

Connecting to Multiple Sheets at Once

One Tool... to Import Them All

One of the biggest timesavers of working in Alteryx is that it can turn menial tasks into streamlined processes. In this lesson, we will cover how to read in data from multiple sheets within an Excel workbook for data preparation and analysis.

Dynamic Input Tool

To facilitate inputting multiple sheets at once, a Dynamic Input tool can be used. The first thing to note is that unlike the standard input data tool, the dynamic input tool has an INPUT and an Output anchor. Unlike a standard input data tool, which will only read in a single sheet from an Excel workbook, the dynamic input tool will read in multiple items. To accomplish this, the dynamic input tool requires an input containing the names of the multiple sheets to read in. Additionally, since the contents will be stacked vertically, it also needs to know the format of the data (what columns to keep/populate).

A standard input data tool can be used to generate a list of sheet names and provide the file path to the parent workbook. The configuration window in the dynamic input tool addresses the last requirement, a template for the format of the incoming data.

Begin by dragging an Input Data tool onto the canvas.

Use the dropdown to connect to the workbook containing the sheets to be read in.

Note that reading in multiple sheets is only supported for .xlsx files. In the dialogue box, rather than select a single sheet, select “Import only the list of sheet names”. This option will create a single column which contains the sheet names within the workbook.

Connect a dynamic input tool from the Developer tool palette to the Input Data tool.

Click the edit button. The dialogue window that appears is the same as the input data tool’s configuration window.

Use the dropdown to select the workbook, which is in the recently opened section. The template for the incoming data is determined in this step.

Templates

Templates set the guidelines for what information is imported and how that information appears when all the sheets are read in. Selection of the template is critical because if a sheet does not match the template, it will not be imported. Designer uses two attributes of the template when evaluating a sheet, the number of columns and the names of those columns. If a sheet does not have the same number of columns as the template, it will not

be read in. If a sheet has the same number of columns, it will be imported. If the names of those columns match exactly, the columns will be aligned, even if they are not in the same order as the template. If the names are different, the data will be read in positionally. Note that this can lead to a misalignment of data. A warning message is displayed when a sheet is not imported or is imported positionally.

The sheet selected in the Dynamic Input tool's configuration window determines the template. Use the dropdown to select the sheet called "[City]".

Once the sheet is selected, a preview of the data will display to ensure you are aware of the template format. If you would like to associate the data being read in with the sheet that originally contained that data, use the "Output Field Name as Field" option. Click "OK" to close the dialogue window.

Use the "Field" dropdown to select the column containing the list of sheet names and leave the action dropdown as the default.

After running the workflow, the data from sheets matching the template are imported and stacked vertically. Clicking on the canvas shows the warning messages for sheets containing different column names and the sheets that were not read in.