



# IBM SOA Summit

 Informations valorisées et SOA,  
le couple gagnant.



IBM SOA\*  
Summit



# Accelerating Business Advantage with Dynamic Data Warehousing

**Marc Andrews**  
Program Director  
IBM Data Warehousing





## CEO Challenges

- Competitors offer **similar products**
- Competitors use **similar technology** and proprietary technologies are **quickly copied**
- **Breakthrough innovation** in products or services is **increasingly difficult**
- **The World is Flat** – losing geographic & regulatory advantages



## What's Left?

- Execute with **maximum efficiency and effectiveness**
- Make the **smartest business decisions** possible





“In God we trust; all others bring data”

- W. Edwards Deming





# Leveraging Information to Create Business Value



*Insightful, Relevant Information When and Where it's Needed*

## Information On Demand

- Optimize Each Transaction
- Call Centers, Field Ops



*Help Solve Crimes by Delivering Suspect List to Detectives Arriving at the Crime Scene*

## OLAP & Data Mining

- Merchandising, Inventory



*Optimizing Police Force Deployments*

## Query & Reporting

- Financials, Sales



*Crime Rate Reports*



# Dynamic Warehousing

## A New Approach to Leveraging Information



Information On Demand  
to Optimize Real-Time  
Processes



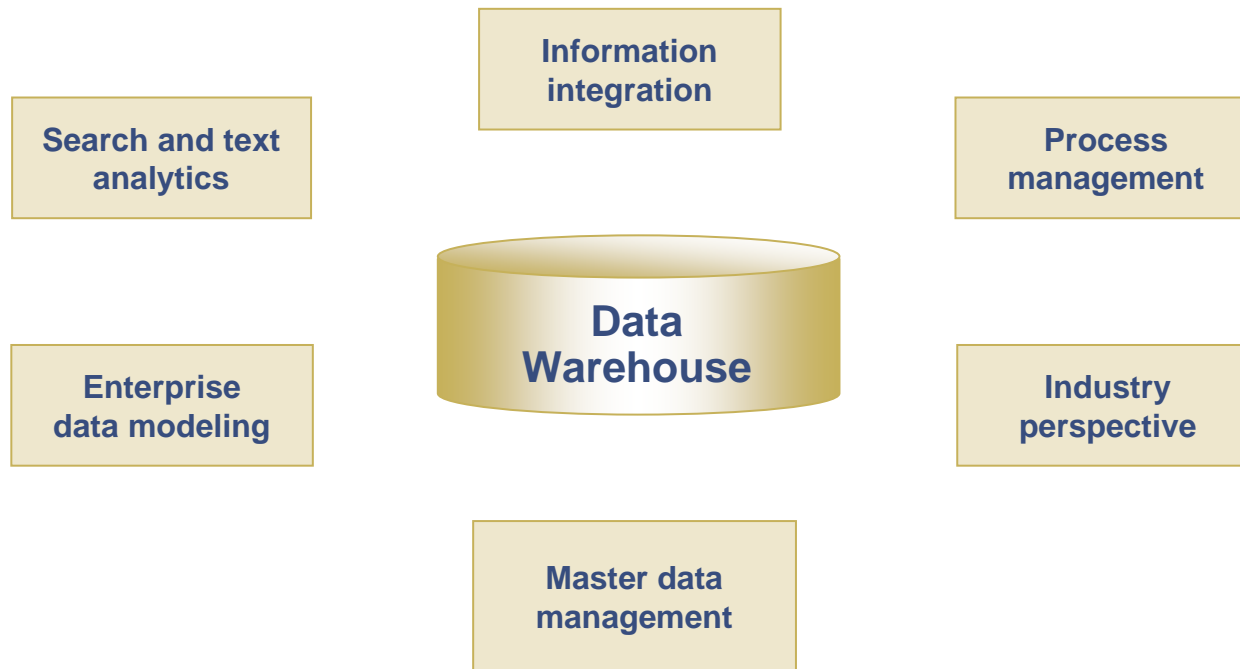
**Dynamic  
Warehousing**

### ***Dynamic Warehousing Requires:***

- 1. Real-time access – in context*
- 2. Analytics – as part of a business process*
- 3. Unstructured information – extracted knowledge*
- 4. Extended infrastructure – tightly integrated*

Reporting

*Extending beyond the warehouse to enable information on demand*



# More Dynamic Warehousing Examples



*Enabling Information On Demand for Business Advantage*

## Traditional warehousing

Insurance fraud analysis and reporting

Reporting on customer issues

Historical sales analysis and reporting

## Dynamic warehousing

Identifying potentially fraudulent claims prior to approval and payment

*Transforms healthcare*



Identifying possible related issues, churn risk and cross-sell opportunities while engaged with the customer

*Transforms customer service*



Discovering relevant customer information to identify cross and up sell opportunities and improve negotiating position at the point of sale

