IBM InfoSphere™ Solutions for System z

Karen Durward
product manager
IBM
kdurward@us.ibm.com

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IBM InfoSphere™ Solutions for System z

Leverage the unique characteristics of z/OS and Linux on System z to create, manage and deliver trusted information throughout the enterprise. This session will introduce you to IBM's InfoSphere System z solutions including Foundation Tools, Information Server, MDM Server, Warehouse and more. This session will present ways to:

- Deliver better business intelligence, faster
- Create a single view of the business
- Consolidate application infrastructure
- Discover, model and map information
- Prevent fraud with identity analysis
- Trace the movement of information

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Agenda

- The Business Information Challenge
- IBM InfoSphere Solutions for System z
  - InfoSphere Information Server
  - InfoSphere Foundation Tools and Models
  - InfoSphere Warehouse for System z
  - InfoSphere Master Data Management
- Why System z?
- Wrap-up and Additional Q&A

The world is changing and becoming more…

- **Instrumented**
- **Interconnected**
- **Intelligent**

The resulting explosion of information creates a need for a new kind of intelligence

… to help build a Smarter Planet

With this change comes an explosion in information …

Volume of Digital Data

Variety of Information

Velocity of Decision Making

… Yet organizations are operating with blind spots

Lack of Insight

1 in 3 managers frequently make critical decisions without the information they need

Inefficient Access

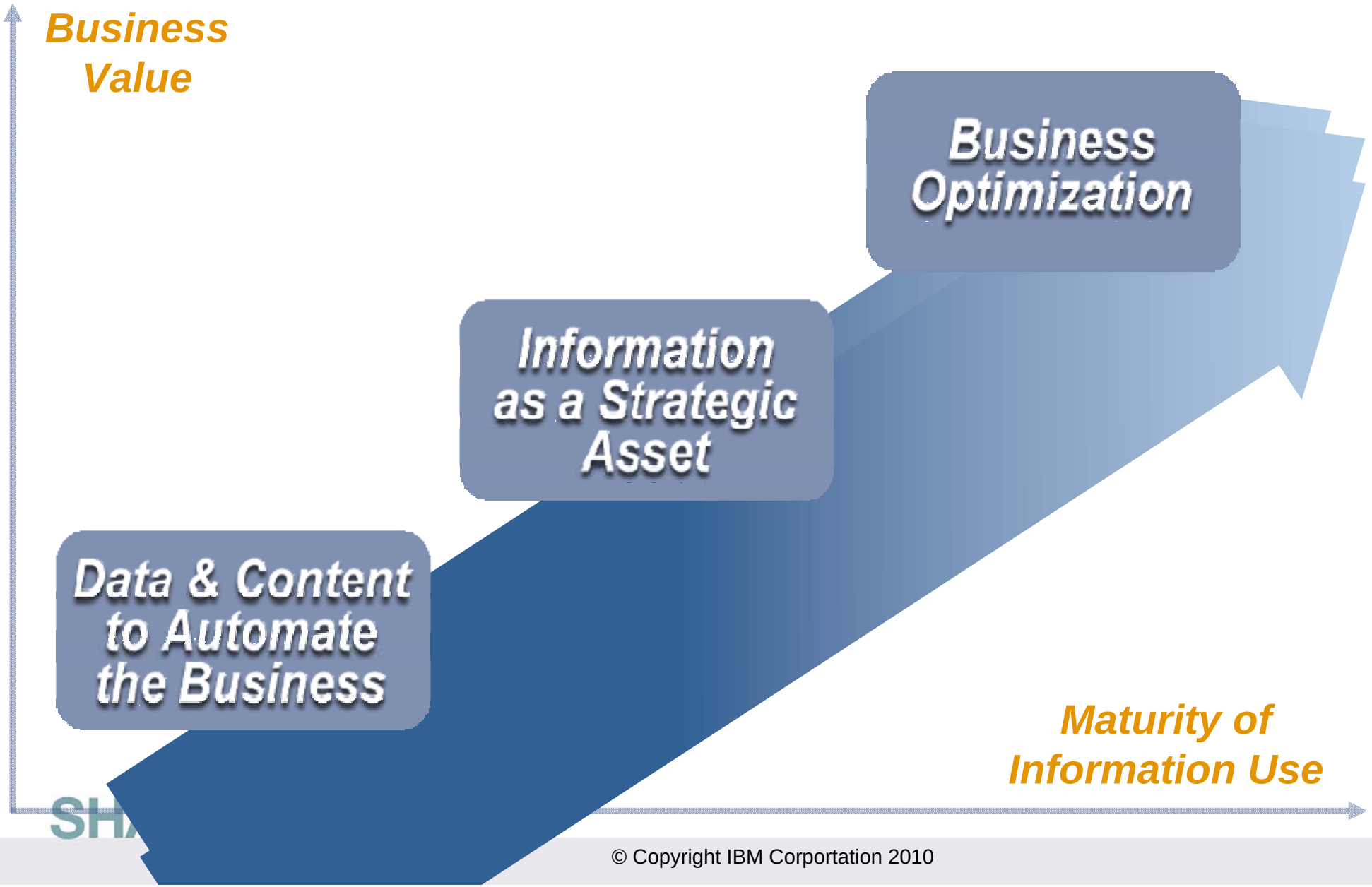
1 in 2 don't have access to the information across their organization needed to do their jobs

Inability to Predict

3 in 4 business leaders say more predictive information would drive better decisions

Source: IBM Institute for Business Value

Trusted Information at the Core of Business Optimization



Leveraging information for business optimization

Information-Led Transformation

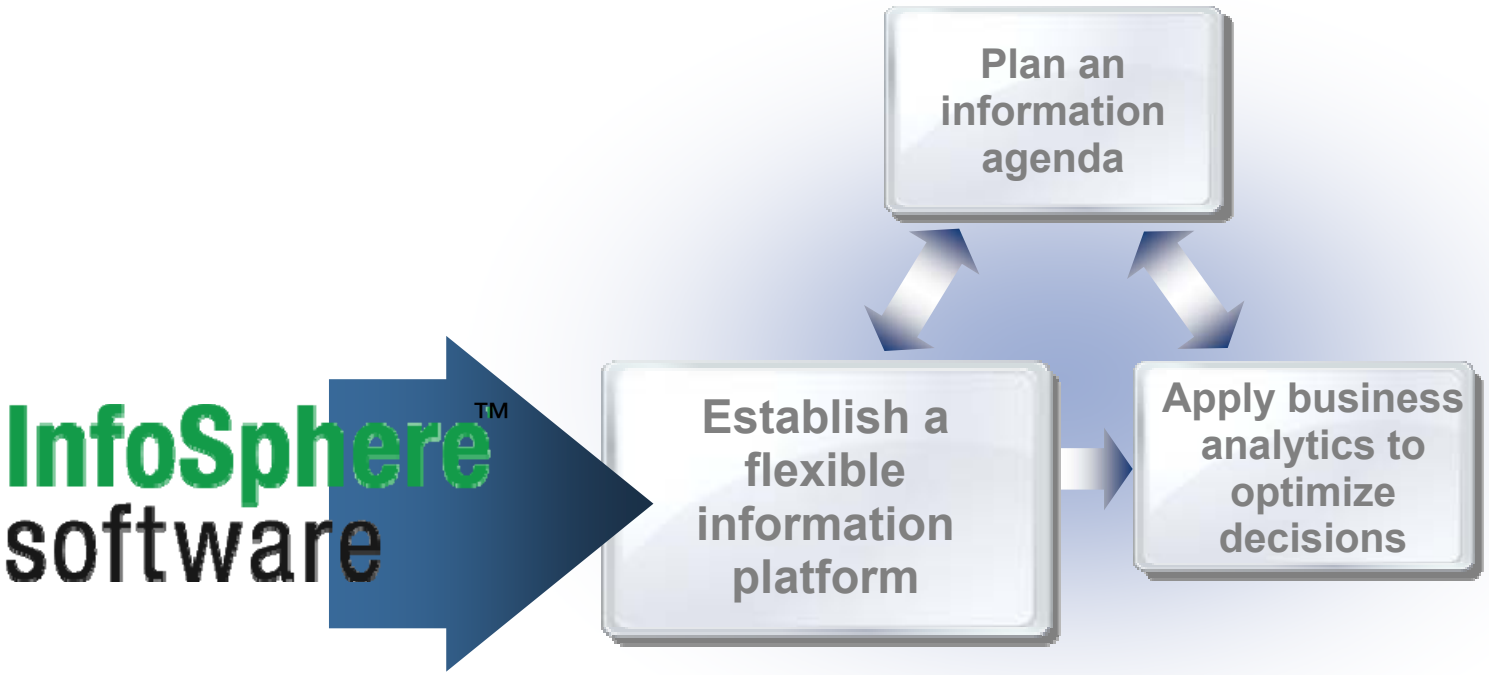
InfoSphere™ software

Industry over-performers are 8 times more likely to pursue information-led transformation at an enterprise level than under-performers*

*Source: IBM Institute for Business Value

Leveraging information for business optimization

Information-Led Transformation



Create a single, trusted view of information across the organization managed over a strategic period

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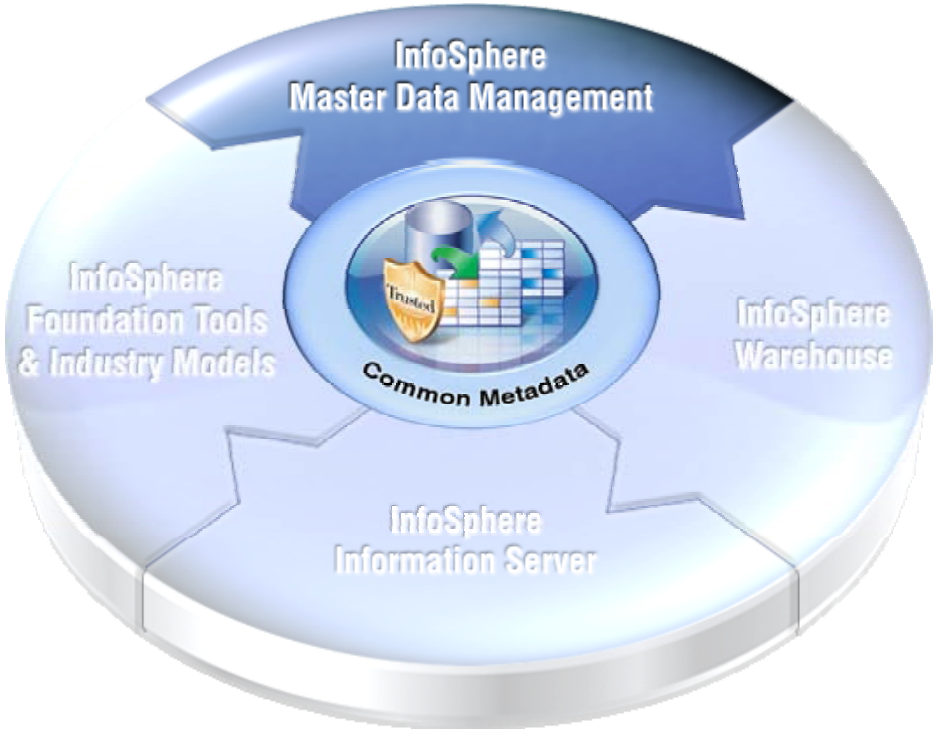
Trusted Information Across The Enterprise
A Range Of Capabilities Are Needed

Get a single view of your business …
with Trusted Information

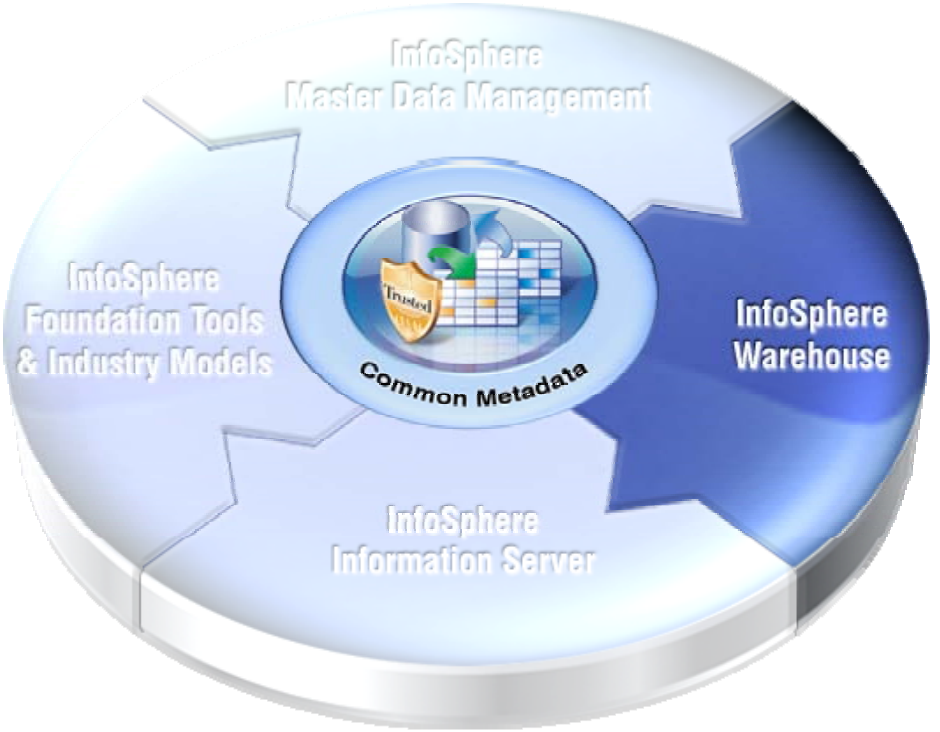
- Meets Business Needs
  - Addresses multiple data domains
    - Customer
    - Product
    - Location
  - Functionality across the full spectrum of use cases
- Flexible Deployment
  - MDM functionality supported with
    - User Interfaces
    - Workflow
    - Business Services
  - Scales as MDM needs evolve



