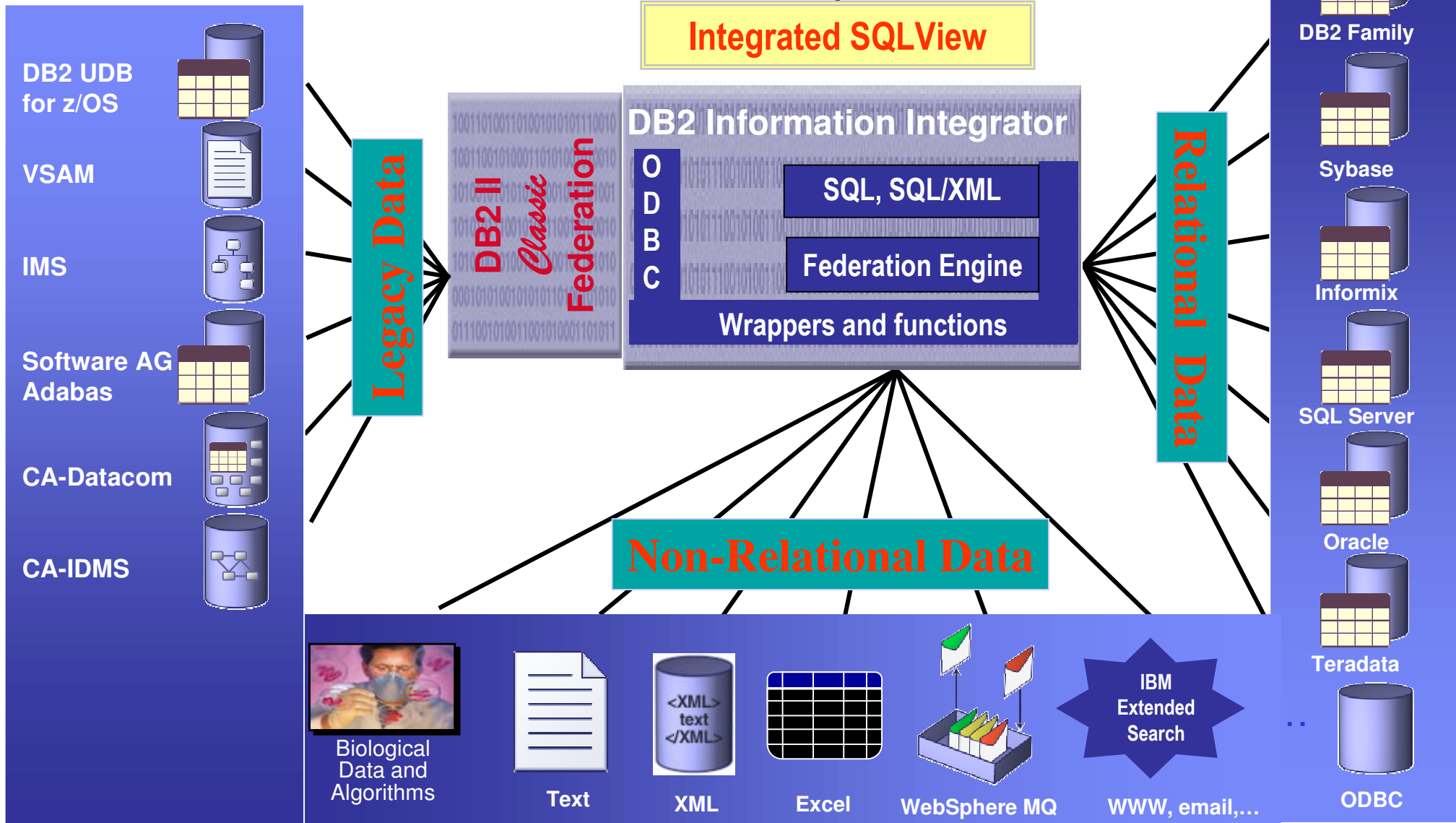
