

23 May 2006



## WS 2-1, BPDM Workshop

May 23, 2006

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EDS Technology Policy, Processes and Standards

# Objective

- Provide a general understanding of the Business Process Definition Metamodel (BPDM) specification
- Discuss implications to enterprise agility
- Engage participants in discussion of requirements

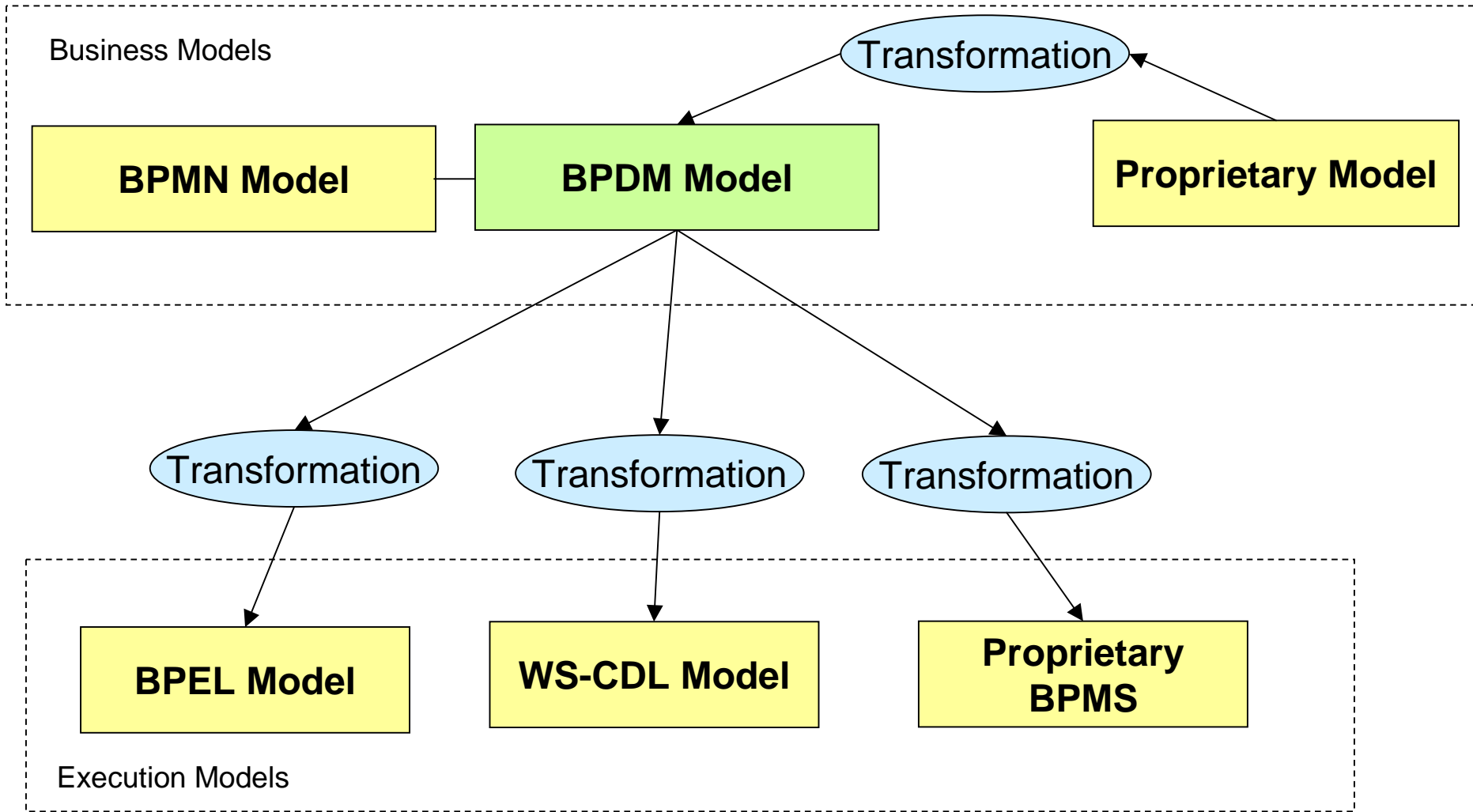
# Agenda

- Business process modeling
- Relationship of BPM and SOA
- Enterprise agility
- Event driven architecture
- Additional Considerations

# Business Process Modeling

- OMG standards
  - BPMN (Business Process Modeling Notation)
  - BPDM (Business Process Definition Metamodel)
- Designed for use and understanding by business people
- Business processes independent of technology
- Interaction of business processes as envisioned in web services

