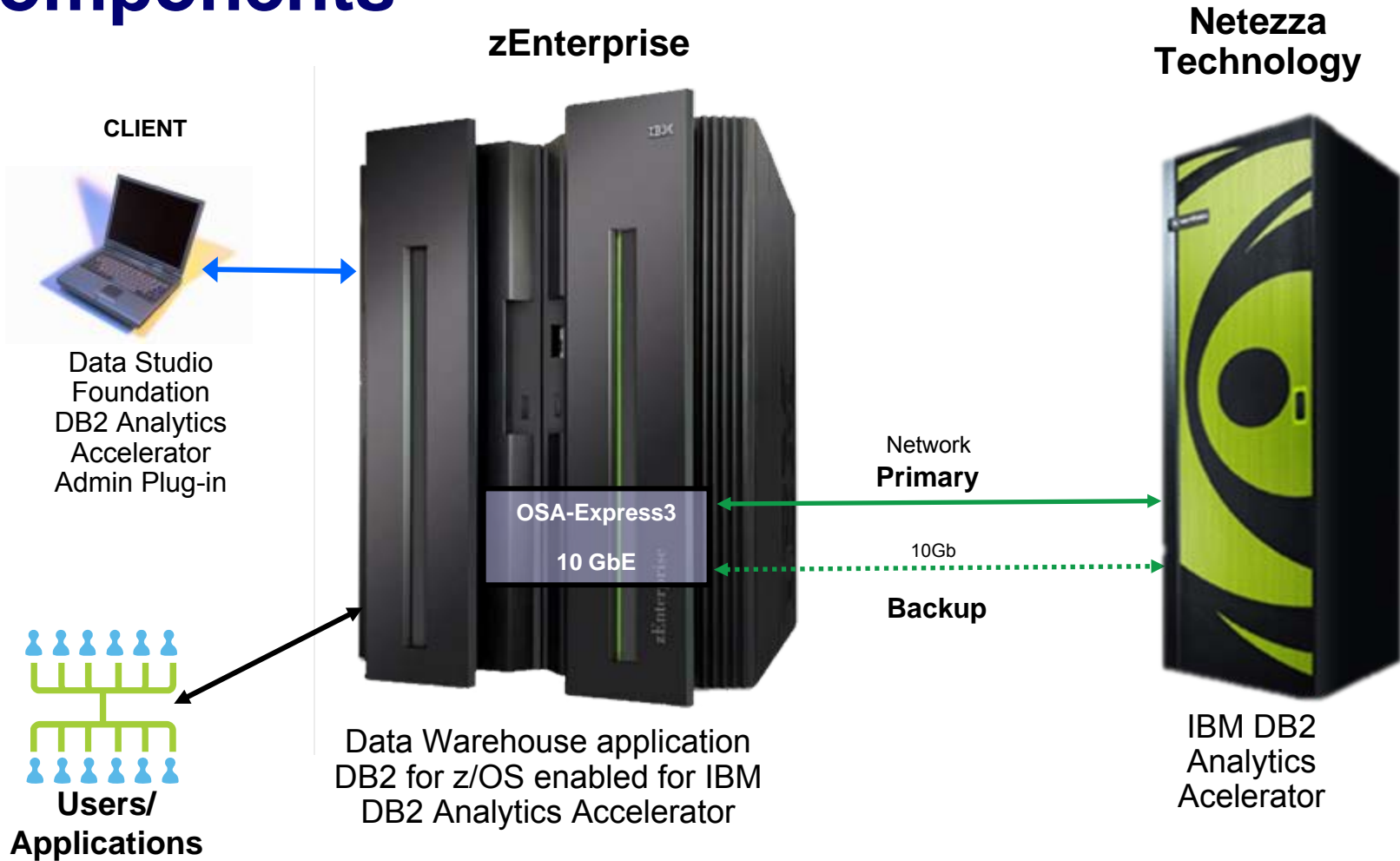
DB2 Analytics Accelerator: “we expect ROI in less than 4 months”

*Accelerating decisions to the speed of business*



Advance to 31 minute mark for DB2 Analytics Accelerator section of keynote

# IBM DB2 Analytics Accelerator V2 Product Components



# Tailored to your needs

*A Hybrid Solution*

## IBM Netezza

## IBM System z with IBM DB2 Analytics Accelerator

### Focused Appliance

- Appliance with a streamlined database and HW acceleration for performance critical functionality
- Price/performance leader
- Speed and ease of deployment and administration
- Optimized performance for deep analytics, multifaceted, reporting and complex queries

### Mixed Workload System

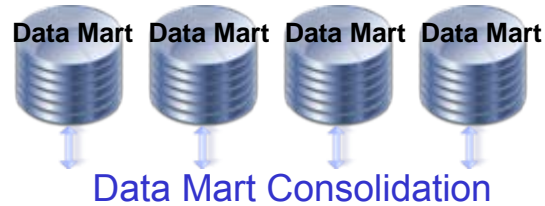
- Mixed workload system z with operational transaction systems, data warehouse, operational data store, and consolidated data marts.
- Unmatched availability, security and recoverability
- Natural extension to System z to enable pervasive analytics across the organization.
- Speed and ease of deployment and administration

**Simplicity**

*The right mix of simplicity and flexibility*

**Flexibility**

# The Ultimate Consolidation Platform



**System z PR/SM**  
 Recognized leader in mixed  
 virtualization and workload isolation



**z/OS:**  
 Recognized leader in  
 mixed workloads with  
 security, availability  
 and recoverability

**Netezza:**  
 Recognized leader in  
 cost-effective high  
 speed deep analytics

## Together:

Destroying the myth that transactional and decision support  
 workloads have to be on separate platforms

## Bringing it all together

- *Better Business Response*
- *Reduced Costs*
- *More Available*
- *More Secure*
- *Reduced Data Movement*
- *Better Governance*
- *Reduced Data Latency*
- *Reduced Complexity*
- *Reduced Resources*

# Today's IBM System z is ...

- The world's most trusted transaction processing and data server for business critical applications
- The world's most cost-efficient platform for data center consolidation and virtualization
- The world's most dependable and scalable hardware and middleware platform for new business applications
- A thoroughly modern application environment for traditional and Cloud delivery models



*The zEnterprise 196 is the world's fastest and most scalable enterprise system. (50 BIPS)*

Based on 5.2GHz core  
processor speed



The text 'Thank You' is rendered in a large, 3D, metallic grey font. The letters are thick and have a slight shadow underneath. The text is centered horizontally and has a reflection on the surface below it. The background is white.