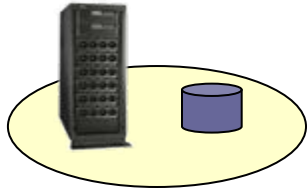




Make Smarter Decisions With New Intelligence

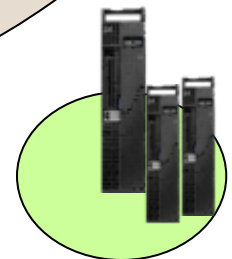
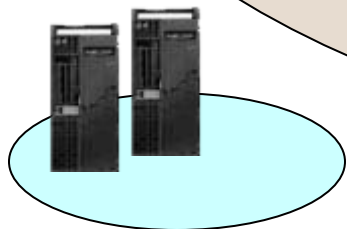
Create New Intelligence With
IBM Information Management Solutions

Smarter Solutions Need To Build On Existing Systems



Smarter Solutions

1. Start with a Strong Foundation
2. Automate Business Processes
3. Capture Business Expertise
4. Connect Everything with an Intelligent Bus
5. Make Smarter Decisions with New Intelligence
6. Use the most efficient platform to achieve New Intelligence



Without New Intelligence Business Decisions Can Be Suspect...

The mortgage line of business is doing well. Our late payment rates are very low.



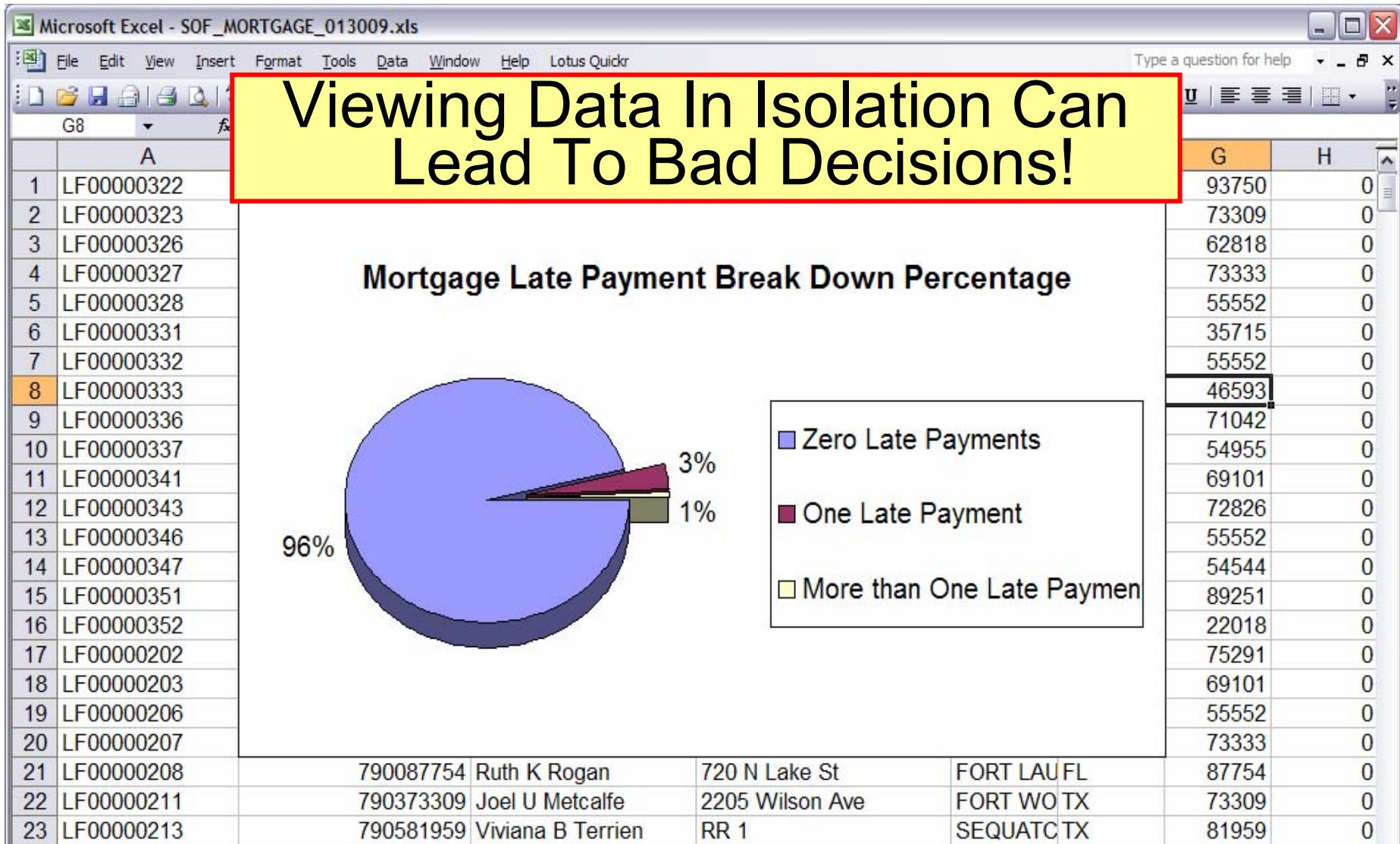
**Mortgage Line of Business
VP**

Then why are other areas of our business seeing problems...



**Service Oriented Finance
CEO**

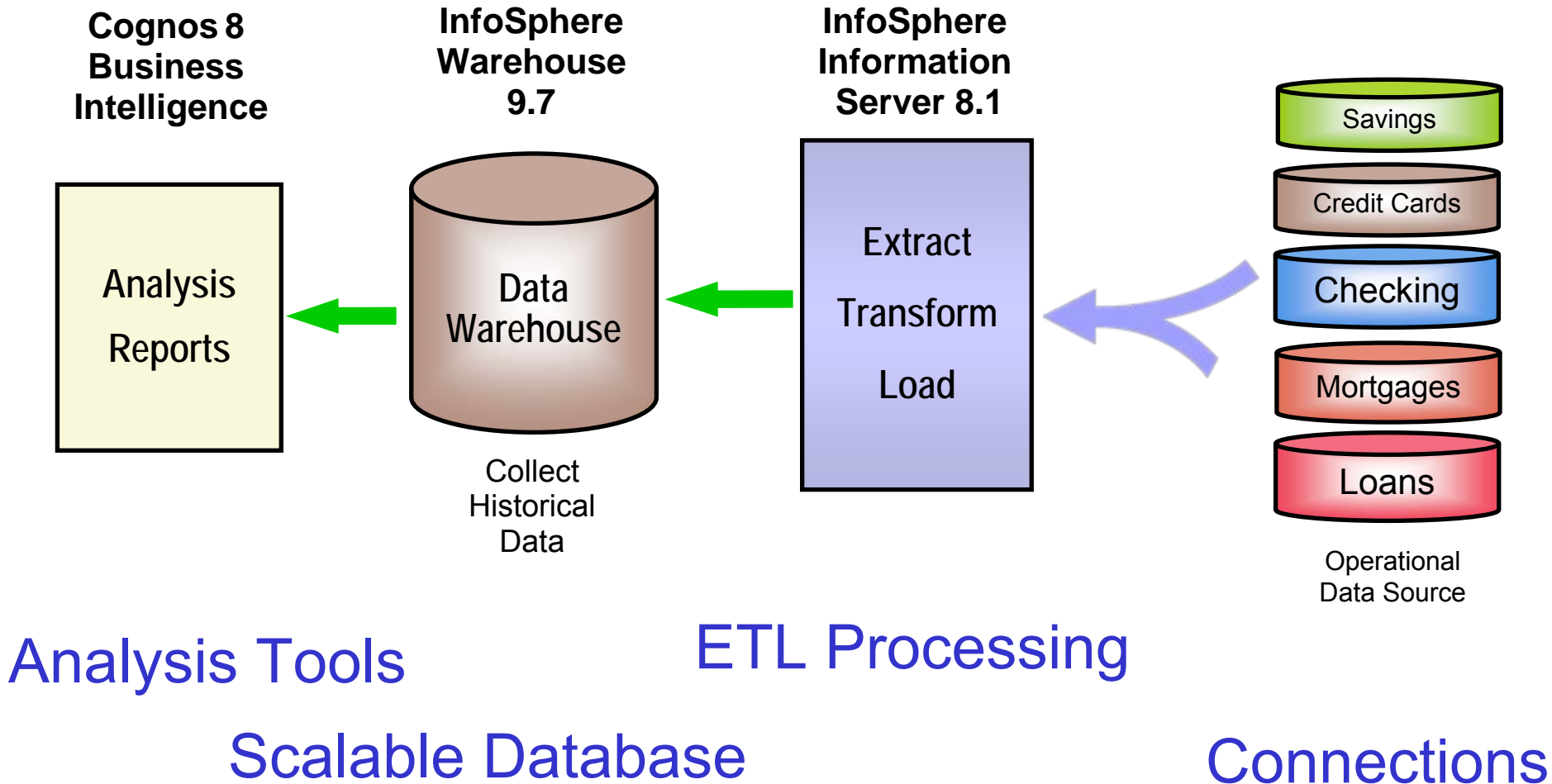
Isolated Customer Information Leads To An Incomplete View Of The Business



Service Oriented Finance Needs A Complete View Of Their Customers

- **Problem:** Segmented lines of business store their data in isolated silos
 - ▶ Banking, Credit Cards, Mortgage, Consumer Loans
- **Requirement:** Identify customer trends faster by viewing data from across all areas of business
- **Solution:** Create new intelligence by building an enterprise data warehouse containing a complete view of customer information

Create New Intelligence With IBM Information Management Software



Industry Data Models Help You Get Started

Where do we start?



**Service Oriented Finance
CIO**

IBM industry data models can help you get started quickly.