# Business Process Definition Metamodel (BPDM)

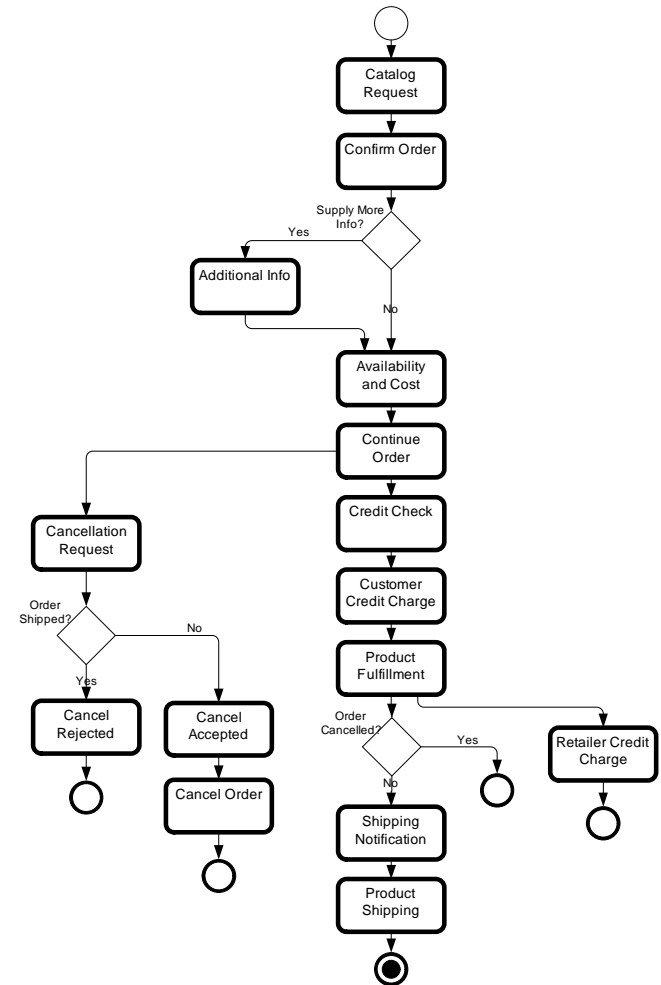


**BPMS** – Business Process Management System  
**BPEL** – Business Process Execution Language

**WS-CDL** – Web Services Choreography Definition Language

# Business Process Modeling Notation (BPMN)

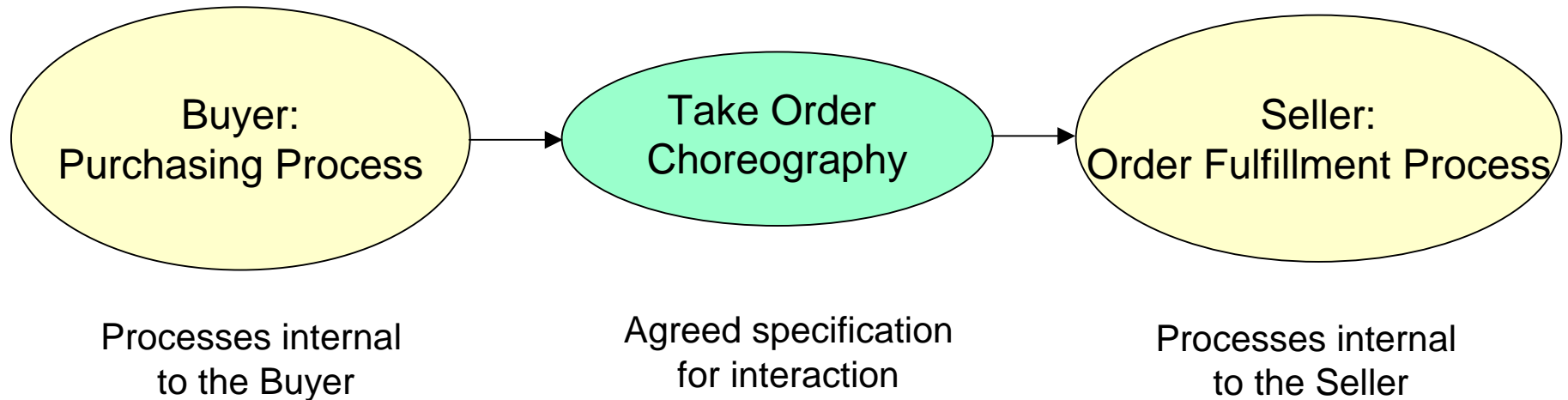
- Adopted by OMG through merger with BPMI
- Graphical notation for process modeling
- Designed for business users
- Platform independent
- Proof of concept mapping to BPEL
- Implemented in a number of process modeling products



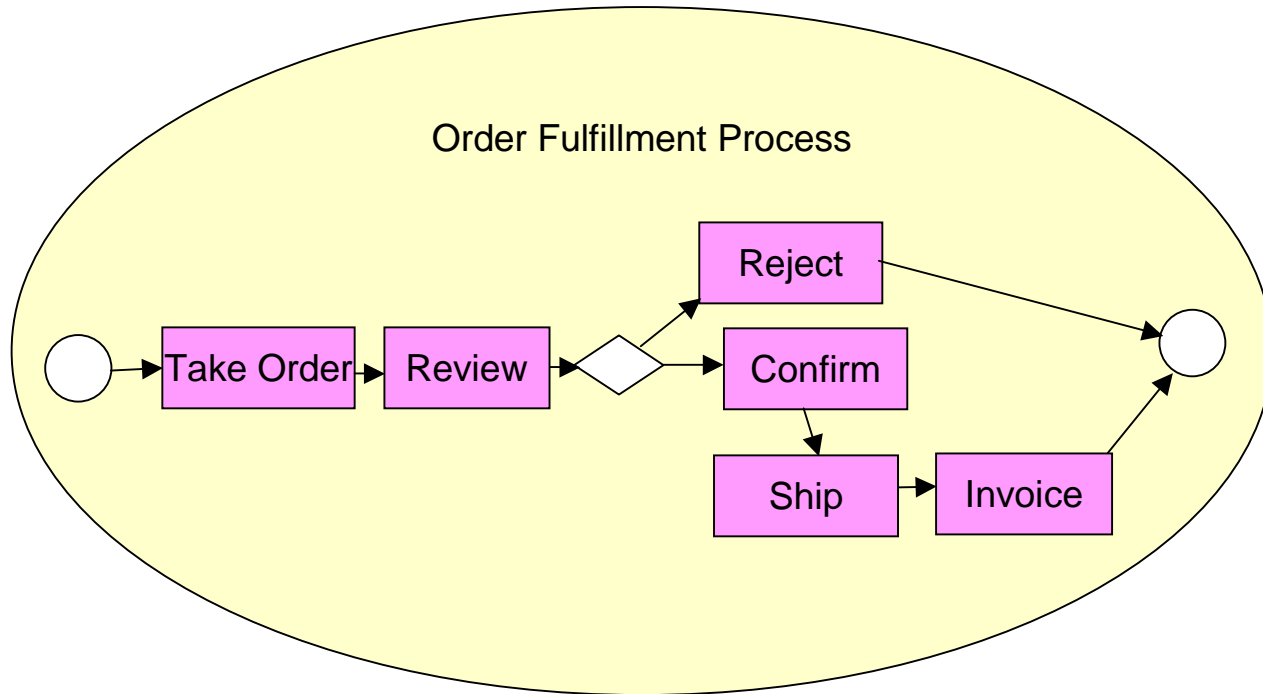
# Business Process Definition Metamodel (BPDM)

