

**SHARE**

Technology • Connections • Results

# IBM Business Intelligence (BI) and Analytics Update

Mike Biere  
Sr. Technical Marketing Manager - IBM  
[mbiere@us.ibm.com](mailto:mbiere@us.ibm.com)

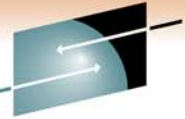
August 9<sup>th</sup>, 2011 3pm – 4pm



***Warning!*** This presentation contains adult content and may not be suitable for some members of the viewing audience. Viewer discretion is advised!



# Analysts forecast next generation analytics systems



By 2013, 33% of business intelligence functionality will be consumed via **handheld devices**.

By 2013, 15% of BI deployments will **combine BI, collaboration and social software** into decision-making environments.

Source : Gartner, Predicts 2011: New Relationships Will Change BI and Analytics, November 2010 , Bill Gassman, Rita L. Sallam, Andreas Bitterer, John Hagerty, Neil Chandler



Mash ups

- **By 2014, externalizing BI will increasingly become an expected aspect of most companies' relationships with customers and partners.**
- Externally focused BI programs will frequently go beyond information dissemination by facilitating a collaborative decision-making process that breaks through the firewall to involve stakeholders from organizations in a broad ecosystem.

Source : Gartner, Prepare for Customer-Facing Business Intelligence, Kurt Schlegel ,October 2010

By 2012, BI Platform capabilities will be embedded as a service within **75% of new business applications**

By 2012, emerging technologies will significantly drive adoption of **BI to 50% of business users** (e.g. interactive visualization, in-memory analytics, search, SaaS and SOA )

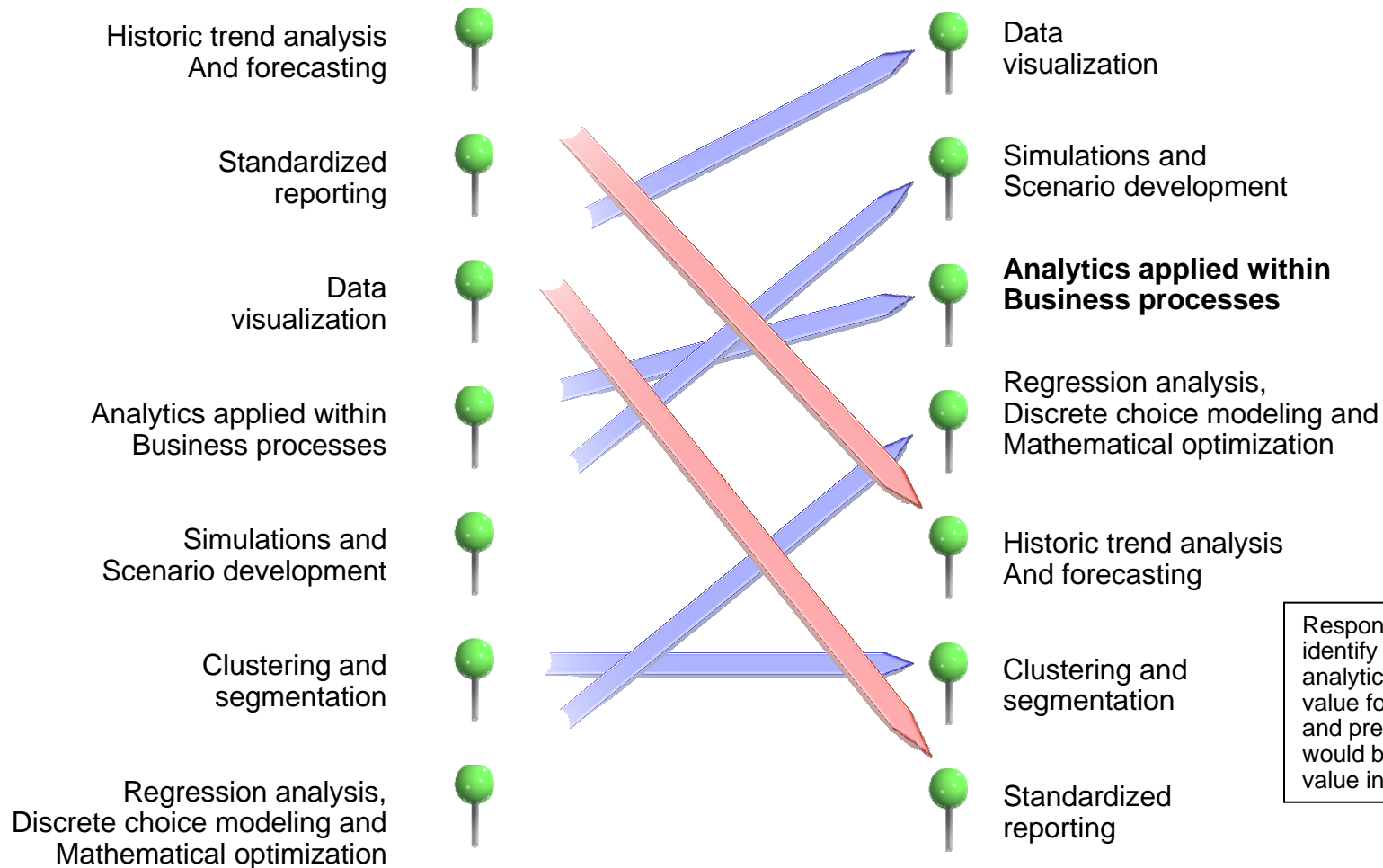
Source : Gartner BI Summit 2008, 4/2008



Embedded Analytics

# What Matters ... is changing

## New Intelligence Enterprise Survey of 3,000 executives



Respondents were asked to identify the top three analytic techniques creating value for the organization and predict which three would be creating the most value in 24 months.

Source: MIT Sloan Management Review, 10 Data Points: Information and Analytics at Work, N Kruschwitz and R Shockley, Fall 2010

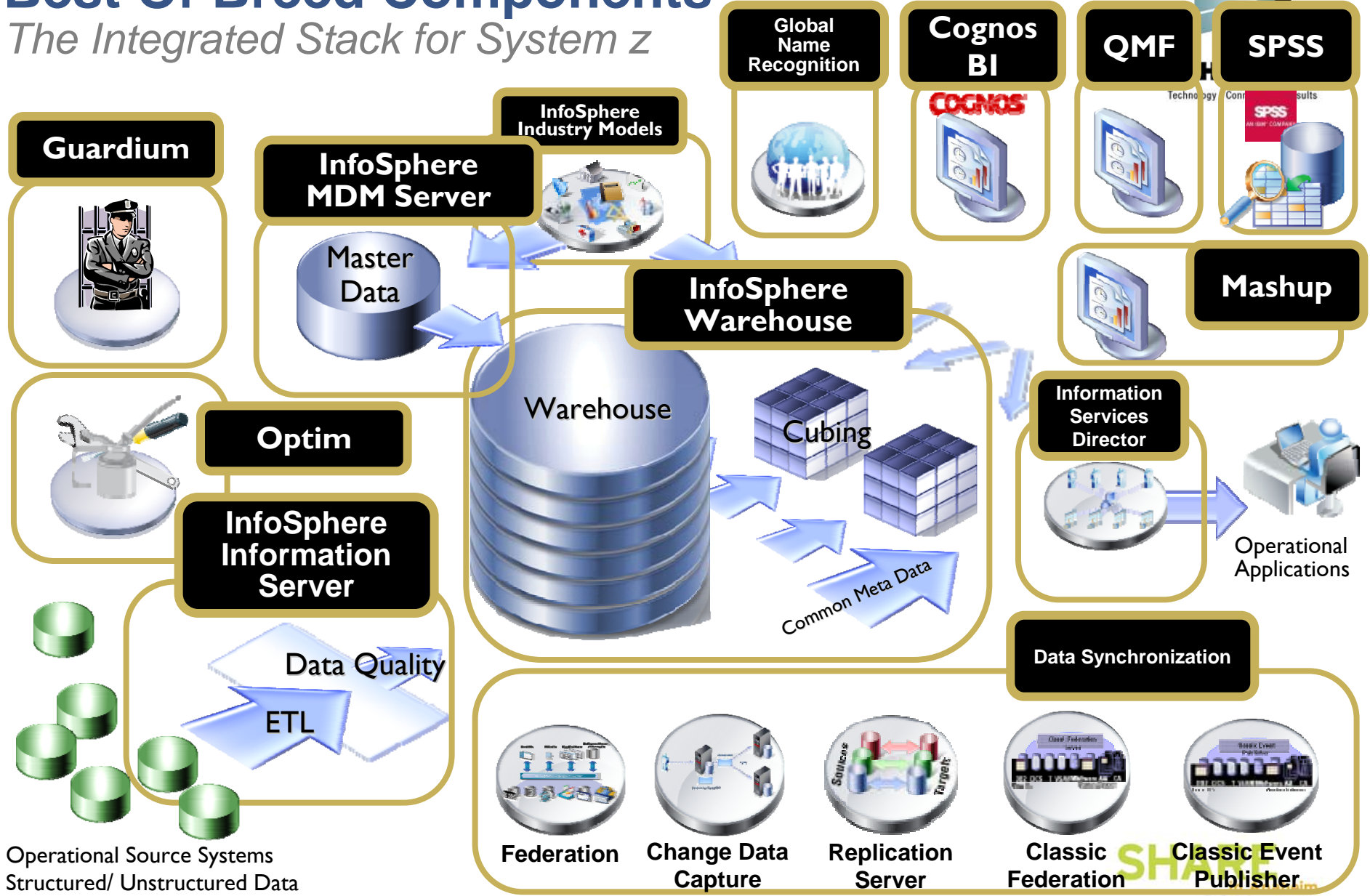
## *Market pressures have provided a wake up call*

- ***Business Intelligence and Business Analytics***

- ✓ Data Warehouse solutions
- ✓ Cognos 10 for Linux on System z
- ✓ QMF 10 Enterprise Edition for DB2 z/OS
- ✓ SPSS for Linux on System z
- ✓ DB2 10 – temporal data and more
- ✓ IBM Smart Analytics Optimizer
- ✓ IBM Smart Analytics Cloud (a result of IBM's Blue Insight Project)