*Transforms sales effectiveness*





# Using Information to Compete



## *Driving Real Business Results*

Using Analytics to Compete	Business Results
Better at identifying profitable customers and minimizing risk	▶ Increased EPS and return on equity by over 20% each year for initial 10 years
Better at charging optimal price per customer	▶ Drove \$1.2 billion in extra revenue over 3 years
Maintaining lowest possible inventory while insuring availability	▶ Saved \$1.2 billion in inventory costs over 5 years
Better at identify loyal customers and cross-selling	▶ Increased market share from 36% to 43% and drove same store sales gains in 23 of 24 quarters over 6 year period
Assess risk, set credit limits, and adjust rates to maximize risk-value reward; adjust CD rates & rollover incentives to attract and retain best customers at lowest price	▶ Increased customer retention for savings accounts by 87%, lowered customer acquisition costs by 83%, and drove 25% increase in revenue per customer account over first 3 years



# What are the challenges for traditional warehouses?



Increasingly mixed workload environments and the constantly changing needs of different business constituents require more dynamic warehousing capabilities

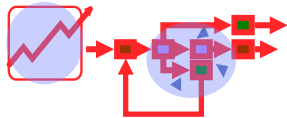


# IBM provides more than just a warehouse

*DB2 Warehouse provides extended capabilities and value*

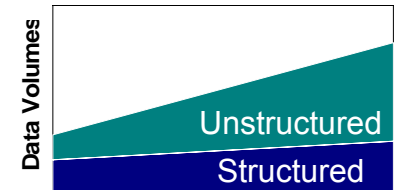
## Embedded analytics (Inline and as a Service)

Multidimensional analysis  
Data mining and visualization



## Beyond traditional structured data

Generate and leverage  
knowledge from  
unstructured information



## Benefits of a data service

Optimized for  
High availability and reliability  
Scalable, secure and auditable

