
IBM
IBM SOA*
Summit
*Informations valorisées et SOA,
le couple gagnant.

IBM SOA Summit

IBM

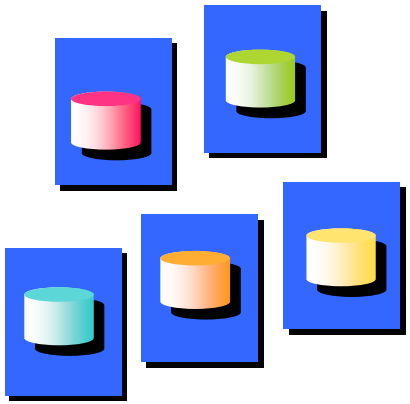
Information Server and SOA Session Number

Brian Haan

Senior Architect IBM SWG

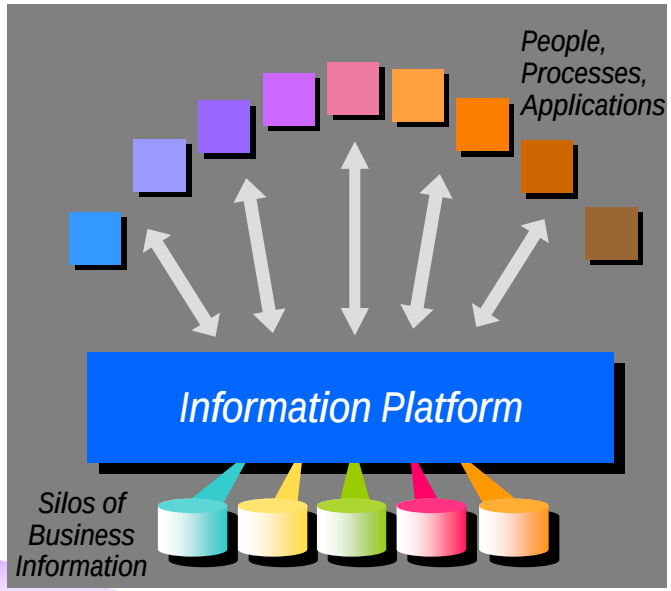
Information Management Requirements are Increasing

Disconnected Silos of Information



Rich Standards, Flexible Architecture

Dynamically Deliver Information



70% of people's time can be spent finding relevant information

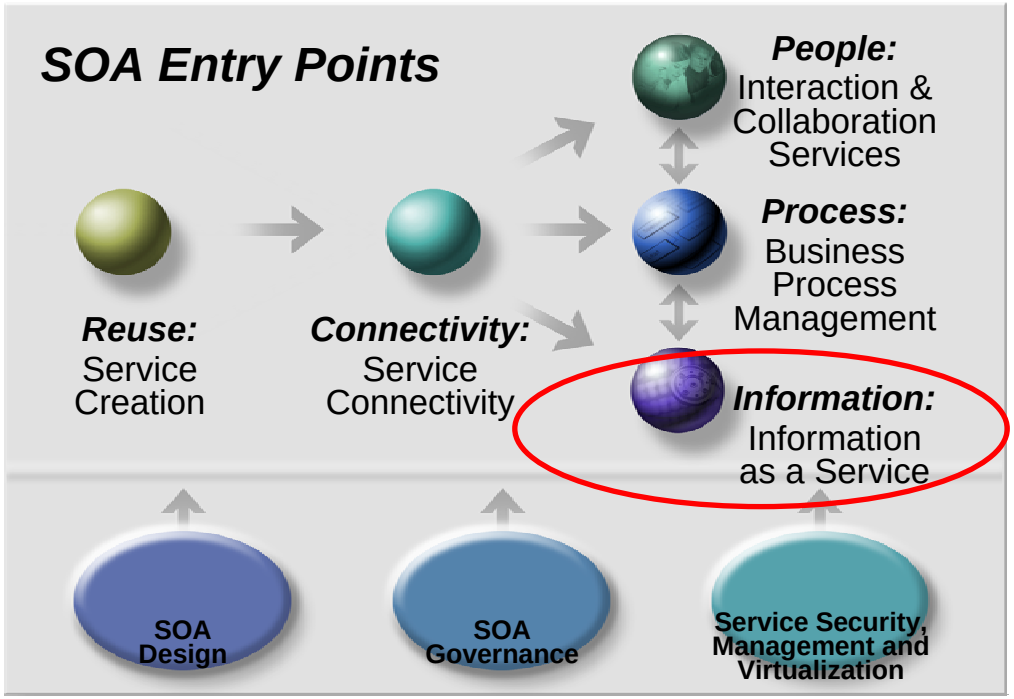
60%+ of CEOs say they need to do a better job leveraging information

5X More Value creation by organizations effective at using information

Delivering information in context to optimize business processes, applications and productivity

Service Oriented Architecture
Information as a Service is Key

Getting the right data quickly and consistently for all applications continues to be a key challenge for many enterprises.
Forrester, January 2006



You will waste your investment in SOA unless you have enterprise information that SOA can exploit.
Gartner, March 2005

SOA Connects People, Processes, and Information

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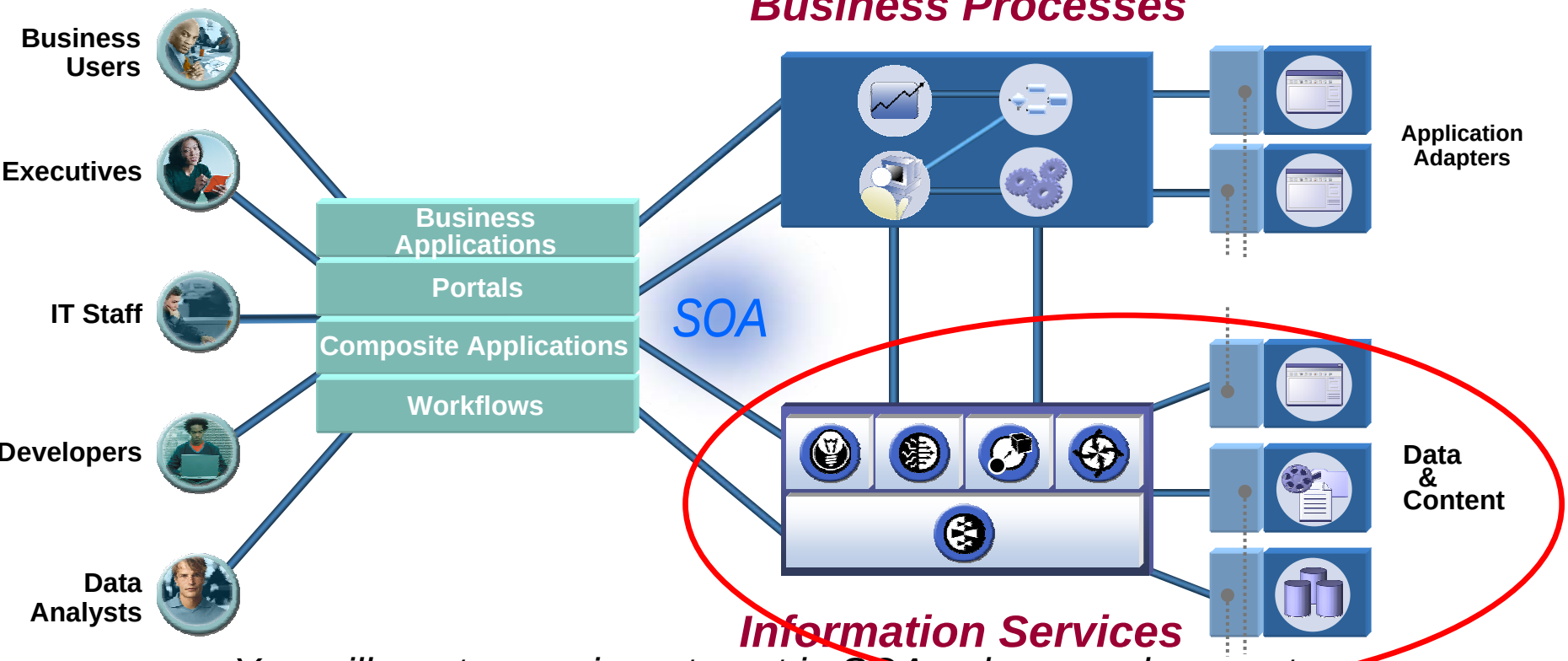


You will waste your investment in SOA unless you have enterprise information that SOA can exploit.

