Information Builders | The Standard for Enterprise Business Intelligence

CAS 2006
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Data 2: Information Stored, Mined & Utilized/2

Data Integration Alternatives & Best Practices

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Agenda

- Analytic Evolution
- Industry Challenges & Responses
- Best Practices in Data Warehousing
- 7 Ways to Integrate Data
- Keys to Data Warehousing Success

Information Builders Introductions

- **Who We Are**
  A software company providing distinct solutions for enterprise business intelligence and enterprise integration.
- **Founded 1975**
  30 years in business intelligence
  14 years in enterprise integration
- **Industry focus**
  Financial Services is largest industry segment
  Insurance is largest Financial Services segment

WebFOCUS

iWay Software

"We enter 2005 with more than 1,700 of the best and brightest professionals in the industry; a solid balance sheet, a strong cash position, and no debt; and a stronger value proposition across our core product and service offerings than at any other point in our 30-year history."

Gerald D. Cohen

President and CEO of Information Builders

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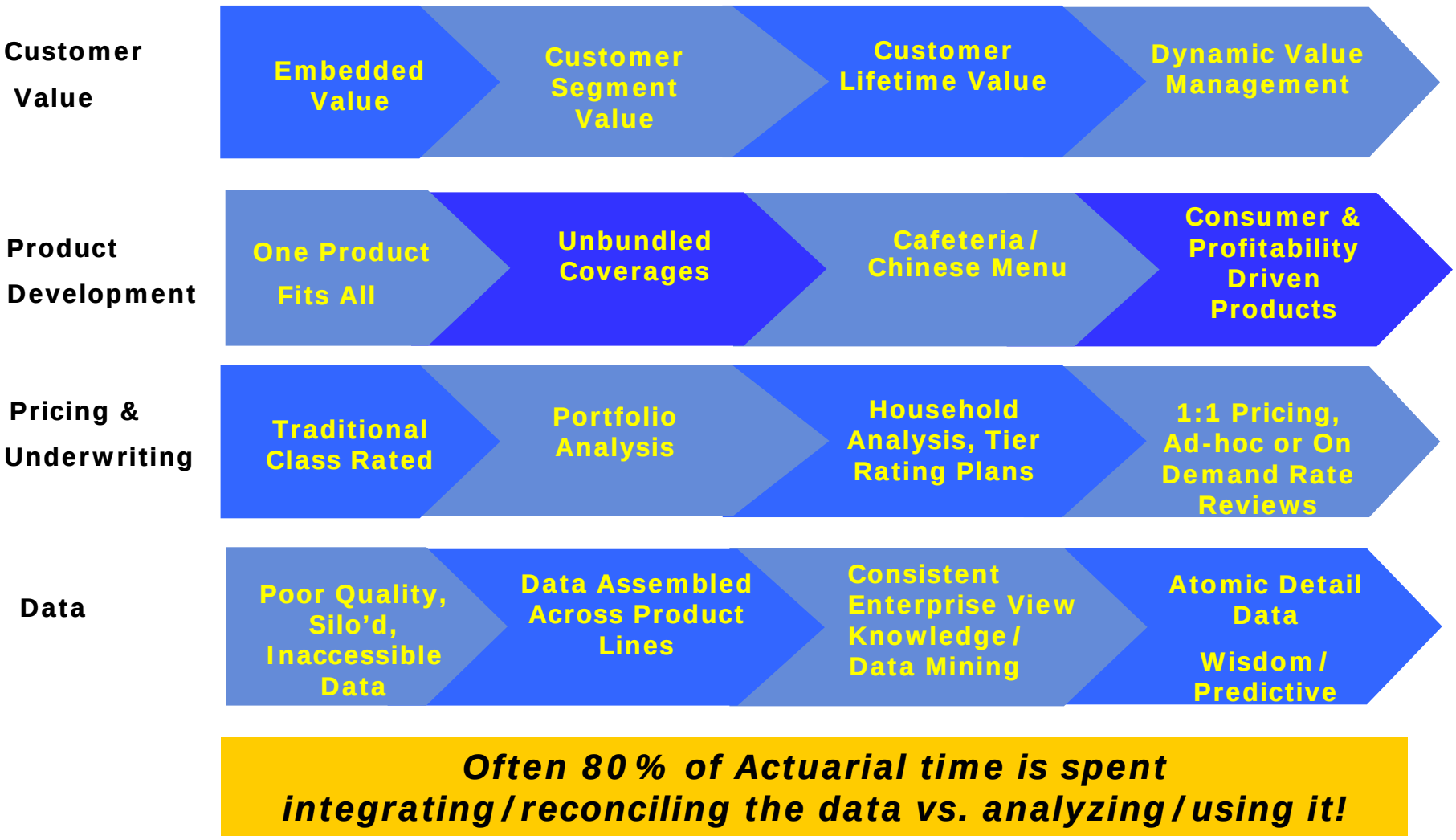
The Analytical Evolution



Often 80% of Actuarial time is spent integrating/reconciling the data vs. analyzing/using it!