- Specification under development by OMG
- Support for BPMN notation
- Includes manual processes
- XMI standard for model exchange
- Runtime platform independent
- Specification of processes and their interactions

# BPDM Overview: Processes and Choreographies

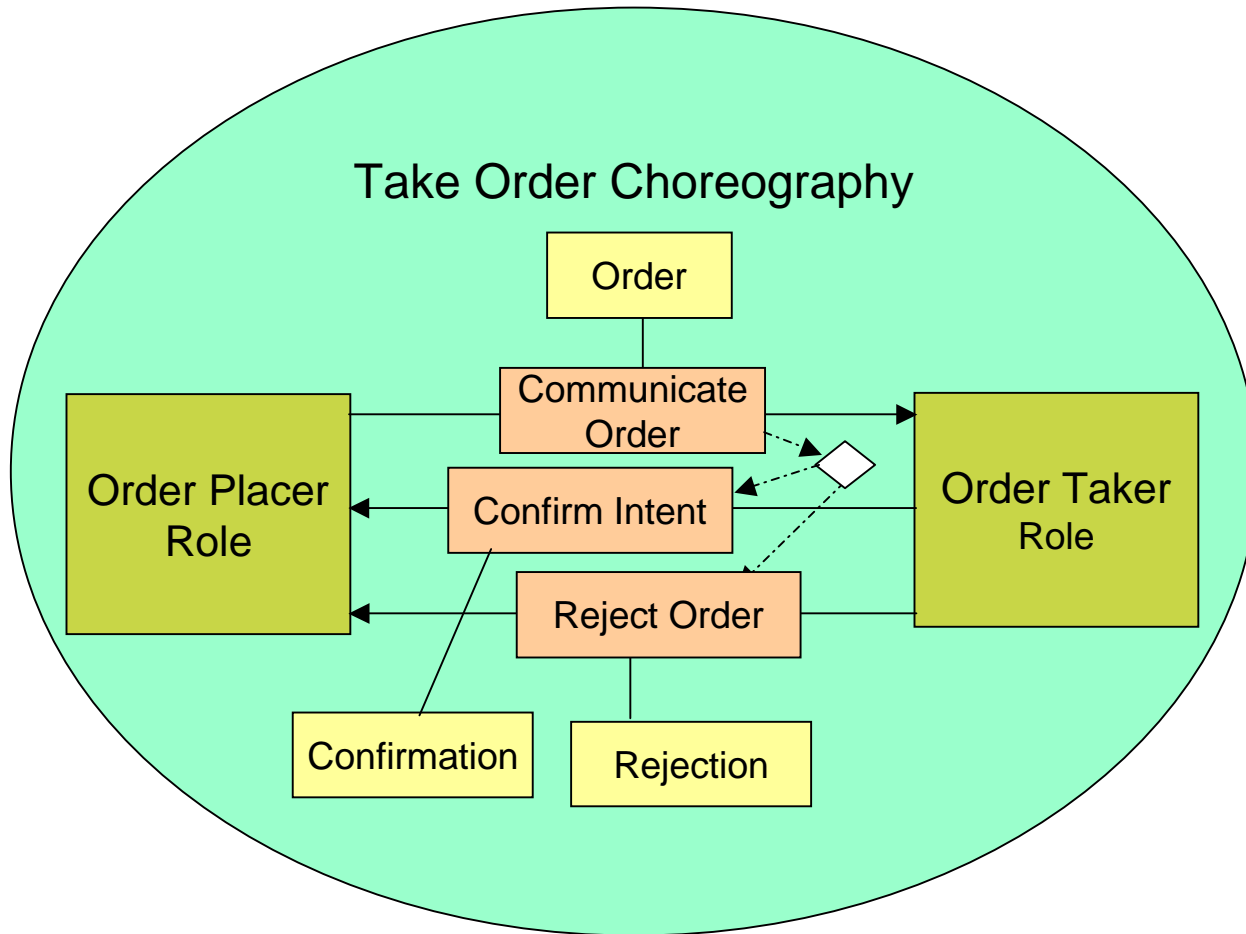


# Process (Orchestration) Concepts

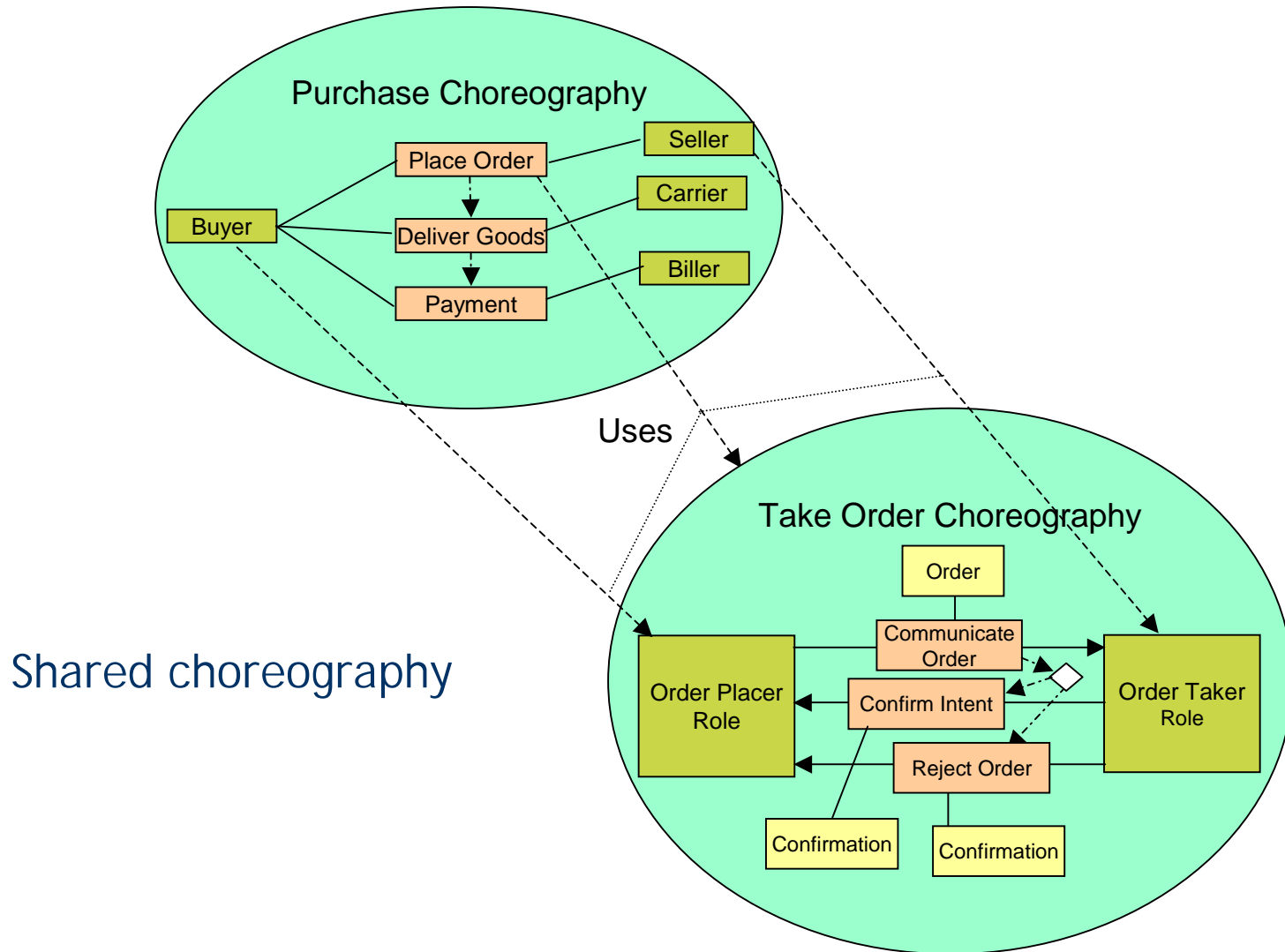


