

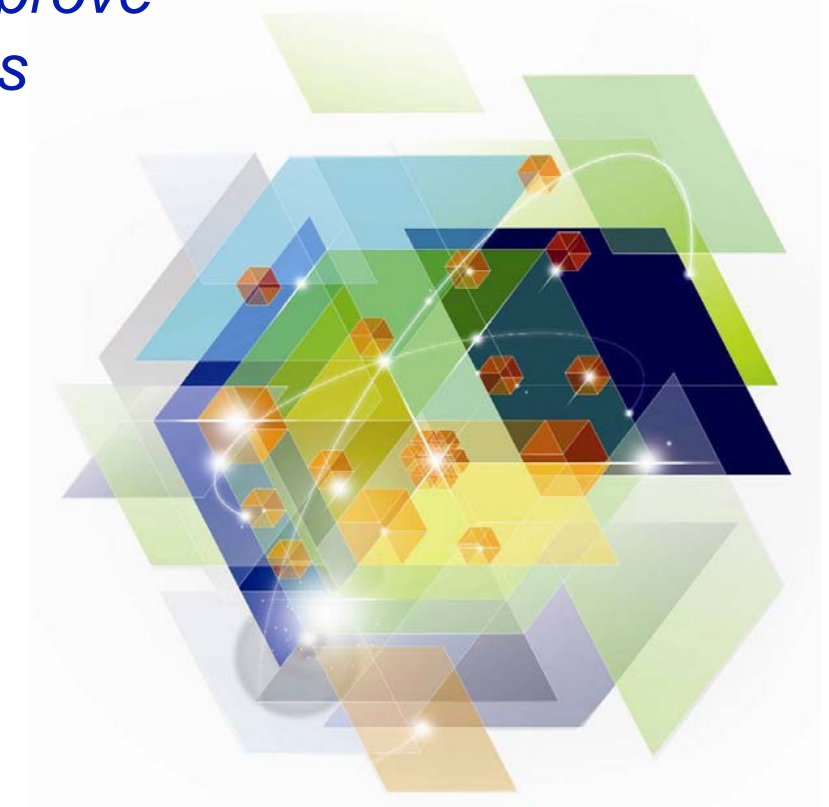


Enterprise Business Analytics – *Leveraging your Data Assets to Improve Business Results and Control Risks*

Dave Jeffries

Business Unit Executive

Business Analytics on System z



Evolution of Everything..

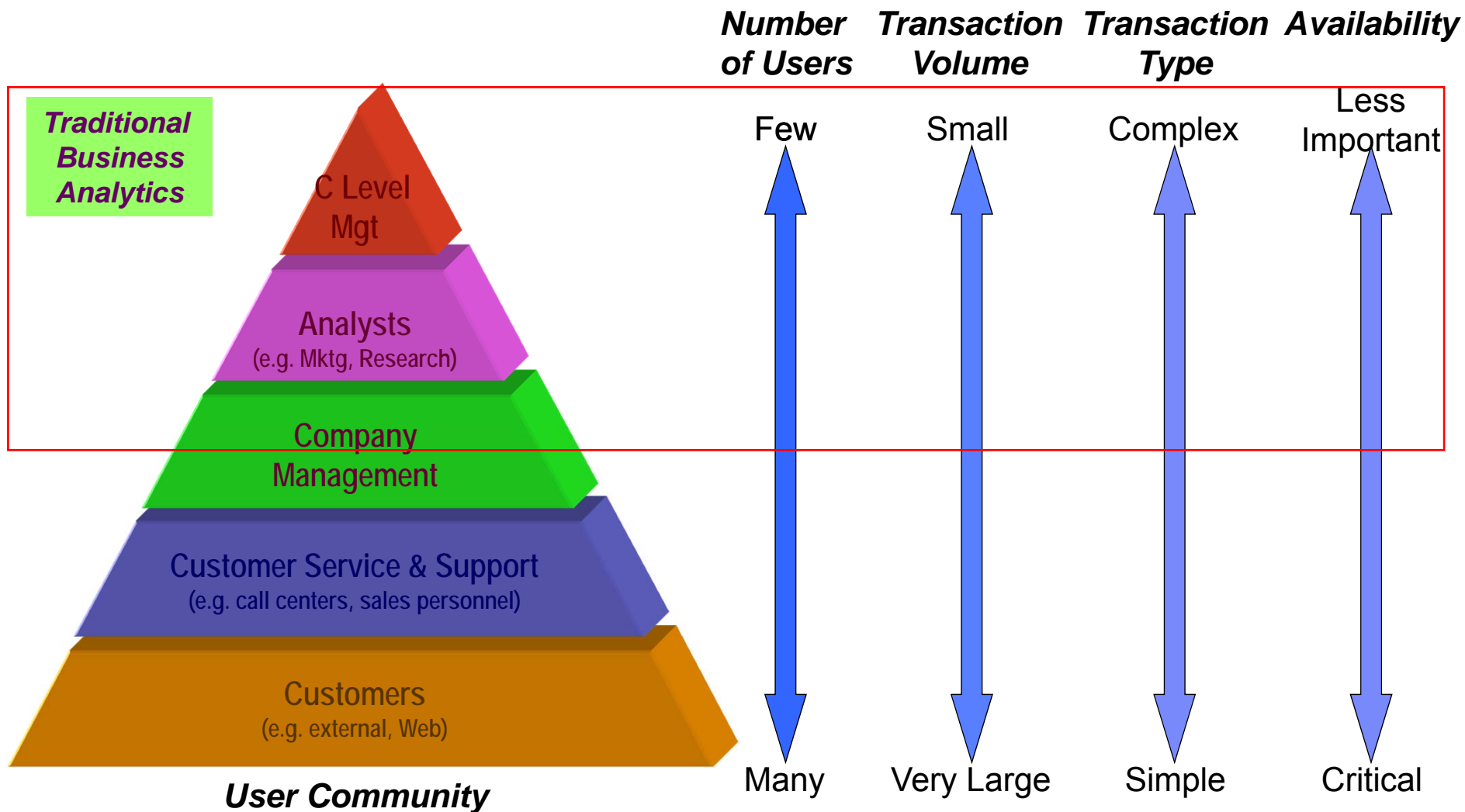


World is Evolving and so is
Business Analytics!

- ⑩ Users are growing
- ⑩ Infrastructure is adapting
- ⑩ Solutions are being developed



Traditional Analytics Market



Getting analytics out to frontline workers is more critical than ever...

- More informed customer interaction = higher customer satisfaction
- Higher customer satisfaction = improved business performance



A dissatisfied consumer will tell between 9 and 15 people about their experience. About 13% of dissatisfied customers tell more than 20 people.

Source: White House Office of Consumer Affairs, Washington, DC

86% of consumers quit doing business with a company because of a bad customer experience, up from 59% 4 years ago

Source: Harris Interactive, Customer Experience Impact Report

For every customer complaint, there are 26 other customers who have remained silent

Source: Lee Resource Inc

Happy customers who get their issue resolved tell about 4 to 6 people about their experience.

Source: White House Office of Consumer Affairs, Washington, DC

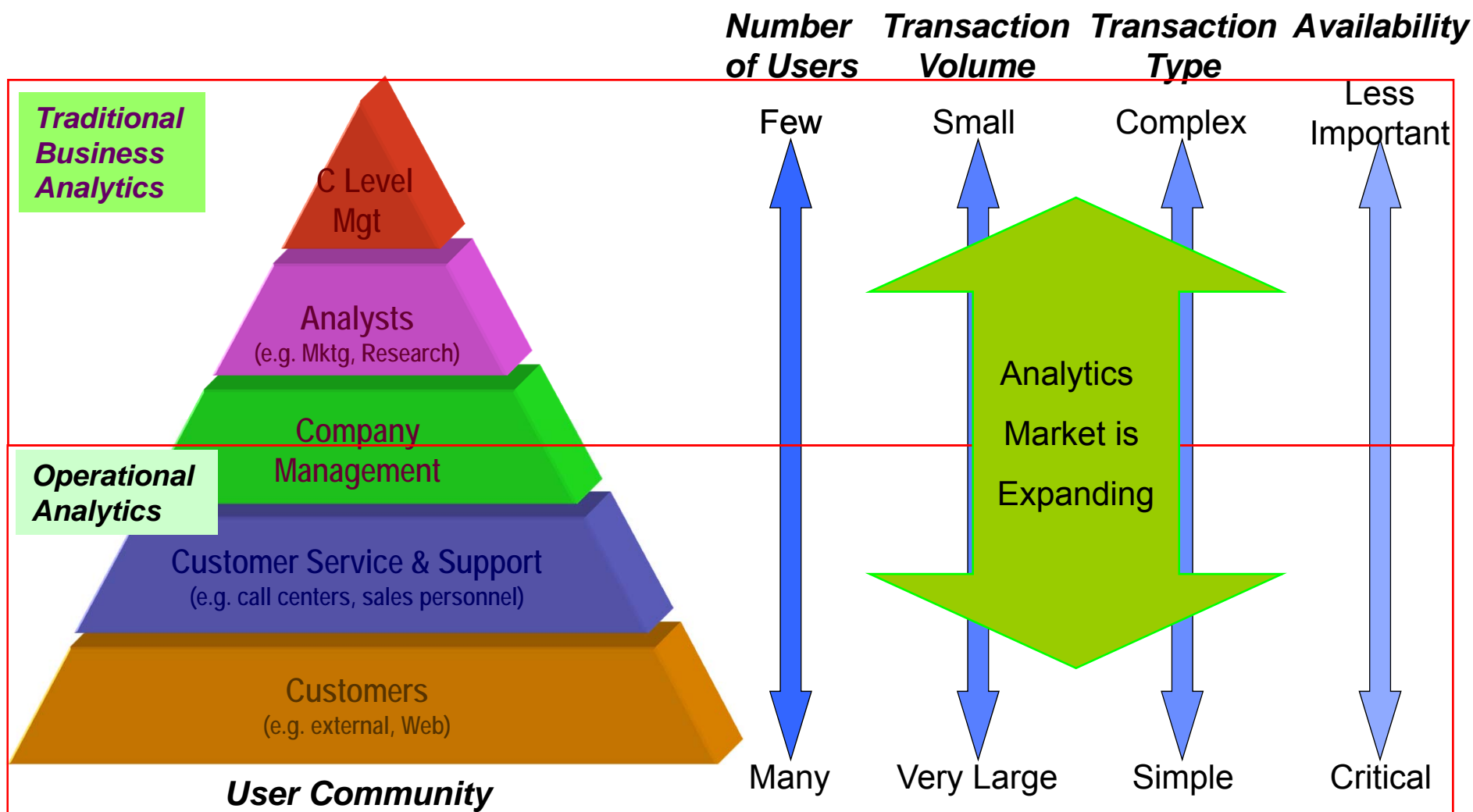
Attracting a new customer costs 5 times as much as keeping an existing one

Source: Lee Resource Inc.




...and is now critical to business success



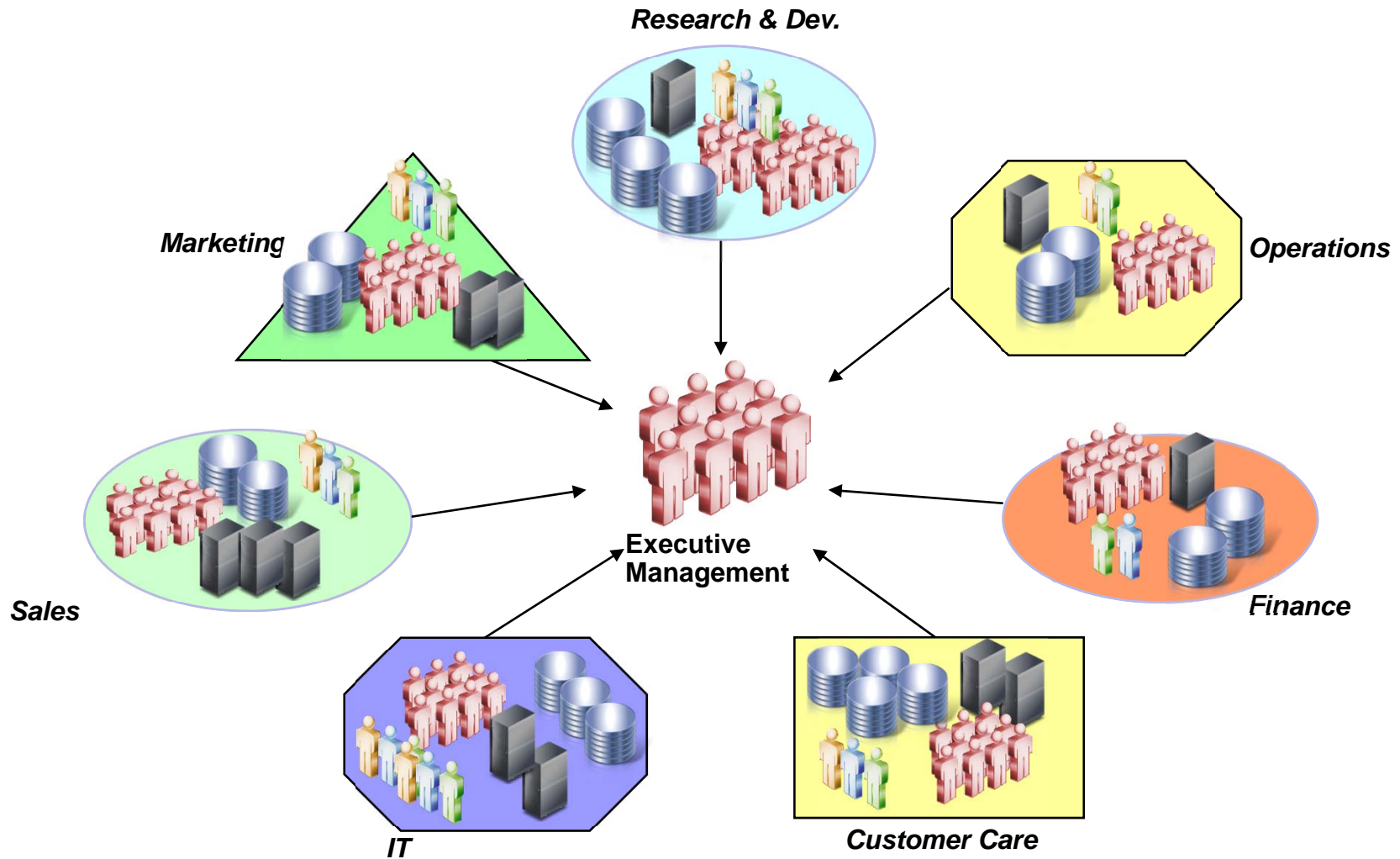
Current Analytics Market is expanding



Infrastructure is Adapting

	1997	2012	Adapting Infrastructure Strategy to Ensure Success
eMail 	<ul style="list-style-type: none"> • Telephone primary communication tool • Outages expected • Staff centrally located • No governance 	<ul style="list-style-type: none"> • Mission critical • High Volume • Near real-time • Corporate regulatory compliance • Global 	<ul style="list-style-type: none"> • Archiving • High Availability • Reporting • Mass storage
Instant Messaging 	<ul style="list-style-type: none"> • Desktop application • No governance • Text based 	<ul style="list-style-type: none"> • Server based • Video sharing • Telephony integration 	<ul style="list-style-type: none"> • Enterprise model • Availability • Governance • Bandwidth
Business Analytics & Data Warehousing 	<ul style="list-style-type: none"> • Departmentally defined • Ad hoc Query • Capability based products • Desktop application • IT not involved 	<ul style="list-style-type: none"> • More volume, real-time • More types of users, and mobile devices • Corporate regulatory compliance • Environmental concerns 	<ul style="list-style-type: none"> • Enterprise BA: Standardization / Consolidation • Modernization • Data Governance • Cloud Computing • Big Data

However business is still siloed...



