

SIGNAVIO® PROCESS INTELLIGENCE TRAINING EXERCISE

Disclaimer: The following pages are an modified version of the “Process Intelligence Training Exercise” generously provided by Signavio® alongside their Process Manager. Once you are registered, you should be able to work through the exercises on your own (also from home).

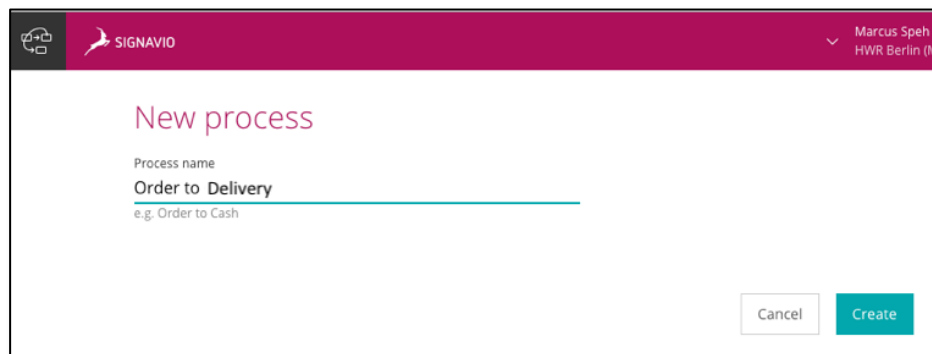
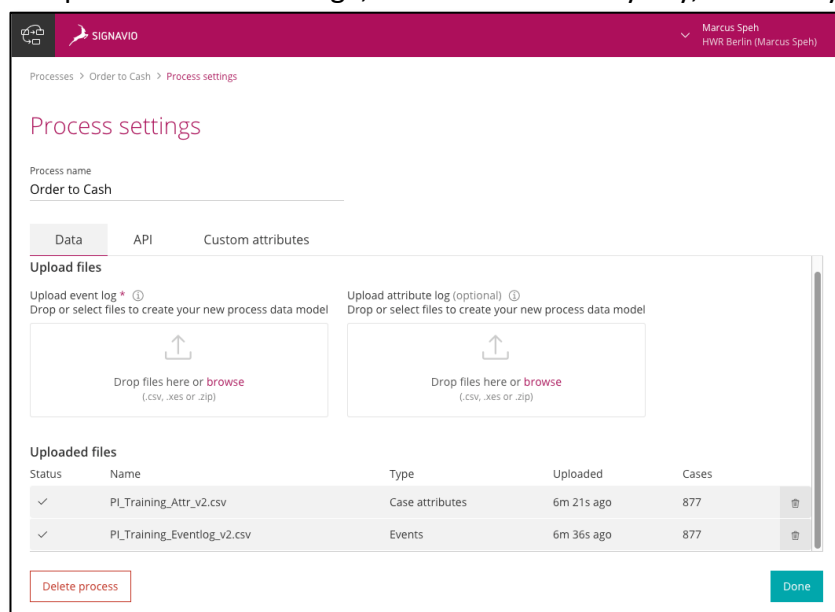


Figure 1: New process “Order-to-delivery”

Process selection. In the Signavio Explorer (the main dashboard – you get there by clicking on the logo at the top), choose the tab `Process Intelligence` at the top. This will bring you to the screen on the left where you can create a new process to be investigated (fig. 1). As process name, enter `Order to Delivery (Your Name)` (insert your actual name for `Your Name`). Now click on `Create` to move on to the next screen. Click on this icon for more information:



Data Upload. Upload the event log and the attribute log data files (in CSV format). You get these files from Moodle: download them from there to your laptop and then add them here. Make sure you upload the event log and the attribute log in the appropriate slots and don’t mix them up. If successful, you should now see the image in fig. 2, with two status lines. (Note: If you see a red cross and get a “upload failure” message, do click “DONE” anyway, there may be a bug.)



Status	Name	Type	Uploaded	Cases
✓	PI_Training_Attr_v2.csv	Case attributes	6m 21s ago	877
✓	PI_Training_Eventlog_v2.csv	Events	6m 36s ago	877

Figure 2: Process settings – event data upload, API and custom attributes

You can check out the other tabs, `API` and `Custom Attribute` (there is nothing to do here for you now). `API` would allow an external application to directly interface with this editor (e.g. upload event logs continuously). `Custom Attribute` allows you to add process attributes for filtering. You can always get back to this screen by opening the sidebar on the left and opening `Process settings`. Click `Done` to move on to data analysis.