Note: Graphical notation is for illustration purposes only

# Choreography (Collaboration/Protocol) Concepts

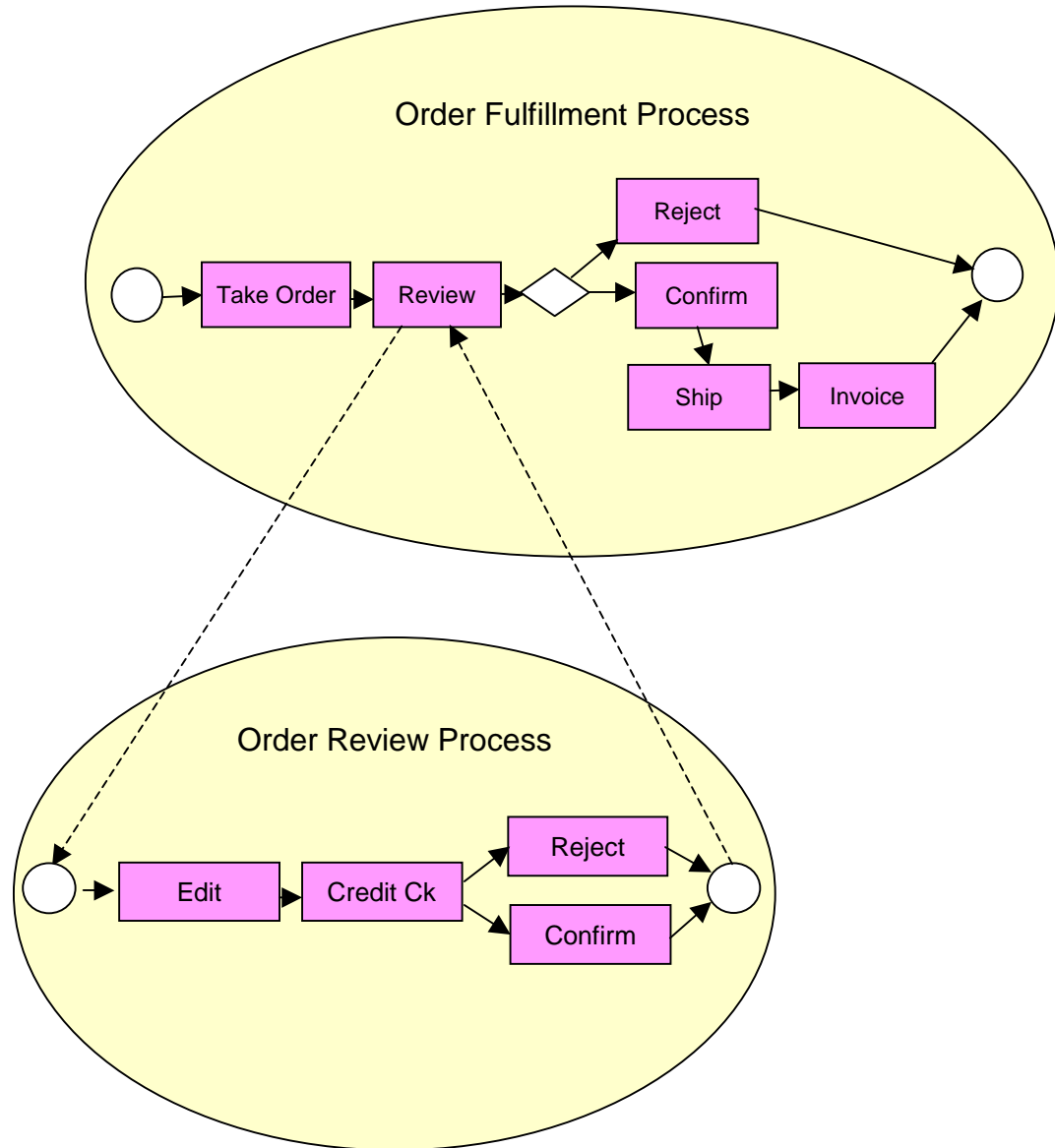


