



*Transform your software architecture into a reusable asset*

## **OMG's Second Workshop on Web Services**

### **Orchestrating Web Services from a UML Development Platform**

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Founder & CTO

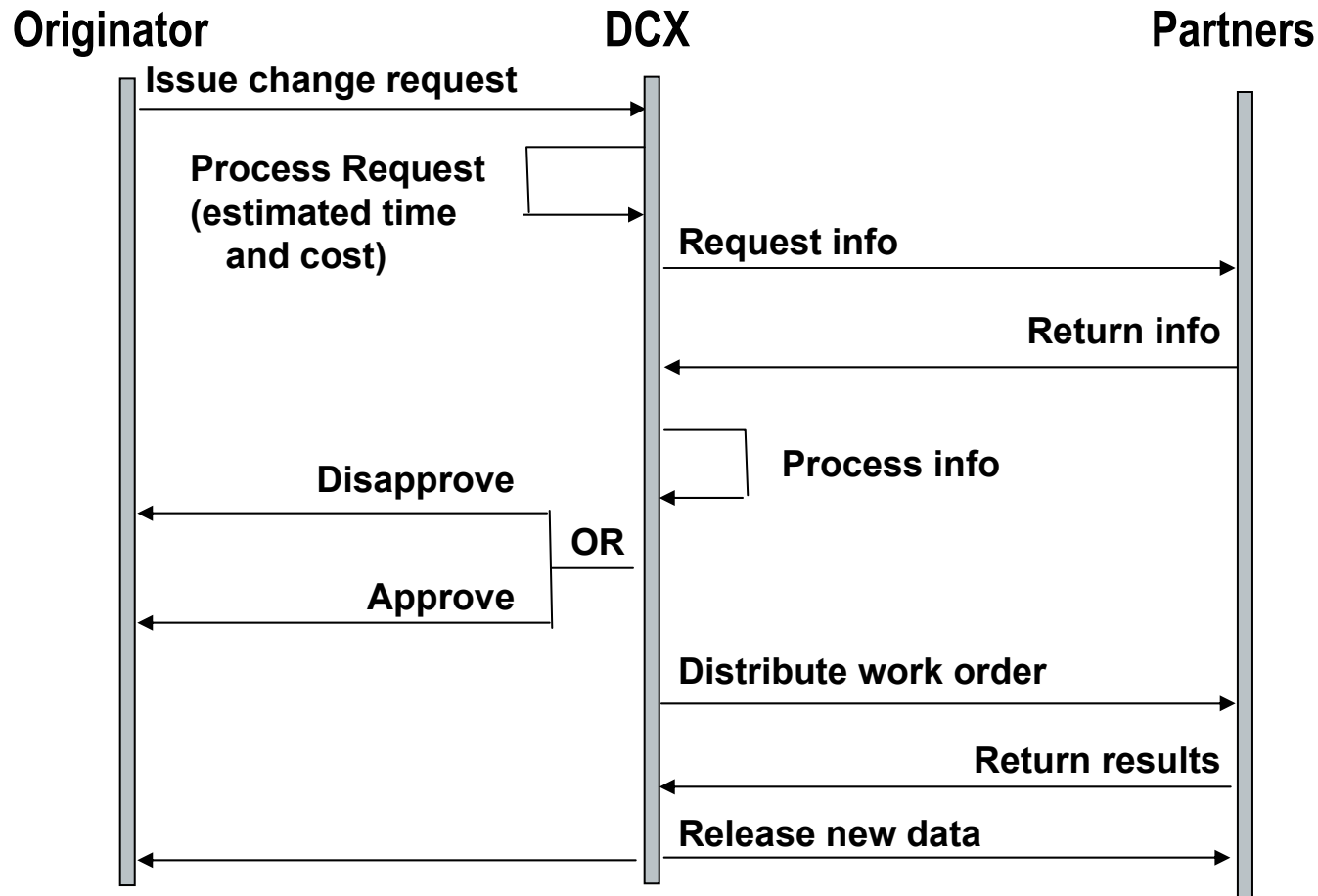
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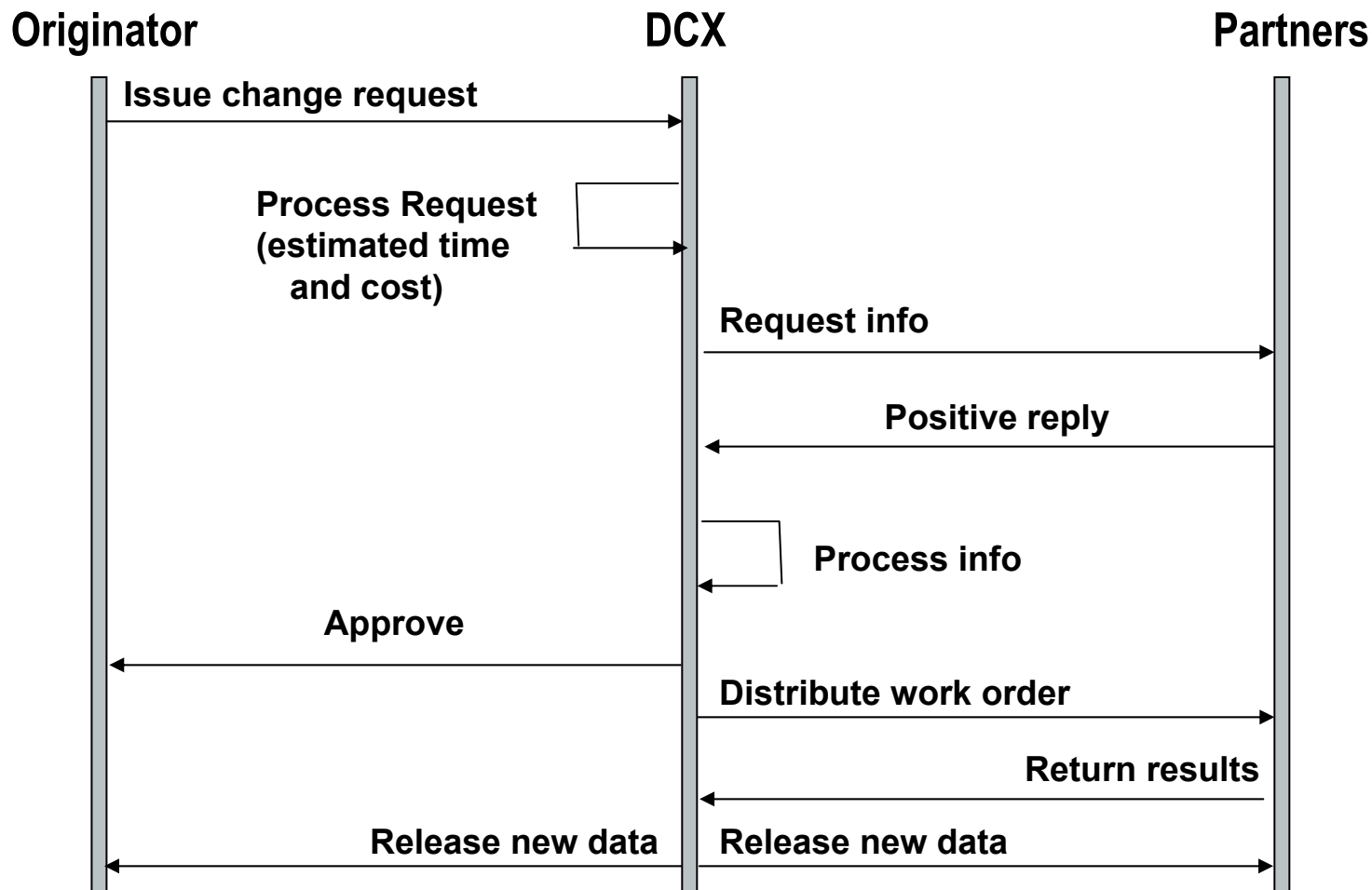
# Agenda

