

# *Interaction Models in BPMN 2.0*

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These slides are based on:

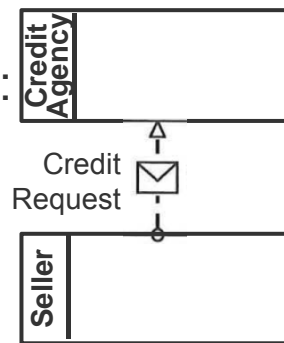
- White, S.A. and Bock, C. (2011): New Capabilities for Process Interaction in BPMN 2.0. In: Fischer, L. (ed.): BPMN 2.0 Handbook, Future Strategies Inc.

# *Interaction Models*

- Interaction models are new in BPMN 2.0
- They allow to model B2B cooperations
- Business services are characterized by interactions between businesses and their customers and partners
  - ◆ They are usually agreed or assumed ahead of time, and do not detail the internal activities of the participants.
  - ◆ Agreements determine what information, goods, or personnel are needed by whom and at what time, how complaints and unusual situations are handled, and so on.
  - ◆ The interactions might be very short from start to end, or take place over a long period.

# Interaction Diagrams

Collaboration  
(between pools):



Choreography:



Two diagrams for interactions:

- ◆ Collaboration (already BPMN 1.x)
- ◆ Choreography

Common elements of interaction diagrams:

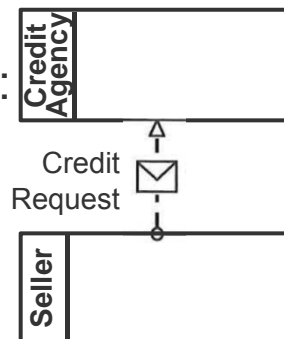
- Participants are the interacting agents
  - ◆ Businesses, departments, people, IT
- Messages are sent between Participants
  - ◆ These can be informational or physical, including physical things that do not carry information, such as cars or furniture.
- Messages Flows occur at certain points during the interaction, between Participants.
  - ◆ The same Message can be carried by more than one Message Flow.

# Interaction Diagrams

Choreography:



Collaboration  
(between pools):



## ■ Choreography diagrams

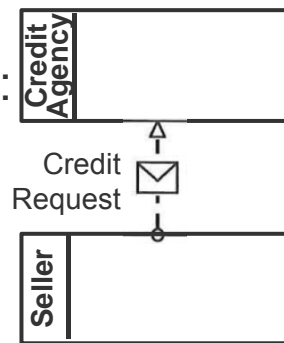
- ◆ show participants as bands inside a rounded rectangle, called a Choreography Activity.

## ■ Collaboration diagrams

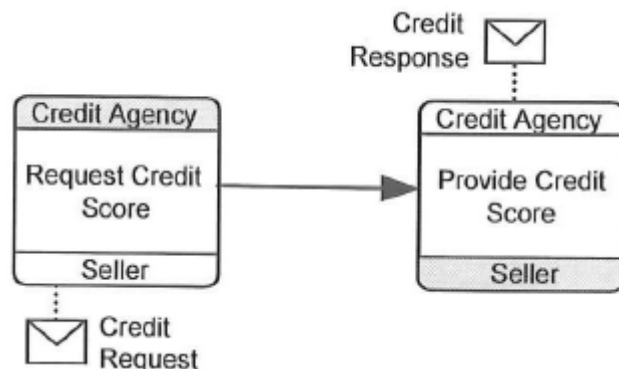
- ◆ show participants more prominently than Choreography.
- ◆ They are useful when relationships between Participants are the primary concern.