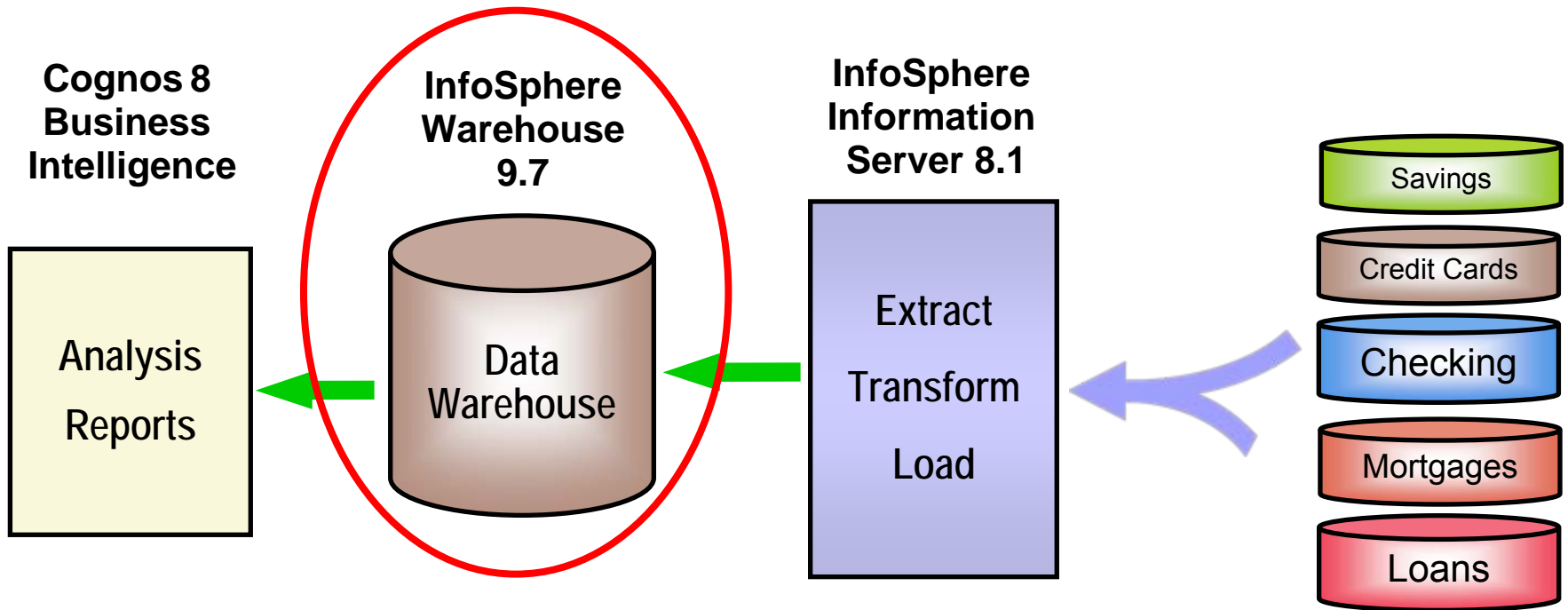
IBM

IBM Industry Data Models Accelerate Your Data Warehouse Solution

- Industry Data Models are:
 - ▶ Best practices from over 400 IBM clients
 - ▶ Built on InfoSphere Information Server and InfoSphere Data Architect
- Industry Data Models include:
 - ▶ Enterprise Data Warehouse (EDW) Model
 - ▶ Business Terminology Data Model
 - ▶ Business Solution Templates (BST)
- Industry Data Model Business Benefits
 - ▶ 83% report their Data Warehouse is better aligned with business needs
 - ▶ Over 50% report that businesses are now getting the information they want
- Industry Data Model Development Benefits
 - ▶ 15-20% cost savings to build the warehouse
 - ▶ 20-25% decrease in the time spent in design phase
 - ▶ 30-40% decrease in time spent in the modeling phase

- Source Hurwitz

At The Heart Of New Intelligence Is A Data Warehouse



Use IBM InfoSphere Warehouse To Build Your Data Warehouse

- InfoSphere Warehouse is built on DB2
 - ▶ Inherits DB2's features, performance, scalability, and specialized integration with IBM Power Systems hardware
- Manage large-scale data warehouses using advanced data partitioning features
 - ▶ Warehouse tables can be spread across multiple physical systems
 - ▶ Parallel execution across nodes is transparent to incoming queries
- Save money with data compression
 - ▶ Reduce your warehouse data storage footprint, often by as much as 60% - or more!
- Uncover new opportunities using embedded analytics
 - ▶ Use integrated OLAP, data mining, and text analysis capabilities without copying data outside of the warehouse
 - ▶ Cubing Services OLAP engine creates virtual cubes accessible via standard protocols supported by IBM and 3rd party analysis tools (MDX, ODBO, XMLA)
- Eclipse tooling to design data models, OLAP cubes, mining models, and more
- Manage service levels with integrated workload management

InfoSphere Warehouse 9.7 Includes Many New Features To Lower Your Costs



- Enhanced compression features compress more types of data (index, XML, temp, LOB, ...)
- Enhanced analytics including new data mining and cubing services features
- Enhanced support for XML data in warehouse environments
 - ▶ XML now supported in range partitioning, DPF, MDC, and more
- Simplified workload management with a graphical administration interface
- Improved packaging and competitive pricing with new departmental edition

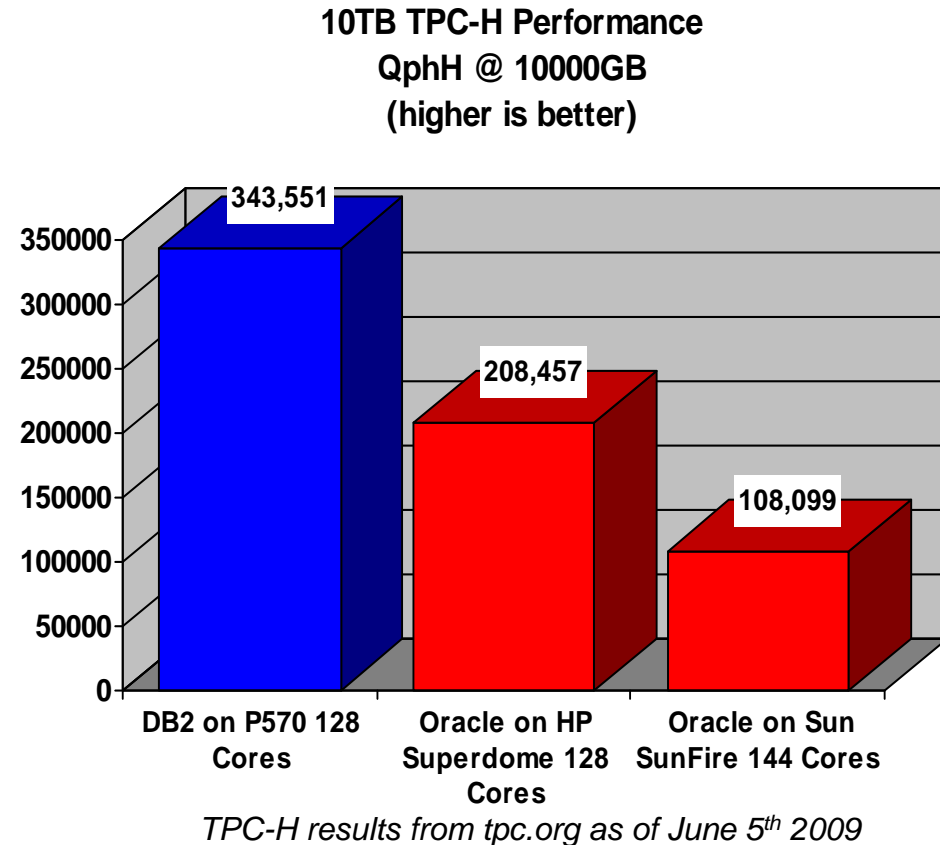
InfoSphere Warehouse Is Optimized For Both Power Systems And IBM Total Storage

- InfoSphere Warehouse and Power Systems integration benefits
 - ▶ Deep integration between AIX Workload Management (WLM) and DB2 WLM
 - Helps meet service levels and maintain predictable performance
 - ▶ Recovery Integration
 - DB2 recovery process with Power Systems autonomic computing technologies
 - ▶ Dynamic Reconfiguration
 - Add or remove processors, memory and I/O adapters on running LPARs

- InfoSphere Warehouse and IBM Total Storage integration benefits
 - ▶ I/O Priority
 - IBM TotalStorage DS8000 can favor AIX/DB2 workloads
 - ▶ Cooperative Caching
 - Enables more efficient use of memory resources in host and storage systems
 - Warehouse and storage exchange information to optimize use of memory in database buffer pools and the storage system's cache
 - ▶ Leverages IBM Total Storage data mirroring
 - Protects against loss of entire storage subsystem