# Best Of Breed Components

*The Integrated Stack for System z*



# DB2 V10 for z/OS What's exciting?



Efficiency	<ul style="list-style-type: none"><li>• CPU reduced: transactions &amp; queries</li><li>• <b>Ten to twenty times more concurrent users</b></li></ul>
Resiliency	<ul style="list-style-type: none"><li>• More online schema changes</li><li>• Concurrency for catalog &amp; utilities</li><li>• Improved security controls and audit</li></ul>
Applications	<ul style="list-style-type: none"><li>• Versioned data or <b>temporal queries</b></li><li>• pureXML and SQL enhancements</li></ul>

→ Productivity improved for DBAs, application programmers, & systems – ability to **'leap' from V8 → V10**

# IBM Smart Analytics Optimizer

## Technology Preview for System z



### What is it?

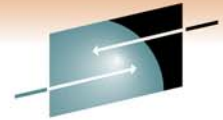
- ✓ A high performance extension that is **integrated with IBM DB2 for z/OS** delivering predictable, order-of-magnitude faster, analytic query response times, while lowering



### How is it different

- ✓ Deep integration with IBM data management systems
- ✓ High performance query software, based on advanced data in-memory technologies
- ✓ Leveraging existing data system investment and values **without any changes to applications**
- ✓ For System z, extends gold-standard manageability, security, and availability to high-performance analytic applications





SHARE

# Orders of Magnitude Faster for Queries

Beta Customer Results

For customers who have struggled with gaining the required performance out their complex queries of full table scans, multiple compares, and complex logic – *the results are astounding!*



... and its acceleration factor ::

Runtime of queries w/o ISAO

163 s

2311 s

25 s

1593 s

35 s

5435 s

Factor

48

511

12

206

4

1424

with ISAO

3s

5s

2s

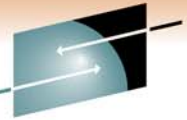
8s

8s

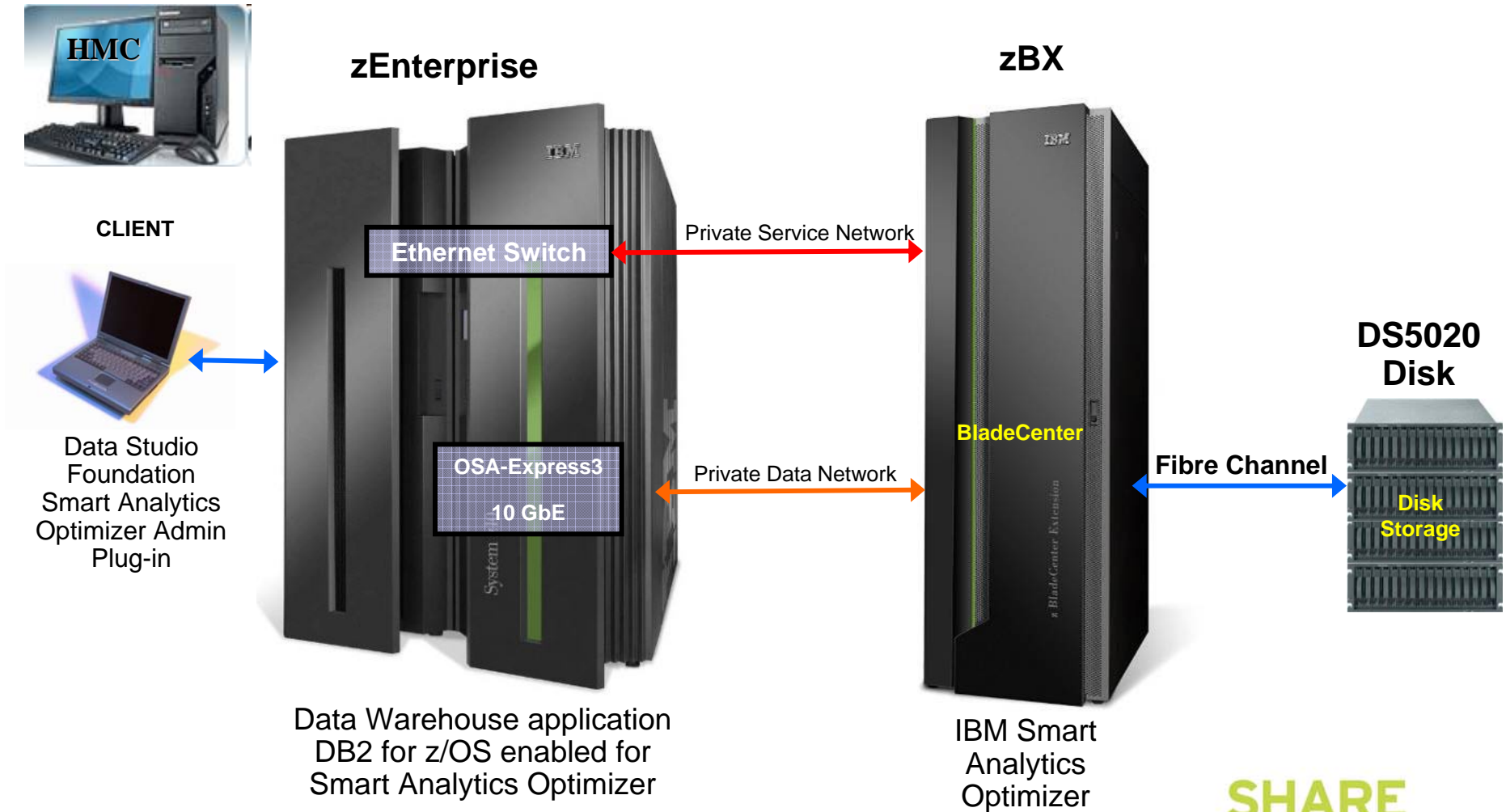
4s

SHARE  
in Anaheim  
2011

# IBM Smart Analytics Optimizer Product Components



**SHARE**  
Technology • Connections • Results



**SHARE**  
in Anaheim  
2011

# Preview of Smart Analytics Optimizer V2

*Capitalizing on the best of both worlds  
– System z and Netezza*



## What is it?

*The IBM Smart Analytics Optimizer is a workload optimized, appliance add-on, that enables the integration of business insights into operational processes to drive winning strategies. It accelerates select queries, with unprecedented response times.*



## How is it different

- **Performance:** Unprecedented response times to enable 'train of thought' analyses frequently blocked by poor query performance.
- **Integration:** Connects to DB2 through deep integration providing transparency to all applications.
- **Self-managed workloads:** queries are executed in the most efficient way
- **Transparency:** applications connected to DB2 are entirely unaware of the Optimizer
- **Simplified administration:** appliance hands-free operations, eliminating many database tuning tasks

**Breakthrough Technology Enabling New Opportunities**

**SHARE**  
Anaheim  
2011

# Extending Smart Analytics Optimizer with Netezza technology

- ***Still is a Smart Analytics Optimizer-***
  - ***Uses Netezza technology to perform high speed query***
  - ***Like Version 1:***
    - ***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***



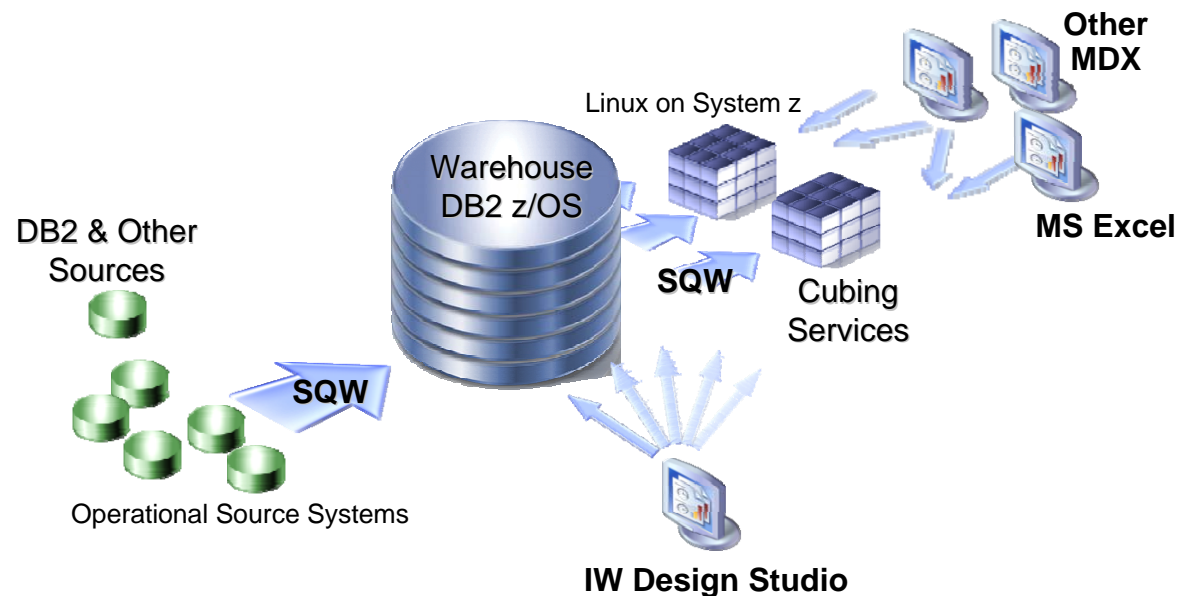
## Key Enhancements in V2 Release

- ***Extending acceleration to significantly larger number of queries***
- ***Expanded size of the data to be accelerated***
- ***Improved concurrent query execution***
- ***Incremental update by partition***
- ***DB2 9 and DB2 10 for z/OS support***
- ***Supported only connected to z196/ and zEnterprise forward***

# InfoSphere Warehouse on System z

## Delivers Data Warehouse Suite on System z -

- *Advanced physical database modeling and design – Design Studio*
- *In-database data movement and manipulation capabilities of **SQL Warehouse Tool (SQW)***
- *Optimize multidimensional reporting and analysis of data with **Cubing Services***





