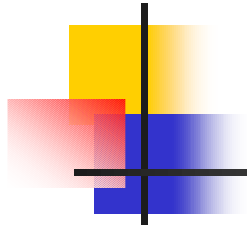


# **The Potential of Web Services and Enterprise Portals for Data Administrators**

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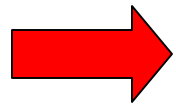
## **Section 1**

# **Web Services Concepts**



# Session Topics

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**A. Business Integration Today**

**B. Web Services Concepts**

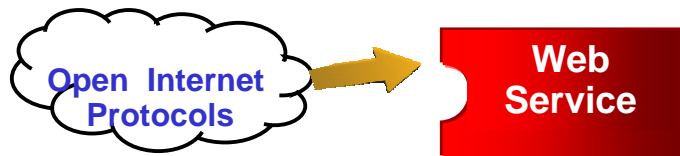
**C. Data Warehouse Opportunities  
from Web Services?**



## A. Web Services

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- **Publishing of business functions to Web**
  - Expresses APIs in XML
- **Web Services are to *programs* what web pages are to *humans***
  - Universal access to functions
  - Layered services
    - Services can be clients of other services



A programmable application component  
accessible via standard Web protocols

**Source: Software AG**



## **A. What Is a Service?**

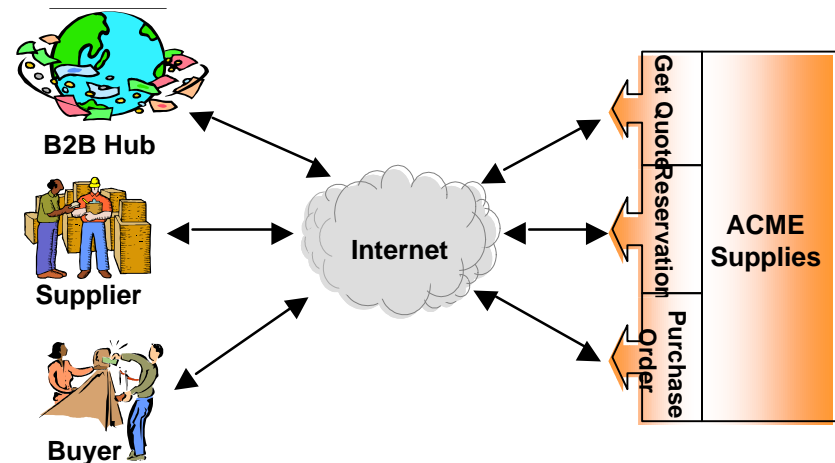
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- **What is a Service ?**
  - **"It is a meaningful business function, encapsulated in computer software" \***
  
- **Characteristics of a Service: \***
  - **Must represent a meaningful business function**
  - **Must be reusable**
  - **Has a clearly defined interface**
  - **Encapsulates functionality**
  - **Can be compound**
  
- **Granularity Scale**
  - **appropriate size**
  - **Access needs to be effective and efficient**

**\* Source: EAI Journal, March 2001**

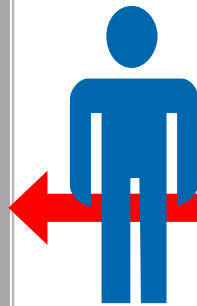
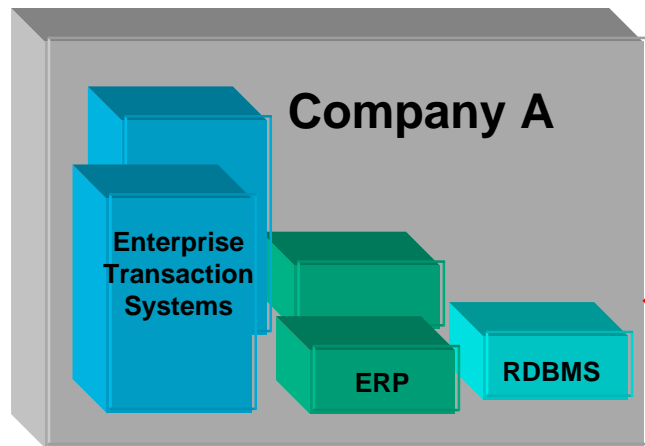
## A. Examples of Web Services

- **Credit Card Validation**
  - Simple Web Service
- **Credit Card Processing**
  - Compound Web Service
- **Purchase Order**
- **Hotel Reservation**
- **Request for Quote**



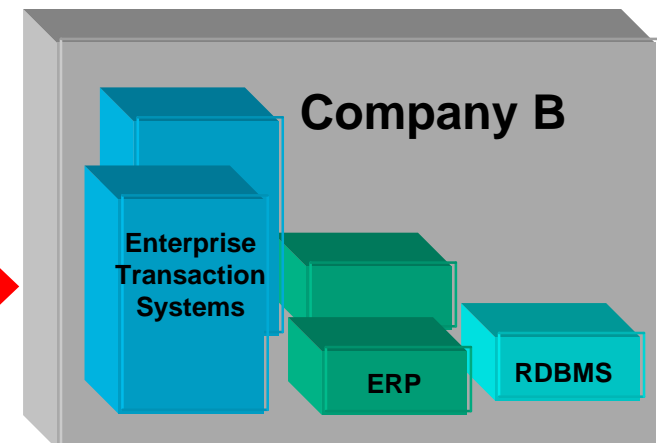
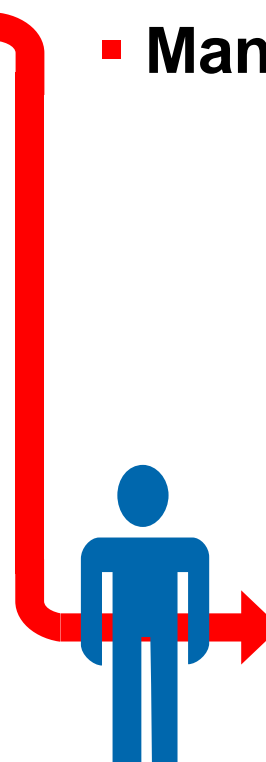
**Source: Software AG**

# A. People as Integrators Today



- People conduct business
- People act as integrators
- Manual reentry problem

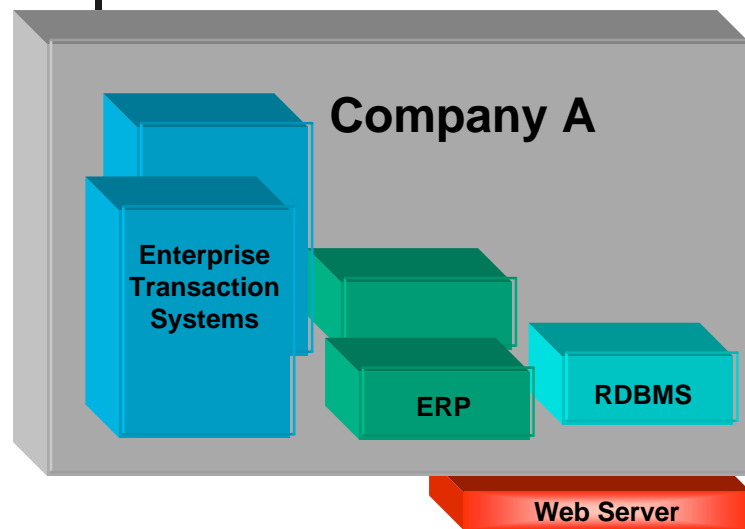
## The Human Interface



Source: Software AG

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# A. e-Business Externalizes Business Processes

