

ALE within the Business Framework - Cross Application Processes

Cay Rademann
SAP AG



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Topics



Business Framework Architecture



ALE Cross Application Processes



ALE Services



Summary



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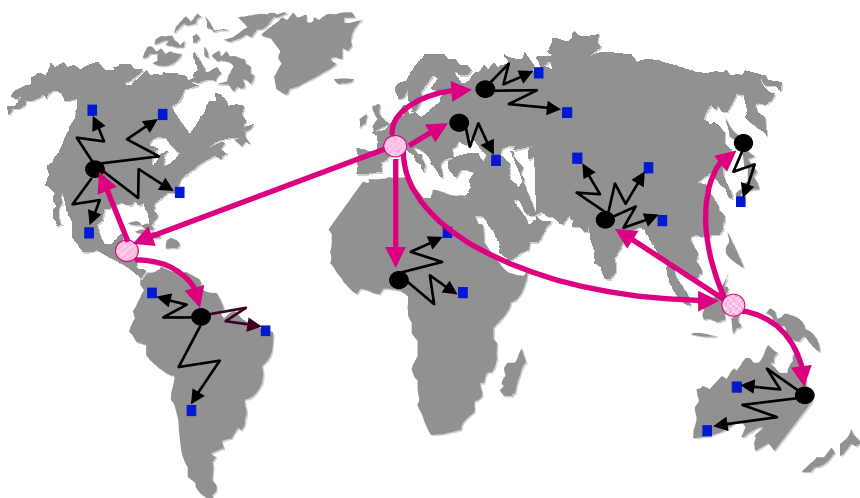
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“With the constant increase of data volumes and the necessity of reactions to fast changes in the market, monolithic and central solutions become insufficient and are hardly maintainable.”

Diebold Management Report Nr. 1 - 98



Why Distributed Applications?



Reasons for Distribution

- Regional distribution
- Organizational reasons
- Integration of different systems
- Flexibility
- Costs
- Security
- System availability
- Performance
- Political reasons



Business Framework for Competitive Advantage

- Speed to market
 - Fast deployment of new functionality without disruption
 - Eased reuse and collaboration of different components
 - Better focus on industry specific solutions
- Flexibility
 - Dynamic reconfiguration of implemented systems
 - Extended choices between complementary components
 - Eased enhancement with custom-specific functionality
 - Leveraging new technologies more easily

SAP
Compo-
nents

Comple-
mentary
Prod.

Custom-
specific
Funct.

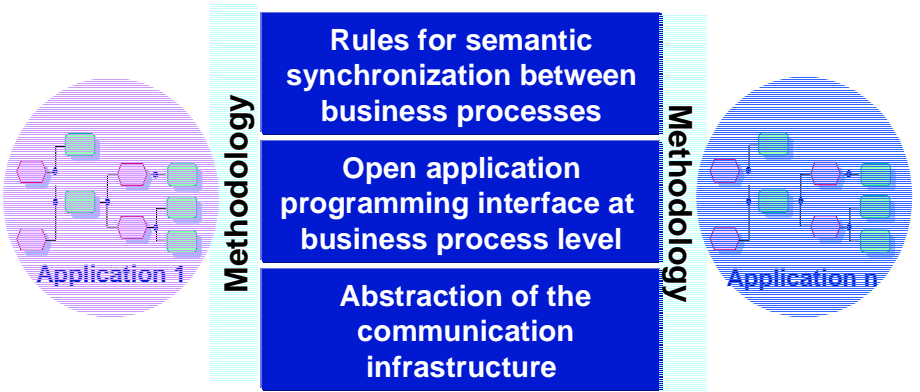
Internet
Solut.

Legacy
Appl.