Process Discovery widget. To begin analyzing data, click on the field `New Investigation`. Enter as title: `Process Discovery`. The default widget shows a process model generated from the event log data. You can display either `Occurrences` (number of processed events) or `Cycle time` (time between activities). You can zoom in or out using two parameters: `Activities` and `Sequence Flow`.

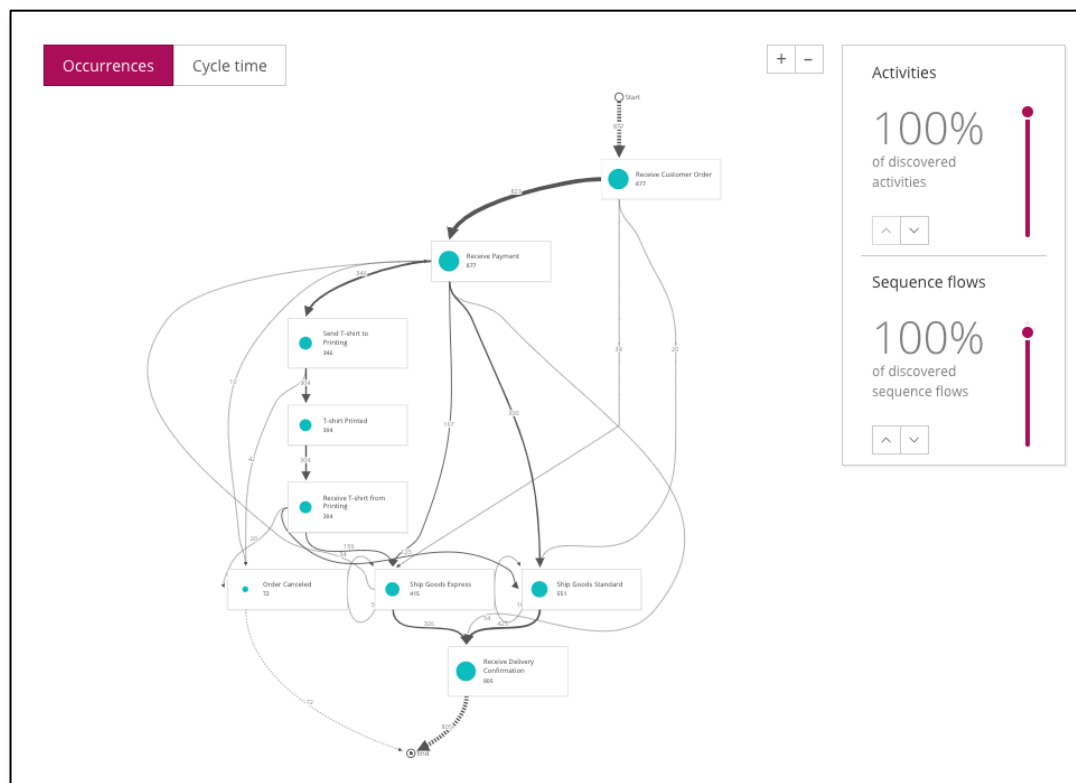


Figure 3: Process Discovery (default) widget with discovered process model

Play with the zooming functionality using `Activities` and/or `Sequence Flow` and observe the resulting changes in the diagram. The modeling algorithm looks for traces (sets of activities, or variants) with the highest frequency in the log. Likewise for the flows between activities. Remember the filter function right above the widget to further segment the model data.

- ☐ Add additional activities and sequence flows.
- ☐ How many of the events were order cancellations (in percent and in total)?
- ☐ How many t-shirts were delivered in total?
- ☐ How often did shipments fail?
- ☐ Were more shipments standard or express delivered?
- ☐ How orders came from New York?
- ☐ Which other (interesting) discoveries can you make?

Other widgets. Within the same chapter, try some of the other widgets (see fig. 4) and answer the following questions about values and relationships of different attributes in the event log:

- ☐ How many `Cities` were sampled?
- ☐ How many characters does the `Customer ID` have?
- ☐ How long did the fastest order process take?
- ☐ How long did `Premium Customers` have to wait for delivery on average?
- ☐ How strongly is `Customer Type` related to `City`?
- ☐ What was the largest order that was cancelled?
- ☐ How many T-shirts were printed for New York customers?