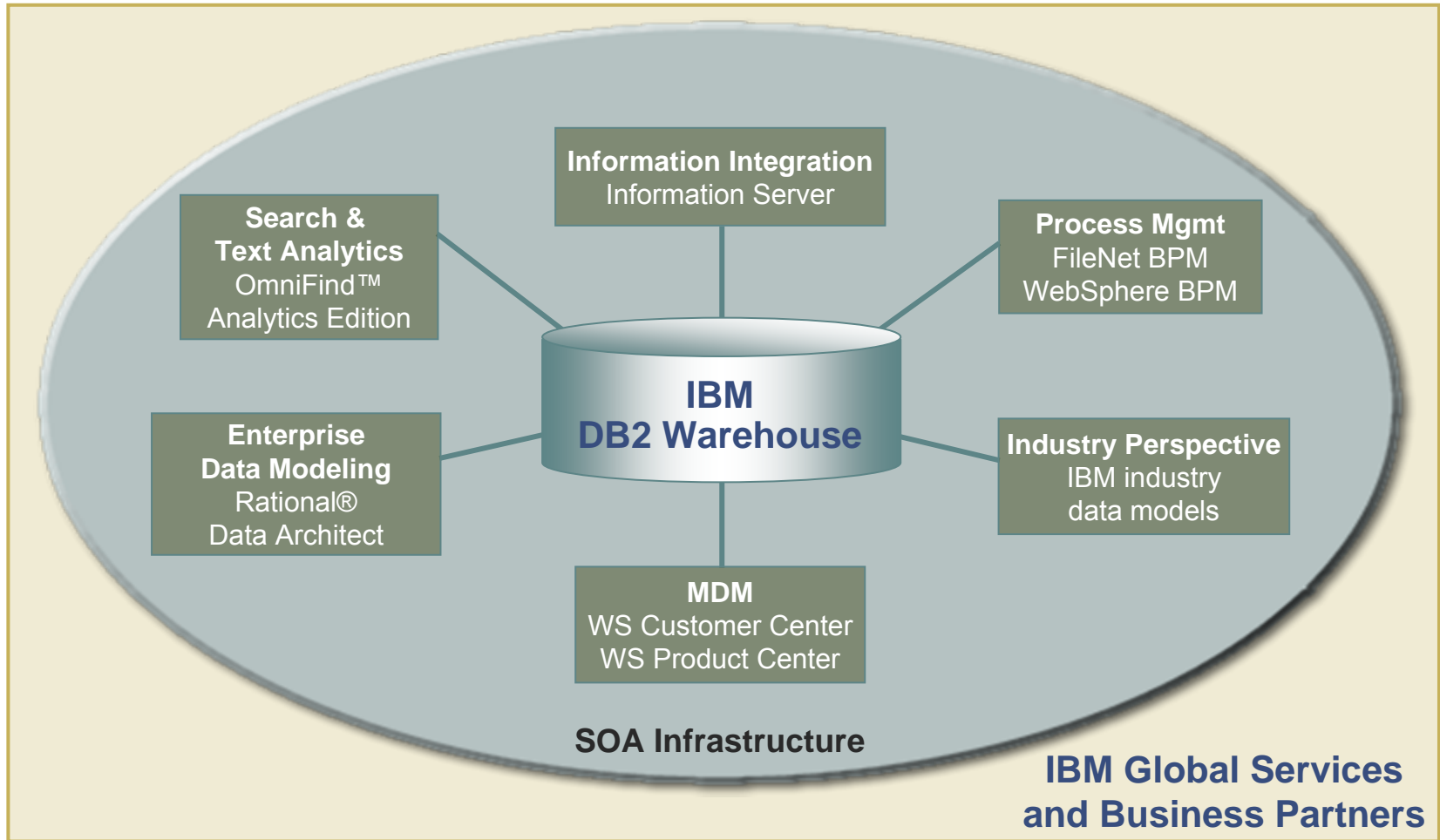
## *Best of Both Worlds Architecture*

Better disk utilization  
Query speed improvement

Advanced data partitioning  
Workload management

# How IBM Enables Dynamic Warehousing

*Integrated offerings to enable information on demand*





# Improve Customer Care, Marketing and Fraud Detection with Greater Information Visibility



▶ *Deliver more timely and accurate debit and credit card data to customer-facing employees*

▶ *Provide highly available access to data and reduce cost of ownership*



## ***Key to Success***

- Managing information in a consistent way across the enterprise
- “Right time” access to customer data with greater analytic capabilities

## ***Result***

- Enables more effective analysis of debit and credit card usage
- Provides better understanding of customer behavior and greater customer segmentation capabilities
- Ability to develop more effective marketing campaigns



# Enter New Markets and Increase Profits with Greater Information Visibility



- ▶ *Moving into retail banking and need more sophisticated customer information management*
- ▶ *Need to support increasing data volumes and deliver improved performance*



## ***Key to Success***

- Ability to quickly access detailed customer information and match it against marketing campaigns

## ***Result***

- Unified view of customer information helps entry into new, more profitable markets
- Banking arm of La Poste now handles 500 million annual customer contacts across multiple channels including ATM, web and phone
- Optimized customer service, better operating efficiency and higher profits



# Warehousing strategic pillars



## *Guiding principles for innovation*

### **Simplicity**

- Easy to deploy and integrate
- Easy to use
- Easy to manage
- Easy to start and grow as needed

### **Reliability & Performance**

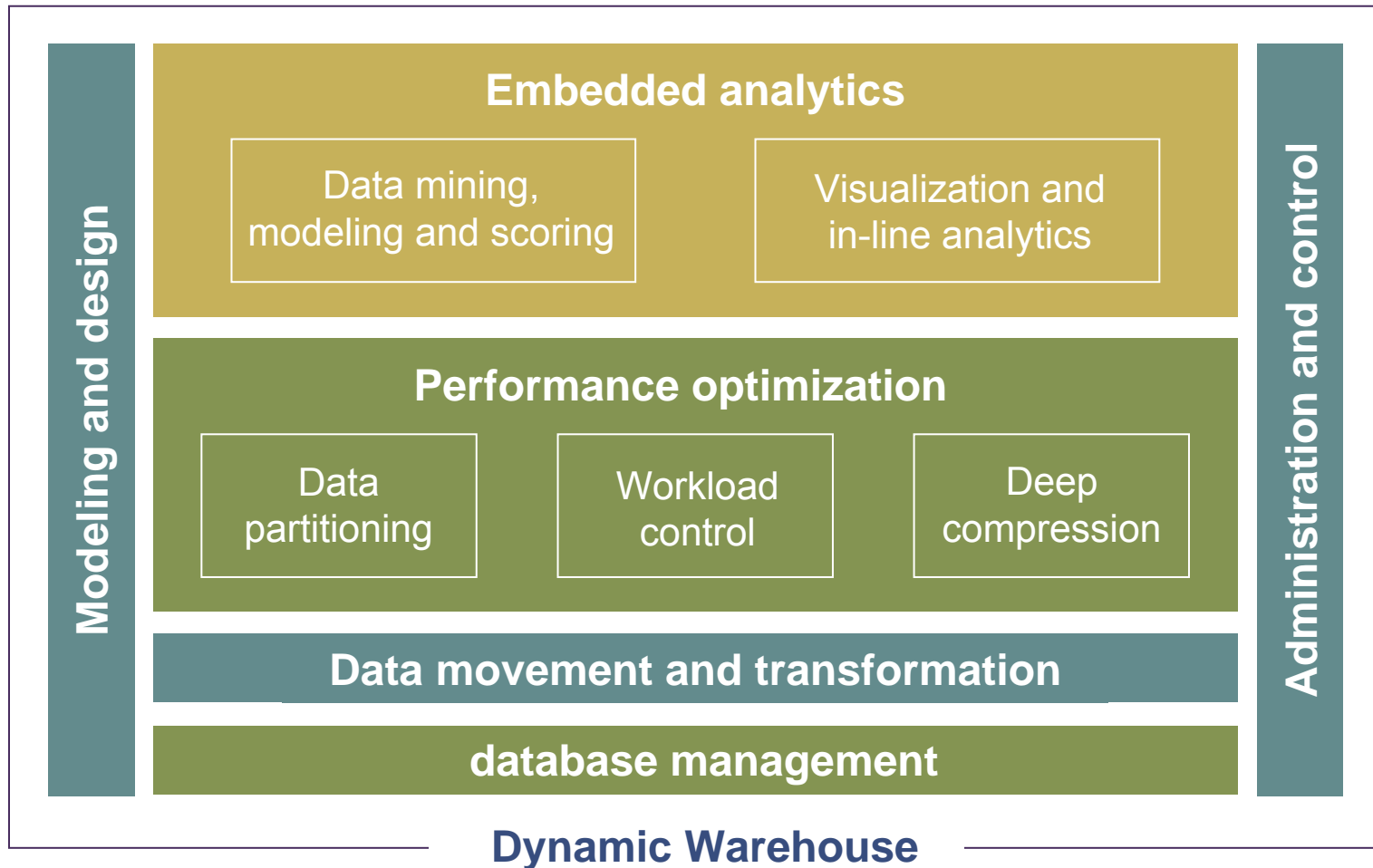
- Reliable access to information
- Highly available
- Real-time performance
- Maximized resource efficiency