Analytics Requirements

Requirement

Linear Scalability

Support more users with less infrastructure
Have your infrastructure work FOR you

Common Compliance and Process

Greater control over system access and ultimate auditability

Better Security

Integration into Common Security Environment
Control Access to sensitive data

Self Service Model

Expand Insight across the Enterprise reach

Service Chargeback

Understand who uses BA and charge accordingly

Support Multi-tenancy

Allow customers to segregate workload for security or performance

Improved Enterprise Performance

Allow the Enterprise to focus on Business not Infrastructure

Impact

High Performance

Fast, consistent, predictable

Lower Cost Per User

Centralized Utility service being re-used across the Enterprise

Rapid Deployment

Deploy New Services at the Speed of Business

Simple Maintenance

Less Provisioning, simpler migration/exploitation of new capability

Reduced Support Costs

Fewer moving pieces

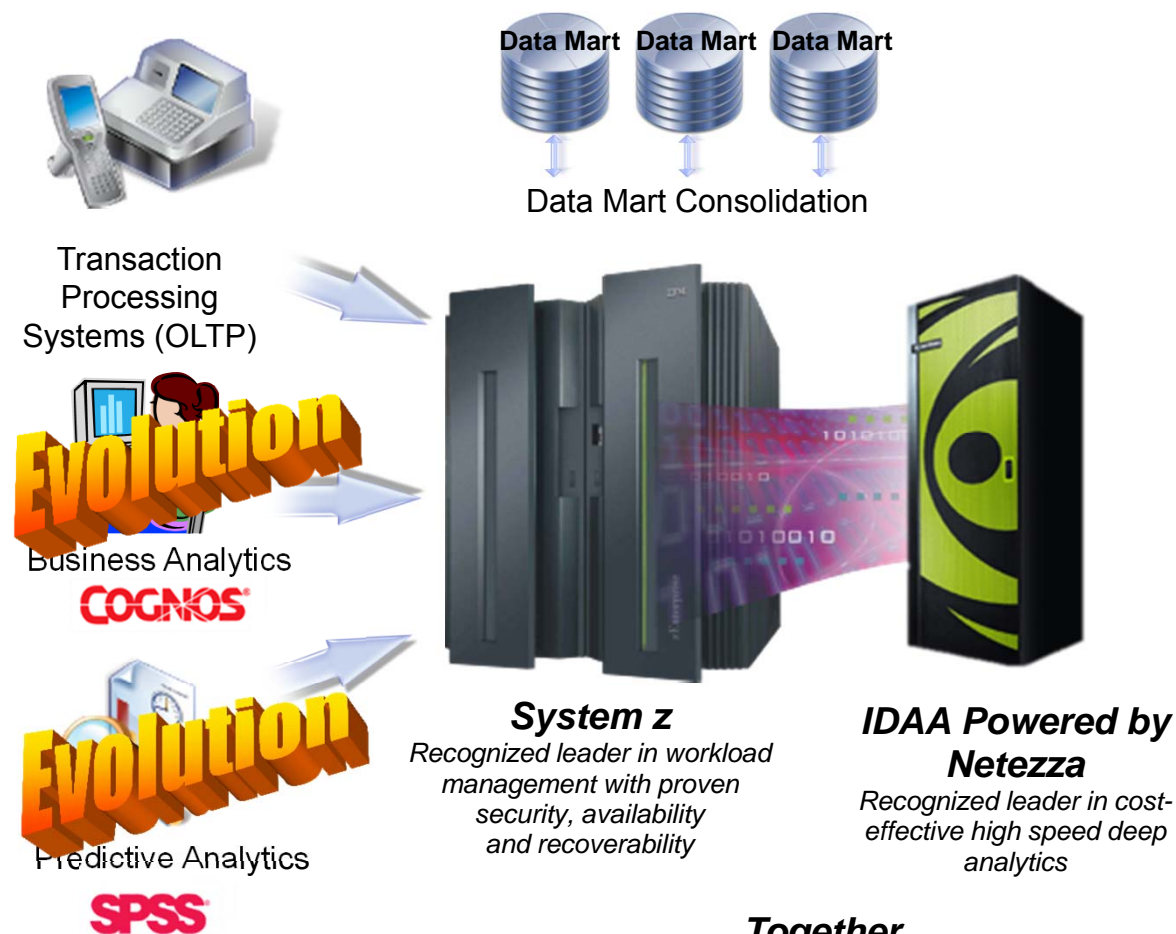
Enterprise Information Hub

- Supports strategic, tactical and operational decisions
- Support a single version of the truth
- Helps improve competitive positioning faster
- Enhances business performance

Brings the analytics up to the information		Transactional business applications + 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 And grow	Deploy the way you need – Turnkey optimized – Private cloud – Services and education

Enterprise Information Hub on a Single Integrated Platform

An industry exclusive



Best in OLTP & Transactional Solutions

Industry recognized leader for mission critical transactional systems

Best in Analytics

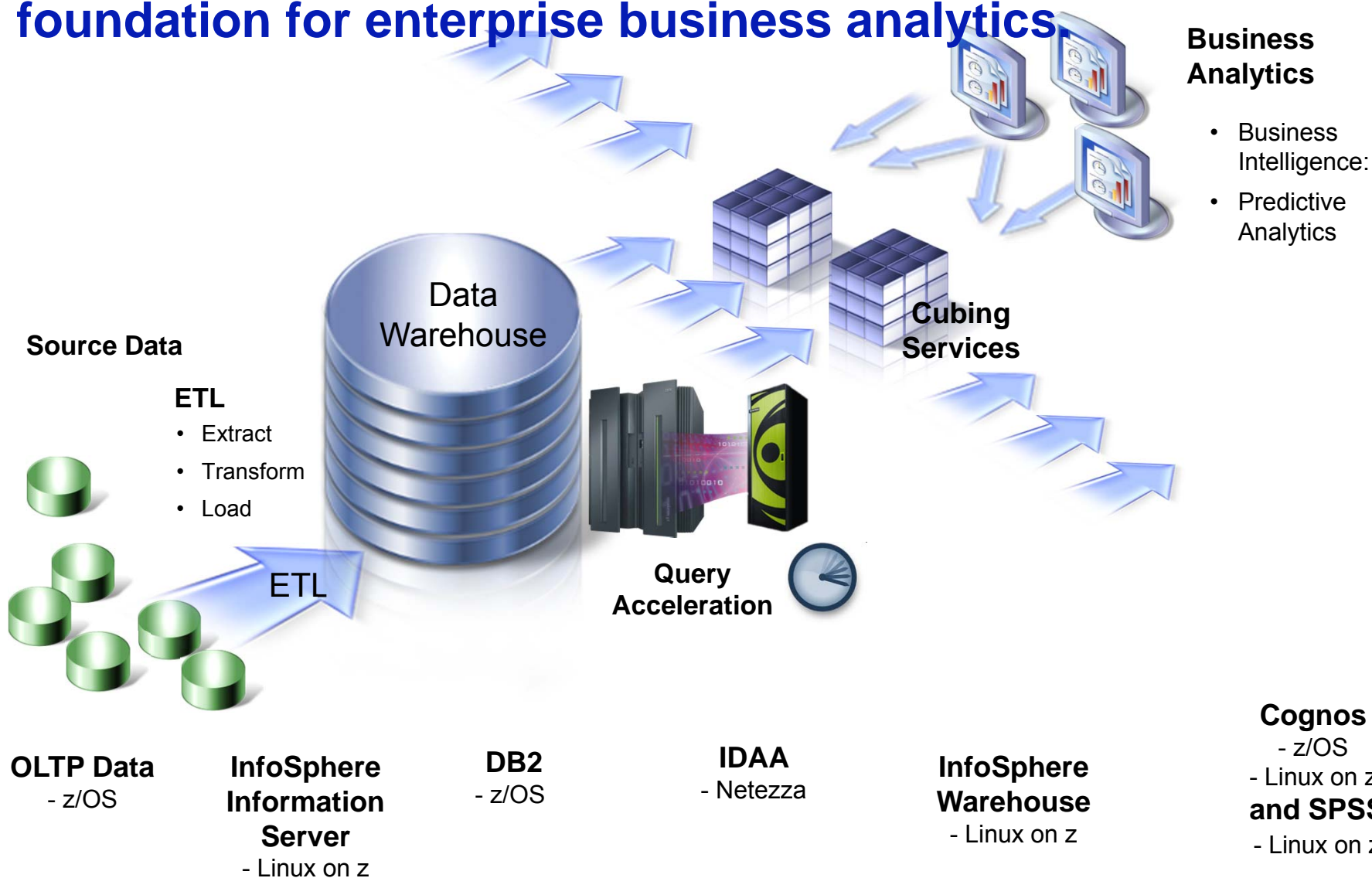
Industry recognized leader in Business Analytics and Data Warehousing solutions

Best in Consolidation

Unprecedented mixed workload flexibility and virtualization providing the most options for cost effective consolidation

Bringing transactional & decision support workloads together on a single platform

IBM uniquely offers an end-to-end, integrated, rock-solid foundation for enterprise business analytics



Business Intelligence on System z

Cognos Business Intelligence for Linux on System z

Version

- Cognos BI v10.1.1

Capabilities

- Reporting
- Analysis
- Dashboarding
- Real-time Monitoring
- Mobile

Database Support

- Support for a majority of all corporate data sources

Cognos Business Intelligence for z/OS Version

- Cognos BI v8.4.1

Capabilities

- Reporting
- Analysis

Database support

- DB2 for z/OS 8.1, 9, 10
- PowerCubes



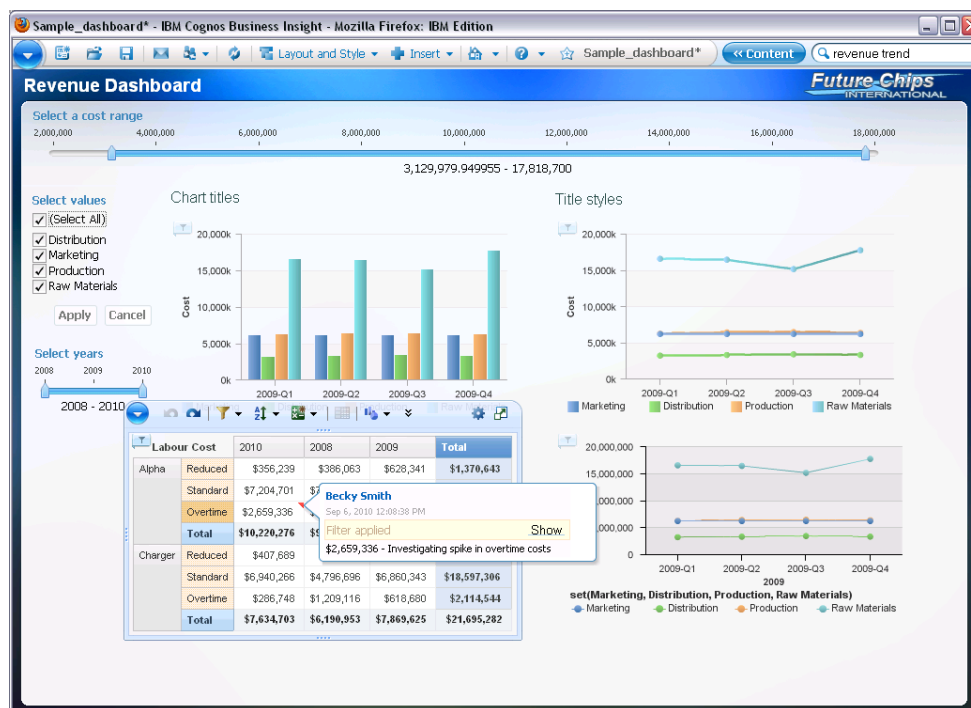
Unified workspace **with greater power, intuitive navigation and cleaner look**

Intuitive and easy to use, it is the single place that you go to find answers to key business questions

IBM Cognos Business Insight

Solution Highlights

- ⑩ Pre-assembled workspace content
- ⑩ Search assisted authoring
- ⑩ Drag and drop assembly
- ⑩ Dynamically filter
- ⑩ Quicker and deeper insight into data
- ⑩ Seamless graduated experience



Breadth of analytics **across historical, real-time and predictive information**



Unified Workspace delivering breadth of analytics



Analytical Reporting <i>Drill</i>	Real-Time <i>What is</i>	Scenario Modeling <i>What-if</i>	Advanced Analytics <i>What might be</i>
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Collaborative BI through built-in collaboration and social networking

Quickly find the people and expertise you need. Discuss and refine ideas with colleagues, partners, and customers.

IBM Cognos Collaboration

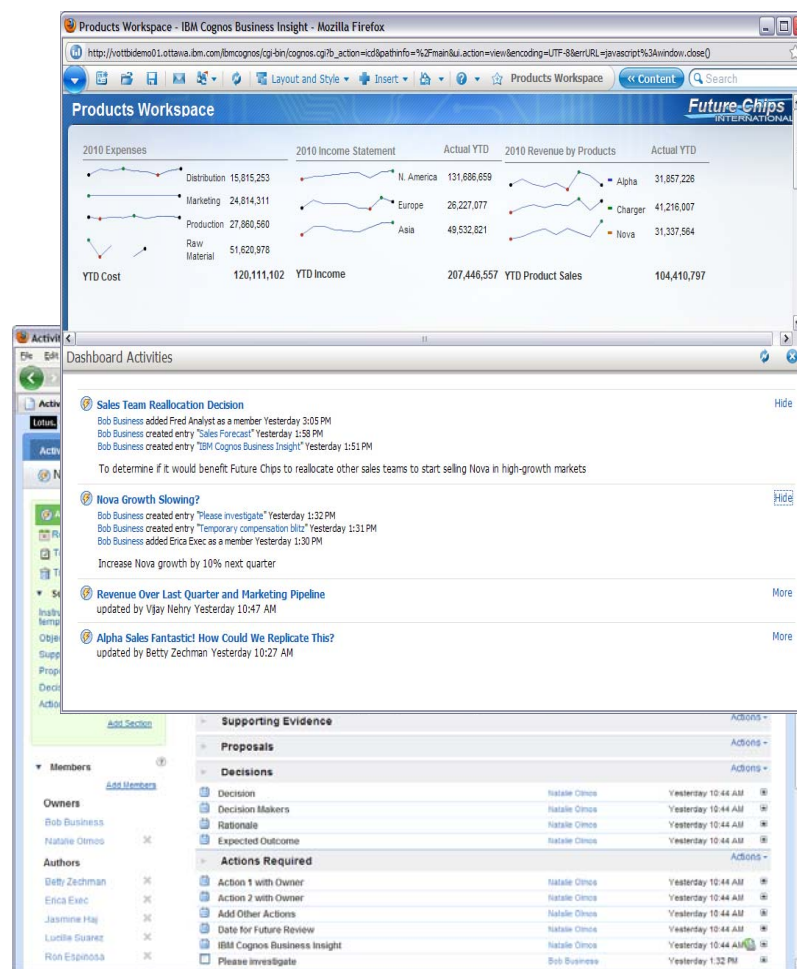
Solution Highlights

Embed of Lotus Connections

- Post messages, share files and links to web content (both BI and external)
- Create and assign to-do items

Work within Business Insight workspace to drive activities or requests for action