**SHARE**

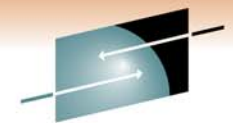
Technology • Connections • Results



**INTELLIGENCE UNLEASHED**

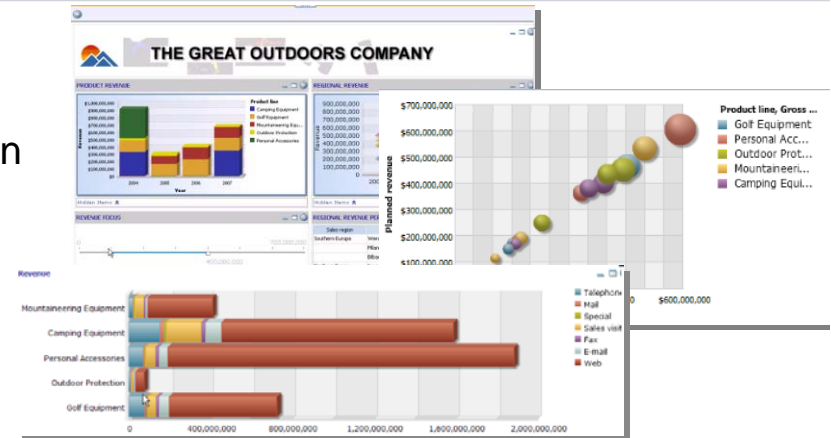
**SHARE**  
in Anaheim  
2011

# Measure and Monitor to See “How” You’re Doing

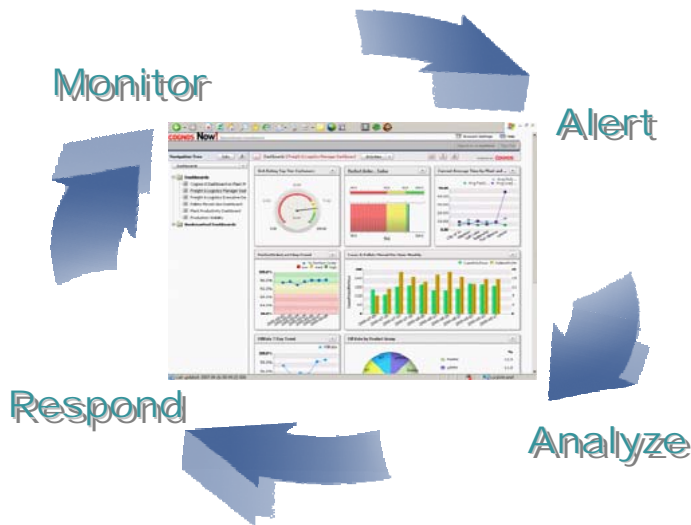


## Dashboards

- Provide at-a-glance, high impact views of complex information
- Help quick focus on issues that need attention and action
- Combine information across disparate sources
- Benefit from range of highly visual personalized, managed, or self-assembled dashboards
- Gain personalized views of operations with continuous monitoring



## Real-time Monitor Business Operations



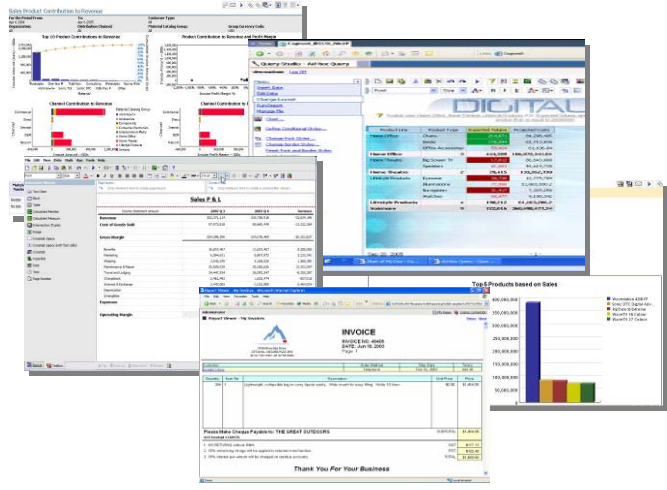
- Continuously monitor and alert when exceptions occur to take immediate action
- Detect events, anomalies and trends in data streams flowing through transactional and messaging systems
- Aggregate data streams across multiple transactional systems and data sources
- Enable self-service with user-defined dashboards, operational KPIs, and alerts
- Address full operational decision cycle from detection to action



# Understand the “Why” Behind Business Performance



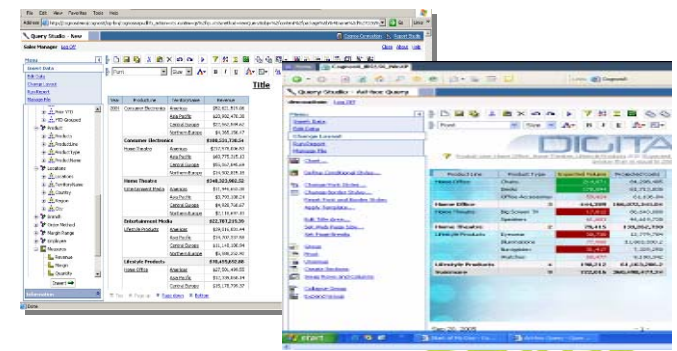
## Reporting



- Address full breadth of report needs (personalized, transactional, management, statutory, production...)
- Deliver consistent information across all types of output
- Personalize and target to each department/individual without having to re-author
- Re-use queries, analyses, express author reports in business and collaborate on design with IT
- Easy access to data lineage, definitions of terms, and annotations

## Ad-hoc Query

- Intuitive, self-service reporting
- Access to all data; drag and drop query creation
- Easy sorting and filtering
- Corporate templates for consistency
- Share ad-hoc or promote for professional distribution

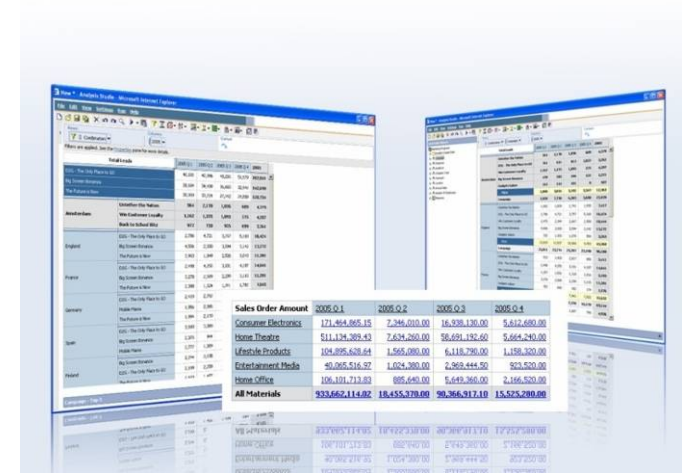


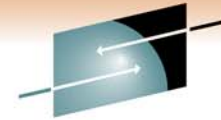


# Dig Deeper - Investigate Possible Better Outcomes

## Analysis

- Compare and contrast to reveal symptoms and causes behind trends
- Gain same analysis experience on Web or in Excel interfaces
- Perform personal exploration across multiple dimensions of information
- Move from summary level to detail effortlessly

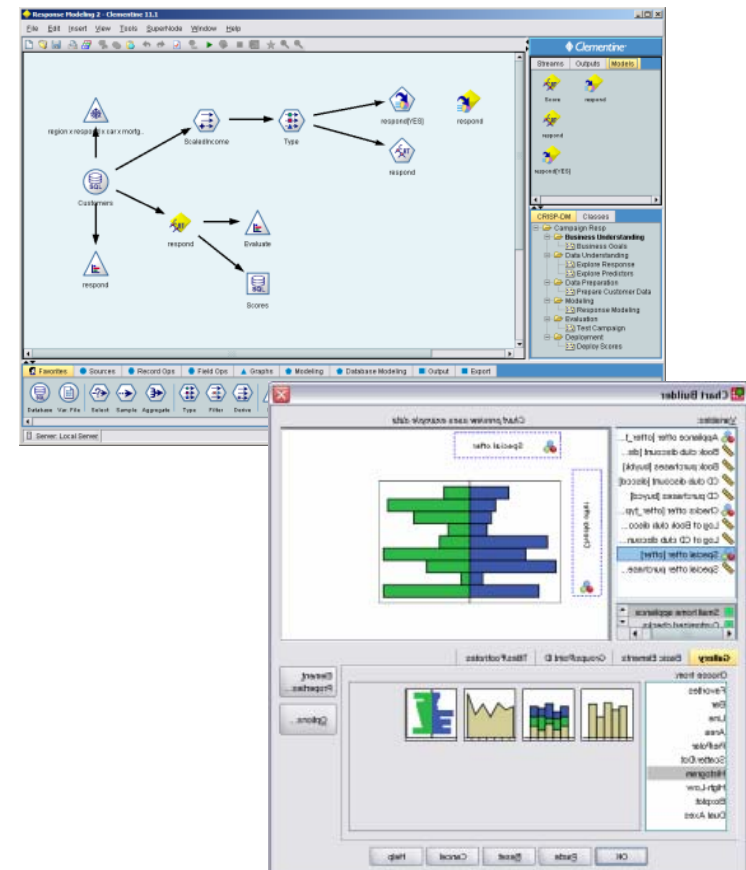




# Enhance decisions with Statistics and Predictors of “What Might Happen”

## Predictive Analytics

- High-performance data mining and text analytics workbench
- **Quickly delivers positive ROI by creating the predictive intelligence**
- **Set of mining algorithms that provide insight and prediction**
- **Enables the discovery of key insights, patterns and trends in data that can be used to optimize business decisions**
- Advanced statistics and data management for analysts researching business problems
  - Analysis, interpretation, explanation and presentation of data
  - Provides insight into a sample of data and tools for prediction and forecasting based on the data
- Flexible enterprise foundation for managing and deploying analytics throughout the organization