### **Extended Insight**

- Beyond traditional capabilities
- Further leverage information
- Extended business insight
- Support broader usage



*A complete, integrated platform*





# Warehousing Made Simple



*Common Eclipse Based Design Studio for All Administration*

The screenshot displays the IBM DB2 DWE Design Studio interface. The top window shows a high-level data flow diagram with nodes like 'Data Flow\_01', 'Data Flow\_02', and 'Data Flow\_03'. A callout bubble labeled 'Control Flow' points to the top diagram. The bottom window shows a detailed data flow diagram for 'KeyReplace\_2'. It includes table sources (SCD\_FACT\_INPUT, SCD\_DIM1, SCD\_DIM2, SCD\_DIM3), order by operations (Order By\_05, Order By\_09, Order By\_027), distinct operations (Distinct\_011, Distinct\_07), and a Fact Key Replace operation. A callout bubble labeled 'Data Flow' points to the bottom diagram. The right pane shows SQL code for a unit: 

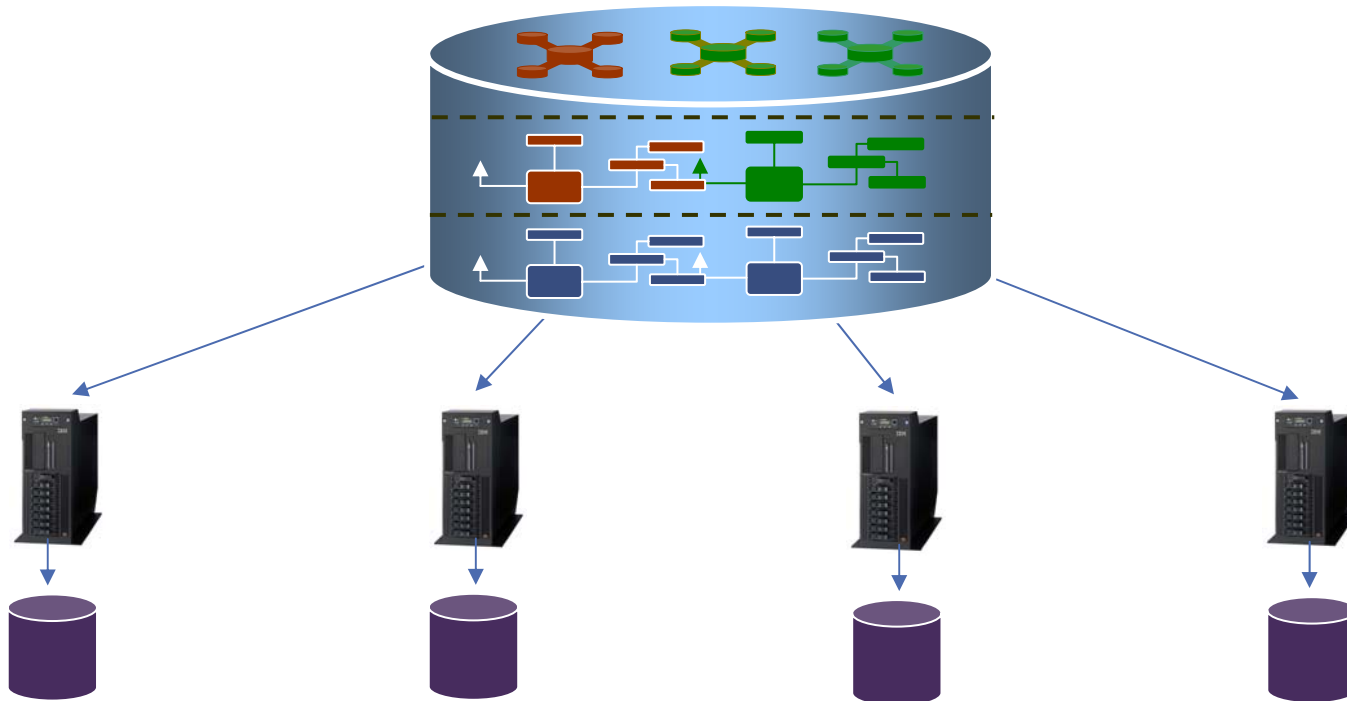
```
CODE_UNIT:SQLSCRIPT
(@RESOURCE = ${grp1/sqlldb1})
{
  SET CURRENT SCHEMA="${grp1/sqlldb1}";
  DECLARE GLOBAL TEMPORARY TABLE INPUT_02SCD_TEMP_02 (
  INSERT INTO SESSION.INPUT_02SCD_TEMP_02 (SELECT
  DELETE FROM INPUT_02 WHERE NOT EXISTS (SELECT
  UPDATE HUILIAO.SCD_FACT SET (AMT) = (SELECT I
  UPDATE HUILIAO.SCD_FACT SET (AMT, FSK2, SERVE
  INSERT INTO HUILIAO.SCD_FACT (FSK1, AMT, FSK2
```