- Modeling Business Scenarios and Business Processes with UML
- Reusing Business Scenarios, Business Documents and Web Services across Business Processes
- Implementing a Business Process using Web Services from a MDA platform

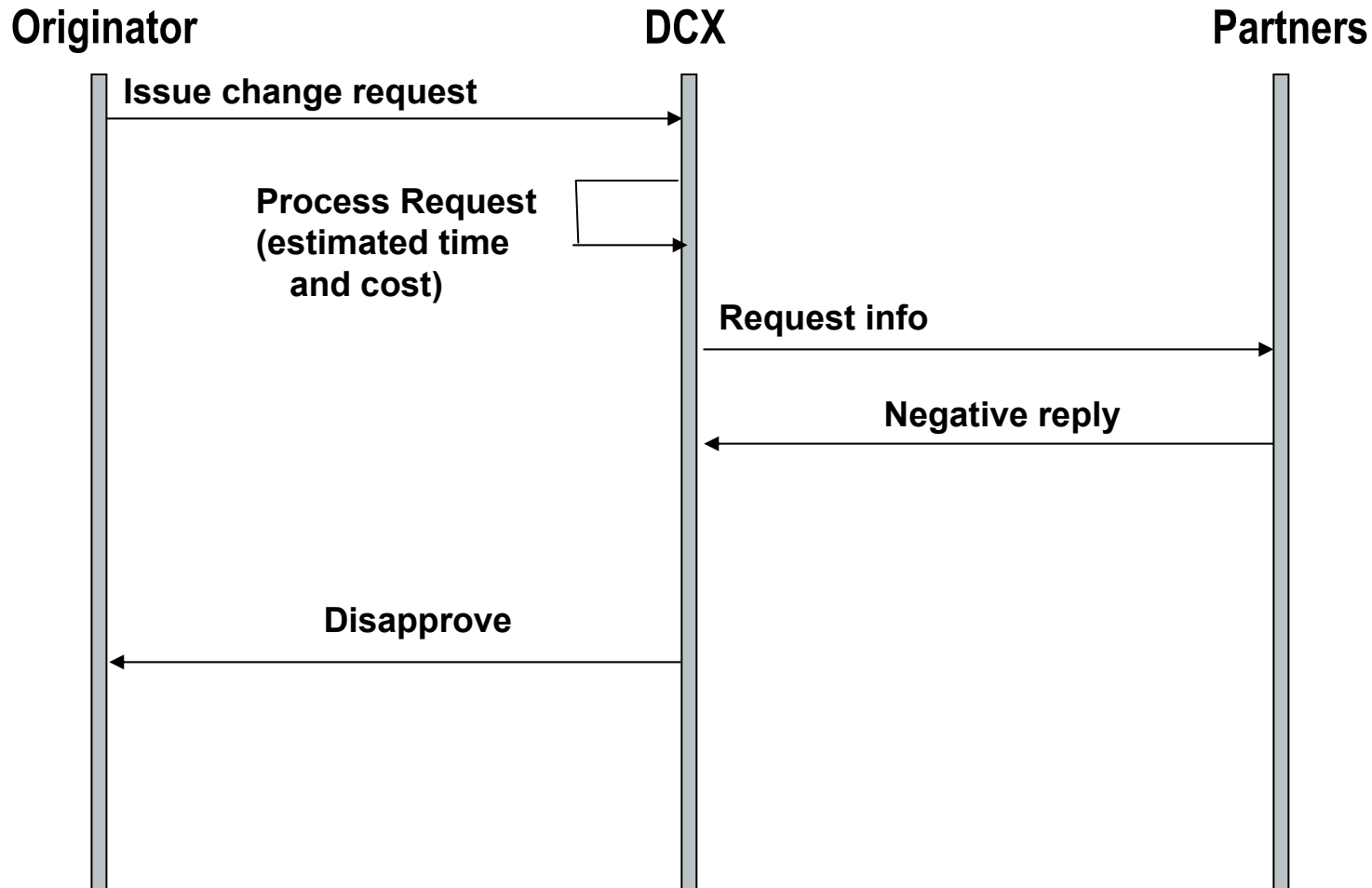
## DCX Business Process: Engineering Change Management