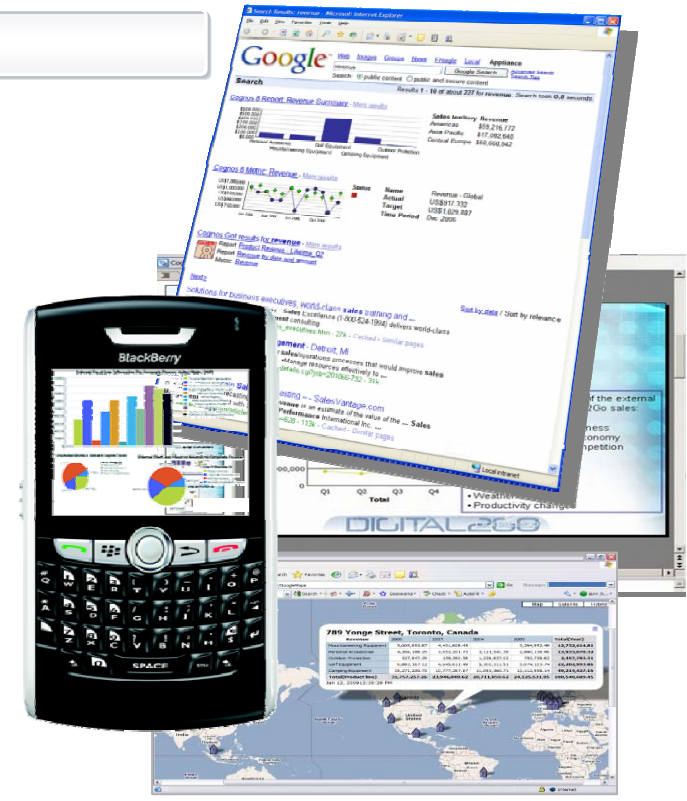


# Flexible Access Wherever and Whenever Needed



## BI Anywhere

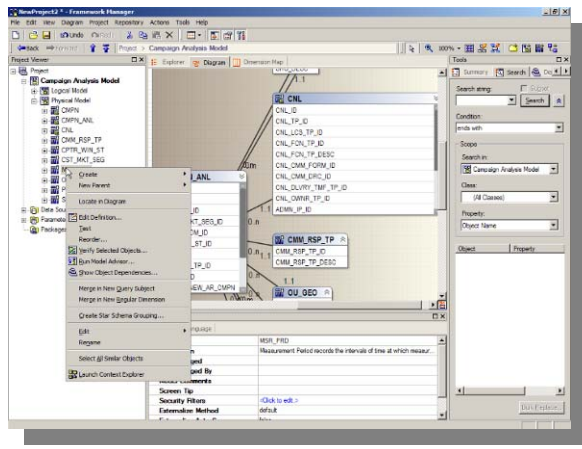
- Receive in any format (PDF, HTML, Excel, XML...)
- Deliver in any language with robust Unicode support
- Access refreshable BI content in any location that best serves the individual (Excel, PowerPoint, Word, Enterprise Search, Portal)
- Search to find instant answers, related content and to author based on search terms
- Browse BI content on mobile devices including BlackBerry, Windows Mobile and Symbian devices
- Automate personal alerts, email bursting, scheduled report production
- Mashup within applications and in processes





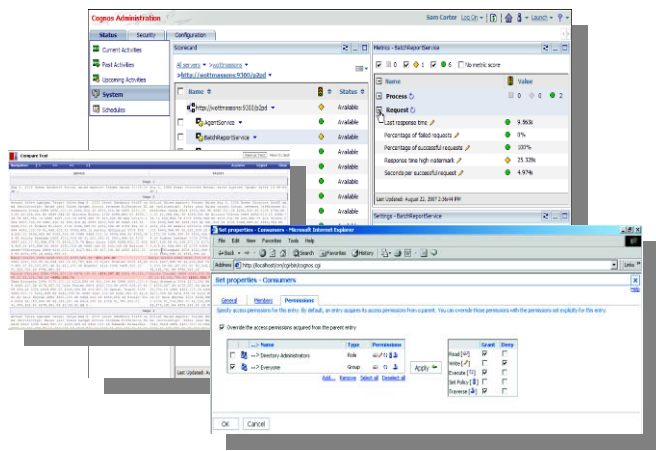
# Deploy and Manage your BA environment

## Model Information Services



- Deliver information in terms business understands
- Combine data into a single view across multiple disparate sources, including OLAP and relational
- Optimize models with built-in advisor, impact analysis, and integration with 3<sup>rd</sup> party metadata
- Easily manage multi-lingual, multi-tier models with reusable objects, versioning and retargeting
- Flexibly deploy model packages to deliver relevant views securely to different communities

## Administer the Deployment



- Complete view of system activity
- Task-oriented system monitoring
- Integration with 3<sup>rd</sup> party EMS
- Proactive administration before business impact
- Comprehensive security down to data layer
- Visual upgrade with automated environment validation



# Cognos working with CICS (in progress)



**Re: CICS Events with Cognos Now! and Mashup Center**

**John Knutson** to: Christopher Law, Mark Heid, Mike Biere

Cc: Klaus Roder, Mukul P Markande, Prakash Dewan, Sandeep K Tyagi

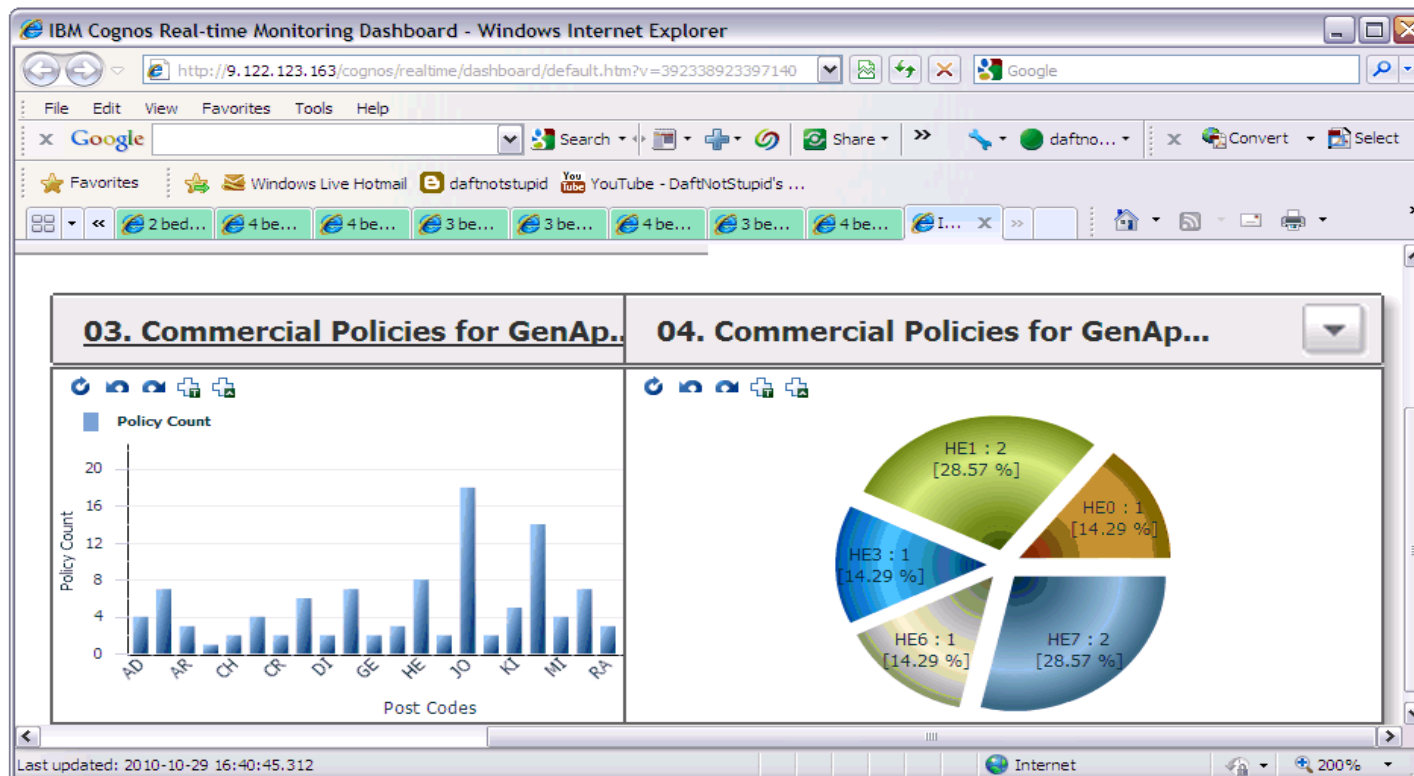
Default custom expiration date: 10/29/2011

10/29/2010

[Sho](#)

Me too. This looks very impressive.

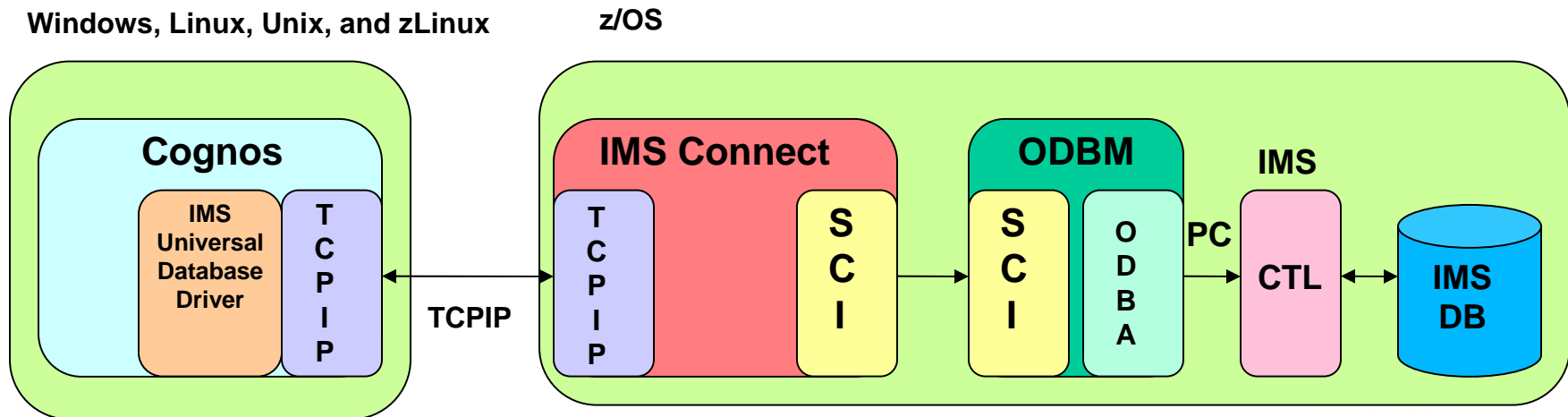
Mike, Mark. The team is making pretty good progress. We've got CICS events showing up in Cognos Now! views and cubes now, and hopefully next week Klaus will be able to integrate them in Mashup Center and round-trip back to CICS. I'm now pretty confident that we have a good story to tell and demo when we record the webcast next Friday.