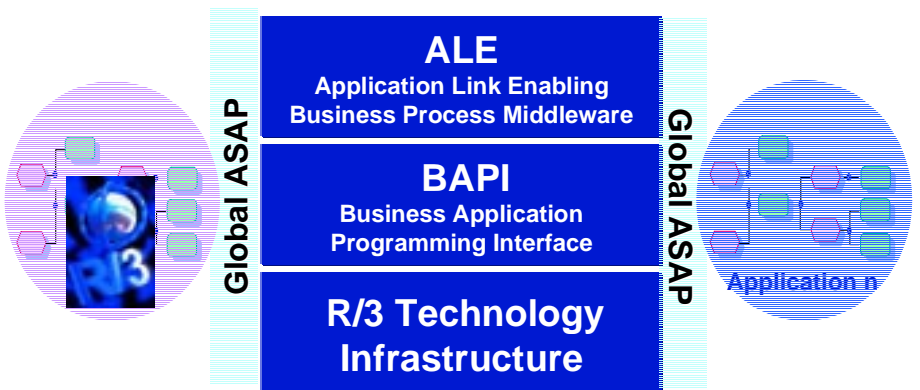
Others

Business Framework Business Backbone

Interoperability Between Independent Business Components Requires:

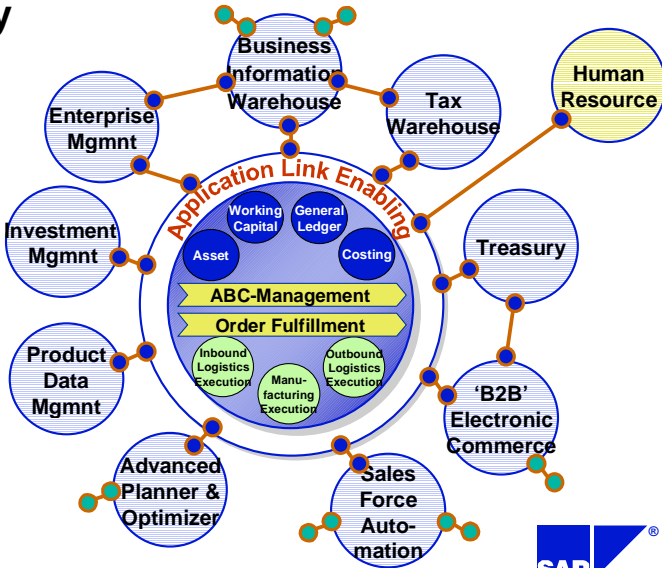


The Business Framework Architecture as a Scalable Business Backbone



Business Framework

Independent Components of SAP's Solution Family



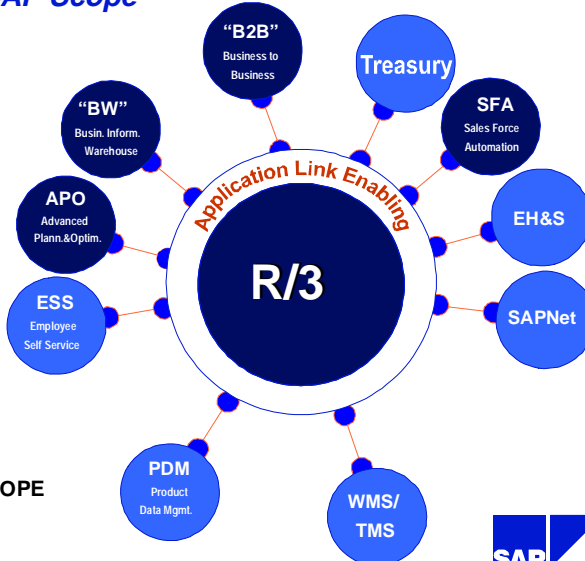
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Generic Product

Example: SAP Scope



SAP SCOPE



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Connectivity based on Open Middleware Standards