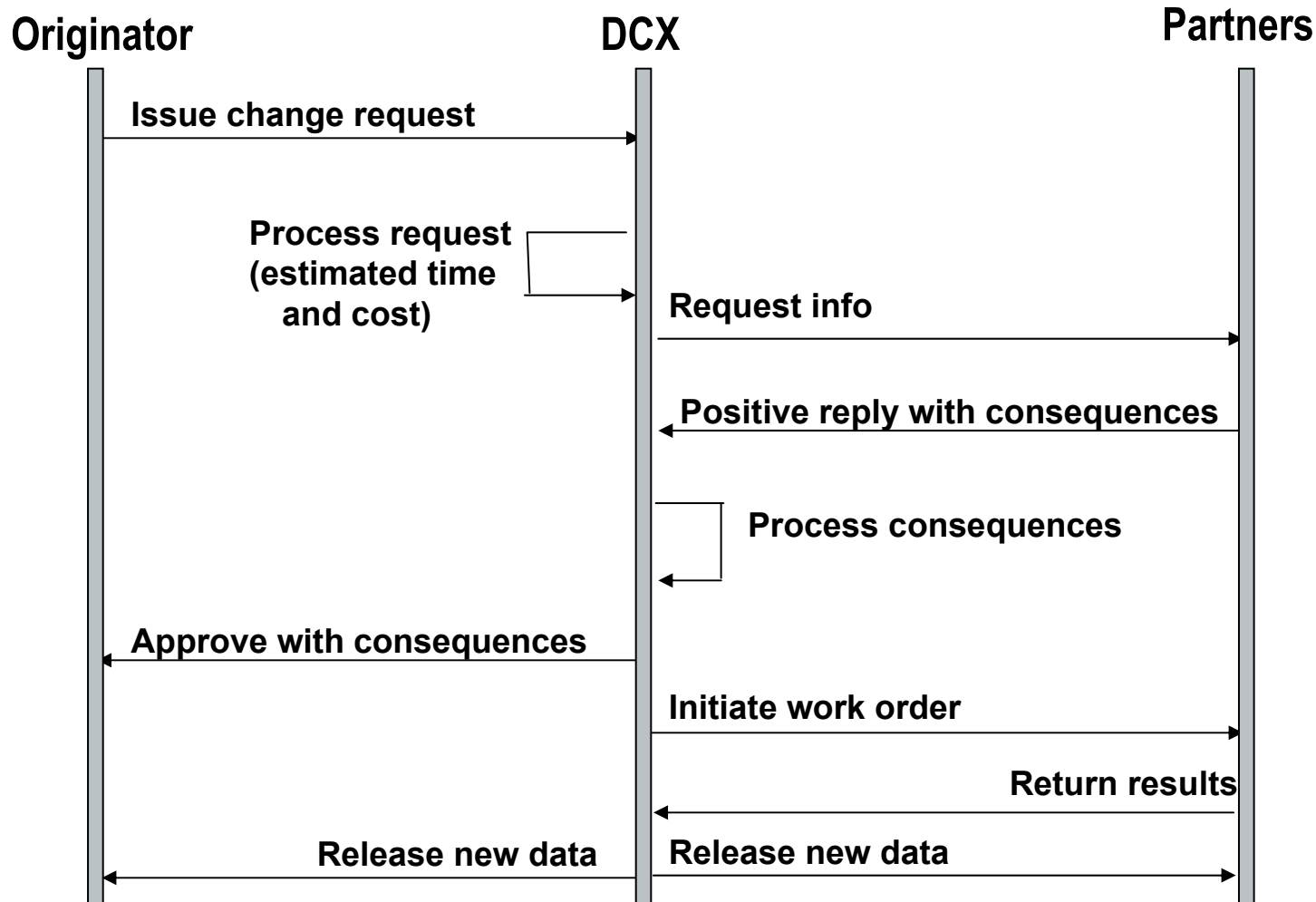
## DCX Business Scenario #1a: Engineering Change Request Without Consequences