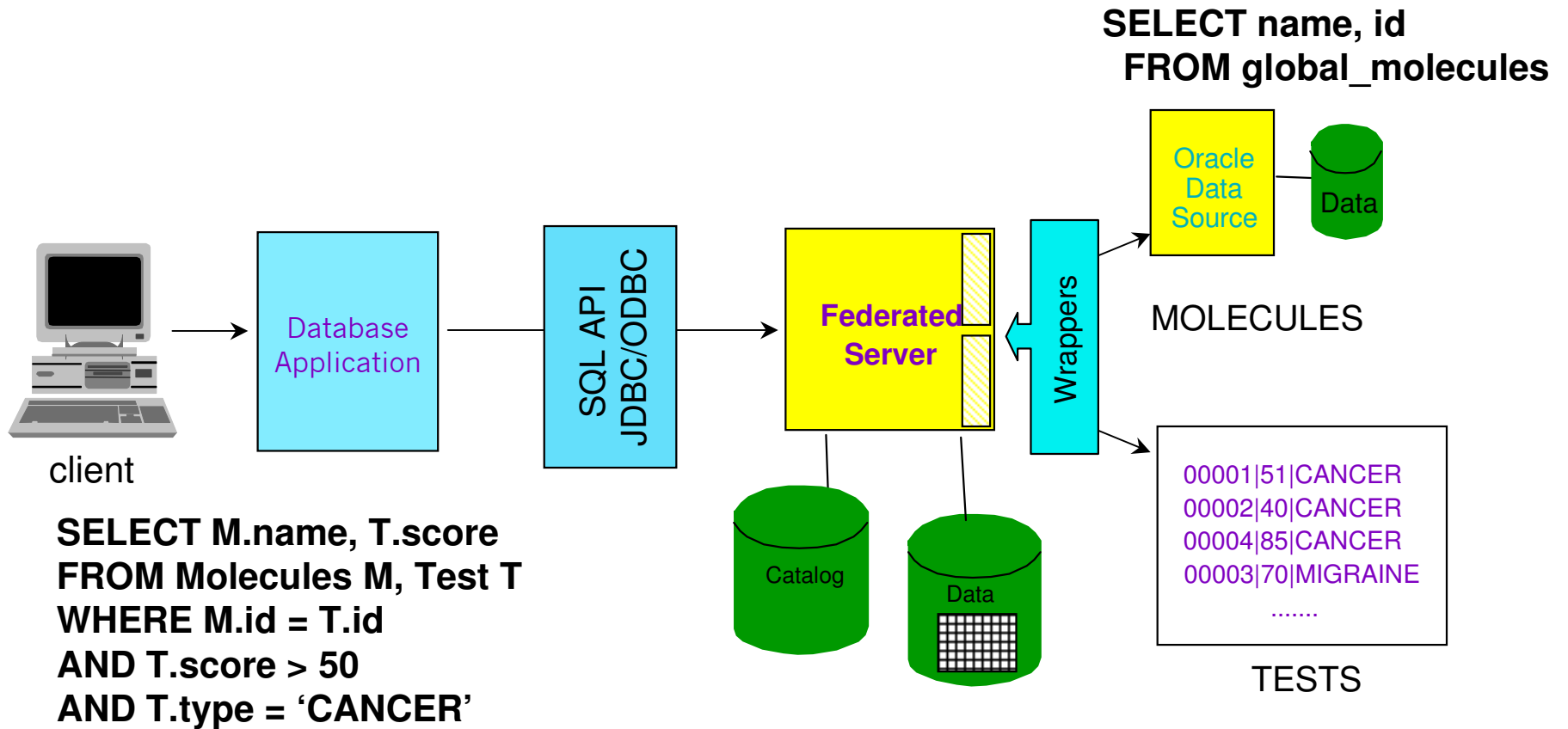