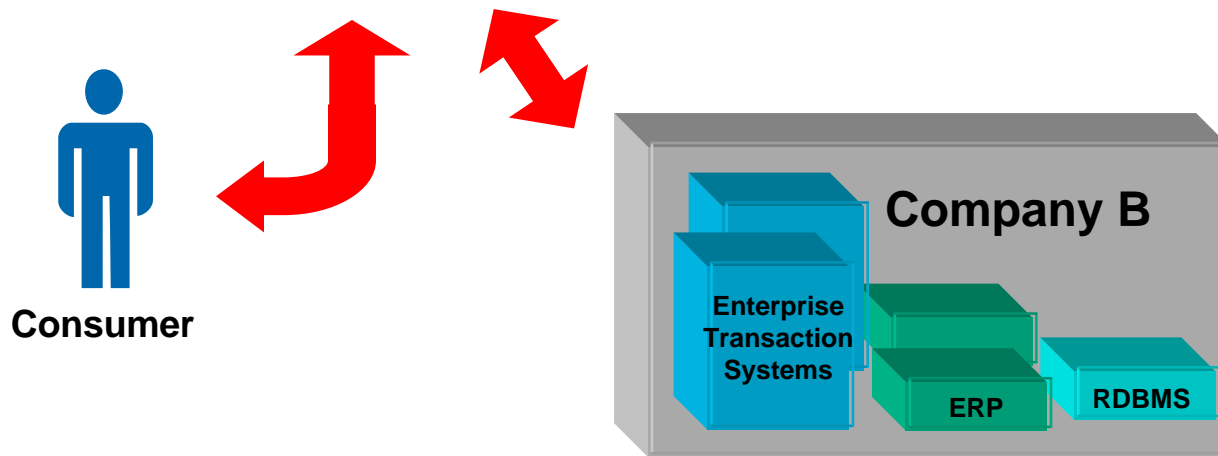


**e-Business ...**

**exposes business processes to the outside world**

**requires well integrated IT systems**

**No integration – no business**



**Source: Software AG**

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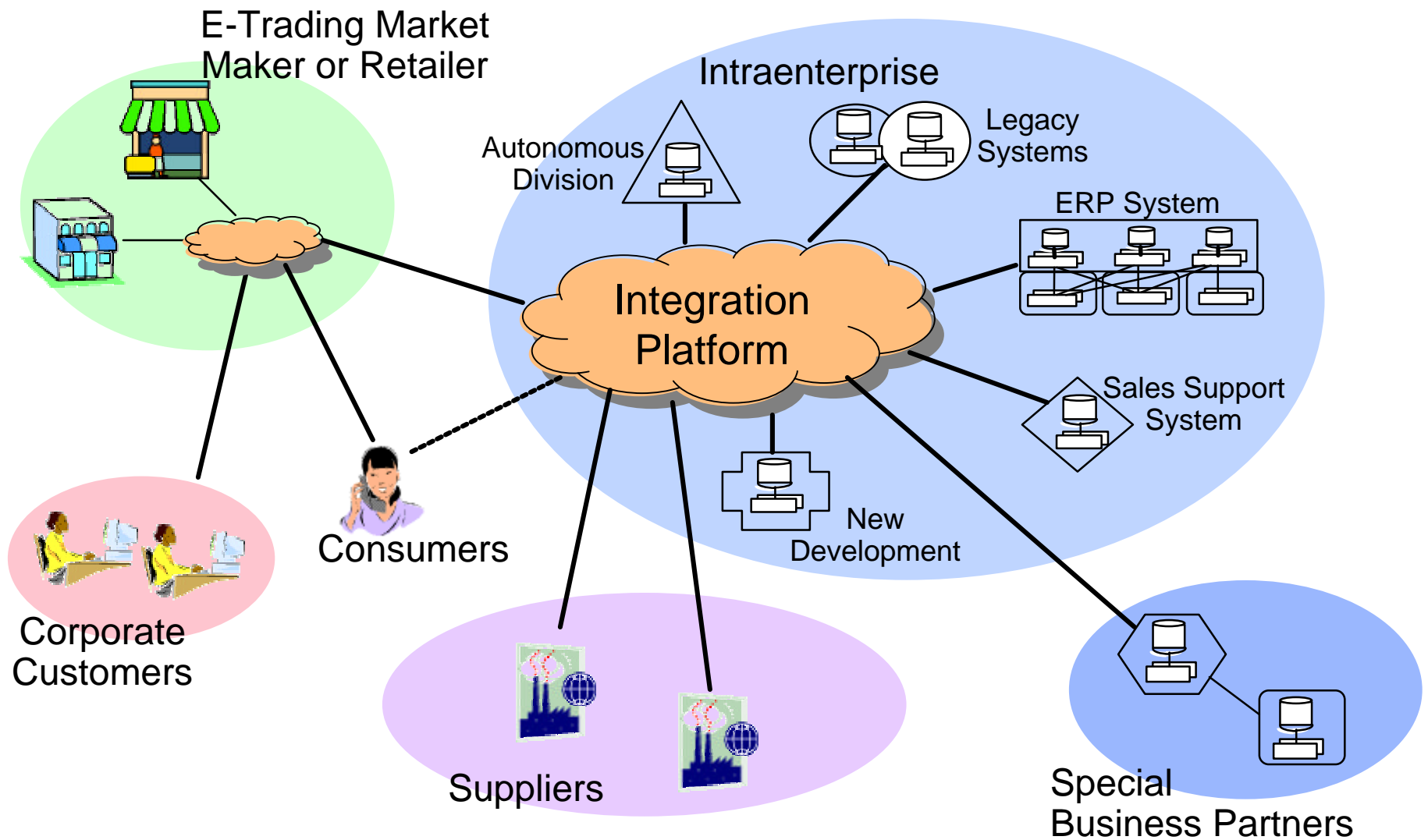
## **A. XML Is a Key Enabler for Collaborative Commerce**

---

- **Works with any programming language**
- **Works with any middleware layer**
- **Uses common Web infrastructure**
- **Describes payload (data), not just interfaces**
- **Easily read by machines and humans**
- **Various schemas and data types available**
- **Broad industry adoption**

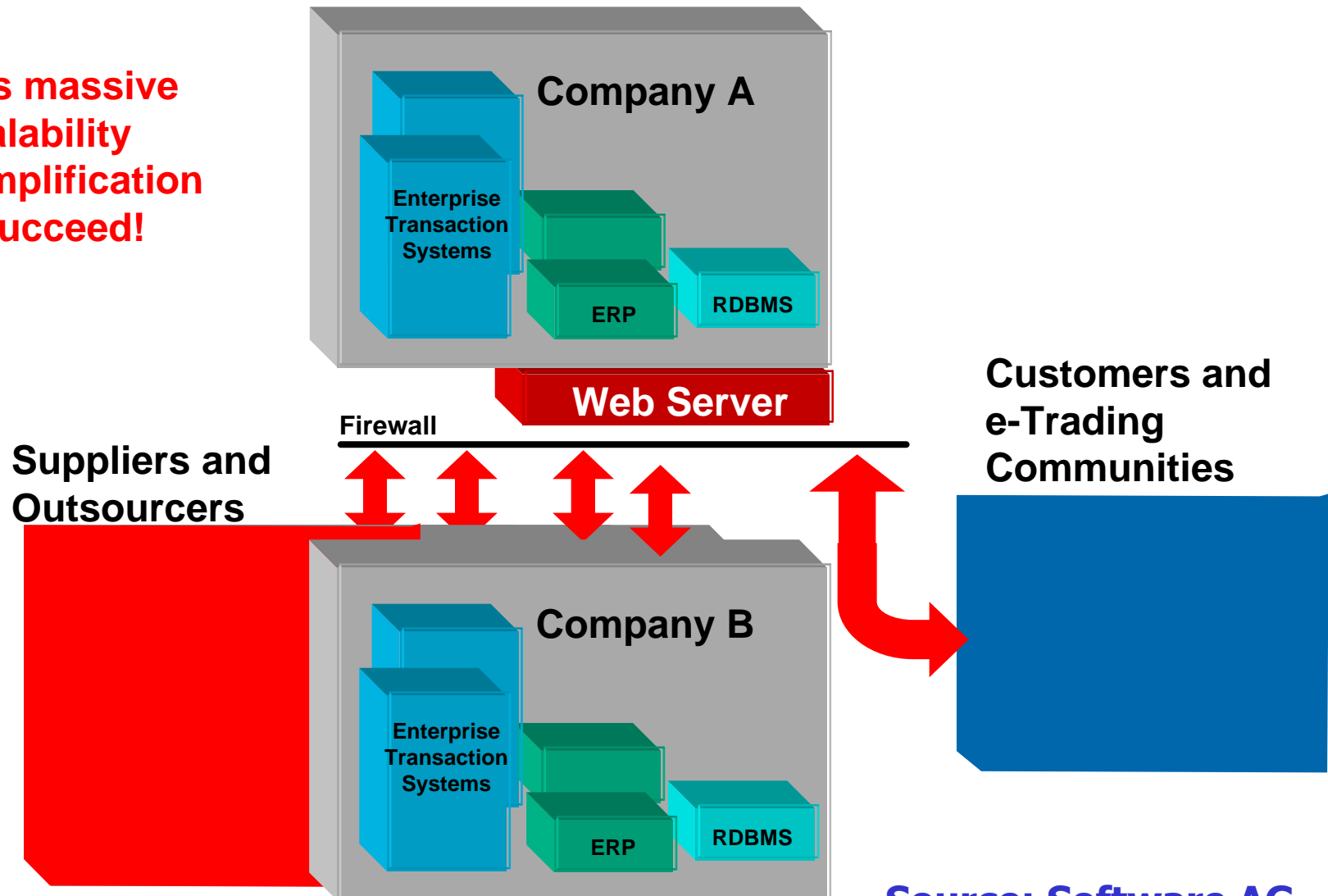


# A. Today's Business Integration

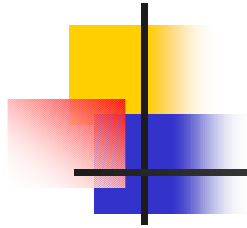


# A. Can Integration Cope With Increased e-Business Complexity?

**Needs massive scalability and simplification to succeed!**



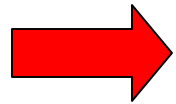
**Source: Software AG**



# Session Topics

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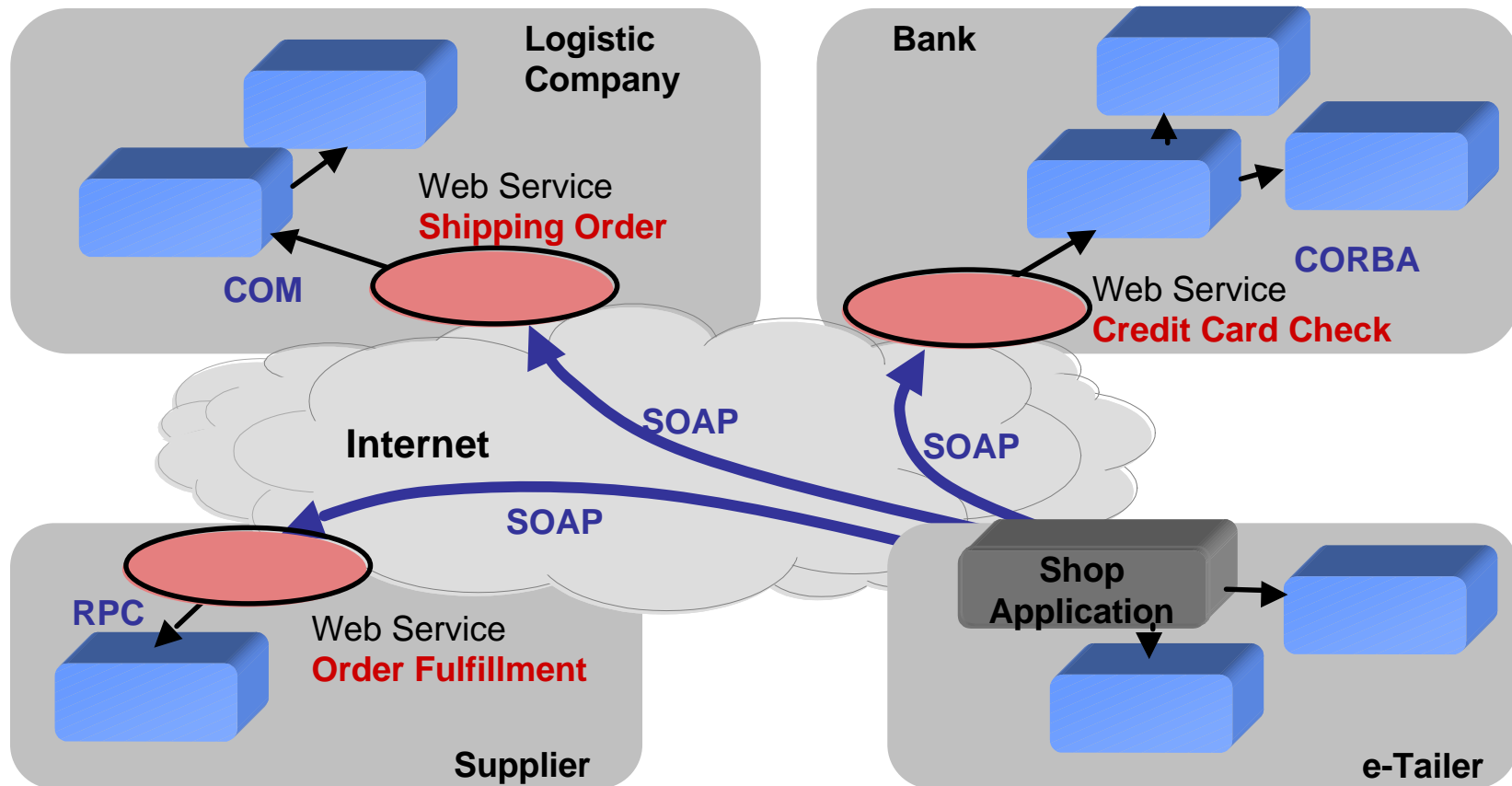
**A. Business Integration Today**