Gartner, March 2005

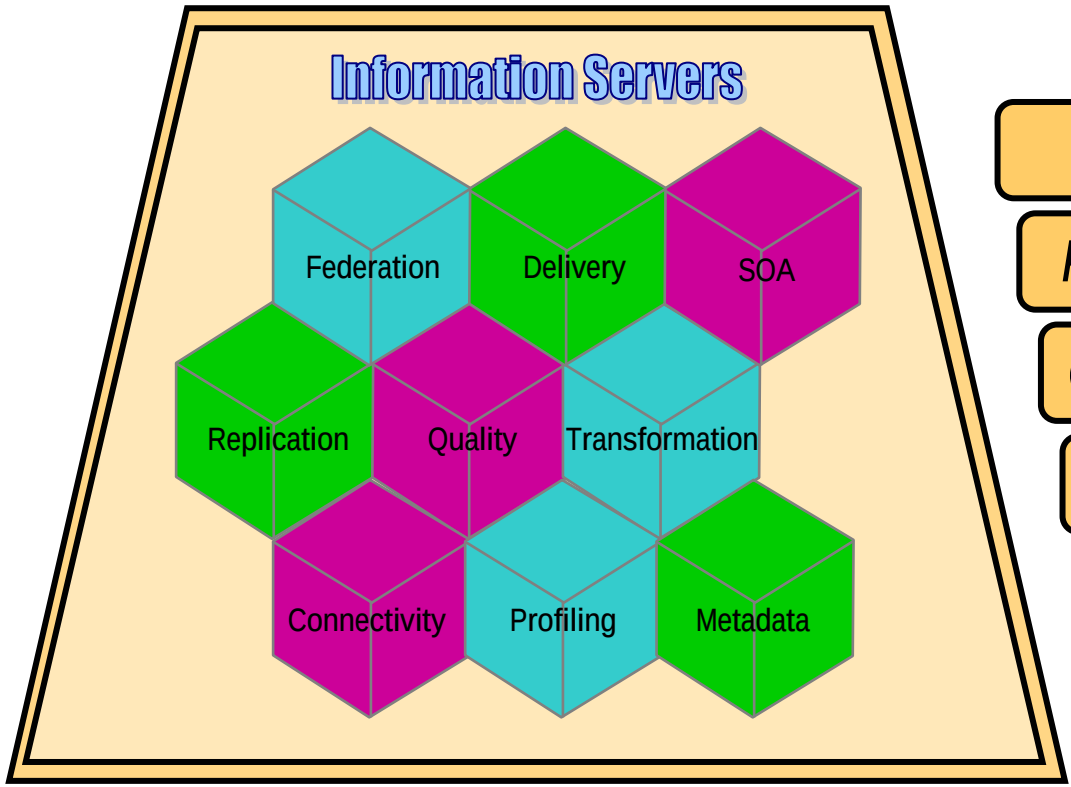
IBM

An Historic Inflection Point

- **Security**
- **Scalability**
- **Reliability**
- **Reuse**

The Need for Information Servers

Today's Inflection Point

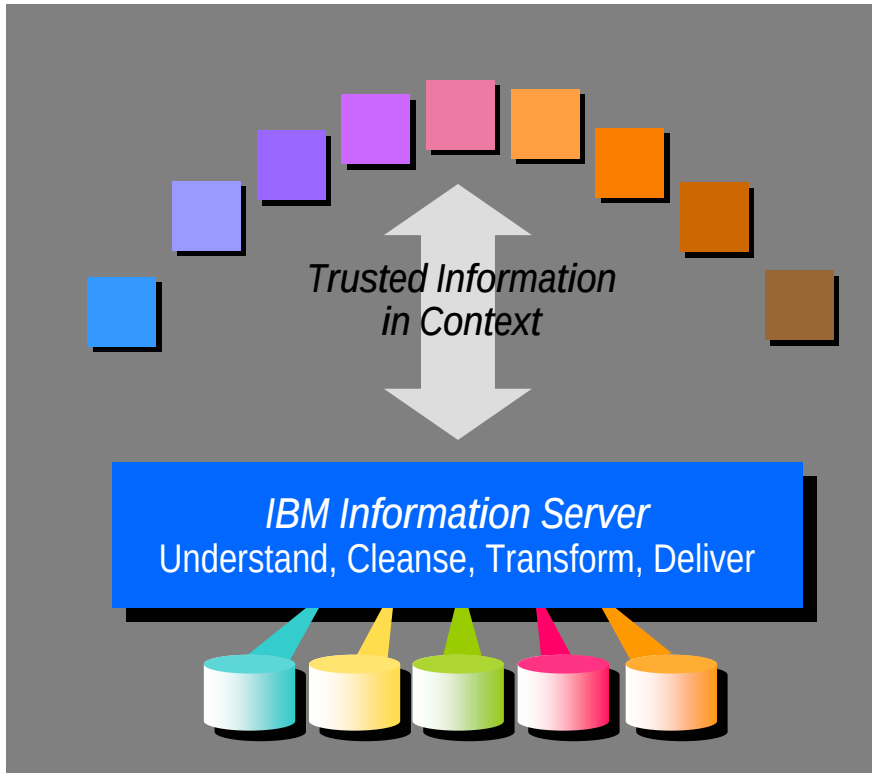


- *Trust*
- *Productivity*
- *Collaboration*
- *Scalability*
- *Reuse*

IBM Information Server
The SOA Foundation for Information Management

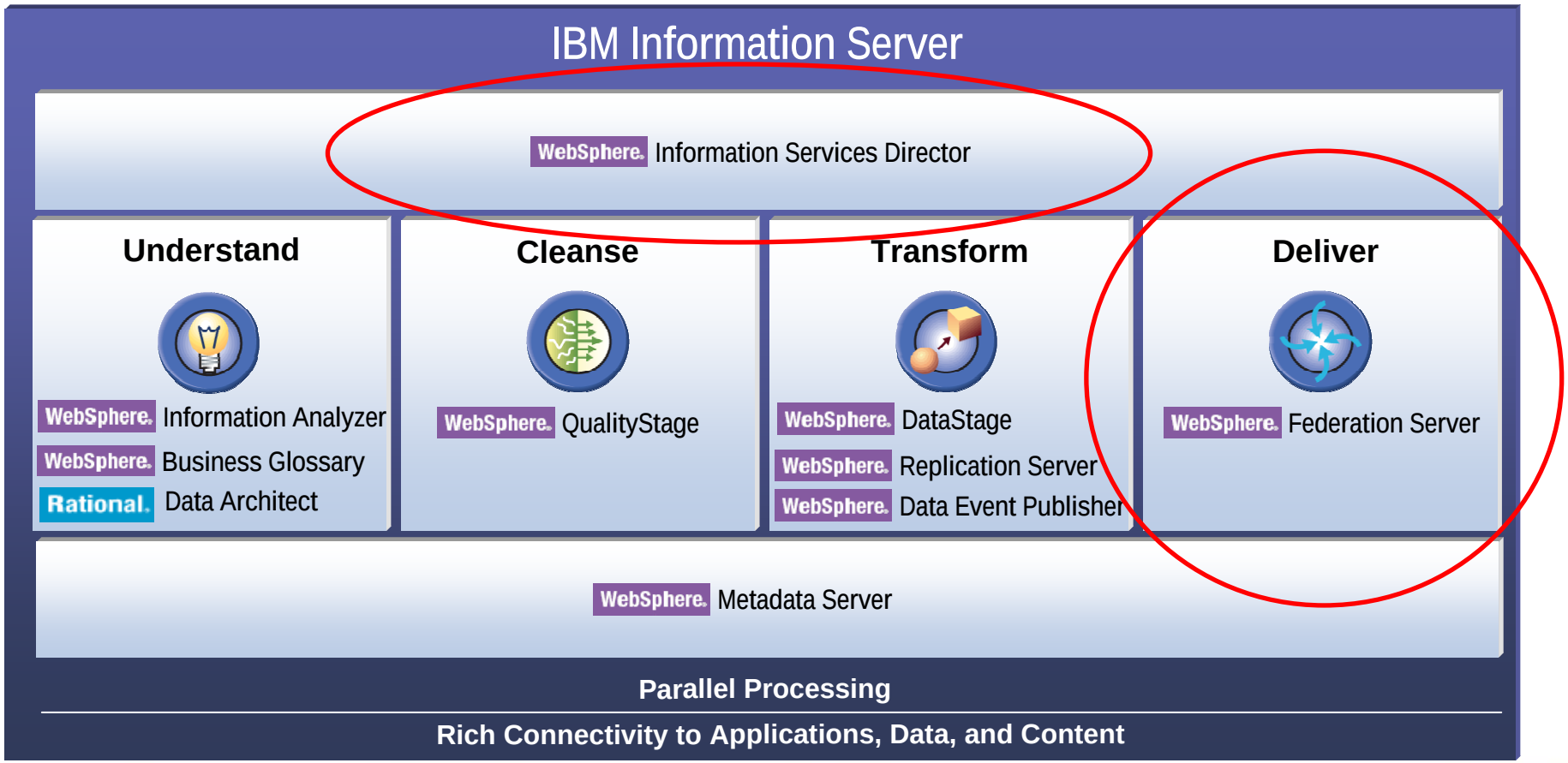
New!