Trusted Information Across The Enterprise
A Range Of Capabilities Are Needed

Deliver better business intelligence faster
… with Trusted Information

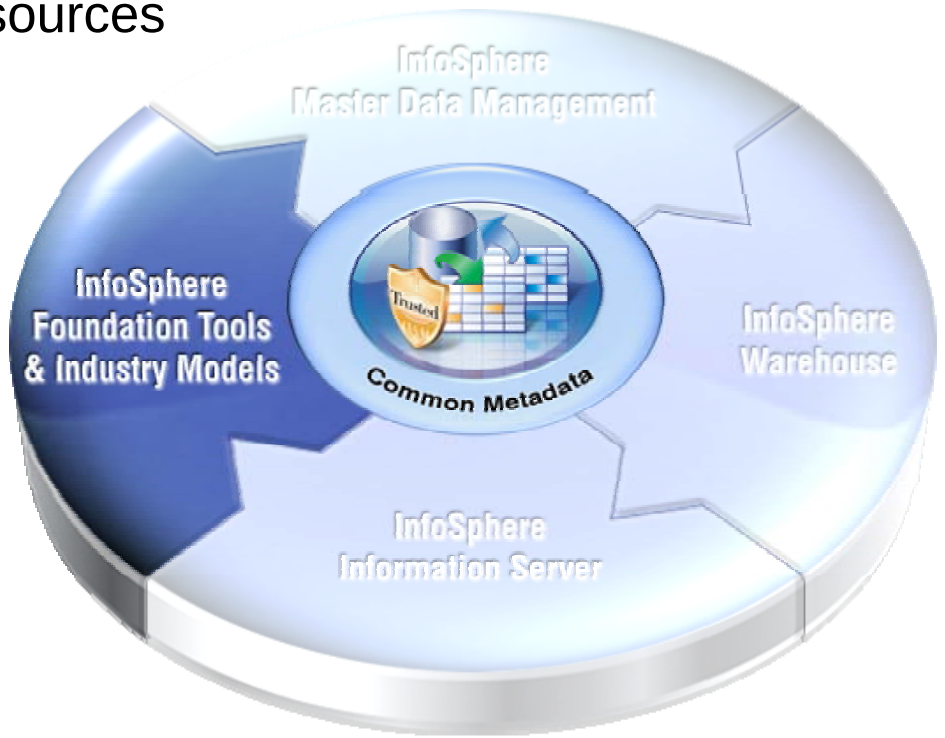
- Unified, powerful data warehouse foundation
  - Advanced partitioning
  - Data mining
  - Retention
  - Cubing features
- Flexible environment
  - Optimized performance for operational and transactional use
  - As big or as small as you need



Trusted Information Across The Enterprise
A Range Of Capabilities Are Needed

Discover, design and govern your data …
for Trusted Information

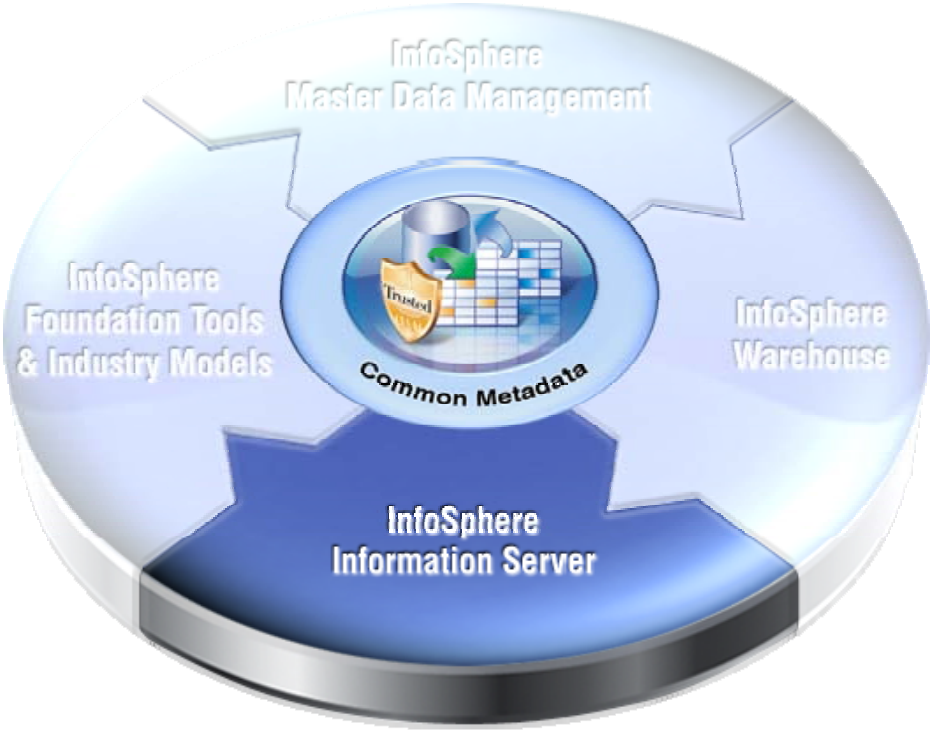
- Enhance business & IT collaboration
- Create, manage and share an enterprise vocabulary
- Gain a true understanding of your data sources
- Ensure information stays trusted across the enterprise



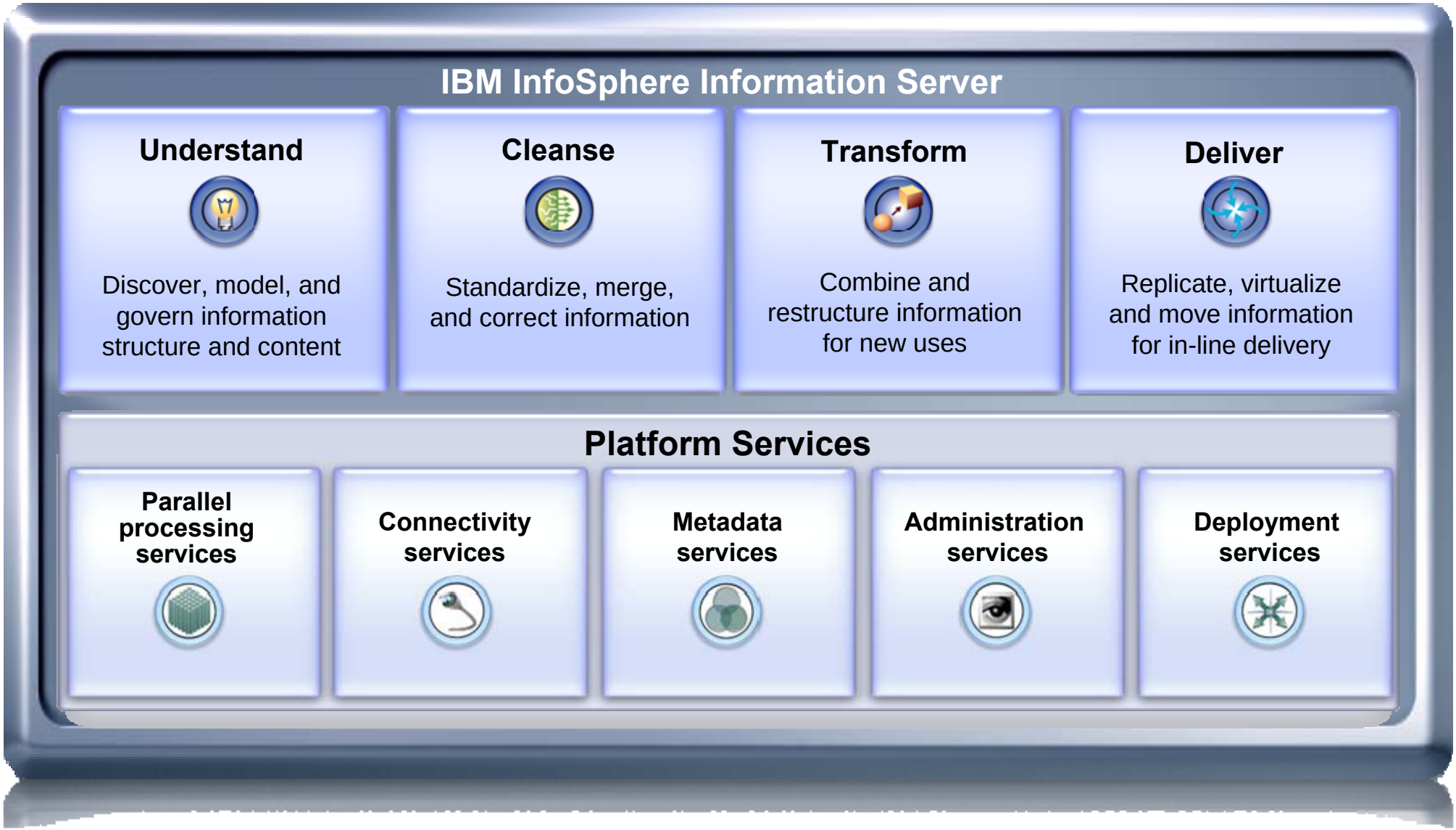
Trusted Information Across The Enterprise
A Range Of Capabilities Are Needed

Simplify the complexity of information integration
… with Trusted Information

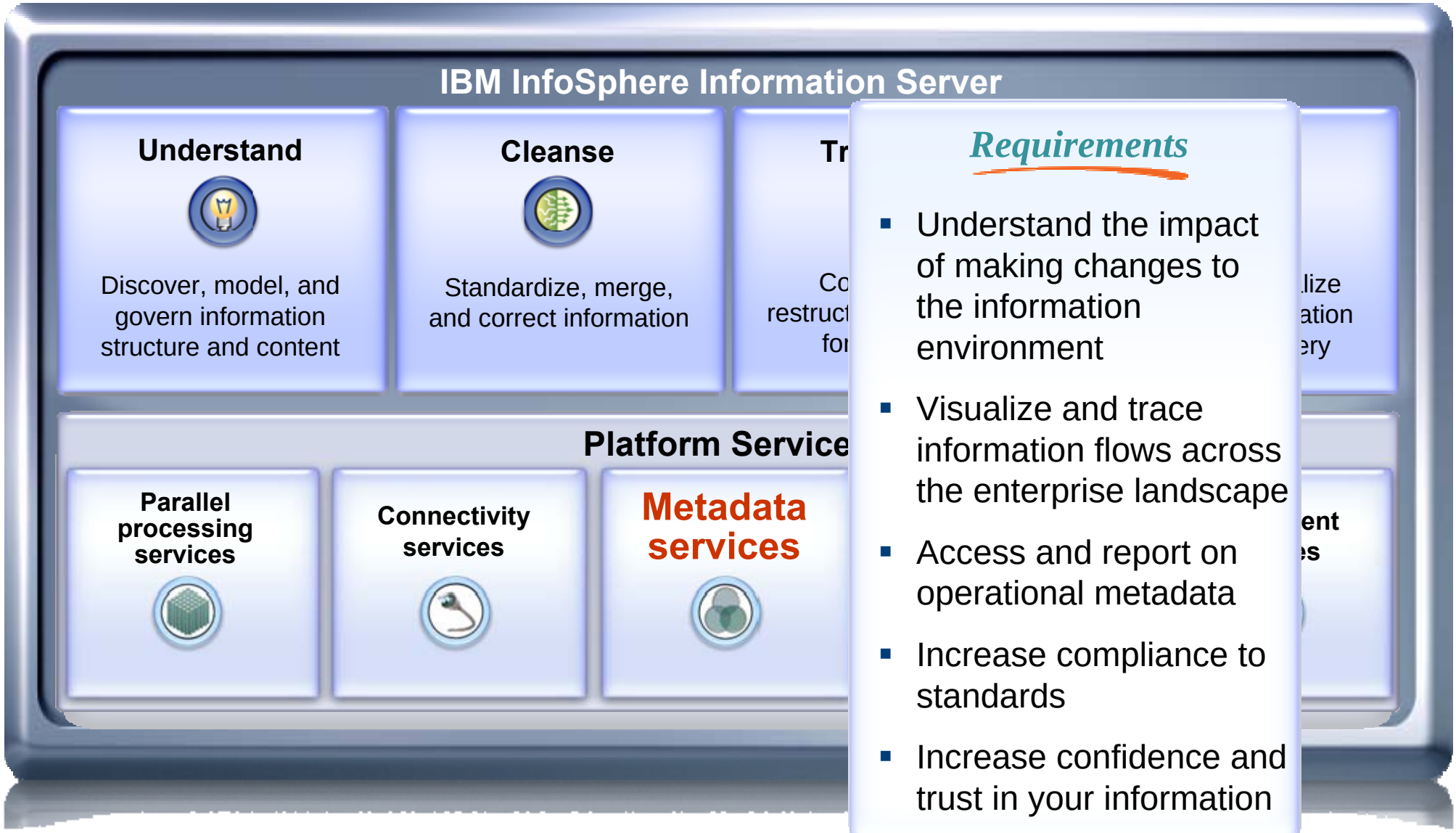
- Accelerate data integration projects
  - Metadata-driven design
  - Business - IT alignment
- Leverage Existing Resources
  - Broad native connectivity
- Architect for Growth
  - Massive scalability
  - Parallel processing
  - Diverse deployment models
    - Traditional batch
    - Service oriented environments
    - Scheduled and dynamic real time