**B. Web Services Concepts**

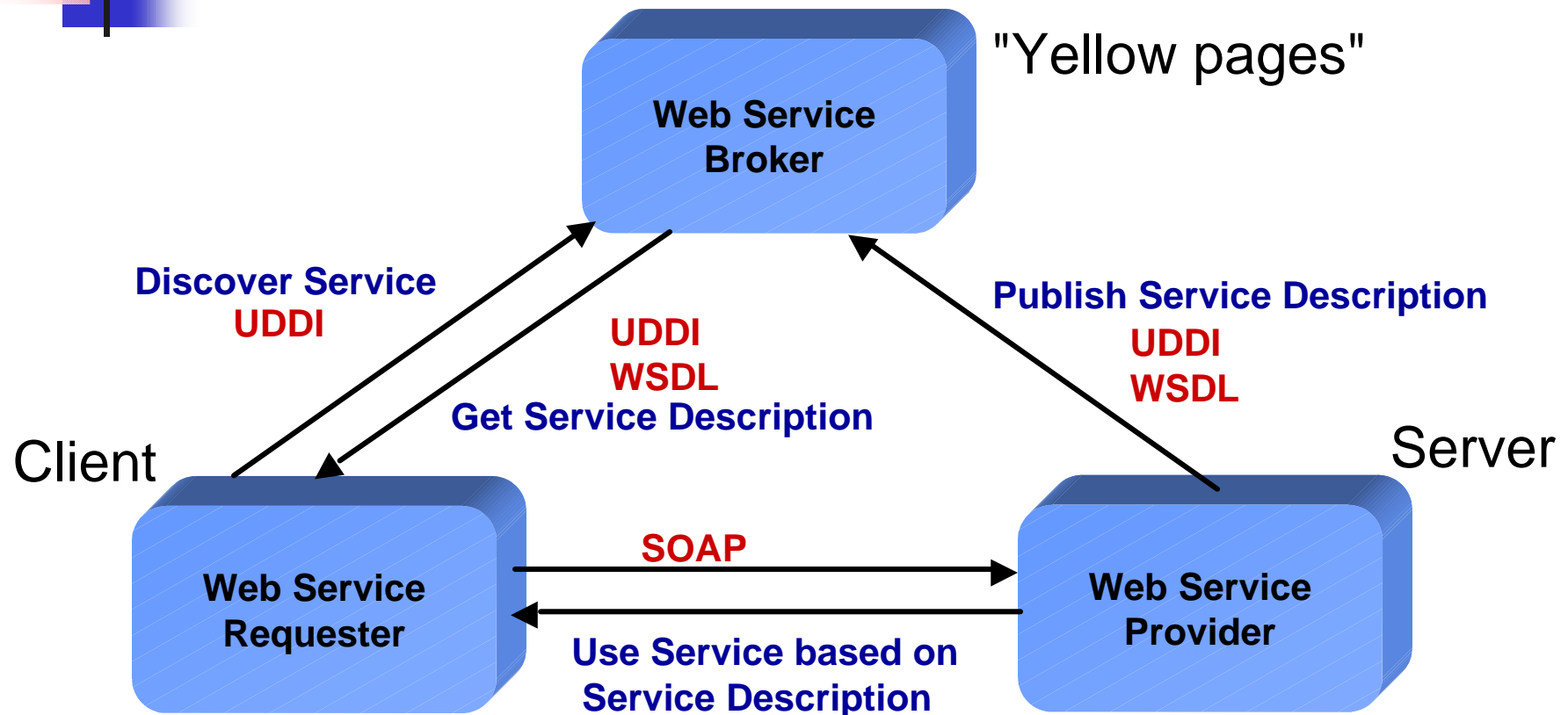
**C. Data Warehouse Opportunities  
from Web Services?**