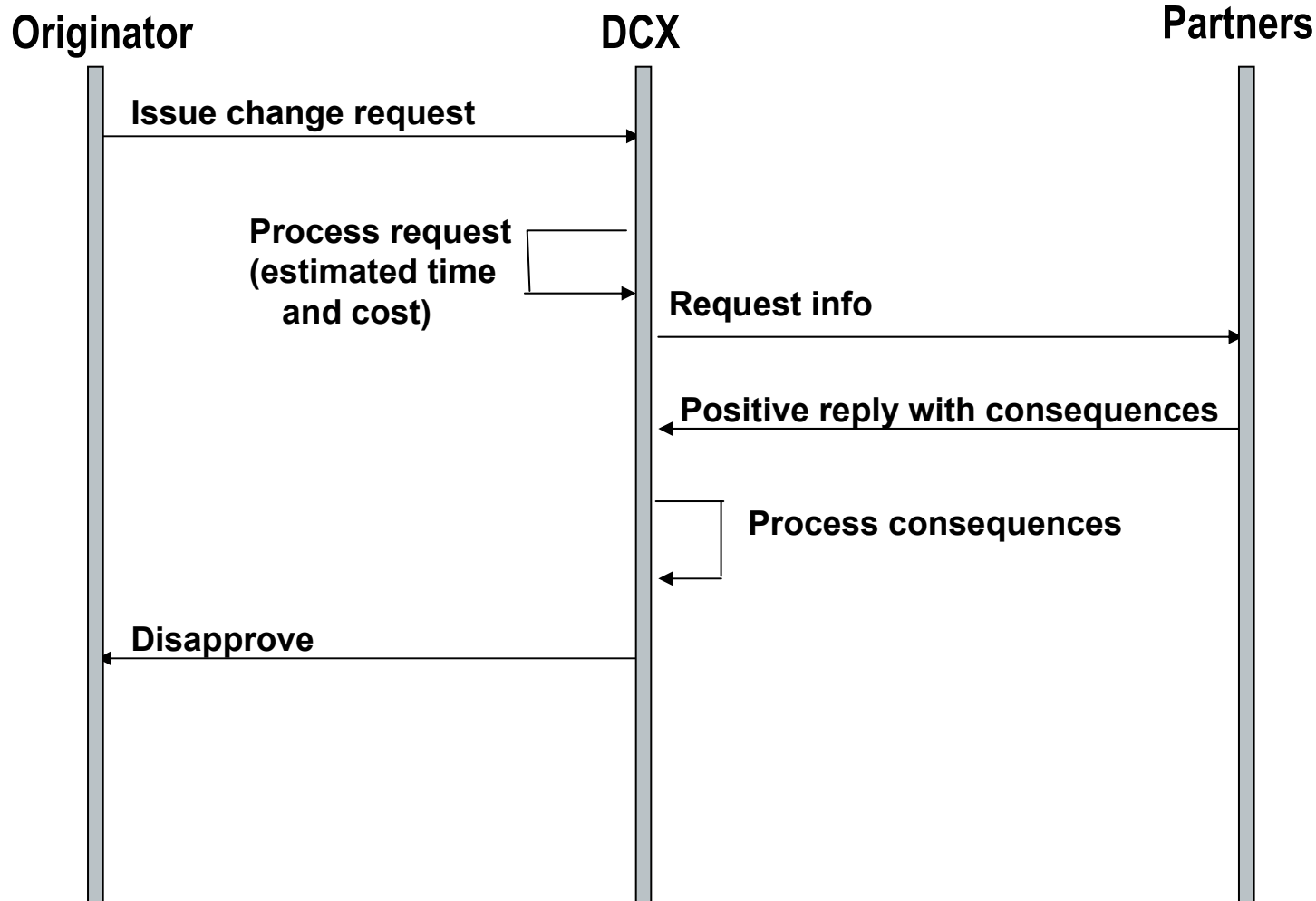
## DCX Business Scenario #1b: Engineering Change Request Without Consequences



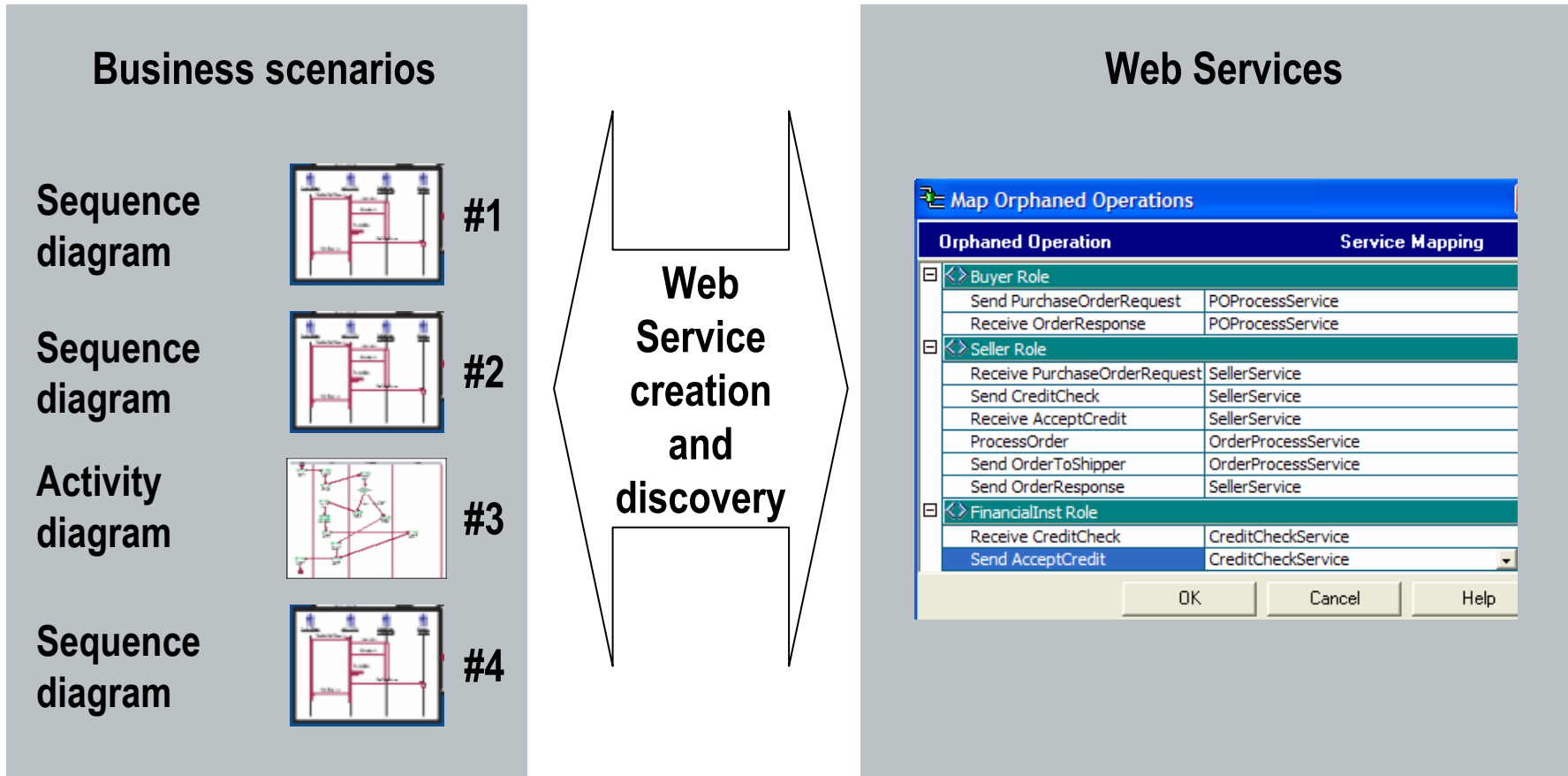
## DCX Business Scenario #2a: Engineering Change Request with Consequences