InfoSphere Information Server



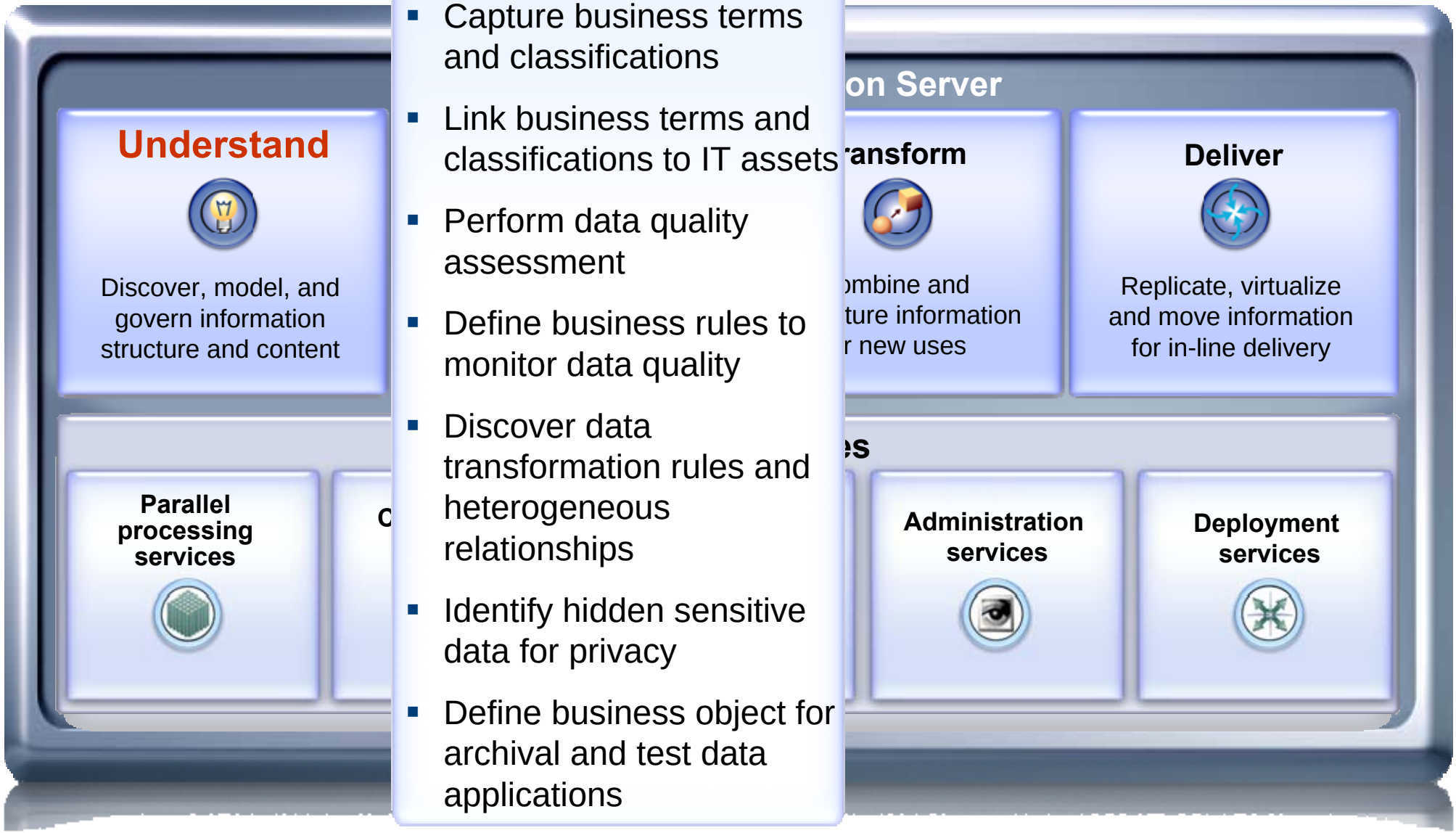
InfoSphere Information Server & Foundation Tools



Requirements

- Understand the impact of making changes to the information environment
- Visualize and trace information flows across the enterprise landscape
- Access and report on operational metadata
- Increase compliance to standards
- Increase confidence and trust in your information

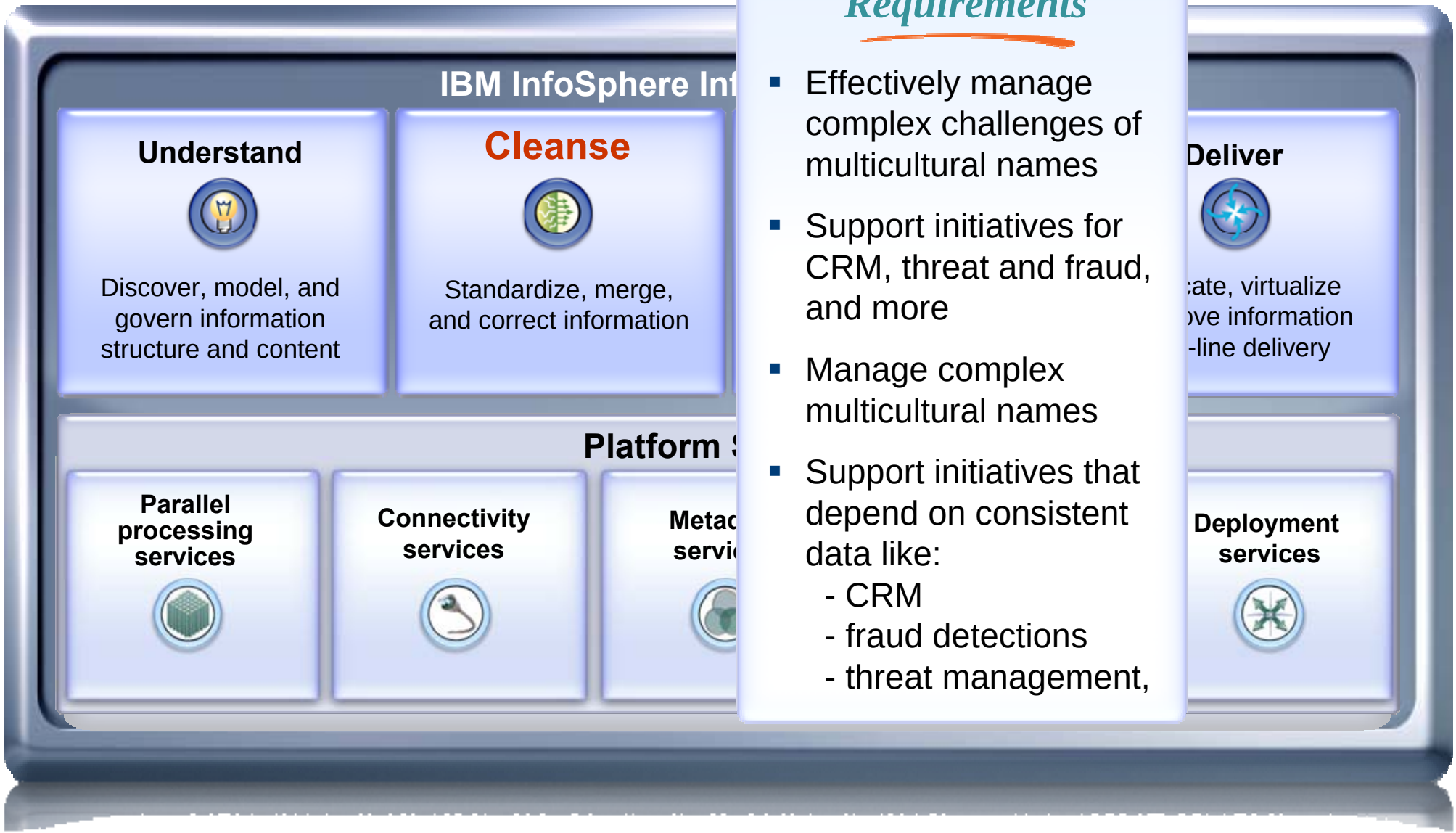
InfoSphere Information Server & Foundation Tools



Requirements

- Capture business terms and classifications
- Link business terms and classifications to IT assets
- Perform data quality assessment
- Define business rules to monitor data quality
- Discover data transformation rules and heterogeneous relationships
- Identify hidden sensitive data for privacy
- Define business object for archival and test data applications

InfoSphere Information Server & Foundation Tools



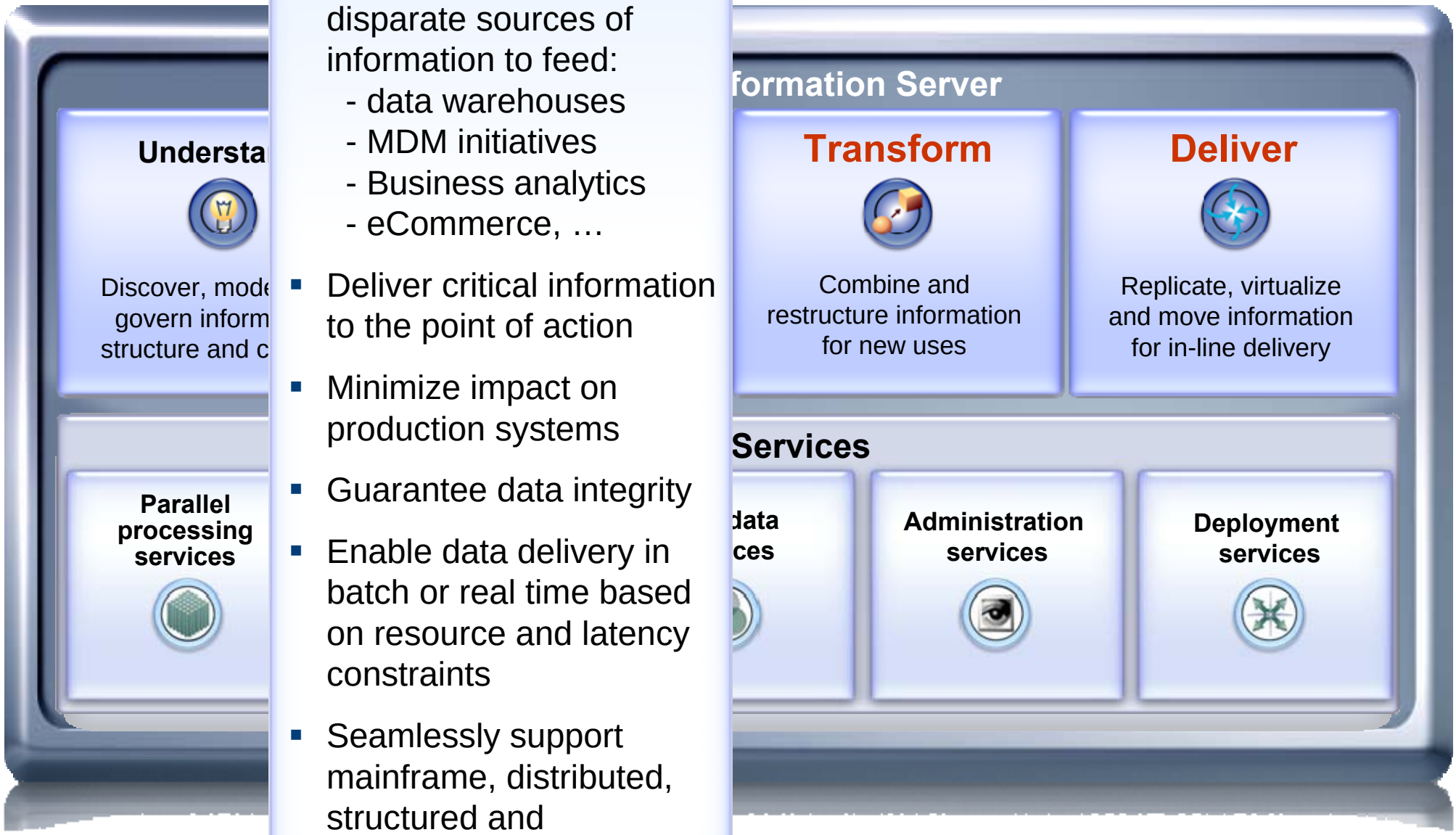
Requirements

- Effectively manage complex challenges of multicultural names
- Support initiatives for CRM, threat and fraud, and more
- Manage complex multicultural names
- Support initiatives that depend on consistent data like:
  - CRM
  - fraud detections
  - threat management,