## A. Web Services Scenario



SOAP: Simple Object Access Protocol

## B. Web Services Standards



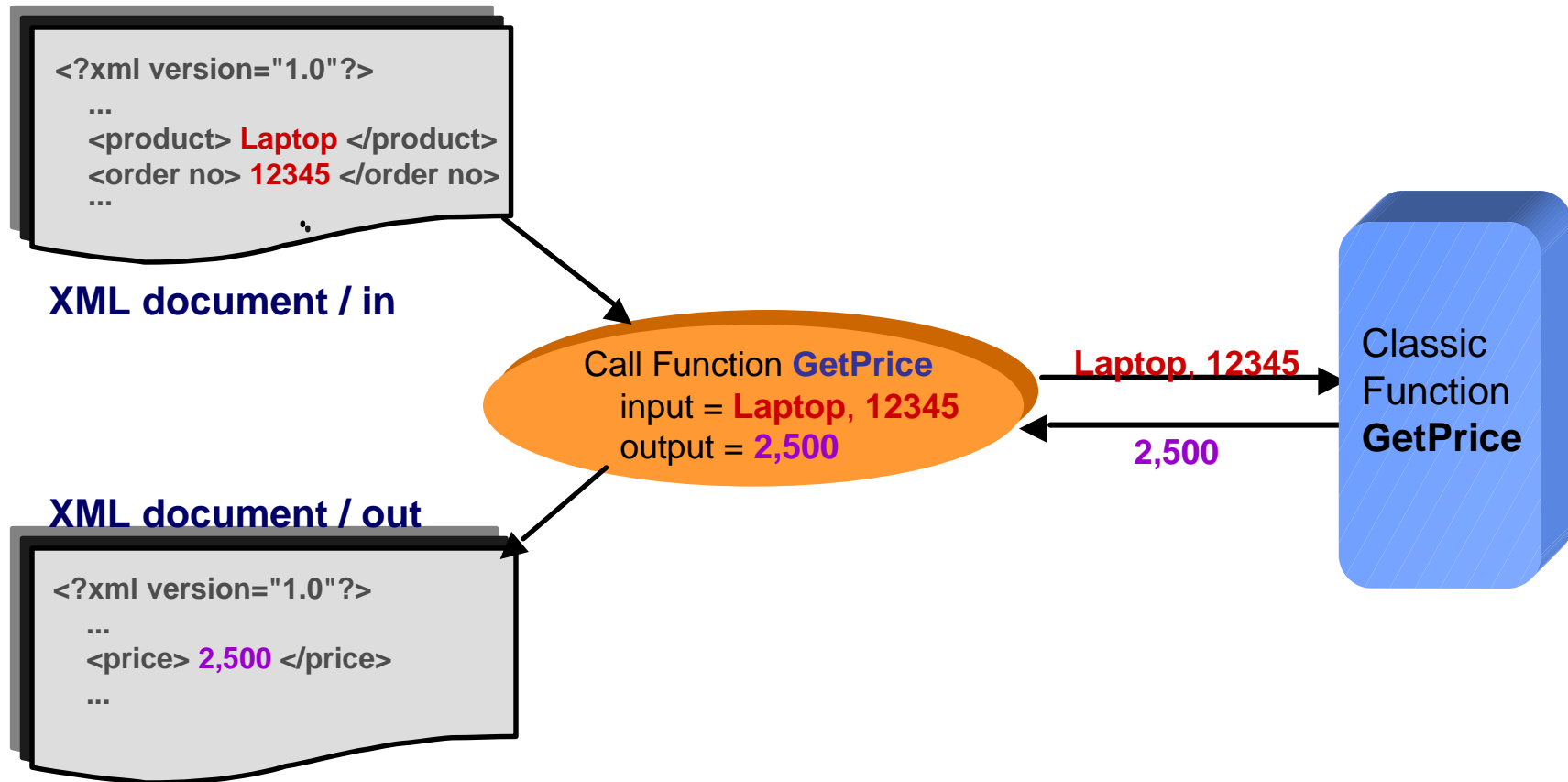
WSDL: Web Service Description Language

UDDI: Universal Description, Discovery, Integration

SOAP: Simple Object Access Protocol

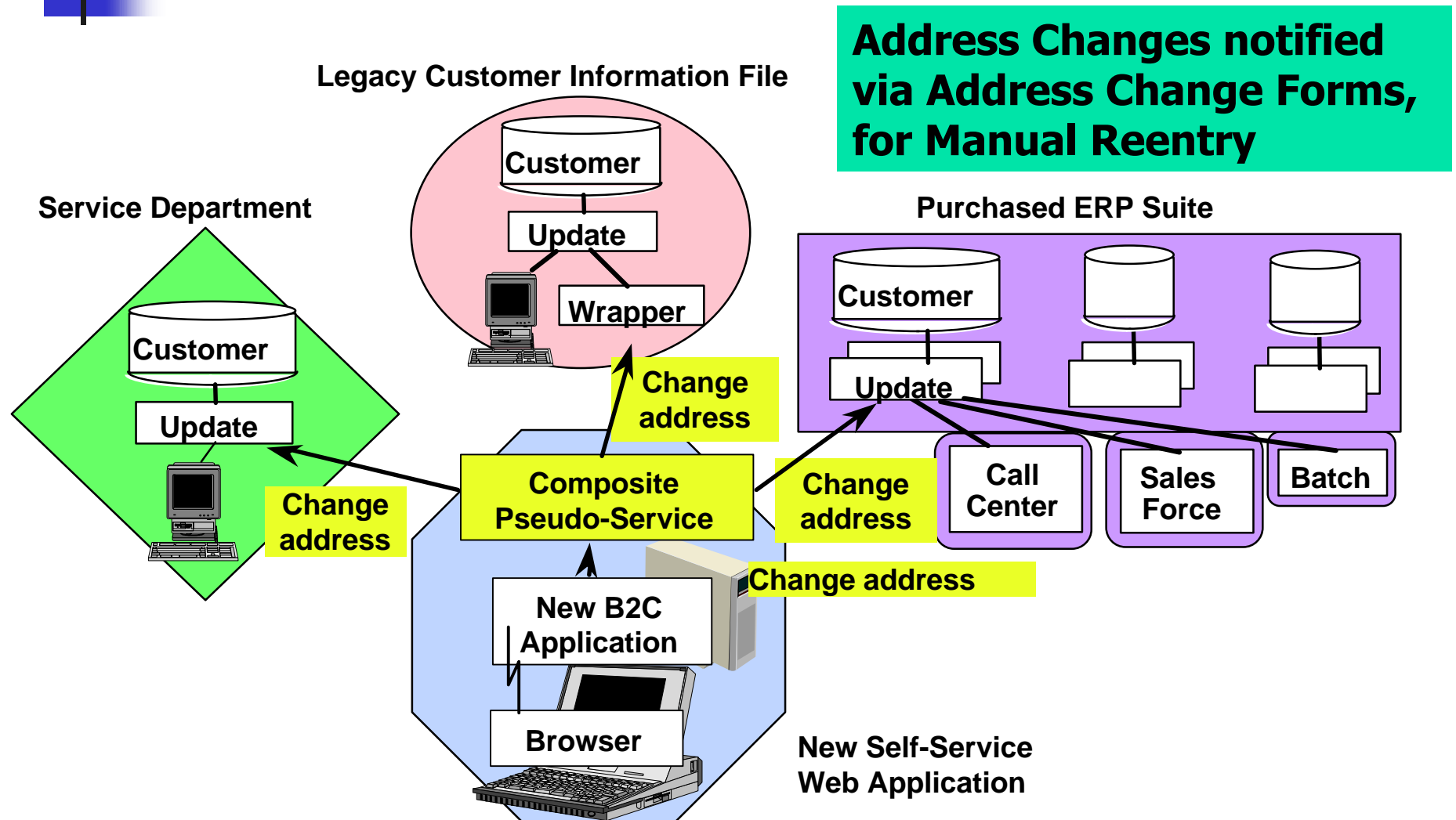
**Source: Software AG**

## B. XML SOAP Function Call Concepts



Source: Software AG

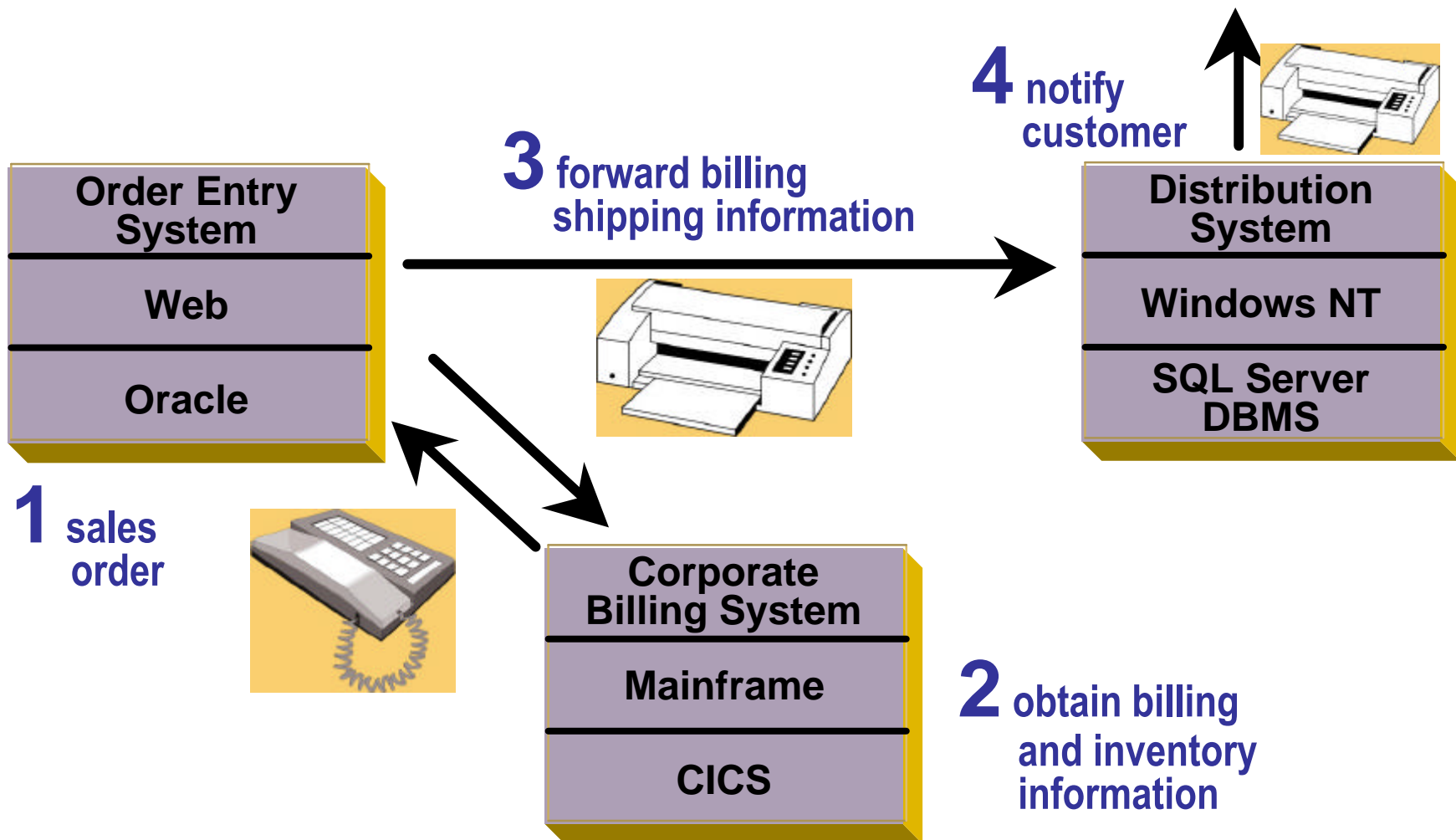
## B. Legacy Integration Human Interface for Manual Reentry



