



## How to Link BPMN Data Object with ERD Entity?

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BPMN data objects provide a way to visually represent "data" within the process flow, such as the purchase order, shipment notice, invoice and receipts in a shipment process. Together with the use of data associations, you can represent the flow of data between data objects, and inputs and outputs of tasks and sub-process.

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[Entity Relationship Diagram](#) (ERD) is generally used in modeling the structure of database tables. However, ERD can also be used to model the internal structure of data elements, which provides an excellent way to realize the properties of data.

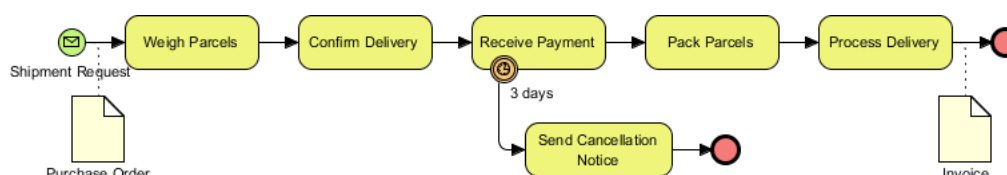
While BPMN data objects in [business process diagram](#) (BPD) play the role of showing the intake and production of data within a process flow, ERD can be used to describe the internal structure of data elements in BPD.

In this tutorial, you will learn how to link up BPMN data objects with an ERD. You will be given a project file that contains both BPD and ERD. You need to connect them using the reference feature. In order to complete this tutorial, you need to have:

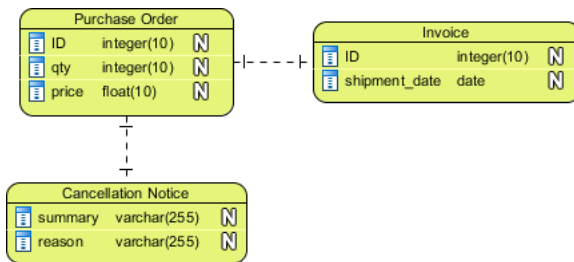
1. Basic knowledge of modeling in [Visual Paradigm](#)
2. Basic knowledge of [business process modeling](#), [BPMN](#), [dbmodeling.jsp#erd">ERD](#)
3. Visual Paradigm 10.1 or higher installed

### Add Reference from Data Object to ERD

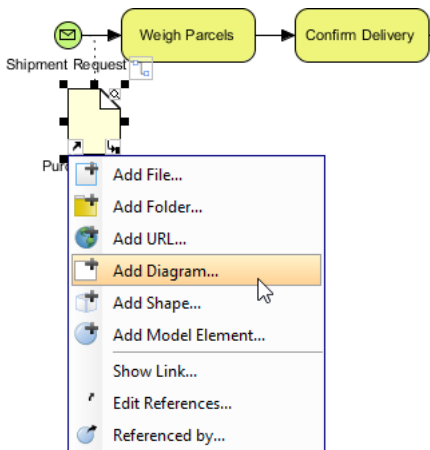
1. Download [CargoConsolidation.vpp](#). You can also find this file at the bottom of this tutorial.
2. Open the downloaded .vpp file in Visual Paradigm. To open a project, select **Project > Open** from the application toolbar.
3. Open and study the BPD *Process Order*.
4. There are two data objects - *Purchase Order* and *Invoice*. We are going to describe their data structure with ERD *Data Structure*.