InfoSpher ver & Foundation Tools

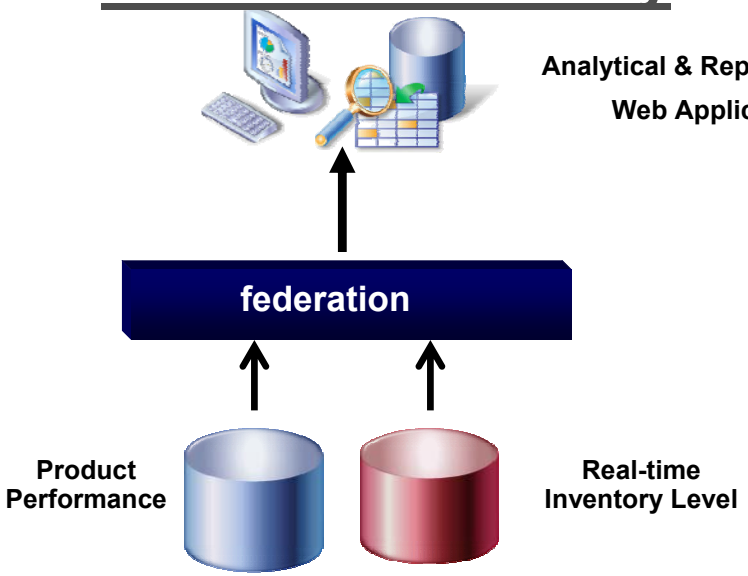
Requirements

- Integrate and transform multiple, complex, and disparate sources of information to feed:
  - data warehouses
  - MDM initiatives
  - Business analytics
  - eCommerce, …
- Deliver critical information to the point of action
- Minimize impact on production systems
- Guarantee data integrity
- Enable data delivery in batch or real time based on resource and latency constraints
- Seamlessly support mainframe, distributed, structured and unstructured data sources

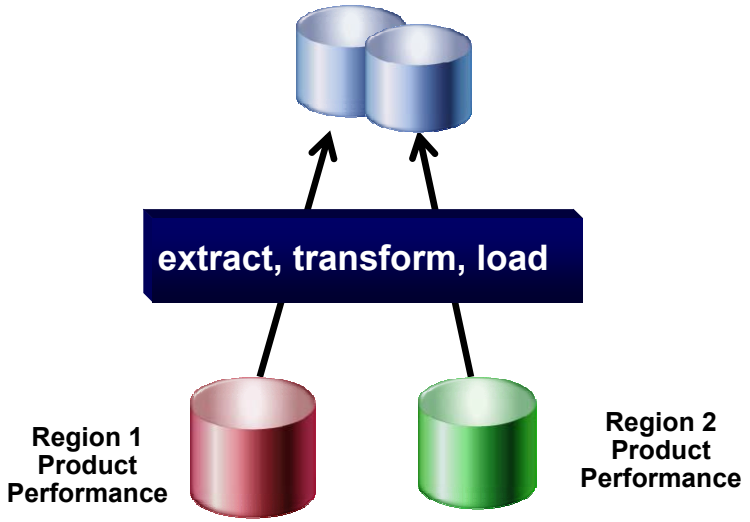


Multiple Data Delivery Methods for Enterprise Needs

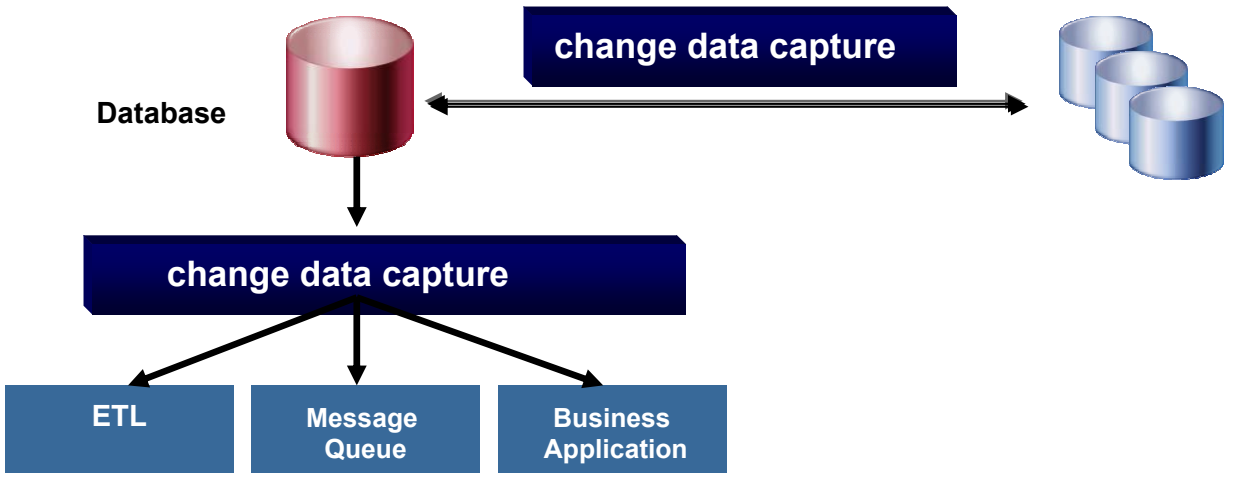
Virtual Data Delivery



Bulk Data Delivery

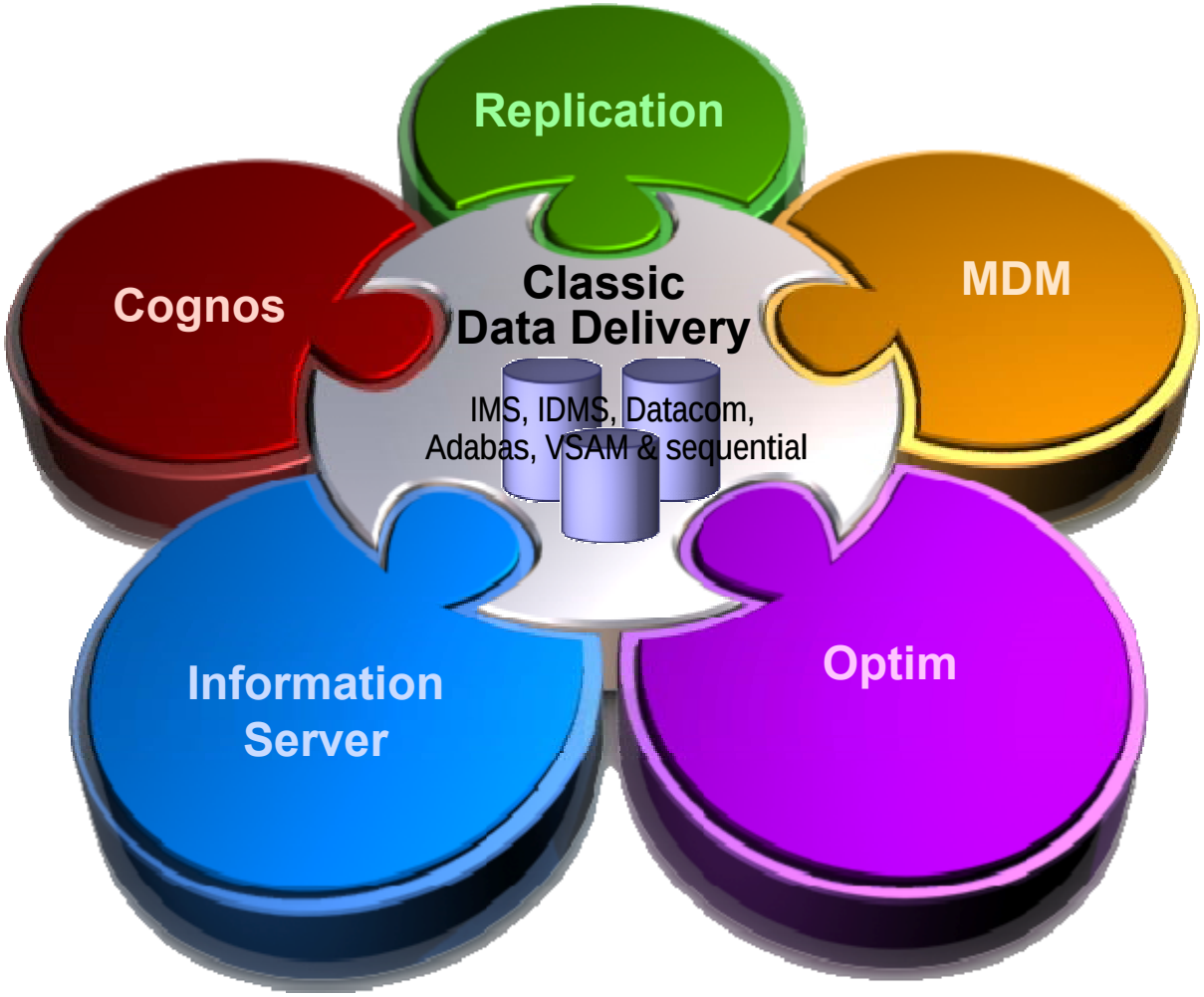


Incremental Data Delivery



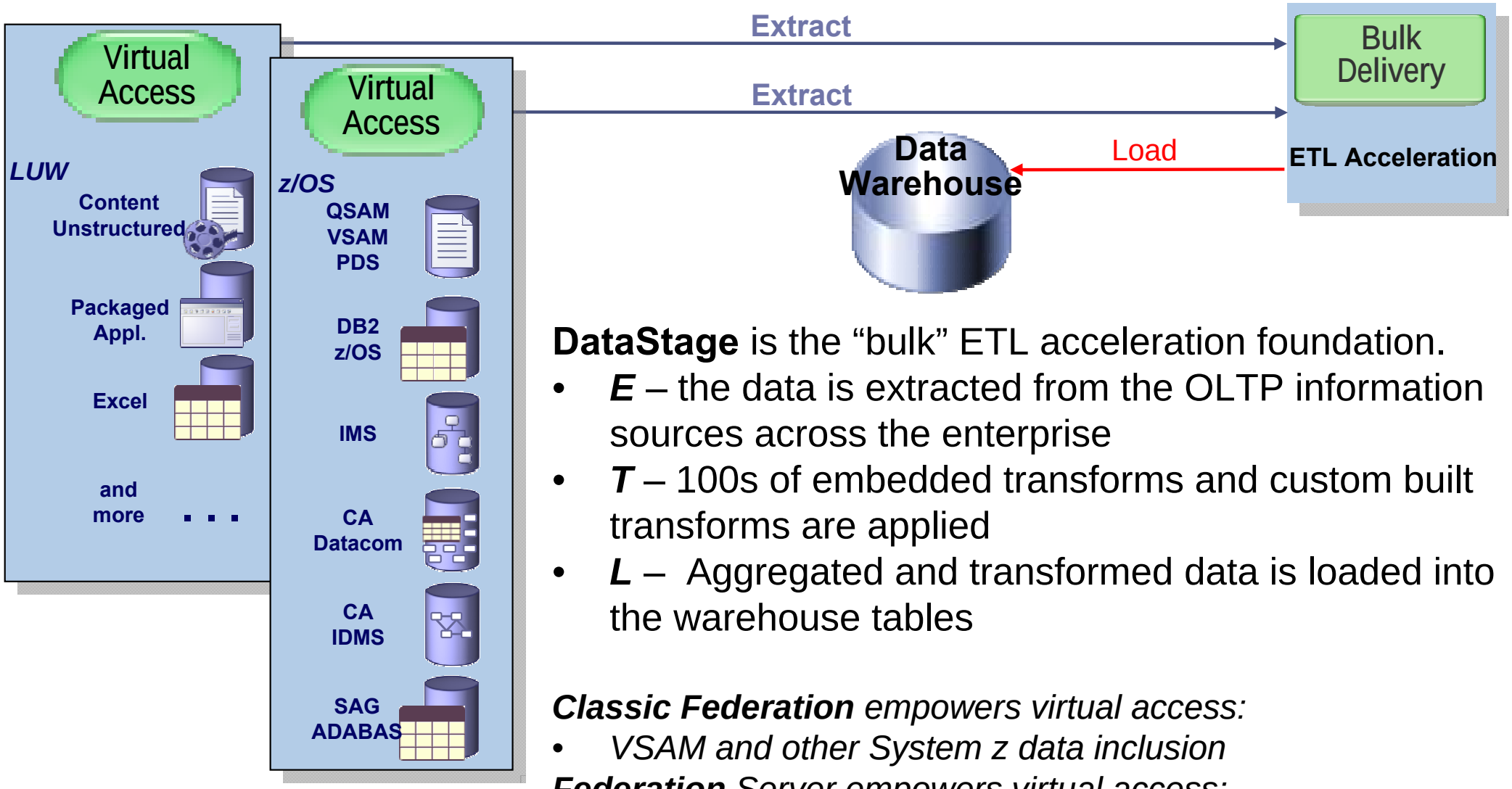
Classic Data Delivery for z/OS Data Sources

- Virtual, Bulk and Incremental z/OS data integration with enterprise information initiatives
  - Business Intelligence
  - Master Data Management
  - Data Warehousing
  - Data Archiving & Privacy
  - Cross silo synchronization



Bringing Multiple Techniques Together …

Managing a "real time" dynamic data warehouse



DataStage is the "bulk" ETL acceleration foundation.