Source: Gartner Group

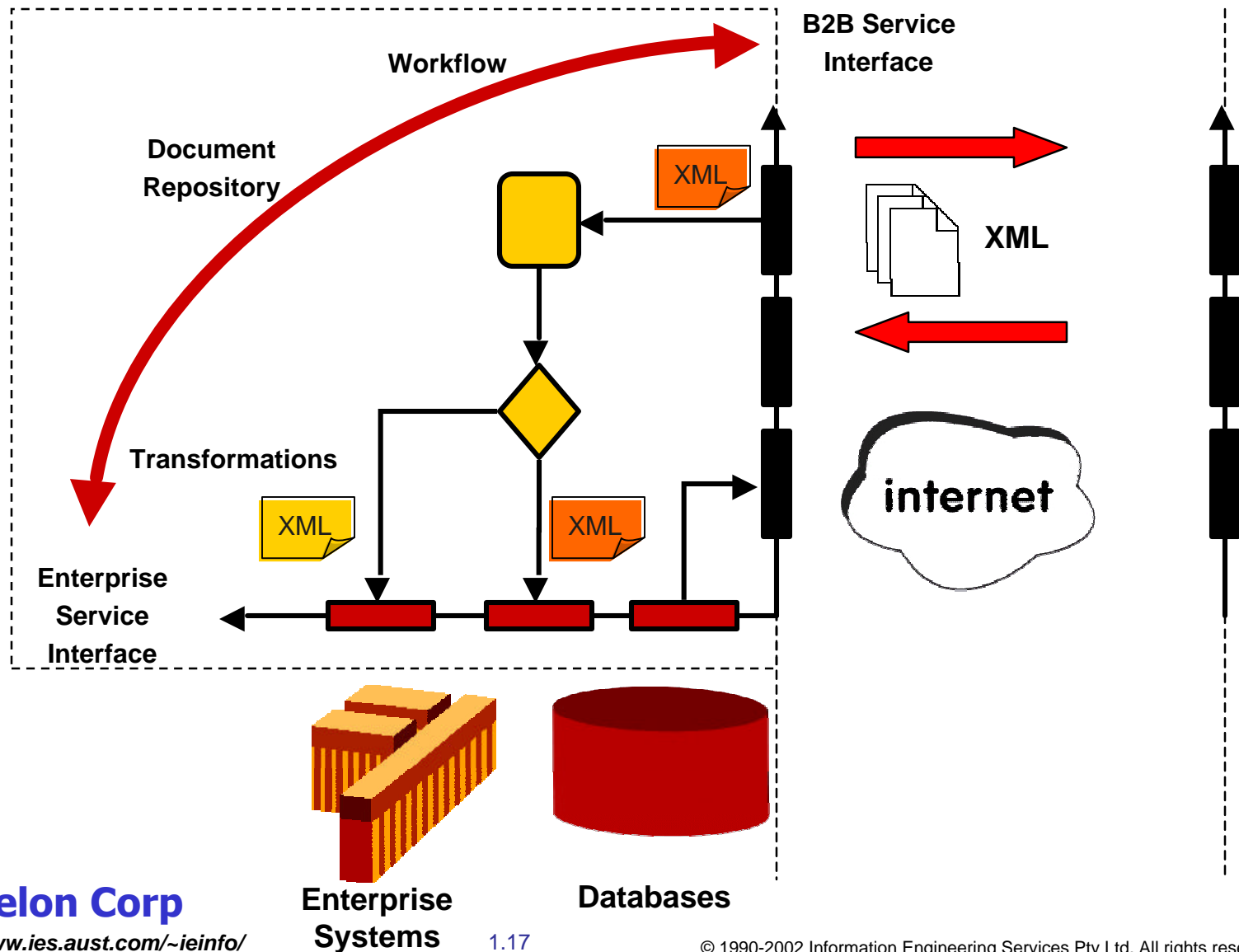
## B. Example Scenario

### Current Manual Process





## B. Integration Automation Concepts (EG: eXcelon B2B Integration Server)



Source: eXcelon Corp

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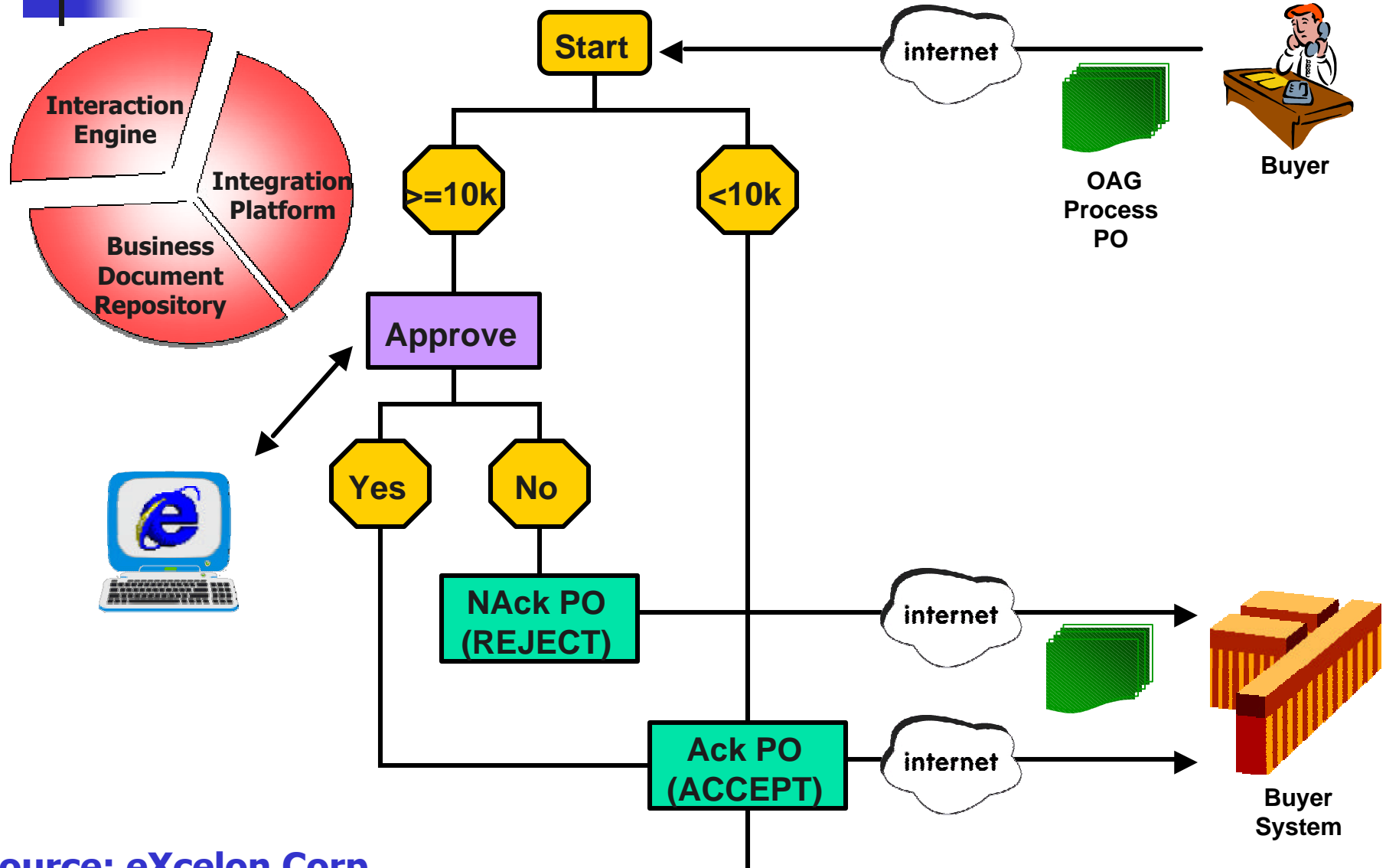
Enterprise  
Systems

1.17

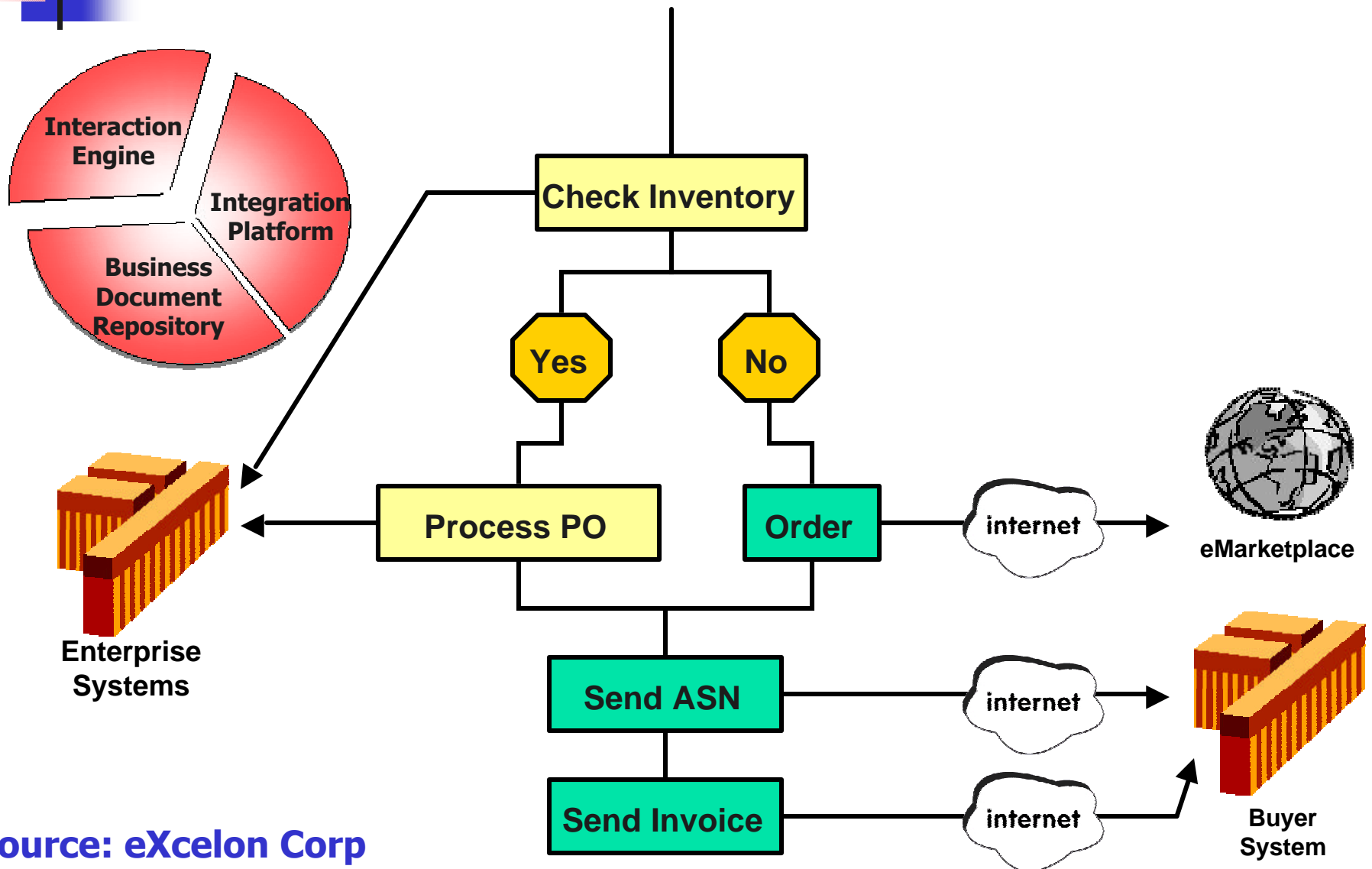
Databases

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## B. Interaction Engine: Workflow Example (EG: eXcelon B2B Integration Server)