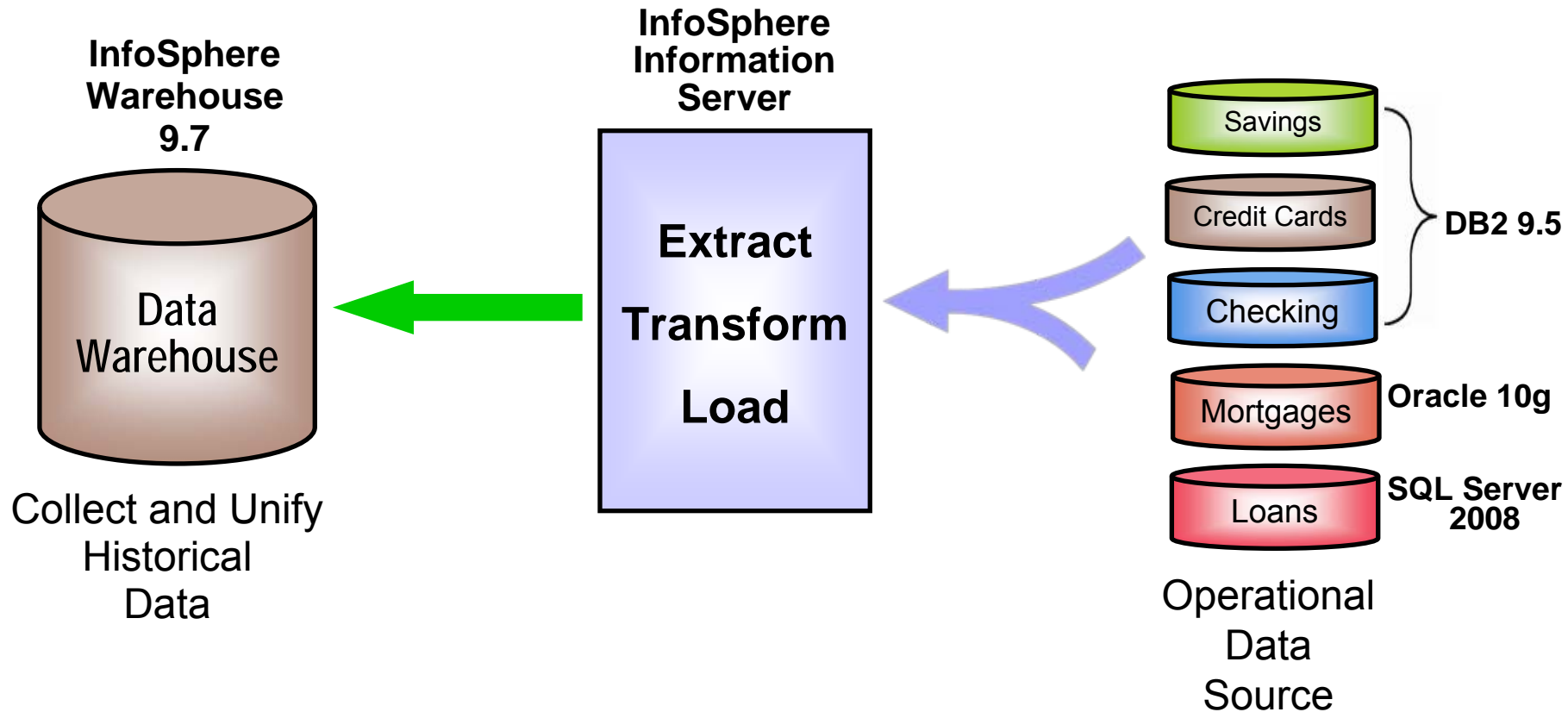
The Competitors Can't Match IBM InfoSphere Warehouse

- InfoSphere Warehouse holds the highest published result for the TPC-H 1TB data warehouse benchmark
- Integration of IBM InfoSphere Warehouse, AIX, and Power Systems hardware gives IBM an advantage
- Oracle on SUN or HP can't beat IBM
 - ▶ Oracle is designed to run on commodity servers
 - ▶ No optimization specifically for HP servers



InfoSphere Scales Bigger and Performs Better than Oracle

InfoSphere Information Server Can Load Your Data Warehouse



Extract, Transform, and Load (ETL) Jobs Map Data From Sources To Targets

A few simple examples:

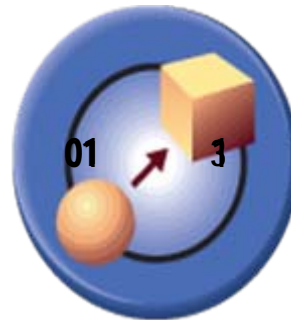
- Mapping source columns to targets
- Different column names and order
- Generating new column values
- Converting data types and formats



PROD ID	CUST ID	SOURCE ID	QTY	BAL	SALEDATE
000 101	100	01	1	\$10,000.00	2007-02-28
000 121	100	01	3	\$500.50	2007-02-28
000 102	101	01	1	\$ 20,000.00	2007-03-01

Target: Data Warehouse

000 101 100



Transform

01 3 \$20,500.50 2007-02-28

PRODUCT	QTY	CUSTNO	BALANCE	DATE
101	01	100	10000	02-28-2007
121	03	100	500.50	02-28-2007
102	01	100	20000	03-01-2007

Source: Operational Data

A successful data integration project requires a detailed specification for the business goals and technical requirements!

InfoSphere FastTrack Creates Data Maps And Specifications For Your Data Integration Projects

- Create simplified data maps and transformations using drag and drop
 - ▶ Automatically discover source and target columns
 - Uses database introspection and Web 2.0-style tagging
 - Use business terms to accurately match source to target
- Data analysts and developers share project specifications
 - ▶ Collaboration and reuse improve productivity
 - ▶ Use metadata common to all Information Server tools
 - ▶ Standard formats and centralized management for governance
 - Synchronize work across global teams
- Generate ETL code directly from job specifications
 - ▶ Reduces costs and errors in ETL job development

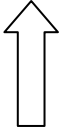
Oracle doesn't offer any of these capabilities

InfoSphere FastTrack Automatically Discovers Data Mappings Using Business Term Tags

Mortgage To Warehouse Mapping Specification

Source	Target	Tag
Times_Past_Due	Credit_Events	Failure_To_Pay
Current_Balance	Ending_Balance	Period_Balance
Account_Num	Account_ID	Arrangement
Account_Holder	Customer_ID	Party_ID

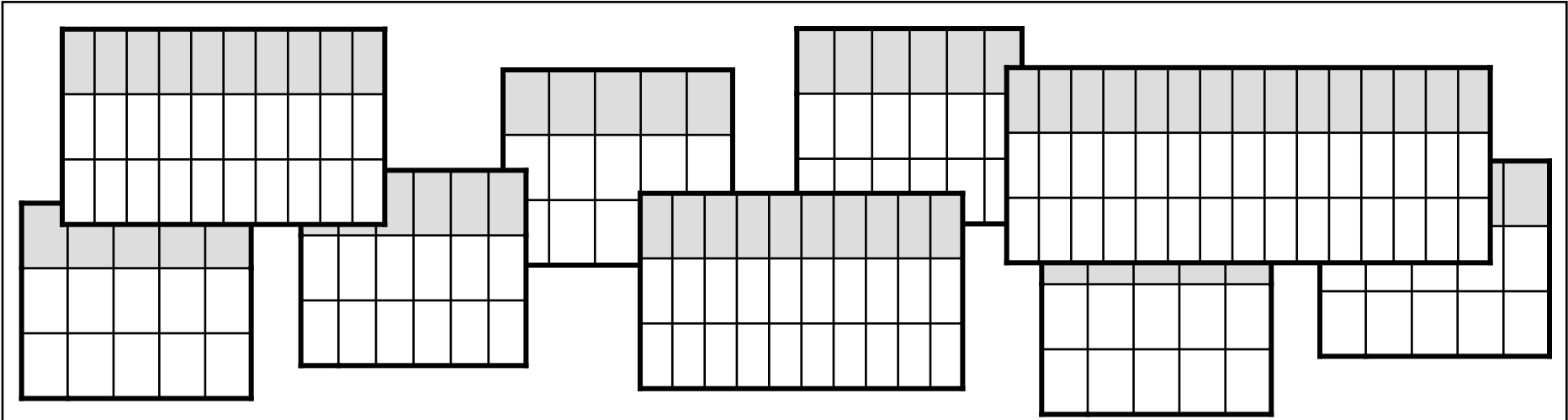
Source Discovery
Mortgage.Times_Past_Due
Checking.NSFCCount
Loans.MissedPayments



Metadata From Information Server

Tags come from:

- Industry data models
- Your corporate standards



DEMO: Use InfoSphere FastTrack To Create ETL Specification For Warehouse

- Use discovery feature to find source columns matching business term tags
- Generate ETL job for InfoSphere DataStage

The screenshot displays the IBM Information Server FastTrack interface. The main window is titled "LoadMortgageFact" and shows a "Mapping Editor" with a table of source and target columns. The source columns are numbered 1 through 7, and the target columns are mapped to specific business terms. A "Discover" tab is active, showing a table of discovered source columns with columns for Name, Score %, Data Type, and Related. A "Match Details" dialog box is open, showing the relationship between "FAILURE TO PAY" and "TIMES_PAST_DUE". The "Properties" panel on the right shows details for the selected column, including Name Alias, Data Type (Double), Position (18), Nullability (true), Length (8), Precision (8), Scale, and Cardinality Type (Not Constrained).