- ***E*** – the data is extracted from the OLTP information sources across the enterprise
- ***T*** – 100s of embedded transforms and custom built transforms are applied
- ***L*** – Aggregated and transformed data is loaded into the warehouse tables

Classic Federation *empowers virtual access:*

- *VSAM and other System z data inclusion*

Federation *Server empowers virtual access:*

- *DataStage reach beyond "connectors" & plug-ins*

Bringing Multiple Techniques Together …

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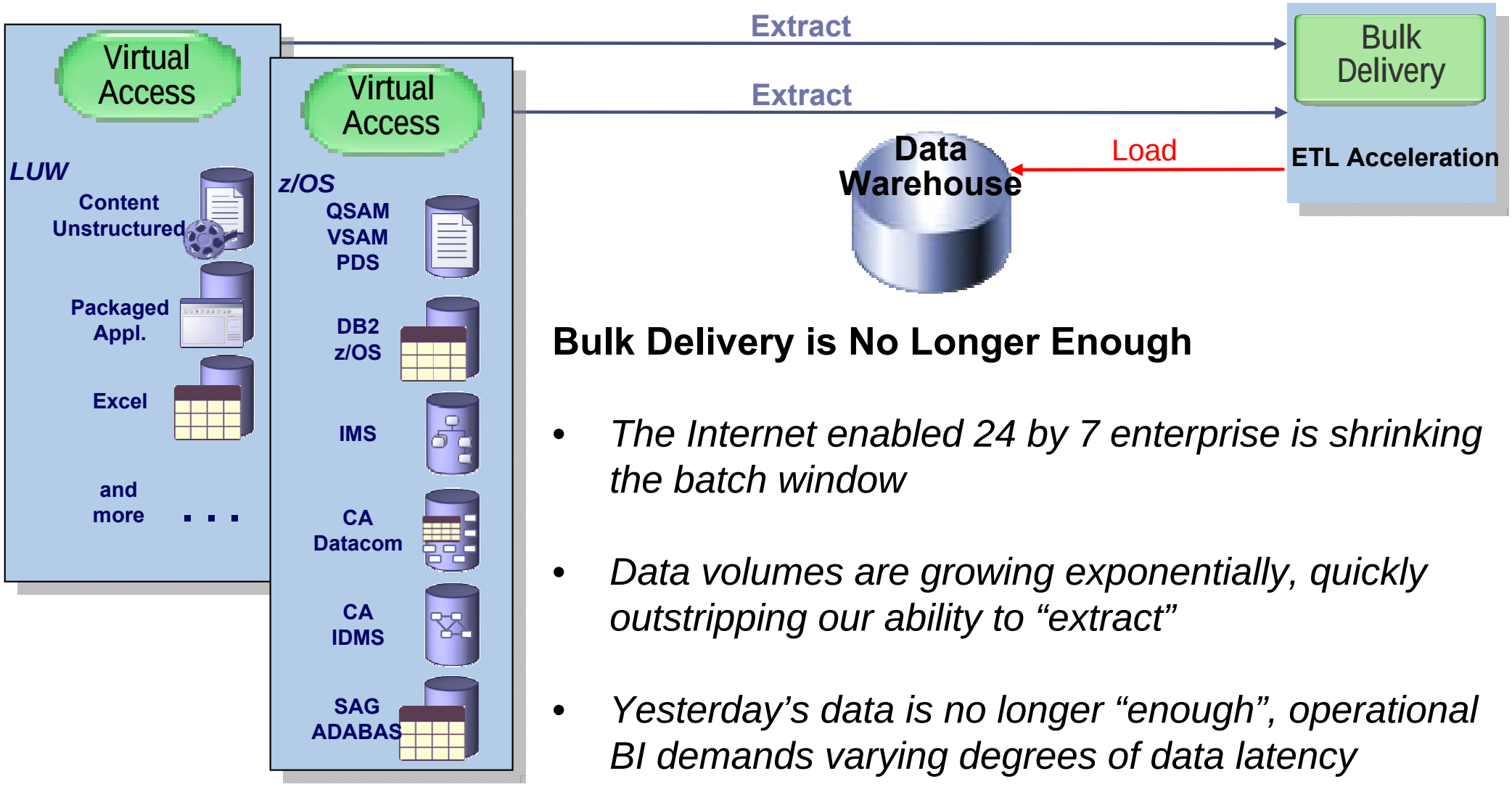

Bulk Delivery is No Longer Enough

- *The Internet enabled 24 by 7 enterprise is shrinking the batch window*
- *Data volumes are growing exponentially, quickly outstripping our ability to "extract"*
- *Yesterday's data is no longer "enough", operational BI demands varying degrees of data latency*

Bringing Multiple Techniques Together …

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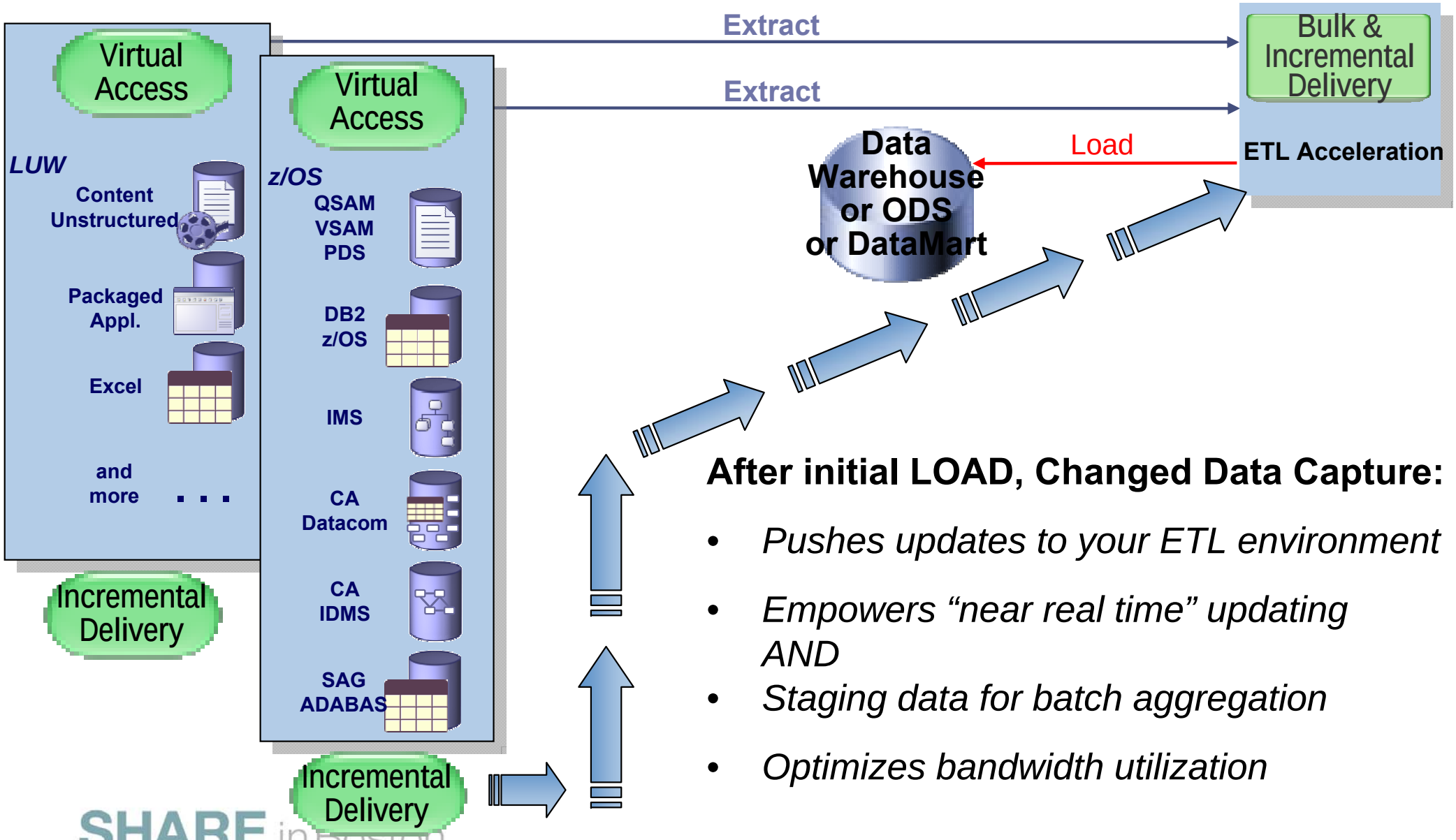


After initial LOAD, Changed Data Capture:

- *Pushes updates to your ETL environment*
- *Empowers "near real time" updating AND*
- *Staging data for batch aggregation*
- *Optimizes bandwidth utilization*

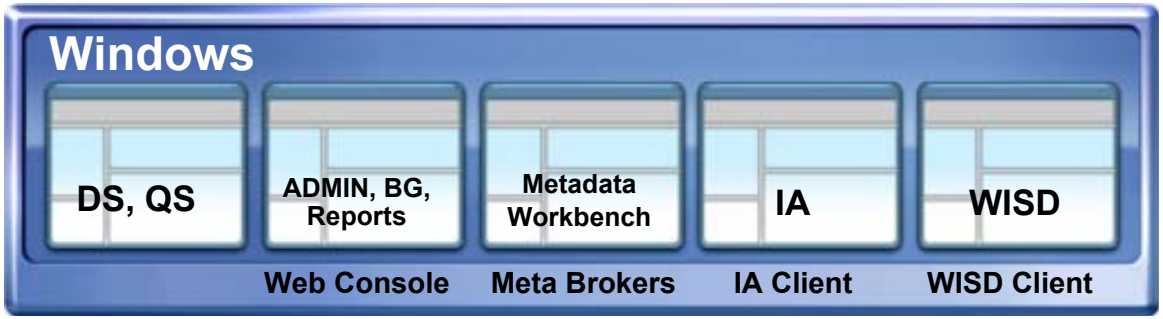
InfoSphere Deployment Models

- **Native System z Hybrid Deployment: Linux on System z and z/OS**
  - **Efficient Integrated Facility for Linux processing**
  - **Native Parallel Processing**
  - **Native z/OS Data Access**
  - **Metadata managed and protected in DB2 z/OS or UDB on Linux on z**

- Symmetric Multiprocessors
  - Linux, Unix & Windows

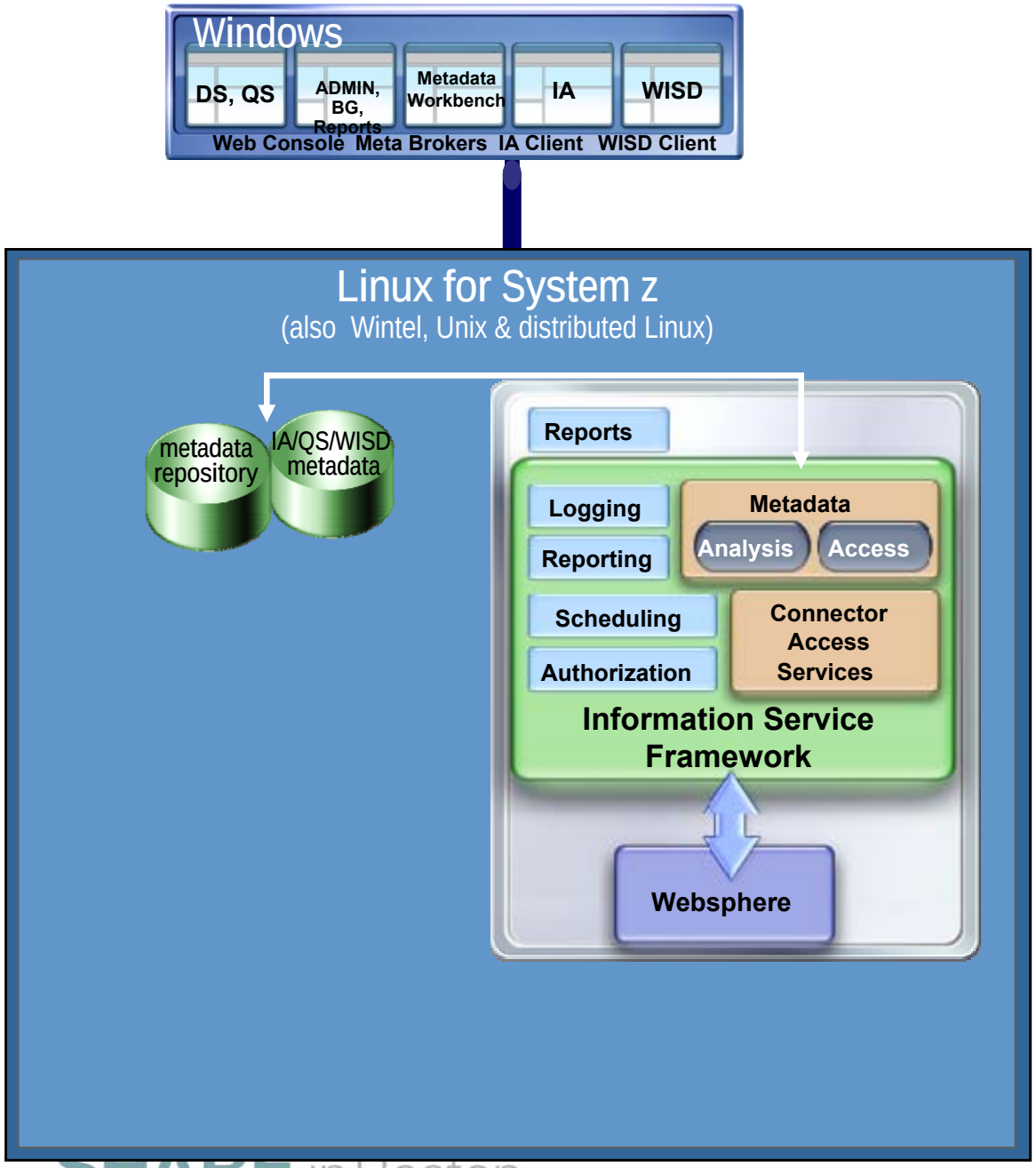
- Distributed Grid Deployment
  - Parallel execution across nodes