Send email notifications directly from an activity



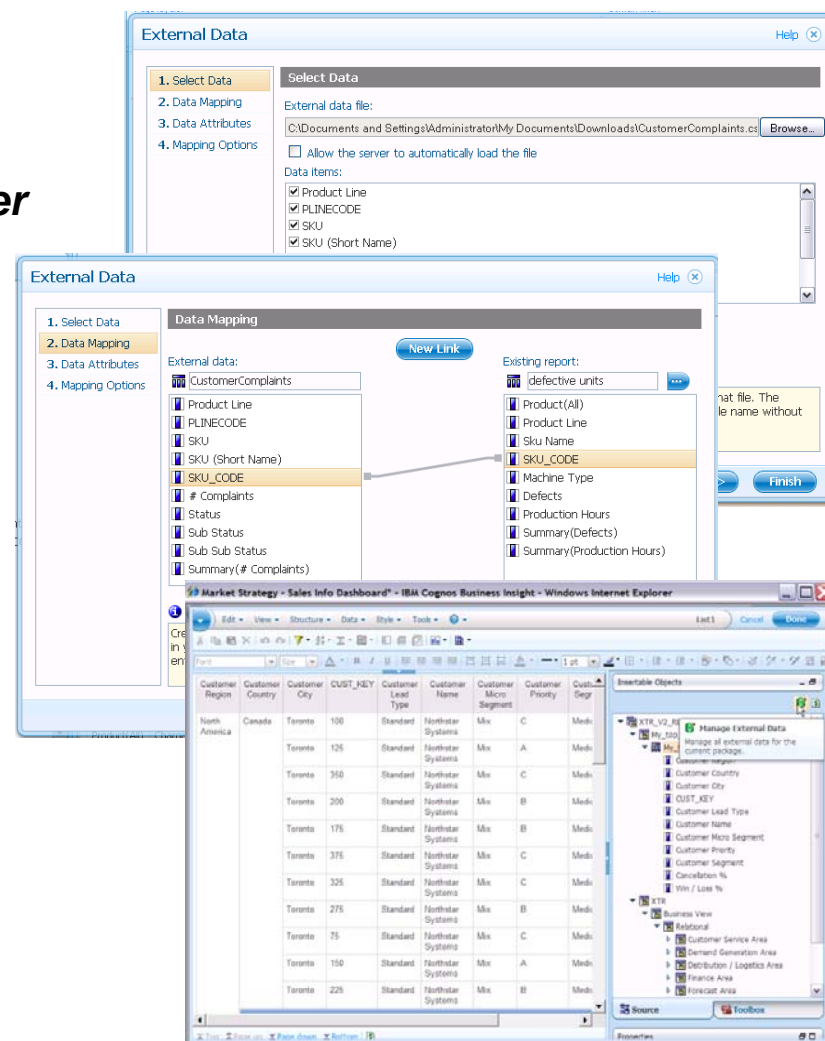
Easy data inclusion **by the business from one value, to entire data sets and external files**

Combine external, departmental, and your own data to corporate information resulting in broader perspectives

External Data

Solution Highlights

- ⑩ Import external data sources into reports or query subjects
- ⑩ Leverage external data as report filters
- ⑩ Publish for reuse and update
- ⑩ Provide IT governance



Analytics on the go **for more devices and disconnected interaction**

Provide business users with the information they need to make responsive and informed decisions regardless of their location

IBM Cognos Mobile
IBM Cognos Active Report

Solution Highlights

Mobile

- ⑩ iPhone, iPad, BlackBerry, Windows Mobile, and Symbian
- ⑩ Full BI interactivity including Drill Up/Down/Through
- ⑩ Schedule reports for immediate access to key content

Active Report

- ⑩ Disconnected BI application, fun and fast
- ⑩ Self-contained, interactive content
- ⑩ Burst distribution to reach wide audiences



Faster performance **with in-memory processing**

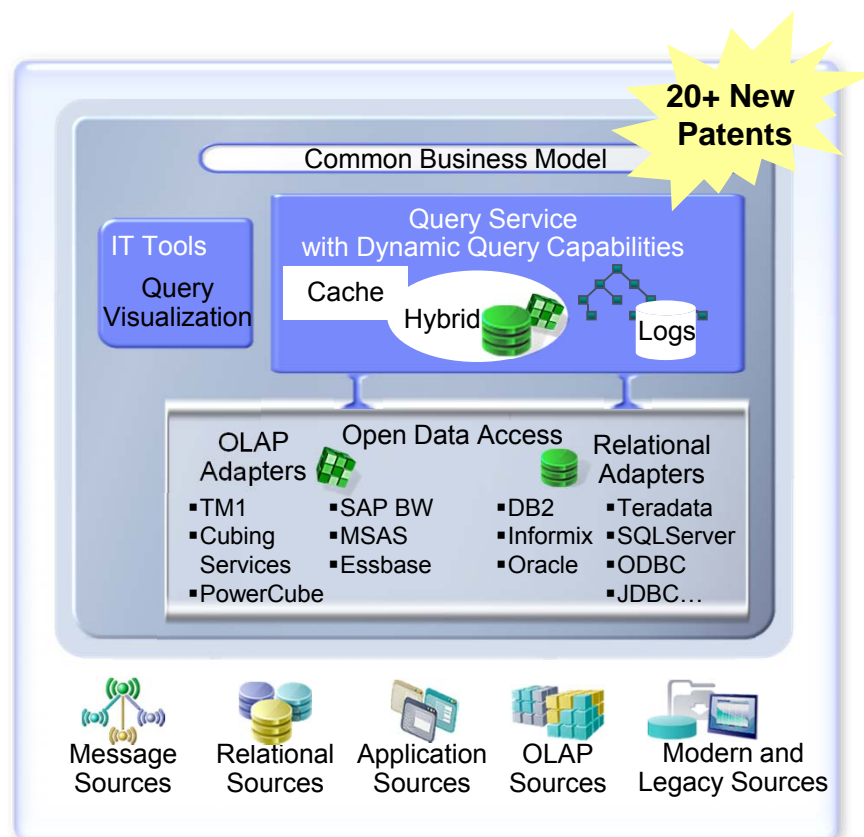
Deliver optimized access to all data regardless of where it resides

IBM Cognos Platform

Solution Highlights

Enhanced Query Service with Dynamic Query:

- 64-bit in-memory optimized query generation with pattern intelligence to improve performance against complex heterogeneous data
- In-memory calculations and aggregate operations for faster compute time
- New optimized caching for hierarchies, members, facts, calculations and prompts for improved report performance
- Initial conformance is for OLAP sources: SAP BW, TM1 and Essbase.



3x faster query

* When compared against IBM Cognos 8 BI software. Based on selective results from tests conducted in the IBM Performance and Scalability Labs on pre-release Cognos 10 software

Seamless upgrade **and ease of ongoing management**

Reduce system management effort and speed time to deploy new functionality to the business community

IBM Cognos Lifecycle Manager

Solution Highlights

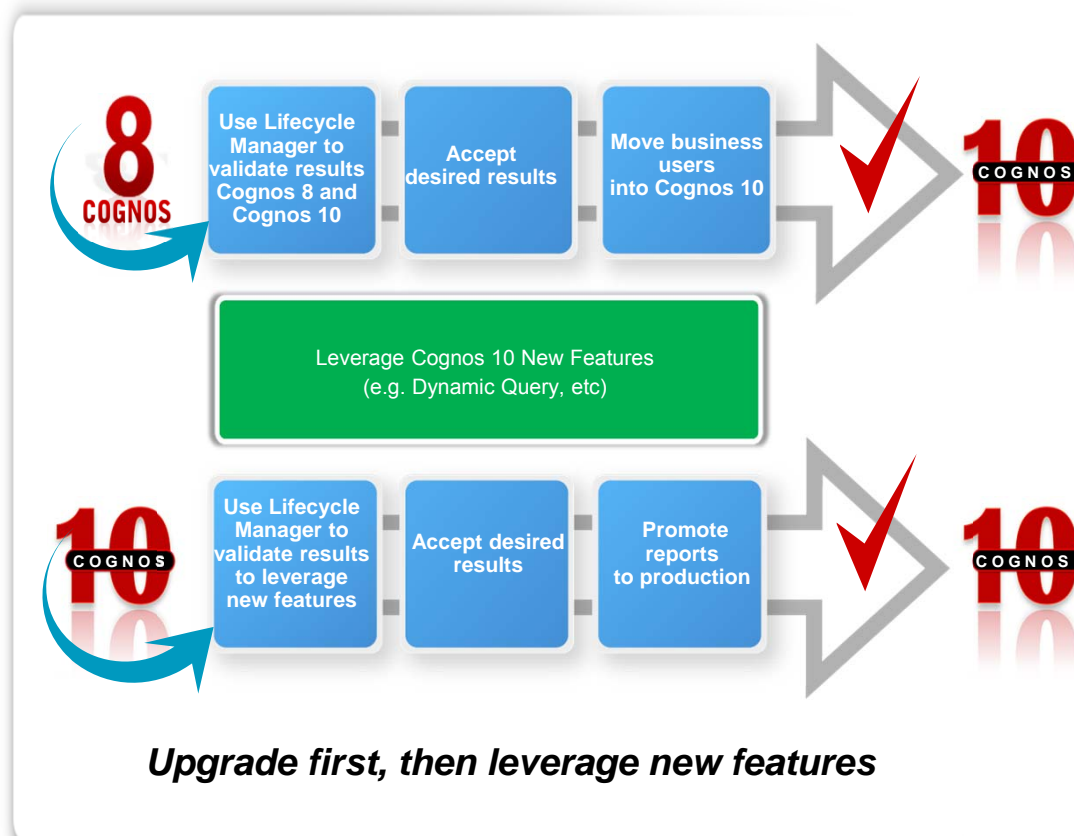
Validate single environment

- Assess impact of change in operating environment, (e.g. refresh pack, data source changes)

Compare multiple environments

- Streamline upgrade process and increase IT efficiency

Use beyond upgrade to quickly assess impact of any change that could effect BI content



Moving from Reactions to Predictions

SMART IS

Turning a Call Center in a Profit Center.



A large Dutch financial services company implemented predictive cross selling programs in its call centers. The implementation took 2 months and generated **\$30 Million in incremental sales**. Essentially, 1M calls generated 180,000 suggestions, reps made 60,000 offers turning into 30,000 leading to 22,000 sales.

SMART IS

Turning clients into advocates.



A large Swiss telco provider adopted a client retention approach based on satisfaction. Based on the use of the “Wisdom of Crowds” principle, gathering feedback. The company **reduced churn from 14% to 2%**.

SMART IS

Preventing crime before it happens.



A large city in the US turned to predictive analytics to predict occurrences of crimes in four blocks radius in tranche of 4 hours. Insights led to optimized deployment of police resources **reducing homicides by 35%** year over year, and robberies by 20%.

SMART IS

Dramatically lowering the cost of claims.



A large US insurer has embedded predictive analytics in claims handling while maximizing and accelerating the collection of subrogation payment. The company achieved an **ROI of 403% with payback in 3 months**.

Predictive Analytics for Linux on System z

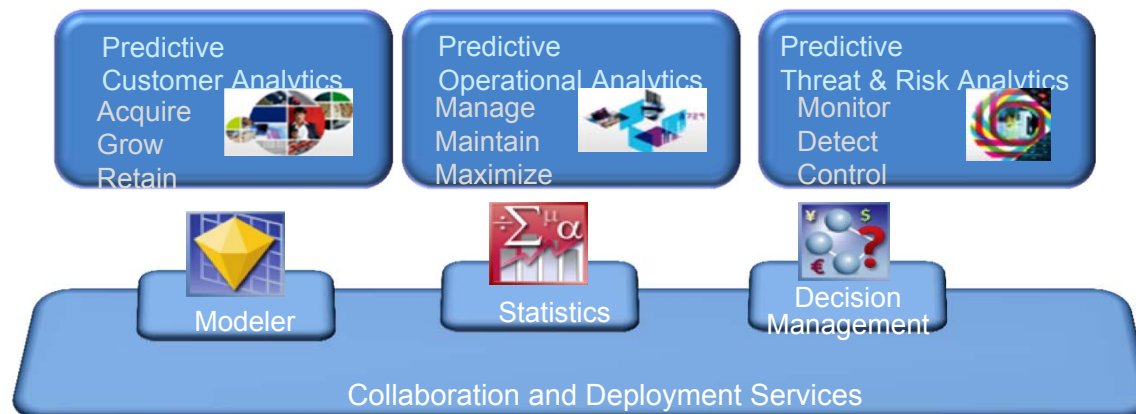


SPSS Statistics for Linux on System z

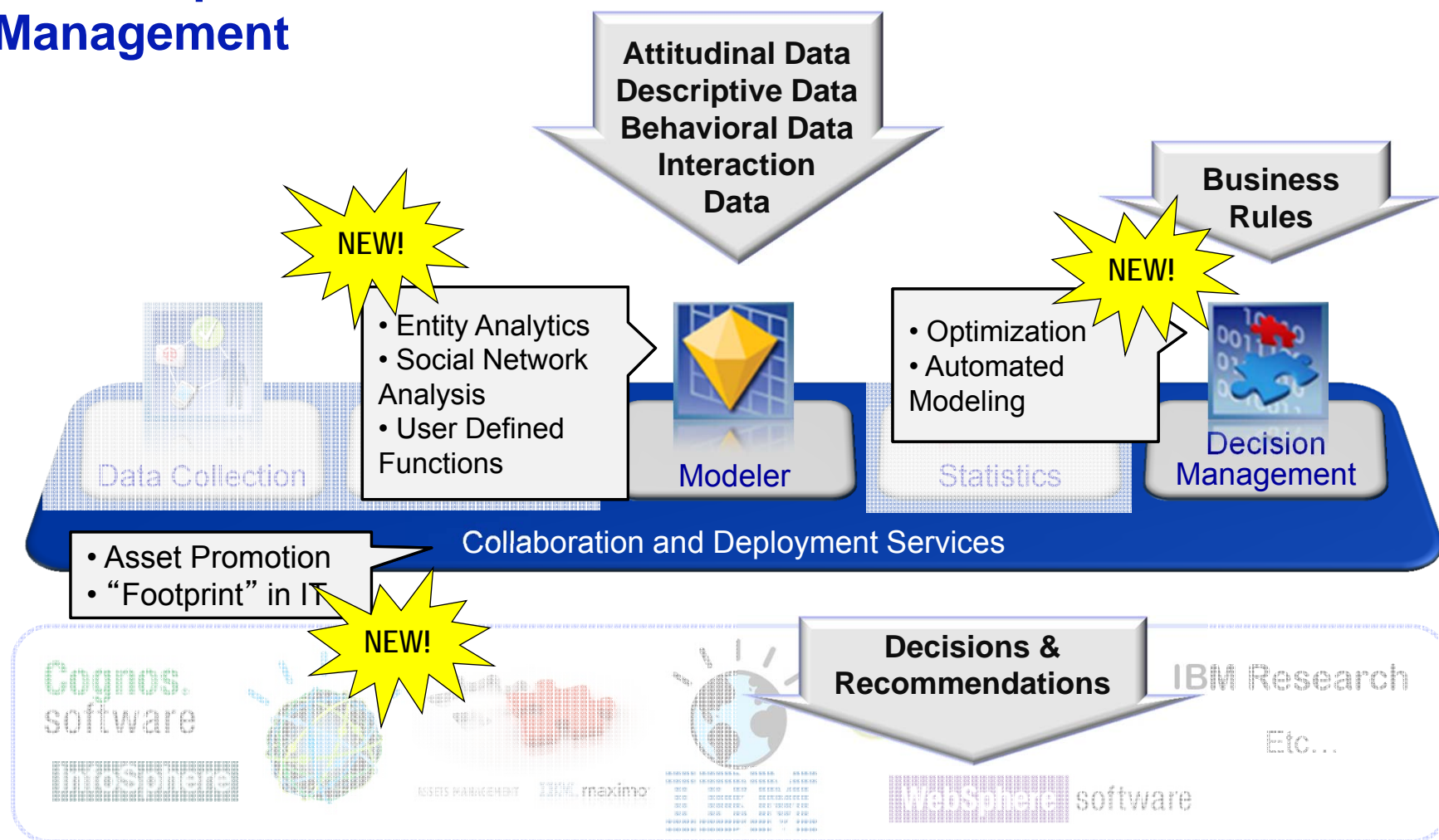
- Version
 - Statistics v20
- Apply math to decision making and research for commercial, government, and academic users

SPSS Modeler for Linux on System z

- Version
 - Modeler v15
- Data mining tool used for generating hypotheses and scoring
- Text analysis for unstructured data to model consumer behavior
- In-Transaction Scoring with DB2 z/OS



A Complete IBM Analytical Decision Management Solution “Picks Up” Enhancements to Modeler, C&DS, and Decision Management



Real time scoring with DB2 for z/OS and SPSS Modeler 15 *(NEW!)*

- **Delivers better, more profitable decisions, using the latest data, at the point of customer impact**
 - Enables more informed customer interaction
 - Improves fraud identification and prevention
- **With improved accuracy, speed and performance while reducing cost and complexity**
 - Improves accuracy by scoring new and relevant data directly within the OLTP application
 - Scales to large data volumes to improve accuracy of data models
 - Delivers the performance needed to meet and exceed SLAs of OLTP applications
 - Minimizes demand on network, HW, SW and resources



*Part of an extensive
Business Analytics solution
on System z!*

In-database Scoring of DB2 for z/OS Represents a Unique Opportunity



Customer Interaction



Business Application

Operational/Transactional System

- OLTP System built on DB2 for z/OS
- On-line transaction processing (OLTP) systems, often referred to as transactional systems are designed to process small, quick, interactive workloads for which users expect fast response times.