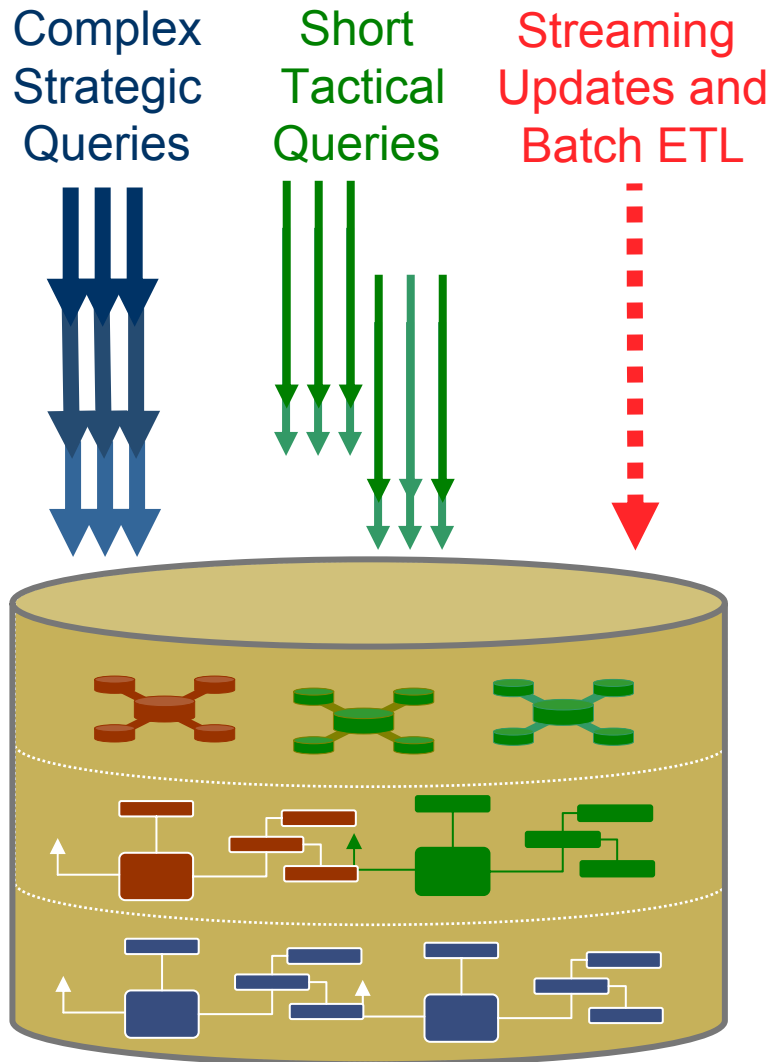
Data Warehouse Project

Enterprise Schema

Data Flow

- **Partition data within a single server or across a cluster of servers**
  - Scale to support very large data sets
  - Minimize impact of complex workloads
  - Provide increased parallelism for administration tasks





## “Query Traffic Corp”

- Prioritize queries across applications
- Ensure operational processes are serviced first
- Minimize impact of complex queries or batch processes