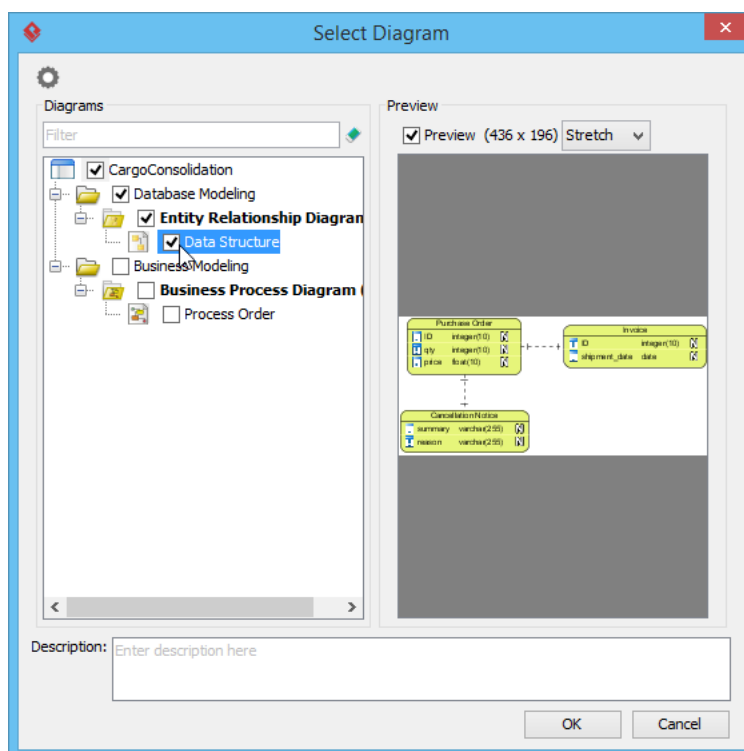
5. Open and study the ERD *Data Structure*. It represents the structure of data objects.



6. Open the BPD again.
7. Move the mouse pointer over the data object *Purchase Order*.
8. Click on the tiny reference resource icon at the bottom left of shape. Add a diagram reference by selecting **Add Diagram...** from the popup menu.



- In the **Select Diagram** window, check the ERD *Data Structure*.

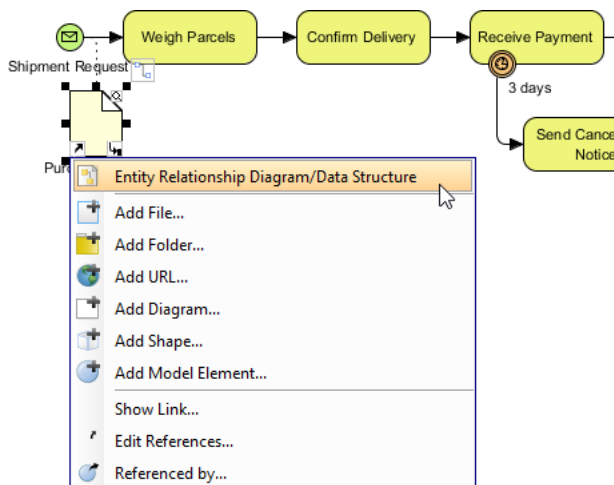


- Click **OK** to confirm the selection.
- Repeat the steps on the data object *Invoice*. Make it reference the same ERD.

### Navigability between Data Object and ERD

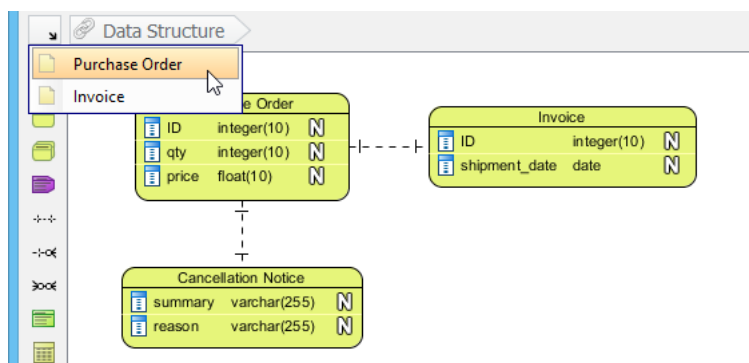
Once reference has been added between data object and ERD, you can navigate between them easily. In this section, you are going to open the ERD from the data object, and go back to the BPD from ERD.

1. Click on the reference resource of data object *Purchase Order* and select **Entity Relationship Diagram/Data Structure** from the popup menu.



This opens the ERD *Data Structure*.

2. You can navigate back to the source diagram easily. Try this, click on the arrow icon at the top left of ERD and select *Purchase Order* to jump back to the BPD.



This opens the BPD and with *Purchase Order* selected.

## Resources

1. [CargoConsolidation.vpp](#)

## Related Links

- [Visual Paradigm's business process modeling support](#)
- [Tutorial: Introduction to BPMN Part I](#)
- [What is Entity Relationship Diagram \(ERD\)?](#)



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

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