BEXEL**MANAGER**

Manual for BEXEL Publisher Add-in for Navisworks

AUTODESK Navisworks Manage

Bexel Publisher Add-in for Navisworks is a file exporter that enables project teams to generate BIM models from authoring tools and formats (e.g. DWG, DWF, Aveva, Infraworks, MicroStation, Rhinoceros, SmartPlant 3D, Solidworks, etc.) supported by Autodesk® Navisworks®. However, Navisworks doesn't natively support export to IFC file format.
This free add-in should be used to export the optimized BX3 files from Autodesk® Navisworks®. The exported BX3 file format supports the transfer of object geometry and all associated metadata. Using BX3 files exported from Navisworks in Bexel Manager software, allows you to create a federated BIM model ready for integrated 3D/4D/5D project management and further analysis possible in Bexel Manager.

For more Navisworks to BEXEL CDE tutorials check links

Based on a version of Autodesk® Navisworks®, download respective version of the Bexel Publisher Add-in for Navisworks manage from our website's **download page**.

1. Close all active instances of Autodesk® Navisworks® Manage.
2. Run the previously downloaded installer of Bexel Publisher and go through the installation wizard.
3. Choose the right location of the Autodesk directory.
4. Once the installation is finished, run Autodesk® Navisworks® Manage.
5. In the Export add-ins tab, the icon for installed Publish to BEXEL add-in should be shown as in the image below.


Tips and tricks

1. The add-in is installed in the default Autodesk® Navisworks® Manage location: installation location (e.g. "**C:\Program Files\Autodesk\Navisworks Manage 202X\Plugins**")

2. In case that previous versions of the add-in are installed in a different location e.g**. "%appdata%\Autodesk\Navisworks Manage 202X\Plugins\"** delete the folder from that location **"BuildingExplorerPublisherN2X"** and reinstall add-in

