



**PLATFORM OVERVIEW / Frameworks and standards / Business process industry and standards / Intro to BPMN / bpmn-basic-concepts**

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Let's get into a bit more details on the main types of BPMN process elements.

### Events



Events are **signals that something happens** – this includes the start and end of a process as well as any interaction with the process' environment.

There are 3 types of events:

- start events
- end events
- intermediate events

### Start and End events



#### Start & End events

Start Event Icon	End Event Icon
	
event that triggers the process	event that defines the state that terminates the process

## Intermediate events

### Message events

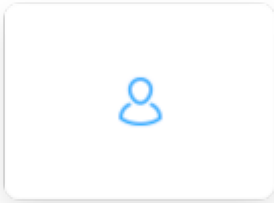
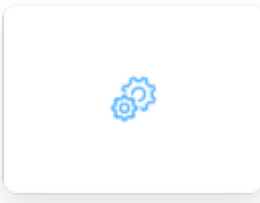
- represents incoming or outgoing messages from external parties - information, email, bank transfer
- Receive Message Event - incoming message occurring during the process flow, somewhere between start and end
- Send Message Event - outgoing message

Send Message Event Icon	Receive Message Event Icon
	
outgoing message	incoming message

## Activities

### Task

- it is an atomic activity within a process flow. You create a task when the activity cannot be broken down to a finer level of detail. A task can only belong to one lane.

User task	Service task
	
a task that requires the human to perform an action	a task that uses a Web service, an automated application, or other kinds of service in completing the task.

### Send Task

- represents a task that sends a Message to another lane or pool. The Task is completed once the Message has been sent.

### Receive Task

- indicates that the process has to wait for a message to arrive in order to continue. The Task is completed once the message has received.

### User Task

- is a Task that is performed without the aid of any business process execution engine or any application. It is performed when the user performs a certain action in the application.

## Service Task

- is executed by a business process engine. The task defines a script that the **process engine** can interpret. When the task begins, the engine will execute the script. The Task will be completed when the script is completed. It also provides a mechanism for a process to run a **business rule** on the process data.

## BPMN Subprocesses

In BPMN, a subprocess is a compound activity that represents a collection of other tasks and subprocesses. Generally, we create BPMN diagrams to communicate processes with others. To facilitate effective communications, we really do not want to make a business process diagram too complex. By using subprocesses, you can split a complex process into multiple levels, which allows you to focus on a particular area in a single process diagram.

## Gateways

Gateways allow to control as well as merge and split the **process flow**.



### Exclusive gateways

In business processes, you typically need to make choices — **business decisions**. The most common type of decision is choosing **either/or**. Exclusive

Gateways limit the possible outcome of a decision to a single path, and circumstances choose which one to follow.

## Parallel gateways

In many cases, you want to split up the flow within your business process. For example the sales and risk departments may examine a new mortgage application at the same time. This reduces the total cycle time for a case. To express parallel flow in BPMN, you use a **parallel gateway**.

Exclusive gateway (XOR)	Parallel gateway (AND)
	
<ul style="list-style-type: none"><li>• defines a decision point</li></ul>	<ul style="list-style-type: none"><li>• no decision making;</li><li>• all outgoing branches are activated</li></ul>

## Closing gateway

- closes gateways by connecting branches with no logic involved
- symbol used depends on the initial gateway
- parallel gateways - waits for all input tokens and merges all into one single token
- inclusive gateways
  - waits for all active inputs

- is informed about all preceding token flows - knows the path selected and are expecting the token from these

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