Source	Target	Business Term
Results available..	BALANCE_SNAPSHOT_FACT.CREDIT_EVENTS	FAILURE TO PAY [WBG]
SOF_MORTGAGE.CURRENT_BALANCE	BALANCE_SNAPSHOT_FACT.ENDING_BALANCE	PERIOD BALANCE [WBG]
SOF_MORTGAGE.ACCOUNT_ID	BALANCE_SNAPSHOT_FACT.ACCOUNT_ID	ARRANGEMENT IDENTIFIER [WBG]
SOF_MORTGAGE.ACCOUNT_HOLDER_ID	BALANCE_SNAPSHOT_FACT.CUSTOMER_ID	INVOLVED PARTY IDENTIFIER [WBG]
	BALANCE_SNAPSHOT_FACT.BRANCH_ID	BUILDING IDENTIFIER [WBG]
	BALANCE_SNAPSHOT_FACT.DATE_ID	STATUS DATE [WBG]

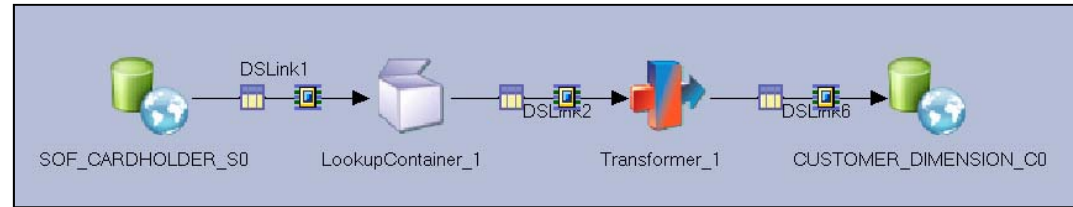
Name	Score %	Data Type	Related
ZLNXPCK.SOFIOD.FISHING.BALANCE_SNAPSHOT_FACT.CREDIT_EVENTS	100	Integer	true
ZLNXPCK.Oracle Mortgages.INST1.SOF_MORTGAGE.TIMES_PAST_DUE	100	Double	true

Match Details: FAILURE TO PAY -> TIMES_PAST_DUE
FAILURE TO PAY : Glossary business term
Defined as classified object relationship
TIMES_PAST_DUE : Column

Properties: Name Alias, Data Type: Double, Position: 18, Nullability: true, Length: 8, Precision: 8, Scale, Cardinality Type: Not Constrained

InfoSphere DataStage Creates The Technical Implementation Of Data Integration Jobs

- Creates graphical data integration jobs using hundreds of pre-built transformation and data quality functions
 - ▶ Batch & real-time operations
- Stores and retrieves metadata from Information Server
 - ▶ Allows easy reuse of integration work between projects
- Advanced parallel processing capabilities
 - ▶ Dynamic partitioning and pipelining
 - ▶ Scale jobs across additional hardware without modification
- Easily deploy data integration jobs as services for SOA



Database				
Classic Federation	DB2 UDB API	DB2/UDB Enterprise	DB2Z	Dynamic RDBMS
Informix CLI	iWay Enterprise	ODBC	Oracle Enterprise	Stored Procedure

Processing			
Aggregator	Change Apply	Change Capture	Compare
Compress	Copy	Decode	Difference
Encode	Expand	External Filter	Filter
FTP Enterprise	Funnel	Generic	Join
Lookup	Merge	Modify	Pivot
Remove Duplicates	Slowly Changing Dimension	Sort	Surrogate Key Generator
Switch	Transformer		

Real Time			
Java Client	Java Transformer	Web Services Client	Web Services Transformer
WebSphere MQ Connector	WISD Input	WISD Output	XML Input
XML Output	XML Transformer		

IBM InfoSphere Information Server Connects To Almost All Sources Of Data

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 and IQ)
Teradata
Universe
UniData
NonStopSQL
And more.....



Offering more
connectivity
than Oracle

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 and BI
SAP XI
Siebel
JDA
Ariba
Manugistics
I2
And more...



Standards and Real Time

WebSphere MQ
Java Messaging Services (JMS)
Java
XML and 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

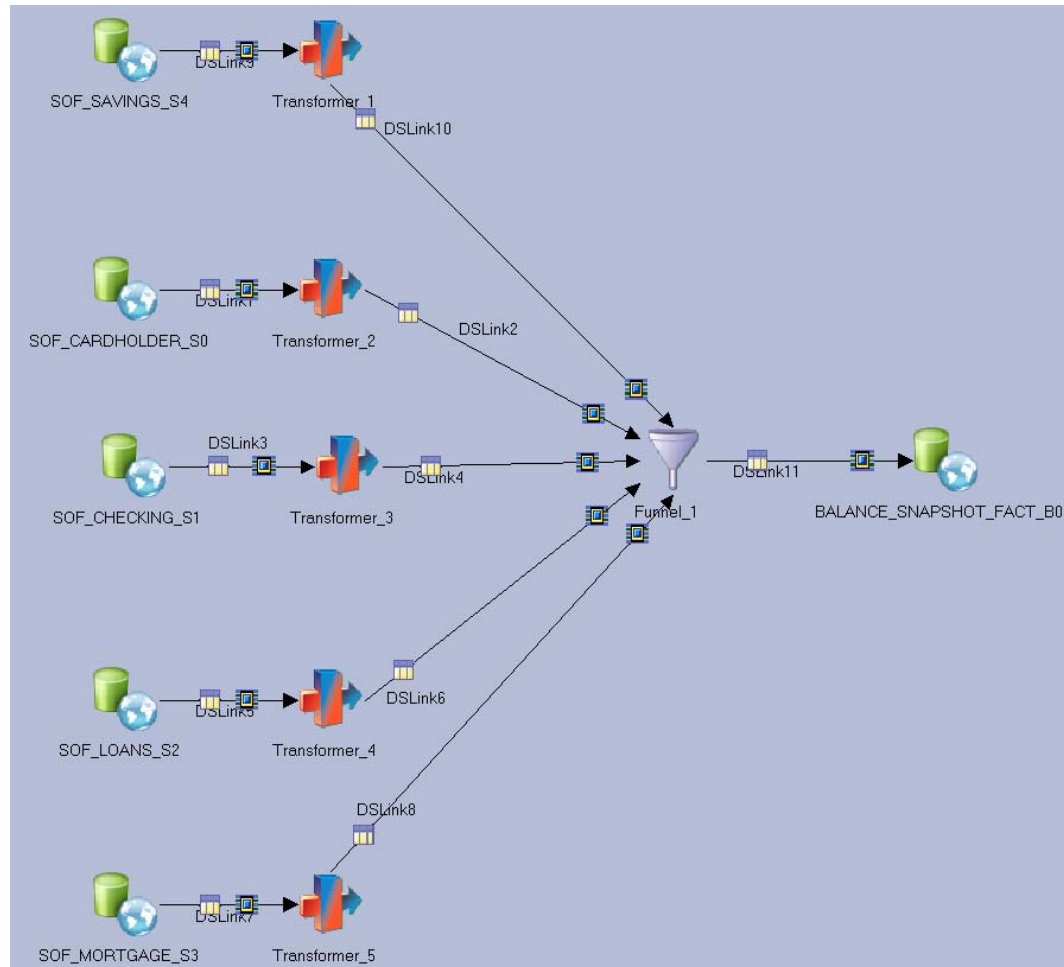
Legacy

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....



Demo: Use InfoSphere DataStage To Load The Data Warehouse

1. Show the DataStage ETL job generated by FastTrack
2. Run the DataStage Job to populate the data warehouse fact table



IBM Leads In Data Integration

- Only InfoSphere Information Server delivers unified metadata across all tools for collaboration and reuse
 - ▶ Oracle has no integration of metadata across products
 - ▶ Manual import/export required
- Model-driven design with FastTrack and DataStage speeds development
 - ▶ Oracle does not offer these functions
- InfoSphere Information Server works in heterogeneous environments
 - ▶ InfoSphere gathers, processes, and cleanses more data from more sources than Oracle

"FastTrack enables our analysts to **capture more complete business requirements**. The ability to translate this information directly into DataStage jobs with up to 70 percent of the code completed will **significantly shorten our development lifecycle**."

- Roderich Hofmann, project manager, WAVE, IT-Solutions provider of Bank Austria and member of UniCredit Group

Using New Intelligence Creates New Business Opportunities

If we can identify our risky mortgage assets, we can work to remove them from our books.



**Service Oriented Finance
CEO**

We can identify risky mortgage customers by watching their activities in other business areas

- ▶ Bounced checks
- ▶ Missed credit card payments
- ▶ Missed loan payments.