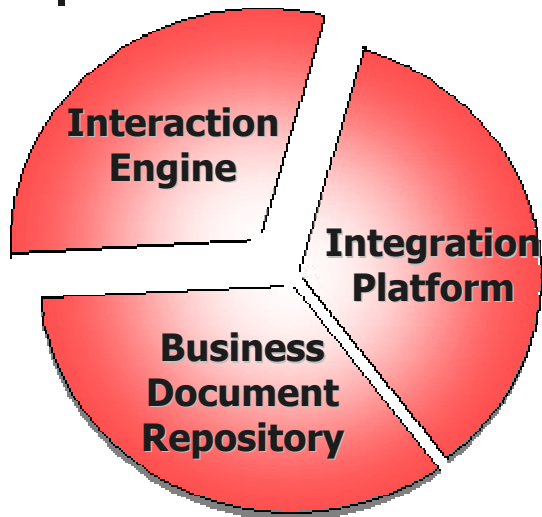


## B. Interaction Engine: Workflow Example (EG: eXcelon B2B Integration Server)



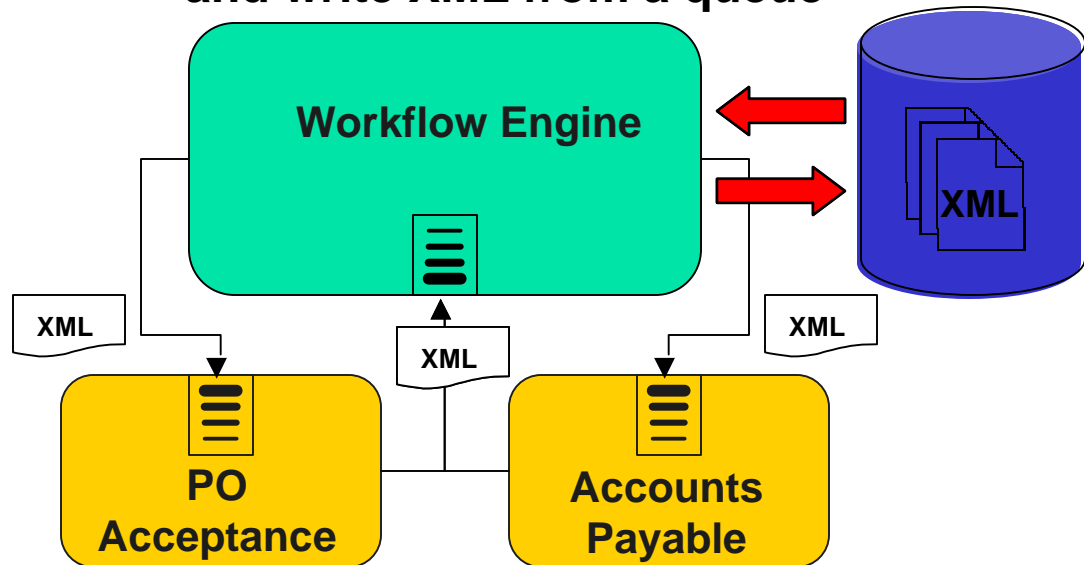
Source: eXcelon Corp

## B. Interaction Engine: Workflow Example (EG: eXcelon B2B Integration Server)



- **Service Architecture**

- Any application can interact if it can read and write XML from a queue

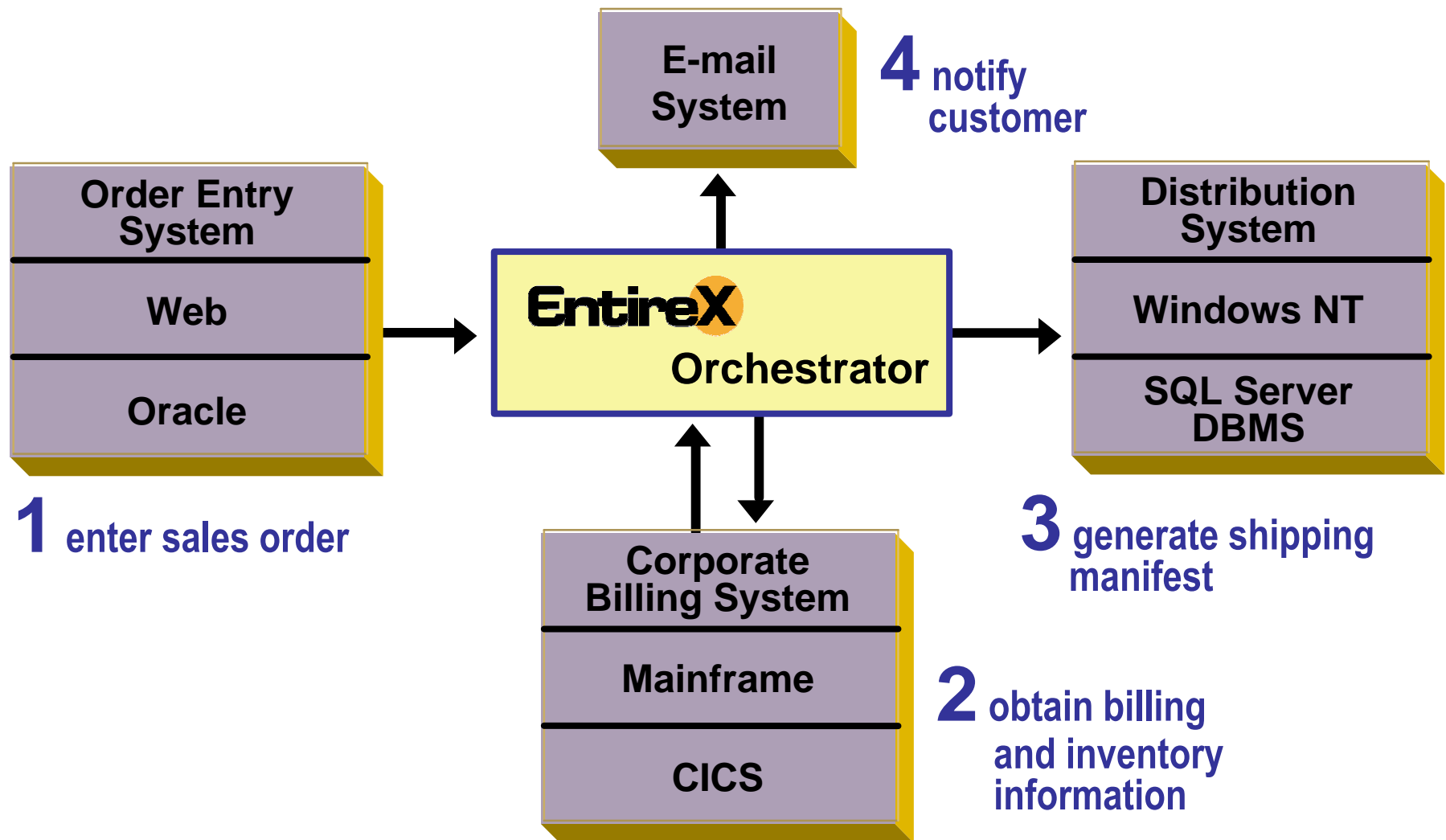


- **Allows any type of application to be integrated**
- **Centralizes state management**
- **Removes interdependencies between components**