Information Server for System z



- **Roles-based GUI Design Tools work the way "you" do**

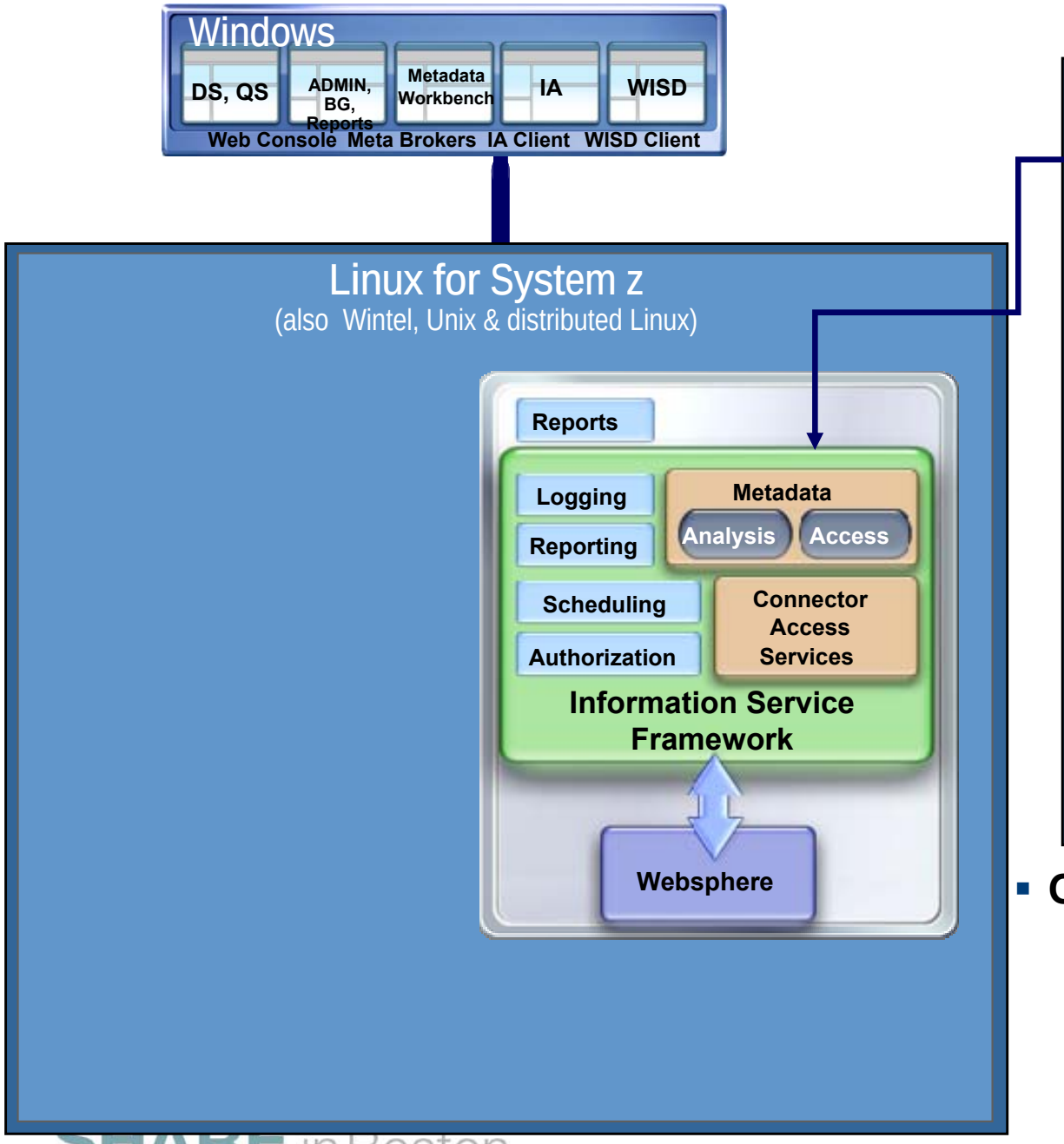
Information Server for System z



- **Common reusable services** framework leverages the power of a SOA environment
  - WAS 6.0.2.20 – App Server *(In the box)*

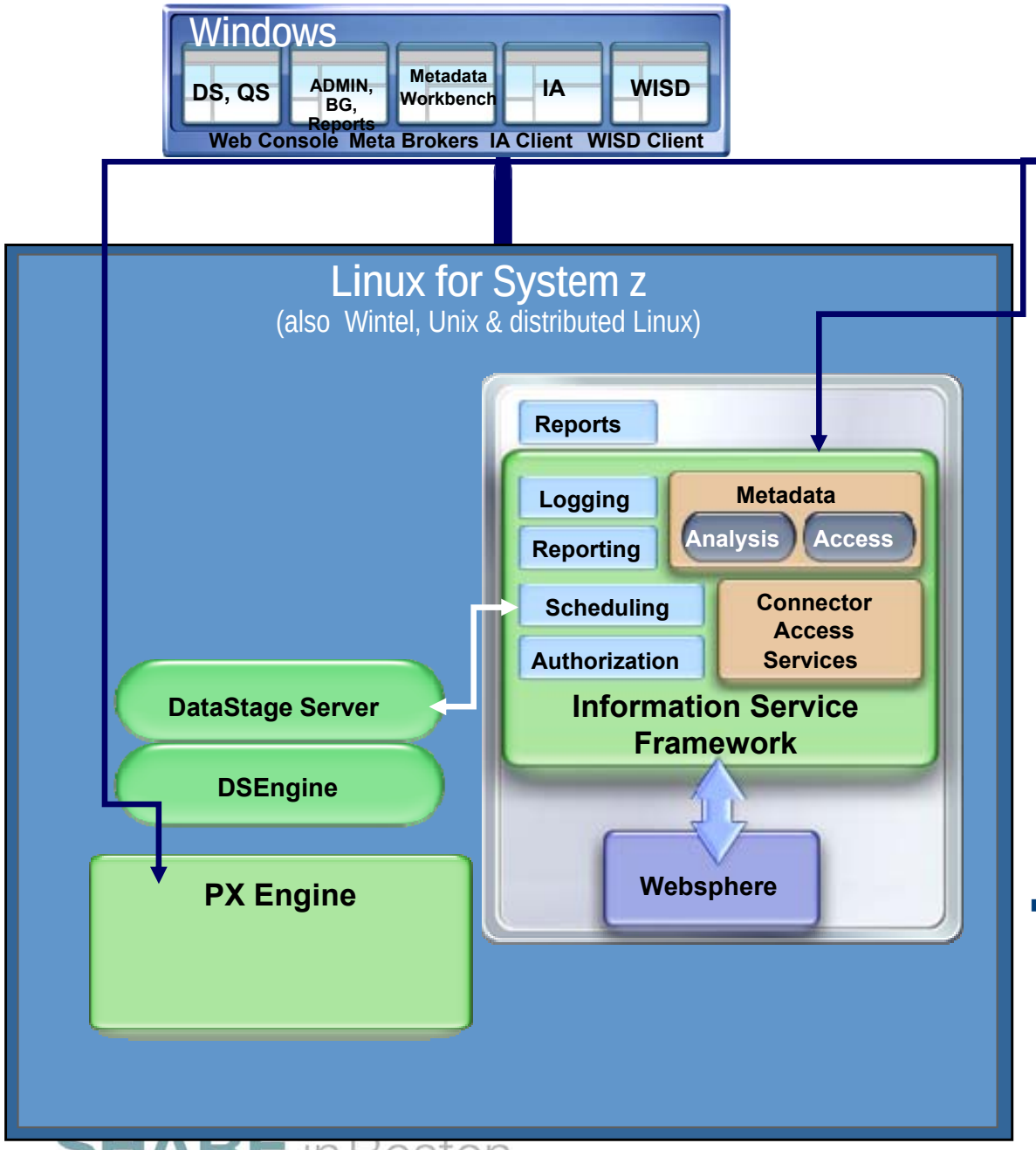
- **Shared meta data repository** promotes reuse, compliance, visual lineage & impact analysis
  - DB2 9.1 on Linux on z *(In the box)*
    OR
  - DB2 9.x on z/OS

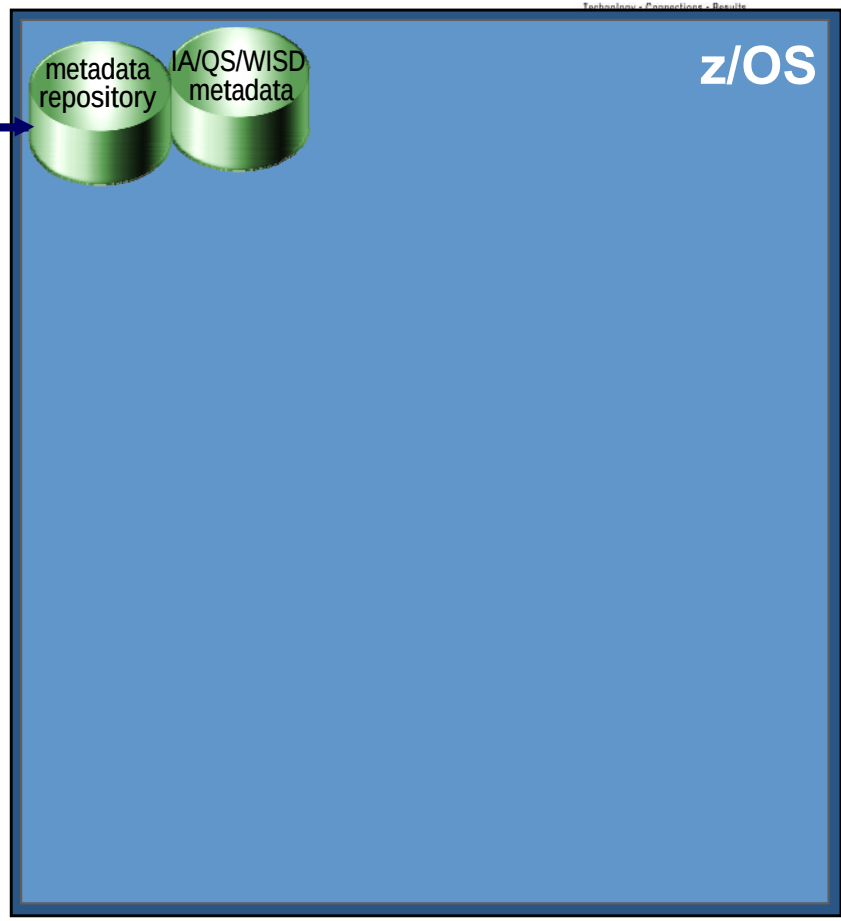
Information Server for System z



- **Optional DB2 z/OS for Metadata**
  - DB2 z/OS v9.#
  - TCP/IP between zLinux & z/OS
  - Can leverage hipersocket
  - Qualifies for zIIP offload