**Mortgage Line of Business
VP**

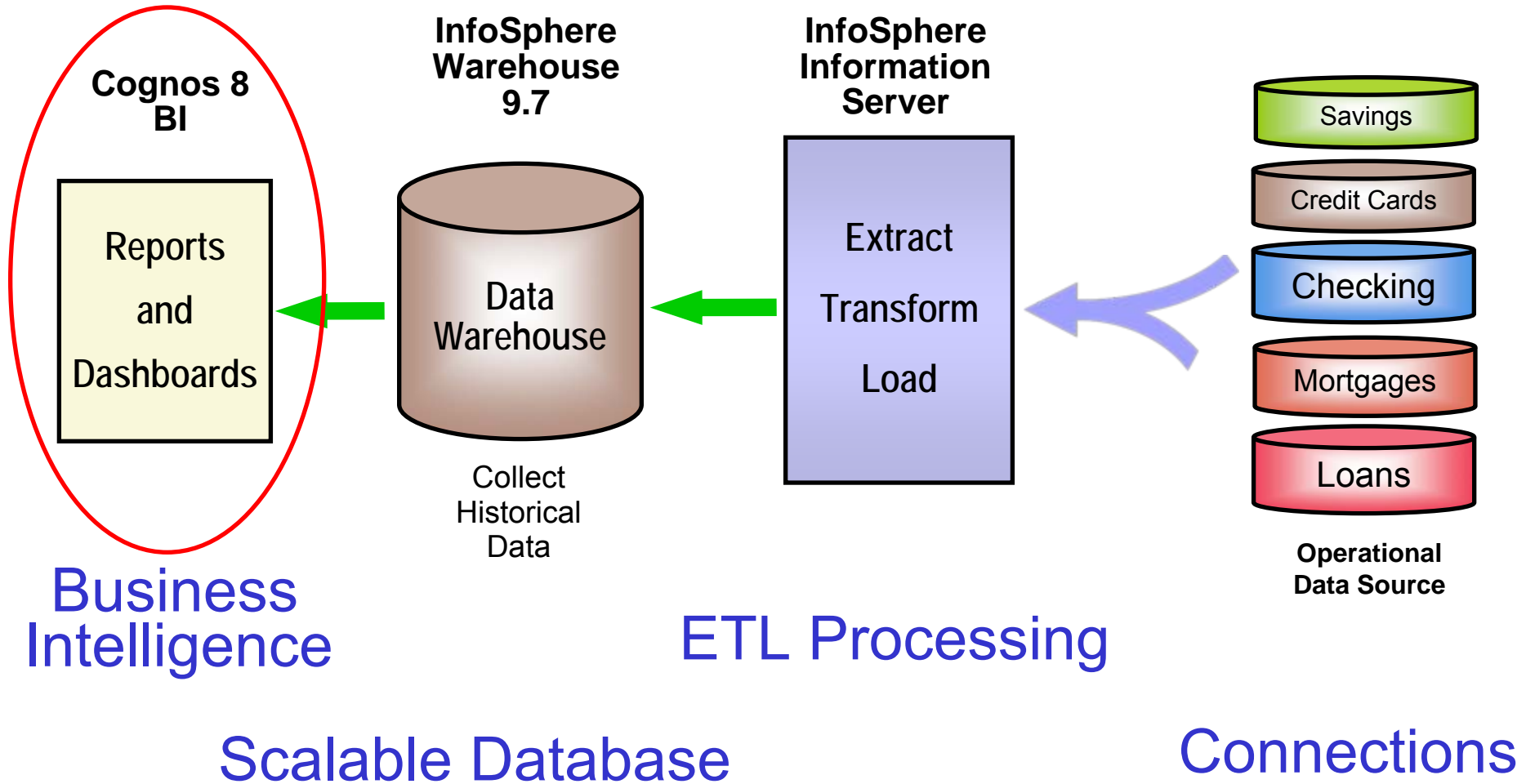
Create New Intelligence With IBM Cognos

Now that you have a data warehouse, you can create this new intelligence using IBM Cognos 8 BI.



IBM

Use IBM Cognos 8 BI To Optimize Business Decisions

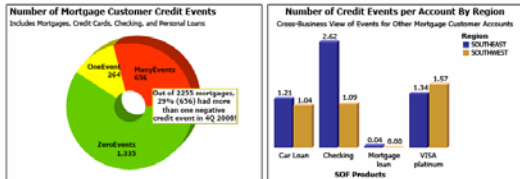


DEMO: Identify Risky Mortgage Accounts Using Cognos 8 BI

1. Show report generated in Cognos Report Studio in PDF format
2. Report identifies high-risk mortgages by looking at negative credit events in customers other SOF accounts (CC, Checking, etc...)
3. Report uses both structured and unstructured data (link to mortgage data stored in FileNet)



Identifying At-Risk Mortgages Using Credit Event Data from Across the SOF Business
 Many SOF mortgage account holders also hold SOF credit cards, checking accounts, and personal loans. This is a report of negative credit events in non-mortgage accounts belonging to current SOF mortgage holders. A credit event is any non-payment of a balance due. Checking account credit events are Insufficient Fund (ISF) events ("bounced checks").



4Q 2008 Mortgage Customer Detail by Region and State
 Colors: Credit events numbers are color coded. Accounts with greater than 8 events are shown in **link red**.
 Links: Customer ID link opens customer's mortgage document folder using FileNet Workplace XT. Authentication required.

Region: **SOUTHEAST**
 State: FL

			Checking		VISA platinum		Car Loan		Mortgage loan		Summary	
			Negative Credit Events	Current Balance	Negative Credit Events	Current Balance	Negative Credit Events	Current Balance	Negative Credit Events	Current Balance	Negative Credit Events	Current Balance
7000A	262	Herman Miller	11	\$1,453.06	2	\$805.48	1	\$24,465.55	0	\$232,285.42	17	\$259,050.71
7000B	723	7233	13	\$1,413.24	3	\$895.40	3	\$24,465.55	0	\$232,285.42	12	\$259,050.71
2602	2602	Julia P Lammiman	4	\$1,261.57	2	\$891.89	2	\$52,120.40	0	\$72,748.89	8	\$777,613.71
7000C	7000C	7000C	4	\$1,251.97	2	\$891.89	2	\$52,120.40	0	\$72,748.89	8	\$777,613.71
3000	3000	Kelly O Minter	4	\$1,127.24	2	\$844.82	2	\$74,670.89	0	\$323,366.59	8	\$400,068.65
8004	8004	8004	4	\$1,127.24	2	\$844.82	2	\$74,670.89	0	\$323,366.59	8	\$400,068.65
3000	3000	Shad I Davis	4	\$780.11	2	\$530.11	2	\$43,230.00	0	\$93,075.43	8	\$443,813.65

That report is just what we need!

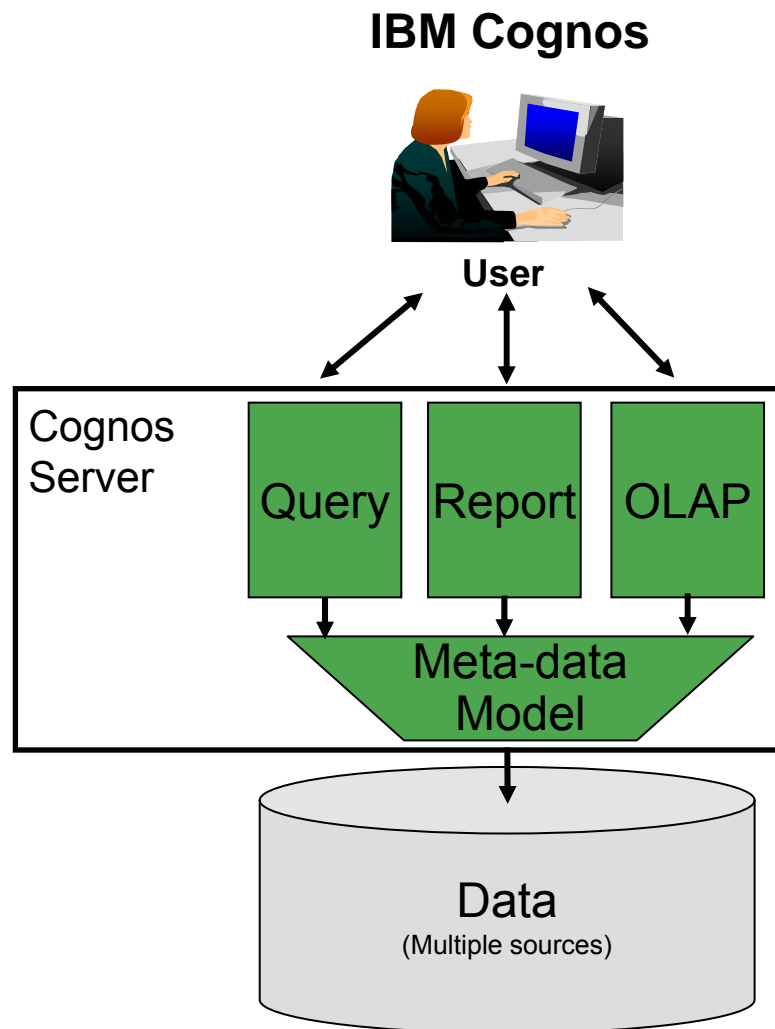


Mortgage Line of Business VP

- At risk customers are identified and contacted to refinance
- Risky mortgages can be sold

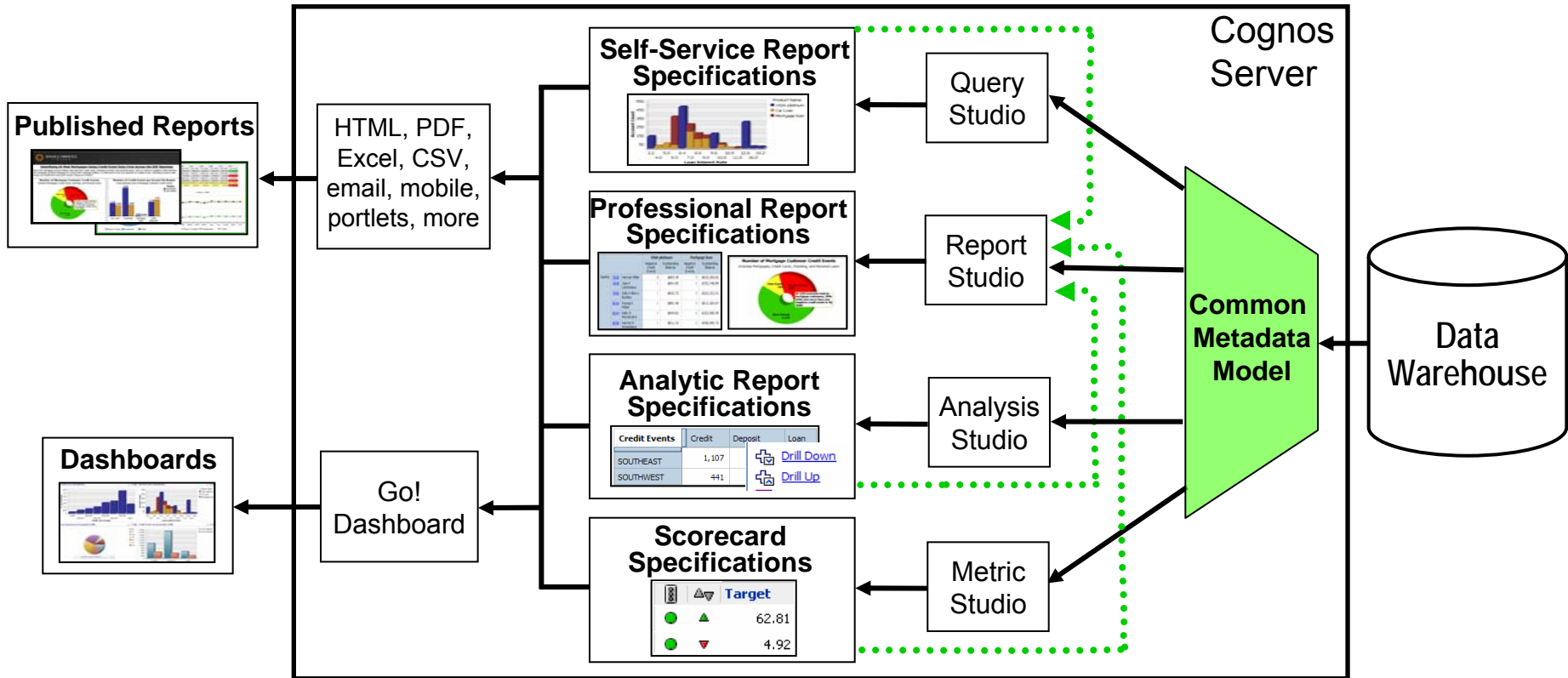
IBM Cognos Is An Integrated Platform Built On SOA