Insurance Industry
Business Challenges & Response

Business Challenges:

- Sustained Profitability
- Channel & Agency Management
- Increased Competition
- Expense / Cost Management
- Regulatory Compliance
- Enterprise Risk Management

Information Challenges:

- Data Accessibility
- Data Quality
- Data Reconciliation

Industry Responses:

- Enterprise Data Strategy
  - SOA
  - Standards
  - Data Governance
- Advanced Business Intelligence
  - Business Perf. Mgmt.
  - Predictive Modeling
  - Real-time Analytics
  - GIS
  - Visualization

Enterprise Data Strategy
Some Key Components

- ***Platform Consolidation***
  - Reduces the number of data stores/repositories
  - Reduces costs of development and maintenance and simplify enterprise architecture
- Comprehensive business oriented ***Data Requirements/Data Architecture***
  - Logical Data Models, Physical Data Models, Business Process Models
  - Tools, knowledge, processes speed the build process (ETL, Profiling, etc.)
- ***Data Governance*** and ***Quality*** services, tools and processes
  - Improved processes and audit/control for data quality – confidence in the data used and ability to audit from cradle to grave
  - Data Stewardship Committee
- ***Architectural Flexibility*** to cope with dynamic requirements
  - Ability to easily migrate from current state to future state
  - Ability to rapidly deploy, re-use/leverage – component architectures, etc.
- ***Scalability*** to meet ***data*** and ***analytical application*** growth and performance needs
  - Data base, BI & other tools
- ***Application Integration***
  - Reusability
  - Ease of integration

What is SOA? Service Oriented Architecture
Why You Should Care

- SOA is about adaptability and reusability
  - Data
  - Business Processes
  - Standards
- Benefits:
  - Speeds application development
  - Reduces application development & maintenance costs
- Involves:
  - Data Integration
  - Application Interfaces

SOA is one of the 5 top IT Business & IT initiatives at most insurance companies in 2006.

Advanced Business Intelligence
Some Key Components

- ***Business Performance Management (Scoreboards)***
  - Self Management
  - Overall BPM monitoring
- Predictive Modeling
  - Enterprise Decision Management (models integration)
  - More user friendly models (non-statistician)
  - Applications – Customer Management, Distribution Mgmt., Underwriting, Claims Fraud Analysis, Enterprise Risk Mgmt., Capital Allocation,
- ***Real Time Analytics***
  - Embedded analytics in workflow/business processes
  - Bringing the processes to the data vs. data to the processes
- ***GIS (Geographic Information Systems)***
  - Easier geo coding of own data
  - Industry/standard data sets
  - Robust application integration
- ***Visualization***
  - Data Discovery

Data Warehousing & Data Mining Best Practices

- Moving toward an Enterprise Data Warehouse
- Enterprise Data Strategy
  - Data Quality/Data Governance process/metadata repository
- Granular/atomic vs. summary data
- More sophisticated data mining and techniques
  - Move data mining tools to the data
- Still using SAS, but not for extraction
- Still using Excel, for smaller data sets
- Storing derived scores/factors in data warehouse for leverage by other users
- Creating common data sets for integrated analysis across functions/departments/SBUs

