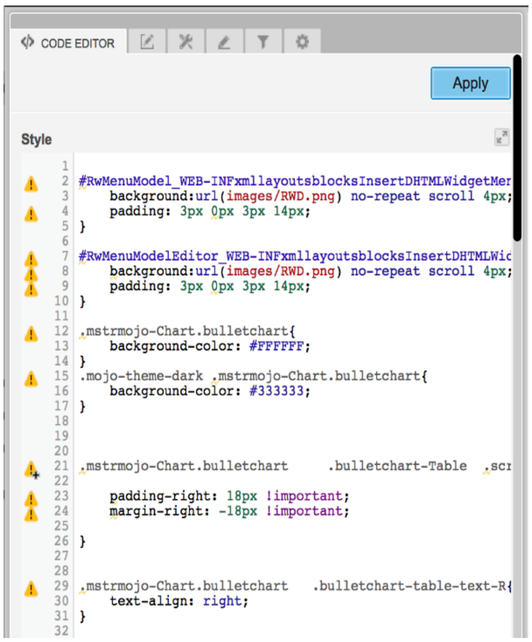
D2D Advanced MicroStrategy Training

Custom Visualizations and Advanced Functions

The MicroStrategy Visualization Builder Interface

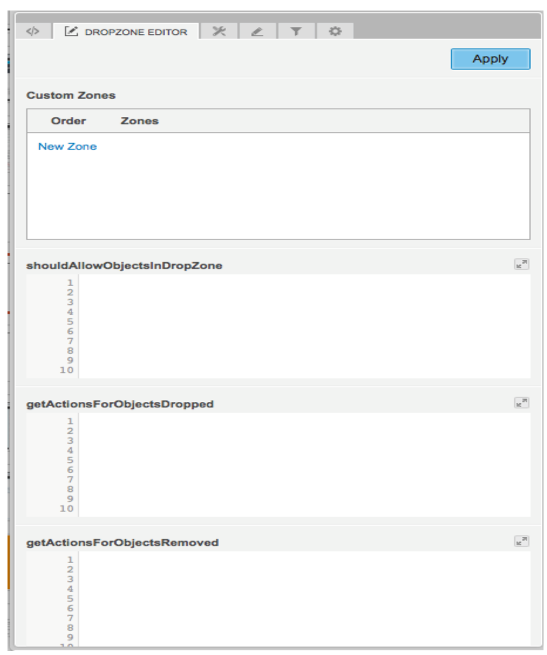
Code Editor



Within the builder, you can do lots of things.

One component is the code editor. if you're a developer, you can edit the code to your liking or edit any errors that result in bugs to fit your company's needs.

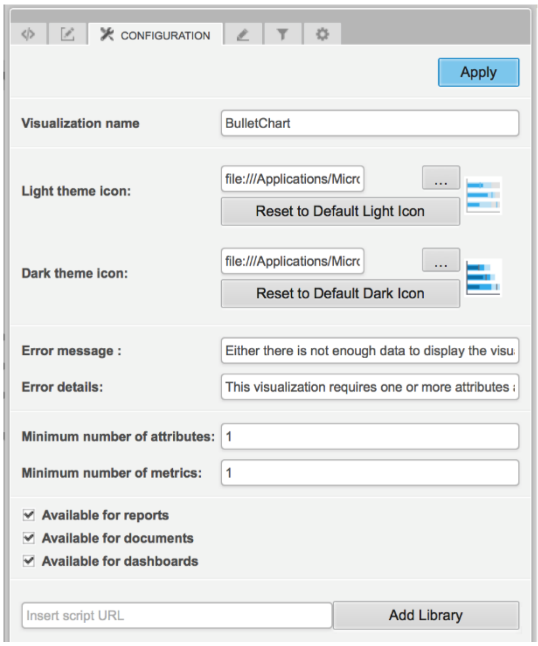
Dropzone Editor



The dropzone editor is what it sounds like.

It's where you create new zones for your visualization and define the elements within them. You can specify whether the components within them require attributes, metrics, attributes and metrics, or attribute or metrics.

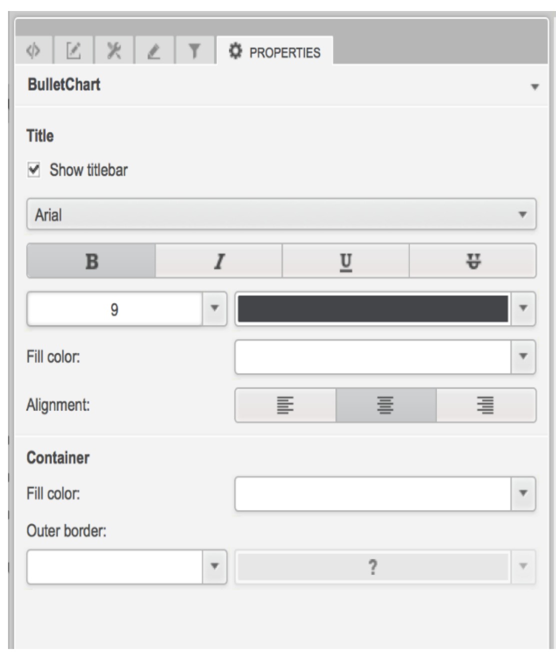
Configuration Editor



This is the configuration tab.