- Implemented in Java, runs on WebSphere
- 100% browser based access
 - ▶ Server side business intelligence
 - ▶ Users can access new intelligence from anywhere
- Easiest for IT to deploy and manage
 - ▶ Scales up and out across heterogeneous hardware and operating systems
 - ▶ Unified security
 - ▶ Unified administration
- Consistent user interface across tooling
 - ▶ Greater user satisfaction and increased business agility with lower IT costs
- Common meta data model
 - ▶ Author new intelligence assets once, consume anywhere
 - ▶ Common view enables open data strategy
 - ▶ Supports Unicode and multilingual features without recreating reports



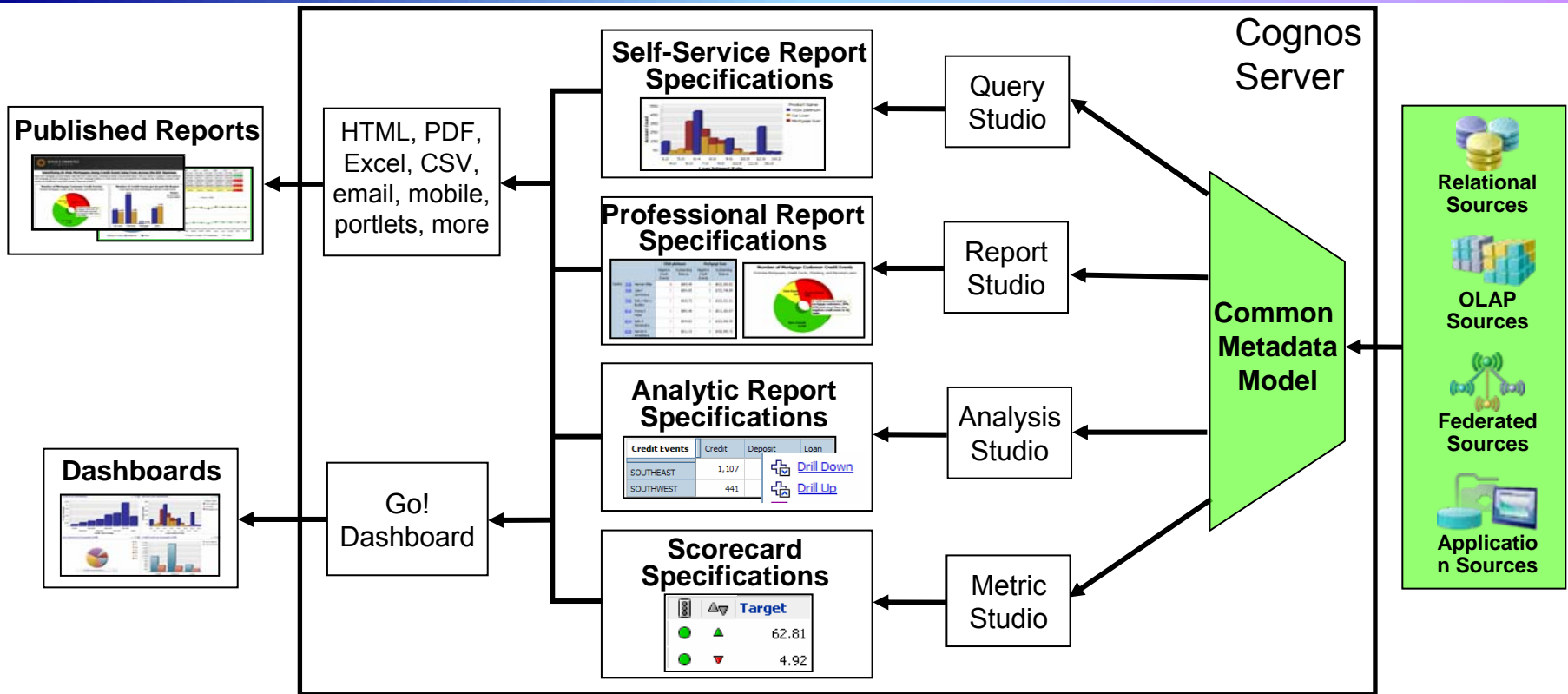
■ IBM Cognos

Reuse Trusted New Intelligence Assets Across the Cognos 8 Platform



- All new intelligence assets share a common metadata model and common report specification
- Author Once – Consume Anywhere
- Ensures consistent information and enables reuse across platform functions

Include Any Data Source In Your New Intelligence With the Cognos 8 Platform

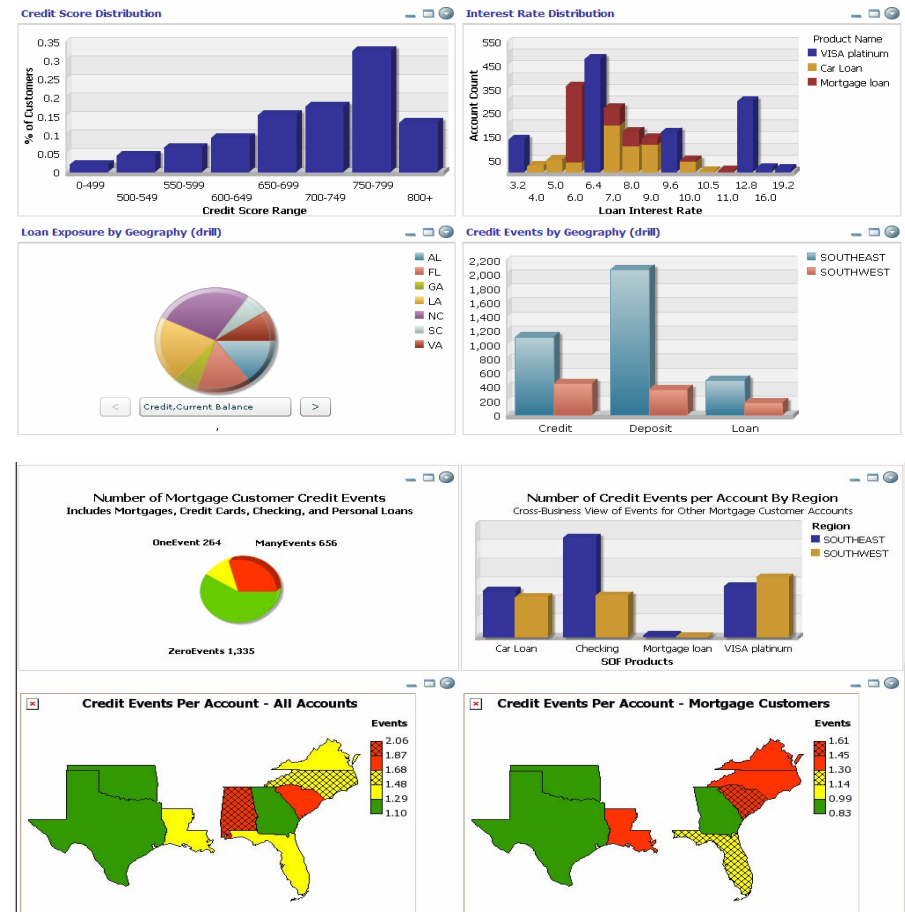


- Open data strategy enables a common view across a variety of data sources
- Support for application data sources such as SAP ERP
- Combine relational, OLAP, federated, and other data sources in any tool

- All capabilities access a trusted set of information defined in the common metadata model
- As sources change, metadata model can control and identify impacts to report specifications

Cognos Go! Dashboard Enables You To Monitor Business Operations

- Cognos report specifications can be incorporated into dashboards using Cognos 8 Go! Dashboards
- What goes into a dashboard?
 - ▶ Self service reports
 - ▶ Professional reports
 - ▶ Analytical reports
 - ▶ Scorecards
 - ▶ RSS feeds, HTML, search, more
- Users can create their own dashboards from existing Cognos report assets
- Everything you need to monitor multiple areas of the business at the same time
- Provides dynamic and visually appealing capabilities by using Adobe Flash
 - ▶ Everything runs in a browser – only Adobe Flash is required
 - ▶ Easily change chart types and color palettes