# IMS Integration with Cognos

## IMS V11 Open Database:

- IMS V11 allows distributed access over TCP/IP using the IMS Universal Database Driver (JDBC)
- IMS Connect and Open Database Manager now work together as a DRDA server for IMS data
  - Shipped with IMS V11 – requires System Programmer for initial setup



# Cognos BI for Linux on System z ....Performance Testing



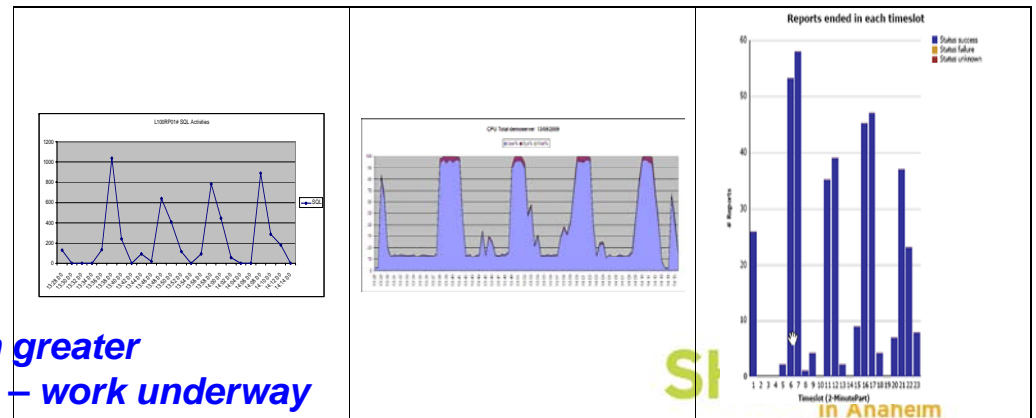
- Customer provided the need:
  - Processes operational and financial data for 10.000 other companies and exchanges info with 250 B2B partners.
  - Faced with performance & stability issues and could not expand it's BI any further.
- IBM Provided the Test Infrastructure:
  - Cognos 8 BI v3 and Websphere set-up on a zLinux and a DB2 instance on z/OS.
- Numius Provided the Expertise:
  - Ported existing application from the distributed to System z:
    - Cognos 8 BI
    - Oracle on HP-UX to DB2 on z/OS
    - MS-SQL on Wintel to DB2 on zLinux)
    - MS-IIS on Wintel to WebSphere on zLinux).
- Cognos Provided the Flexibility:
  - Cognos 8 BI - open to Operating Systems and Database Systems, no redevelopment was required

## The Results

### Cognos 8 BI for Linux on System z

- By adhering to our best practises could support more users and deliver faster performance.
- There was no change in functionality at the Cognos 8 BI level, so no impact whatsoever for the end-user.
- Not one report timed out, not one user was rejected. Even when the system slowed down, it remained stable.
- No redesign was needed to achieve his objective of reaching out to a large community.
- **System z was 400x faster in this case!!!**

**Cognos 10 is showing even greater improvements on System z – work underway**

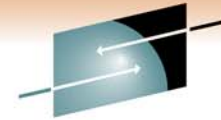


SI  
in Anaheim  
2011

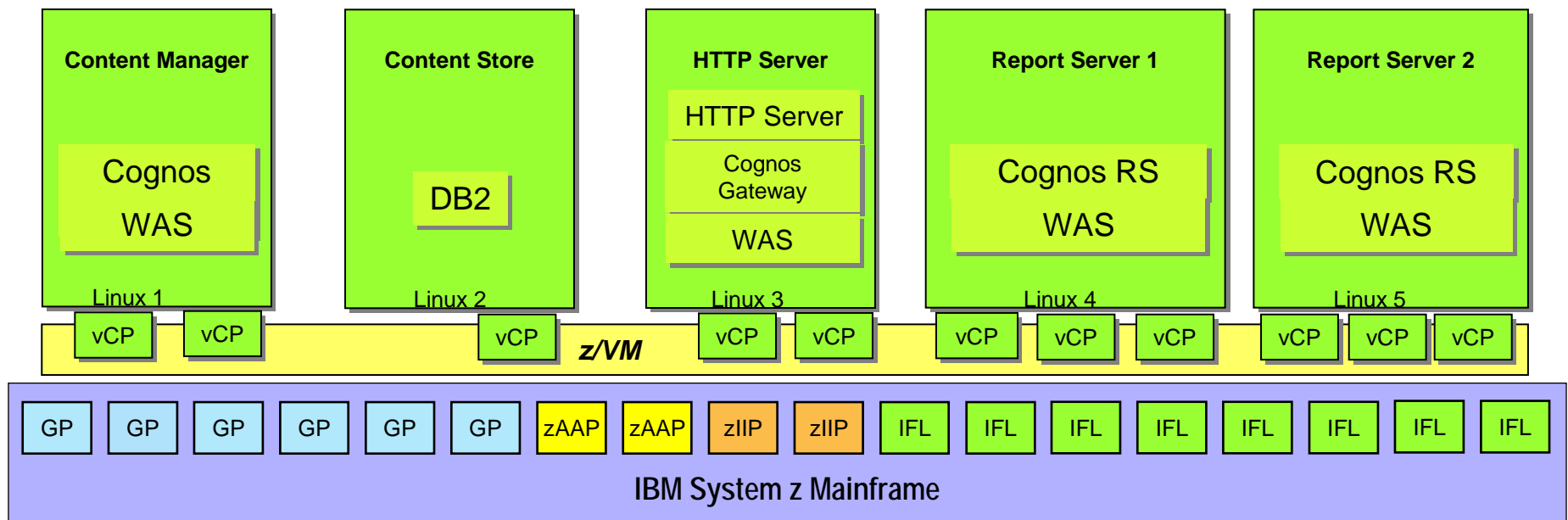


# IBM Cognos BI within a z/VM environment

## "Distributed" Deployment with Over-commit

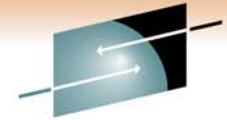


**SHARE**  
Technology • Connections • Results



- Total allocation of **real IFLs** to z/VM remains the same = **8**
- Number of virtual Cognos instances similar to other platforms' physical servers or partitions
- Individual Cognos components distributed on individual Linux "guest" servers
- Number of virtual CPs /Cognos = **11** : instance increased on high CPU instances to enable use of excess capacity from low CPU instances
- Number of virtual CPs/Cognos instance should be less than or equal to number of GPs/IFLs assigned to z/VM LPAR
- Over-commit ratio (sum of virtual resource type/real resource type assigned to z/VM LPAR) varies from 1.5/1 to 20/1 or more
  - highly dependent upon how active the guest server is

**SHARE**  
in Anaheim  
2011

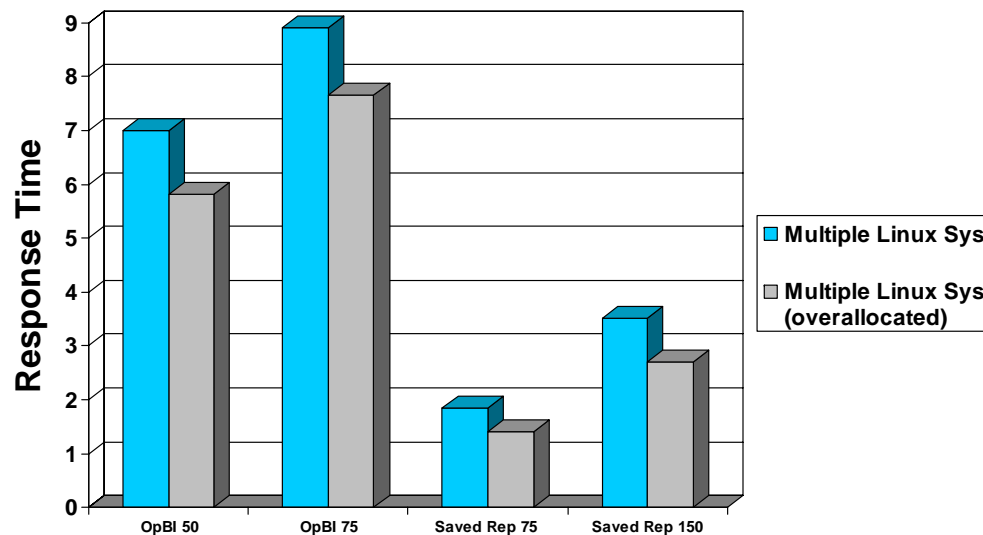


**SHARE**  
Technology • Connections • Results

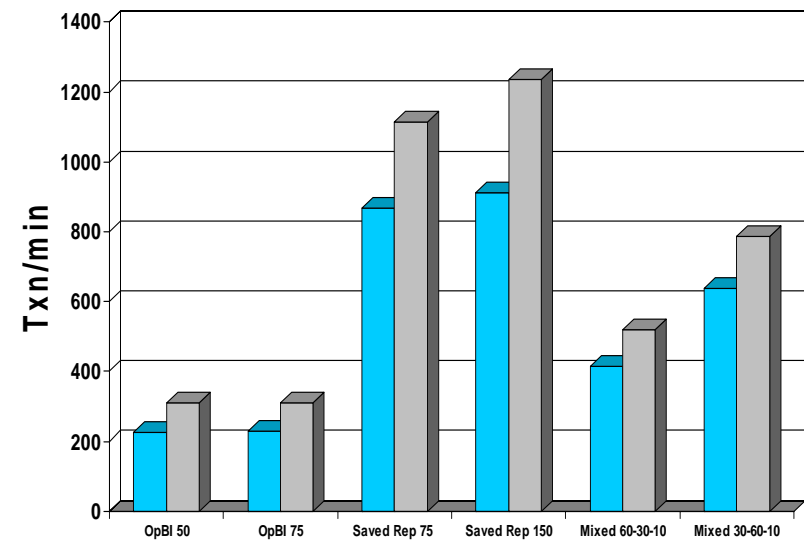
# Multiple Linux systems

– virtualization with CPU over-allocation

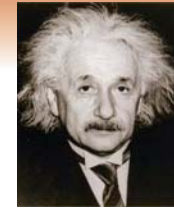
**Avg. txn duration (lower is better)**



**Throughput (txn/min) (higher is better)**



- With additional virtual CPU capacity available to the Report Server and HTTP Server, response times were lowered, and more transactions could be processed.