- **A New Kind of Platform**
  - Delivers trusted information to processes, and applications
  - Foundation for SOA
  - Dramatically Simplifies Integration
- **Innovation Technology**
  - Metadata-driven integration
  - Breakthrough productivity
  - Industry-leading scalability
  - Rich, bi-directional connectivity
- **Based on Experience**
  - 5,000+ Integration Clients
  - 75 Clients in Beta Program
  - 35+ Partners Enabled…

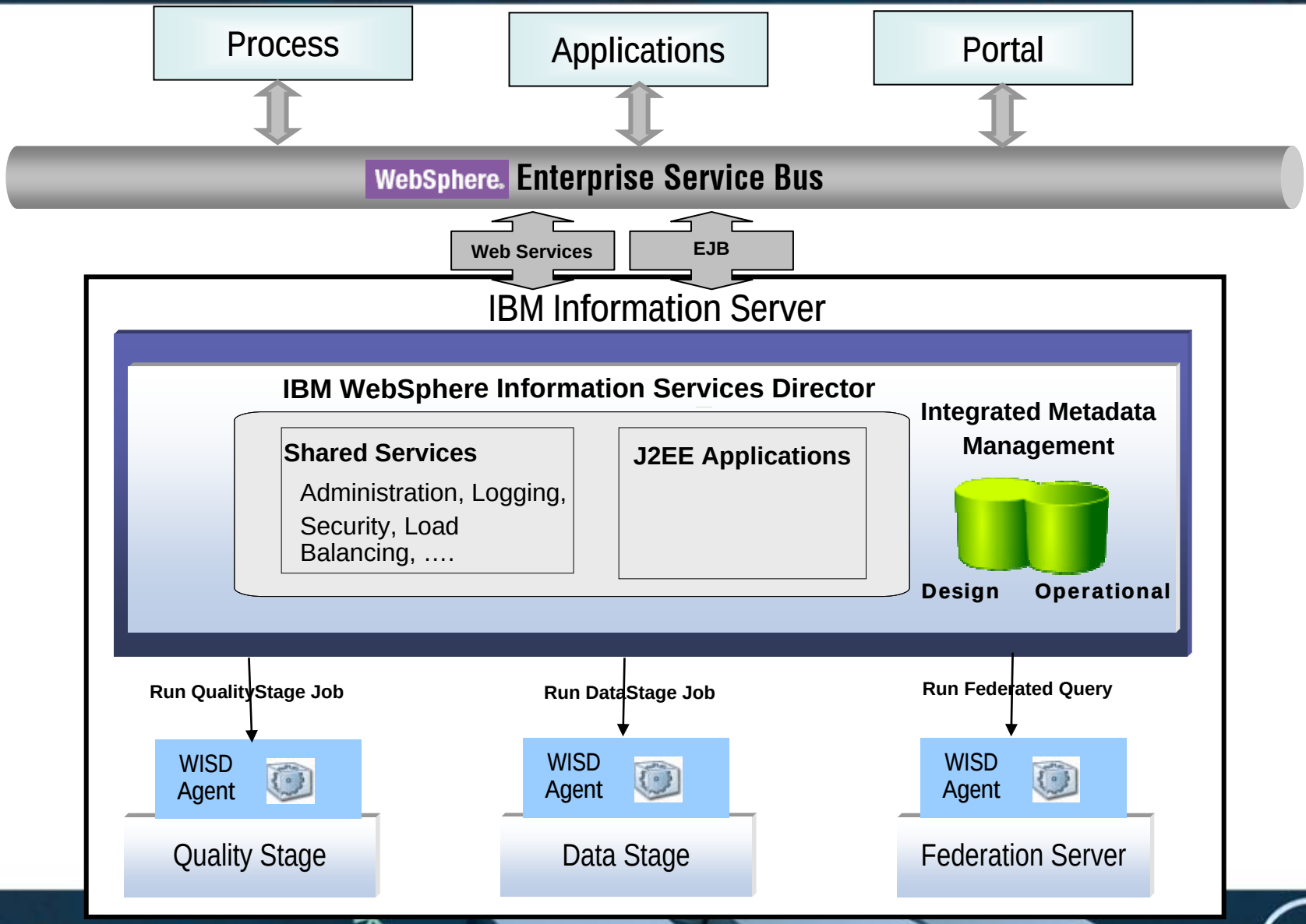


IBM Information Server

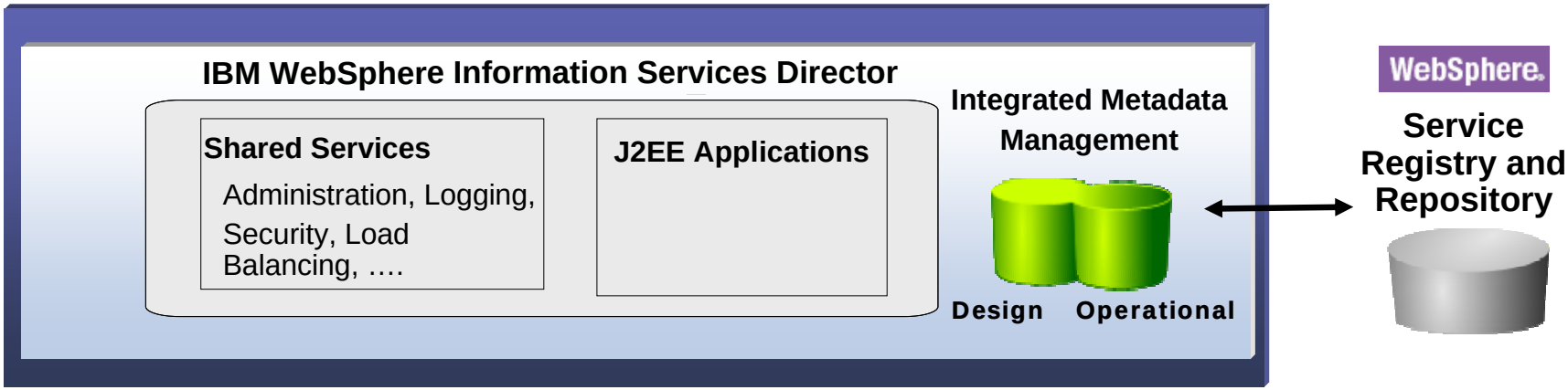
Delivers Data Access and Data Integration Services for SOA Environments



IBM Information Server
A Common Programming Model



SOA Framework inside IBM Information Server



- **Foundation for SOA data applications**
- **Common Services infrastructure**
- **Standard access to Common Services**
  - Services can be invoked as EJB or Web services
  - Services can be stored in the WebSphere Service Registry and Repository
- **Simplified administration and deployment**
- **Unified reporting, logging, and administration**

Service Oriented Finance Needs a Complete View of the Customer

Our Relationship Managers need to be able to see all the customer information at once.