INTERNET

- Business Connector

DCOM

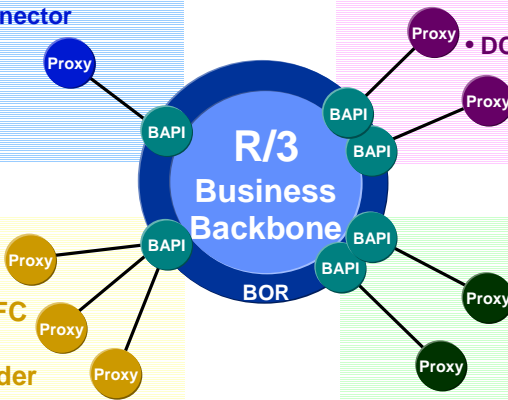
- BAPI Control
- DCOM Component Connector

Java

- JBAPI & JRFC
- JBuilder
- Access Builder

CORBA

- CB Connector
- Object Bridge



Topics

★ Business Framework Architecture

★ ALE Cross Application Processes

★ ALE Services

★ Summary



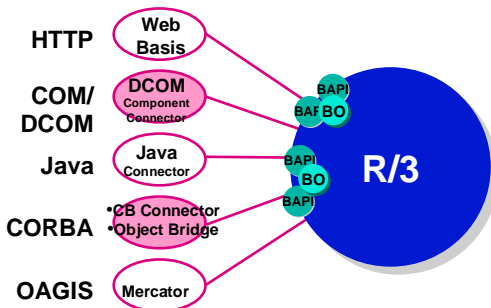
The Business Framework Component Land

- Front-end applications, Internet Application Components
- Complementary software
- HR as a single component
- Separation of logistic and finance
- Separation of sales and manufacturing
- Business Information Warehouse for central reporting
- Multiple sales and manufacturing systems
- Advanced Planning & Optimizing
- Supply Chain Integration



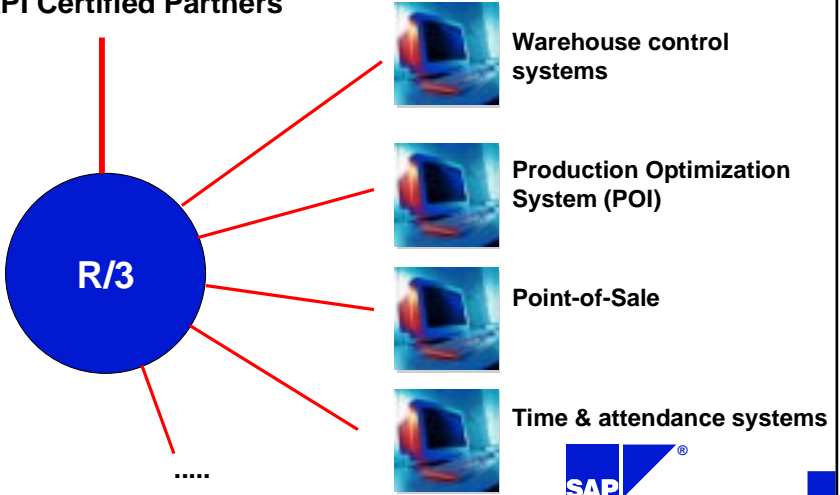
Access to R/3 for Front-End Applications

- Access for new kind of users through front-end applications and internet / intranet
- Connectivity to R/3 via BAPIs
- Major programming environments supported



Complementary Software

> 250 BAPI Validated and
BAPI Certified Partners



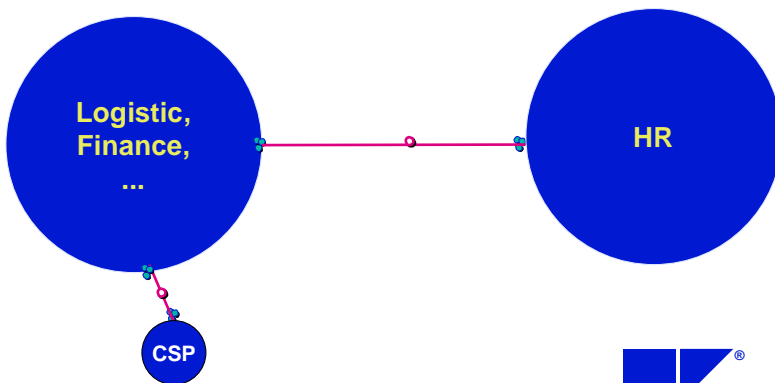
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HR as a Distributed SAP Component