Figure 4: Add widget

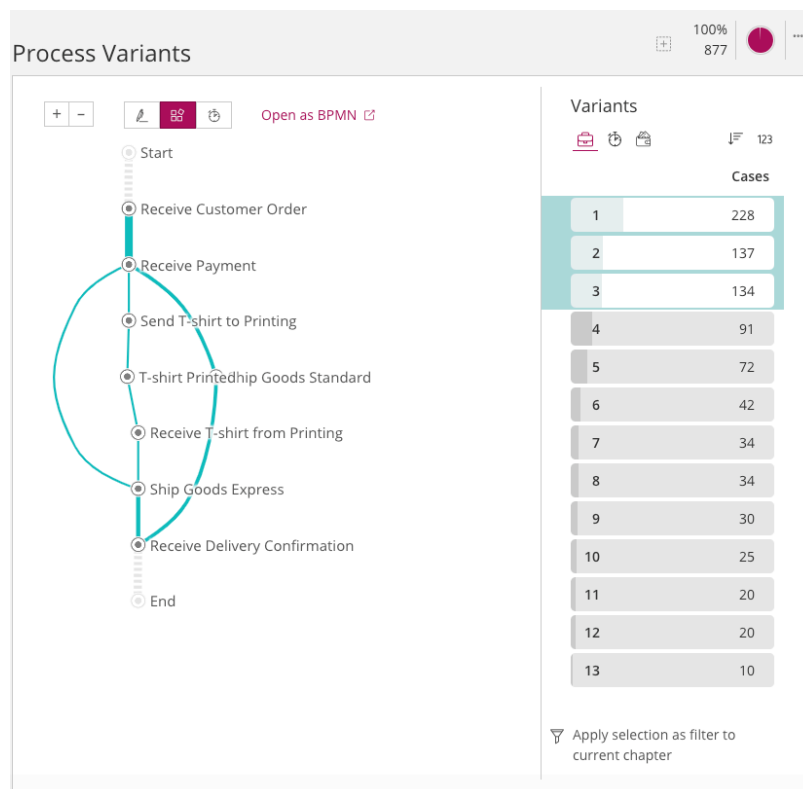


Figure 5: Process Variants (default) widget with top 3 variants (by case) selected

Process Variants Widget. Open the leftmost sidebar and select `New chapter`. In the new chapter, add the widget `Process Variants`. The default has the variants with the most cases selected (on the right), and the variants are shown on the left. This widget is useful for tracking alternative pathways (= “variants”) through your process. On the left hand side of the widget, pathways are displayed as colored lines. The meaning of the thickness depends on what you’re viewing, occurrences or cycle time. When viewing occurrences, the thickness indicates how many selected variants are in the pathway. When viewing cycle time, the thickness indicates, how long the pathway takes. Here you can also create BPMN diagrams on the fly. On the right hand side, you can sort by selecting cases (event traces from start to end), duration (time), or order amount (“cost” in EUR). You can select variants by clicking on the list on the right hand side. You also can apply filters as usual. The process model on the left

can also be animated: when you click on a variant (next to its number), you see the events being processed on the left side.

- ☐ How many orders (cases) exist altogether?
- ☐ How many variants (different process pathways or traces) are there?
- ☐ What is the most common variant (process flow)?
- ☐ (In the default `Process Variant` widget:) Open the process as BPMN (A) for the most common, and (B) for the two most common process flows. Save the resulting diagrams (which open in a new tab) in your folder `My Documents` and compare them.
- ☐ What is the different between variants no. 3 and 4 (use the animation for support)?
- ☐ What is the variant with the highest `cycle time` and why does it take so long?
- ☐ Which path generates the highest income (absolute and per case)?

Optional A:

- ☐ Add a new chapter with a filter for long duration cases (more than 20 days).
- ☐ Add a process discovery and a process variant widget.
- ☐ Compare the process flow, especially sequence durations: what do you notice?

Optional B:

- ☐ Change the filter to cases that were canceled
- ☐ Compare changes in process discovery and process variants.

Process Conformance. Similar to the process variant widget, but the process conformance widget maps variants against a BPMN model of a process. This way, you can see what your actual process is like compared to your process model. You must first map your investigation to a BPMN model to use this widget. To do this, go back to the main process intelligence dashboard and click on **New investigation**. Enter **Process Conformance Check** as the name. Now you can **Link BPMN model to investigation**. Enter **“PI Training”** in the search field and you should be offered to link the diagram [Shared documents] **PI Training - Order processing**. Now you can add the widgets **Process Conformance** and **Time Series**.

- ☐ What is the average cycle time for all cases? How much does Printing affect that?
- ☐ How much does the Customer Type affect the average cycle time for all cases?

