# **Activities**

Task

A **Task** is a unit of work, the job to be performed. When marked with a + symbol it indicates a **Sub-Process**, an activity that can

Transaction

A Transaction is a set of activities that logically belong together; it might follow a specified transaction protocol.

Event **Sub-Process** 

An Event Sub-Process is placed into a Process or Sub-Process. It is activated when its start event gets triggered and can interrupt the higher level process context or run in parallel (noninterrupting) depending on the start event.

Call Activity

A Call Activity is a wrapper for a globally defined Sub-Process or Task that is reused in the current process.

#### **Activity Markers**

Markers indicate execution behavior of activities:

+ Sub-Process Marker

Loop Marker

Parallel MI Marker Sequential MI Marker

Ad Hoc Marker

Compensation Marker

Task Types

Types specify the nature of the action to be performed:

Send Task

Receive Task

User Task

Manual Task

Business Rule Task

Service Task

Script Task

Sequence Flow

defines the execution order of activities.

**Default Flow** 

is the default branch to be chosen if all other conditions evaluate to false.

**Conditional Flow** 

has a condition assigned that defines whether or not the flow is used.

# **Gateways**

**Exclusive Gateway** 

**Event-based Gateway** Is always followed by catching events or receive tasks. Sequence flow is routed to the subsequent event/task which happens first.

outgoing flow.

**Parallel Gateway** 



When used to split the sequence flow, all outgoing branches are activated simultaneously. When merging parallel branches it waits for all incoming branches to complete before triggering the outgoing flow.

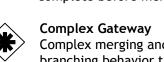
When splitting, it routes the sequence flow to exactly

one of the outgoing branches. When merging, it awaits

one incoming branch to complete before triggering the



**Inclusive Gateway** When splitting, one or more branches are activated. All active incoming branches must complete before merging.



Complex merging and branching behavior that is not captured by other gateways.

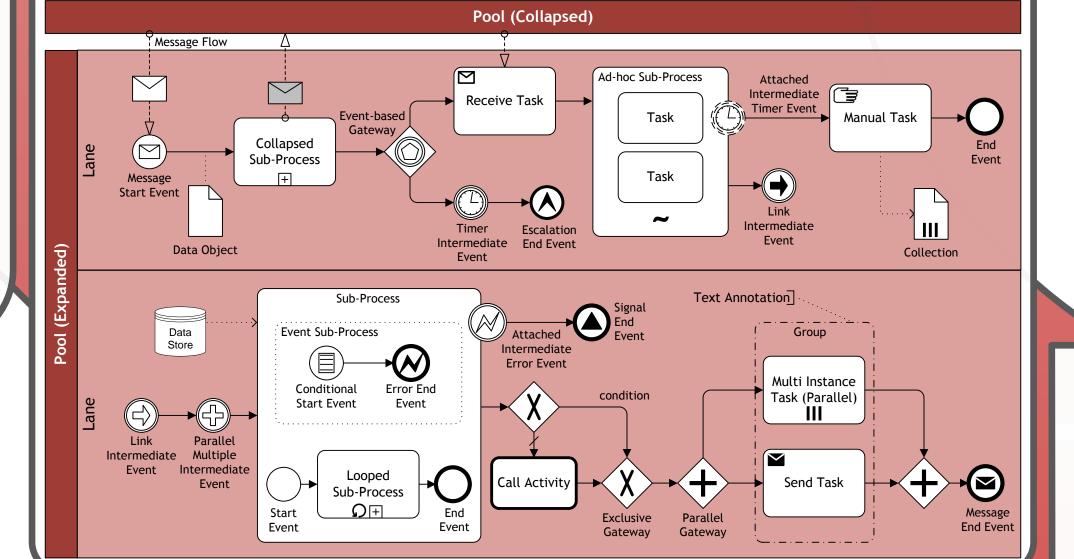
**Exclusive Event-based Gateway** (instantiate)

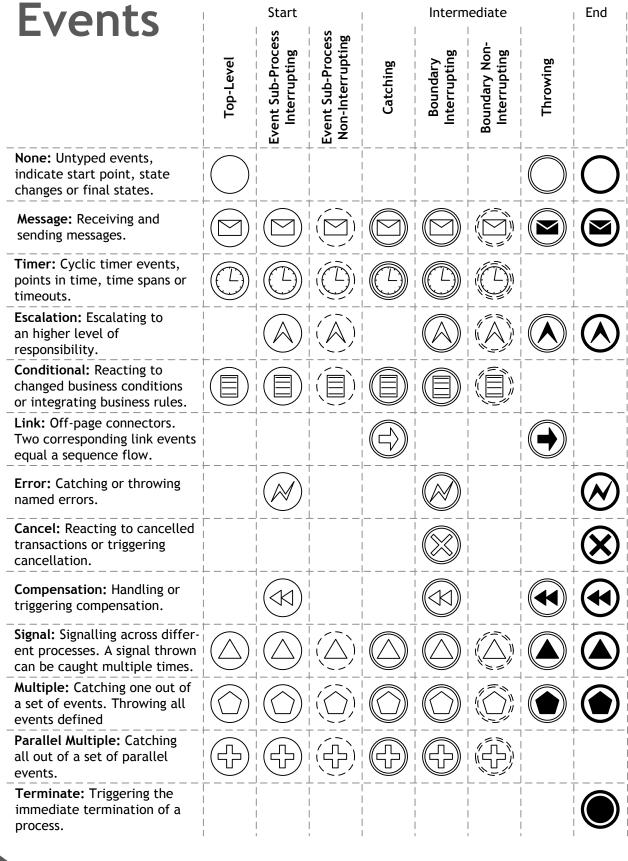
Each occurrence of a subsequent event starts a new process instance.

Parallel Event-based Gateway (instantiate)

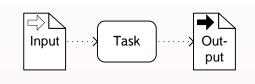
The occurrence of all subsequent events starts a new process instance.

### **Collaboration Diagram**





## Data



A **Data Input** is an external input for the entire process. It can be read by an activity.

of the entire process.

A Data Output is a variable available as result

A **Data Object** represents information flowing through the process, such as business documents, e-mails, or letters.

A Collection Data Object represents a

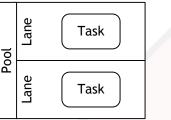
collection of information, e.g., a list of order



A **Data Store** is a place where the process can read or write data, e.g., a database or a filing cabinet. It persists beyond the lifetime of the process instance.



A Message is used to depict the contents of a communication between two Participants.



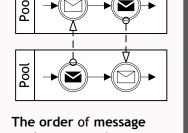
Pools (Participants) and Lanes represent responsibilities for activities in a process. A pool or a lane can be an organization, a role, or a

system. Lanes subdivide pools

or other lanes hierarchically.

**Swimlanes** 

Message Flow symbolizes information flow across organizational boundaries. Message flow can be attached to pools, activities, or message events.



exchanges can be specified by combining message flow and sequence flow.