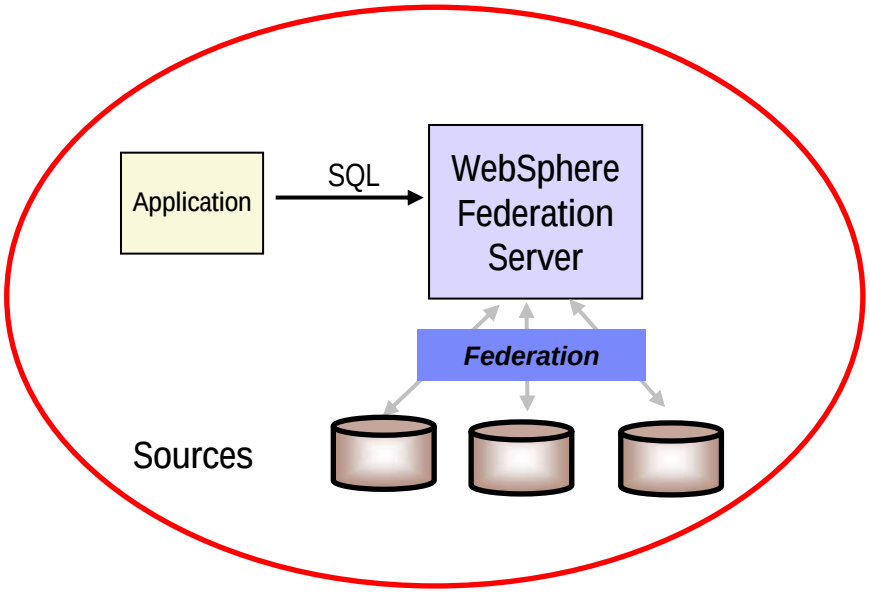
Service Oriented Finance CIO

With IBM's Information Server you can deliver a federated view of the customer data.

IBM

Different Types of Integration for Different Needs

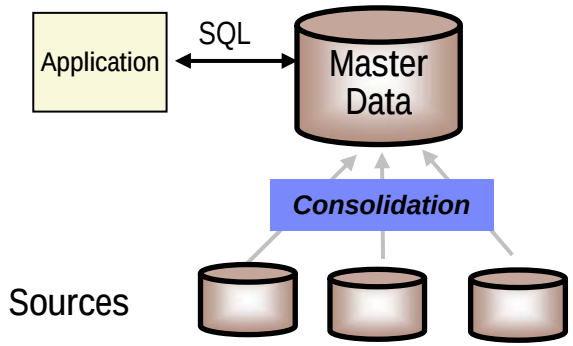
Federated Data Access



- **Source data remains in place**
- **Small amounts of data accessed**

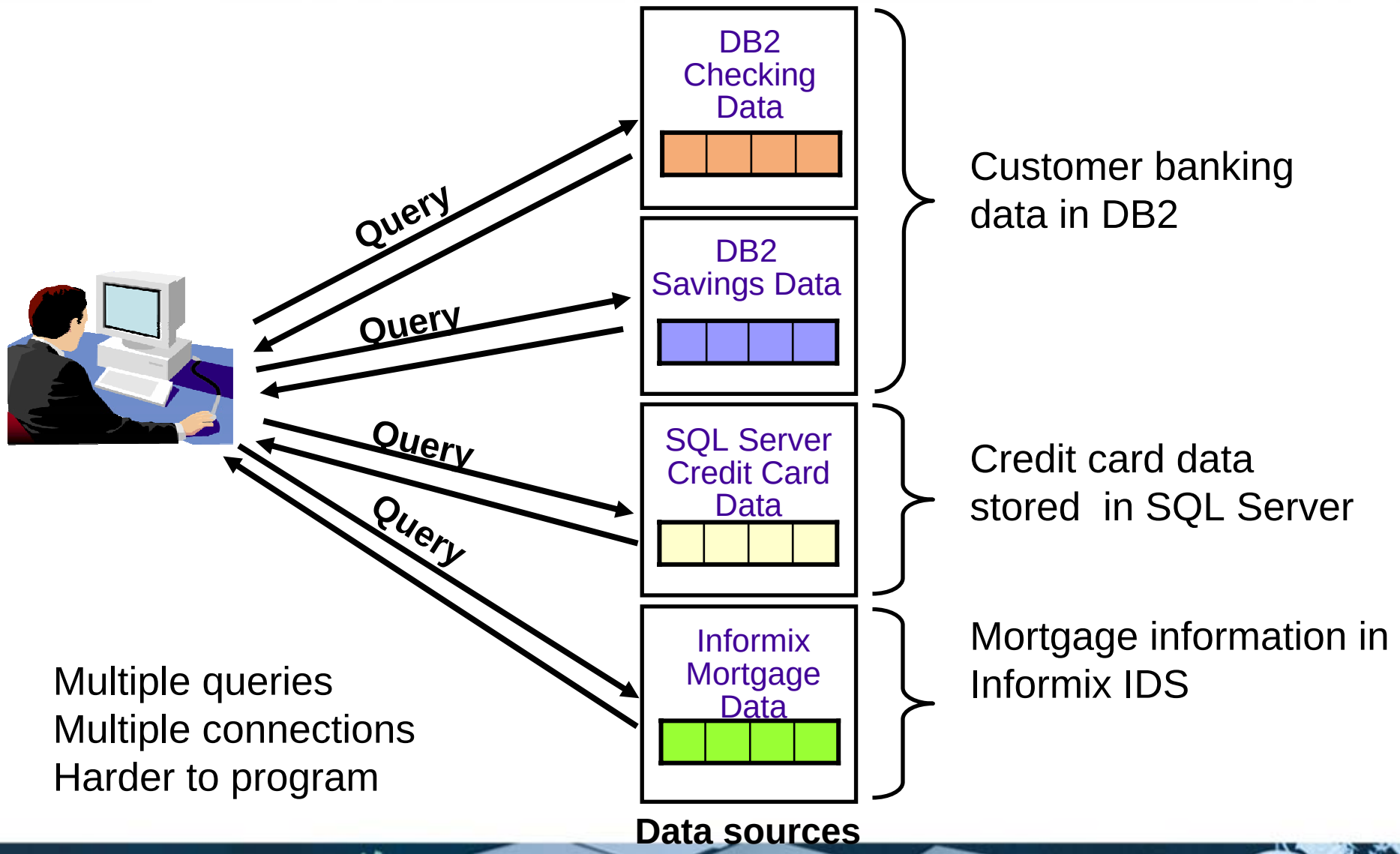
Typically used for operational purposes

Consolidation (Extract, Transform, Load)