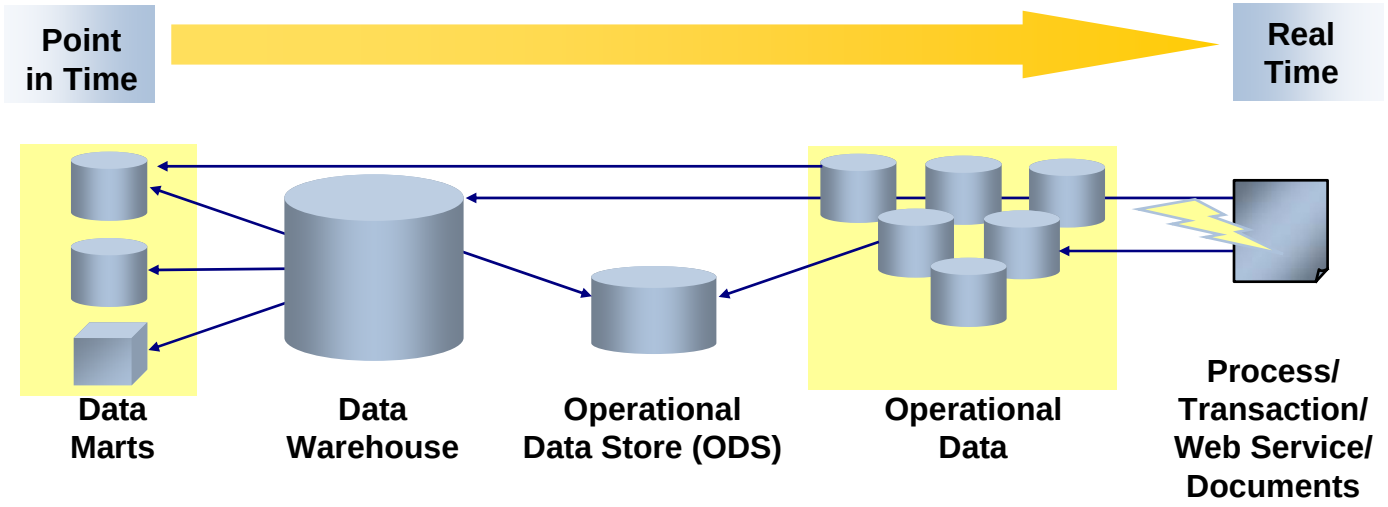
Delivering Information
Some Facts…

"80% of the cost of implementing business intelligence is attributed to data integration."

Ted Friedman
Research Analyst
Gartner

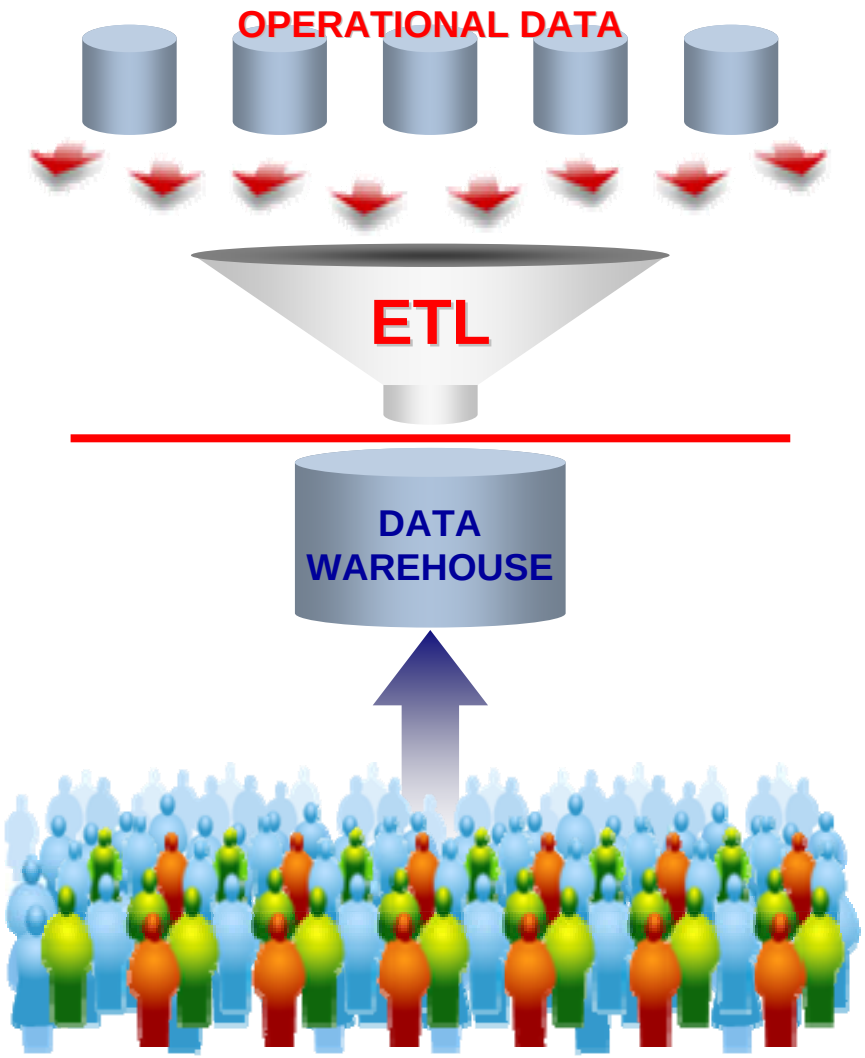
- Most organizations **access and analyze less than 10%** of all data they collect.
- Organizations typically possess an **average of 30 unique types of database structures** running in production.
- Real time business requirements add the need to **integrate an infinite number of new data formats** including messages, transactions, documents, web services, etc…..