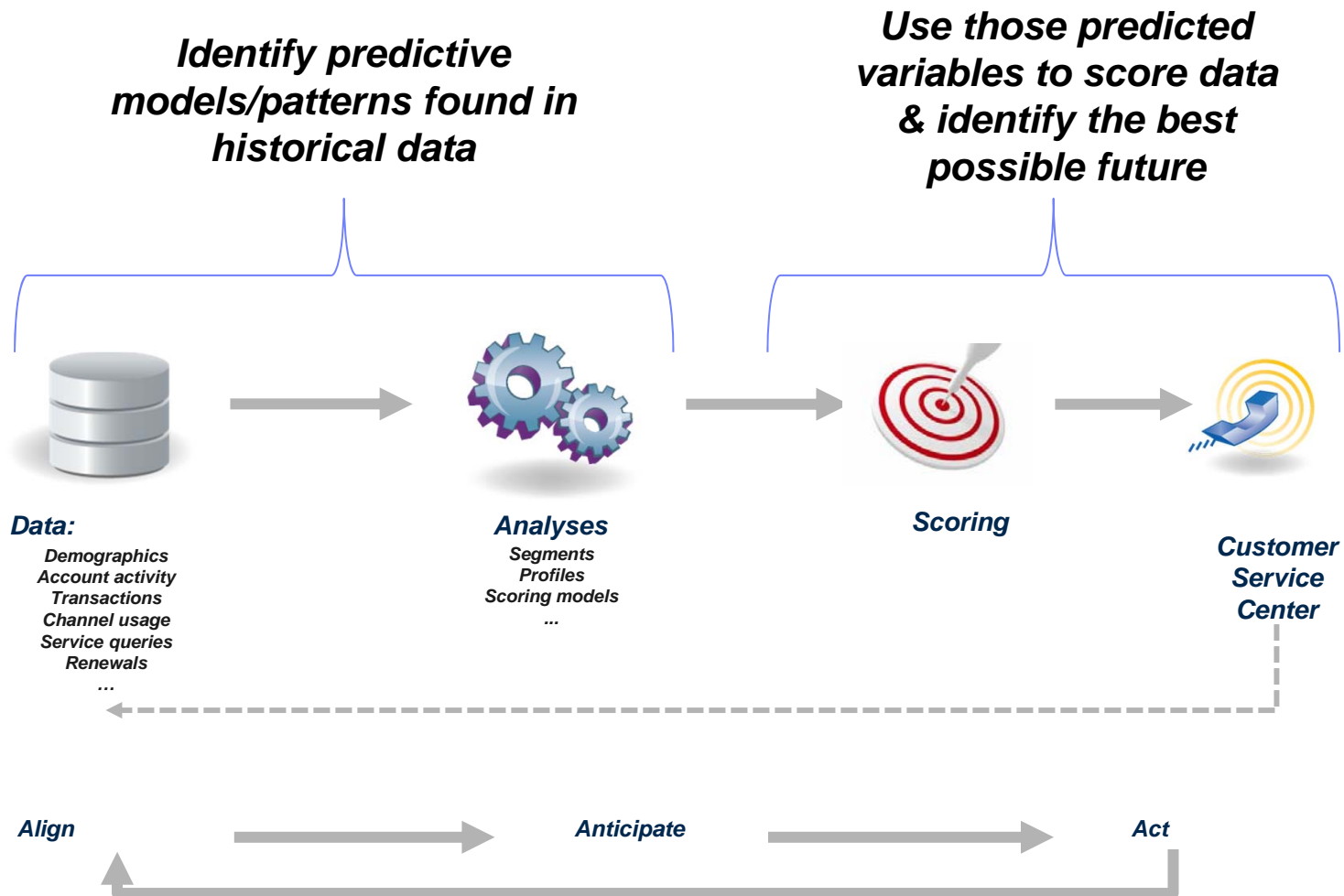
Data Repository

- Data Warehouse
- Operational Data Store
- Data Mart

*Data moved to data warehouse for long term analysis

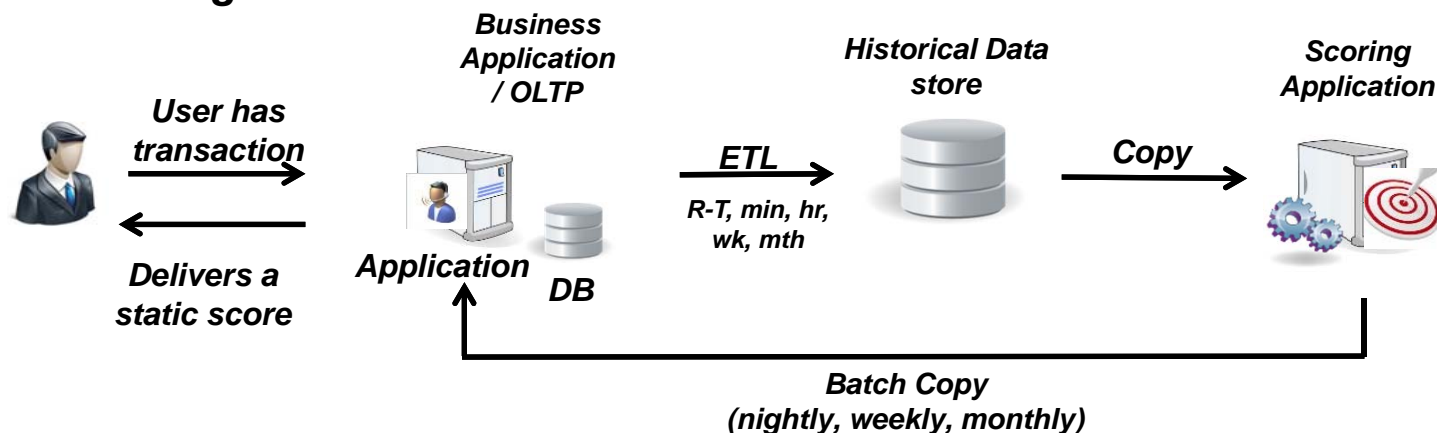


What is involved Scoring ?