# The New QMF 10 – what you need to know

*Enhanced to meet the challenges of today's Business Analytics requirements*

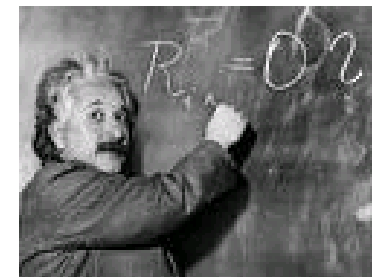
- Business Analytics functionality added to QMF for Workstation and QMF for WebSphere
  - 150 BI and analytic functions
  - Executive dashboards & significantly enhanced visual reports
  - Enhanced metadata layer presents concise and user-friendly data structures to end users
  - New Entity Relationship Diagrams (ERDs) simplify query development
  - Introduction of data source environments allows the same QMF objects to be used across distinct user groups (such as differing regions or business areas)
  - Ability to embed QMF content into 3<sup>rd</sup> party or in-house developed BI solutions
- Key benefits:
  - Rapid development and deployment of Business Intelligence solutions, enterprise-wide
  - Lightweight installation and administration: ~80MB server-side footprint vs. >1GB for most BI platforms
  - Minimal learning curve - zero coding, drag-drop authoring model
  - New QMF content remains fully compatible with existing QMF objects
  - Embeddable BI – can be integrated into web and Java apps
  - Database-based licensing model – not user or application server-based

**SHARE**  
in Anaheim  
2011

# QMF – Business Value and Benefits



- The business value of QMF 10 for DB2 for z/OS
  - Business value is typically measured by a tool's capability to deliver required functions in contrast with its associated cost.
    - QMF 10 provides an enterprise license model with no per-user cost.
    - **Can be deployed throughout the enterprise with no additional set charges while providing rich, powerful analytic functions with a wide variety of uses and users.**
    - **It can be embedded within an application** and can now be called from nearly any other BI tool such as Excel and more. Thus assets created in QMF 10 can be used repetitively by many.
- The benefits of QMF 10 for DB2 for z/OS
  - Business Analytics is a key area of interest to any enterprise. Query and reporting solutions now have to offer much more such as:
    - Dashboards and Key Performance Indicators (KPIs)
    - Advanced analytic functions and analysis
    - Multi-dimensional analysis
    - Operational Business Intelligence
    - Heterogeneous database access
- QMF 10 provides a more sophisticated and advanced set of analytic functions while offering advances in performance and ease of use.



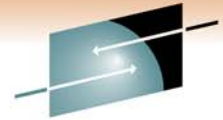
**SHARE**  
in Anaheim  
2011



## The QMF/EE (Enterprise Edition) Solution Suite

- The QMF product family comprises the following components:
  - **QMF for TSO/CICS:** Supports end-users who work entirely from traditional mainframe monitors to access databases in the IBM DB2 family.
  - **QMF HPO:** ‘High Performance Option’ for QMF for TSO/CICS is a multifaceted tool that helps database administrators manage QMF objects and performance in the TSO and CICS environments.
  - **QMF for Workstation:** Replicates the key functionality of QMF for TSO/CICS on distributed platforms via a rich desktop development environment. Runs on Windows, Linux, and the Mac.
  - **QMF for WebSphere:** Provides a feature set similar to that of QMF for Workstation, using a thin-client, browser-based solution. Runs on Windows, Linux, Solaris, AIX, HP-UX, iSeries, z/Linux, and z/OS.

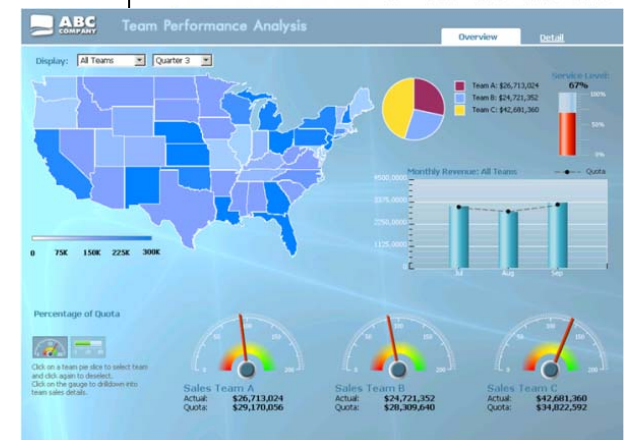
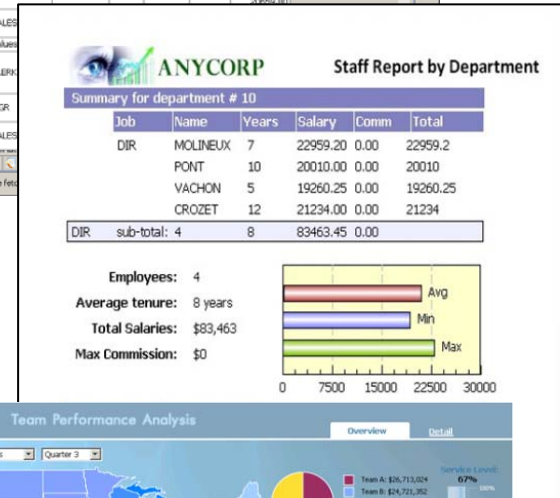
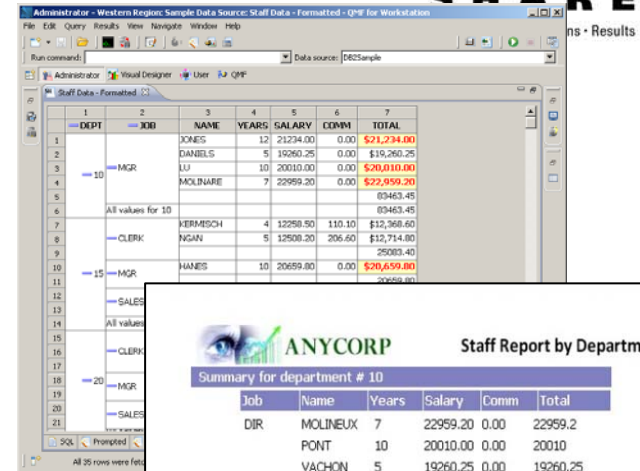
**SHARE**  
in Anaheim  
2011



SHARE

# QMF V10 – Three forms of content

- Ad-hoc & prepared queries
  - Create/edit/re-use QMF queries
  - Apply groupings, aggregations and conditional formats
  - One-click export to Excel, data files or DB
  - One-click generation of reports from the data
- Tabular and graphical reports
  - Generate QMF tabular reports or graphical *visual reports*
  - Highly customizable page-based layouts
  - Draw data from any number of data sources
- QMF Dashboards
  - Customized interactive dashboard solutions
  - Rapid authoring model



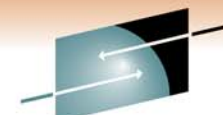
in Anaheim 2011

# Take it to the Web

- Disseminate QMF-powered queries, reports and dashboards to users across the enterprise using QMF for WebSphere
  - Create, run and share queries on the Web
  - Run and share reports on the Web
  - Deploy your dashboards to business end users as stand-alone solutions or embedded within web pages and web applications
- Display as
  - Pure HTML & JavaScript\*
  - Adobe Flash Player
  - PDF

\* Suitable for all browsers and platforms





# QMF V10 Dashboards

- Provide end users with direct access to enterprise data
- Highly customizable – perfectly meet the needs of the end users
- Ability to aggregate data concurrently drawn from heterogeneous relational and OLAP sources
- Interactive, ad-hoc visualizations and optional data write-back
- Publish via the web or workstation

**Management Dashboard**

Backup SLA Report by Domain

Domain	JF	JC	JF	SS
R-ali	948	879	89	92.7%
R-ali	307	132	175	47%
R-ali	7072	6648	424	94%
R-ali	1131	1124	7	99.4%
R-ali	58	5	51	8.9%
R-ali	342	24	1	99.7%
Overall	14215	13715	1448	96.2%

SLA Status: 92.7% (4%), 94% (94.4%), 8.9% (99.7%), 96.2%

Total GB Backed Up (28 days) by Domain

Domain	GB Backed Up
R-ali	24,968.7
R-ali	25,582.9
R-ali	13,831.0
R-ali	11,288.8
R-ali	6,066.8

Enterprise Resources

Storage Server	Clients	Mounts Per Day	Scratch Tapes	Database Size	Database Utilization
adams15	24	0	0	471.7 MB	18.5 %
ali	409	408	161	145.4 GB	80.5 %
Total	513	408	161		

Total Storage (28 days)

All Risk: 16.6 TB  
Offsite Storage: 2.5 PB  
Onsite Storage: 2.5 PB

**Dashboard Concepts**

Multi-Modal Displays | Multi-Zooming | Multi-Lateral Navigation

**Corporate Profile**

Click on the charts to see an expanded view. Use the Back button to return to the previous scene.

**Company Details**

Name: R2 Telecom  
Exchange: SAMPLE2  
Average Volume: 1,800,000

**Valuation**

P/E Ratio: 56  
Market Cap: \$37,550 million  
EPS: (\$0.52)  
Beta: 1.06

**Financial**

Current Assets: \$447,000,000  
Current Liabilities: \$323,000,000  
Current Ratio: 1.38  
Debt: \$1,250,000

**Team Performance**

Display: All Teams | Quarter: 3

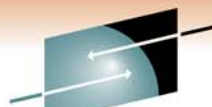
Monthly Revenue: All Teams

Percentage of Quota

Click on a team pie slice to select team and click again to drill-down into team sales details.

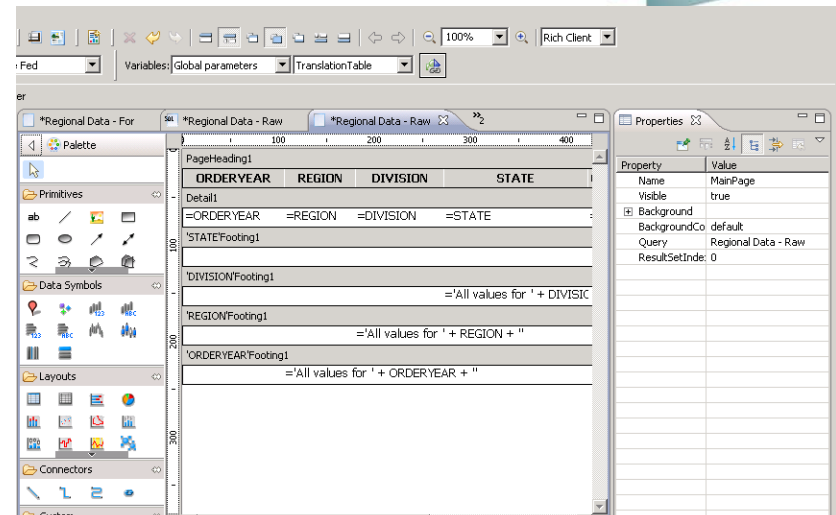
Sales Team A: Actual: \$26,713,024, Quota: \$29,170,056  
Sales Team B: Actual: \$24,721,352, Quota: \$28,309,640  
Sales Team C: Actual: \$42,681,360, Quota: \$34,822,292