# Choreography Composition

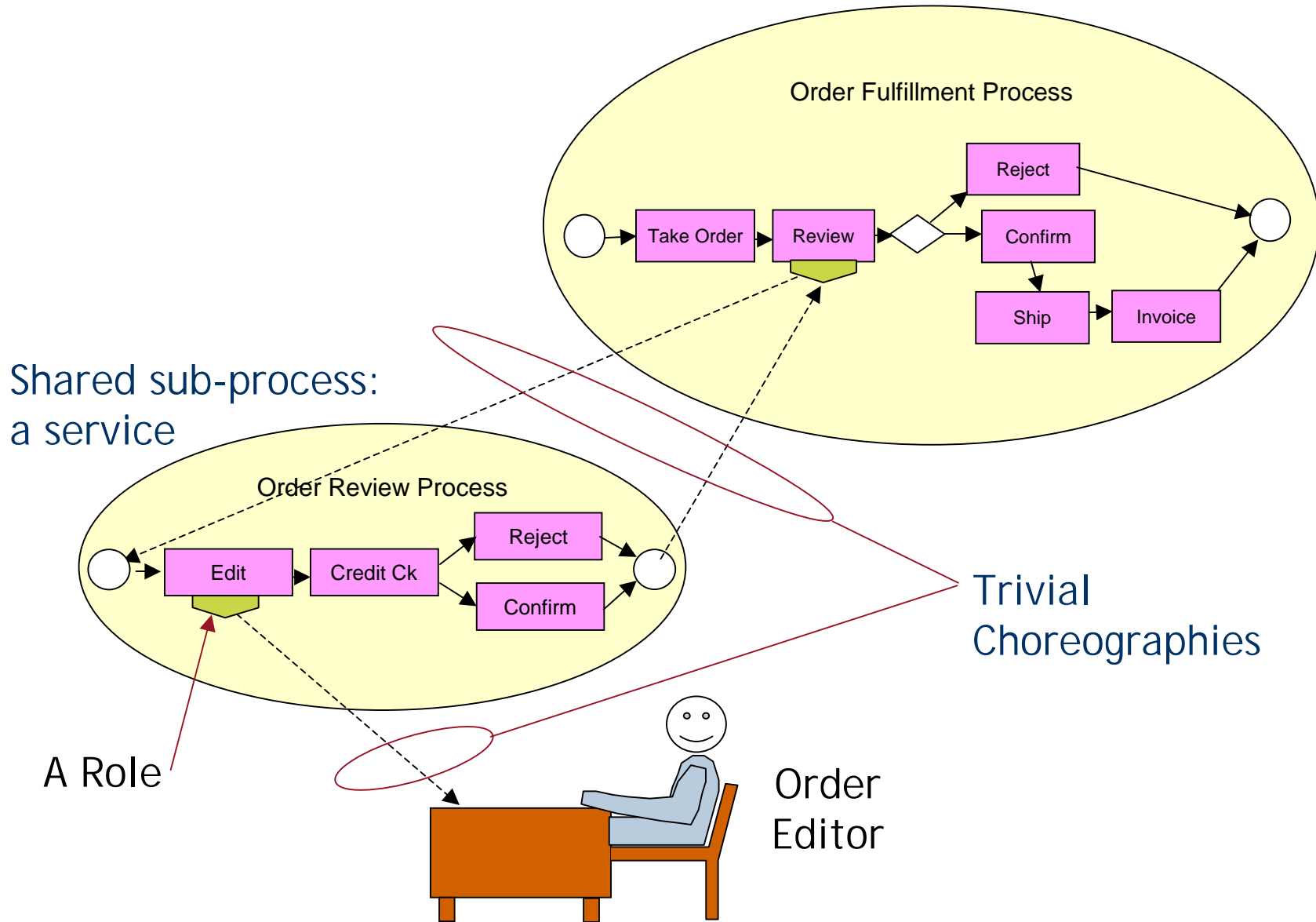


# Process Composition

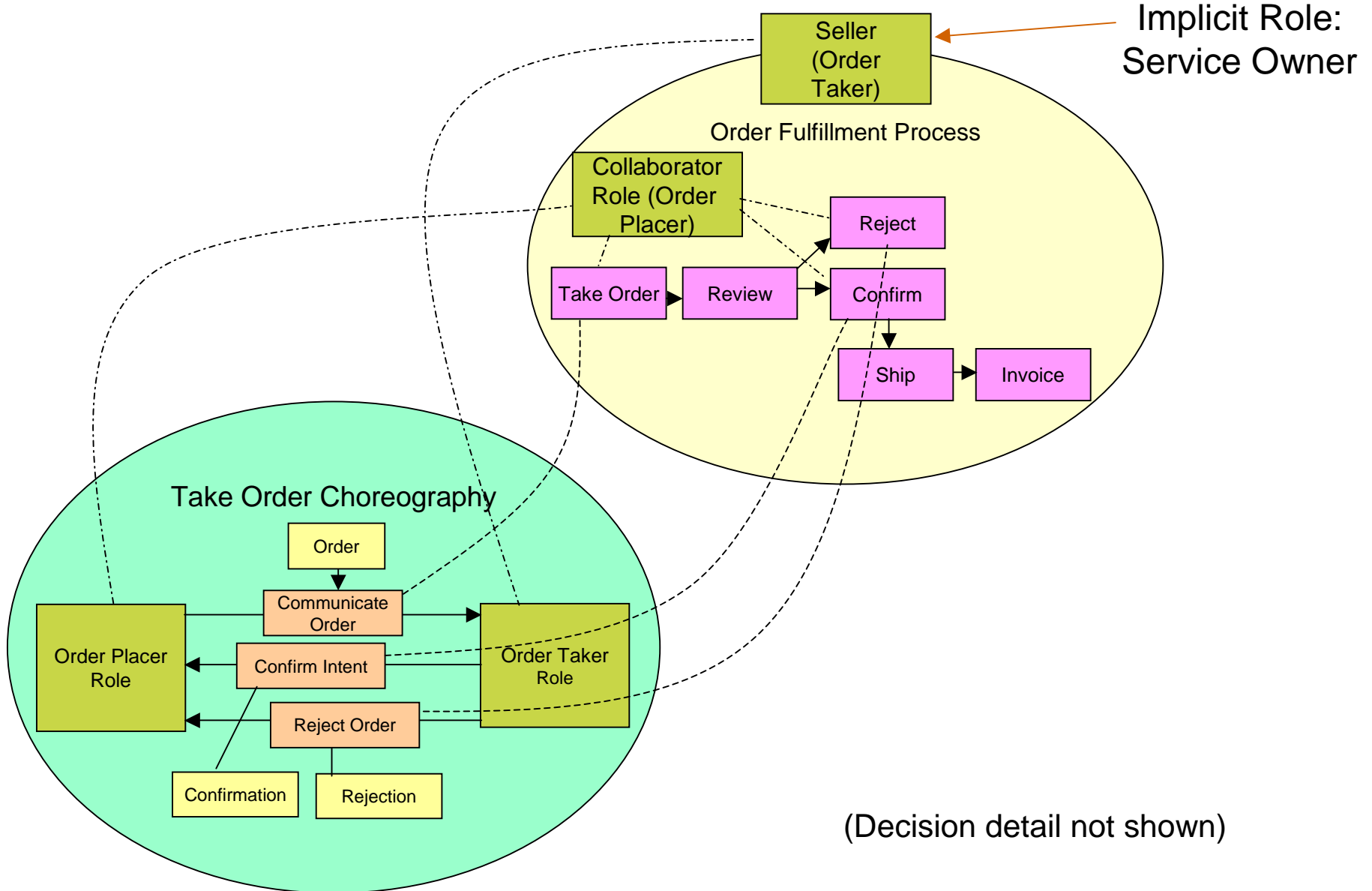
Shared sub-process



# Choreography Links Processes



# Process Binding