Publish Selection
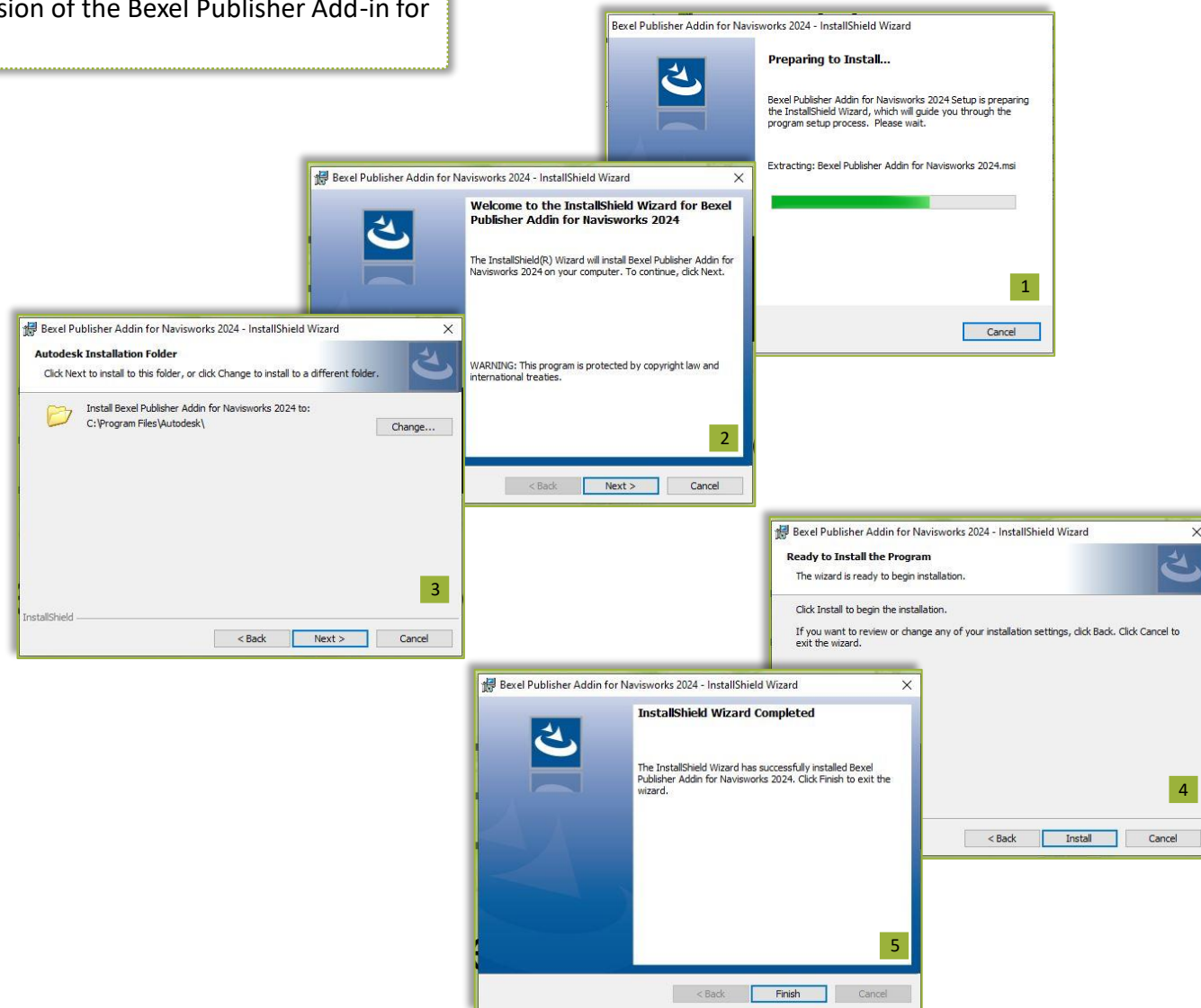
Using this option, only selected elements will be exported and placed within the defined category. This is useful for quick exports and analyzes of specific elements from Navisworks in Bexel Manager. For more flexible and advanced export settings, using Publish by Mapping option is recommended. **Publish Selection** allows exports without need to even create and save Element Selection or to create Search sets within Navisworks.
This option to **Publish Selection** is active only when 3D elements are selected before running the **Publish to BEXEL add-in**:
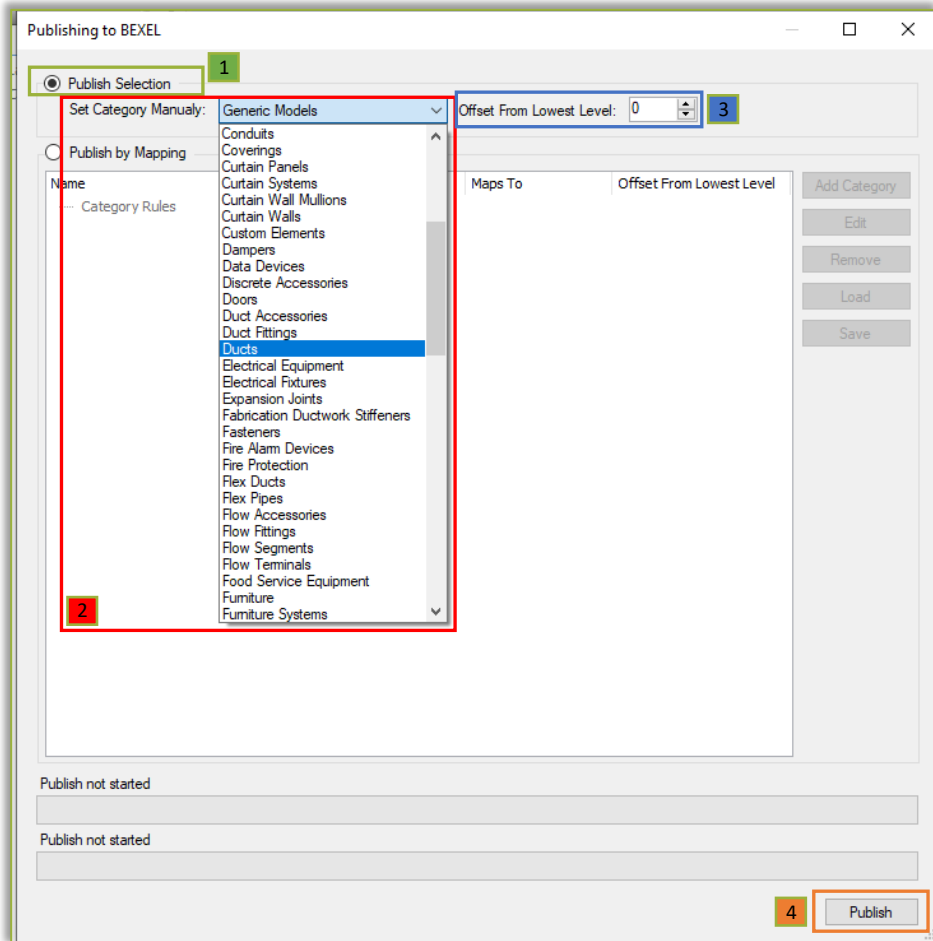
Select elements for export (within Selection tree or directly in a viewer),
Run **Publish to BEXEL exporter**

1. Check **Publish Selection**

2. **Set Category Manually**. This option allows to specify in which Bexel Manager category exported elements will be assigned. (If categories are not required or important for further analysis within Bexel Manager, export all selected elements as Generic Models),

3. **Offset From Lowest Level**.* This option allows to specify granulation of exported elements from Navisworks to Bexel Manager. To define if each element will be exported separately or if multiple elements will be merged the option Offset From Lowest Level is used. If offset from lowest level value is set to 0 (default) – it means that each element will be exported as a separate, on the other side, by setting higher values the segregation of elements becomes lower and a smaller number of bigger and joined elements will be exported.

4. Click **Publish** and **Save as** dialog will appear to define the File name and location of the saved file,

5. Open exported .bx3 file within Bexel Manager.
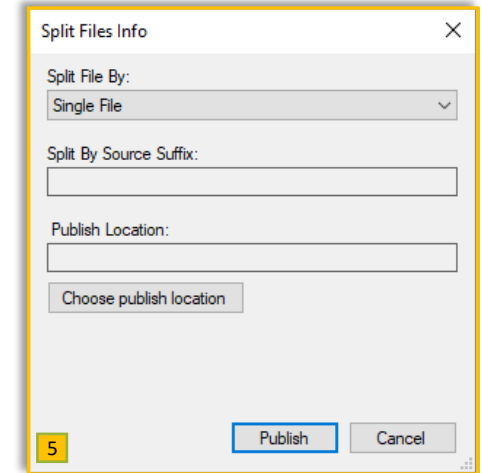
This next pop-up window is used to define Location of exported file, its name and if necessary to split/segregate exported file by different options.
In case of selected elements, the default option to Split File By is **Single file** meaning that exported elements will be saved as one bx3 file.

Notes
To clarify meaning and use of the offset Levels see images on the slides below.

Elements hierarchy

The element hierarchy breakdown can be found in the Navisworks Standard Selection Tree.

The number of hierarchy levels may vary based on authoring tools in which the model was created.

The selected element (duct) is the lowest element in the hierarchy of the project (Using the previously mentioned option of our exporter, Offset From Lowest Level, the elements in the lowest hierarchy are always 0 from the Lowest level)

Notes
*Properties exported from Navisworks to Bexel Manager will be the properties available on the elements of the respective hierarchy level.
Keep that in mind when you export elements. Only properties from that (specified) hierarchy level will be exported. Properties available on Higher or Lower hierarchy levels will not be exported.*

In the example from the picture above, when all Rectangular Ducts from a building storey in the lowest level of hierarchy from the Navisworks Selection tree are selected - 188 elements will be selected.

When these 188 selected elements are exported using 0 as Offset From Lowest Level, the result will be 188 exported elements assigned to selected category (Ducts in this example) in Bexel Manager.

Properties of exported elements from Navisworks are the same properties available in the elements of respective hierarchy level and these will be exported properties available in the Bexel Manager. The properties of higher hierarchy levels will not be inherited.

Elements hierarchy & Understanding Offset from lowest level option – example 1

When the same 188 duct elements from the lowest hierarchy level are selected and tried to be exported using higher value for Offset From Lowest Level Hierarchy – the system warning window will pop up.

The warning window notifies that unexpected exporting option is being used and it will export elements in the highest available hierarchy for selected elements (in this case 0, since all elements are being selected in the lowest hierarchy level in the selection tree).

Notes

It is very important to understand hierarchy in the Selection Tree and to carefully make selections of elements to be exported.

It's suggested to always make selections of elements of the same hierarchy levels, otherwise unexpected issues such as duplication of exported elements could occur in case that user selects elements from various hierarchy levels and still tries to exports them using higher offset from lowest level than it's allowed, in spite of the system warning.

In this example, all items of the **1st level above the lowest hierarchy are selected** in the Selection tree (5 items containing all ducts of the 2nd storey of the building)

Using the Publish selection, export elements as Duct category and for Offset from Lowest Level set to 1.

The system will export only 5 elements in total. These elements are ducts and each Duct element during the export process was created by merging all duct elements from the lower hierarchy level into 1 element.

Notes

*Properties of exported elements are the same properties available for the elements on their respective hierarchy level in Navisworks

SELECTED ITEMS

Offset from the lowest level for Selected Items

Notes

*Different Items (element nodes) in the Navisworks Selection Tree could have different levels of hierarchy and you need to be aware of this when exporting elements using the basic **Publish Selection** option.

If the user wants to export these 5 selected items (containing multiple categories and different hierarchy levels), set those selected items as e.g. Generic models with Offset from the lowest level set to 2.

The system will show the warning screen before finalizing export to limit and avoid unwanted issues.

Notes

**The result of this export will be shown on the next slide

In this example, elements of the previous export are selected in BEXEL Manager. All items of the 2ⁿᵈ building storey were selected in Navisworks during export. **In total 5 different element nodes,** where not all of them have the same hierarchy levels nor contain the elements of the same category.

As expected, the system exported 5 elements in total.

These elements are Generic models (as specified) and each element during the export process was created by merging all elements of different categories from the lower hierarchy levels into 1 element.

Tips and tricks

In this example, when all selected Navisworks items don't have the same levels of hierarchy, or if they don't contain the elements of the same type/category, the better solution to export would be choosing the option: **Publish by Mapping.**

The other solution could be to still **Publish Selection** but in a few passes, for each selected item that contains different categories or hierarchy levels – make separate export.

Notes
*Usually the goal is to export each 3D model element as a separate, regardless of items in Navisworks and their respective hierarchy. Therefore, the suggested method for exports is **Publish by Mapping** and setting various hierarchy levels for each Selection set respectively, aiming offset from the lowest hierarchy level to be usually in the range from 0 to 2 (based on authoring tool)

Publish by Mapping – part 1

Using this option, multiple groups of elements, regardless of their hierarchy and original category will be exported according to defined settings. This option is using Selection Sets created in Navisworks. Due to its flexibility to set different exporting settings related to exported category of elements or exported segregation of elements, for each selection set, **this is the recommended option for common exporting elements from Navisworks.**
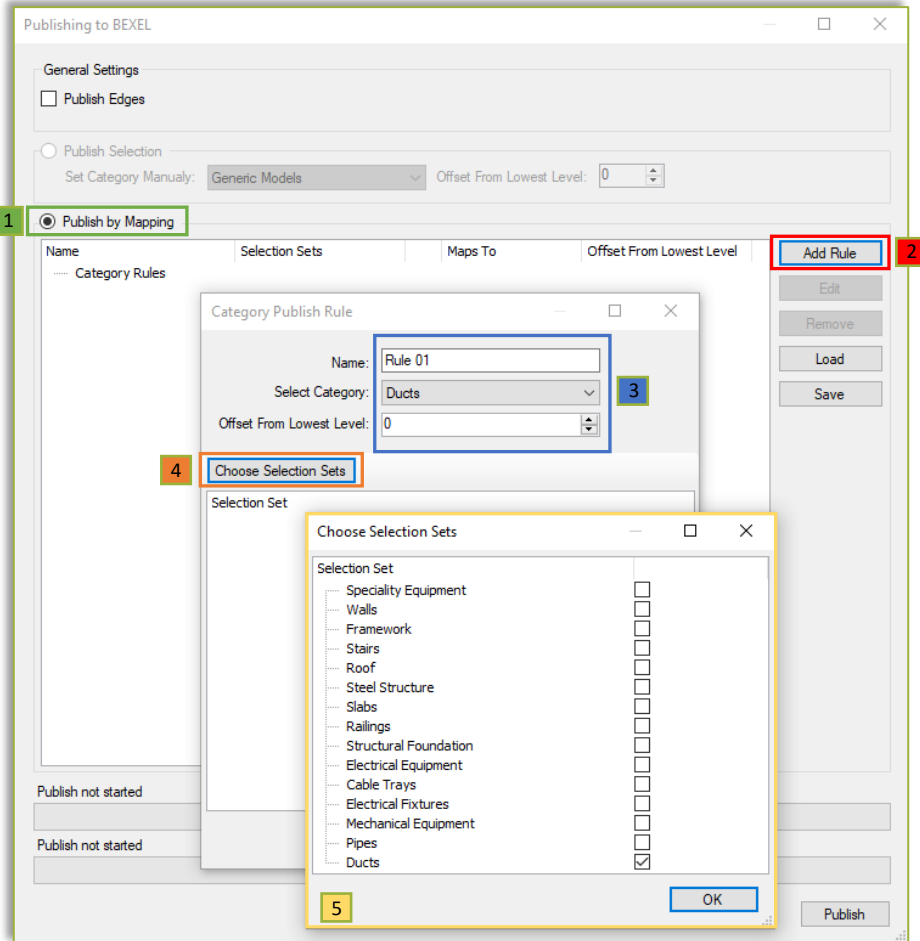
Run **Publish to BEXEL exporter**

1. Check **Publish by Mapping**.

2. **Add Rule**. This option allows to specify rules in which Bexel Manager category exported elements will be assigned. For each category, we will set different Rule.

3. In **Category Publish Rule** pop-up window we can define **Rule Name** (e.g. Rule 01), Category (e.g. Ducts) and Offset Level (e.g. 0) of exported elements for specific rule. **Select Category** allows to specify in which Bexel Manager category exported elements will be assigned and **Offset From Lowest Level** option allows to specify granulation of exported elements from Navisworks to Bexel Manager (both function similarly to the previous option **Publish Selection**).

4. **Choose Selection or Search Sets.** Opens up pop-up window.

5. In the **Choose Selection Sets** pop-up window check one (or more) created Selection or Search Sets checkbox for chosen category.*

Tips and tricks

Selection and search Sets in Navisworks are usually made manually, their number and naming will depend on the complexity of the model and the authoring tool.
When creating **Sets**, the user should keep in mind how he wants to export the elements later, the selection/search sets should group the elements according to the category in which user want to export the elements in Bexel Manager for further **use.**

Notes
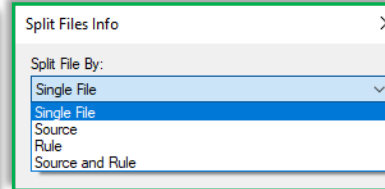*further activities are shown on the next page*
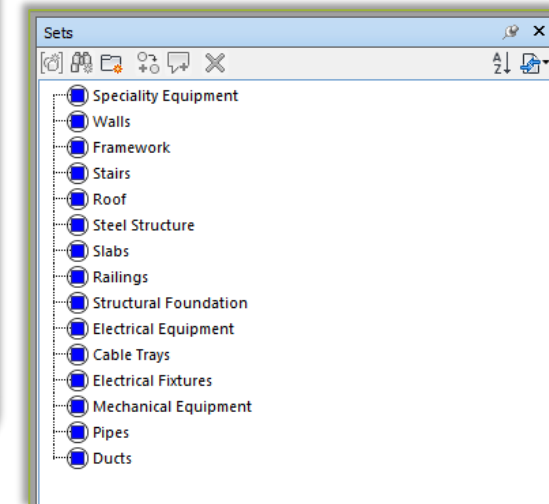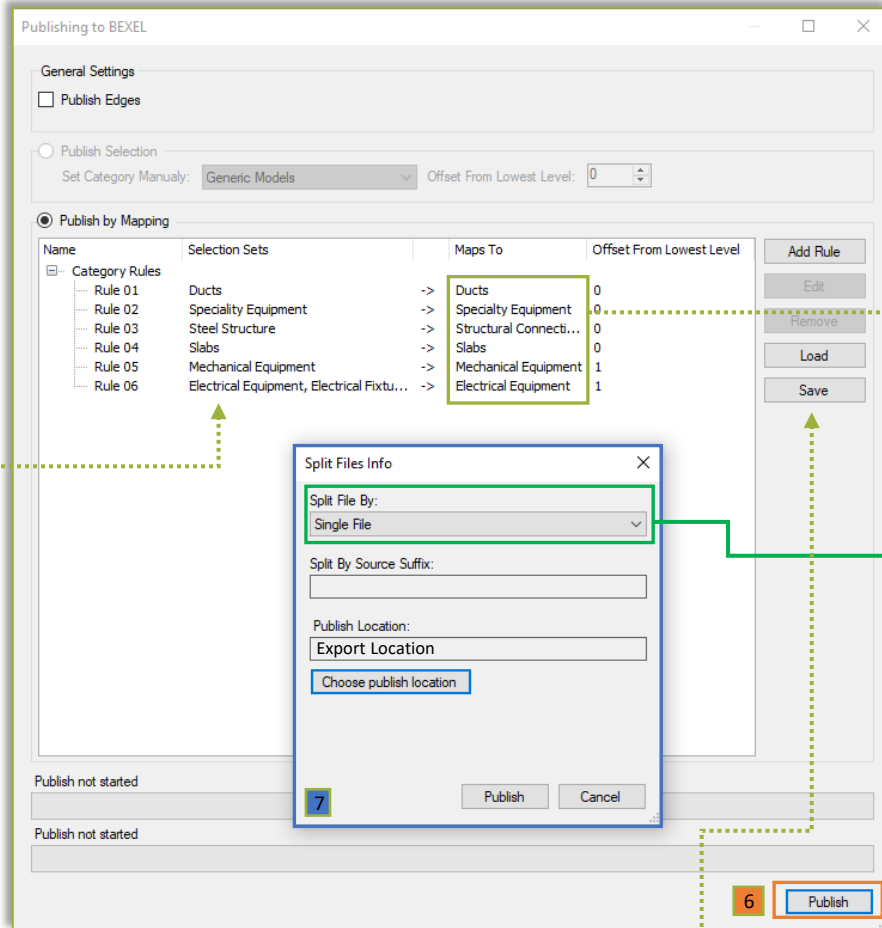
6. After defining all the desired Rules, the next step is exporting the model using the option **Publish**.

7. In this Pop-up window define if/how exported file will be split (**Split File By:**), define **Publish Location** and **Split By Source Suffix** (this is optional).

8. Open exported .bx3 file within **Bexel Manager**.

Tips and tricks

Exported files can be split in multiple ways:
Single File - the file will not be split, i.e. the final result will be one file (default option);
Source - the file will be split based on the sources from which the Navisworks model was created;
Rule - divided in relation to the rules user created during export;
Source and Rule - a combination of the previous two options.

It is recommended that more complex models be split with one of these options to improve the export process.

Notes
*previously defined categories are shown in the **Bexel Manager** after export/import*

Split Files Info

Split File By:
Single File
Single File
Source
Rule
Source and Rule
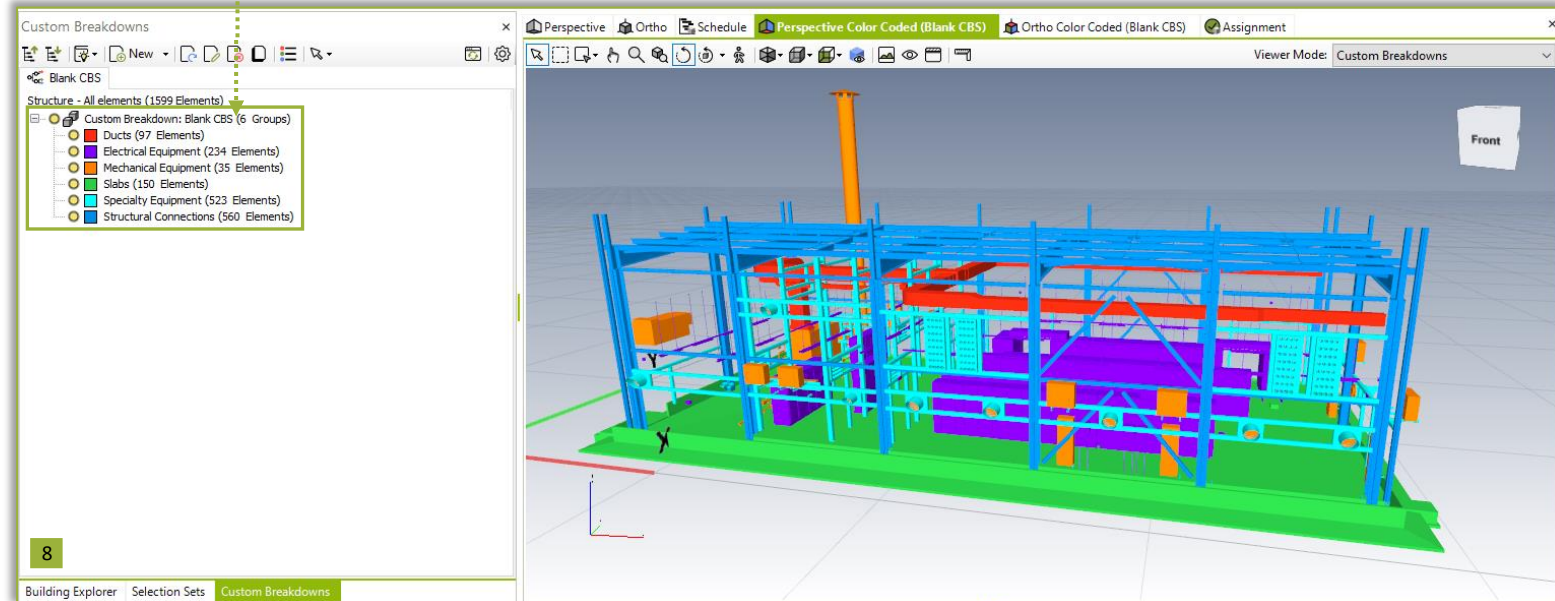
Notes
**Rulesets can be saved and loaded for further use.*
***One Category Rule can have more than one Selection Set*

www.bexelmanager.com

BEXEL Manager **in**

help.bexelmanager.com

info@bexelmanager.com
support@bexelmanager.com

BEXEL**MANAGER**