# QMF V10 Visual Reports

- Generates HTML or PDF graphical reports, drawing data from one or more data sources
- Support for optional cover sheets, summary pages and report annexes
- Reports generated at designated intervals and made available to end users via the workstation, web or email
- Ability to directly embed reports within portals, custom web sites or web applications



**>> Legal Exchange Invoice From Law Firm: Alver & Johnson**

Invoice Number	10390895
Invoice Date	22/11/2003
Matter Number	377562
Matter Name	Jacob Muller vs Mathew Evans
Client Personnel	James Walker
Customer Pay	Y

**> FEES:**

Date	TK Name	Code	Hours	Rate	Org. Amt	Curr. Amt	Description
21/11/2003	Stephen Hall	L310	40.9	\$153.90	\$6,294.51	\$6,294.51	-
21/11/2003	William Harris	L310	61.3	\$184.70	\$11,322.11	\$11,322.11	-
<b>Total Fees:</b>						<b>\$17,616.62</b>	<b>\$17,616.62</b>

**> EXPENSES:**

Date	TK Name	Code	Units	Cost	Org. Amt	Curr. Amt	Description
21/11/2003	Harold Wilson	E120	1	\$958.70	\$958.70	\$958.70	-
<b>Total Expenses:</b>						<b>\$958.70</b>	<b>\$958.70</b>

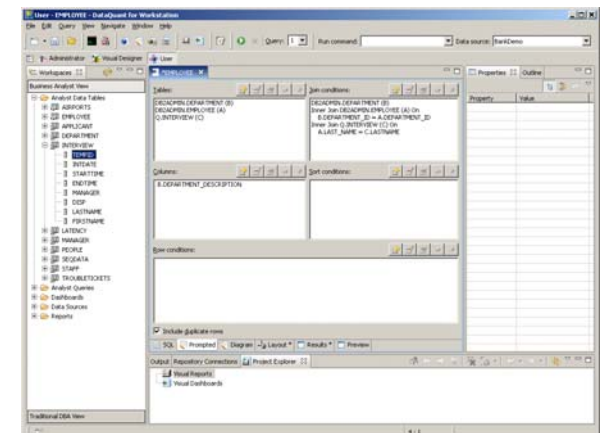
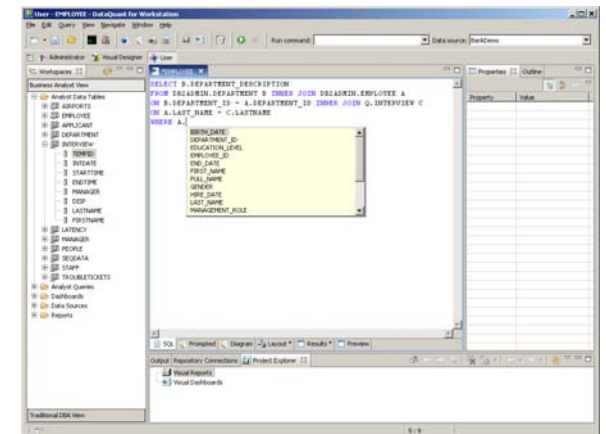
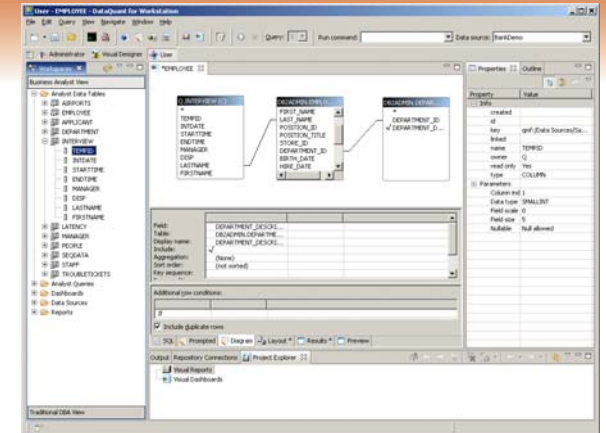
  

**> BILLING SUMMARY:**

	Original Amount	Current Amount
Fees:	\$17,616.62	\$17,616.62
Expenses:	\$958.70	\$958.70
<b>Totals:</b>	<b>\$18,575.32</b>	<b>\$18,575.32</b>

# Query development facilities

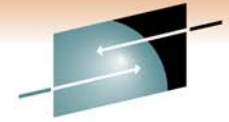
- Graphical development via 'query diagram' designer
- Step-by-step development via 'prompted query builder'
- SQL development via colorized editor with code assist, code completion and dynamic parameter hints
- Support for both relational queries (SQL) and OLAP queries using multi-dimensional expressions (MDX) query language
- Available in both the workstation and web-based environments





# Metadata layer simplifies ad-hoc analysis

- Create custom views of tables or sets of tables
- Alter table names, column names, add calculated columns, pre-joined views etc. without altering the physical structure of the underlying databases –creates a virtual view of your databases
- End users code against the virtual tables – QMF translates their SQL to that which matches the underlying table schema
- Shields users from the underlying complexity of your table schemas. Also permits DB schema changes that do not impact reports/dashboard/queries (since metadata layer can remain unaltered)

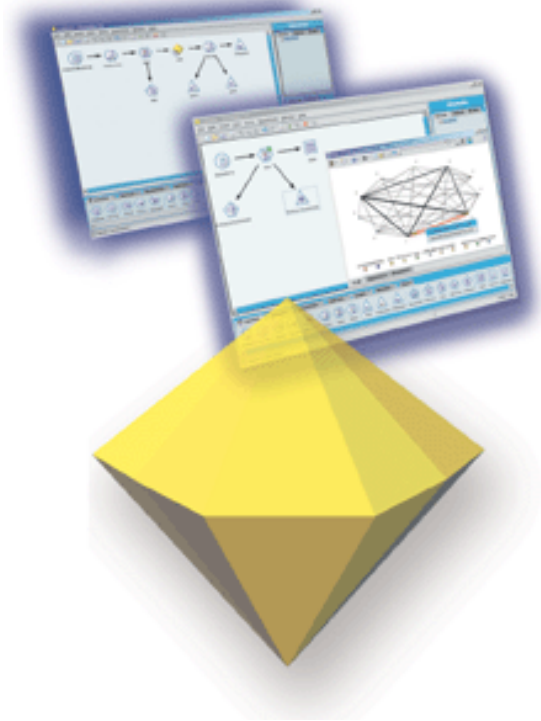


**SHARE**  
Technology • Connections • Results

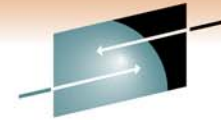
# ***SPSS Solutions - Modeler***

**SHARE**  
in Anaheim  
2011

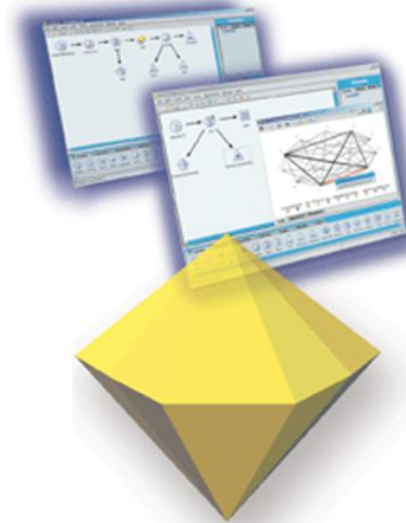
# Predictive Analytics with Modeler



- Data mining uses existing data to:
  - Predict
    - Category membership
    - Numeric Value
  - Group / Find Outliers
    - Cluster (group) things together based on their characteristics/attributes
  - Associate
    - Find events that occur together
  - Sequence
    - Forecasting/ Time-dependent events



**SHARE**  
Technology • Connections • Results



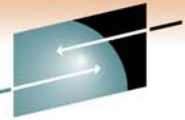
## ***Modeler Key Features***

- Ease of use
- Openness
- Productivity
- Automatic Model Selection
- Powerful Data Manipulation/Transformation Functionality
- Multiple Levels of Model Deployment
- Very Scalable\*
- Leverages existing database functionality\*
  - SQL Pushback
  - *In-Database* Mining

\*Server

**SHARE**  
in Anaheim  
2011

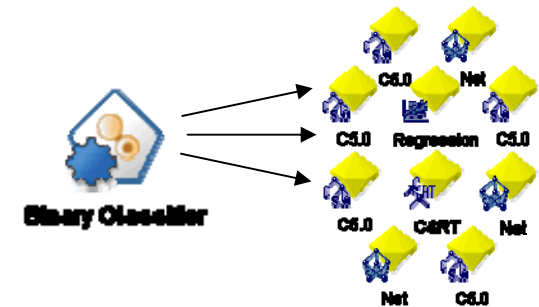
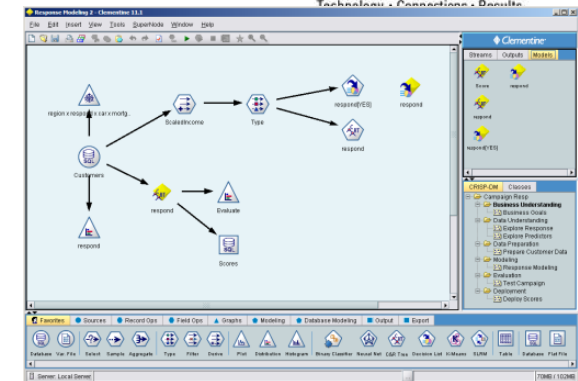
# Customers use Modeler when they want to...