7 Integration Ways
Right Way Depends on Your Business Needs



1. **Data Warehouse**
2. **Operational Data Access**
3. **Enterprise Information Integration**
4. **Drill-Through Data Warehousing**
5. **Real-time Data Warehouse**
6. **Process-Driven Alerts**
7. **Web Services**

Data Integration Requirements
Traditional Data Warehousing



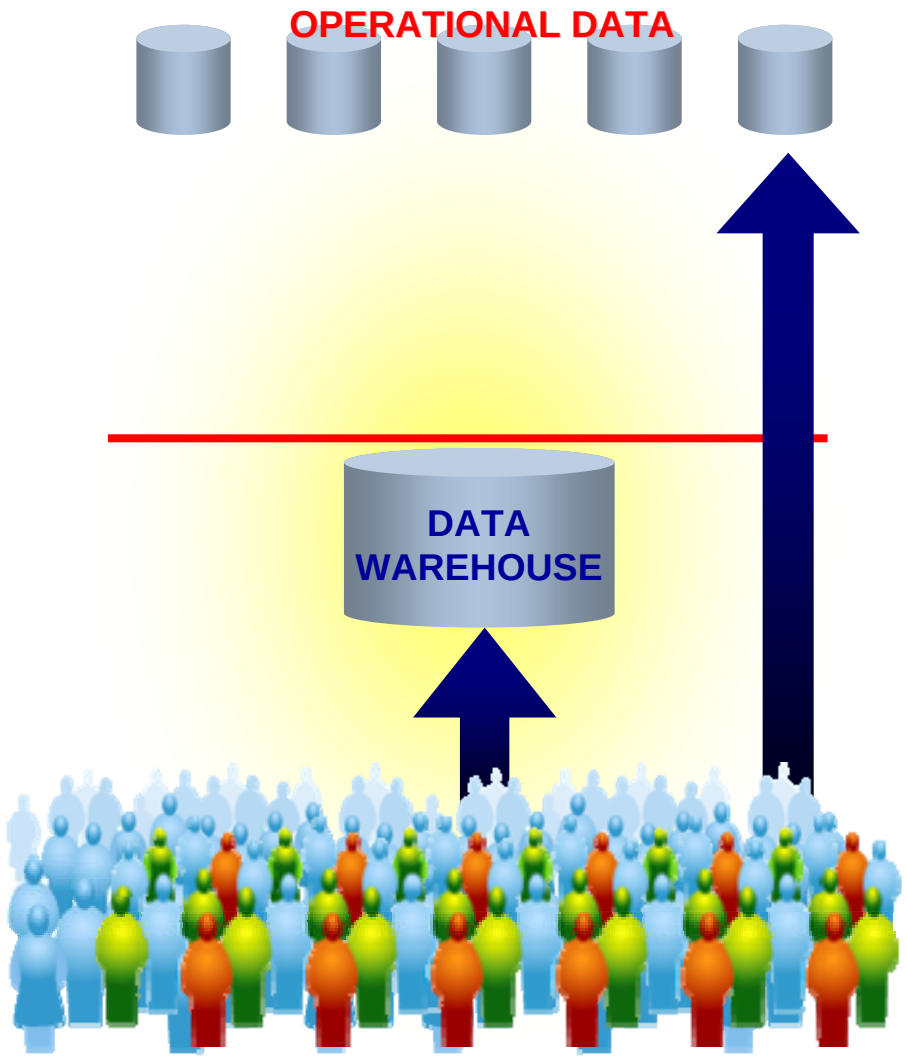
Benefits

- Data quality
- Consolidated data
- Data consistency
- No operational system impact