# Messages in Interaction Diagrams

Collaboration  
(between pools):

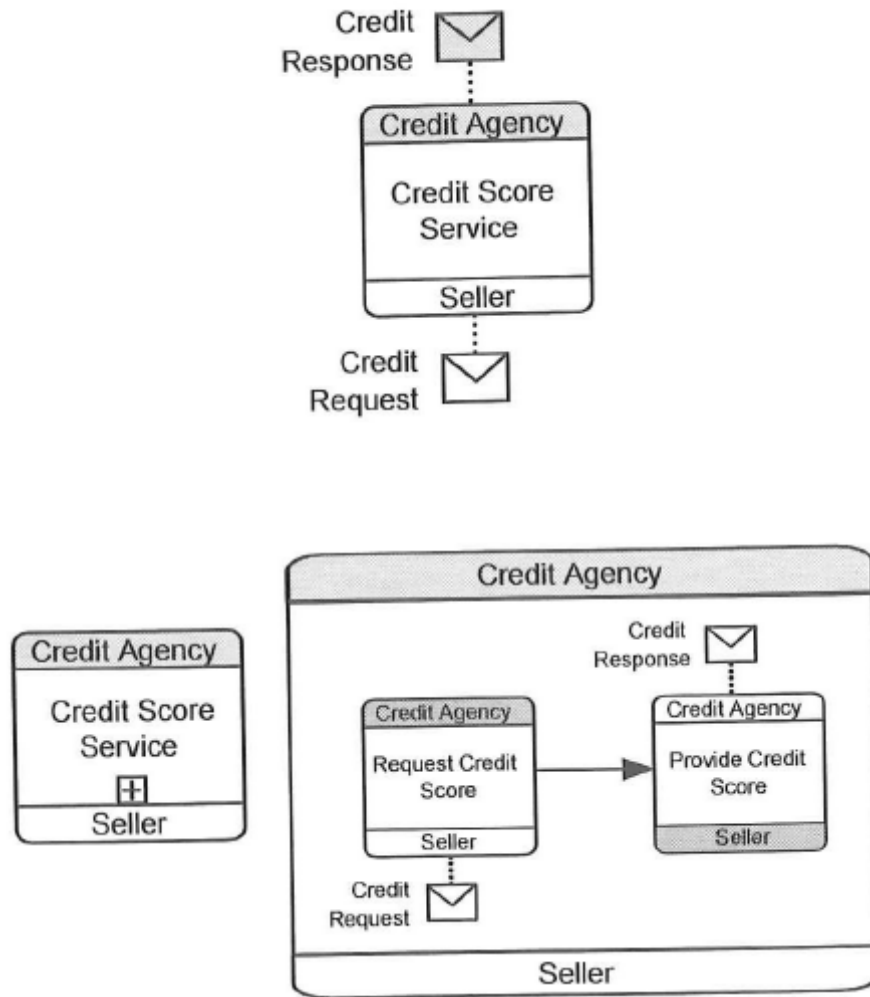


Choreography:



- Messages are shown as envelopes on both interaction diagrams
- In Collaboration diagrams Message Flows appear as dashed arrows with Messages optionally overlaid on them.
- In Choreography, Message Flows are shown as Choreography Activities, with Messages linked to them by dotted lines called Associations.
  - ◆ unshaded bands of Choreography Activities are Participants sending the Message
  - ◆ shaded bands are the ones receiving them.
- There can be sequences of Message Flows in Choreography