## “Accountant”

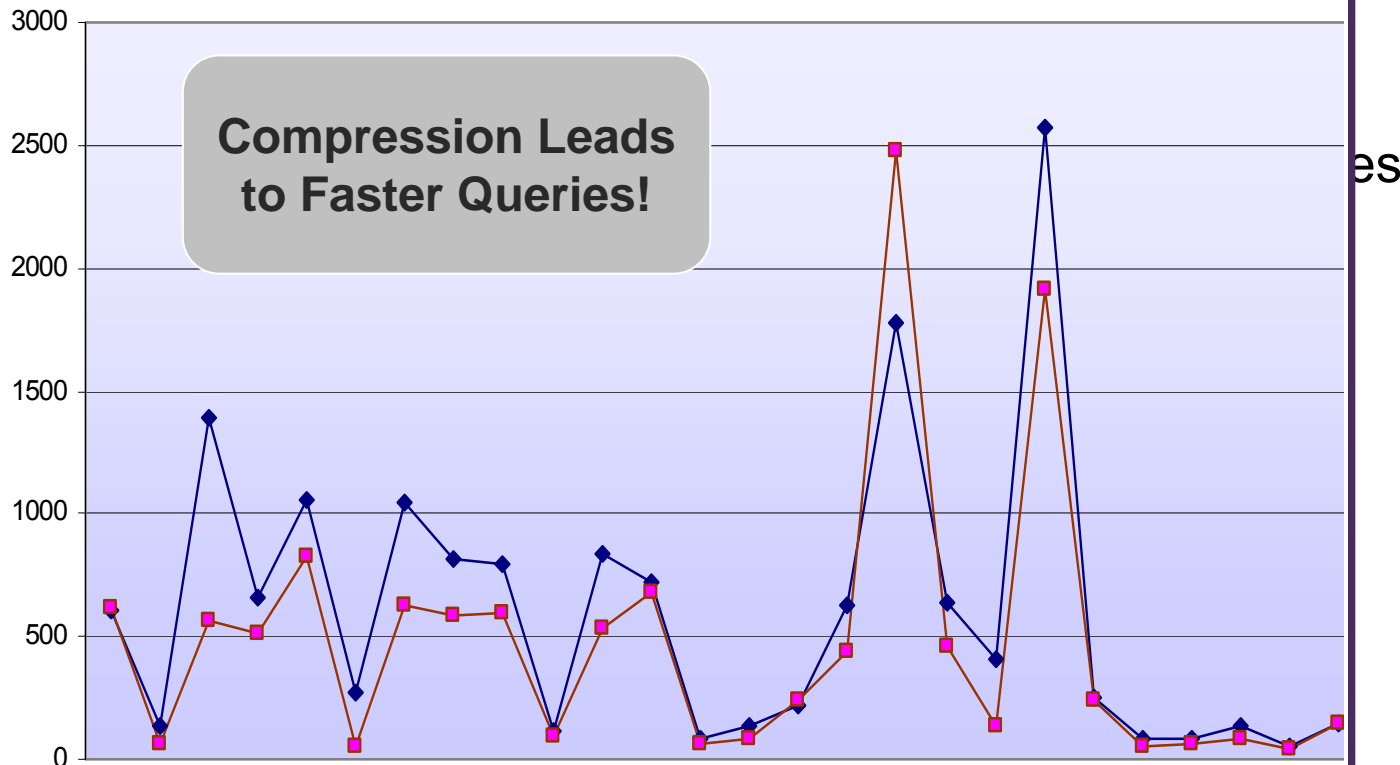
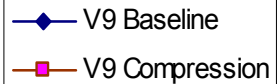
- Keep a lid on “cost”
- Real-time & historical query-execution statistics
- Reports on:
  - data accessed most frequently
  - data NOT being accessed
  - users or groups generating most workload

## Complex Queries Comparison

(Lower is better)