to Choreography



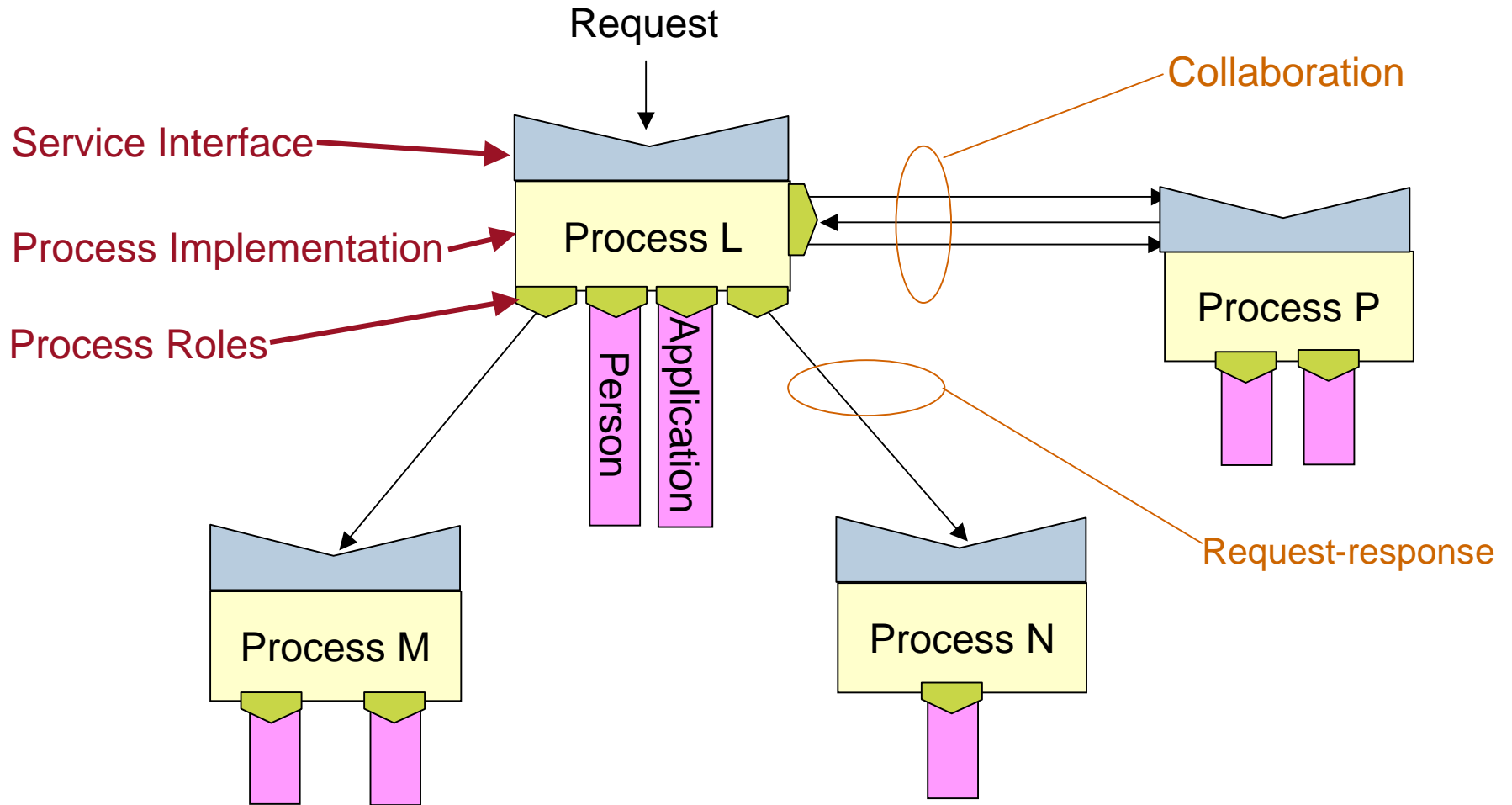
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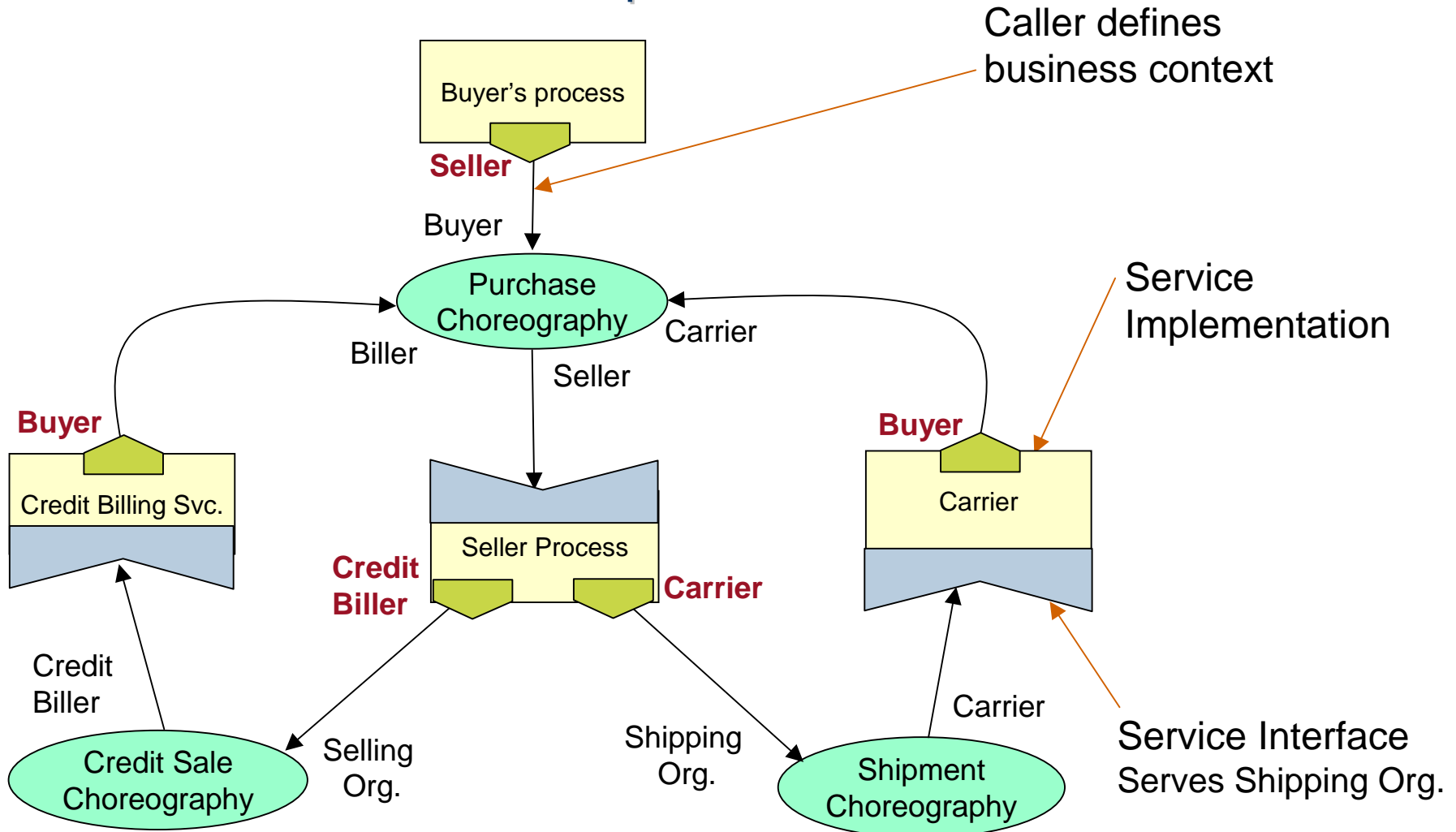
# Relationship of BPM and SOA