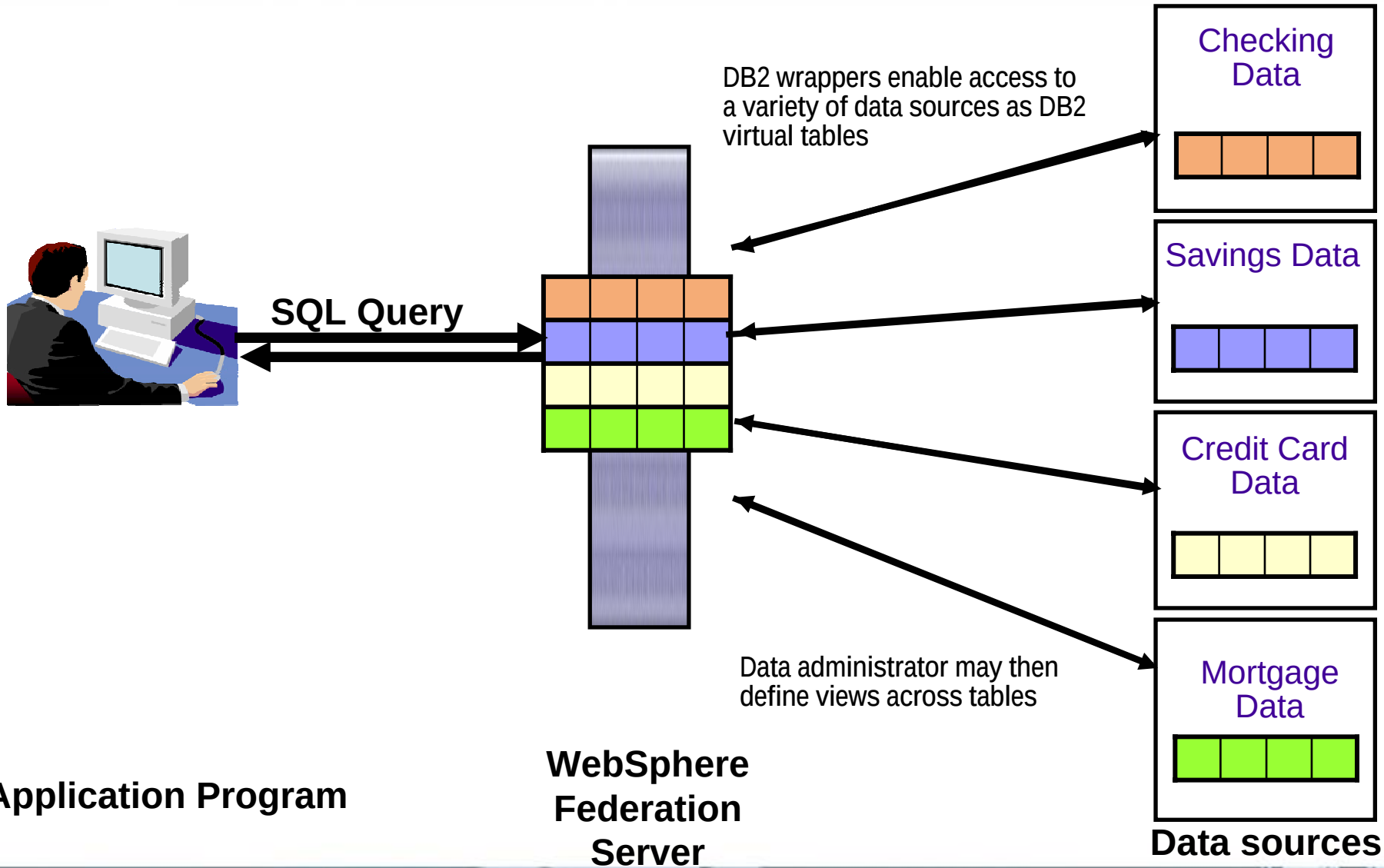


- **Move data to physical master copy**
- **Large amounts of data moved**
- **Data may require transformation and cleansing**
- **Typically used for analytical purposes**

Problem: Customer Information Is Stored in Multiple Systems



WebSphere Federation Server

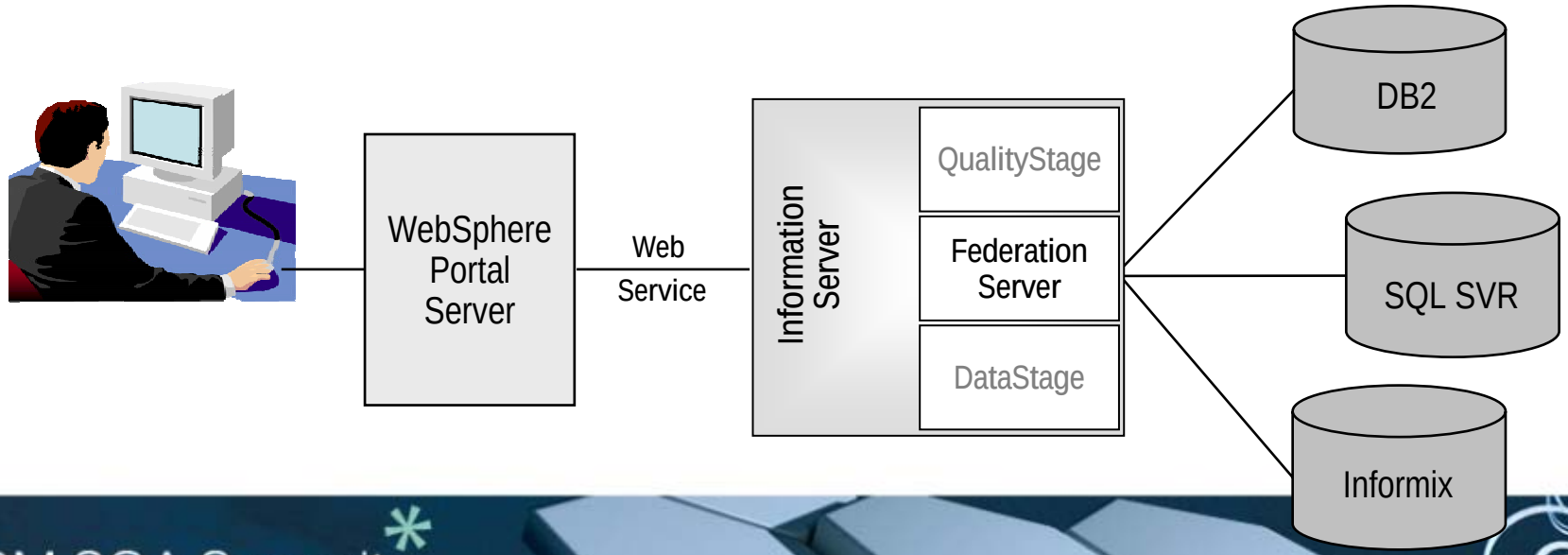


DEMO: Federated Data Delivered via IBM Information Server

Create federated query using query designer

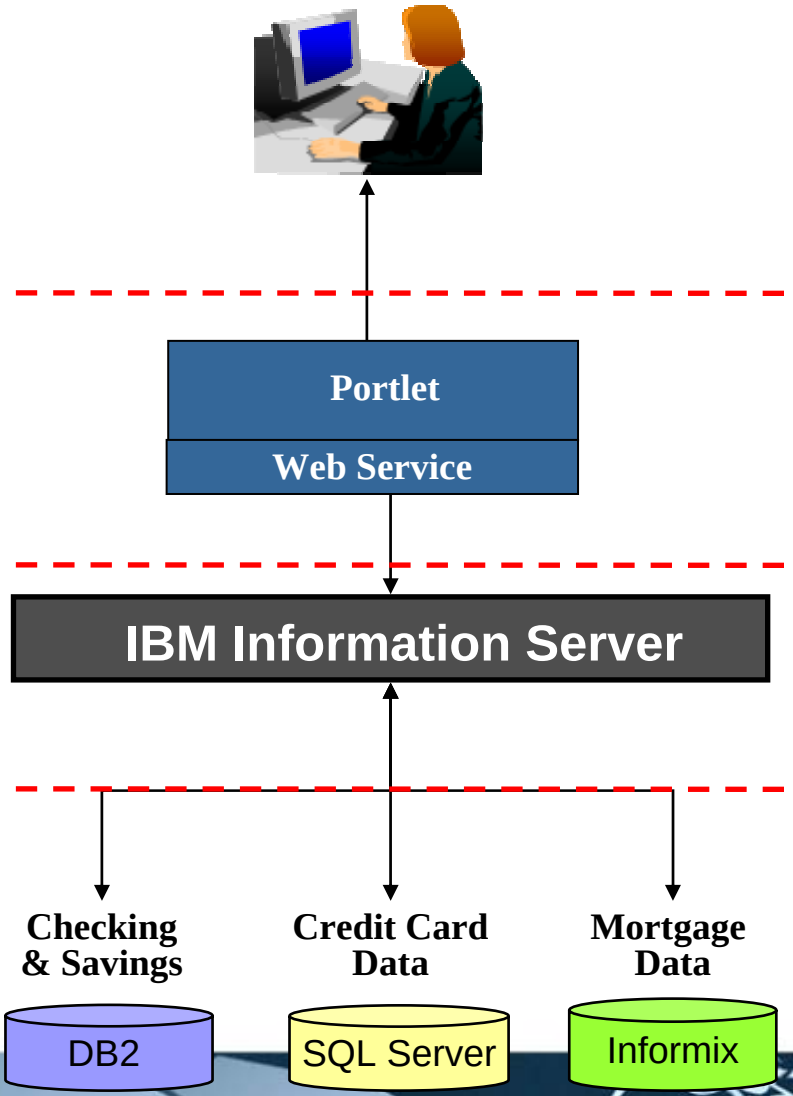
Deploy query as a Web Service using IBM Information Server

Service Oriented Finance Portlet uses Web Service to get the federated customer information with a single service request