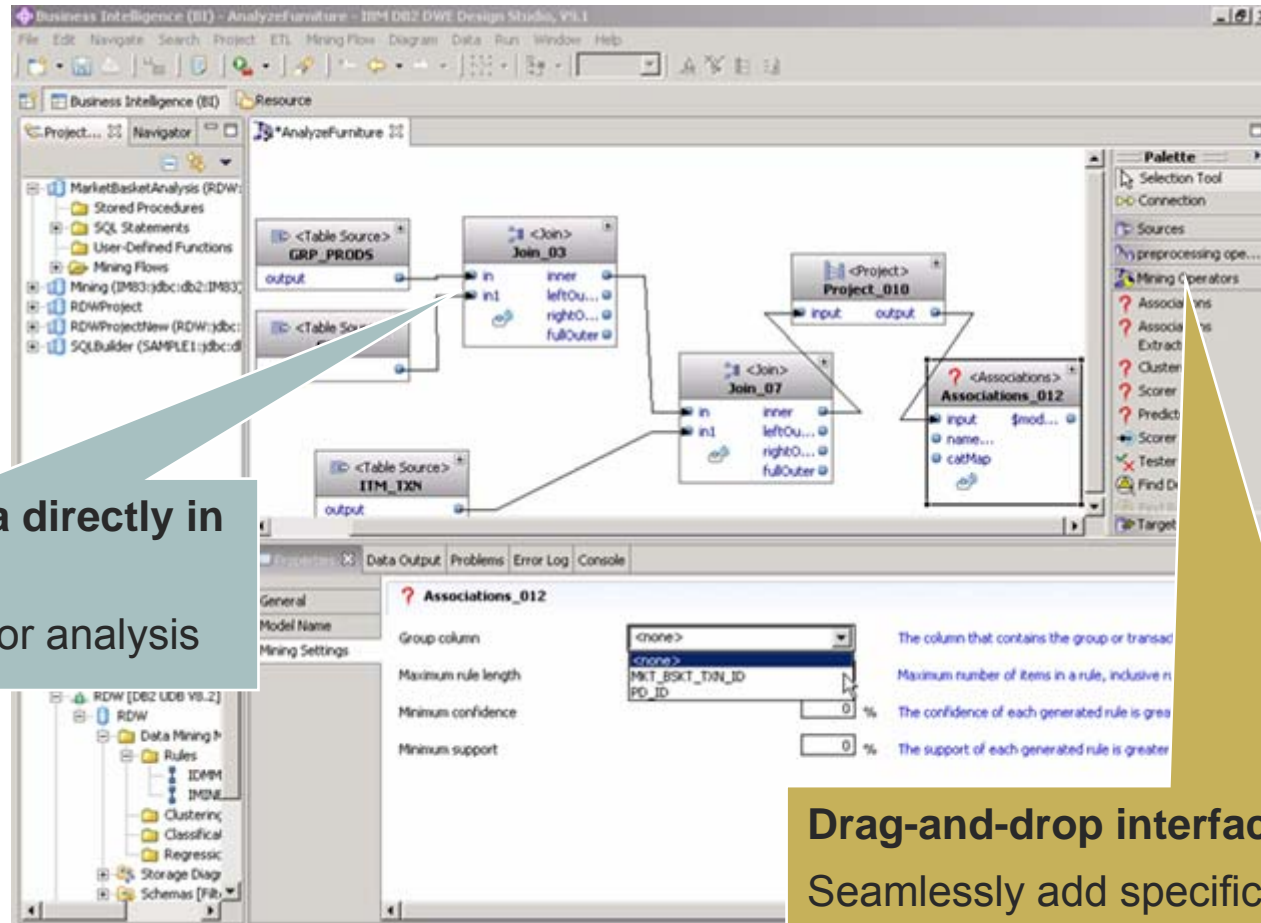
**Compression Leads to Faster Queries!**

Response Times  
(milliseconds)





*Seamless integration of analytics capabilities with integrated tools*



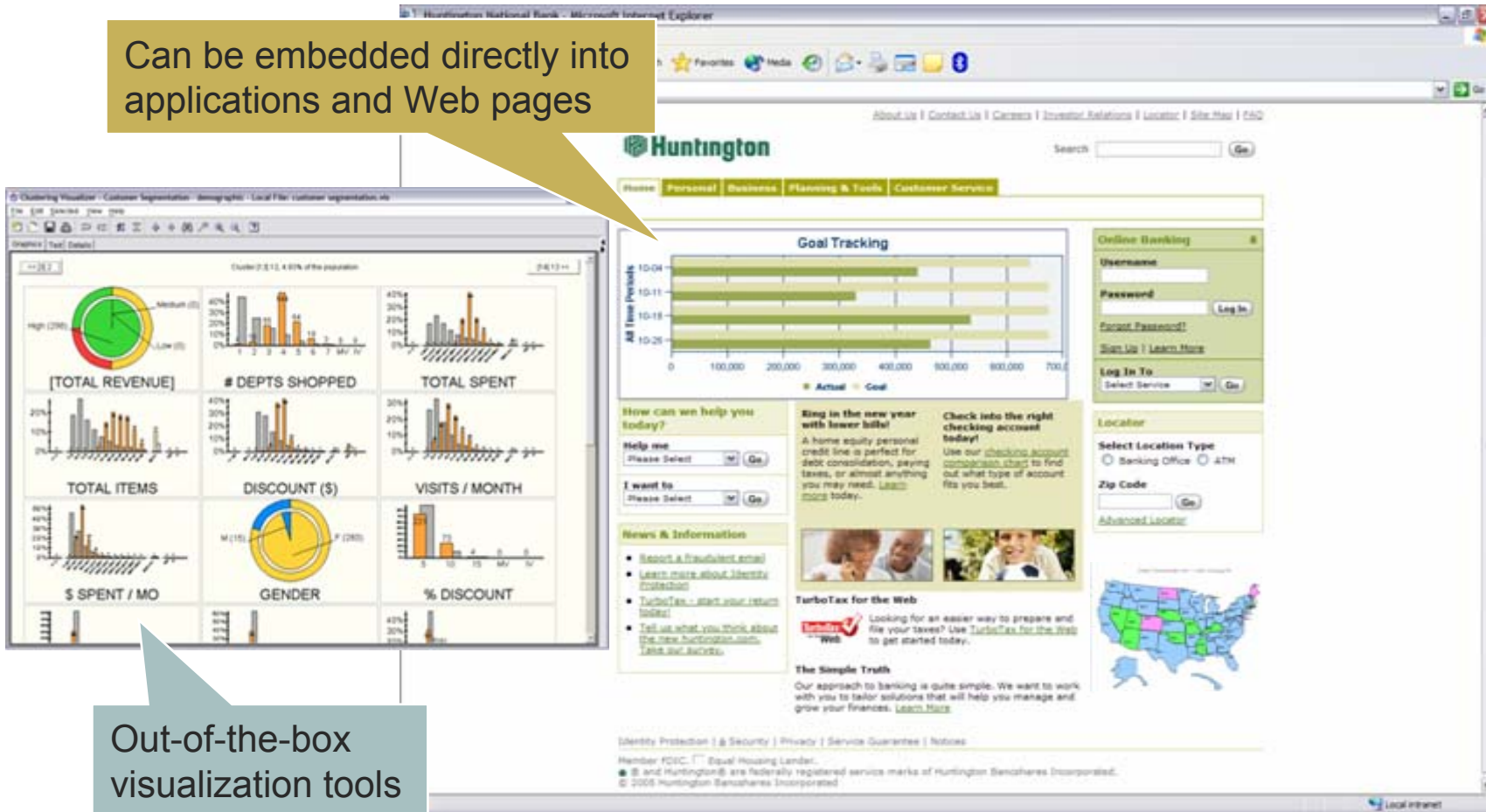
**Filter required data directly in the warehouse**  
Get subset of data for analysis