This is where you edit visualization details, such as name, icon, error messages, and visualization requirements. Requirements refer to the number of attributes or metrics or the medium that the visualization will be compatible with. When I say medium, I'm talking about reports, documents, or dashboards.

Properties Editor



This is the properties tab.

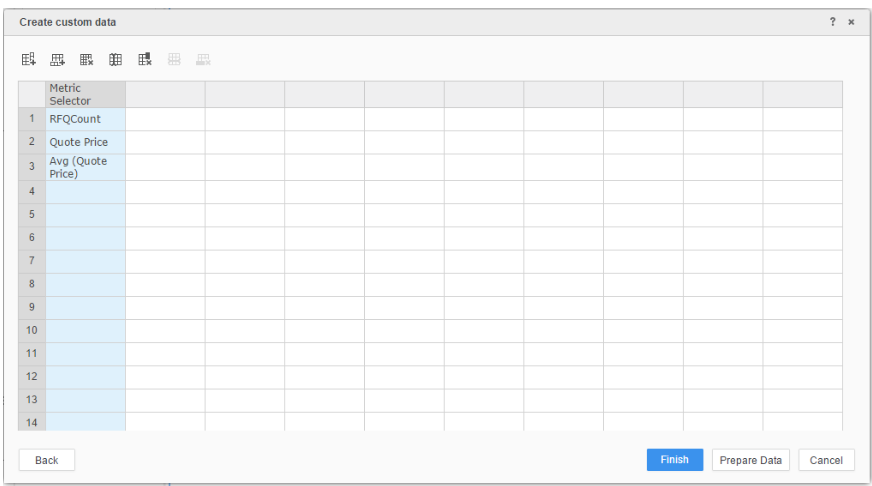
This a reflection of what properties will be made available in the visualization. You can edit visualization code in the Code Editor to change what shows up in this section. Just remember that this is where you'll allow end users to change and manipulate the appearance of a visualization without code. Whatever items you choose to bring in this section is what they'll be able to edit.

Exercise 1: Advanced Functions – Metric Selector

MicroStrategy Dashboard #1

Adding Custom Data

1. From the dataset panel, select the ellipse next to **Datasets** -> **Add Data** -> **New Data**
2. Select **Clipboard** as your dataset option
    - Gives users the ability to create or paste your own data on the fly
3. Title the first column **Metric Selector**
4. Name each row under the Metric Selector column RFQCount, Quote Price, and Avg (Quote Price)
5. Your custom data should look like this:



6. Select Finish
    - *Notice that a new data set has been added to the dataset panel*
7. Right-click the Metric Selector attribute in the dataset panel and select **Duplicate Metric**
8. Change Metric Selector metric to aggregate by **Sum**
    - Right-click Count (Metric Selector) and select **Edit**
    - Change **Count** to **Sum**
    - Rename the metric **Generic Metric**

Creating the Metric Selector

1. Click the ellipse next to the **Ebuy Award Details** title and select **Create Metric…**
2. Switch to **Formula Editor**
3. Change the metric name to **KPI**
4. Using the CASE formula

Case functions return specified data in a SQL query based on the evaluation of user-defined conditions. In general, a user specifies a list of conditions and corresponding return values. When MicroStrategy queries the data warehouse, the software determines which condition evaluates as true and then returns the value that the user has specified that corresponds to that condition.