## DCX Business Scenario #2b: Engineering Change Request with Consequences



## Behaviors found in Business Scenarios are Mapped with Web Services



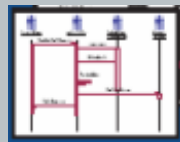
**Web Services can be reused across business processes**



## Business Scenarios allow an incremental approach to business process modeling

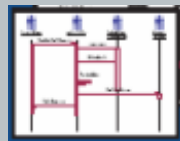
### Business scenarios

Sequence diagram



#1

Sequence diagram



#2

Activity diagram

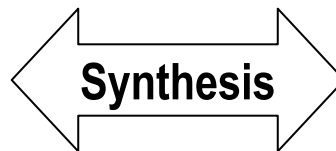


#3

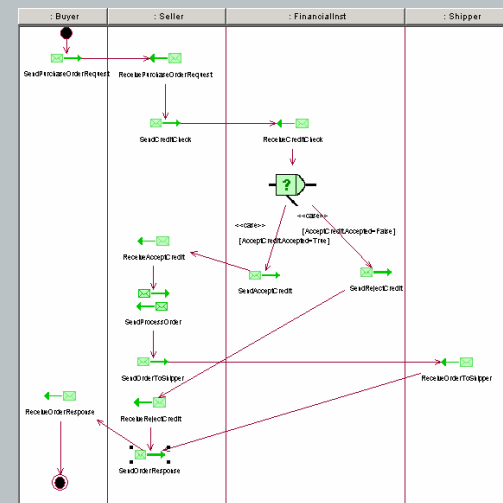
Sequence diagram



#4



### Business process



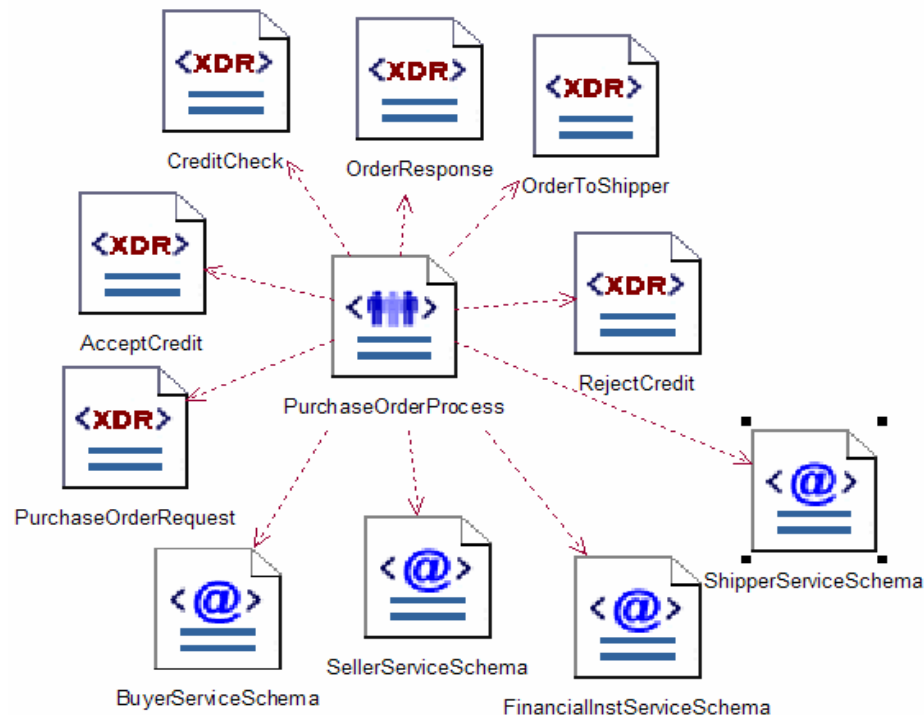
Activity diagram

- **Business Scenario integration:**

- Automatic Synthesis of the global view of the business process:

- Generates the structure of the global view of the business process

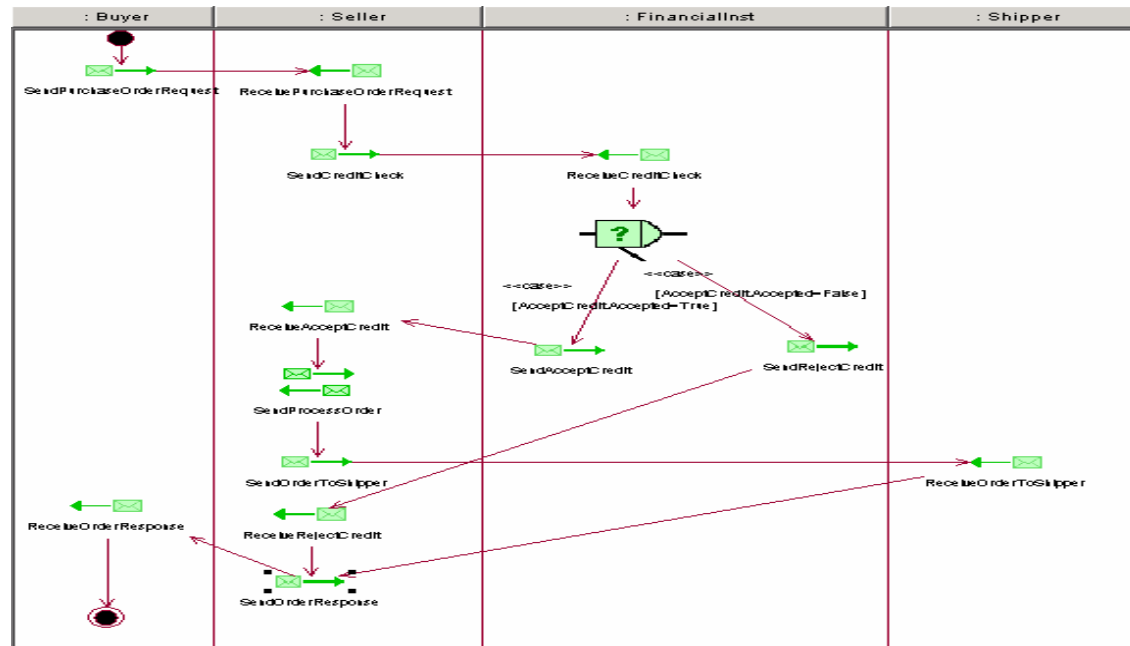
A business process is a multiparty collaboration between a set of Web Services and XML documents



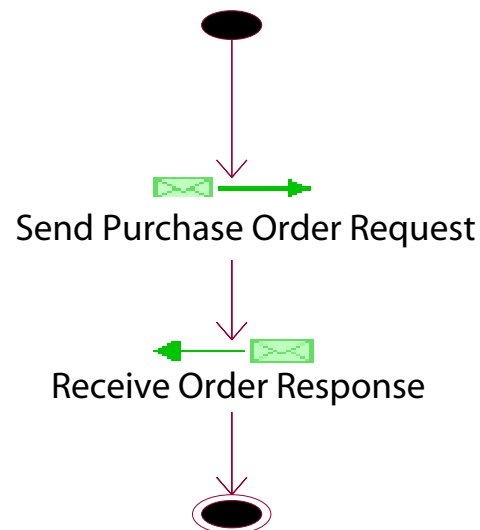
Each Web Service is provided by a trading partner involved in the collaboration

- **Business Scenario integration (continued):**
  - Automatic Synthesis of the global view of the business process (continued):
    - Generates the behavior of the global view of the business process

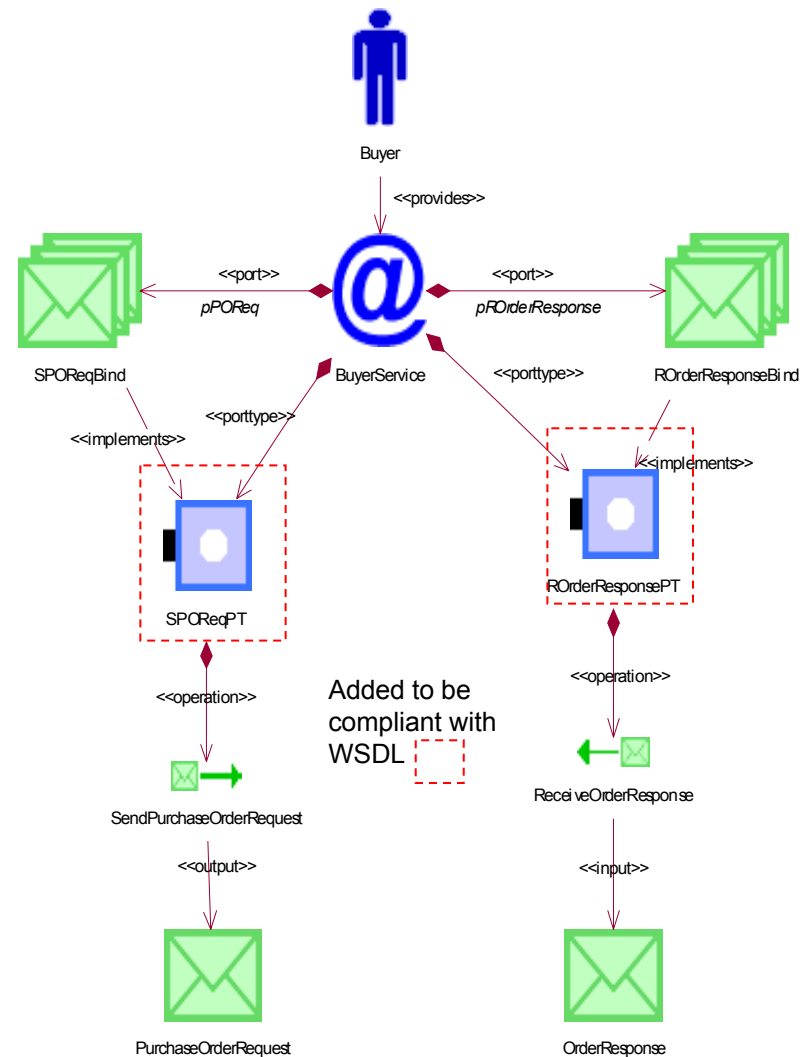
Enforces a consistent view of the contract among trading partners