Challenges

- Data Latency
- High Cost
- Implementation time and maintenance

Data Integration Requirements
Operational Data Access



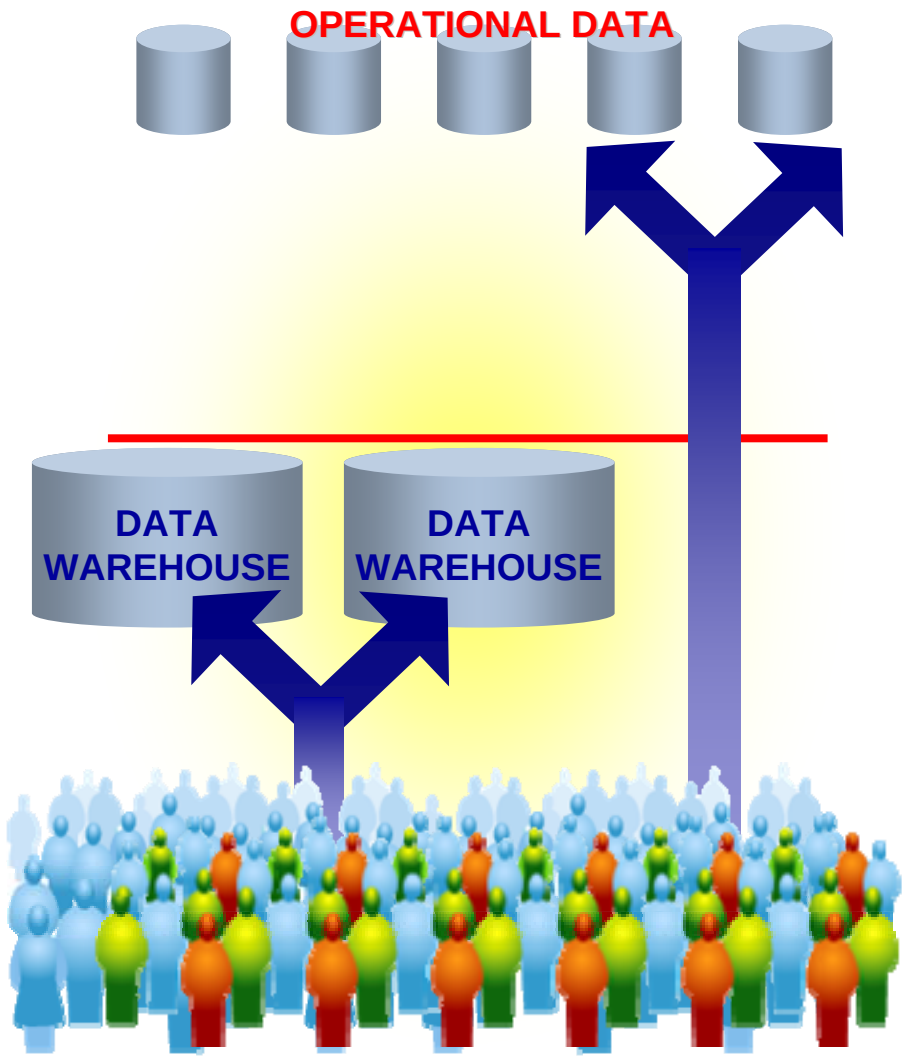
Benefits

- Zero data latency
- Lower Cost
- Detail Data
- Reduced implementation time

Challenges

- Data Quality
- Operational system impact
- Data Aggregation

Data Integration Requirements
Enterprise Information Integration



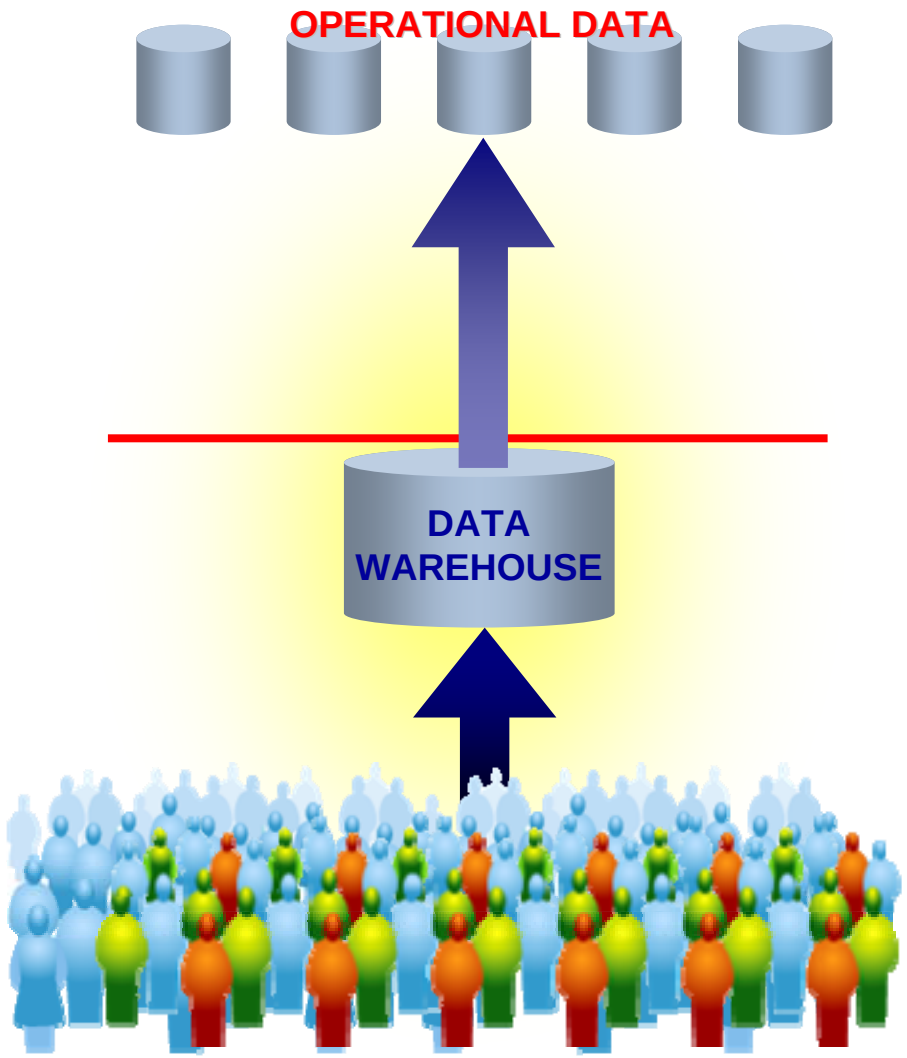
Benefits

- Consolidated view
- Cross-business functions
- Executive portals
- Reduced implementation time