- Available with R/3 release 4.0A
- Same functionality as in integrated system



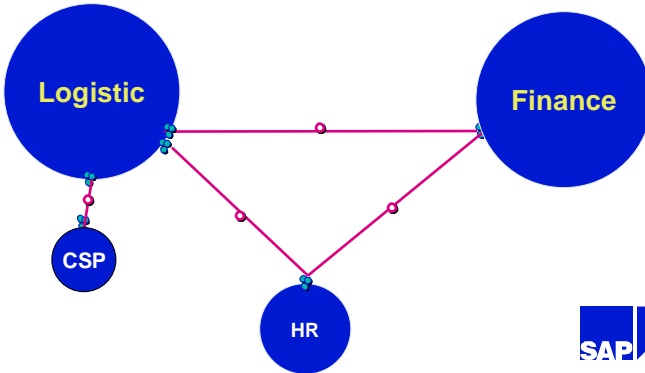
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Separation of Logistics and Finance

- Business Processes available since release 3.0A
- Not separate components yet

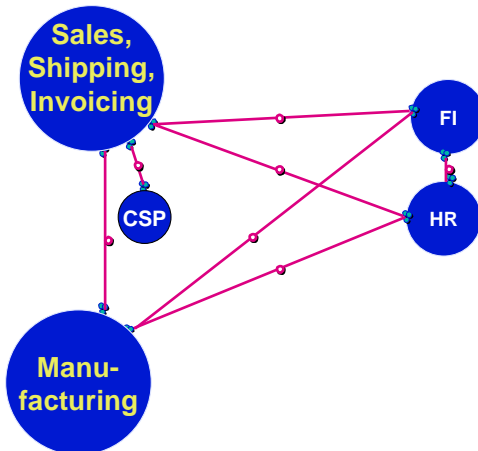


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Separation of Sales and Manufacturing

- Business Processes available since release 3.0A

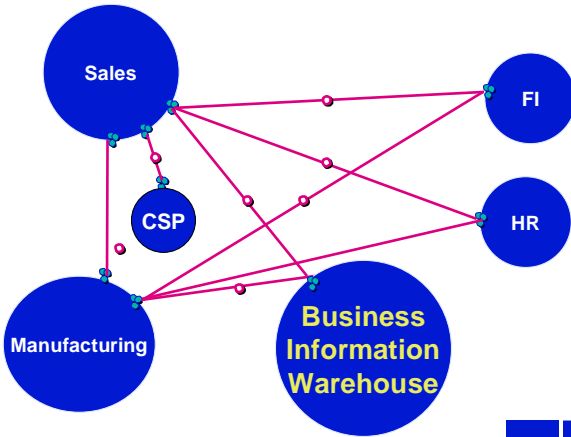


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Central Reporting: Business Information Warehouse