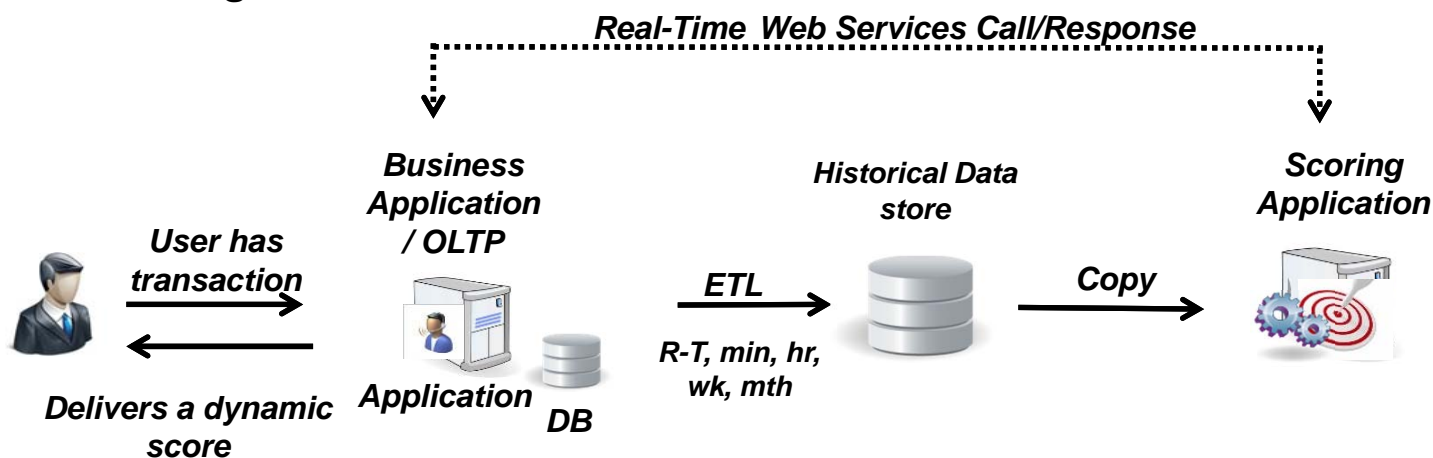


Scoring Associated with an OLTP Application

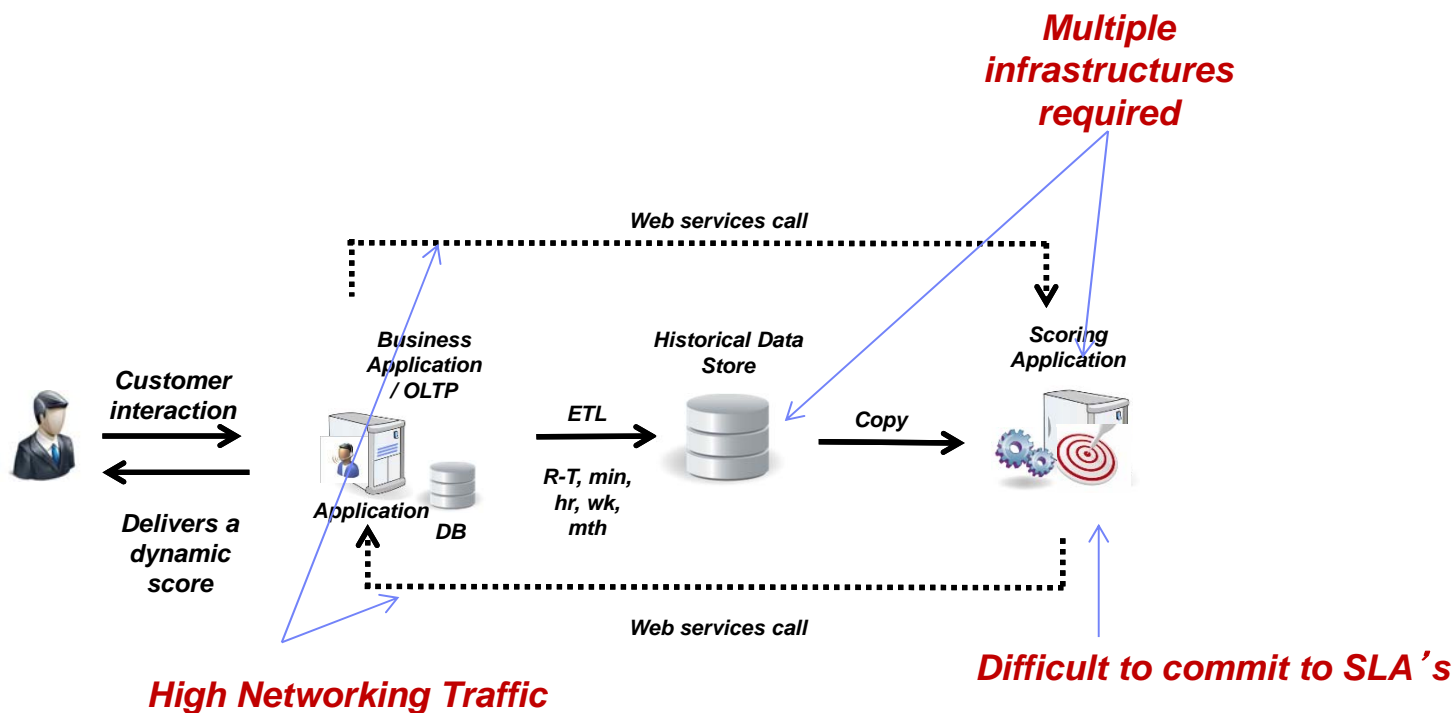
Historical Scoring



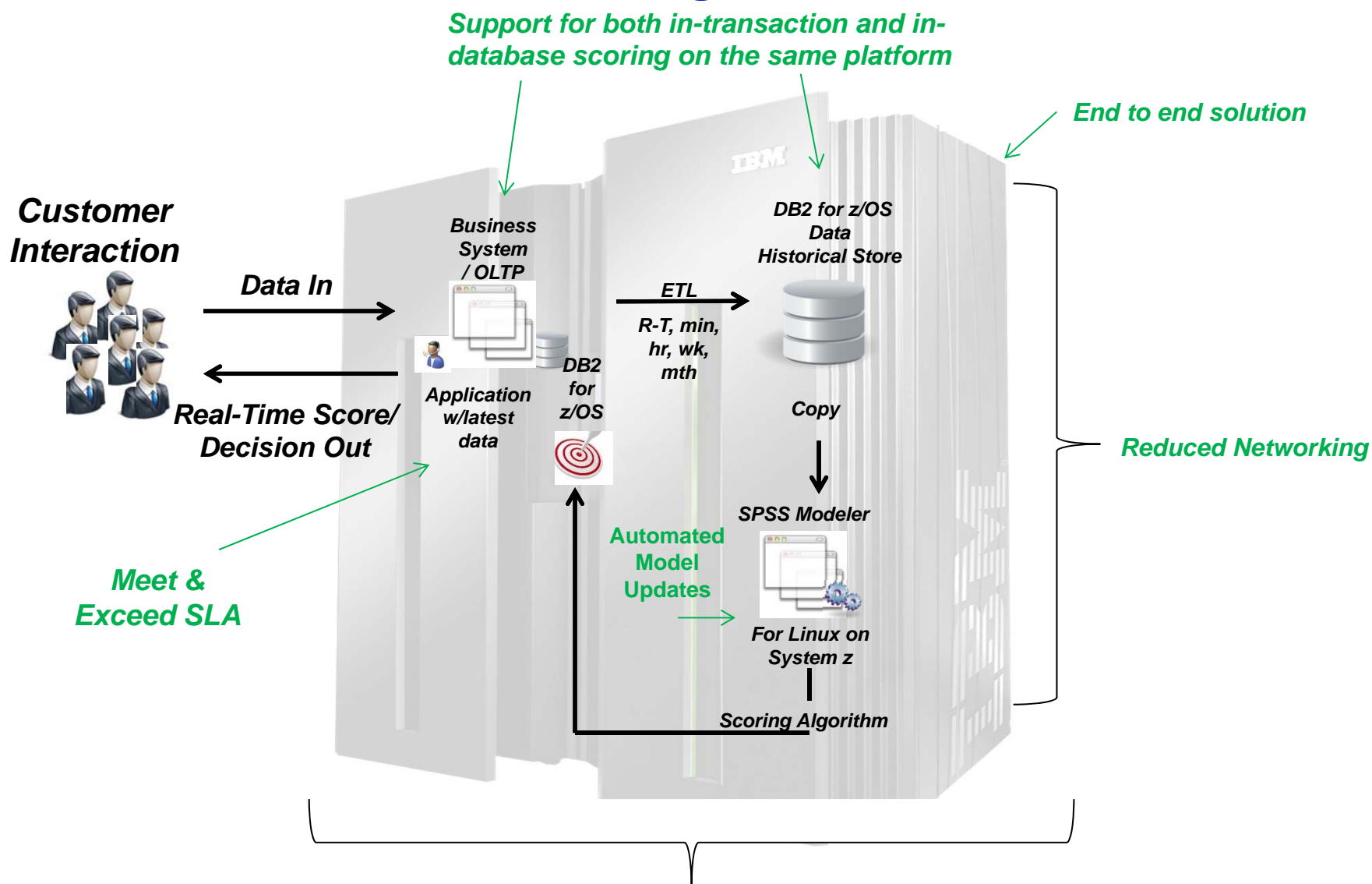
Real-time Scoring



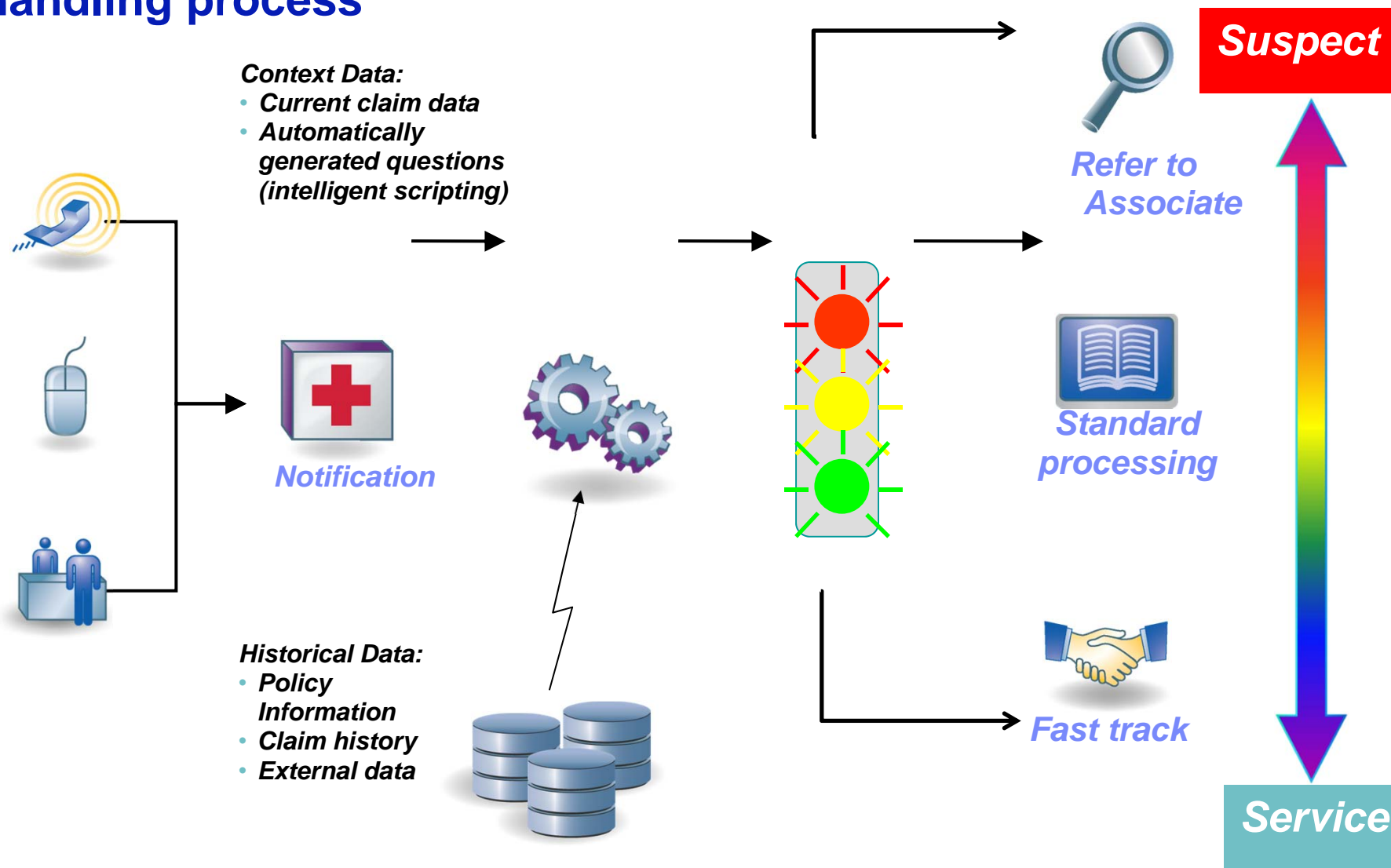
The Impact on Real-time Scoring



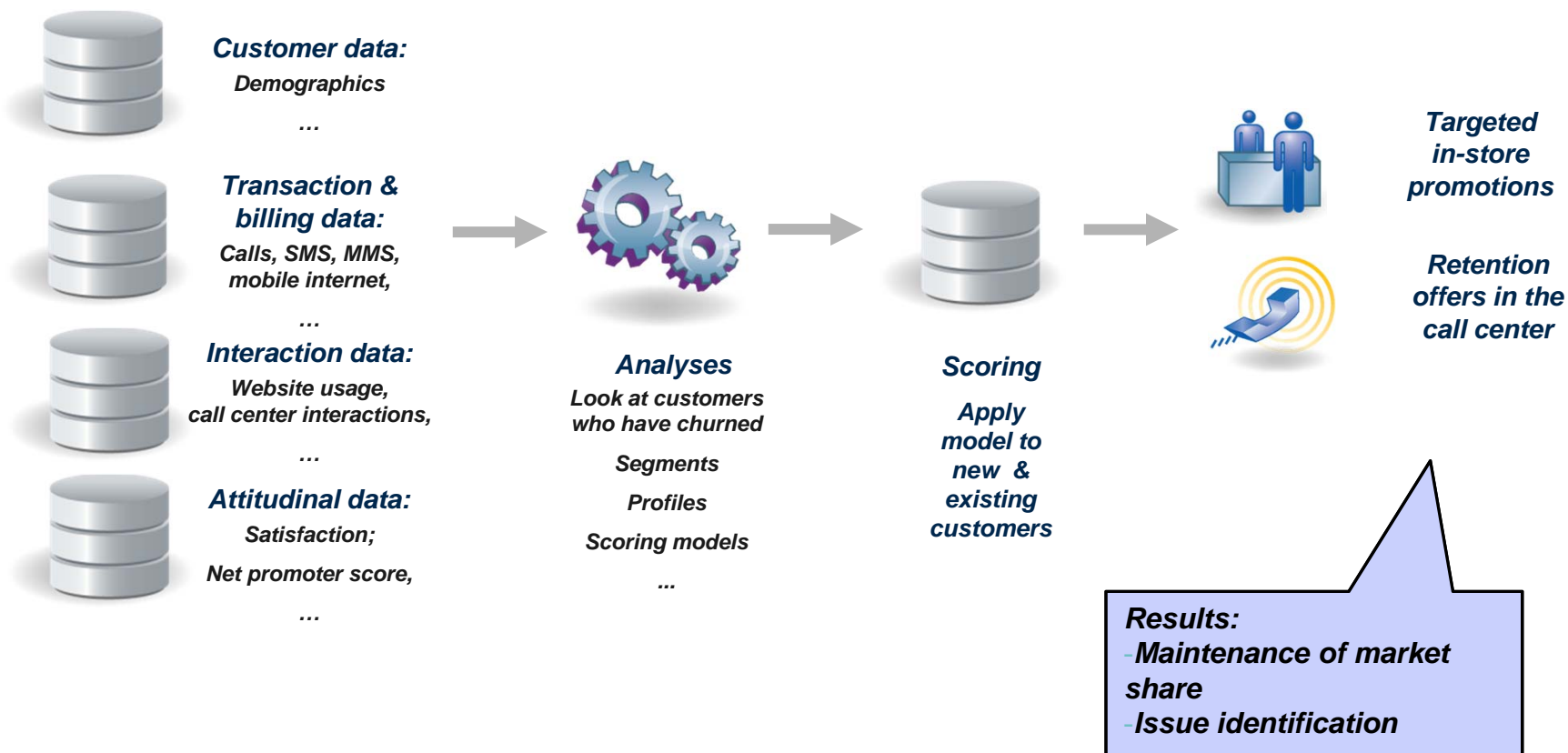
Modeler 15 Real-time Scoring with DB2 for z/OS



Predictive threat & fraud analytics: Improving initial claim handling process



Predictive operational analytics: Improving customer retention



Integration Real-Time Scoring for DB2 for z/OS into an OLTP application

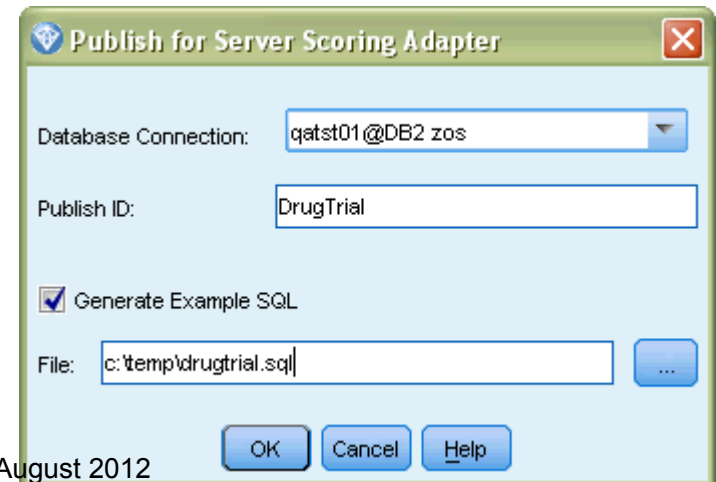
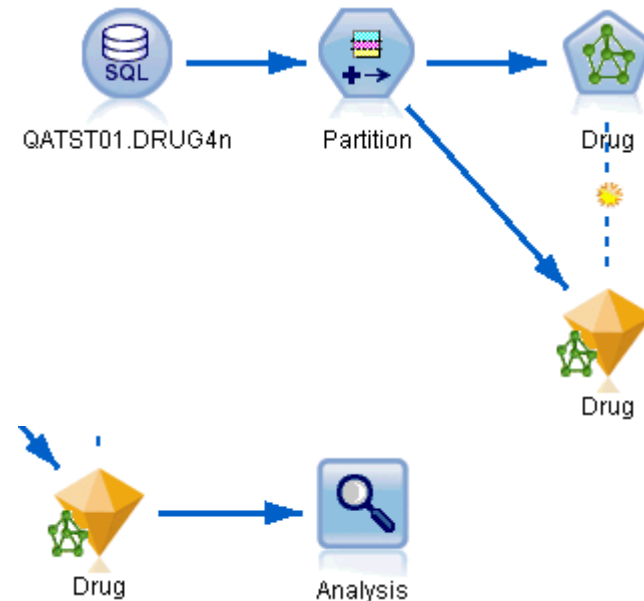
Create a stream to build a model.

Execute the model building node to produce a model apply node.

Evaluate the model against a separate test partition of the data to test the model

Publish the model to the OLTP application

To rebuild the model, repeat steps 1..4 above.



DB2 Analytics Accelerator

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

Flexible Deployment Options with System z



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

- *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*

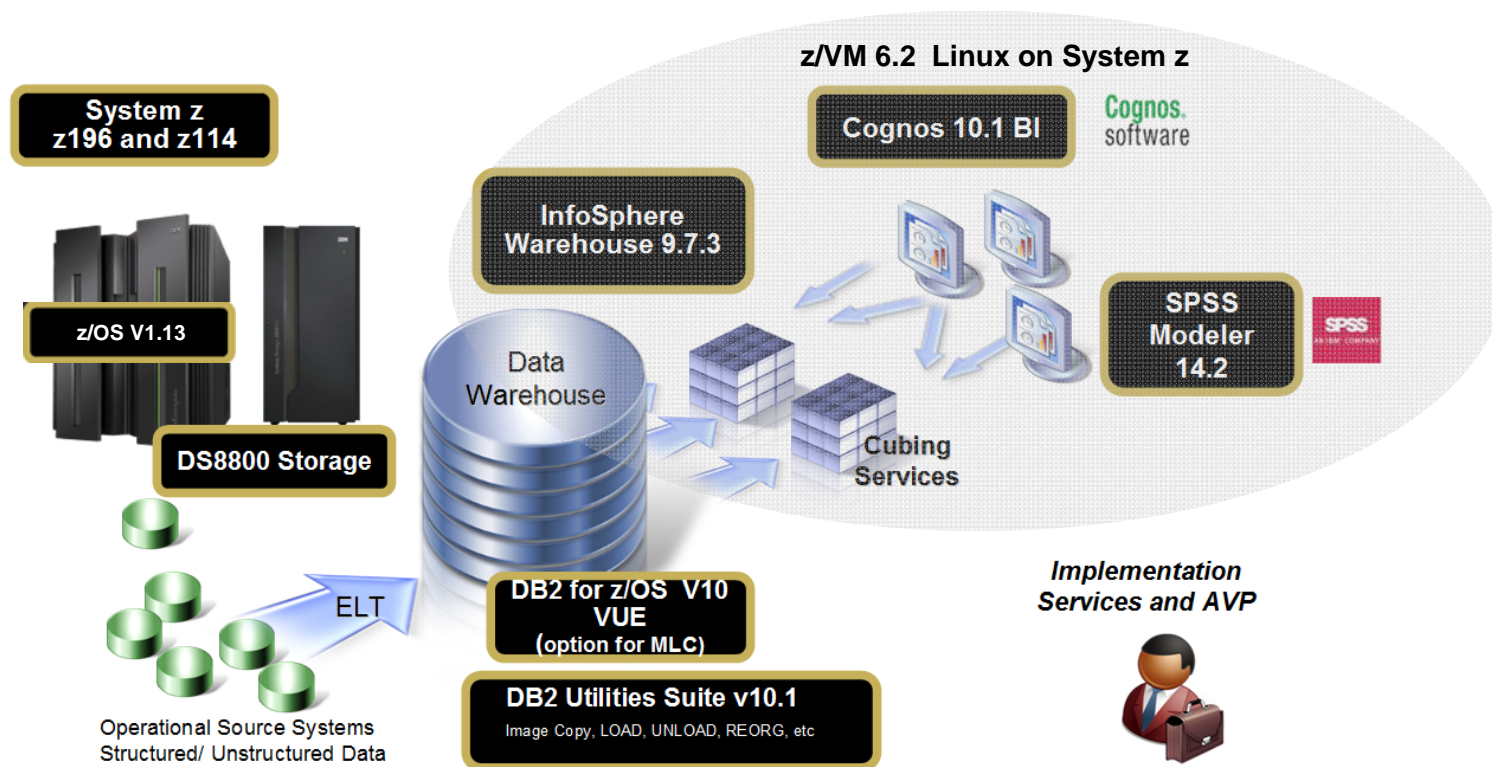


Private Cloud

IBM Smart Analytics Cloud

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

IBM Smart Analytics System 9700 / 9710



- An integrated solution of hardware, software and services that enables customers to rapidly deploy cost effective game changing analytics across their business. Offered in standard and foundational configurations.
- The 9700 is built using the System z196 server. The 9710 leverages the System z114 server to deliver a truly compelling entry-level offering
- The standard configuration delivers everything as pictured. The foundational configuration removes the Linux on System z portion of the solution (z/VM, SPSS, Cognos, InfoSphere Warehouse).

IBM Blue Insight

Harnessing IBM Business Analytics and data warehousing on System z technologies to drive multi-million dollar benefits

The need:

Blue Insight is IBM's strategic analytics platform, designed to empower hundreds of thousands of IBM employees with access to sophisticated business intelligence and predictive analytics via a single cost-effective private cloud architecture. Making this vision a reality involved the usual technical and process issues of centralization, but also social and philosophical ones: how could the Blue Insight team convince users that a centralized private cloud solution was the right way forward for IBM's business to achieve its 2015 roadmap?

The solution:

Blue Insight uses a suite of IBM Business Analytics and Information Management software running on the IBM® System z® platform, which delivers the highest possible levels of performance, availability, security and scalability. As a result, Blue Insight's flexible core analytics services place no limits on adoption or sophistication of end-users' analyses; this versatility, combined with top-level executive support, is helping to drive adoption throughout the enterprise.