**Source: eXcelon Corp**

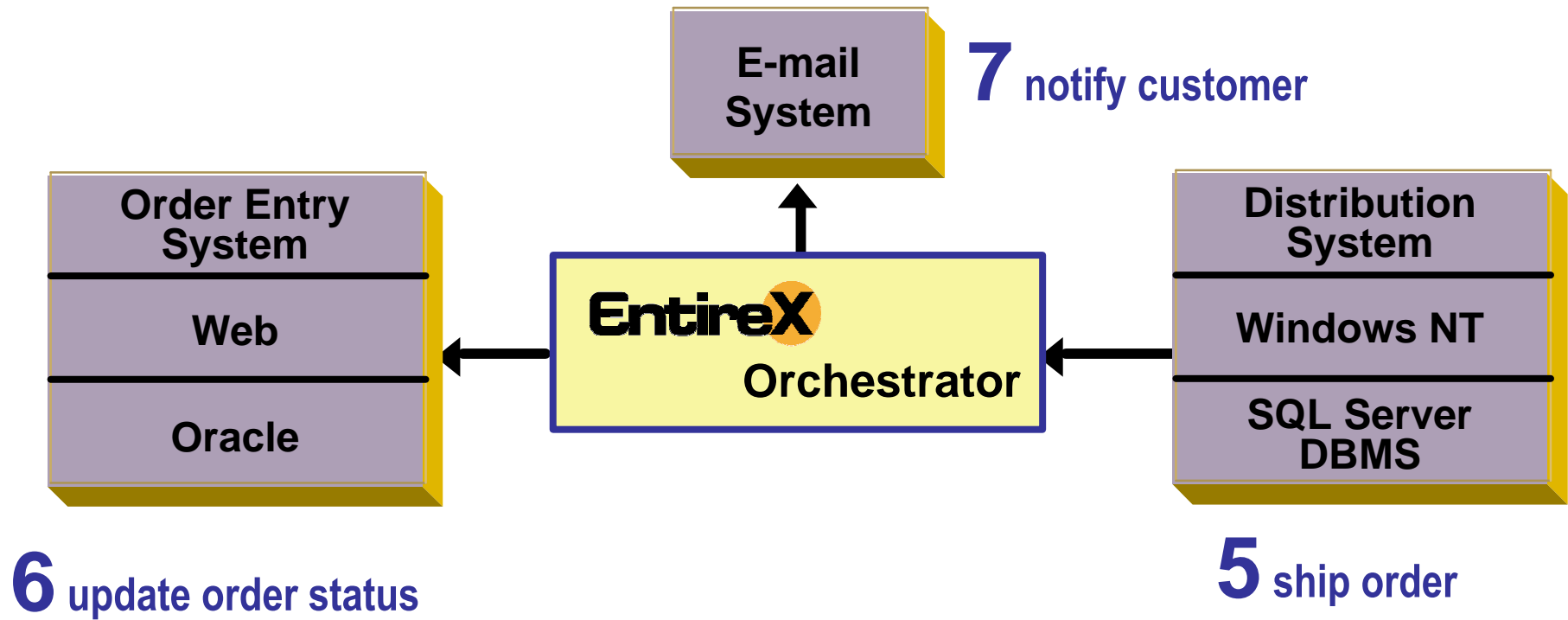
## B. Example Scenario

### New Automated Process

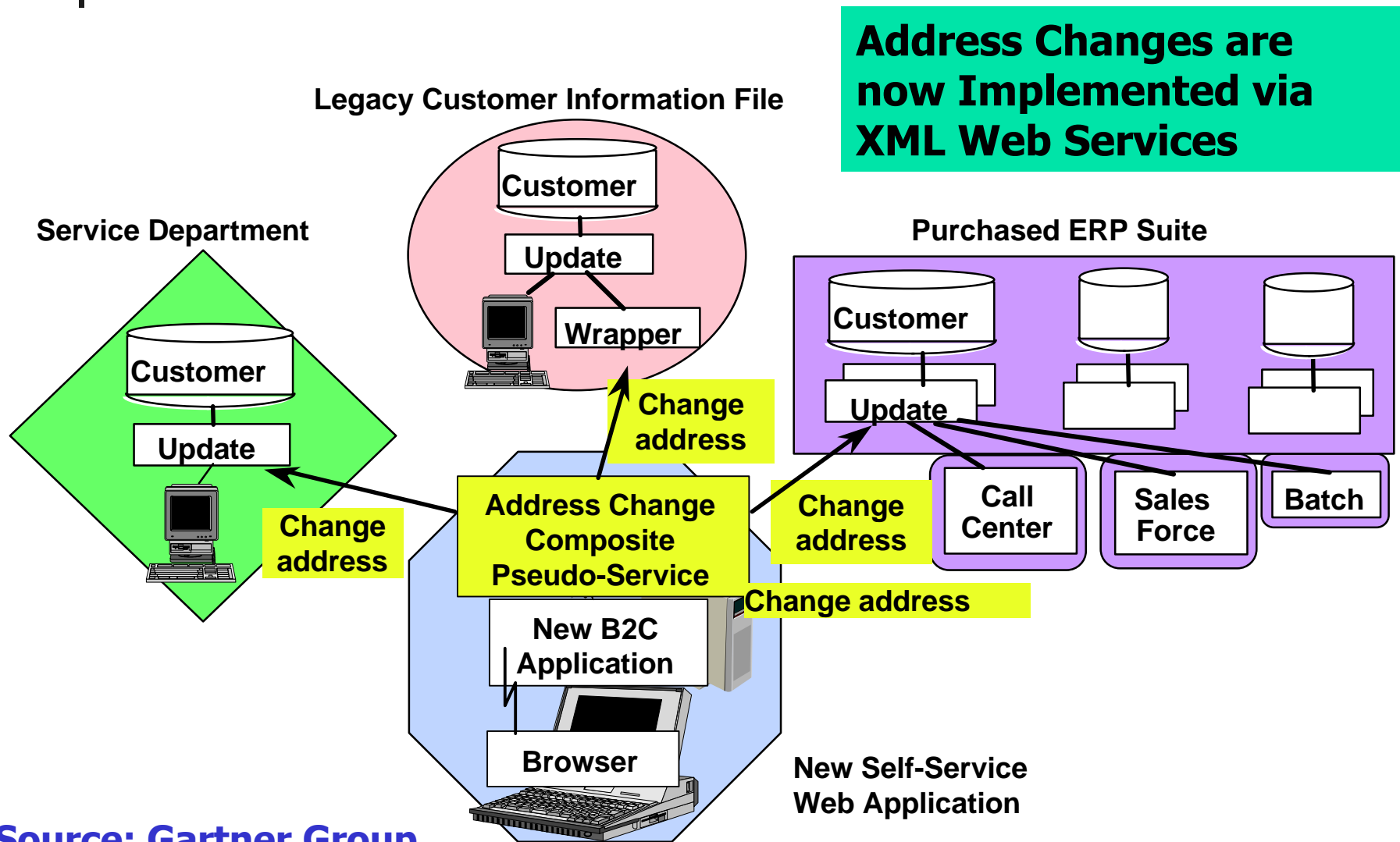


## B. Example Scenario

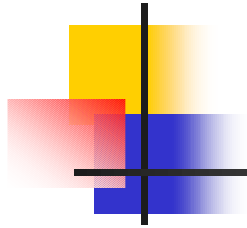
### Enhanced Automated Process



## B. Legacy Integration using Web Services



Source: Gartner Group

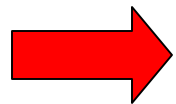


# Session Topics

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**A. Business Integration Today**