- Available for 3.0D and later

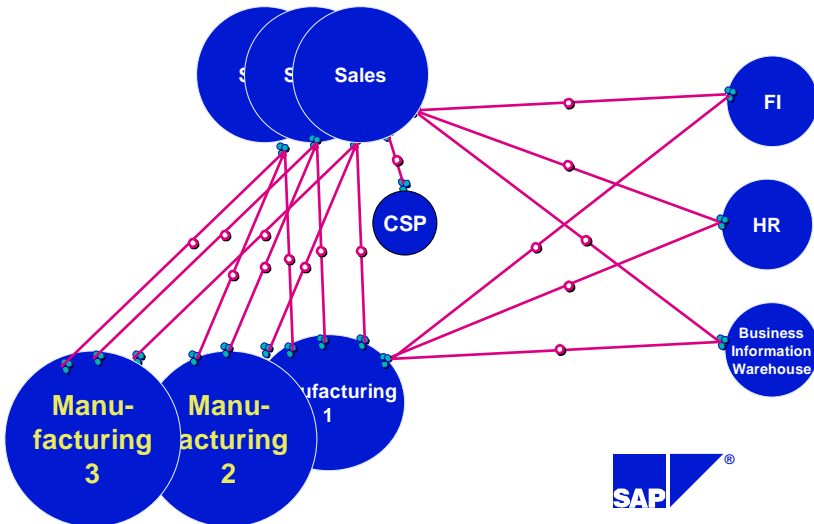


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Multiple Sales and Manufacturing Systems

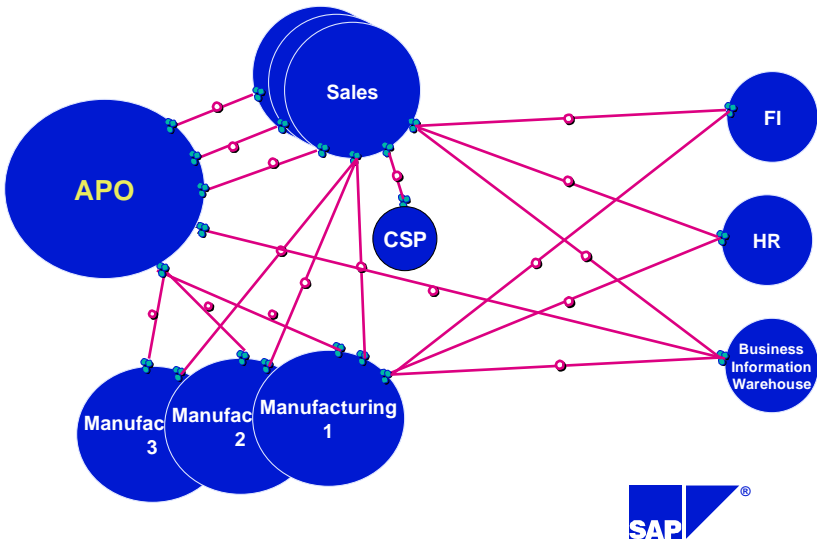
- Business Processes available since release 3.0A



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Advanced Planning and Optimizing



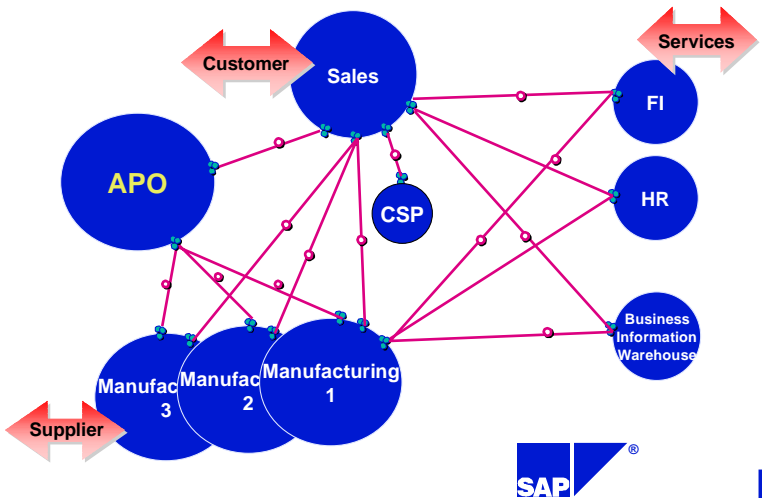
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Supply Chain Integration

- e-commerce
- EDI
- ...