IBM Information Server Benefits

- **For the Portlet Developer –**
  - Easily use Web Services to access federated data
  - No need to connect to multiple sources
  - No need to know various source schemas
  - Lab tests show **40-60% reduction in development time and code size**
- **For the Administrator –**
  - Easily create Web Services to expose federated data
  - Data schemas may be changed without forcing change to application programs



Sample Data Sources and Wrappers for WebSphere Federation Server

Relational Sources

- DB2 UDB
- Informix
- Oracle
- Sybase
- Teradata
- MS SQL Server
- and more …

Content Sources

- FileNet
- Interwoven
- Microsoft
- and more …

ODBC Sources

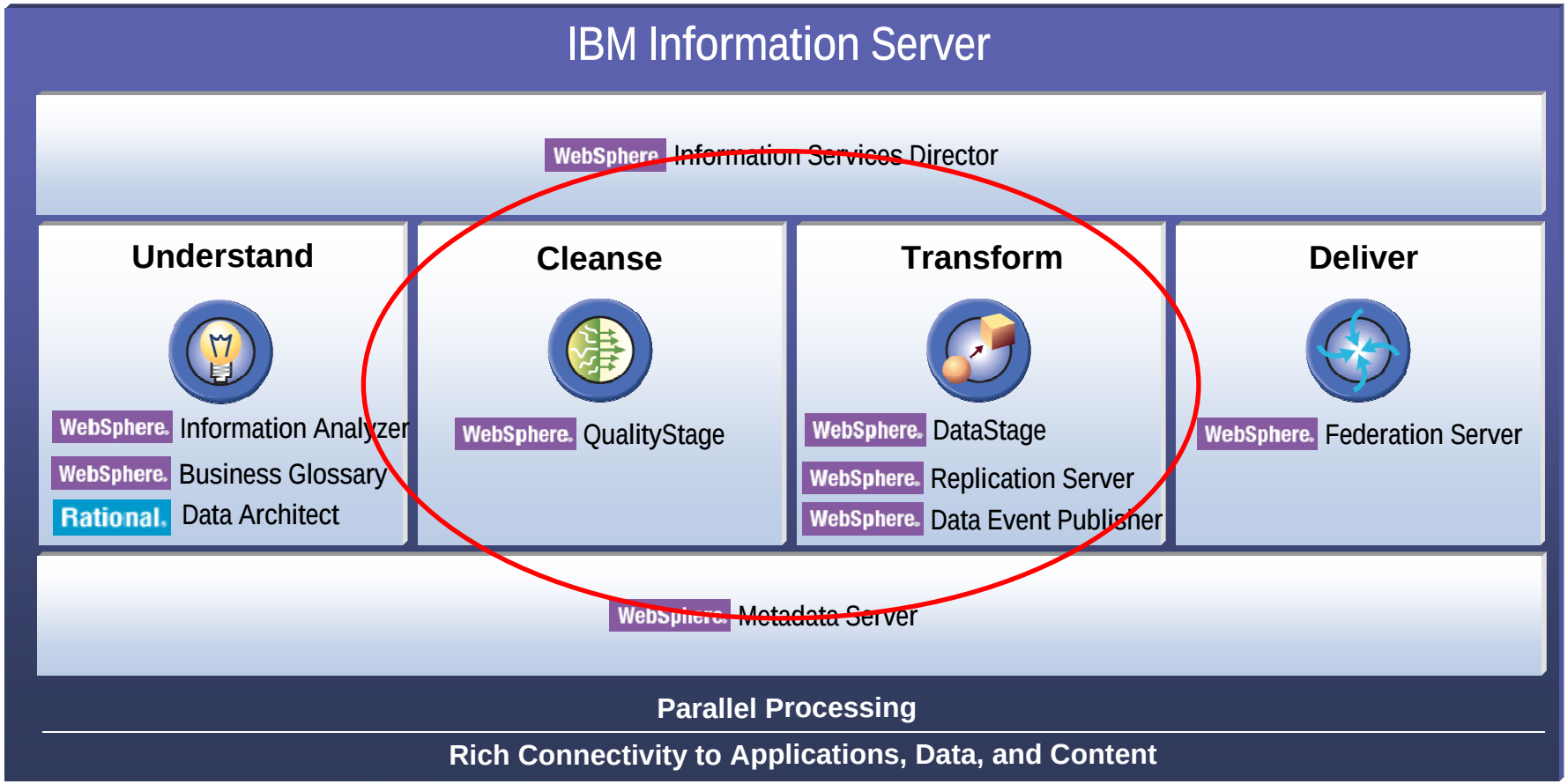
- Red Brick Warehouse
- Classic Federation
  - IMS, VSAM, CA-Datacom, CA-IDMS, Adabas
- Ingres
- Lotus Notes
- Microsoft Access/Excel
- MySQL
- PostgreSQL
- SAS
- Sybase SQL Anywhere
- and more…

Non-relational Wrappers

- Web Services
- Life Sciences
- WBI sources
  - SAP, PeopleSoft, Siebel
- Legacy Data Access via WS II Classic Federation for z/OS
- and more …

- Or build custom wrappers
  - Java and C++ SDK

IBM Information Server



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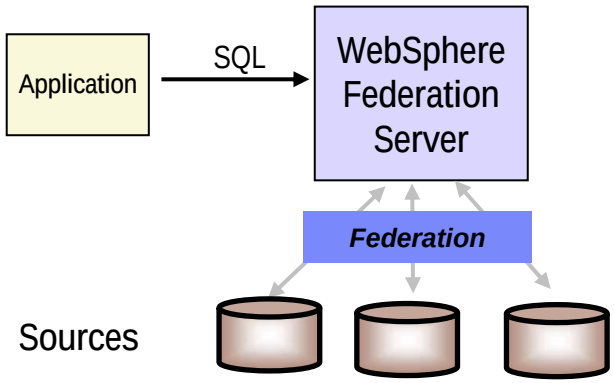

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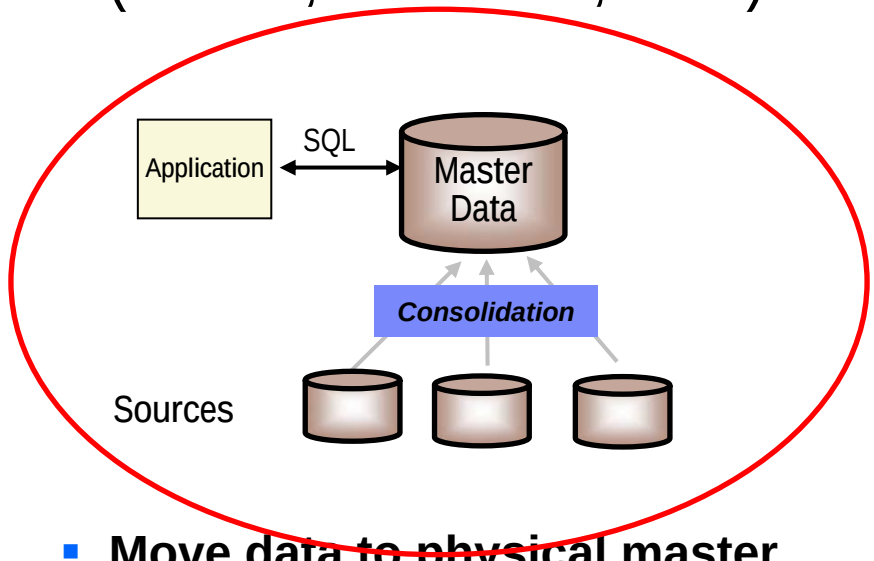

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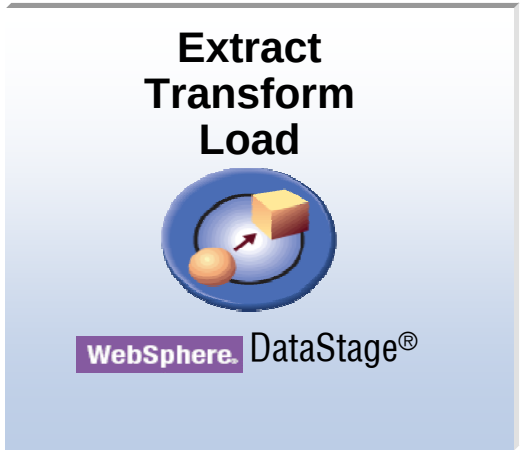
Extract, Transform, and Load (ETL) Data with WebSphere DataStage

- **Create, execute, and monitor jobs to extract, transform, and load data**
- **Graphically design, develop, deploy, and reuse ETL jobs quickly and easily**
- **Deploy jobs in real-time, batch mode, or as services using SOAP and/or EJB bindings**
- **Parallel Processing delivers Unmatched Function, Performance, and Scalability**



ODM Wants a Simpler Solution to Load Its Warehouse

We have to move a lot of data into our warehouse.