Challenges

- Performance
- Non-similar data keys
- Data quality/reconciliation

Data Integration Requirements
Drill-Through Data Warehousing



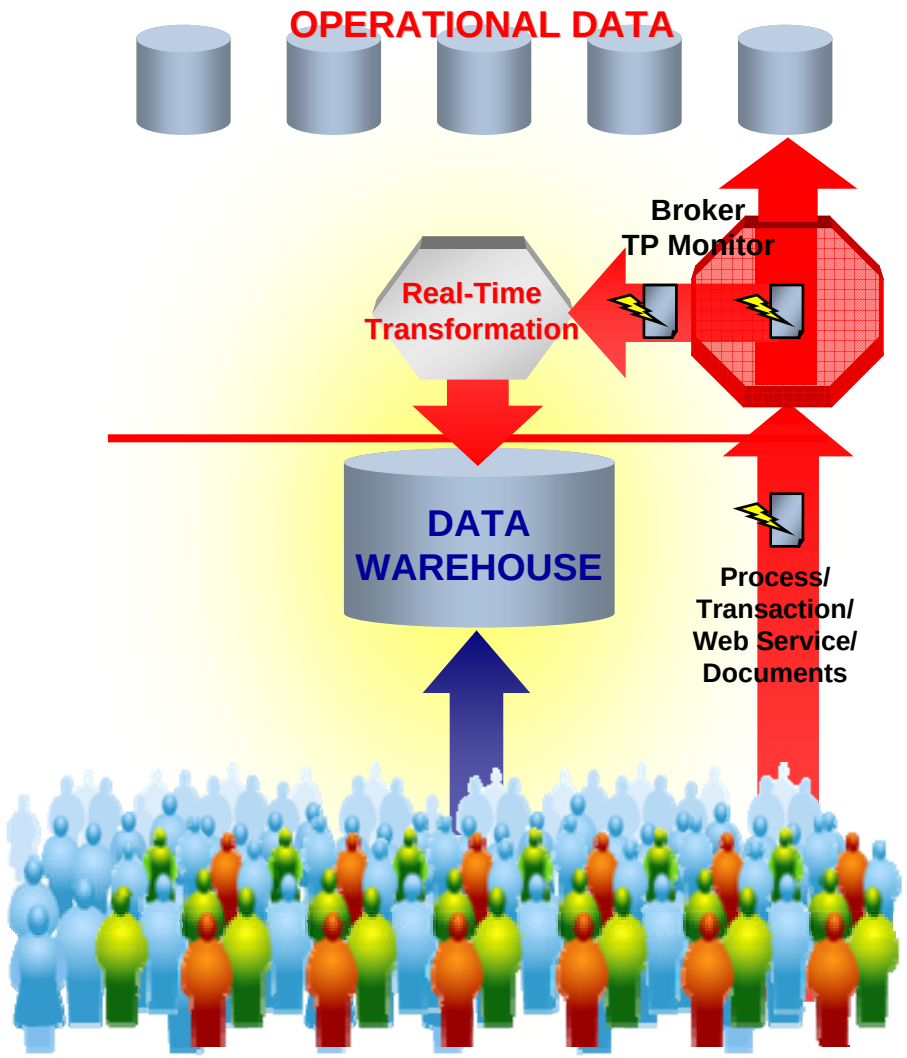
Benefits

- Detail analysis
- Financial analysis
- Data Warehouse validation

Challenges

- Data synchronization

Data Integration Requirements
Real-Time Data Warehouse



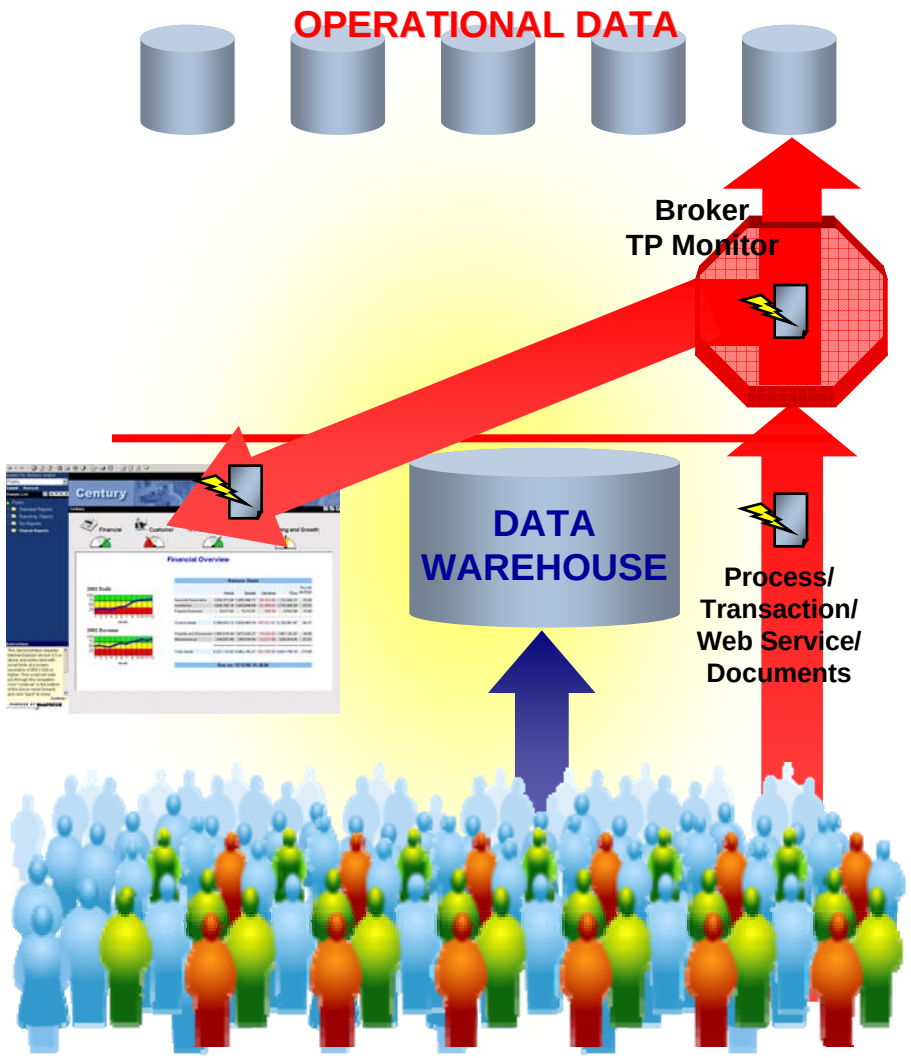
Benefits

- Zero data latency
- Consolidated data model
- No operational system impact

Challenges

- Transaction volume

Data Integration Requirements
Real-Time Alerts



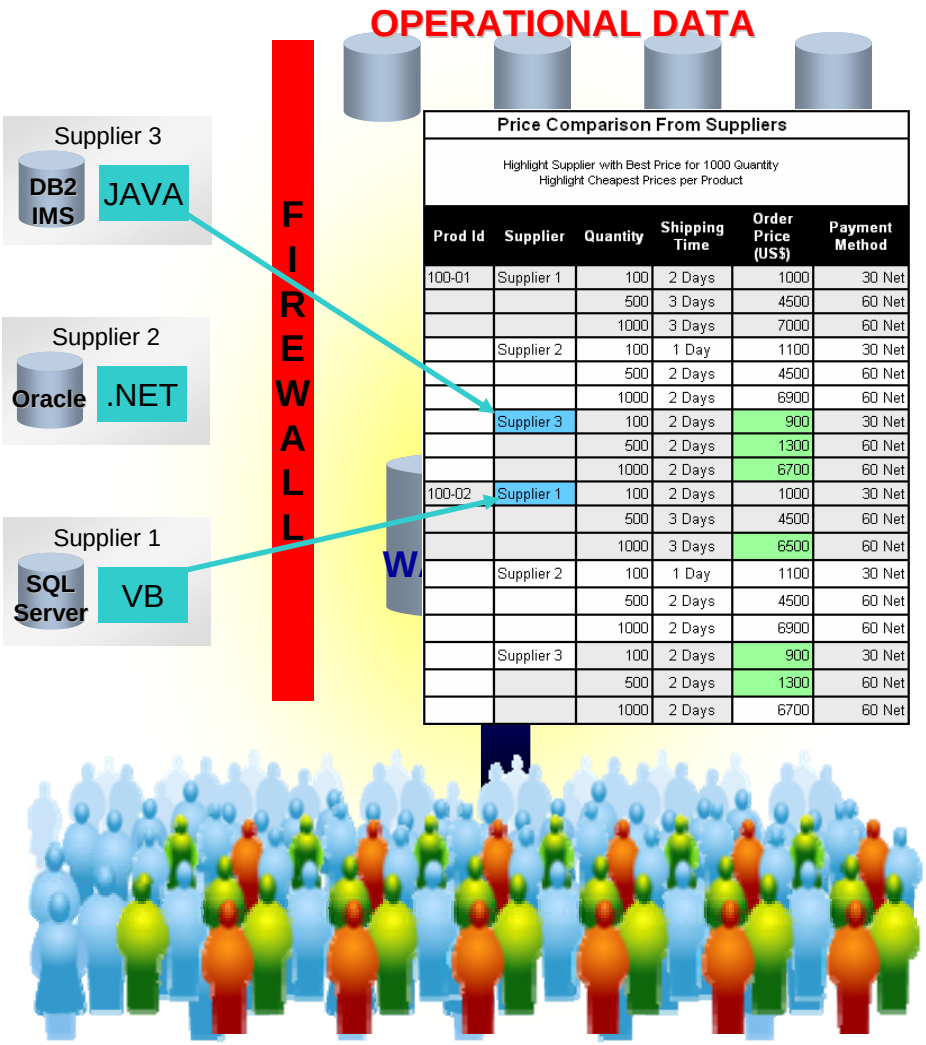
Benefits

- True Real-Time
- Direct delivery from event to portal

Challenges

- Performance
- Accessibility

Data Integration Requirements
Web Services



Price Comparison From Suppliers

Highlight Supplier with Best Price for 1000 Quantity
Highlight Cheapest Prices per Product

Prod Id	Supplier	Quantity	Shipping Time	Order Price (US$)	Payment Method
