

How to Draw BPMN 2.0 Business Process Diagram?

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Business Process Modeling Notation 2.0 makes a great improvement in business process modeling. There are number of new notations introduced in <u>BPMN</u> 2.0. In this tutorial, we will show you how to draw choreography task and message. We will draw the example diagram of BPMN 2.0 draft specification (An example of stand-alone Choreography diagram). By finishing this tutorial, you will be able to draw a business process diagram that looks like this:



Drawing a BPMN 2.0 business process diagram

- Create a new project by selecting Project > New from the application toolbar. In the New Project window, enter *Tutorial* as project name and click Create Blank Project.
- 2. Let's create a model first. Select **View > Project Browser** from the application toolbar.

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3. Open the Model Structure page in Project Browser



4. Click on the **New Model** button on top of the model list on the left hand side.

Tutorial	
New Model	

5. Name the model *Sales* and click **OK** to confirm.



6. We can create pools directly under *Sales* model without using diagram. Let's try. Right-click on *Sales* model and select **Model Element > New Model Element...** from the popup menu.



7. You can search the model you would like to create in the **New Model Element** window. Enter *Po* in the **Model element type** text field to search for **Pool**.

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8. Enter *Customer* as **Model element name**.

New Model Element
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- 9. Uncheck **Open specification after create** and click **OK** to continue.
- 10. Repeat the steps to create the pool *Bidder*, *Manufacturer* and *Supplier*.

11. Right-click on the *Sales* model and select **Sub Diagrams > New Diagram...** from the popup menu.

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12. In the **New Diagram** window, select **Business Process Diagram** and click **Next**. Keep the diagram name as provided and click **OK** to create the diagram.

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		called "Brainstorm". When the meeting ends, you can organize the notes and derive a diagram from them.	^
		Business Process Diagram Model business workflow with the use of OMG BPMN (Business Process Model and Notation).	
		Chart Diagram Define the relationships between model elements in project.	
		Class Diagram Design object model, persistence model for Hibernate ORM and REST API with classes, their attributes, operations and inter-relationship.	
		Communication Diagram Model the relationships between objects. Communication Diagram focuses on telling whether a relationship exists between objects. It does not tell their order and how objects interact with each other.	~
		Next Can	cel

13. We can now start creating the <u>business process diagram</u>. First, let's create a start event. Select the **Start Event** tool from the diagram toolbar, and then click on the empty area of the business process diagram.



14. Now click on the start event and drag out the Resource Catalog icon.



15. Release the mouse button on the blank area of the diagram, and select **Choreography Task** from Resource Catalog.

<u> </u>	
	Choreography Task

16. Enter Order Request as the name of the choreogrpahy task and press Enter to confirm.



17. Right-click on Order Request and select Open Specification...



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Description:	📼 Suppl	ier				

- 19. Select *Manufacturer* pool as **Participant 2**.
- 20. Select Customer pool as the Initiating participant.

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21. Click **OK** to confirm. Now the task *Order Request* is done. You can see that the initiating participant is showing in the same color of the task, with the non-initiating participant showing in gray.



22. Let's create a message between *Customer* and *Manufacturer*. Click on the *Order Request* task and drag out the **Resource Catalog** icon.



23. Release the mouse button above the choreography task and select **Message** from Resource Catalog.



24. Then, select New Message Flow from "Customer" to "Manufacturer" from the popup menu.



25. Enter Order as the name of message and then press Enter to confirm.



26. Create an **Event-based Exclusive Gateway** from *Order Request*. Again, click on *Order Request* and then drag out the **Resource Catalog** icon. Release the mouse button in the empty space of the diagram and select **Gateway** from Resource Catalog to create a gateway.



27. Enter *Can Fulfill Order*? as the name of gateway and press **Enter** to confirm. You can insert a line break by pressing **Alt + Enter**.



28. Right-click on the gateway and select Type > Event-Based Exclusive Decision/Merge (XOR).



29. Repeat the steps to complete the business process diagram, like this:



- 30. There could be multiple instances of 'procure parts' activity running simultaneously. Let's represent this by setting the loop type of task *Procure Parts* to Multi-Instance Loop. Right-click on the *Procure Parts* task and select **Open specification...** from the popup menu.
- 31. Select Multi-Instance Loop for Loop type combo box.

>	Choreography Task Specification	
References Tagged Values General	Project Management Quality Comments Constraints Diagrams Traceability Procedures Message Flows Stereotypes	
Name: ID:	Procure Parts BP21	Ŧ
Participant 1: Participant 2:	Manufacturer M	
Initiating participant	Manufacturer - Sales	
Loop type: Description:	<unspecified> v <unspecified> Standard Loop</unspecified></unspecified>	
	Multi-Instance Loop	

32. Click **OK** to confirm. Now the **Multi-Instance loop** marker is shown in the *Procure Parts* task.



33. Let's create messages between Manufacturer and Bidder on the Part Auction task. With the use of Resource Catalog, create a Message from the Part Auction activity. Select New Message Flow from "Manufacturer" to "Bidder" from the popup menu.



- 34. Name the message as *Part Request*.
- 35. Repeat the step to create another message to *Part Auction* task. This time, select **New Message Flow from "Bidder" to "Manufacturer"** during creation. Name the message as *Part Response*. You can see that the message from *Bidder* to *Manufacturer* is in different color since *Bidder* is non-initiating participant.



36. Now the gateway *All Parts Available*? and *All Parts Obtained*? in business process diagram only modeled the false situation. What about the true case? Assuming that the flow should flow back to the *Order Confirmation* task. We don't want to make the diagram too complicated by having too many connector lines. Let's represent the flow with the use of a pair of intermediate events. Click on the *All Parts Available*? gateway and drag out the **Resource Catalog** icon. Release the mouse button above the gateway and select **Intermediate Event** from Resource Catalog. Enter *A* as name and press **Enter**.



- 37. Name the connector Yes.
- 38. Right-click on the intermediate event and select Trigger > Link Trigger.
- 39. Repeat the steps to create another link event from All Parts Obtained? gateway.



40. Select Link Intermediate Event from the diagram toolbar.



41. Click on the left hand side of the *Order Confirmation* task and name it *A*. Connect it with the task. Up to now your diagram should look like this:



42. Create the other messages. Finally, your business process diagram should look like this:



Resources

1. <u>Complete Project - Tutorial.vpp</u>

Related Links

- Introduction to BPMN
- How to Define Working Procedures for Business Tasks



Visual Paradigm home page (https://www.visual-paradigm.com/)

Visual Paradigm tutorials (https://www.visual-paradigm.com/tutorials/)