Do you have anything to make this easy?

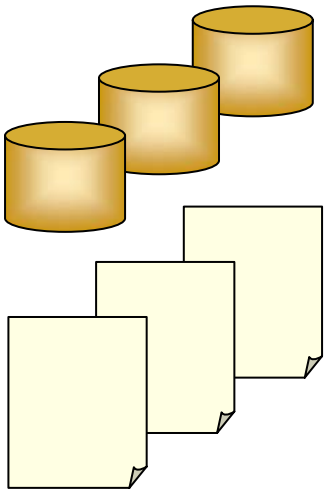
CIO
On Demand Merchants

You can easily create ETL jobs that move data into your data warehouse with WebSphere Data Stage.

IBM

Loading Your Data Warehouse with WebSphere DataStage

Multiple databases or files



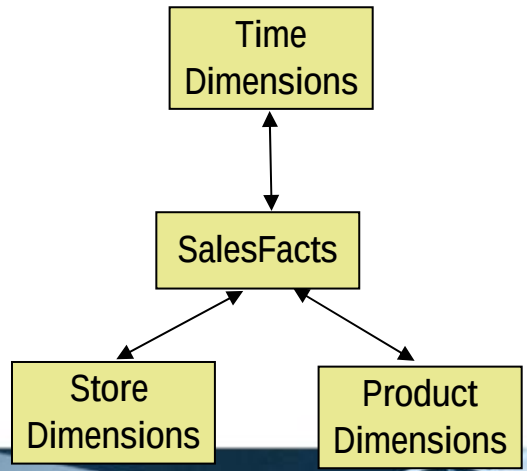
Extract

WebSphere DataStage

Transform

Load

Master Data
or
Data Warehouse



Star schema tables

Sales Data Transformation

Different field names

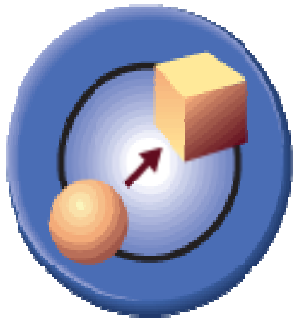
Different field order

Add store Identifier

Different currency format

PRODID	CUSTID	STOREID	QTY	TOTALSALE	SALEDATE
000 101	100	01	01	004.50	2006-02-28
000 121	100	01	03	005.97	2006-02-28
000 101	101	01	01	004.50	2006-03-01

Data Warehouse SalesFacts Table



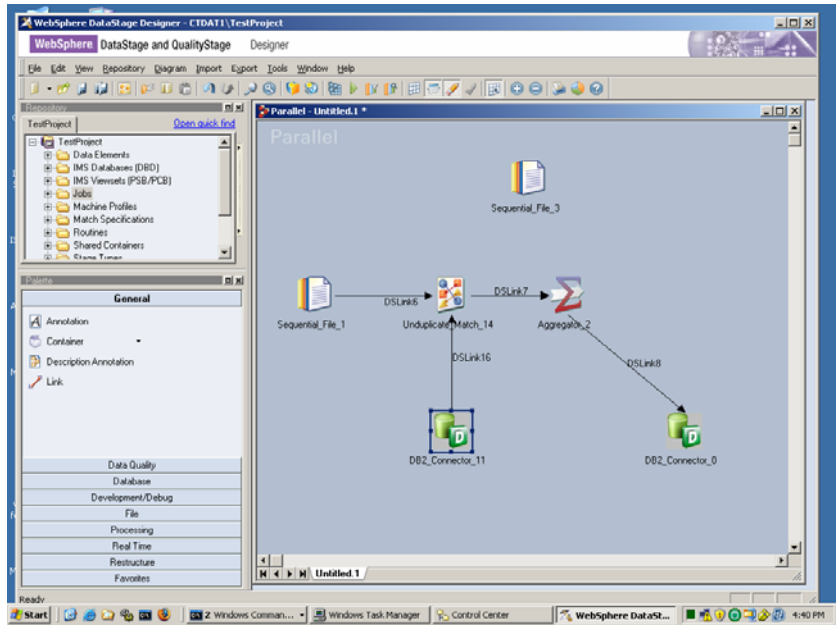
Transform

PRODUCT	QTY	CUSTNO	SALEAMT	DATE

Store #1 POS Sales Extract

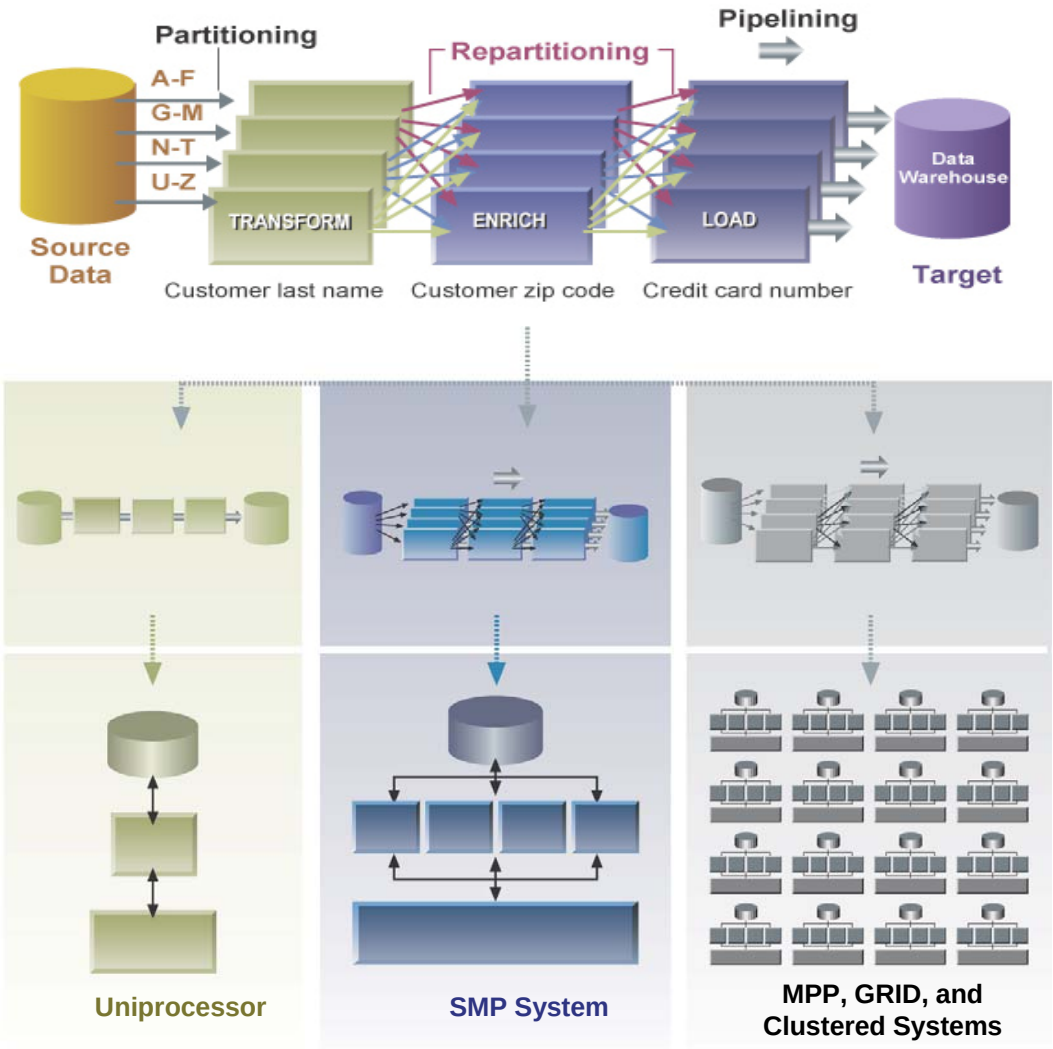
DEMO: DataStage

1. **Use DataStage to load sales and customer data from a store extract sources into your data warehouse**
   1. Flat Files (Input) – POS Store sales data
   2. ODBC (Input) – POS Store info
   3. DB2 (Update) – Corporate Sales Warehouse