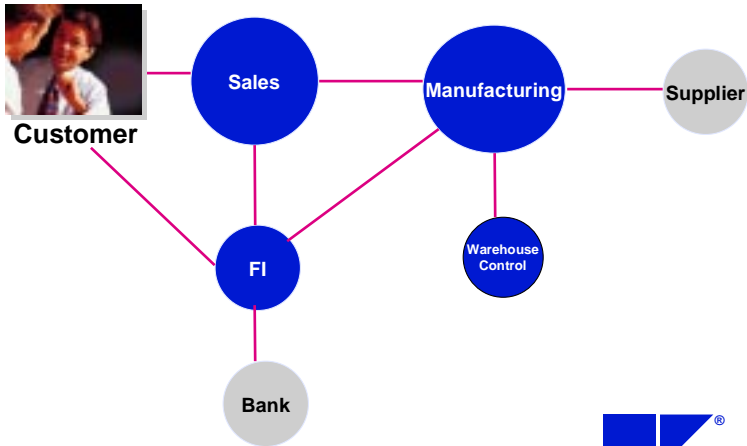
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ALE Offers Distributed Business Processes

- **Example: Customer Order Processing**



ALE Business Processes: Accounting

- **Distributed Financial Accounting**
- **Distributed Cost Center Accounting**
- **Distributed Special Ledger**
- **Consolidation Data**
- **Profitability Analysis**
- **Distributed Profit Center Accounting**
- **Treasury**



ALE Business Processes: Logistics

- Reallocation between Systems
- Distribution of Sales and Shipping
- Purchasing: Blanket Orders
- SOP
- Credit Limit Check
- Product Data Management
- Enhanced Delivery Interface



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ALE Business Processes: Information Systems

- Send Information from Logistic Systems to Logistic Information Systems
 - Inventory
 - Purchasing
 - Sales
- Exchange Data between Information Systems
 - For all Logistic Information Systems
- Business Information Warehouse



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ALE Business Processes: Human Resources

- **HR results -> FI/CO**
 - Payroll results
 - Travel expense accounting results
 - Results of personnel cost planning (synchronous communication)
- **Completion information Logistics -> HR**
 - Time tickets
 - Attendances
- **HR as a single Component**
 - 35 Interfaces



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Master Data Distribution: General & Logistics

- | | |
|---|---|
| <ul style="list-style-type: none">● General<ul style="list-style-type: none">■ Customer■ Vendor■ Material■ Characteristics■ Classes■ Classification | <ul style="list-style-type: none">● Logistics<ul style="list-style-type: none">■ Conditions (prices)■ BOM (Bill of Materials)■ Variant Configuration■ Purchasing Info Rec.■ Source List■ Service Master Data■ Article Master Data (retail) |
|---|---|



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Master Data Distribution: CO, FI, HR

- CO
 - Cost Center
 - Cost Center Hierarchy
 - Profit Center
 - Profit Center Hierarchy
 - Cost Element
 - Activity Type
 - Tariff
- FI
 - G/L Account
- HR
 - HR Master Data
 - Organizational Data



ALE Business Processes to Non-SAP only

- Warehouse Management
- Accounting Interface to external systems
 - OAG BOD 'Post Journal' for material movements
- Production Optimization Interface
- Transportation



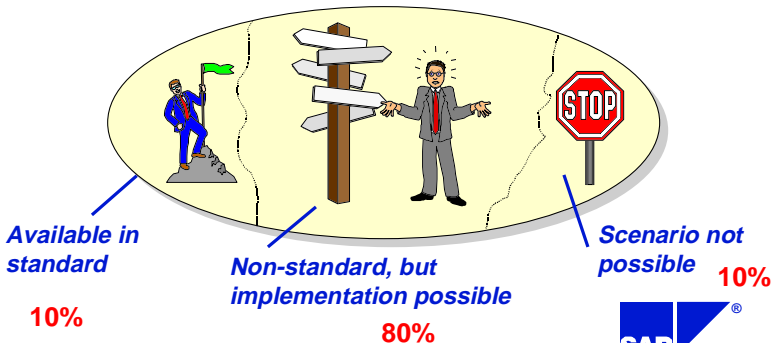
Further Interfaces

- More than 1000 BAPIs
 - Overview: BAPI-Browser
 - Open BAPI Network: <http://www.sap.com/bapi>
- R/3 Interface Adviser