The benefits:

- Generates new insights that drive real business value – for example, increasing software revenues by eight percent by enhancing small deals management.
- Delivers \$25 million savings over five years through consolidation.
- Avoids approximately \$250,000 in set-up costs for each new analytics project
- Scales seamlessly to meet increasing user demand. Blue Insight now has a user-base of nearly 200,000 people across 390 projects.

“The business gets excellent performance and near-total availability, and can regard analytics as an always-on, real-time service.”

— Larry Yarter, Chief Architect,
Blue Insight Business Analytics
Competency Center, IBM

Solution components:

- IBM® Cognos® Business Intelligence
- IBM SPSS® Statistics
- IBM SPSS Modeler
- IBM InfoSphere® Warehouse
- IBM zEnterprise™ 196
- IBM DB2 Analytics Accelerator

IBM Blue Insight

Selects System z platform to deploy an internal Private Analytics Cloud

Project Scope

- 180K named users world-wide
- 390 distinct Cognos BI reporting projects
- 250 data sources - DB2, PowerCube, XML, pSeries, zLinux, z/OS
- 1.7 million reports delivered in Q3 2011
- The team – Operations team of 9 BACC support and 10 infrastructure
- Single instance of Cognos on 1 z box for production, using multiple zLinux guests

Value to the Business

- Hard cost savings - \$25 Million over 5 yrs
 - People: 30% - more efficient use of resources, less duplication
 - Infrastructure: 50% - hardware, software, facilities
 - Common Process: 20% - common boarding, communication and practice
- Soft cost savings – 10's of \$M already
 - Cost avoidance
 - Each new project solution requiring analytics is saving
 - Reduced technical and business team solution churn
 - Improved resource flexibility
- Value Generation – 10's of \$M already
 - Better business decisions
 - Channel segmentation of sales opportunities
 - WW Cash management
 - Commodity purchase optimization



*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 Blue Insight Delivers 5yr 25M\$ Savings



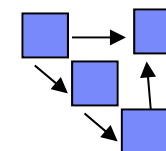
People - 30%

- Reduction in non value add operations of silo' d systems
 - Installations, updates, operations monitoring
- Elimination of silo' d tool evaluations
- Reduced solution design using analytics service as a component architecture service
- Common tooling skills provides common practitioner "language" and workforce flexibility
- Improved analyst efficiency due to reuse of models and reports



Infrastructure – 50%

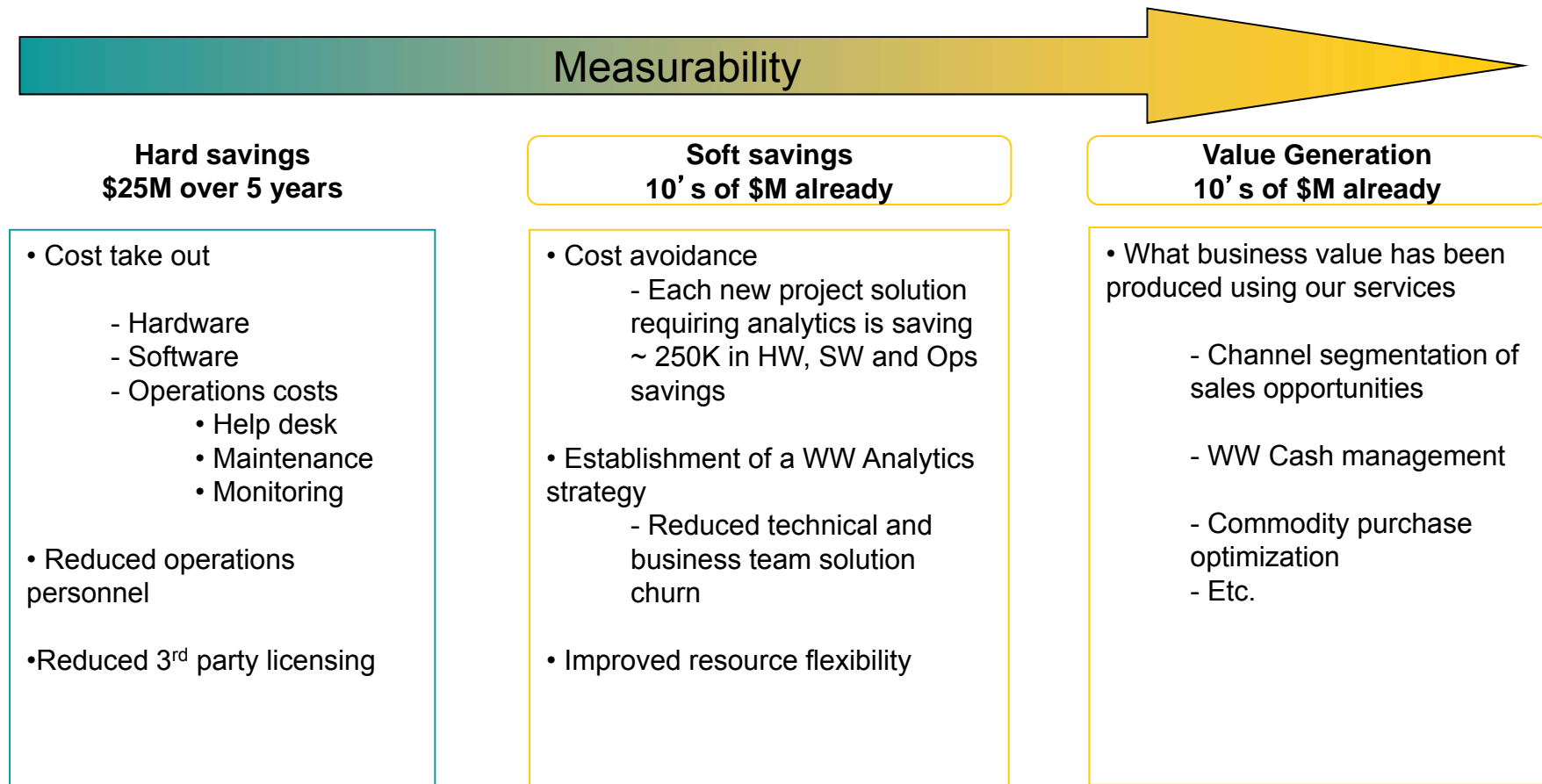
- Hardware reduction
 - Systems are right sized to maximize utilization
- SW license reduction
 - Share all SW environments reduces costs of underutilized licenses
- Reduced facilities expenses
 - Electric, real estate, network, heating/ cooling
- Reduce SW licensing due to tooling standardization
 - Reduce purchases and SW maintenance costs



Common Processes – 20%

- Common boarding process
 - Reduces adopter time to board and create value
- Common lifecycle processes
 - Common communications, code promotions and upgrades, etc.
- Common consulting practice
 - Solution and architecture assessments to assist in service integration
- Standardized problem reporting, root cause analysis and help desk

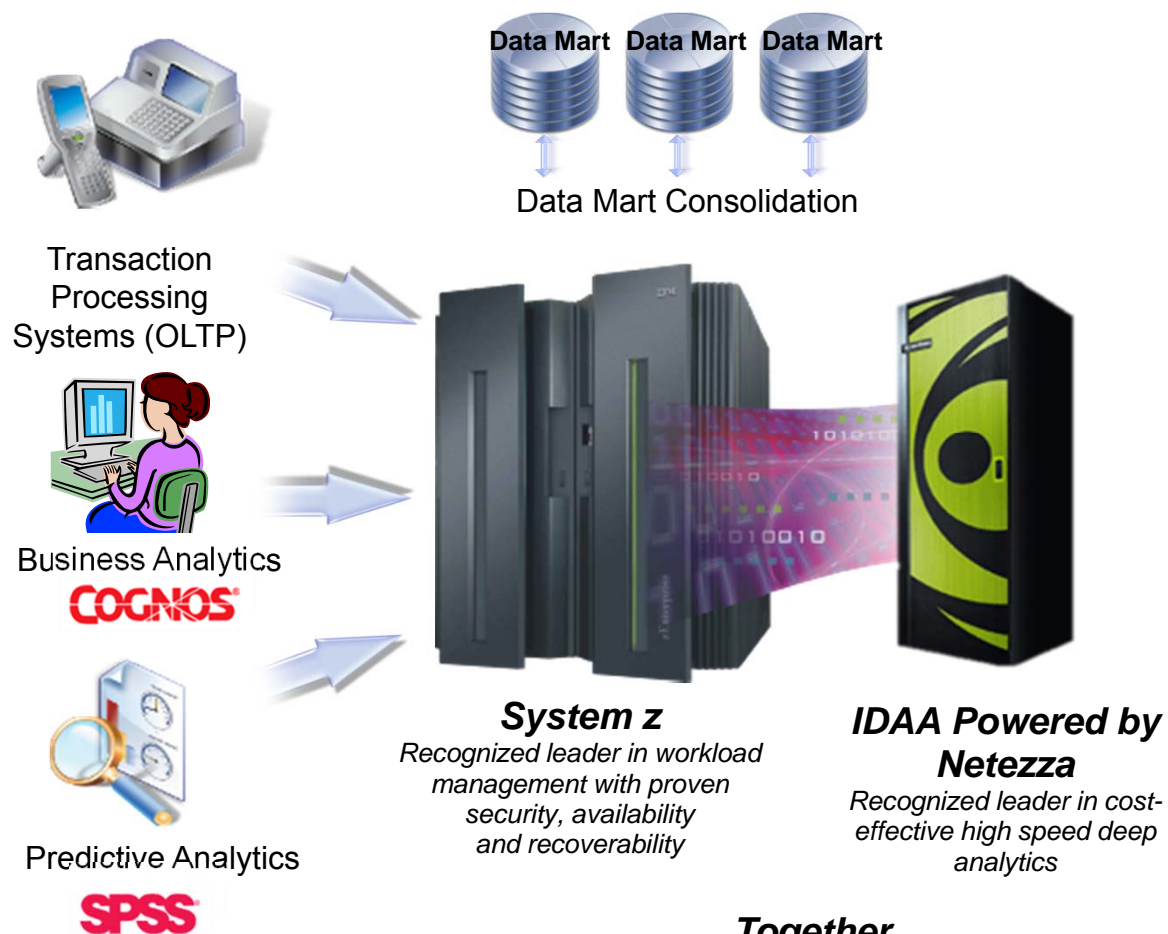
But Why not More



IBM focused on immediate returns to the business first with an eye on the bigger prize - Delivering the proven capabilities of analytics to the creative minds of our workforce

Enterprise Information Hub on a Single Integrated Platform

An industry exclusive



Best in OLTP & Transactional Solutions

Industry recognized leader for mission critical transactional systems

Best in Analytics

Industry recognized leader in Business Analytics and Data Warehousing solutions

Best in Consolidation

Unprecedented mixed workload flexibility and virtualization providing the most options for cost effective consolidation

Together

Bringing transactional & decision support workloads together on a single platform

Customer Implementations



Chartis have implemented Cognos BI to support their financial reporting environment. They installed on IFLs and were up and running rapidly. Cognos BI on zLinux is now underpinning a greater AIG service standardisation rollout.



Miami Dade use Cognos on Linux for System z to consolidate all their BI services for the county. They rapidly implemented Cognos from a distributed platform and rolled out new services and capabilities to over 3000 users. This adoption won the county a North America Technology Innovation award.

Daimler Trucks North America

Freightliner are running Cognos BI on Linux for System z in production and have just upgraded from v8 to v10. They use Cognos to provide BI services to their external business partners.



Marriott had a significant investment and in-house expertise in Cognos. The move to IBM Cognos 10 is to support three key applications: SRW Mobile Reporting, eCommerce and Consolidated Inventory. IBM Cognos 10 provides interfaces to Netezza, SPSS Modeler and IBM Connections, all used by Marriott. They will benefit by saving on redundant administrative and license costs by using a single enterprise reporting platform, including Linux on System z.



SD Worx (Belgium) are implementing Cognos on Linux for System z to scale and existing Cognos/Wintel/SQL Server app. They saw an order of magnitude reduction in the processing time for complex SQL Server powercubes



Bank of China are implementing Cognos on z/OS to front end WBI-FN applications. Also adopting a Capacity Management solution with Cognos on z/OS rather than SAS/MXG

Customer Implementations (...)

...A large Data Processing company on the US East Coast have rationalised their BI environment, consolidating servers onto the biggest IFL installation worldwide. They currently have Cognos 10.1.1 with iPad support rolled out to 30,000+ employees using data on z/OS and distributed platforms.

... private bank in Switzerland generates business-intelligence reports in less than a day and delivers business insight across its enterprise more quickly than before when it implements an enterprise data warehouse environment based on an IBM Information Management data server, IBM Cognos software and IBM Integrated Facility for Linux processors

... another leading player in energy production, electricity and the oil industry in Europe are implementing Cognos. They are a conglomerate of companies with production operations in crude oil, refining, and the distribution of the refined product to more than 4,100 service stations throughout Italy. Part of this Cognos z/Linux project consists in migrating from Business Objects on distributed systems to overall consolidation effort of their BA/BI to Cognos for Linux on System z.

A construction company in the US currently has 3 IFLs deploying HATS and in the ELA they wanted the flexibility with the Linux on z part numbers to run software on the IFLs in the future. They are currently deploying Cognos on open systems yet have a strategic direction to deploy more applications on the IFLs. Their North America ERP application is running on z/OS and the close proximity to that data through Cognos on the IFLs would enhance response time and reduce the amount of CPU overhead from moving data on and off of the mainframe today.

And finally....

Do you ever hear these types of questions ?

Do I have enough System Capacity to accommodate the new Sales launch ?

What was happening in the system last night between 4am and 6am ?

What system resources does Application X consume ?

How much capacity will I have spare next April ?

What other workloads were in the system when DB2 z/OS spiked last Tuesday ?

How many reports were run in the last 12 hours ?

What hardware resources were required to support those reports ?

What was the average time to run a report ?

What was the time taken to run all reports issued by user x ?

What were the peak reporting periods ?

What resources were consumed during the peak periods compared to the average ?

Consider 'Infrastructure Dashboarding'...