**Drag-and-drop interface**  
Seamlessly add specific analytics and mining operations

# Deliver Inline Visualization and Analytics



Can be embedded directly into applications and Web pages



Out-of-the-box visualization tools

# Introducing IBM Balanced Warehouse™



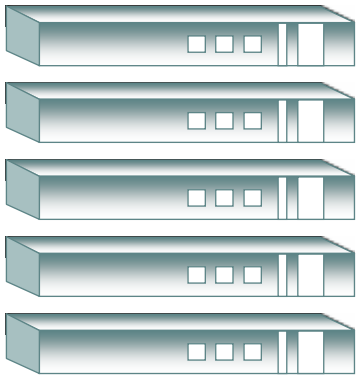
## *A fast track to warehousing*

### Balanced Configuration Unit (BCU)

Preconfigured, pretested allocation of software, storage and hardware to support a specified combination of function and scale



**SIMPLE  
FLEXIBLE  
OPTIMIZED**



Balanced Warehouse



### Simplicity

- Predefined configurations for reduced complexity
- One number to contact for complete solution support

### Flexibility for growth

- Add BCUs to address increasing demands
- Multiple on-ramps for different needs
- Reliable, nonproprietary hardware for reusability

### Optimized performance

- Preconfigured and certified for *guaranteed* performance
- Based on best practices for reduced risk

**Better than an appliance**

# IBM Balanced Warehouse Offerings



## C-Class

Out of the Box Warehousing Solution for SMB Customers  
(includes out-of-the-box BI tools)



Linux on System x

**New Offering!**

## D-Class

Departmental Data Marts and Small to Mid-Size Data Warehouses



Linux on System x

**New Offering!**

## E-Class

Large Enterprise Data Warehouses



AIX on System p

Scales to 1 TB

1TB to 5TB (target)

4TB and Up

Up to 200 Users

Modular Scalability

Unlimited, Modular Scalability

Affordable Hardware & Storage

Mid-Range Hardware & Storage

High End Hardware & Storage

crystal reports





# Industry data models



Over 400  
Customers!

*Leverage industry best practices for  
faster time to market*

New  
Offering!

## Banking

(Banking Data Warehouse)

- Profitability
- Relationship marketing
- Risk management
- Asset and liability management
- Compliance

## Financial Markets

(Financial Markets Data Warehouse)

- Risk management
- Asset and liability management
- Compliance

## Health Plan

(Health Plan Data Warehouse)

- Claims
- Medical management
- Provider and network
- Sales, marketing and membership
- Financials

## Insurance

(Insurance Information Warehouse)

- Customer centricity
- Claims
- Intermediary performance
- Compliance
- Risk management

Enhanced  
Capabilities!

## Retail

(Retail Data Warehouse)

- Customer centricity
- Merchandising management
- Store operations and product management
- Supply chain management
- Compliance

## Telco

(Telecommunications Data Warehouse)

- Churn management
- Relationship management and segmentation
- Sales and marketing
- Service quality and product lifecycle
- Usage profile

# Industry leaders use DB2 for Warehousing

## *IBM is a Leader in Data Warehousing*


11 of the top 12 banks 

7 of the top 8 auto manufacturers 

5 of the top 6 insurance companies 

4 of the top 6 general merchandisers 

4 of the top 5 specialty retailers 

3 of the top 4 food and drug stores 

---

**IBM is ranked as a leader in Gartner's "Magic Quadrant for Data Warehouse Database Management Systems 2006."**

---

IBM SOA\*  
Summit



**Thank You**