**B. Web Services Concepts**



**C. Data Warehouse Opportunities  
from Web Services?**



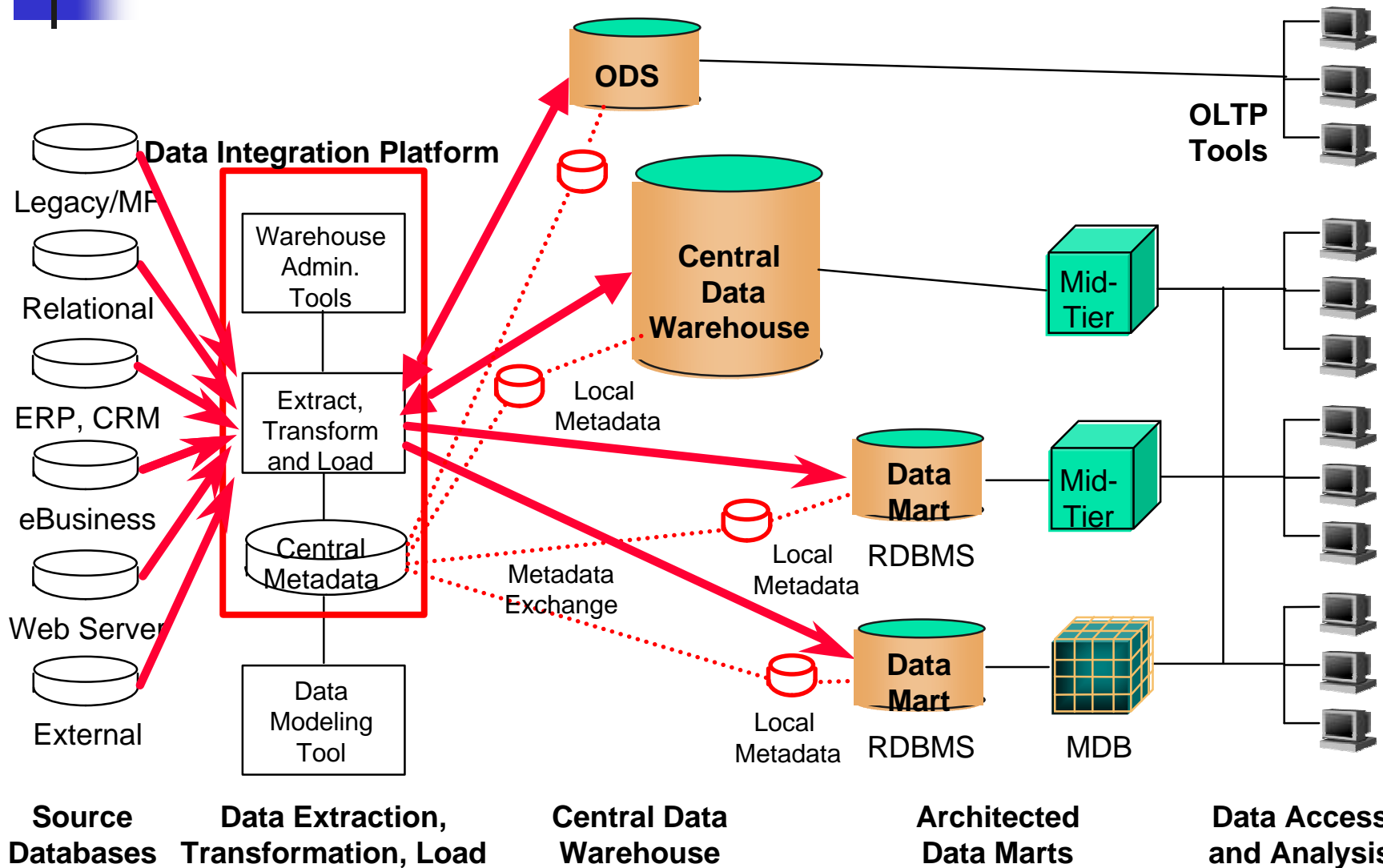


# Any EAI Opportunities for Data Warehouses from Web Services?

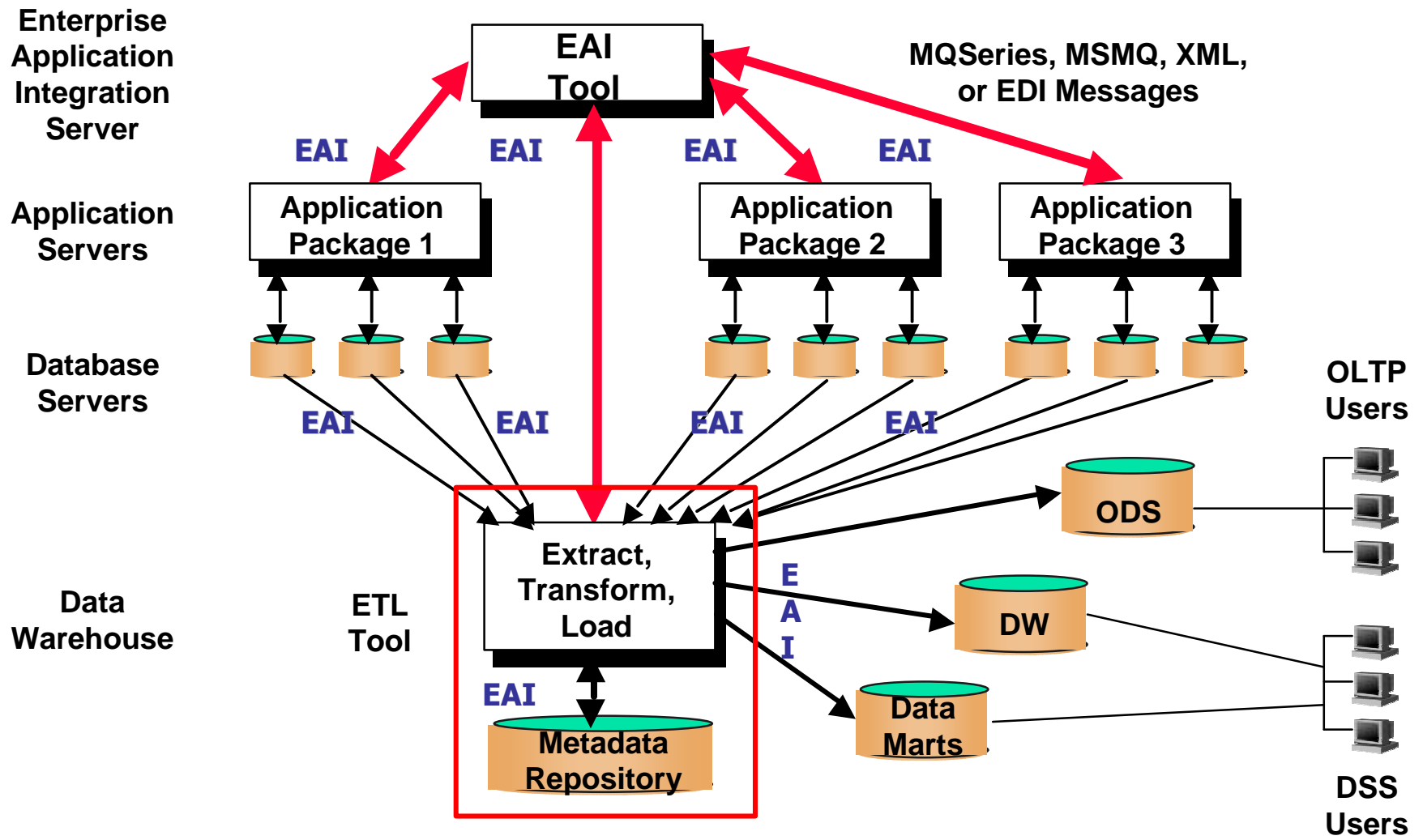
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- Data Warehouse Analytics
  - Any Opportunities using Web Services?
- Integrated Metadata Repository
  - Do Web Services offer Metadata Opportunities?
- Corporate Portal Front-End to DW
  - Are Web Services applicable to Data Warehouses when used with front-end Corporate Portals?
- Other Opportunities?

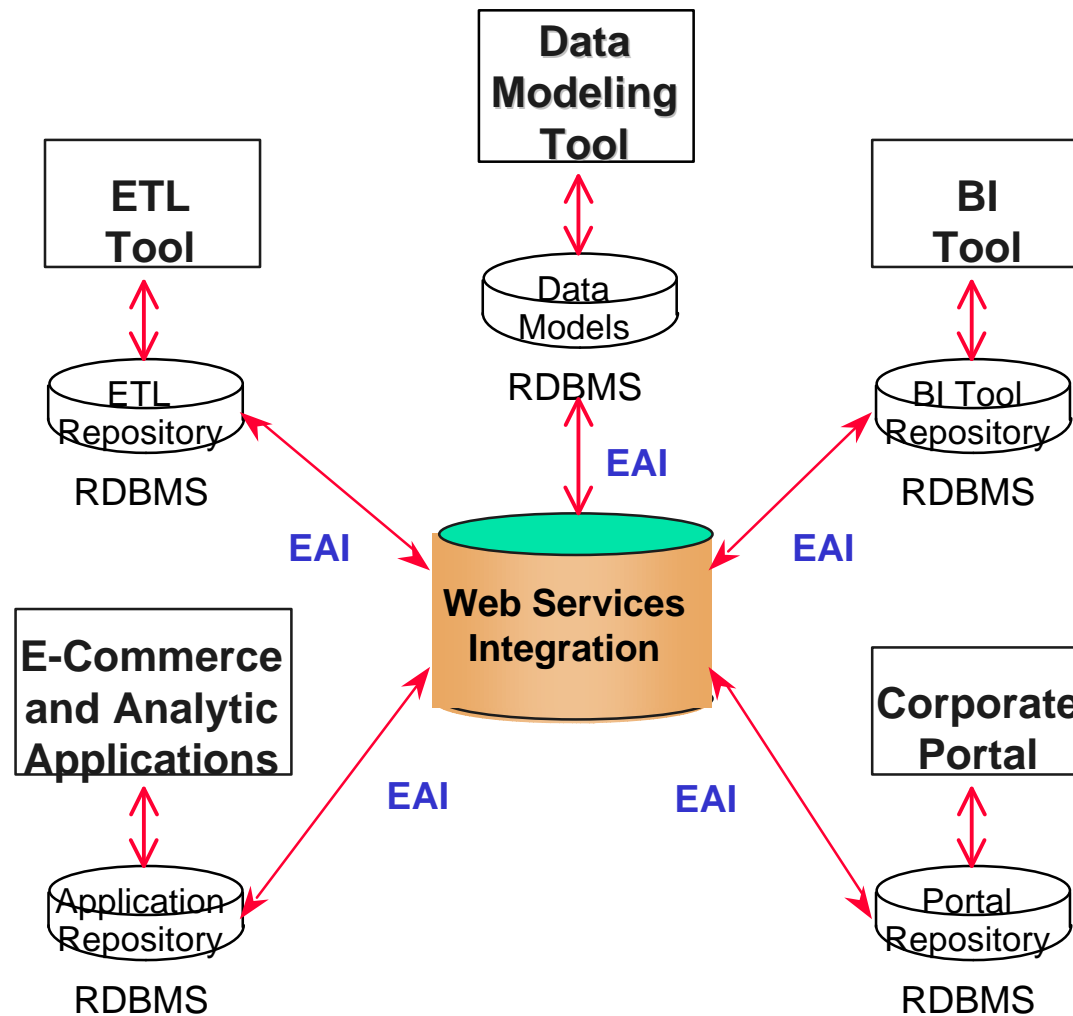
## C. Recommended DW Architecture



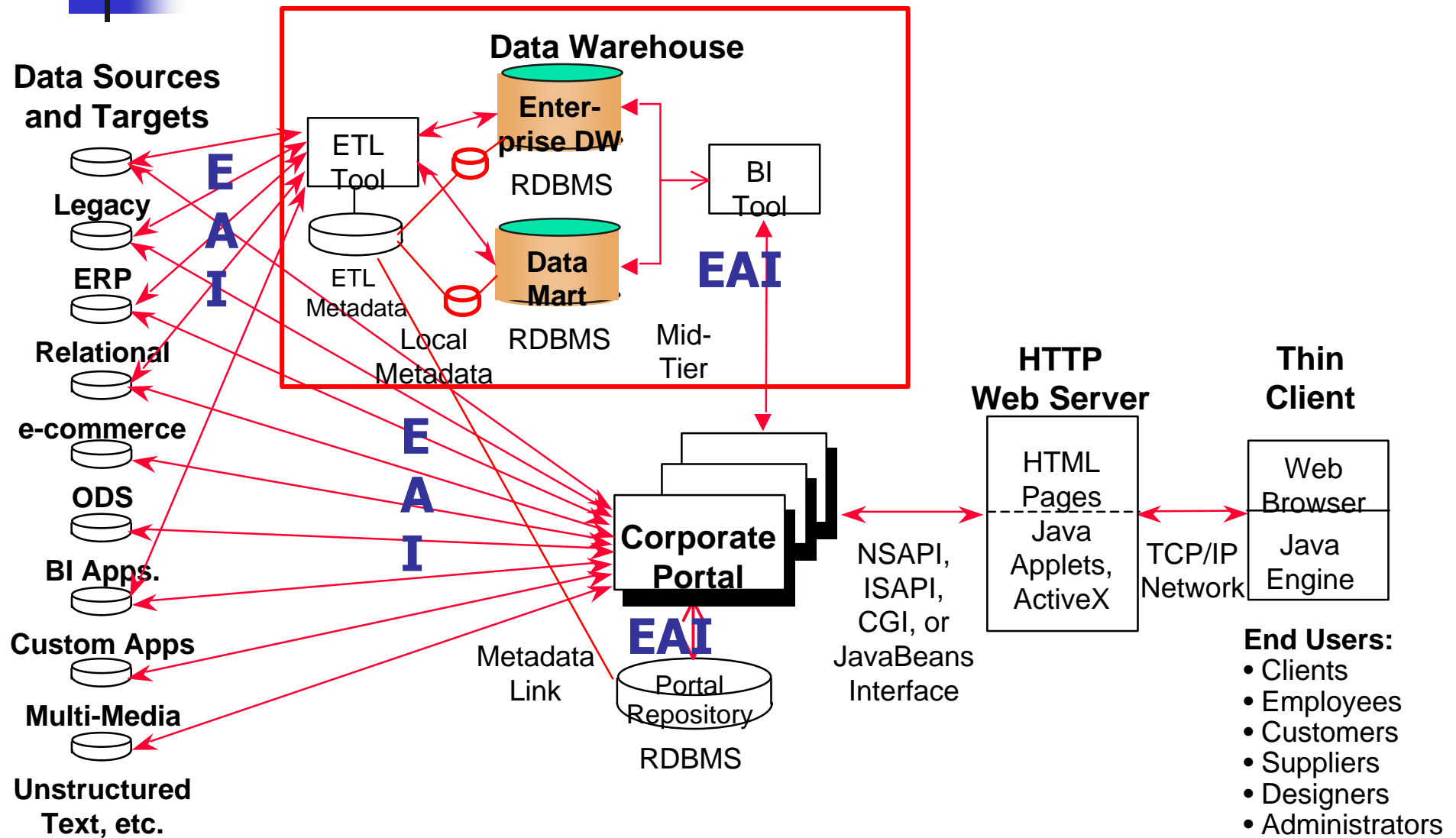
## C. DW Analytics using EAI



## C. Metadata Integration using EAI



## C. Corporate Portal DW Front-End using EAI



## C. Corporate Portal using EAI

### Data Sources and Targets