2. **Show how built in stages make it easy to handle transformation and aggregations**

WebSphere DataStage Enterprise Editions Provide Real Scalability for Big Jobs

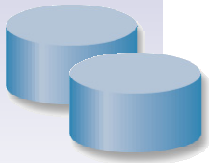


- Design integration process without concern about data volumes or time constraints
- Leverages database partitioning schemes for optimal load performance
- Simple steps to define partitions within each process if needed
- Single configuration file may be reset to add processors, hardware
- No hand coding of programs to enable more processors
- Supports SMP, Clustered, GRID, and MPP platforms

IBM Information Server Connects to Almost Everything

RDBMS

DB2 (on Z, I, P or X series)
Oracle
Informix (IDS and XPS)
Ingres
MySQL
Netezza
Progress
RDB
RedBrick
SQL/DS
SQL Server
Sybase (ASE & IQ)
Teradata
Universe
UniData
NonStopSQL
And more…..

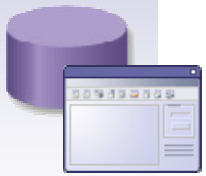


General Access

Sequential File
Complex Flat File
File / Data Sets
Named Pipe
FTP
Compressed / Encoded Data
External Command Call
Parallel/wrapped 3rd party apps
EMC InfoMover
Web logs
Unstructured: e-mail, docs, etc.
Content Management Systems
Life Sciences

Enterprise Applications

JDE/PeopleSoft EnterpriseOne
Oracle Applications
PeopleSoft Enterprise
SAS
SAP R/3 & BI
SAP XI
Siebel
JDA
Ariba
Manugistics
I2
And more…



Standards & Real Time

WebSphere MQ
Java Messaging Services (JMS)
Java
XML & XSL-T
EBXML
Web Services (SOAP)
Enterprise Java Beans (EJB)
EDI
FIX
SWIFT
HIPAA

CDC / Replication

DB2 (on Z, I, P, X series)
Oracle
SQL Server
Sybase
Informix
IMS
VSAM
ADABAS
IDMS
NonStopSQL
Enscribe

Legacy

Allbase/SQL
C-ISAM
D-ISAM
Datacom/DB
DS Mumps
Enscribe
Essbase
FOCUS
IDMS/SQL
ImageSQL
Infoman
KSAM
M204
MS Analysis
Nomad
Nucleus
RMS S2000
Supra
TOTAL
TurboImage
Unify
And many more….

The Need to Improve Data Quality

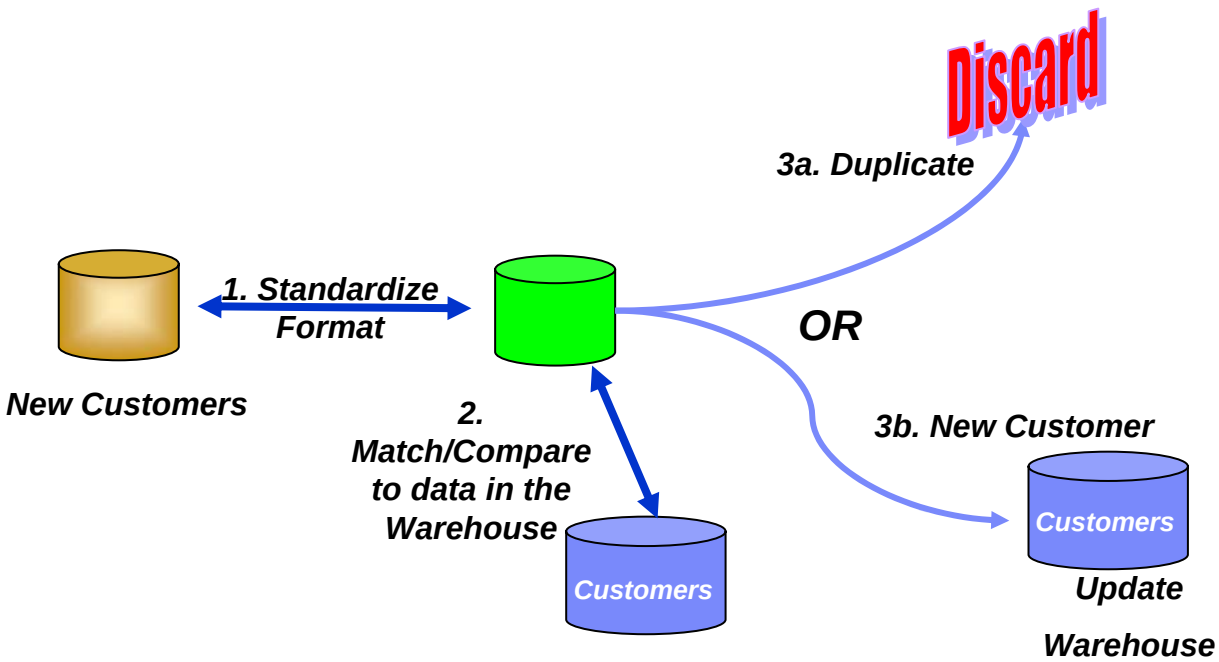
Critical Problem

- **Extracted data may have inaccuracies, errors, and duplicate data which must be corrected to create a "master" consolidation**

Why?

- **No common standards across organization**
- **Human error**
- **Operational data is estimated to degrade in accuracy 2% per month**
- **Unexpected values stored in fields**
- **No reliable keys for consolidated views**

Data Cleansing with WebSphere QualityStage



What About Our Competitors?

	IBM	Microsoft	Oracle
1. Federated database support	YES	Limited Basic ODBC	**Limited Limited connectivity
2. Information Server platform	YES	NO	NO
3. Cross-product metadata repository	YES	NO	NO
4. Graphical tool for automatic ETL job development with built-in transformations functions	YES	Limited SQL transforms	Limited SQL transforms
5. Highly scalable ETL - uniprocessor to true grid	YES	NO	Limited Multiple products
6. Data cleansing and harmonization	YES	NO	Limited

BlueCross BlueShield of Tennessee

Improving customer service and sales with visibility of all relevant information

Challenge

- **Differentiation from competitors, with targeted offerings designed to win new business**
- **Response to the growing information needs of customers and providers**
- **Creation of a single view of information, with business intelligence capabilities, across multiple LOBs**

Solution

- **BCBST is using IBM Information Server with IBM DB2 to profile, transform, and load data to an enterprise data warehouse (EDW).**
- **For multidimensional analytics and client reporting, BCBST uses Cognos BI.**
- **The solution also provides intelligent search capabilities for unstructured data using IBM OmniFind and IBM Content Manager.**

of Tennessee
plans for better health. plans for a better life.™

Business Benefits

- **Improved satisfaction for customers and providers by enabling them to run their own analytics and better manage their healthcare costs**
- **Reduced risk with improved tracking of data movement to comply with healthcare regulations.**
- **Reduced time to load data to EDW and improved performance for high-volume data transformations**
- **Provided access to structured and unstructured data, historical and real-time**

DHL

Business challenge:

Integrate Airborne's land operations into DHL

Business benefits:

Merged regional silos of data into a single view of the customer

Established firm base for additional acquisitions

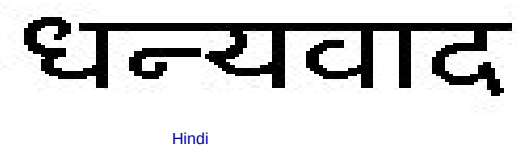
Solution

Used IBM® WebSphere® DataStage® and IBM WebSphere QualityStage™ products to

Convert Airborne's customer data into DHL's formats

Establish a Global Customer Database

Deliver the common customer data to data marts serving the regional operating units worldwide.



Hindi

Traditional Chinese

Thai

Russian

Spanish

Arabic

Thank You

Brazilian Portuguese

Italian

German

French

Tamil

Simplified Chinese

Korean

Japanese