Evolution of Data Integration



Product Architecture



DB2 II V8.1 Features

- **Data Federation**
 - Relational Wrappers
 - Non-Relational Wrappers
 - Classic Federation
- **Data Replication (SQL Replication)**
- **Rich Data Sources**
 - WebSphere & MQ Integration
 - XML Extender
 - Lotus Extended Search Wrapper

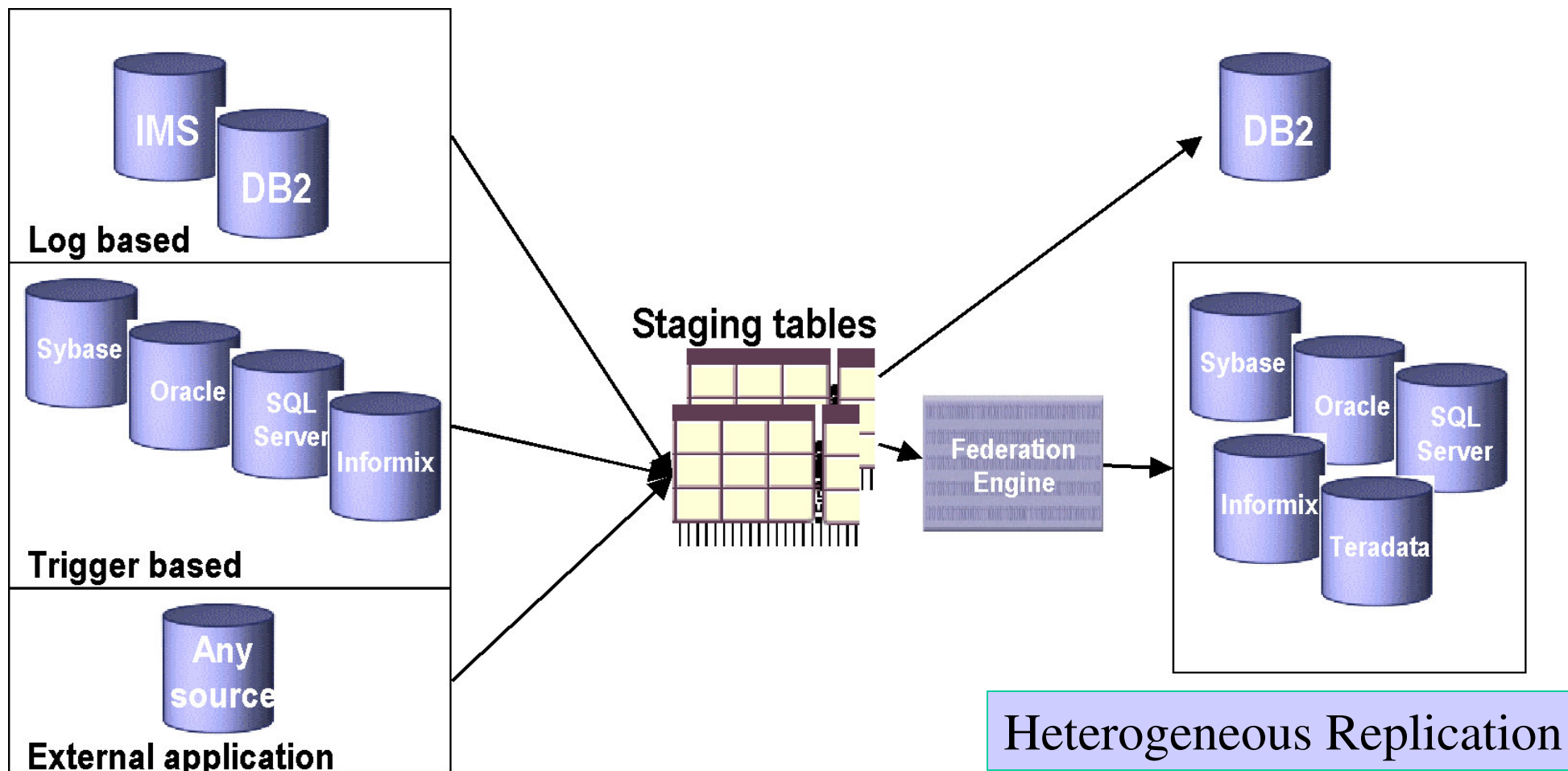


Data Federation: Key Features

- **Transparent DDL**
- **Replication/Update Capability Against Relational Nicknames (1 PC)**