- BPM (Business Process Management): Business processes are the orderly execution of activities that achieve defined objectives.
- SOA (Service Oriented Architecture): Services offer capabilities that can be used in a variety of contexts.
- Business processes may use services to achieve their objectives.
- Services implemented with explicit business processes can be more quickly adapted to business changes.

# Processes as Services



# Roles and Services Viewpoint



# Business Value of BPM and SOA

- Economies of scale
  - Resources shared in multiple contexts
- Consistency
  - Same process used for same capability
- Service metrics
  - Basis for comparison/evaluation of service alternatives
- Timeliness
  - Respond to needs as they occur—transaction based
- Outsourcing option
  - Services may be acquired elsewhere
- Agility
  - Process changes and service selection at different levels of granularity

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# Enterprise Agility

The ability to adapt in a timely manner to **events** that reflect changing circumstances and demands

- Occurrence of a **problem** meeting expectations in current business operations
- Recognition of an **opportunity** to improve operations, expand business or enter a new market
- **Variance** beyond a threshold that violates operating assumptions
- Occurrence of a **deviation or trend** that indicates a change in the marketplace—either suppliers or consumers

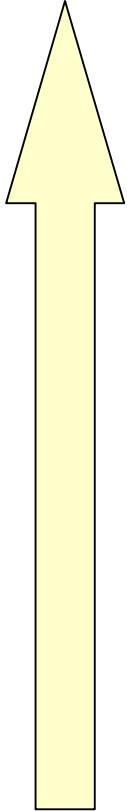
It's about the ability of management to adapt the enterprise

# Role of Business Processes and Services in Agility

- Primary impact of business change is on **business processes** and **organizational structure**
- The actual work (**concrete services**) and **data** of the business tend to remain the same.
- Services encapsulate these capabilities
- Adaptable business processes enable rapid implementation of significant business changes

# Degrees of Demand on Agility

Increased  
Demand



- New business paradigm
  - Change to processes, organization, services and capabilities
- Business transformation
  - Change to processes, organization and service objectives
- New product
  - Change to processes and organization
- Process Improvement
  - Change to Processes
- Operating efficiency
  - Changes to resource management

# Agility Meta Processes

- Adaptation
  - Monitor
  - Assess
  - Plan
  - Change
  - Monitor
- Potential impact:
  - Operating efficiency
  - Process Improvement
  - New product
  - Business transformation
  - New business paradigm

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# Event Driven Architecture: Meta Process Support

- Recognize events from various sources
  - Operating processes
  - Changes in resources, facilities, operating environment
  - Market changes
  - Political, economic or social changes
- Route notice to responsible entity
- Assess impact—may involve correlation of events
- Escalate attention to appropriate level
- Determine and implement appropriate resolution
- Resolution may involve monitoring of additional events

# Types of Events

- **Routine events** are handled by normal operating processes
  - Shipment arrives
  - Part passes inspection
  - Employee checks out
  - Customer submits order
  - An employee completes a task
- **Alert events** require action to change operating processes
  - Requires ability to recognize and initiate action
  - Requires management decision
  - May involve processes for change or corrective action
  - Resolution depends on enterprise agility

# Infrastructure

- Sensors: recognition of relevant events
  - Operating problem
  - Business opportunity
  - Unusual variance
  - Market deviation or trend
- Ad hoc monitoring
  - Define new events of interest
  - Deploy ad hoc sensors
- Publish and subscribe service
  - Event publishers unaware of uses
  - Event subscribers determine relevant events
- Drive agility business processes

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# Additional BPDM Considerations

- Multiple viewpoints
  - Executive
  - Business analyst
  - Process designer
  - Protocol designer
  - Participant
- Organization based routing
- Integration of business rules
  - Policies
  - Regulations
- Integration with strategic planning
- Enterprise agility/re-engineering

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