Reporting and Forecasting 'application' used by almost ALL our mainframe customers

- Many customers currently using SAS and MXG products to provide Capacity Forecasting (including our own ITD Service Delivery teams)

Core to the Management of IT infrastructure and Enterprise Service Delivery

Comprising of:

- Reporting
 - Set of reports that show the consumption of system level resources (CPU, load, DB2, CICS..., IFL, Linux, zVM)
- Forecasting
 - Trendline analysis of capacity requirements in the short term future (e.g. 10% increase next March !)
 - Most forecasting available to Capacity Planners is done using simple, straight-line linear projections that ignore daily or seasonal variations or the demand spikes that actually cause SLA violations. **Accurate forecasts available at the click of a button, with ability to drill up or drill down is not readily available to today's capacity managers.**

Key requirement in any Enterprise to ensure:

- Consistence of service delivery
- Enterprise applications have the horsepower to manage the incoming workload
- SLAs are met

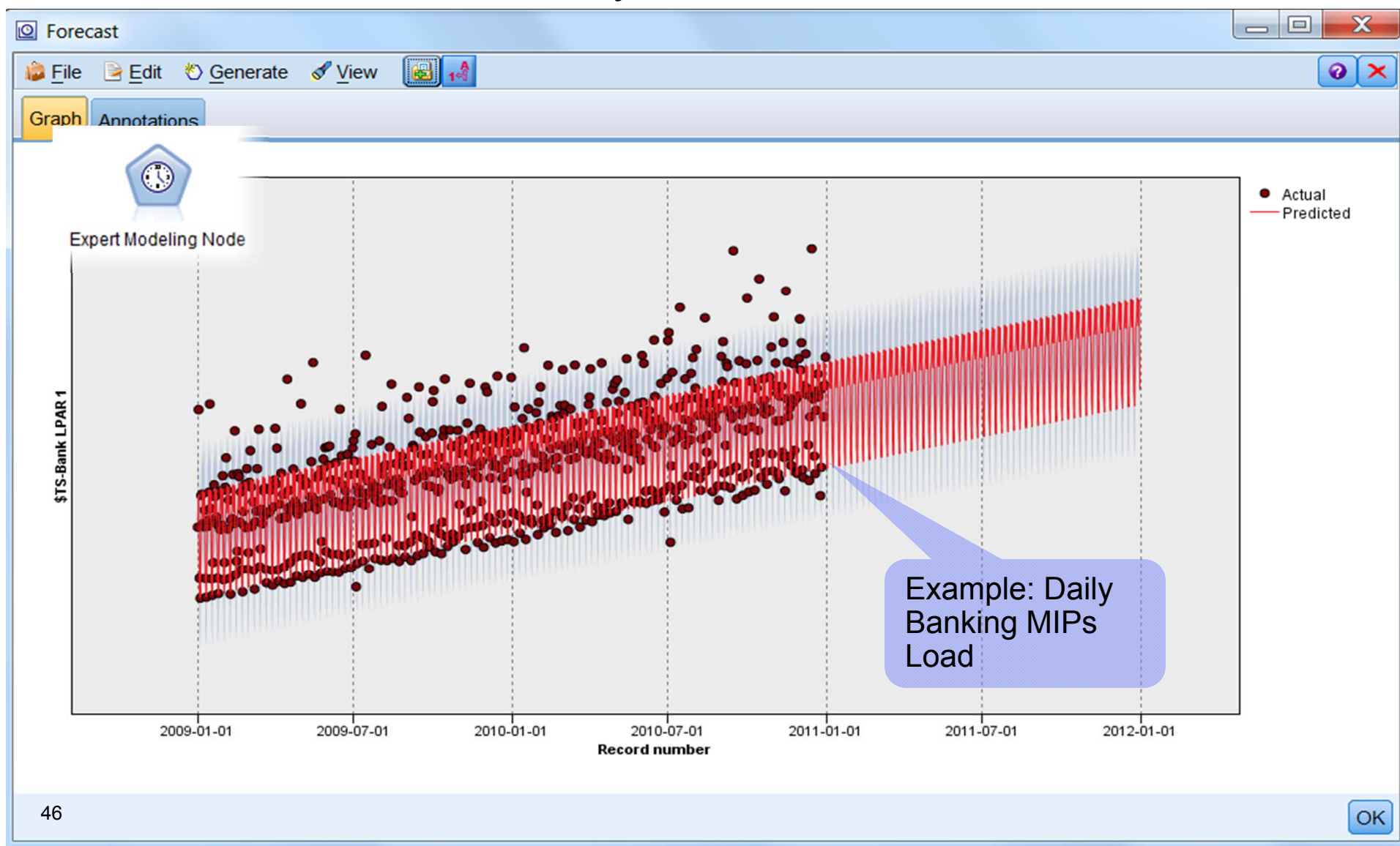
Initially a System z (Mainframe) skill but now growing across the platforms

Why is BA appropriate in this space ?

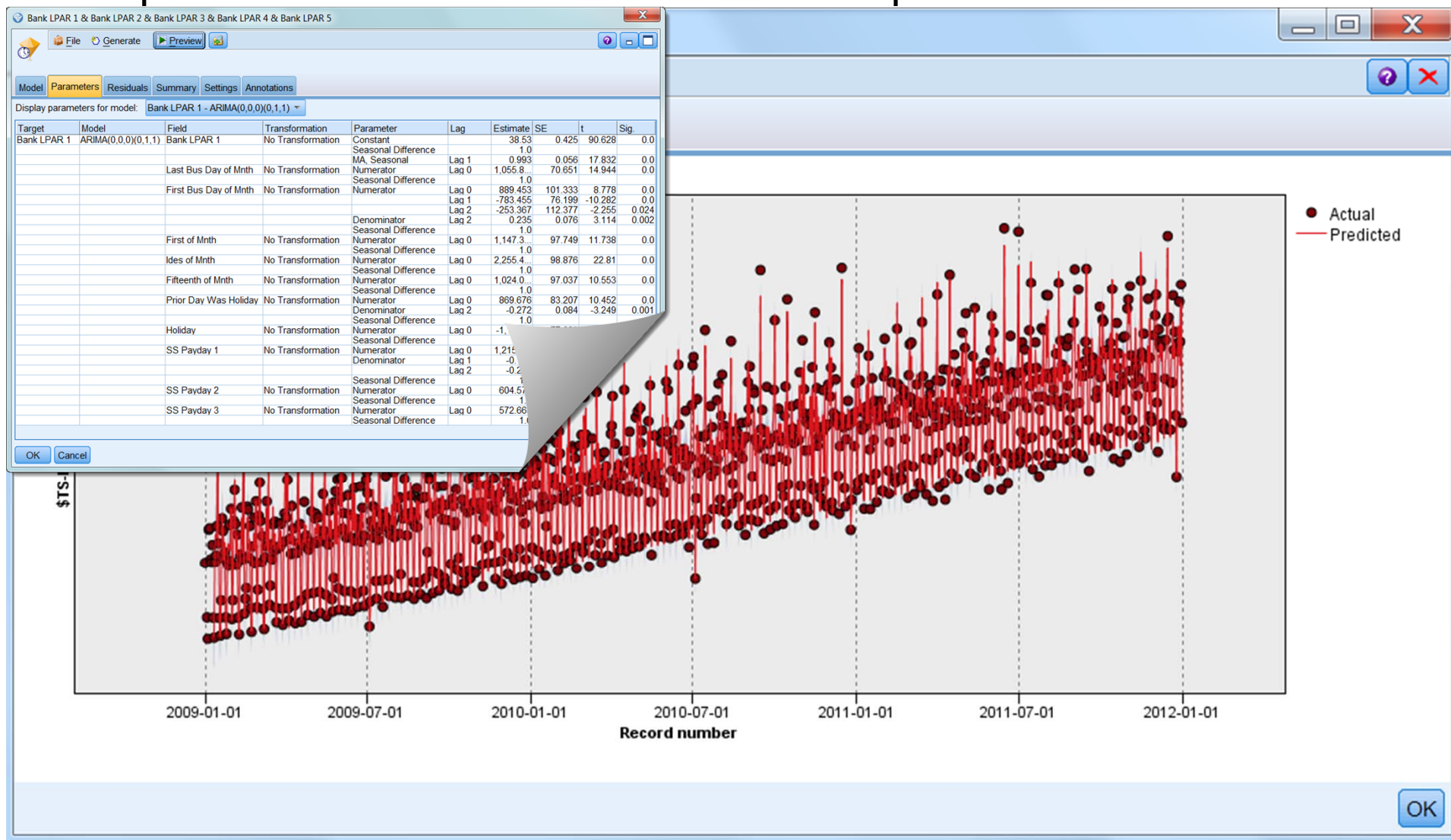
- We do Reporting and Analytics
- This is just another set of data and statistics – available in a relational format
- It's a critical reporting requirement for the IT team
- **Because we can do this better than anyone !**

Simple Models Out of the Box

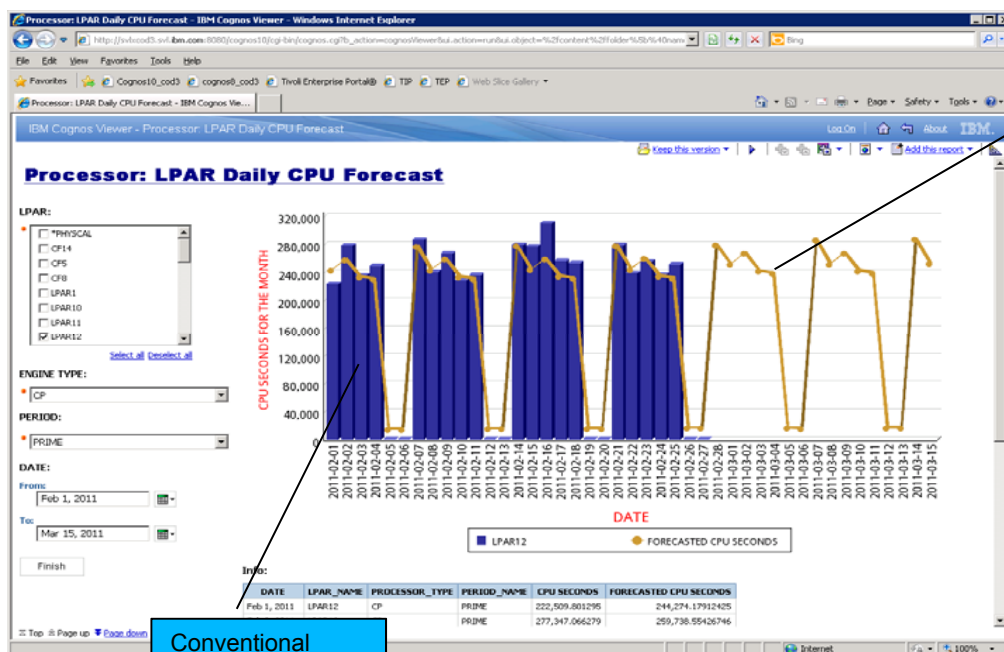
Forecast From Load Data Only – 12 Months



Compare Forecast vs. Actuals - More Complex Parameters

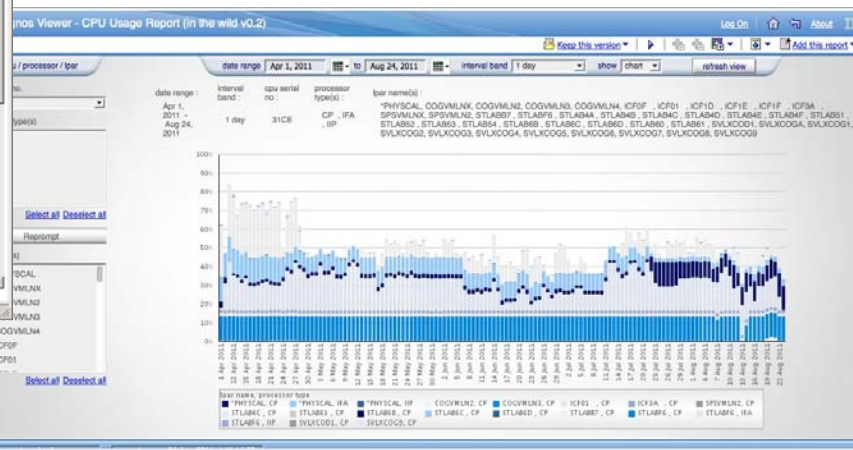


Harnessing Tivoli, Cognos and SPSS for 'Infrastructure Insight'



Integrated Forecasting

Conventional Historical Report



DATE	SYSPLX	SYSID	JOB	JOB_NUMBER	JOB_TIMESTAMP	JOB_START_TIME	JOB_END_TIME	TOTAL ELAPSED SECS	TOTAL JOB HELD SECS
Jun 15, 2011	FLX4AB	SY4E	MANSFEL1	JO802681	Jun 15, 2011 12:00:17 PM	Jun 15, 2011 12:22:01 PM	Jun 15, 2011 12:22:07 PM	1,310.57	1,298.14

THANK YOU

What about Non Structured Data ? Big Data ?

Imagine the possibilities of analyzing all available data

Faster, More Comprehensive, Less Expensive

Real-time Traffic Flow Optimization



Fraud & risk detection



Understand and act on customer sentiment



Accurate and timely threat detection



Predict and act on intent to purchase



Low-latency network analysis



What can you do

Act on Deeper Customer Insight

- Social media customer sentiment analysis
- Promotion optimization
- Segmentation
- Customer profitability
- Click-stream analysis
- CDR processing
- Multi-channel interaction analysis
- Loyalty program analytics
- Churn prediction



Create Innovative New Products

- Social Media - Product/brand Sentiment analysis
- Brand strategy
- Market analysis
- RFID tracking & analysis
- Transaction analysis to create insight-based product/service offerings



Optimize your Operational Processes

- Smart Grid/meter management
- Distribution load forecasting
- Sales reporting
- Inventory & merchandising optimization
- Options trading
- ICU patient monitoring
- Disease surveillance
- Transportation network optimization
- Store performance
- Environmental analysis
- Experimental research



Proactively Maintain your Assets

- Network analytics
- Asset management and predictive issue resolution
- Website analytics
- IT log analysis



Prevent Fraud and Reduce Risk

- Multimodal surveillance
- Cyber security
- Fraud modeling & detection
- Risk modeling & management
- Regulatory reporting

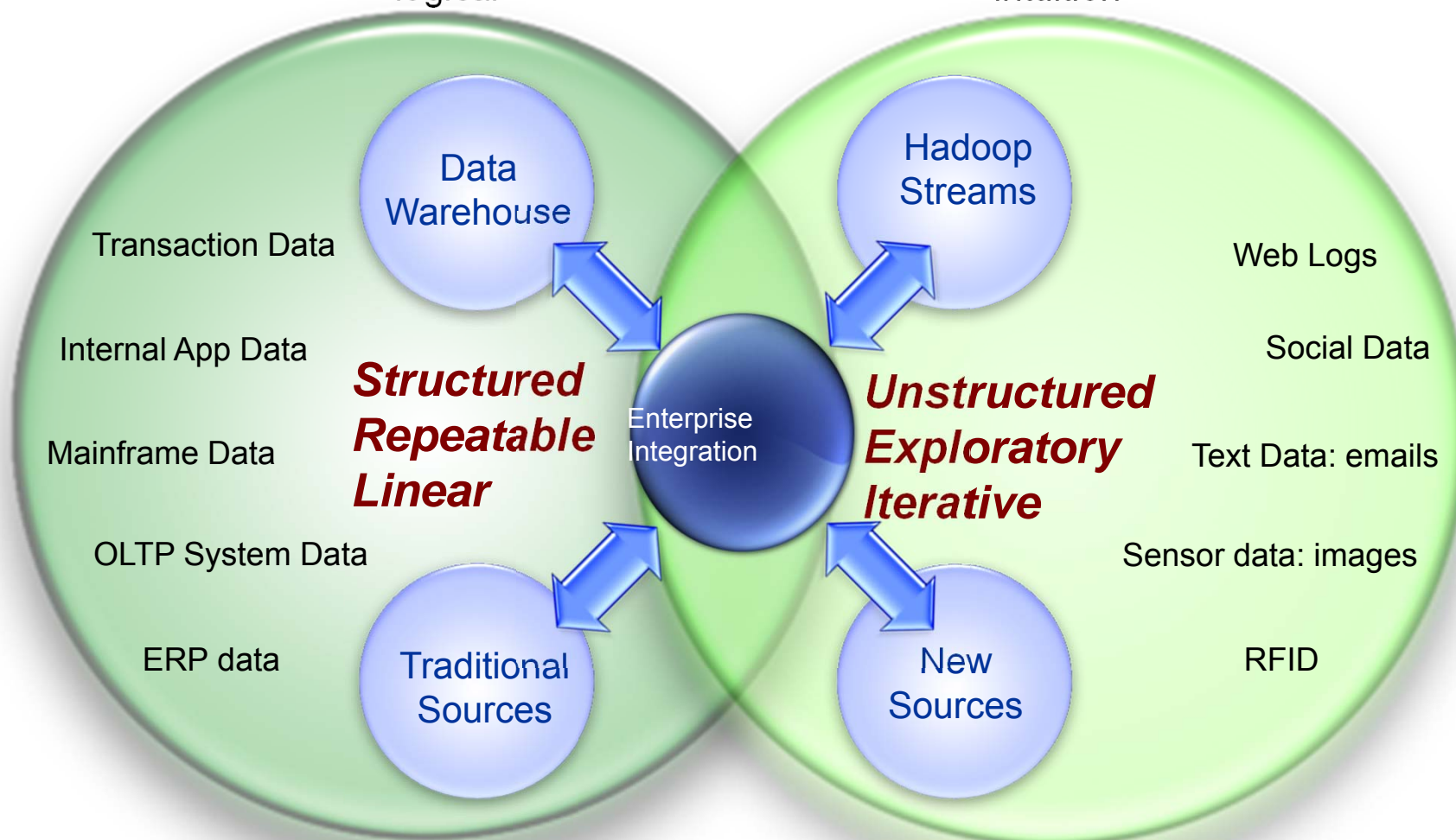
Complementary approaches for different use cases