- **Materialized Query Tables over Relational Nicknames**
- **LOB Handling**
 - Can retrieve LOB data from all relational wrappers
 - Can update (I/U/D) LOB data against Oracle
- **Net Search Extender Against Relational Nicknames**
- **MQ Integration**
- **DB2 as Web Service Provider/Consumer**
- **Enhanced Control Center GUI Administration for Federated Data Sources**
- **Garlic Wrapper Planning Technology**



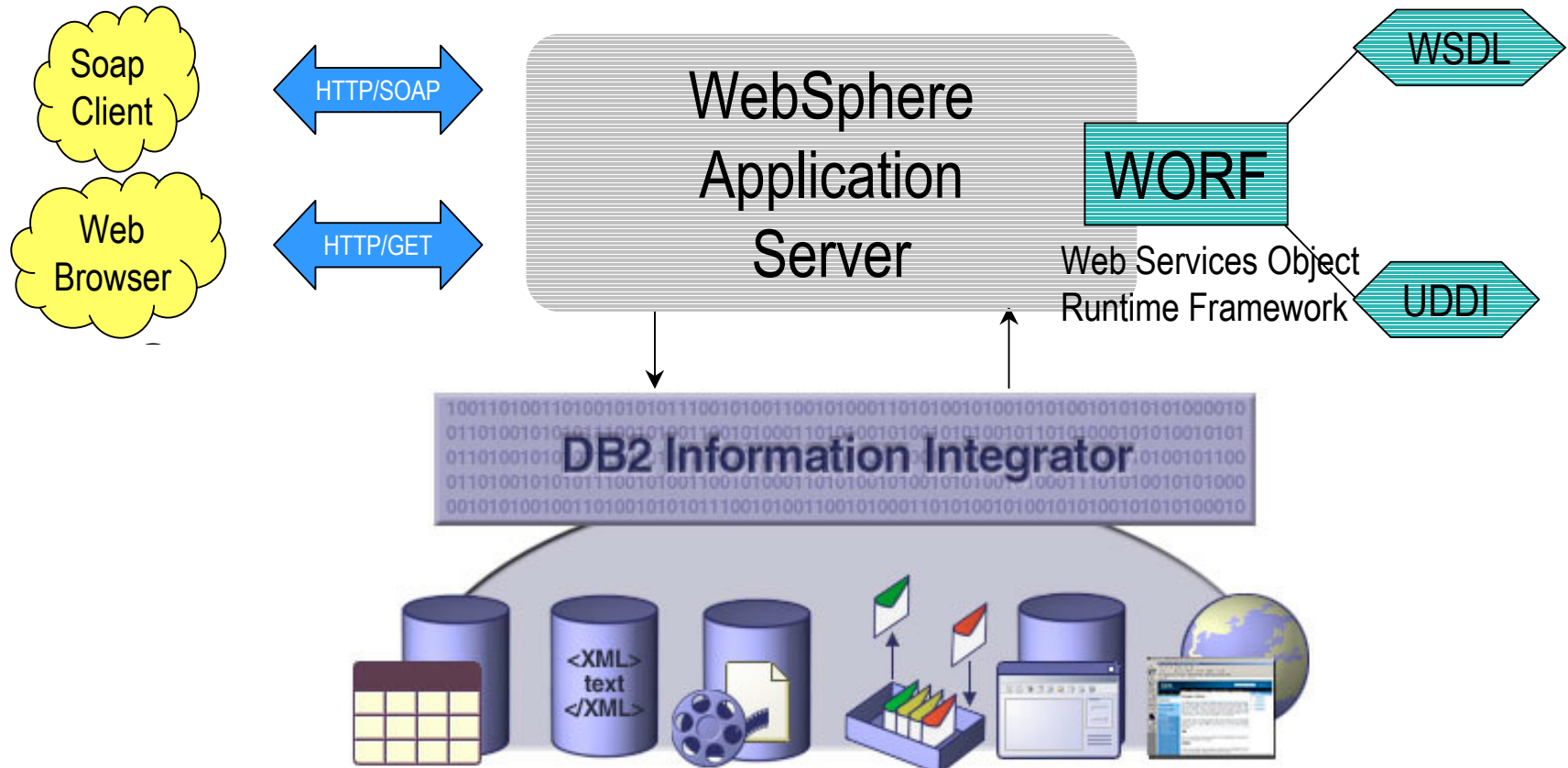
V8.1 Data Replication (SQL Replication)