- **Business Scenario integration (continued):**
  - Automatic Synthesis of the local views (Web Services) of the business process:
    - Generates the behavior of the local view of a trading partner that plays a role in the business process

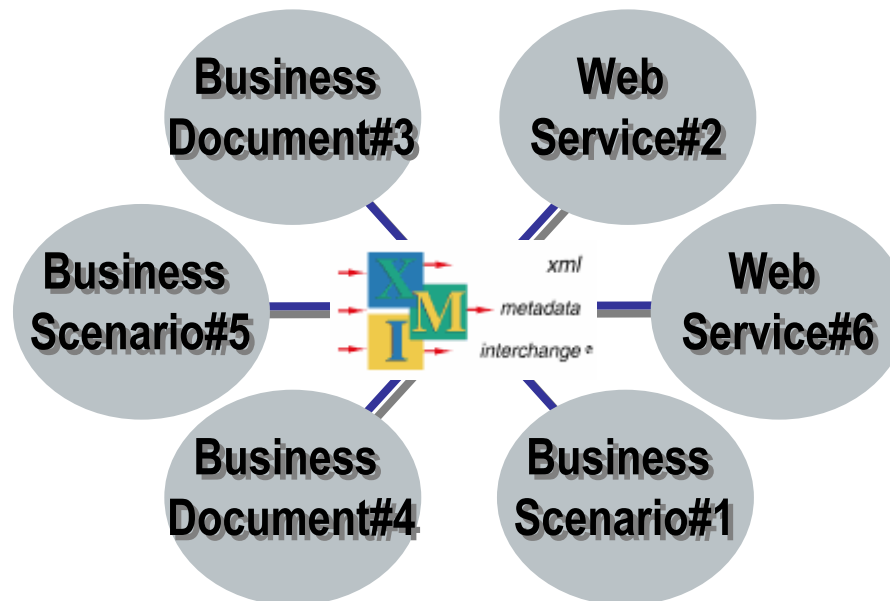


- **Business Scenario Integration (continued):**
  - **Automatic Synthesis of the local views (Web Services) of the business process (continued):**
    - **Generates the structure of the local view of a trading partner that plays a role in the business process**
      - Binds operations of a business process with messages
      - Binds operations with a port implementation (manual step)



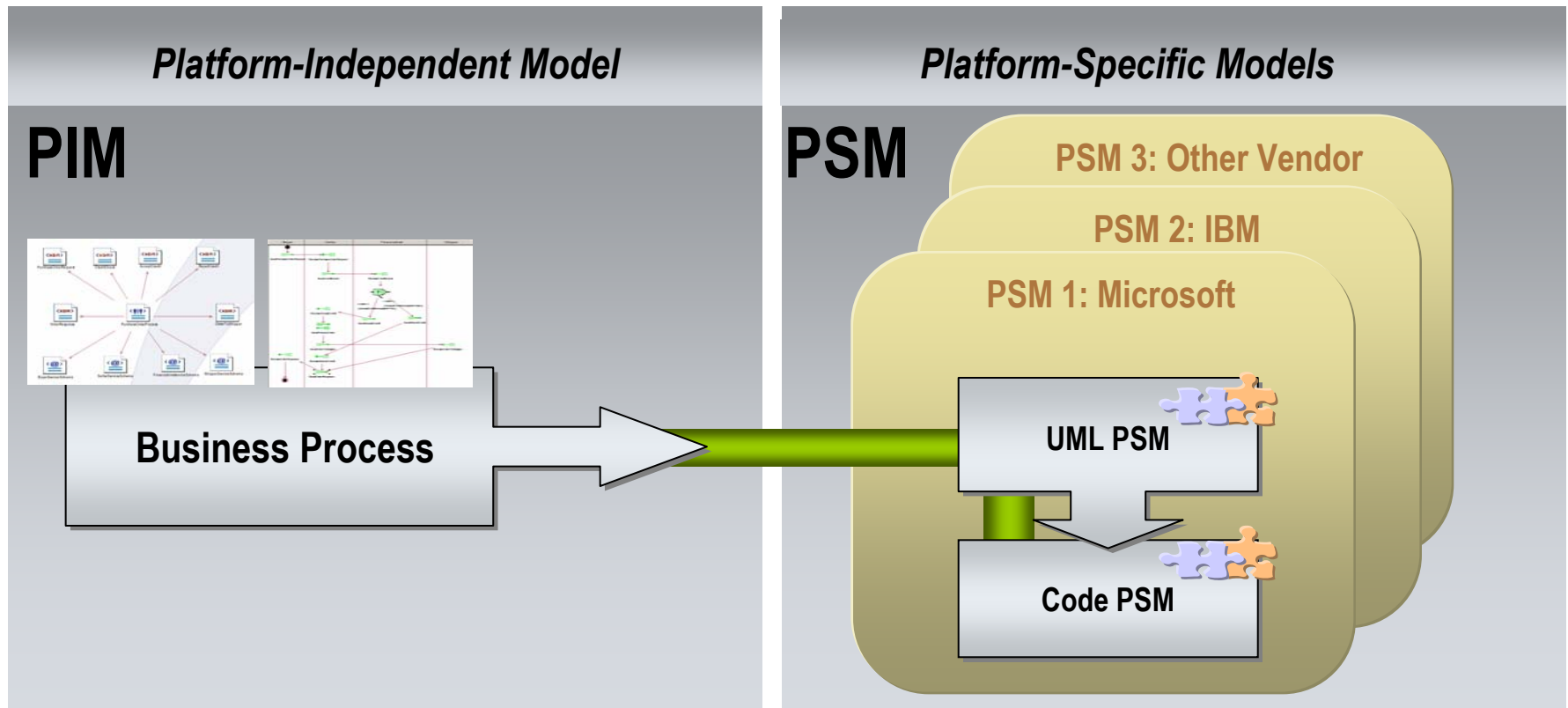
# Reusing Business Scenarios, Business Documents and Web Services across Business Processes