Traditional Approach

Structured, analytical,
logical

New Approach

Creative, holistic thought,
intuition



Pains addressed by a Big Data platform



High cost of storing and analyzing data combined with data growing volumes

Cost and performance of enterprise data warehouse - single DW cannot meet everyone's needs

Inability to exploit new sources of data – need to explore, prove value, and extract it cost effectively

Loss of fidelity and huge time/cost to convert unstructured data (video, audio, textual content) to structured format for analysis

Inability to act and high cost of acting on data in real-time leads to lost opportunities

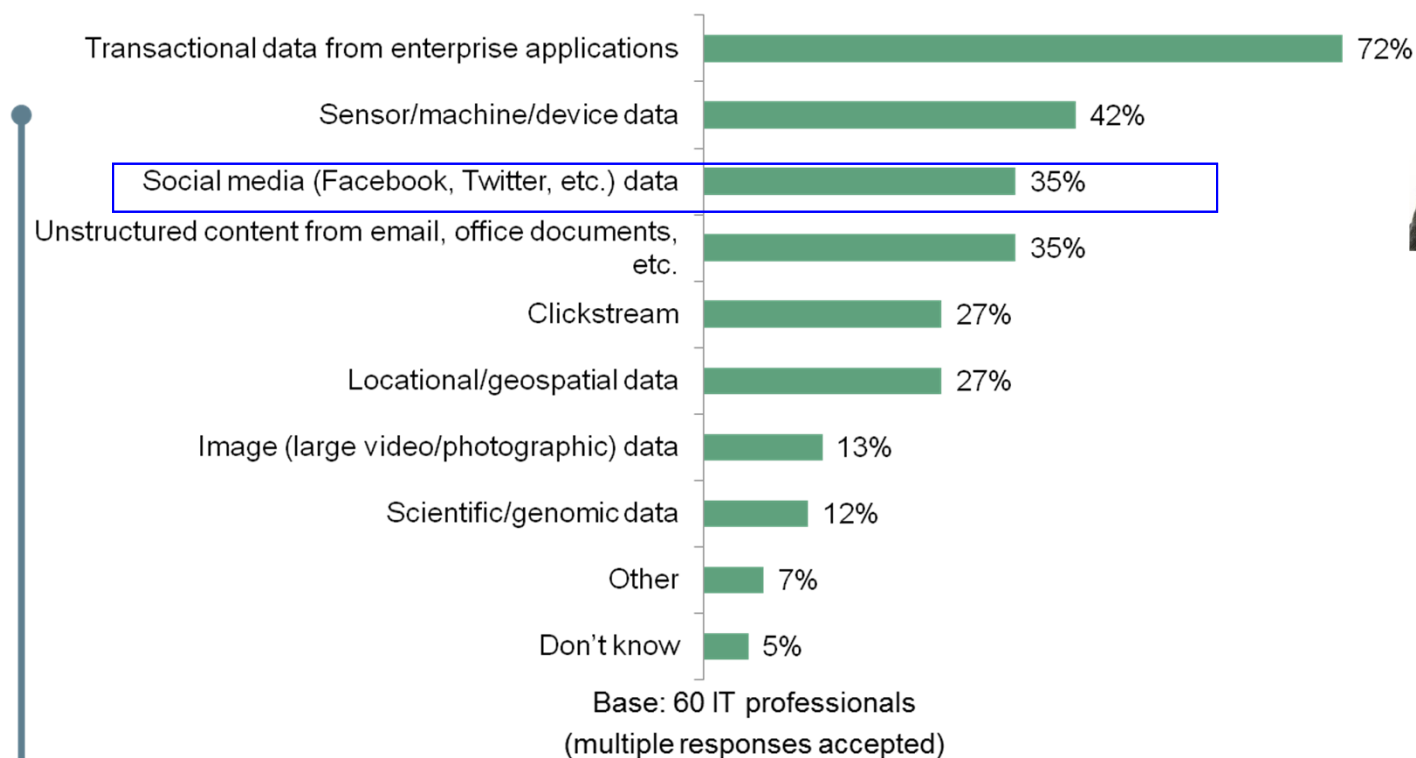
High cost to maintain data online when it could exist in an online archive – query-able archive

Where to start - reality check...

What data can you manage / analyze today?

Big data: across diverse subject domains

“What types of data/records are you planning to analyze using big data technologies?”

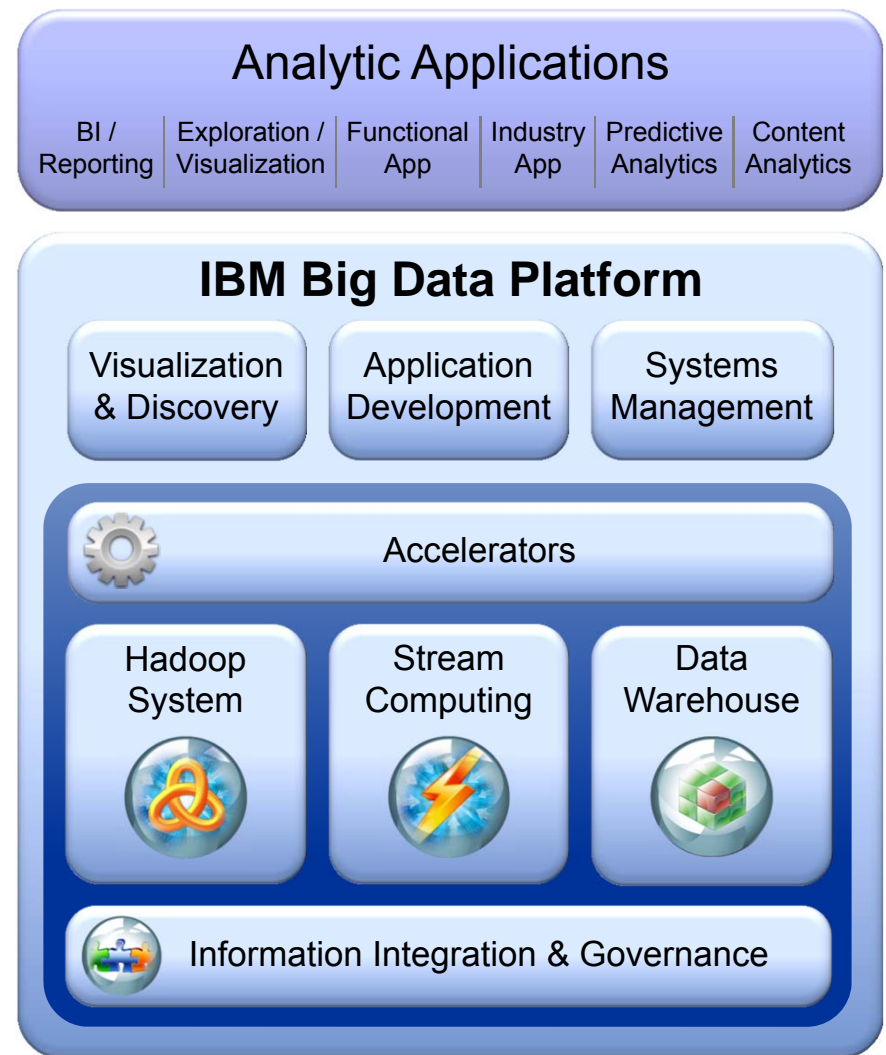


Most big data use cases hype its application for analysis of new, raw data from social media, sensors, and web traffic, but we found that firms are being very practical, with early adopters using it to operate on enterprise data they already have.

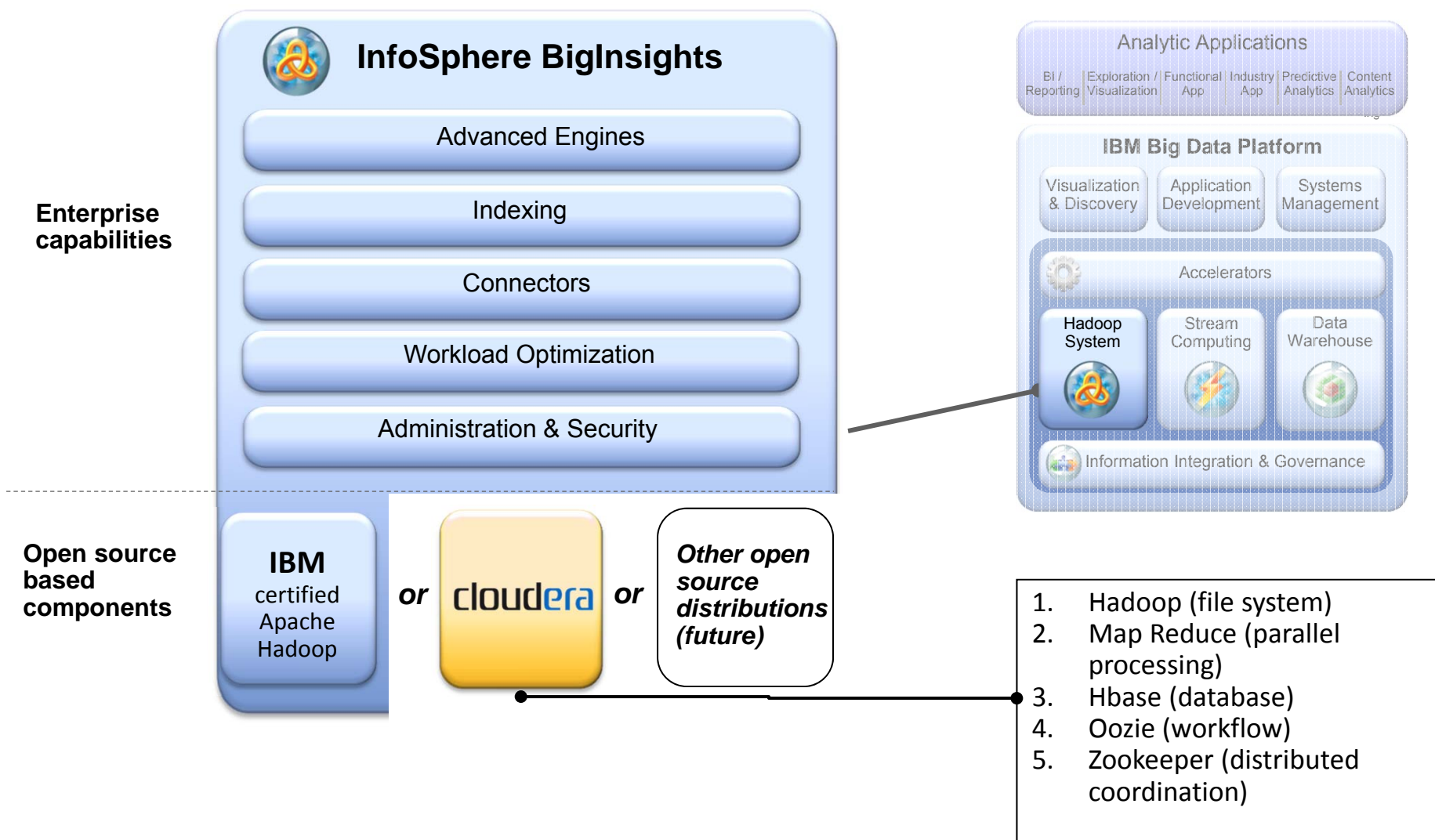
IBM Big Data strategy: *move the analytics closer to the data*

New analytic applications drive the requirements for a big data platform

- Integrate and manage the full variety, velocity and volume of data
- Apply advanced analytics to information in its native form
- Visualize all available data for ad-hoc analysis
- Development environment for building new analytic applications
- Workload optimization and scheduling
- Security and Governance

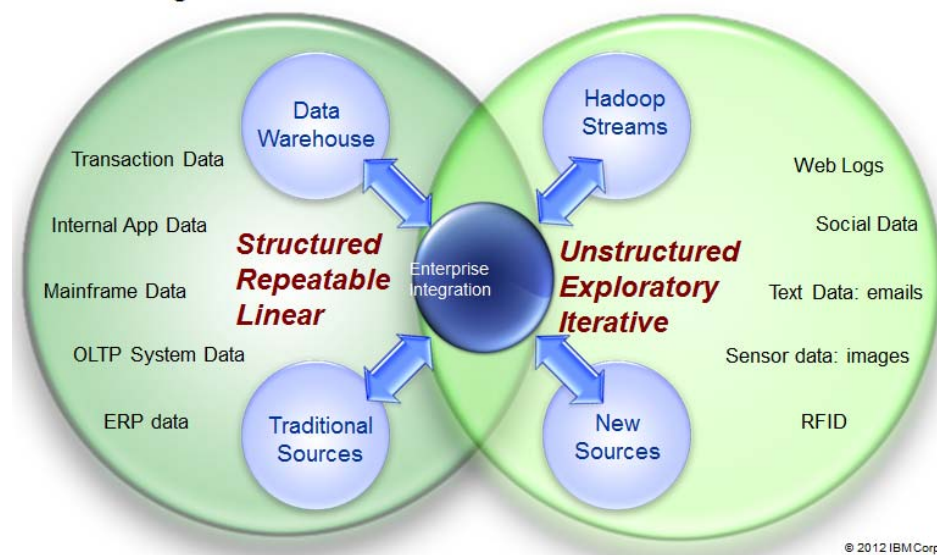


IBM's Big Data platform will support open source distributions



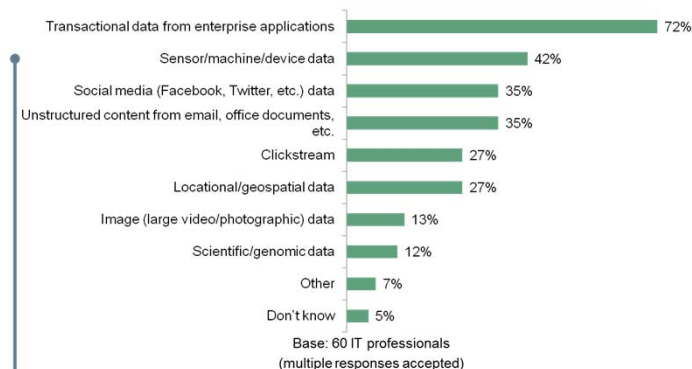
The data challenge for business analytics development in IBM

- How to effectively transition from 'traditional' data sources to embrace the new formats?
- Can it be done efficiently or will it alter the basic design points of the solution?
- Which data sources are most critical to embrace today per our customer feedback?



Big data: across diverse subject domains

“What types of data/records are you planning to analyze using big data technologies?”



! Most big data use cases hype its application for analysis of new, raw data from social media, sensors, and web traffic, but we found that firms are being very practical, with early adopters using it to operate on enterprise data they already have.

Source: June 2011 Global IT Online Survey

August 2012

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IBM Business Analytics for Big Data

IBM Big Data Business Analytics portfolio

- **IBM Cognos for Linux on z/OS ***
 - **IBM Cognos for z/OS ***
 - **IBM Query Management Facility ***
 - IBM BigInsights
 - **IBM SPSS ***
 - IBM iLog
 - InfoSphere Streams
 - IBM Vivisimo
 - **IBM Collaboration and Mobile solutions (part of the Lotus brand) ***
- * These are my domain and I will cover today**



BA product Suite will be supported with a set of solutions that run on System z as well as in a hybrid environment to support:

- Structured data analysis
- Semi-structured data analysis (e.g. Lotus Notes applications)
- Unstructured data (emails, video, and more)
- Business analysis information delivery to a wide range of devices (e.g. PCs, Laptops, iPads, and other mobile devices)

Purpose: to apply modern BA solutions to the many data formats and sources within the Big Data infrastructure. An evolutionary process as not all tools support all data formats/sources within the Big data initiative.