Combined with the federation engine -> a powerful integration tool!

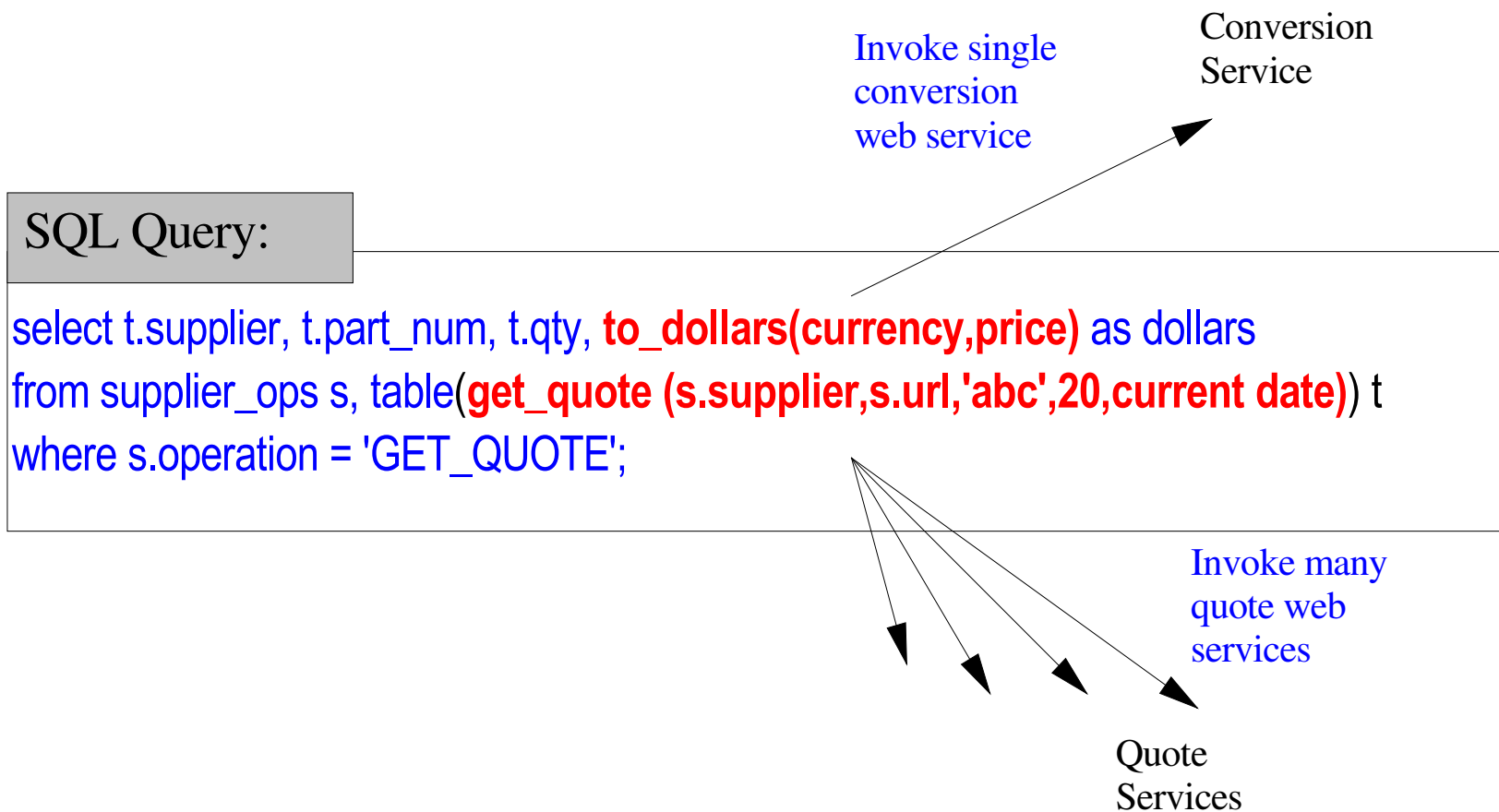


Rich Data Sources: Web Services Integration (Provider)



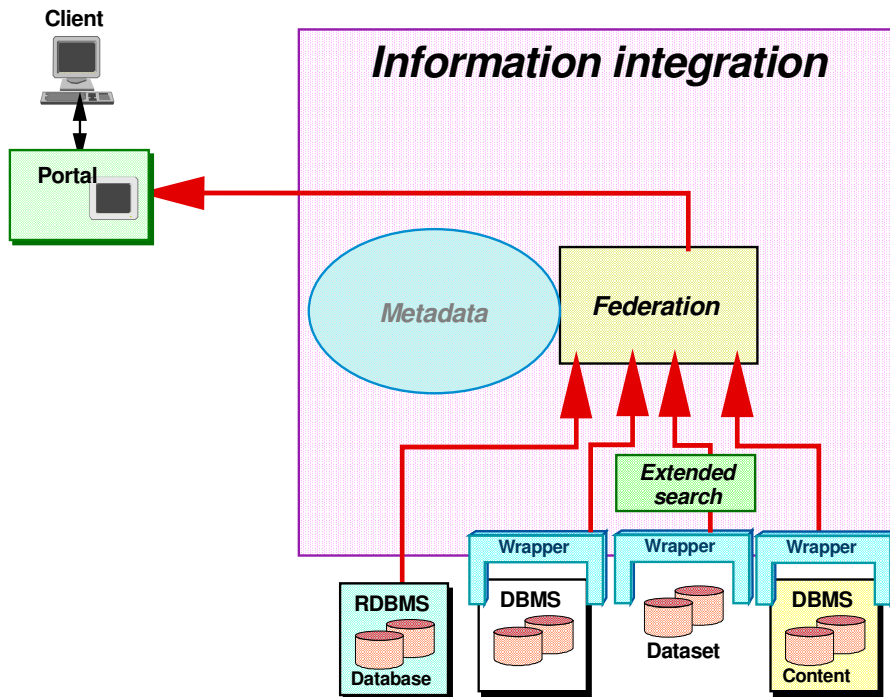
- Types of web services operations supported:
 - XML-based query or storage
 - XML document stored in DB2 table or composed on retrieval
 - Requires XML extender
 - SQL-based operations (Query, Insert, Update, Delete or Call)

Rich Data Sources: Web Services Integration (Consumer)