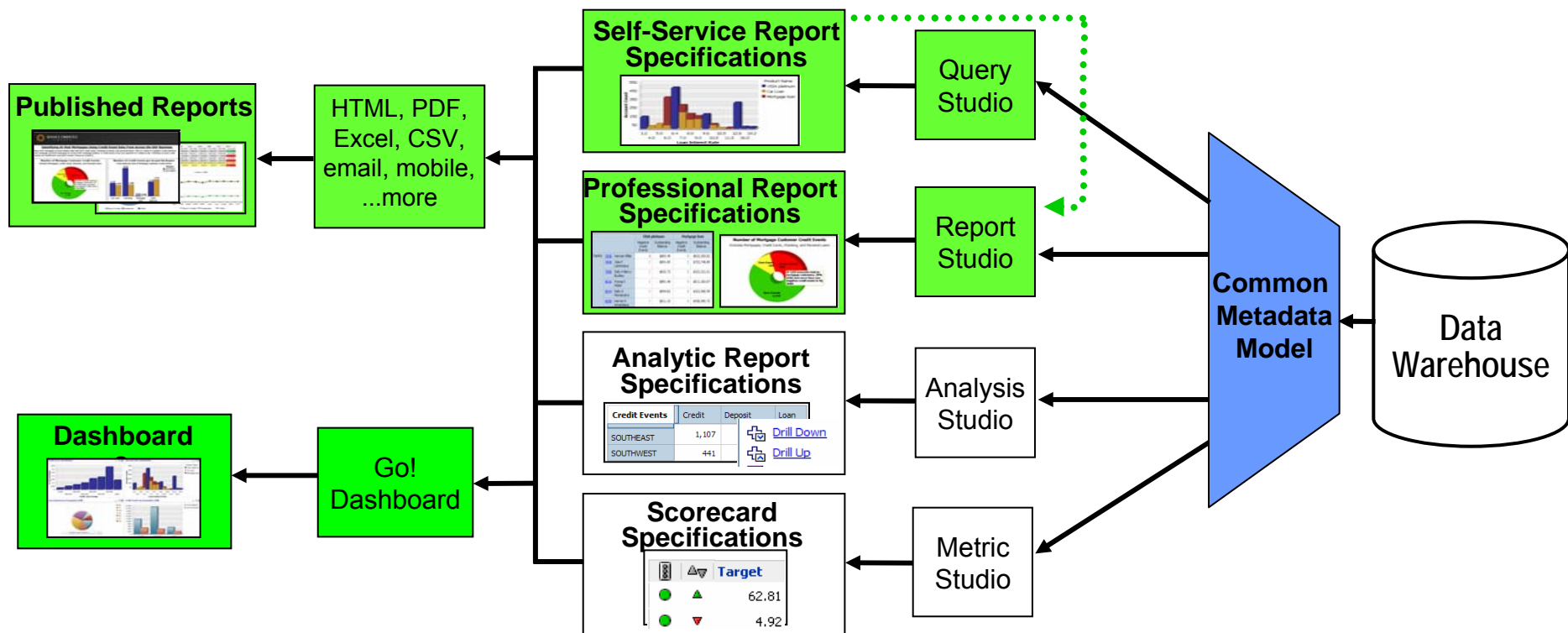
Users Can Create The Reports They Need Using Cognos 8 BI

- Query Studio is an easy to learn self-service reporting tool requiring minimal reporting knowledge
 - ▶ Helps alleviate report authoring backlog
 - ▶ Use existing self-service reports to create a new report
 - ▶ Modify the style and layout of self-service reports

- Report Studio is a professional reporting tool to create any style of report
 - ▶ Invoices, financial statements, inventory, payroll, etc
 - ▶ Provides “pixel-perfect” formatting with absolute control over visual layout
 - ▶ Library of lists, crosstabs, charts, maps, operators, constants, functions, filters, more

Demo: Gain Business Insight Through IBM Cognos 8 BI And Go Dashboard

- Use Go! Dashboard to quickly monitor the business operations
- Use Cognos Query Studio to customize an existing report
- Open the original “risky mortgage” report in Cognos Report Studio
- Show how elements of report specifications created in different Cognos functions can be included in a single dashboard

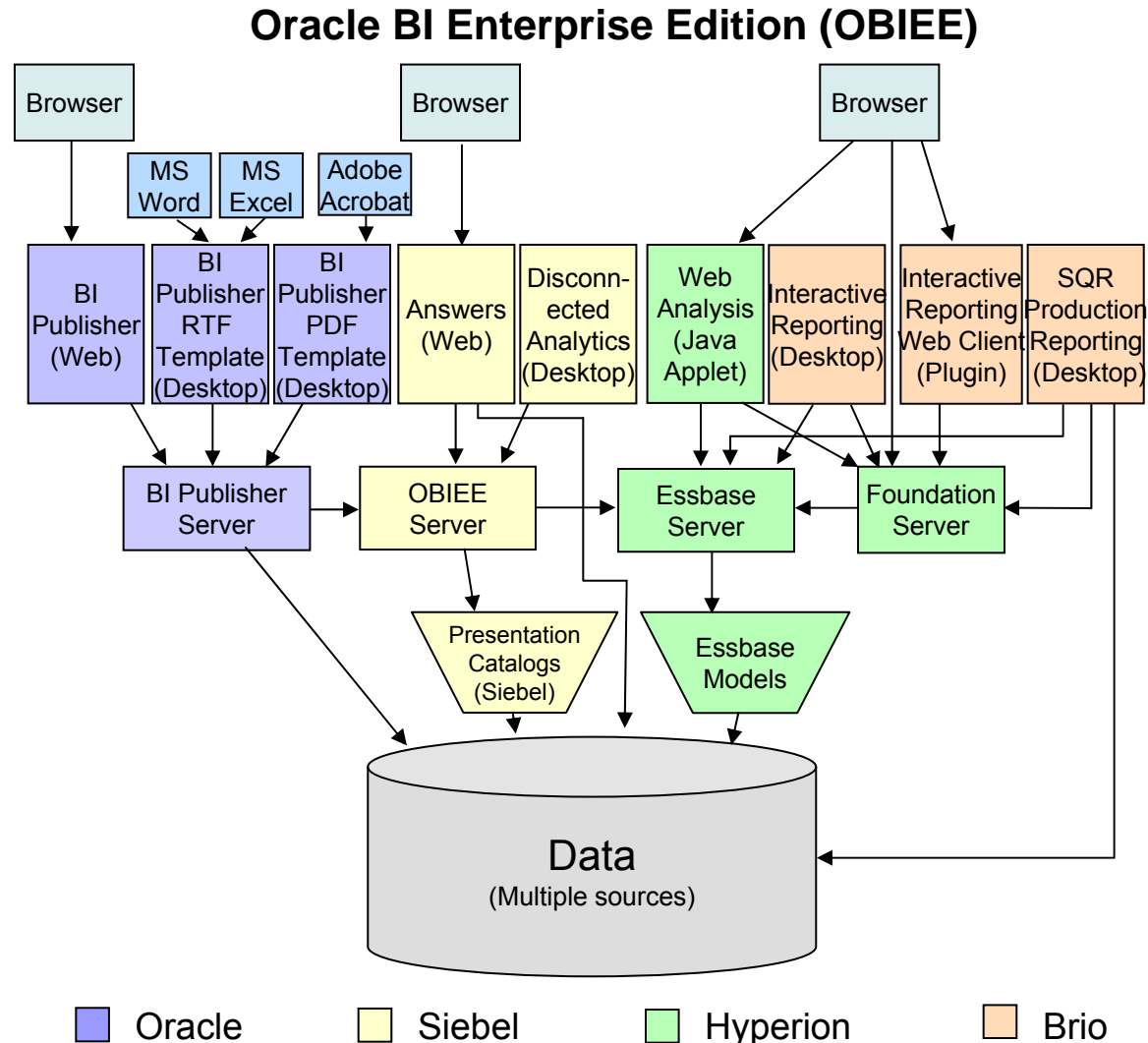


Oracle Business Intelligence Enterprise Edition Is Complex And Is Not Integrated

- **Multiple Thick Client Tools**
 - ▶ Multiple report formats
 - ▶ Multiple metadata models
 - ▶ Creates more work

- **Too Many Products!**

- **Creates IT Burden**
 - ▶ Install, Patch, User Support all happen at the desktop



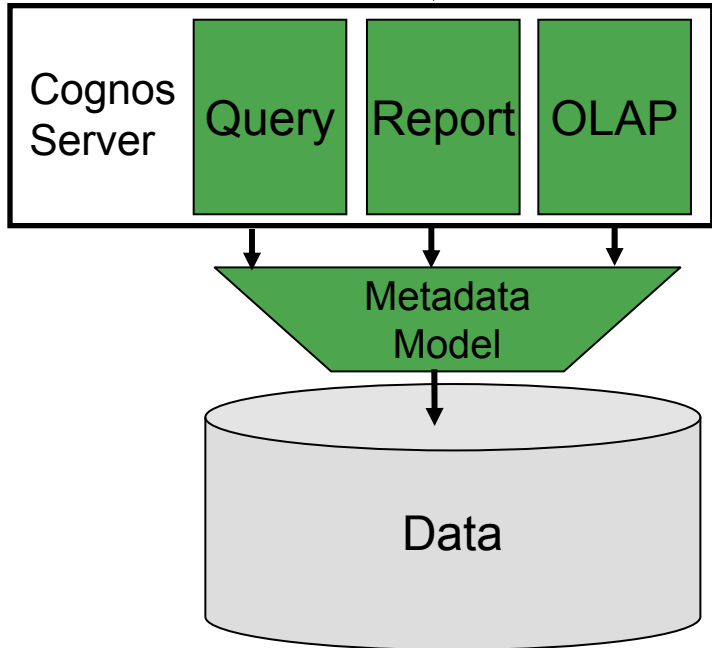
Compare For Yourself: Cognos Is Simple, Oracle Is Complex