Enhancements / New Scenarios

- If a scenario is not available in the standard, you can enhance existing scenarios or create new ones.
 - ALE Programming
 - BAPI Programming



Topics

Business Framework Architecture

ALE Cross Application Processes

ALE Services

Summary



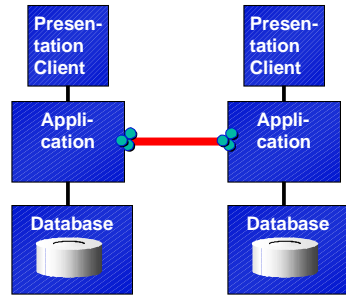
BAPIs as Interfaces

- ALE Business Processes use BAPIs as interfaces
- BAPIs are published and stable interfaces
- BAPIs can be invoked synchronously and asynchronously
- Asynchronous BAPIs make use of the IDoc-messaging technology
 - Separation between interface and messaging technology
 - BAPIs can be invoked asynchronously through IDocs



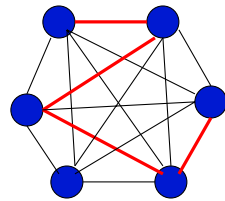
Interfacing on Application Layer

- Communication controlled by business logic
- High scalability and performance
- Minimal network traffic
- Platform independence



ALE Services

- Cross Application Processes require more than interfaces
 - Harmonization of the sub-process
 - Which system is the right server?
 - Semantic synchronization
 - Monitoring
 - Error handling

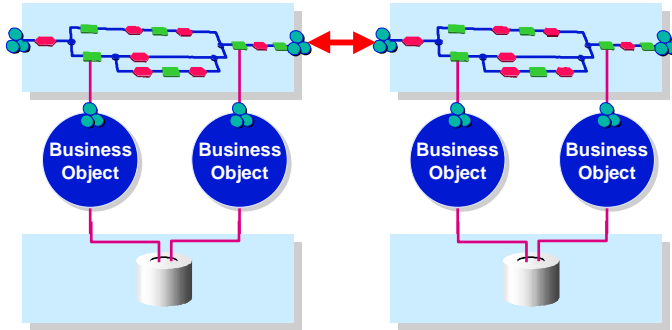


=> ALE provides special *Services* for this



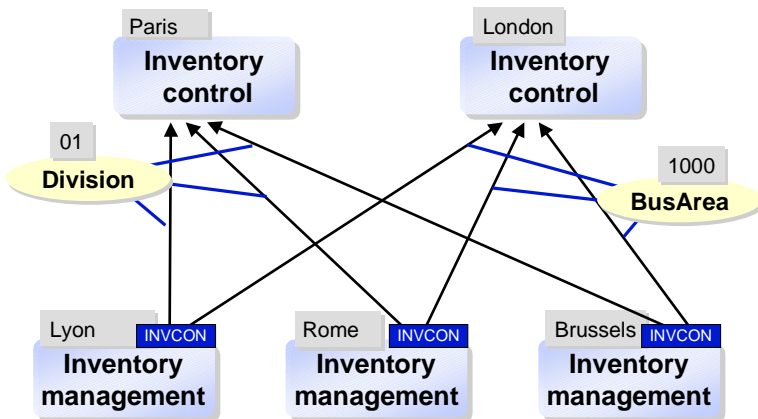
Harmonization of Sub-Processes

- A distributed Business Process consists of sub-processes running on different components
- These sub-processes have to be harmonized



Which System is the Right Server?