100-01	Supplier 1	100	2 Days	1000	30 Net
		500	3 Days	4500	60 Net
		1000	3 Days	7000	60 Net
	Supplier 2	100	1 Day	1100	30 Net
		500	2 Days	4500	60 Net
		1000	2 Days	6900	60 Net
	Supplier 3	100	2 Days	900	30 Net
		500	2 Days	1300	60 Net
		1000	2 Days	6700	60 Net
100-02	Supplier 1	100	2 Days	1000	30 Net
		500	3 Days	4500	60 Net
		1000	3 Days	6500	60 Net
	Supplier 2	100	1 Day	1100	30 Net
		500	2 Days	4500	60 Net
		1000	2 Days	6900	60 Net
	Supplier 3	100	2 Days	900	30 Net
		500	2 Days	1300	60 Net
		1000	2 Days	6700	60 Net

Benefits

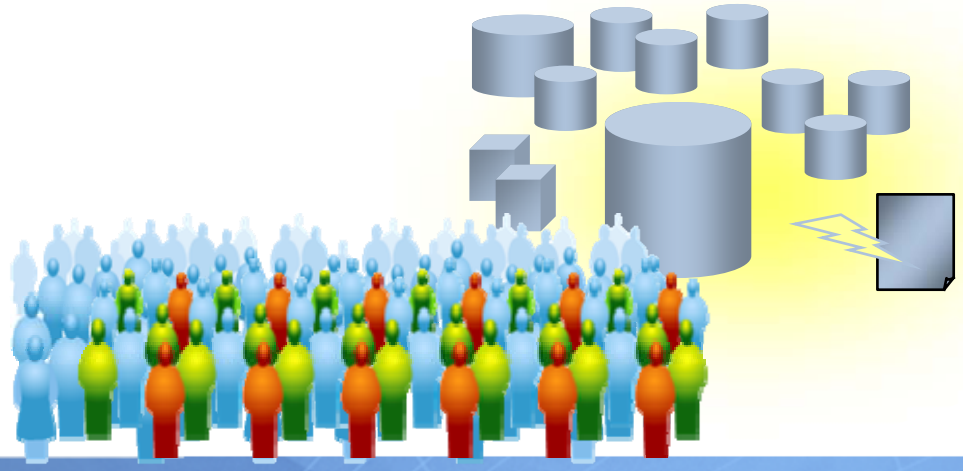
- Standard interfaces
- Simplifies B2B data access

Challenges

- Performance
- Cost to program/maintain the interfaces

Seven Ways to Integrate Data Summary

- Today's business requires new types of data.
- Information demand is driving lower latency of data.
- Enterprise Business Intelligence requires most, if not all, styles of data integration.
- Don't have to use all at once!
- The "best way" depends on your business needs, your IT environment and your corporate culture.



Keys to Data Warehouse Success

- ***Specific Business Problem*** to be solved
- ***Executive Sponsorship/Support***
- ***Business and IT Alignment***
- Well-Defined ***Plan (Think Big, Start Small)***
  - ***Short-term*** deliverables (90-120 days)
  - ***Continual*** enhancements
- Realistically factor in Business Process Changes
- Clear ***Return on Investment (ROI)***
  - Pre-implementation Business Discovery
  - Post-implementation Business Value Assessment (to ensure continued funding)
- Utilizing ***Proven Methods, Tools and Technology***
- ***Experienced*** Personnel

Pat Saporito, CPCU
Insurance Industry Practice Director

- 25+ yrs. insurance experience
- Business & IT; industry & consulting
- Vendor (Teradata Ins. Industry Director), Analyst (META Group Ins. Practice VP), Industry (AIG, American Re, Hartford, ISO, et al.)
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