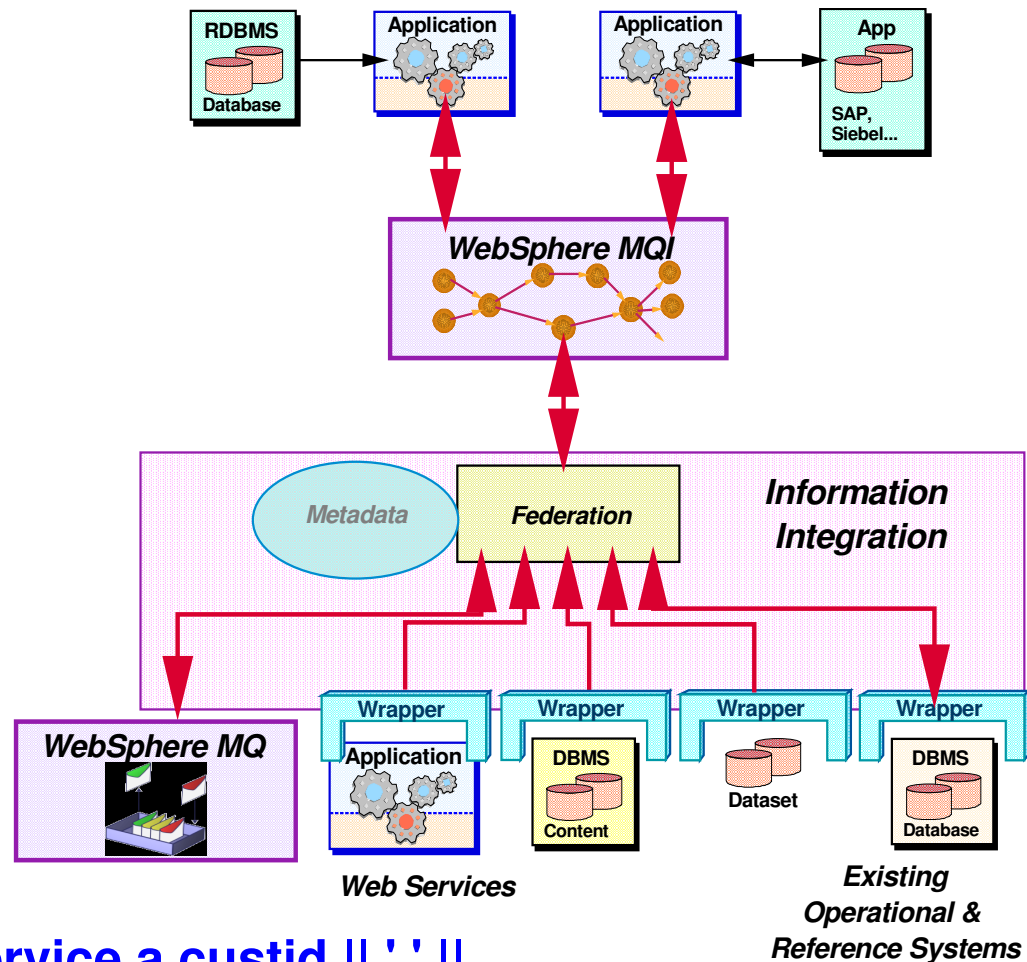
Rich Data Sources: WS Portal



Access federated data

via:

Rich Data Sources: WS MQ Integration

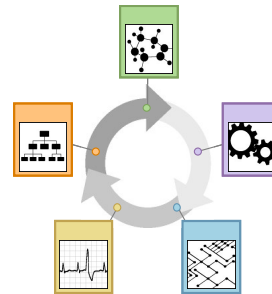
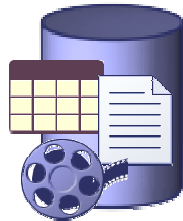


```
SELECT MQSend(followup.service,a.custid || ' ' ||
a.ordid) FROM account a WHERE a.status = 'overdue'
```

DB2 II and WS MQ – Indicators for Usage

DB2 II

- ✓ Integrating, sharing state of business
- ✓ Recorded State embodied in stored data