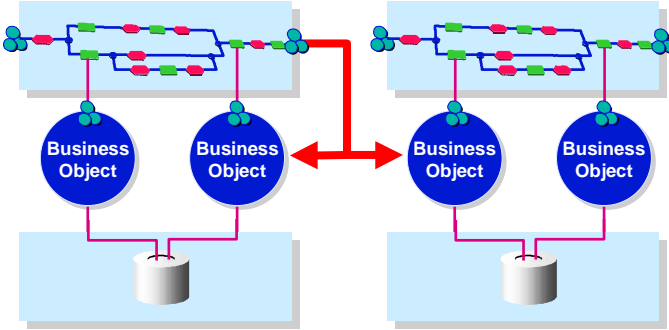
- ALE Distribution Model



Semantic Synchronization

= Mapping of Business Process activities into several databases

- Changes of business objects in one component have to be synchronized with the other components



Consistency checks

- Consistency checks exist for the customized settings in different areas:
 - consistency between distribution model and customized data on the outbound and inbound side (e.g. partner profiles)
 - consistency check for the customizing in the linked applications
 - consistency check for control data



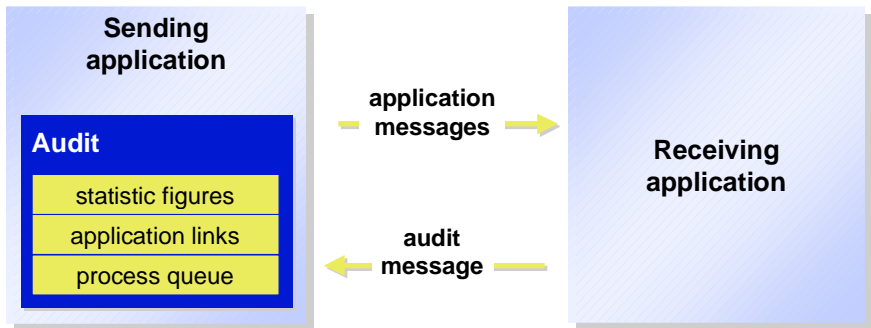
Monitoring

- **Special monitoring functions exist for asynchronous communication:**
 - IDoc-Overview
 - IDoc-Trace
 - Asynchronous RFC
 - ALE-Audit

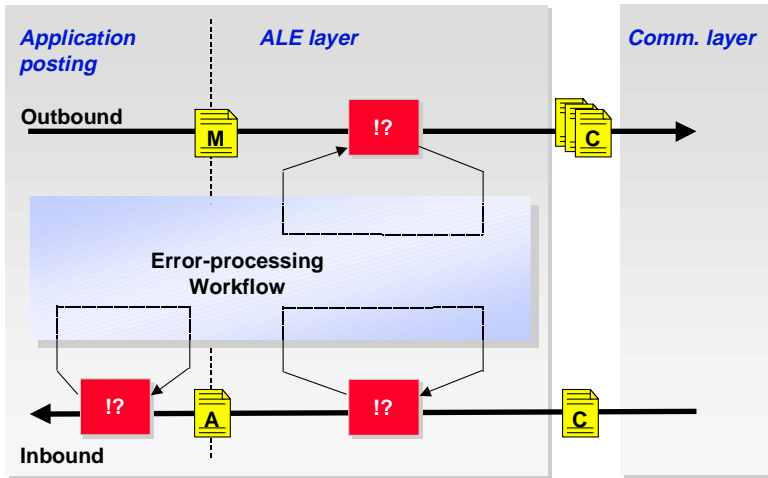


ALE Audit

- **Let the sender know the status of processing in target systems**
- **Provide a link between distributed business objects**



Error processing via Workflow



Topics

Business Framework Architecture

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ALE Services

Summary



Summary

- There are many reasons for distributed applications
- Distributed applications require cross application business processes
- ALE provides cross application business processes
- ALE provides special services for distributed applications
- ALE is a proven technology



Example: ALE at Digital Equipment Corporation