- **Import/export using:**
  - Proprietary utilities among same UML modeling tool vendors
  - XMI 2.0 among different UML modeling tool vendors
- **Facilitates collaborative development**



# Implementing Business Process using Web Services from a MDA Platform

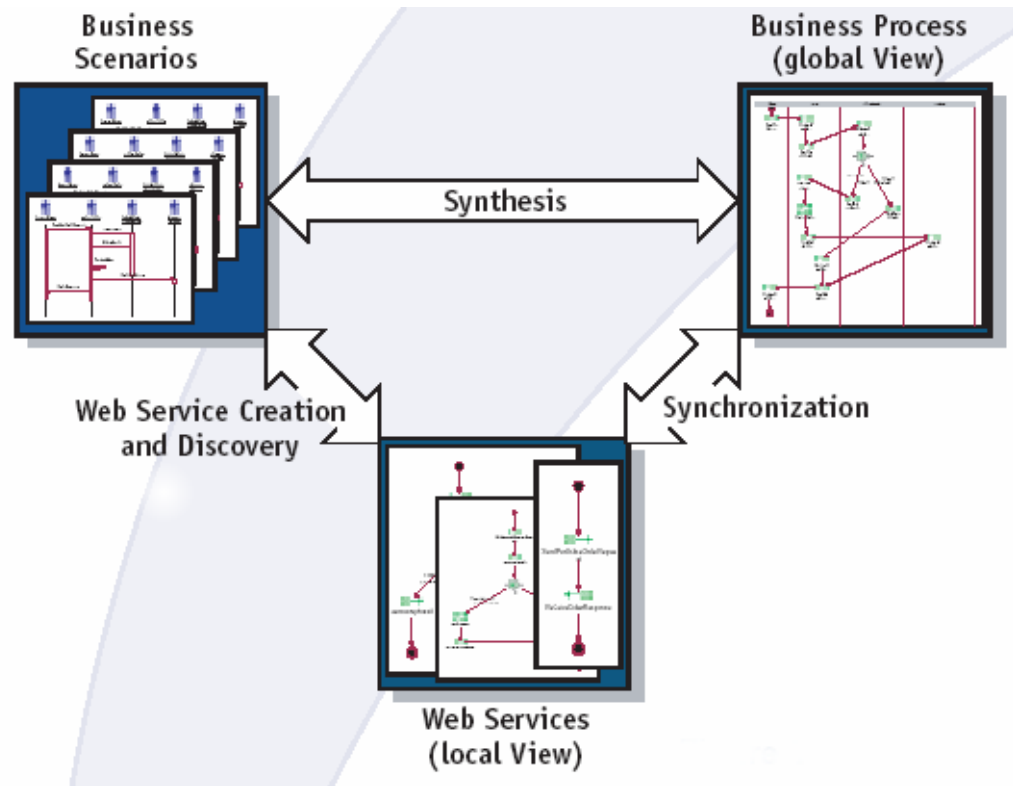
- **Loosely-coupled implementation for a single business process**



**Trading partners build Web Services using a .NET or Java platform and different vendors for their workflow engine**

# Demonstration

- Provides a UML platform for modeling:
  - Business scenarios
  - Business processes
  - Business documents
  - Web Services





# Summary

- **Business scenarios can:**
  - Facilitate a collaborative and incremental approach for designing a business process
  - Reduce the risk and cost of creating and maintaining a business process
- **Synthesis of business scenarios generates the static and dynamic view of:**
  - The global business process
  - The local view for each trading partner, which is consistent with the contract describing the interaction among them

# Summary

- **UML profile, MDA and XMI can:**
  - Maximize UML investments without requiring a working knowledge of the standard
  - Enforce a business process over a heterogeneous implementation
- **Web Services for EAI or B2B can be implemented as:**
  - Activities orchestrated by a workflow engine for each trading partner involved
  - Composite Web Services using a programming language like Java, C#, or VB