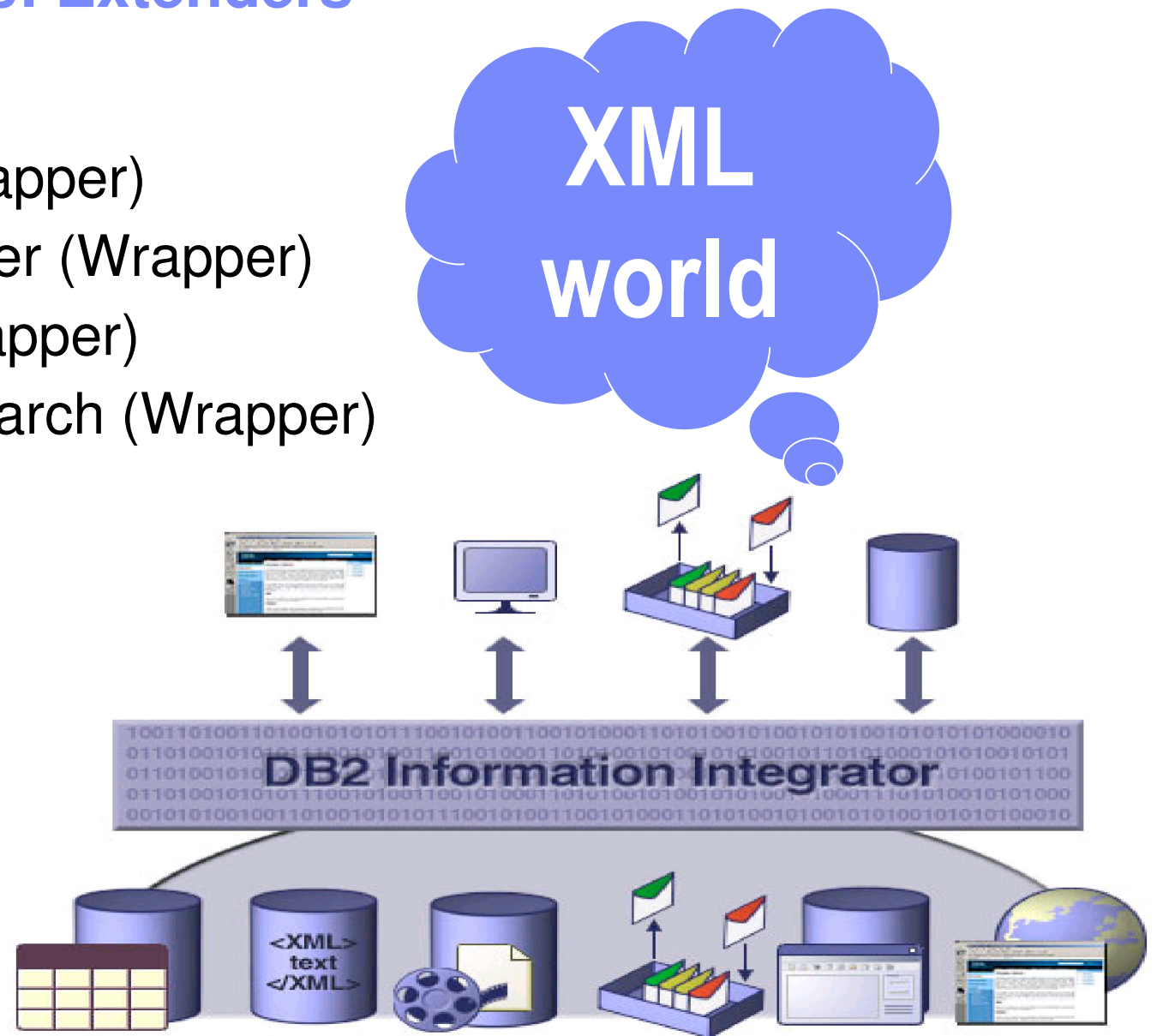


WS MQ

- ✓ Application to application integration
- ✓ Communicating business events

Rich Data Sources: Extenders

- XML Extender (Wrapper)
- Net Search Extender (Wrapper)
- Text Extender (Wrapper)
- Lotus Extended Search (Wrapper)



Rich Data Sources: Wrapper Development Toolkit

- ❑ C++ Toolkit available now
 - Use for developing/customizing non-relational wrappers
 - ODBC Wrapper can be customized for most relational sources
- ❑ Java Toolkit expected to ship in the next release



Performance: Is Relative

- **TPC-H using DB2 Information Integrator vs native client**

- Majority of queries achieved comparable performance, thus pushdown is working well
- Performance deterioration points us to areas for focus

- **DataJoiner comparison**

- 80% of queries were faster
- Half of those were twice as fast

Ratio of query elapsed time:
DB2 Federated V8 vs. Native SQL interface
to a single remote data source