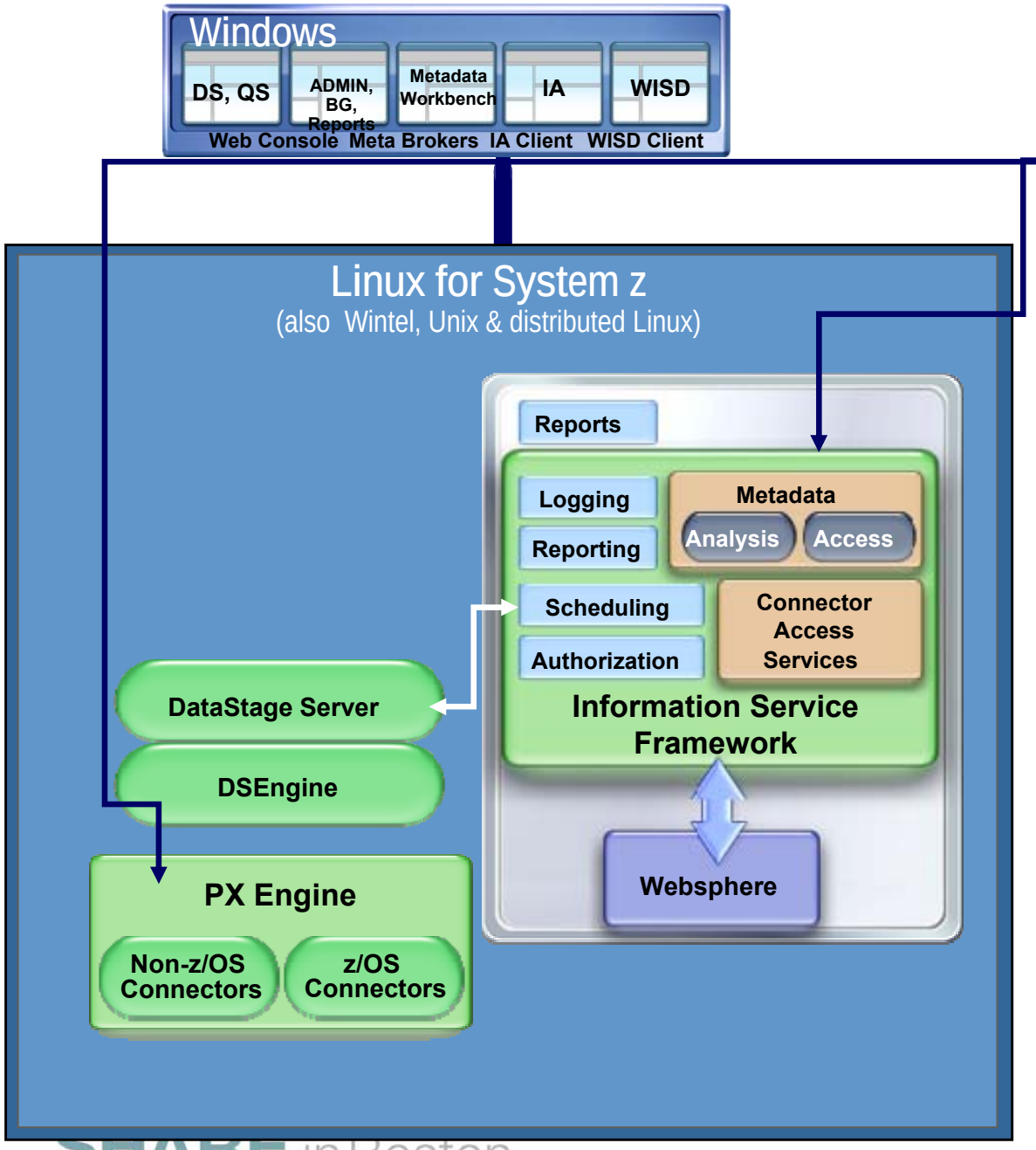
Information Server for System z

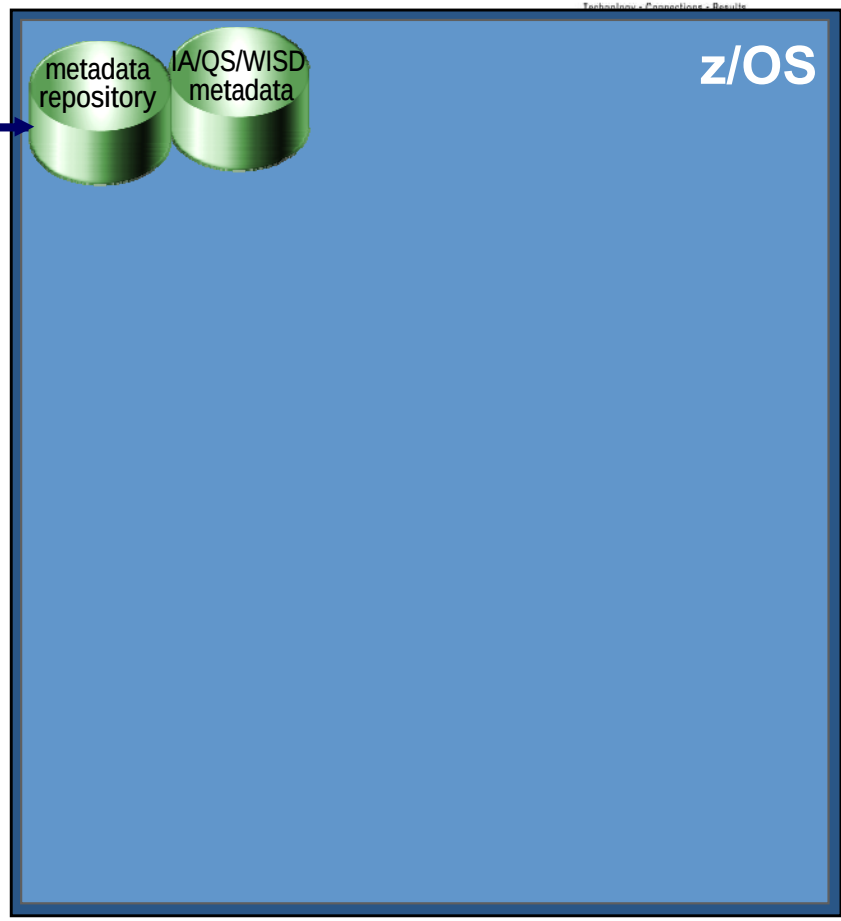




- **Linux for z Operational Environment**
  Robust, parallel processing with minimal impact on z/OS costs
  - SuSe & Red Hat...

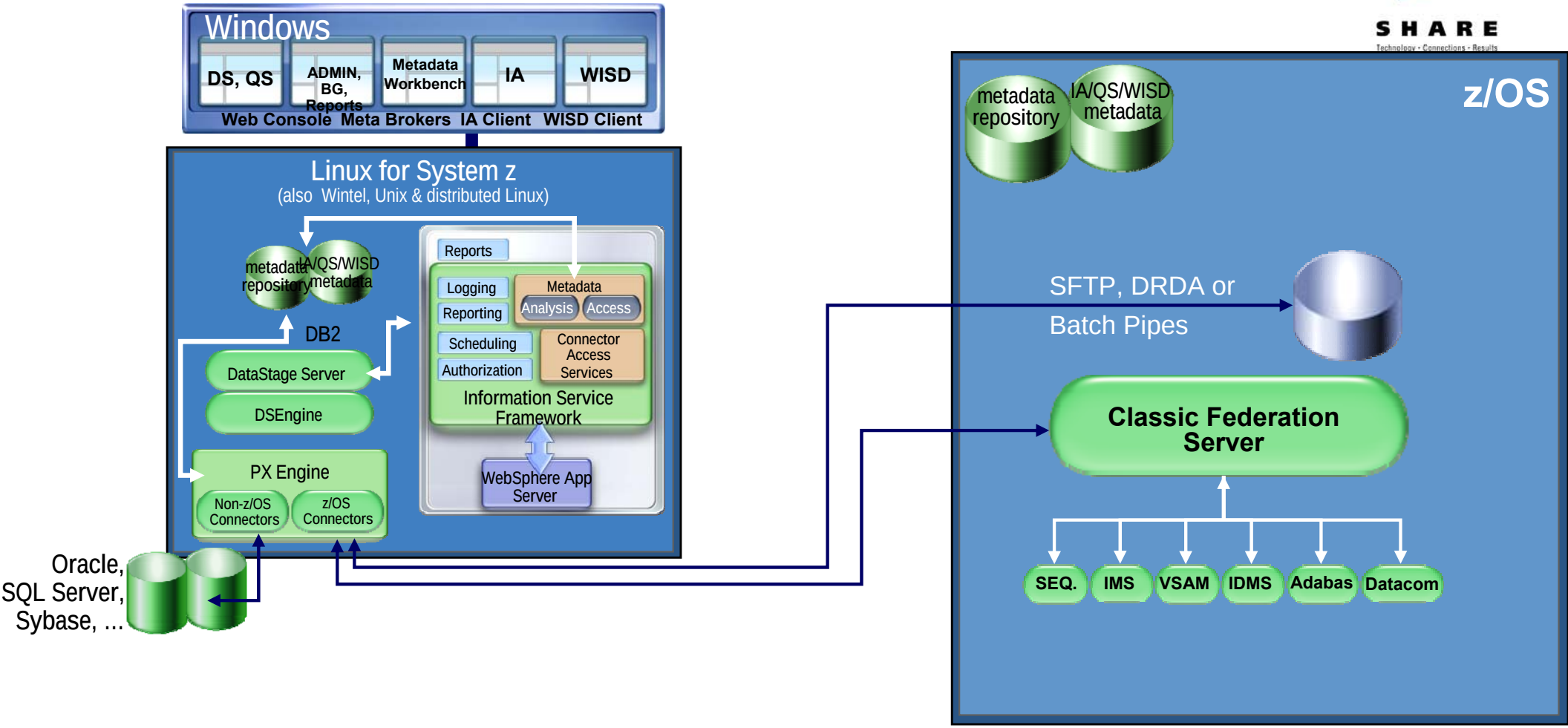
Information Server for System z





- **Robust "z" & remote connectors**
  Supports integration with z/OS, Linux on z and distributed data sources
  - DB2, DB2 for z/OS, Oracle, …

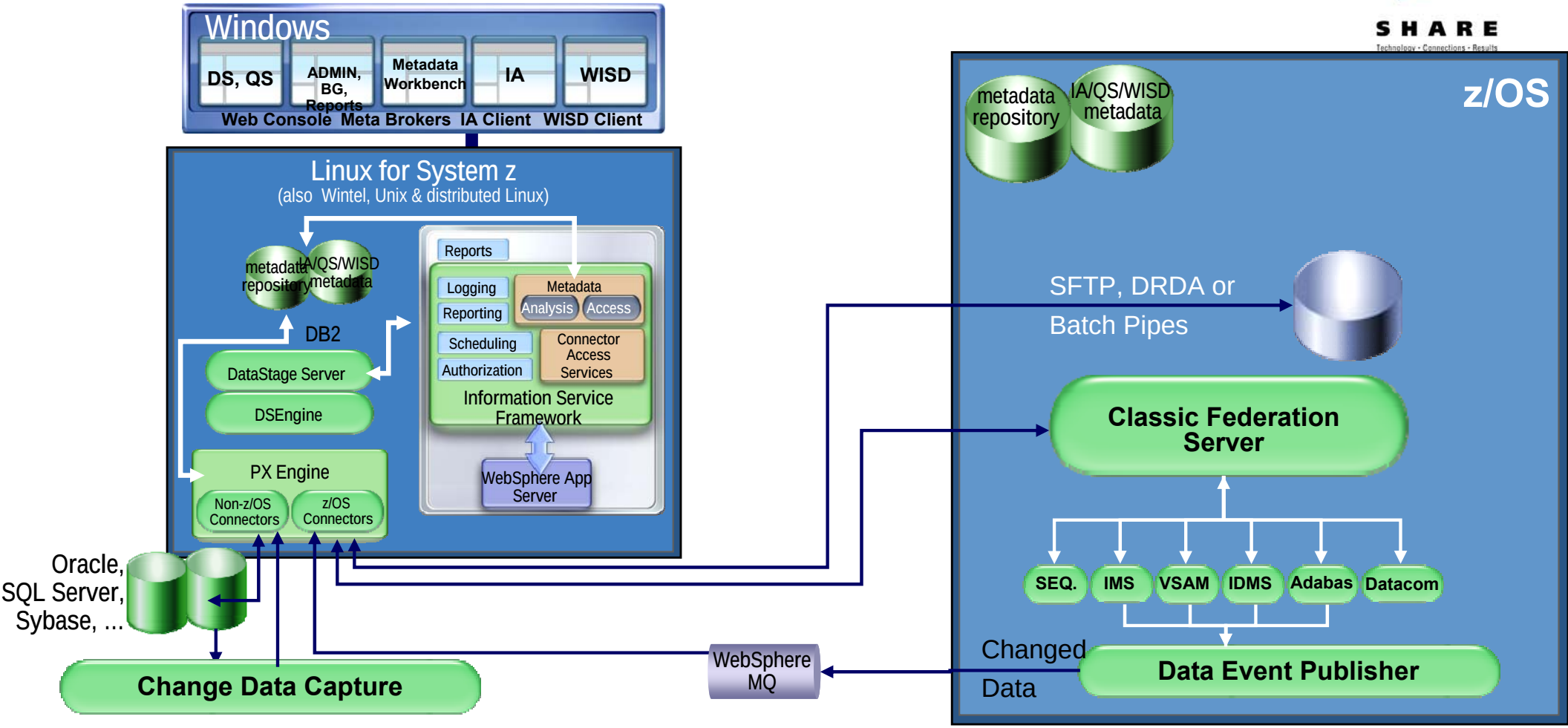
Information Server for System z



- **Distributed Connectivity includes:**
  - DB2 V9.1 Linux, Unix, Windows
  - DB2 UDB V7.x, 8.1, 8.2 for Linux Unix Windows
  - DB2 UDB V5R1, V5R3, V5R4 for iSeries
  - Informix Dynamic Server 9.3, 9.4, 9.4x, 10, 11
  - MS SQL Server 7.0, 2000, 2005
  - Oracle 8i R2, 8i R3, 9i R1, 9i R2, 10g R1, 10g R2, 11g
  - Sybase 11.5, 11.9, 12.0, 12.5x, 15

- **z/OS Connectivity includes:**
  - DB2zStage:
    -- DB2 UDB v7.x and 8.1 and 8.2 for z/OS
    -- DB2 v9.1 for z/OS
    -- Parallel read and load through DB2 Connect
    -- Parallel load through Batch Pipes
  - Classic Connect for read/write to QSAM, VSAM, IAM, IMS, CA-IDMS, CA-Datacom and Software AG ADABAS

Information Server for System z



- **Change Data Capture for incremental updating from:**
  - DB2 UDB v8.1 and v8.2 for Linux Unix Windows
  - DB2 UDB v8.1 and v8.2 for z/OS
  - DB2 v9.1 Linux, Unix, Windows
  - DB2 v9.1 for z/OS
  - VSAM, IMS, CA-IDMS and Software AG ADABAS for z/OS

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- Wrap-up and Additional Q&A

Why the System z ?