**SHARE**

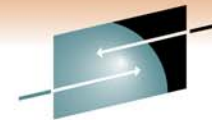
Technology • Connections • Results

- Integrate and analyze data from a range of data sources
- Apply complex pre-/post-processing steps
- **Build and evaluate predictive models**
- **Perform advanced “predictive” analysis for deep insight e.g. segmentations, sequence detection, anomaly detection**
- Score cases in an ad hoc or straightforward batch manner
- Create predictive models and results for deployment through other products
- Enable all of the above in a way that is:
  - intuitive
  - accessible to users without “expert” credentials
  - supports the most demanding requirements of advanced users
  - minimizes time taken to deliver a best-fit solution



**SHARE**  
in Anaheim  
2011

# IBM's Blue Insight



**SHARE**

Technology • Connections • Results

## In the spotlight



*Our commitment to informed decision making led us to consider private cloud delivery of Cognos via System z, which is the enabling foundation that makes possible **+\$25M savings over 5 years.***

-IBM CIO Office

### IBM's Pains:

- Segmented investments in BI tooling and infrastructure
- Silo'd development, redundant and possibly competing
- Lack of tooling standardization
- Limited visibility to the total cost of business intelligence costs for the enterprise
- Organizational reluctance to a centralized service

### IBM's Strategy:

- Common BI "appliance like" service for delivering BI to IBM
- Common service definition and boarding process
- Business intelligence experts to assist adopters
- Start with BI, grow to:
  - Predictive Analytics
  - Data Warehouse

### IBM's Results:

- Consolidating 115 multi-product, departmental BI deployments to 1 Cognos 8 BI on System z
- Support for our global workforce
  - 2009 – 72K
  - 2010 – 130K
  - 2011 – 200K
- Realizing value from +60 data sources across IBM
- Projected \$25M in savings
  - 60% Consolidation
  - 35% Standardization
  - 5% Automation

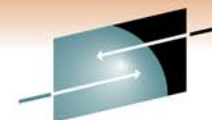
Learn more: [ibm.com/software/systemz/telecon/1jun](http://ibm.com/software/systemz/telecon/1jun)

**SHARE**  
in Anaheim  
2011



# What Exactly is Blue Insight?

*Transformational technology delivery matched with process and solution delivery model changes*

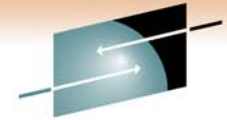


**SHARE**  
Technology • Connections • Results

- **Common BI “appliance like” service for delivering Business Intelligence to IBM**
  - Common extensible infrastructure ( HW & SW)
  - Common operational support
  - Common management of Cognos 8 BI *licensing* and Level 3 *support*
- **Common service definition and boarding process**
  - Defined BI tooling service scope (Reports, Adhoc, cubing, pervasive, etc)
  - Defined standard security and LDAP management
  - Common operational processes
- **Business intelligence experts to assist adopters**
  - BICC - (Business Intelligence Center of Competence)
  - Consultants available to assist in solution definition and consumption of service
- **Blue Insight is **NOT** an enterprise data strategy or a portal strategy**
  - Assumes data consumed by reports is a trusted part of the enterprise data strategy
  - Initial scope of Blue Insight was to use the standard Cognos portal delivery

**SHARE**  
in Anaheim  
2011

# The Smart Analytics Cloud solution offering



**SHARE**  
Technology • Connections • Results

Creates ...

That delivers ...

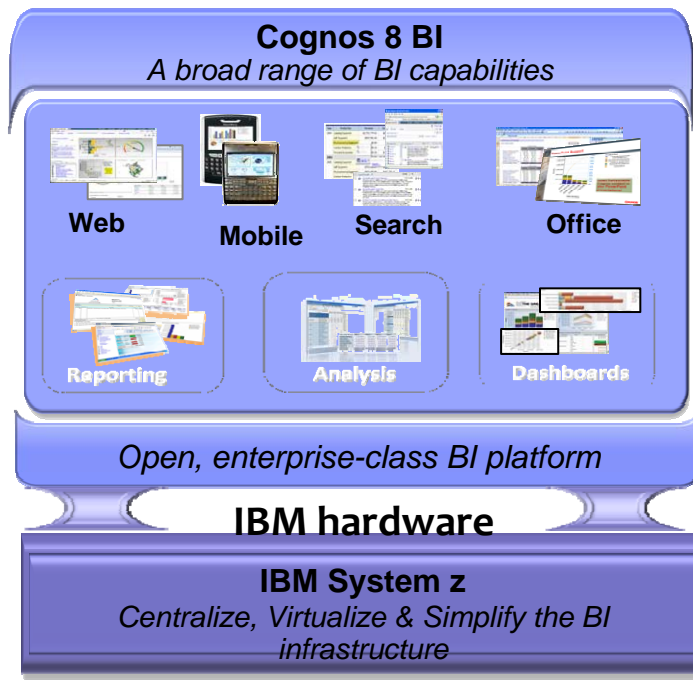
Smart  
Analytics  
Cloud

A private cloud within  
the enterprise

A solution for delivering business  
intelligence to the entire organization

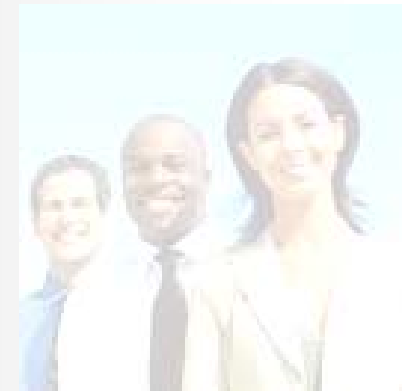
The solution components ...

## IBM software



## IBM Services

- **Phase 1:** Create awareness of, a strategy for and a governance foundation for BI across the organization
- **Phase 2:** Preparation for the Smart Analytics Cloud
- **Phase 3:** Install the base cloud, integrate into the corporate enterprise and test the cloud use cases
- **Phase 4:** Educate the enterprise for on-going success with the Smart Analytics Cloud



**SHARE**  
in Anaheim  
2011

# IBM Big Data - the Challenge... to bring Together a Large Volume and Variety of Data to Find New Insights



*Multi-channel customer sentiment and experience analysis*



*Detect life-threatening conditions at hospitals in time to intervene*



*Predict weather patterns to plan optimal wind turbine usage, and optimize capital expenditure on asset placement*



*Make risk decisions based on real-time transactional data*



*Identify criminals and threats from disparate video, audio, and data feeds*

# The Solution – IBM's Big Data Platform

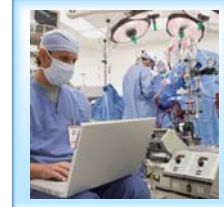
## Bring together any data source, at any velocity, to generate insight



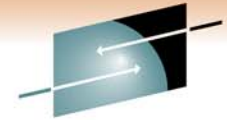
- Analyzing a variety of data at enormous volumes
- Insights on streaming data
- Large volume structured data analysis

### IBM Big Data Platform

- Variety
- Velocity
- Volume



# Announcing: InfoSphere BigInsights v 1.1



**SHARE**  
Technology • Connections • Results

## Platform for V<sup>3</sup>

- Hadoop foundation
- Large-scale indexing

## Analytics for V<sup>3</sup>

- Integrated text analytics

## Usability

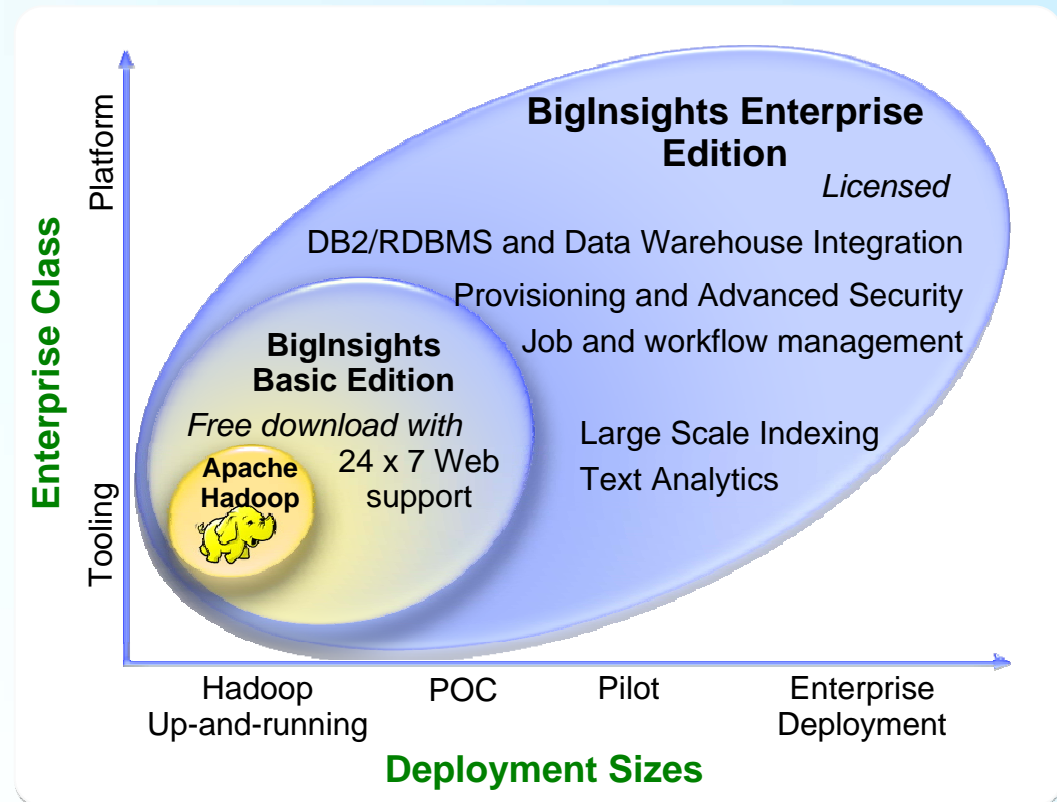
- Development Studio
- Admin console (incl. HDFS explorer)

## Enterprise Class

- Provisioning, storage, and advanced security

## Integration Capabilities

- Integrated install
- Connectivity with DB2, InfoSphere Warehouse and IBM Smart Analytics System.



# Summary

- IBM has heard you and responded
  - Data Warehousing
  - Cognos 10 for Linux on System z
  - QMF 10
  - IBM Smart Analytics Optimizer
  - Smart Analytics Cloud
  - SPSS
- We have invested billions in new technologies and building a new information-led infrastructure
- BI has evolved from a static, report-centric environment to a more real-time and embedded analytics model – **Business Analytics**
- Data Warehousing has evolved to a more global, federated, real-time environment
- We are using our own technology to change our business
- You can use it to change yours



## External Websites



Business Analytics pages for Cognos and SPSS

[http://www-01.ibm.com/software/analytics/?pgel=ibmhzn&cm\\_re=masthead-products-sw-bizanalytics](http://www-01.ibm.com/software/analytics/?pgel=ibmhzn&cm_re=masthead-products-sw-bizanalytics)

QMF 10

<http://g01zcdwas002.ahe.pok.ibm.com/software/data/qmf/>

IBM Smart Analytics Optimizer Webpage:

<http://www.ibm.com/software/data/infosphere/smart-analytics-optimizer-z/>

Data Warehousing and Analytics

<http://www.ibm.com/software/data/infosphere/data-warehousing/>

Terabyte Club for System z BI customers

<http://www.ibm.com/software/data/businessintelligence/systemz/terabyte-club.html>