IBM Cognos

100%
browser-based
web access

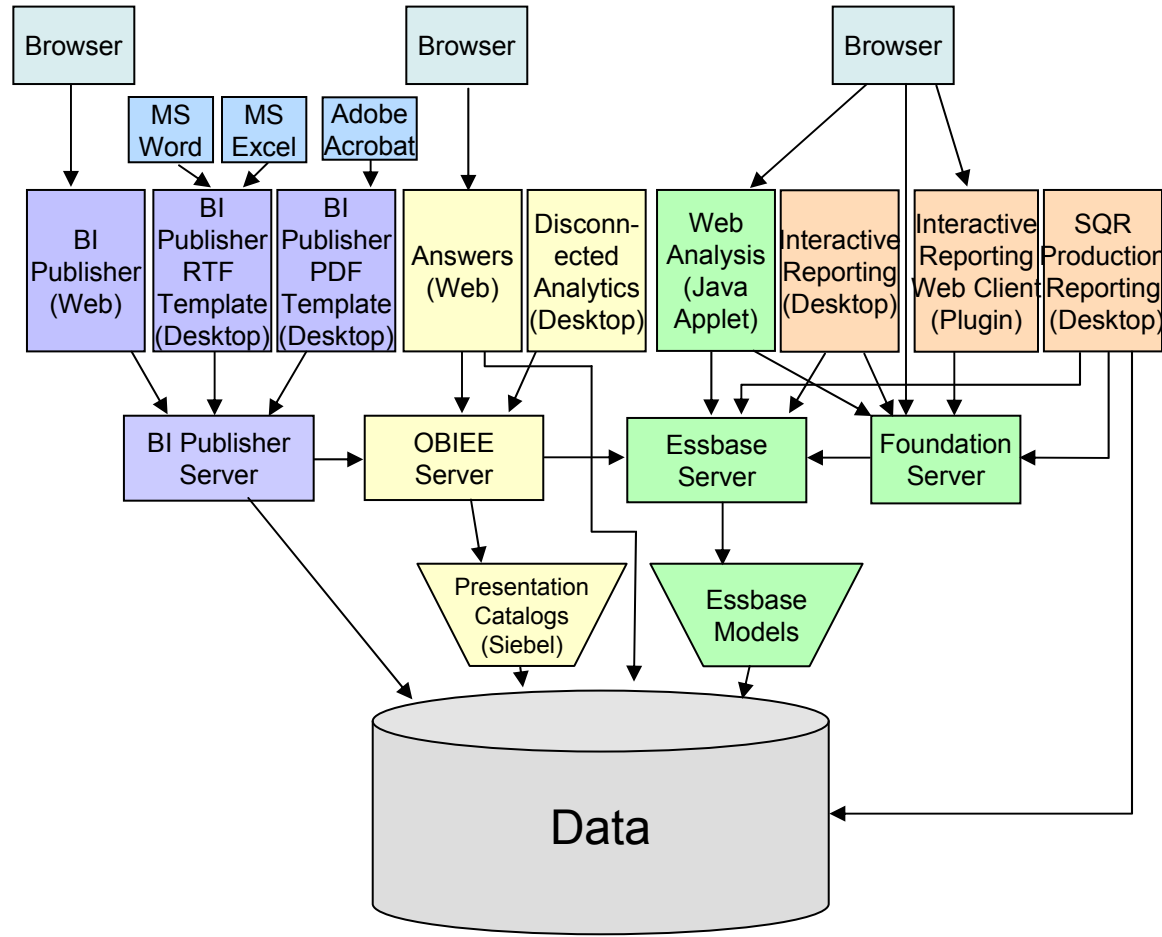


User



■ IBM Cognos

Oracle BI Enterprise Edition (OBIEE)



■ Oracle

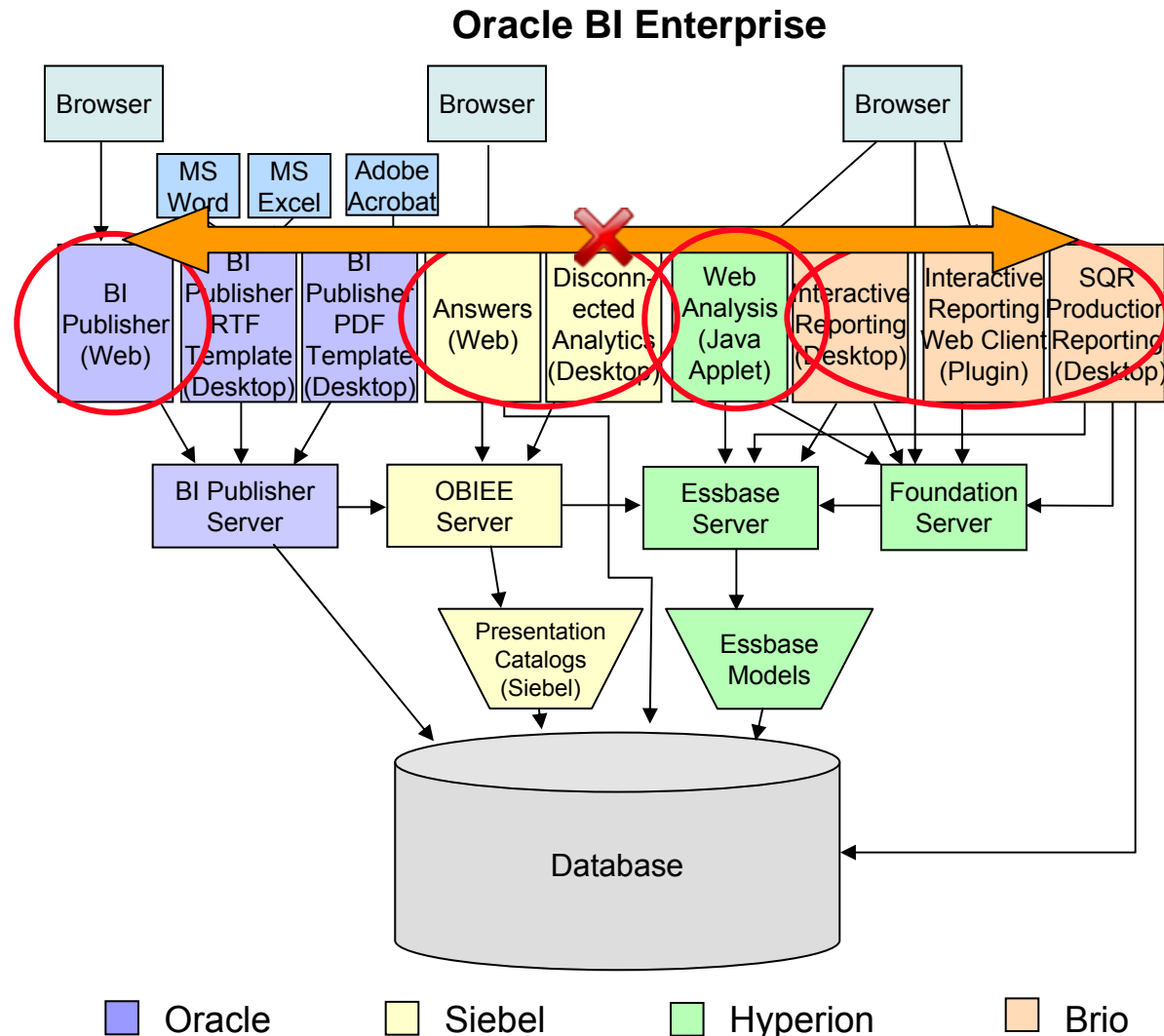
■ Siebel

■ Hyperion

■ Brio

Oracle Lacks Common Metadata And Common Report Format So Tools Cannot Share Assets

- Limited sharing of assets between BI Publisher, Answers, Web Analysis, Interactive Reporting, etc
- Cannot promote self-service (Answers) reports into BI Publisher
 - ▶ Different technologies, different formats
- Multiple metadata strategies
- Complexity = More Work



Deliver New Intelligence Quickly With The IBM Smart Analytics System

How can we get started quickly?



**Service Oriented Finance
CIO**

The IBM Smart Analytics System provides a complete ready-to-deploy system for delivering New Intelligence.



IBM

The IBM Smart Analytics System Delivers New Intelligence

A complete, ready-to-deploy system including hardware, software, storage, and network

- System is installed, tuned, and ready for your data
- Choose from standard configurations, add capacity with hardware and software modules
- Single point of contact for support

Analytics

- Cognos 8 Business Intelligence
- Cubing Services
- Text Analytics & Data Mining

Data Warehouse Software

- InfoSphere Warehouse
- Advanced Workload Management
- Tivoli System Automation

Hardware/OS

- AIX 6.1
- IBM Power 550
- IBM System Storage DS5300



Faster Time To Value

- Deploy in days instead of months
- Focus on creating business value, not installing hardware and software

Costs less than building it yourself

- Less staff and expertise required to implement, tune, and maintain

Find out more: <http://www-01.ibm.com/software/data/infosphere/smart-analytics-system/>

Blue Cross Blue Shield Delivers New Intelligence With The Smart Analytics System

Challenge:

Give Employers, Consumers, and Providers:

- ☑ Decision Support
- ☑ Actionable Information
- ☑ Predictive Analysis

Solution:

Blue Cross and Blue Shield is using components of IBM's Smart Analytics System, (InfoSphere Balanced Warehouse and Cognos) as the backbone of the new "Blue Health Intelligence (BHI)," a unique resource that will help to improve healthcare quality. BHI is now able to **better understand and detect demographic trends**, such as comparing an employer's plans to those of companies in the same industry, to improve workforce health while better managing costs for the employee.



BlueCross BlueShield
Association

Chicago, IL-based Blue Cross and Blue Shield Association (BCBSA), a national federation of 39 independent BCBS health insurance companies

Benefits:

- ☑ **Gain insight** into healthcare trends and clinical best practices
- ☑ **Deliver information** about treatment and medical technology effectiveness
- ☑ **Identify emerging trends** in healthcare practice and delivery

"This is revolutionizing the way we deliver healthcare analytics while giving us faster access to the types of information we didn't have before."

Shirley Lady,
Vice President, Blue Health Intelligence

IBM Cognos vs. Oracle OBIEE Summary

	IBM	Oracle
Integrated, Comprehensive Performance Management Platform	IBM Cognos	NO Multiple separate products (Oracle, Hyperion, Siebel, Brio)
100% web-based zero footprint BI	IBM Cognos	NO BI Publisher uses MS Word, Many BI functions require desktop apps and plug-ins
Common metadata model	IBM Cognos	NO Multiple separate metadata strategies
Common report specification format	IBM Cognos	NO Multiple technologies using different report formats
Purpose-built architecture for IT simplification	IBM Cognos	NO Collection of many technologies