Because it is…

- Designed to deliver the power business needs
- Exceptional in security
- Reliable, available, and scalable
- Incredibly virtualized
- Affordable
- Manageable

A platform companies worldwide believe in

Built-In Reliability, Availability and Scalability

- Greater Reliability
  - Built-in hardware redundancy for uninterrupted operations
  - More reliability …=… More availability
  - Reduced risks associated with downtime
- Higher availability
  - Double instruction set
  - Non-disruptive upgrades for minimal “reboots”
  - Granular disaster recovery solutions
  - Minimal downtime …=… Maximum uptime
  - Avoid downtime costs
    - Lost revenue, fines, lawsuits, etc.
- Highly scalable
  - Capacity on Demand offerings: Pay only for what you use
  - Applications added in minutes rather than days
  - Faster response to meet
    - Expected or unexpected business needs
    - Customer and internal user demands

Innovation leader in virtualization technology

- Innovation and refinement of virtualization for nearly 40 years
  - Virtualization technology invented by IBM in 1967
  - Hardware- and software-based for optimum performance and flexibility
  - Share resources among various applications
- z/VM Virtualization to simplify your IT infrastructure
  - Run hundreds of “virtual” servers on one physical piece of hardware without sacrificing performance
  - Use virtualization to run multiple copies of Linux on the mainframe
    - Running Linux on the mainframe combines:
      - *Benefits of distributed computing*
      - *Benefits of the mainframe*
  - Reduce time and cost of business growth to help maximize ROI

“We found the mainframe to be the first and only one to address the whole enterprise virtualization and management challenge in a comprehensive manner. It therefore clearly moves the virtualization ‘state-of-the-art’ well beyond other vendor offerings.”

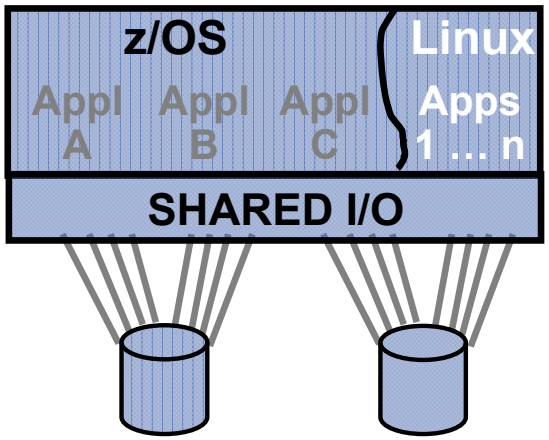
Ian Bramley
Managing Director
Software Strategies

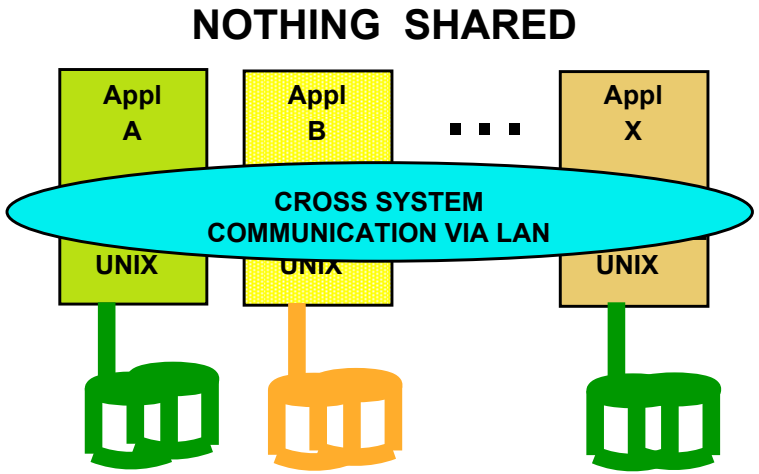
Unique Mainframe Shared Hardware Capabilities

- HiperSockets™ –
  - Availability you can count on
  - Increasing bandwidth, decreasing latency
  - No external network dependencies, components and associated latency
  - Heightens network security with minimal change
  - Integrated function of z/Architecture™ on zSeries®

Cross LPAR Communication on System z

MEMORY BUS using HiperSockets™





It’s where your data resides

Are you one of these z/OS installation?

- DB2 for z/OS
  - 25 of the Top 25 Worldwide Banks
  - 9 of the Top 10 Global Life/Health Insurance Providers
  - 23 of the Top 25 US Retailers
- IMS is used by:
  - Approximately 80% of the largest retail banks in the US, Germany, Japan, and Australia
  - Majority of business in:
    - Automotive manufacturing
    - US and European insurance
    - Telecommunications
    - Package shipping

Keep your Information Platform close to your mission critical data

Summarizing the Mainframe's Resurgence

Industry trends		System z provides
• Regulatory focus on security/compliance	. . .	Enterprise security, encryption
• Need to withstand catastrophic events	. . .	Enterprise business resilience
• Deep integration requirements for collaboration	. . .	Hub for integration of Data and Apps
• Staff costs dominate overall IT spending	. . .	Centralized management
• Global, 24 by 7 business via the Web	. . .	99.999% application availability
• Virtual servers address hardware proliferation, data center sprawl	. . .	4 decades invested in virtualization
• Dramatically rising energy costs (power and cooling)	. . .	Most efficient use of technology

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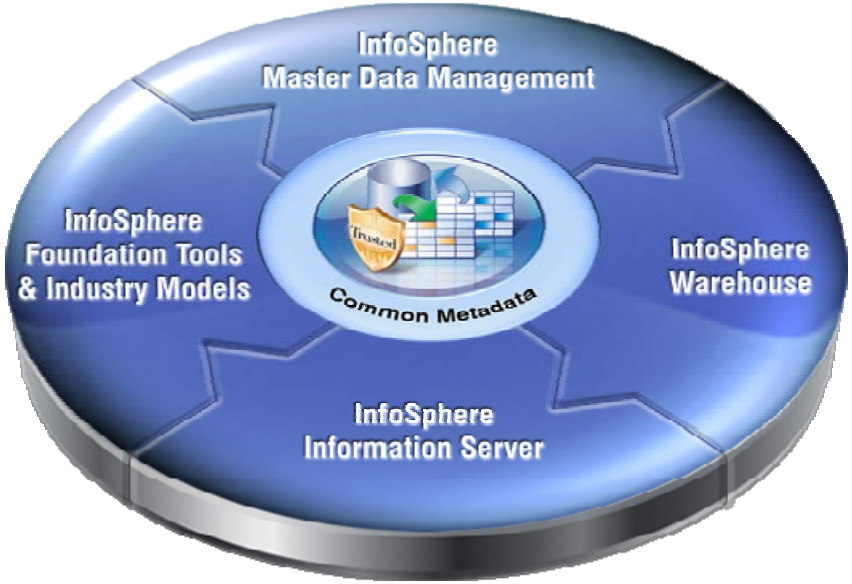
InfoSphere Strategy & Vision

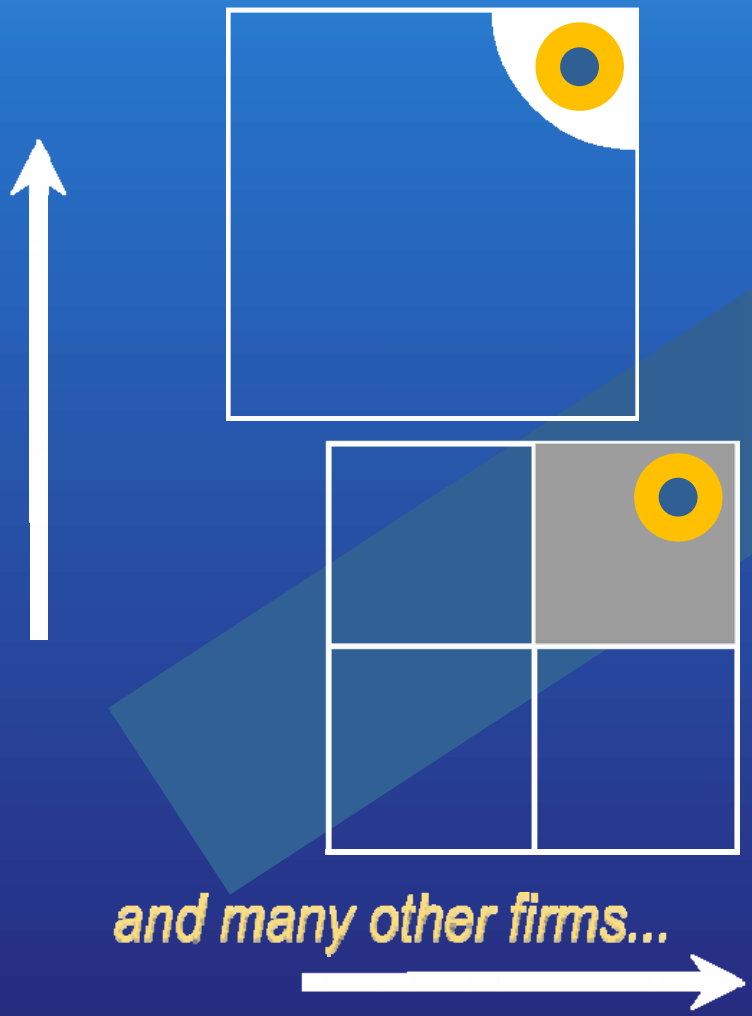
Leading The Market In Innovation

- Continued Simplicity & Usability Advancements
- Rule & Transformation Discovery
- Automation to Optimization
- Platform Analytics & Dashboards
- Data Governance Tools



IBM is Leading the Way

Industry Analysts Rank IBM as Leaders....



- *ETL Tools*
- *Business Intelligence Platforms*
- *Data Warehousing*
- *Data Quality Tools*
- *Data Integration Tools*
- *Customer Data Integration*

InfoSphere™ software

You Have a Choice…

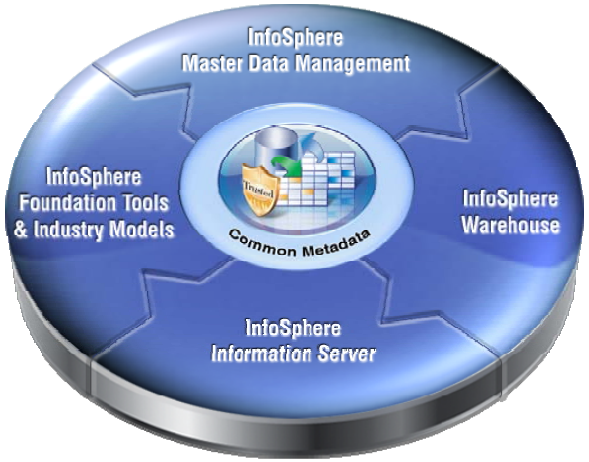
Point Products

? + ? + ? + ? + ? + ? + ?

Tools	Models	Cleansing	ETL	MDM	Warehouse	BI

IBM + IBM + IBM + IBM + IBM + IBM + IBM

Information Platform



InfoSphere Communities

- InfoSphere On-line Community – share and interact with peers around the world
  - www.ibm.com/community/infosphere

- Information Champions – recognizes individuals who have made the most outstanding contributions to the Information Management community
  - www.ibm.com/software/data/champion