# Grouping Message Flow

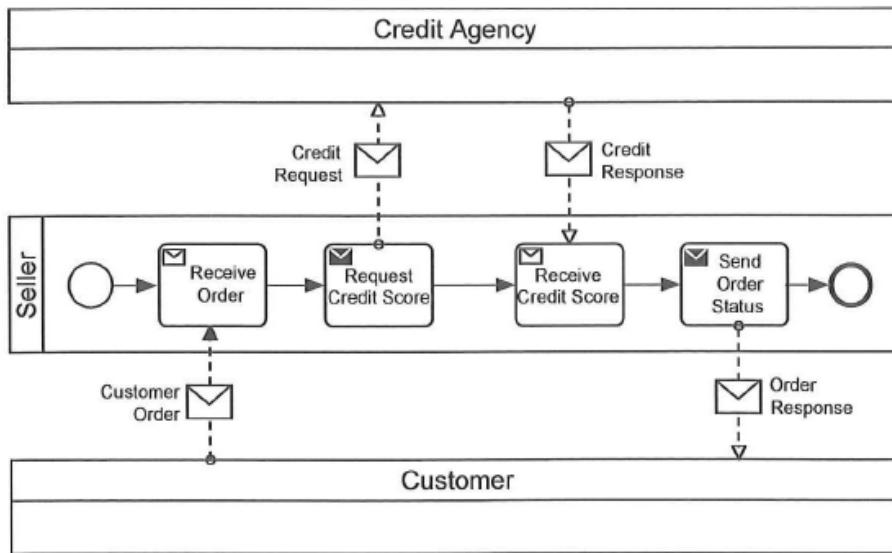


- Choreography diagrams can represent multiple Message Flows
- The above Interaction has two Message Flows without explicit sequencing
- Interactions with a [+] can be expanded; representing explicit sequencing of a Message Flow

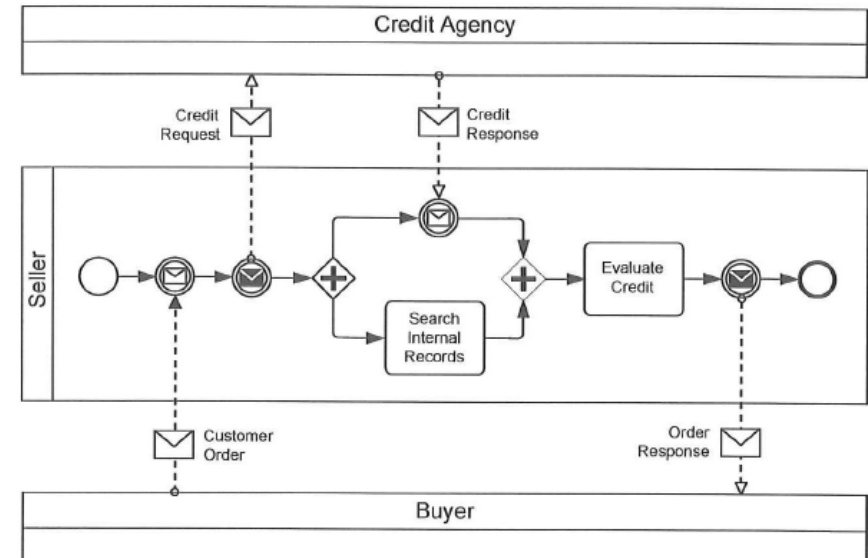


# Interaction Processes: Public and Private Process in Collaborations

Process in a collaboration



Corresponding private process



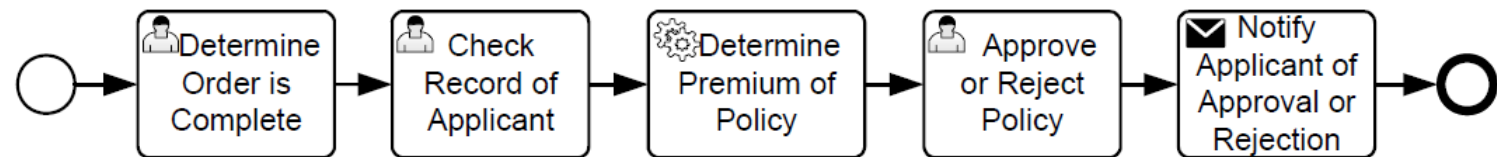
- The left process could be public, because it only sends and receives messages
- The right figure shows a possible private process containing activities that are not interactive and usually are not shown to other participants
- The Events used for sending and receiving messages have the same effects as the send and receive tasks of the left process



# Public vs. Private Process

**Private Processes** are internal to an organisation.

Example:



A **public process** represents the interactions between a private Business Process and another Process or Participant (represented by a different pool):

Example:

