Categories Plugin

Categories are used for analysis purposes. An analyst can mark the activities of a process with their corresponding categories, and can then produce reports with category details. Apart from their analysis purpose, categories can also be used for searching in a process hierarchy or simply for displaying diagrams differently if the categories have formatting options attached.

What are categories?

Categories are flags that can be set on a model object such as a BPMN object, file, folder or project. Categories are different from simple flags in the sense that they can have several extra attributes.

Categories are managed in *category sets* and are stored in files which are separate from process model files. Each categories file can contain multiple category sets. This makes them easy to share by analysts with their clients and fellow analysts working in teams. Category files are stored within projects so they can be used with a CVS managed project repository.

Avantage comes with a pre-defined base set of categories compatible with KAISHA-Tec's ActiveModeler 2 product.

Besides modifying the meaning of an object to which they are applied, categories can also modify the appearance of an object, for example they might change the background color of an object or change its label in some way.

There are different types of categories, each type having a common set of attributes and different behavior. Because there are different analysis practices around the world, categories are not hard coded inside Avantage, but instead the analyst can define their own sets of categories in addition to the base category set.

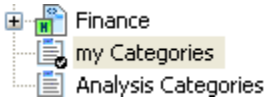
An object can be flagged with with categories from different category sets and even with multiple categories from the same set.

Most users will never need to design or modify categories because they will be working with pre-defined categories that someone else designed and put into the project. If you need to design or modify categories then read the **Categories Editor** section of this document. The **Categories Editor** is a component of the categories plugin.

Working with categories

Category set files are displayed in the Navigator as in the figure below. Because they are files you can rename them, delete them, share them, copy and paste them into other projects within your workspace.

Figure 1. Category sets are displayed in the project Workspace as files



***Note**: You need a default categories file before you can assign categories to project entities.*

You can have multiple categories files in a project but only one is the default one. You can assign categories to almost any entity from the project (files, folders, diagrams, tasks etc.), but only the categories from the default categories file are available to assign to other entities.

To make your categories file the default one, you have to set the default flag on the categories file. To do this, right-click on the file in [Workspace Navigator], and choose [Set as Default Categories File] from the menu.

The default category set indicated by a tick mark

Figure 2. The default Category set icon

To change the default category set

To make a category file the default file, Right-Click on it in the workspace and choose the "**Set as Default Categories File**" menu action.

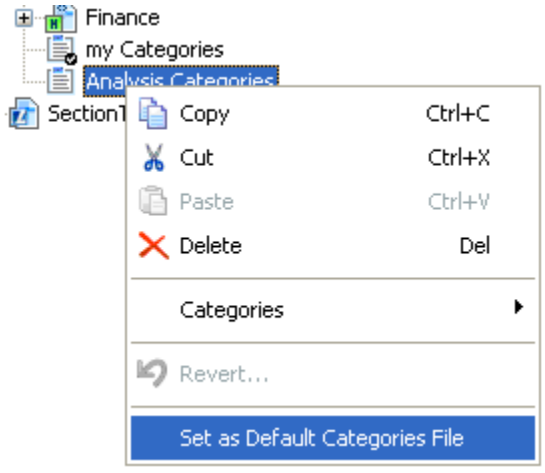
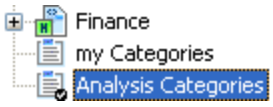


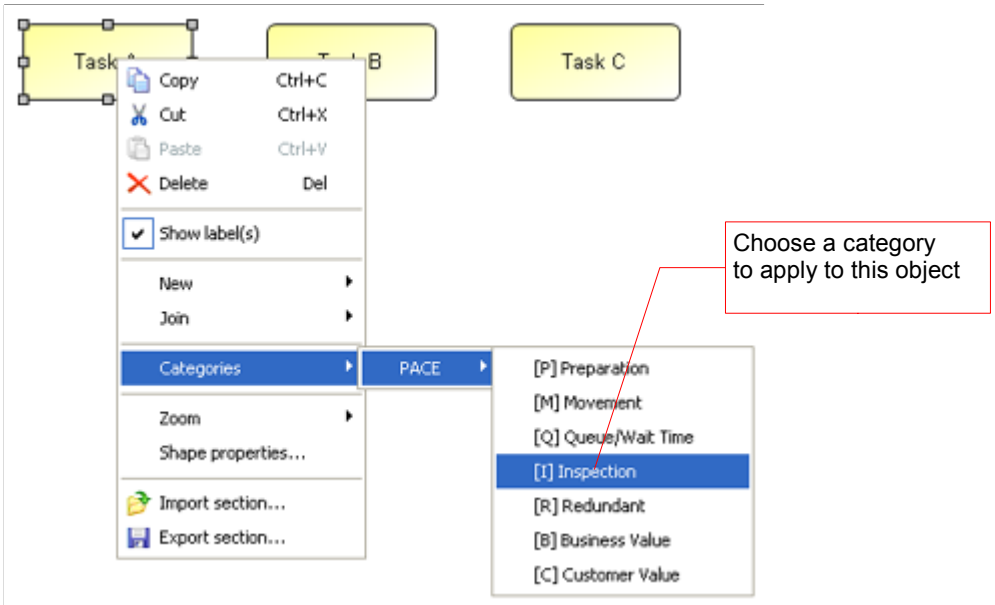
Figure 3. The default indicator mark is applied to the selected file.



Applying Categories to BPMN process objects

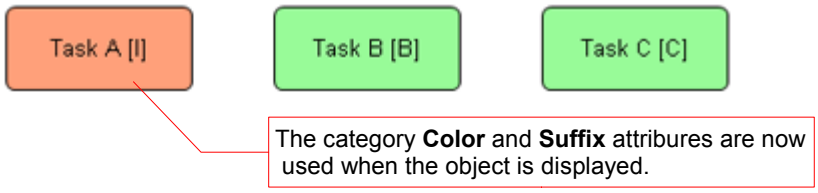
You can specify process object categories from the Workspace Navigator or a Diagram Editor window by right-clicking on the object and choosing the **Categories:[Category set name]:CategoryName** menu action.

Figure 4. Choosing the category of an object in a diagram.



After you choose the category it is applied to the shape and the shape is *decorated* with the category information.

Figure 5. Category decoration


Task A [I]
Task B [B]
Task C [C]
The category **Color** and **Suffix** attribures are now used when the object is displayed.

The Categories Editor

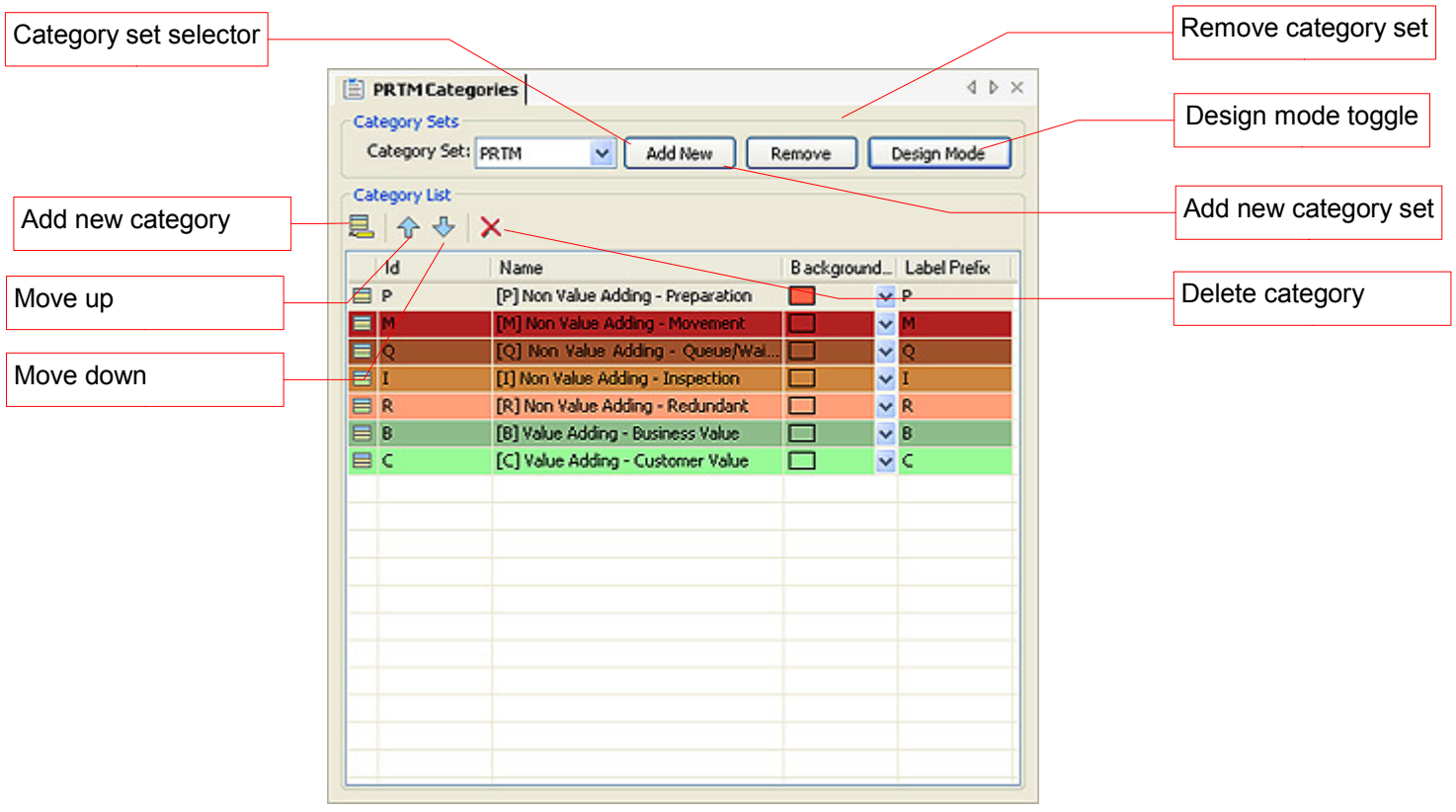
To edit a categories set file double-click it in the Navigator view. The categories editor will open in Category List mode and display the first category set in the file.

Another way is to right click on a project in the Workspace Navigator and choose the **New:Category file** action.

The Categories Editor has two modes – Category List Mode and Design Mode. The Design Mode button toggles between these two modes.

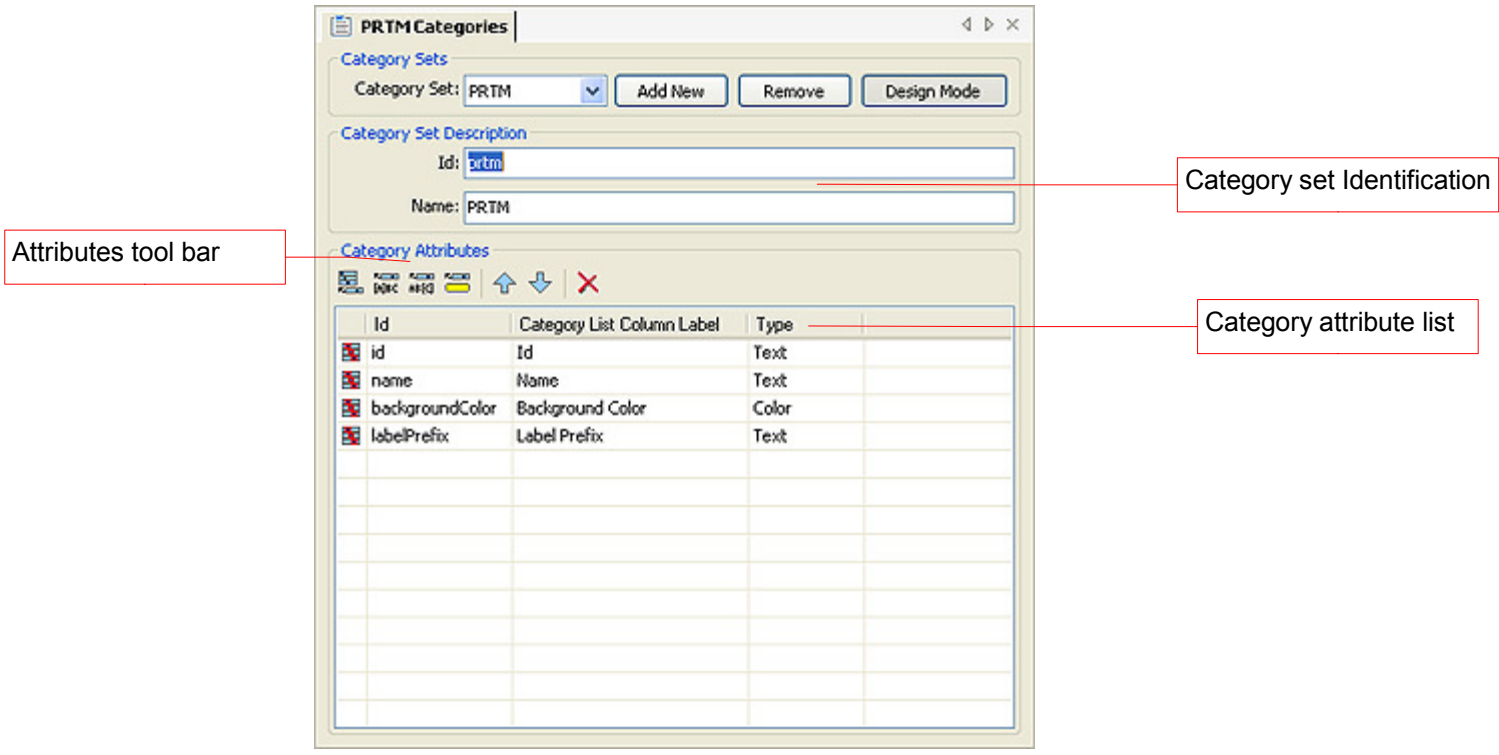
Category List Mode

When in Category list mode you can switch between category sets (with the Category set selector), and add or delete category sets with the Add New and Remove buttons.



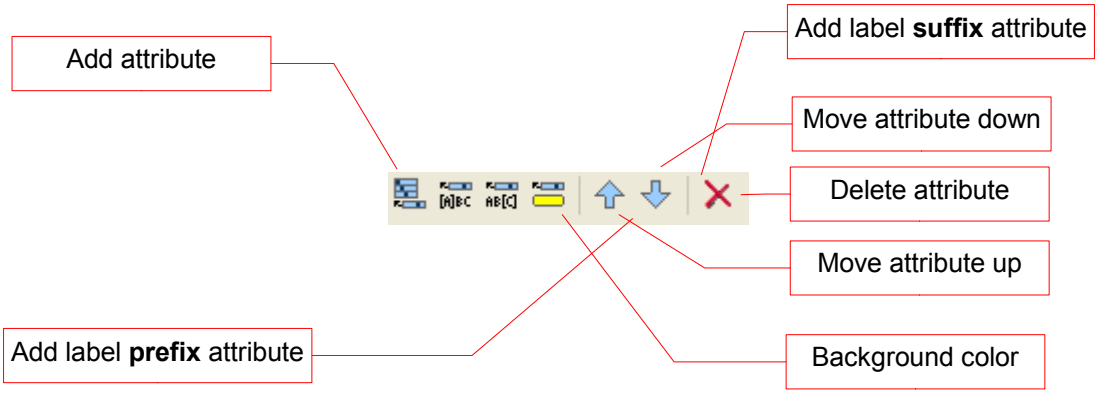
Design Mode

When in design mode you can examine, define and modify the Attributes which make up a Category. You can also change the Name and Id of the category set you are editing.



The Attributes tool bar

Figure 6. Attribute Editor Tool bar



Creating a new category set

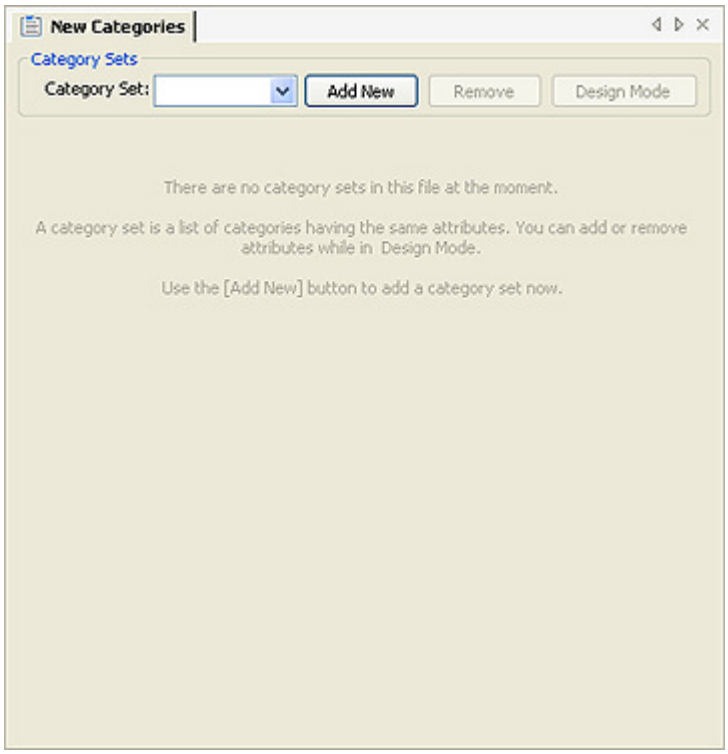
Firstly you must select a project item in the **Navigator.** This becomes the project in which the category file is located. Right-click on the project icon and choose the **New:Category file**... action.

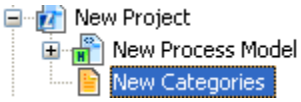
Each category editor appears in its own tabbed viewer in the main editing area of Avantage. This allows you to edit multiple category sets at the same time.

The newly created category set is automatically added to your project workspace and displayed open in an editor window.

To create a new empty category file, right-click on the project icon in the Navigator and choose the ***New:Category file*** *menu*

Figure 7. New (unsaved) Categories file





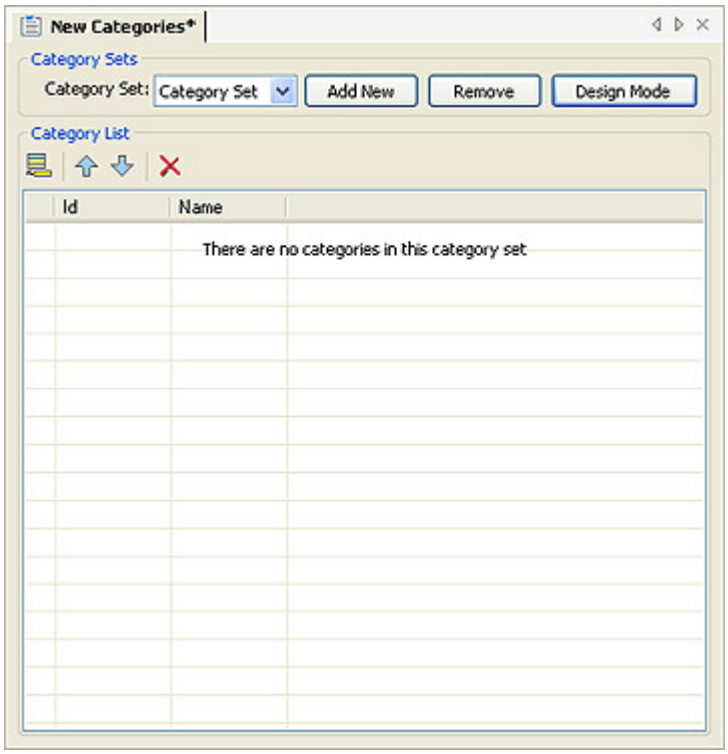
Because the categories file in initially empty there is nothing displayed in the editor window until you add a new category set.

Click **Add New,** which will create a category set and the editor will then display it.

The newly created category set has been given a default name “Category Set” and it is displayed selected in the editor.

A freshly created Category set only includes attribute definitions for **`Id`** and **`Name`** (these are built-in), otherwise for all intents and purposes it is empty. You must define additional attributes for the category set to be useful.

Figure 8. After adding an initial category set



The next step is to define the additional attributes that are needed for the particular type of category you are designing.

We also need to put the editor into *design mode* in order to add Attributes so click the **Design Mode** button now.

While in design mode you can add attributes to the list of categories. The attributes will appear as columns in the list of categories above

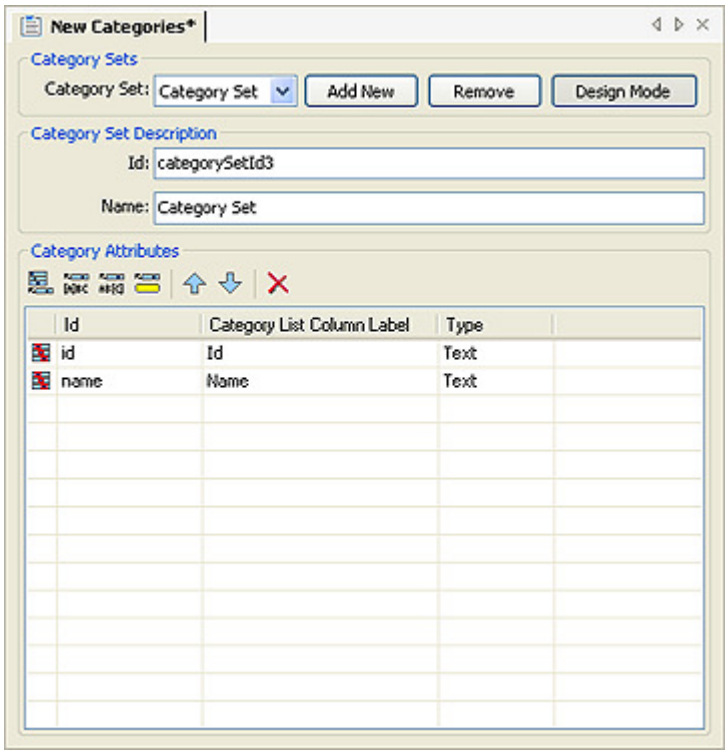
Editing Attributes

A category is composed of various attributes. By default a category has an ID and a Name.

*An attribute can be of type **Text**, **Number**, **Check Box** or a **Color**. Each attribute has an ID, a column Display Label and a Value.*

Upon entering design mode notice that you can now see the **Id** and **Name** of the category set. You should change them at this point in time in order to reflect the purpose of your category set file.

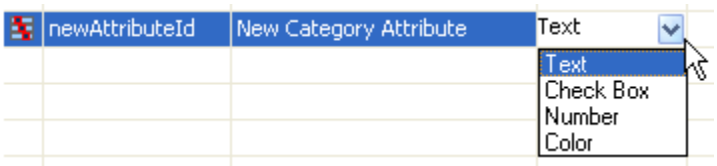
Figure 9. The freshly created CategorySet in design mode



Add attribute

This action adds a new attribute. It is given an automatic **Id** and a default name and type. Change the **Id** and **Name** at this point to reflect the usage of the attribute. By default the attribute is *text* but you can change it by double-clicking on the **Type** entry. You can then trigger the drop-down to select from *text*, *check-box, number* and *color*.

Figure 10. Changing the type of an attribute



Add label prefix

This action adds a text attribute which defines a label prefix that is used by a *decorator* when the category is actively associated with a BPMN object in the process model.

You should not change the **`Id`** of this attribute because it is used in association with label decorators.

Add label suffix

This action adds a text attribute which defines a label suffix that is used by a *decorator* when the category is actively associated with a BPMN object in the process model.

You should not change the **`Id`** of this attribute because it is used in association with label decorators.

Add a background color attribute

Note: *There should only be one backgroundColor attribute in a category set.*

This action adds an attribute which defines the background color used to decorate BPMN objects and labels which have a category using this attribute applied.

The background color attribute is a predefined one. You must not change its **`Id`** and it must have the value **`backgroundColor`** and its **type** must be **`Color`**.

A simple example

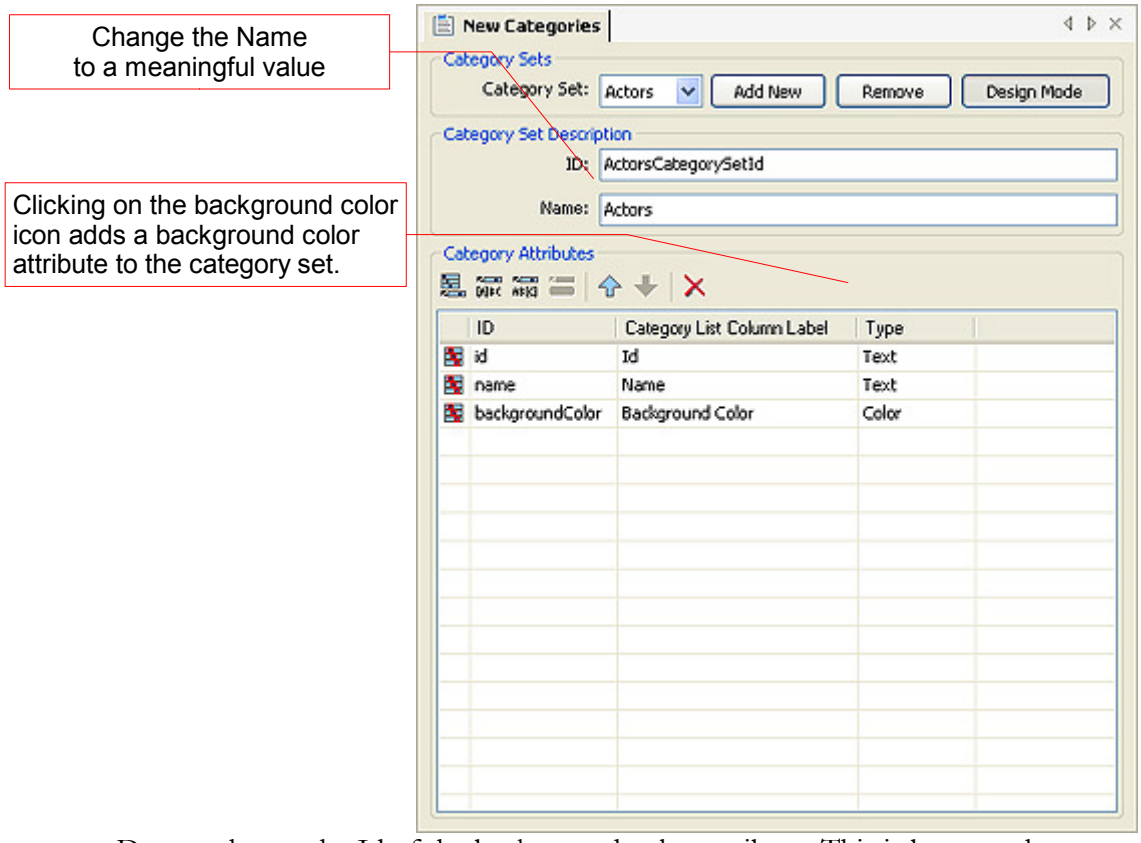
By way of example we will create a simple category set which defines three categories. We want these categories to display in the process model with specific background colors.

These 3 categories have a white background color by default. Change their names to Management, Worker and System and select the following background colors: Red for Management, Blue for Worker and White for Machine.

We will name this category set "Actors".

Adding the attributes

Figure 11. After adding background color and specifying a Name for the set



Do not change the Id of the background color attribute. This is because the "backgroundColor" is a system Id which is used by decorators.

Now that we have defined this backgroundcolor attribute switch out of Design Mode by clicking on the "Design Mode" button.

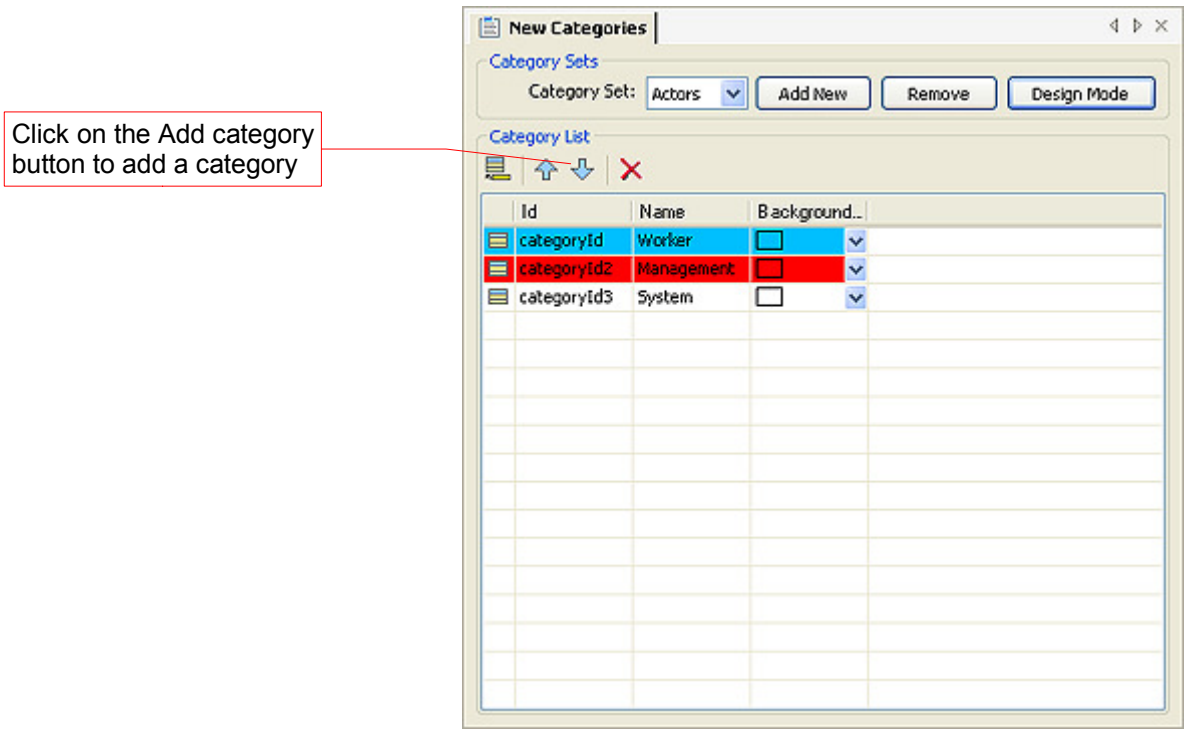
Adding the categories

Now that the editor is back in Category List mode we can add the three categories. Click on the Add Category icon to add three new categories.

You will notice that the list now shows a Background Color column. This was added because we added a backgroundColor attribute previously.

For each category, double-click on the Name cell and enter the names {Worker, Management and System}. Then select the background color drop-down and assign Blue to Worker, Red to Management and White (the default) to System.

Figure 12. Adding the categories and setting the color



Make sure that you save the categories set now. You can do this by typing Ctrl-S (File Save) or answering Save to the prompt when you close it.

The next step is to actually use these categories in a process diagram.

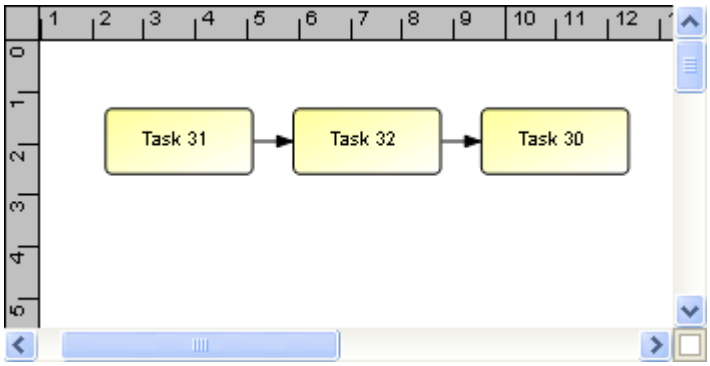
Specify the category set file as the default category set file in your project

Right-click on the category file in the Navigator and choose **Set as Default Categories File** in the menu.

Assigning categories to process entities

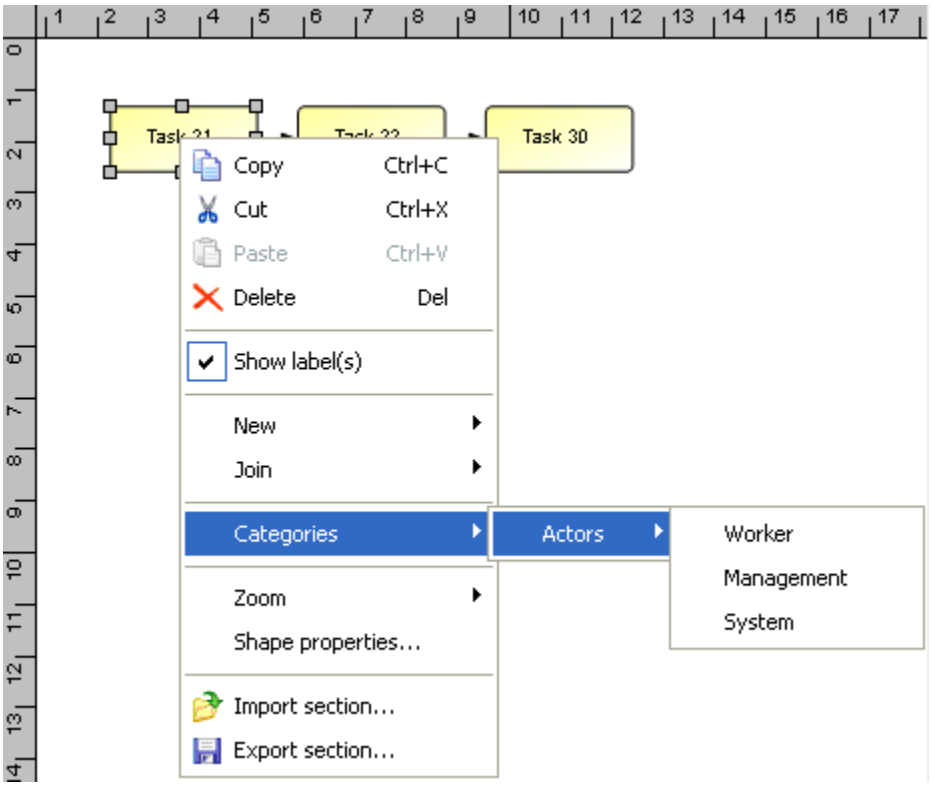
Create a diagram and add three Task objects to it.

Figure 13. Create a diagram in the project with three shape



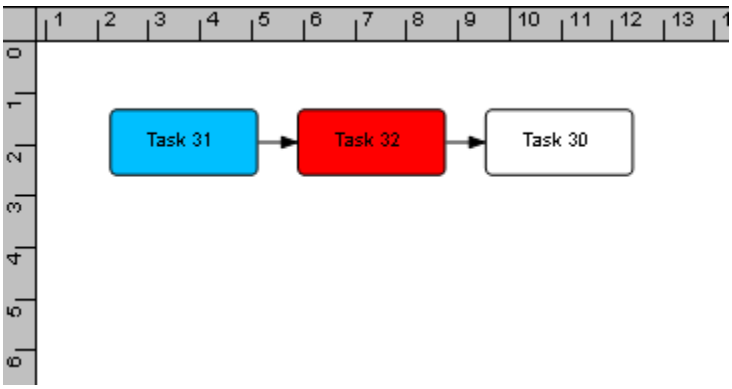
Next we will assign them categories. Right-click on each Task in turn and choose the **Categories:Actors** menu and then select the appropriate Category to be applied.

Figure 14. Using the Categories context menu



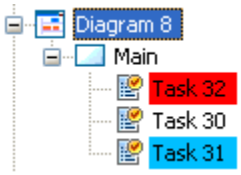
The end result of doing this will something like the figure below.

Figure 15. After assigning categories to the Tasks



You will notice that the shapes are now decorated with the background colors that we defined just before. But that is not all. Any **View** in the Avantage platform that displays these process entities will now use the background color associated with the category.

Figure 16. The Navigator is decorated by the category.

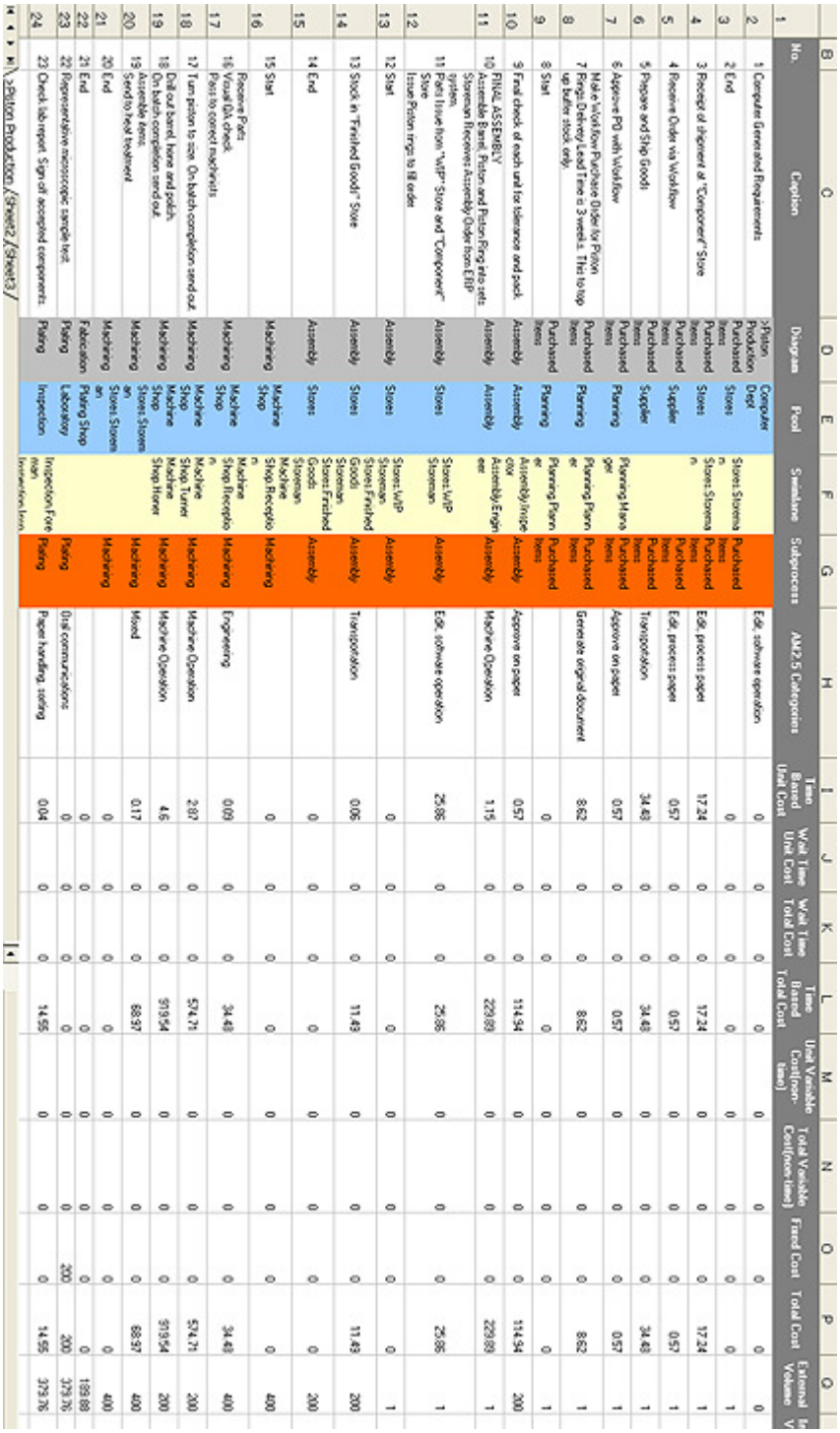


Category Analysis

The Analysis:Categories menu action provides a way to export a categories matrix directly into Excel.

You must have Excel XP or later installed on your computer in order to do this.

The data is output in a format so that it can be used to create a pivot table in Excel.



No.	Caption	Diagram	Pool	Swimlane	Subprocess	AM2.5 Categories	Time Based Unit Cost	What Time Unit Cost	What Time Total Cost	Time Based Total Cost	Unit Variable Cost(non-time)	Total Variable Cost(non-time)	Fixed Cost	Total Cost	External Volume
1	Computer Generated Requirements	>Piston Production	Computer Dept			EdE software operation	0	0	0	0	0	0	0	0	0
2	End	Purchased Items	Stores	Stores:Storemen	Purchased Items		0	0	0	0	0	0	0	0	1
3	Receipt of shipment of "Component" Store	Purchased Items	Stores	Stores:Storemen	Purchased Items	EdE process paper	17.24	0	0	17.24	0	0	0	17.24	1
4	Receive Order via Workflow	Purchased Items	Supplier		Purchased Items	EdE process paper	0.57	0	0	0.57	0	0	0	0.57	1
5	Prepare and Ship Goods	Purchased Items	Supplier		Purchased Items	Transportation	34.48	0	0	34.48	0	0	0	34.48	1
6	Approve PO with Workflow	Purchased Items	Planning	Planning Manager	Purchased Items	Approve on paper	0.57	0	0	0.57	0	0	0	0.57	1
7	Make Workflow Purchase Order for Piston Rings Delivery Lead Time is 3 weeks. Tries to top up buffer stock only.	Purchased Items	Planning	Planning Planner	Purchased Items	Generate original document	8.62	0	0	8.62	0	0	0	8.62	1
8	Start	Purchased Items	Planning	Planning Planner	Purchased Items		0	0	0	0	0	0	0	0	1
9	Final check of each unit for tolerance and pack	Assembly	Assembly	Assembly:Inspector	Assembly	Approve on paper	0.57	0	0	114.94	0	0	0	114.94	200
10	FINAL ASSEMBLY	Assembly	Assembly	Assembly:Engineer	Assembly	Machine Operation	1.15	0	0	229.89	0	0	0	229.89	1
11	Assemble Barrel, Piston and Piston Ring into sets	Stores:pin	Stores	Stores:WIP Storeman	Assembly	EdE software operation	25.86	0	0	25.86	0	0	0	25.86	1
12	Pistn Issue from "WIP" Store and "Component" Store	Assembly	Stores	Stores:WIP Storeman	Assembly	EdE software operation	25.86	0	0	25.86	0	0	0	25.86	1
13	Issue Piston rings to fill order	Assembly	Stores	Stores:WIP Storeman	Assembly		0	0	0	0	0	0	0	0	1
14	Start	Assembly	Stores	Stores:Finished Goods	Assembly	Transportation	0.06	0	0	11.49	0	0	0	11.49	200
15	Stock in "Finished Goods" Store	Assembly	Stores	Stores:Finished Goods	Assembly		0	0	0	0	0	0	0	0	200
16	End	Machining Shop	Machine Shop	Machine Shop:Receptionn	Machining		0	0	0	0	0	0	0	0	400
17	Start	Machining Shop	Machine Shop	Machine Shop:Receptionn	Machining	Engineering	0.09	0	0	34.48	0	0	0	34.48	400
18	Receive Parts	Machining Shop	Machine Shop	Machine Shop:Turner	Machining	Machine Operation	2.87	0	0	574.71	0	0	0	574.71	200
19	Visual QA check	Machining Shop	Machine Shop	Machine Shop:Honer	Machining	Machine Operation	4.6	0	0	919.54	0	0	0	919.54	200
20	Plant to correct machine/s	Machining Shop	Stores:Storemen		Machining	Mixed	0.17	0	0	68.97	0	0	0	68.97	400
21	Turn piston to size. On batch completion send out	Machining Shop	Stores:Storemen		Machining		0	0	0	0	0	0	0	0	400
22	Drill out barrel, hone and polish	Machining Shop	Plating Shop		Machining		0	0	0	0	0	0	0	0	189.88
23	On batch completion send out	Fabrication	Laboratory			Oral communications	0	0	0	0	0	0	200	200	379.76
24	Assemble items	Plating	Plating		Plating	Paper handling, sorting	0.04	0	0	14.95	0	0	0	14.95	379.76
25	Send to heat treatment														
26	End														
27	Representative microscopic sample test														
28	Check lab report. Sign off accepted components														