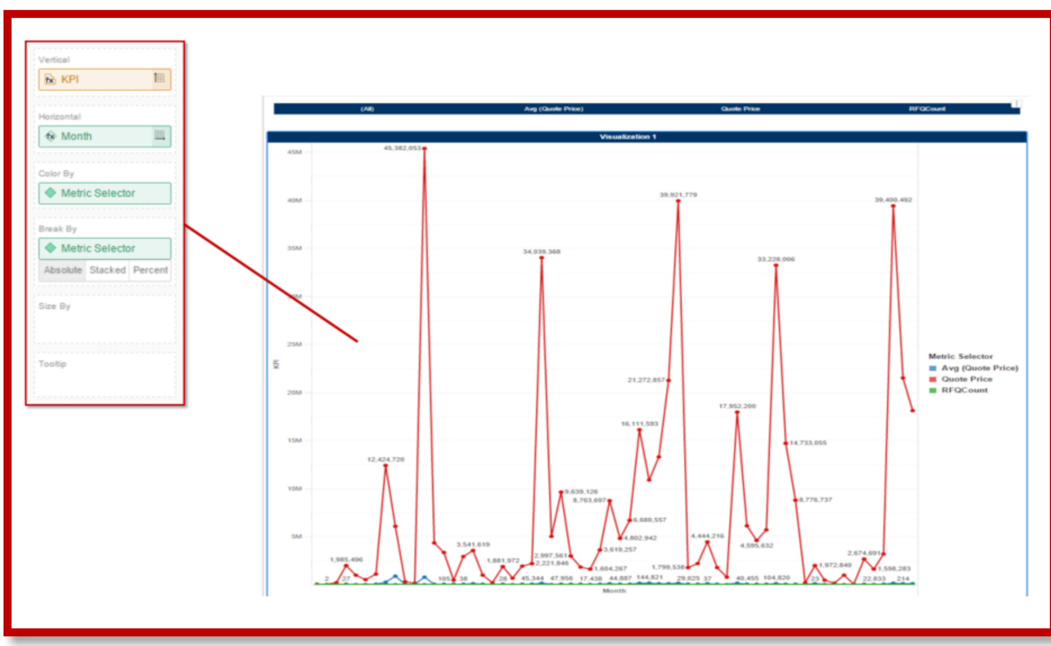
5. Paste or type the following formula into the formula editor:

Case([Generic Metric]="RFQCount", RFQCount, [Generic Metric]="Quote Price", [Quote Price], [Generic Metric]="Avg (Quote Price)", [Avg (Quote Price)], 0)

6. Click **Validate** and **Save** in the metric editor

Line Graph

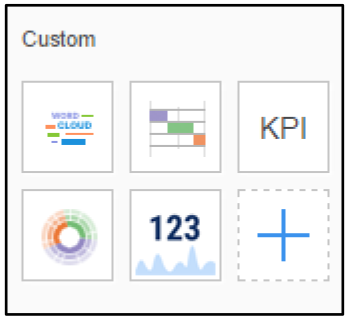
1. Select **Line Chart** from the visualization gallery
   - Drag the KPI metric into the Vertical section
   - Drag the Month attribute to the horizontal section
   - Drag the Metric Selector attribute to the break by section and then the color by section
2. Adding in the Metric Selector
   - At the top of the MicroStrategy UI, Select the Filter button:
   - Drag the Metric Selector attribute to the filter area
   - Click **Select Target** and choose the Line Chart as the target
3. Your Dashboard should now look like the one below:



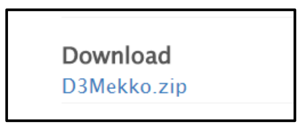
Exercise 2: Importing a D3 Visualization

Downloading from the MicroStrategy Visualization Gallery

1. From the visualization gallery, select the "+" icon under the custom section



2. Select **Browse Gallery**
    a. This will navigate to the visualization gallery on the MicroStrategy Community website
3. Scroll through the website and select **Mekko Chart**
4. Scroll to the bottom of the page and download **the D3Mekko.zip file**



Importing a D3 Visualization

1. From the visualization gallery, select the "+" icon under the custom section
2. Select **Import Visualization**
3. Navigate to your download folder to the **D3Mekko.zip file** and select **Open**
4. The Mekko Chart should now be imported into MicroStrategy Desktop for further use and will be located under the custom section:

Using a custom Visualization – Mekko Chart

1. Since this visualization is designed to work with % to total metrics, you will need to aggregate the following metrics: **RFQ Count and Quote Price**
    - Create a new grid visualization
    - Bring the **Year, Agency Name, and Quote Status attributes** into the rows section
    - Bring the **RFQ Count and Quote Price metrics** into the metrics section
        - At the RFQ Count column header, select the down arrow
        - Select **Shortcut metric** -> **Percent to Total** -> **Automatic**
        - Repeat the last two steps for the **Quote Price metric** as well
    - Your grid should now resemble this:

Year	Agency Name	Quote Status	RFQCount	Percent to Total (RFQCount)	Quote Price	Percent to Total (Quote Price)
2010	Agency for International Development	awarded	2	0.04%	$61,803.41	0.01%
	Department of Agriculture	awarded	2	0.04%	$28,185.52	0.01%
	Department of Defense (Office of the Secretary of Defense)	awarded	4	0.07%	$225,070.00	0.05%
	Department of Homeland Security	awarded	2	0.04%	$330,071.00	0.07%
	Department of Justice	awarded	2	0.04%	$14,600.59	0.00%
	Department of Labor	awarded	1	0.02%	$182,398.12	0.04%
	Department of the Air Force	awarded	7	0.12%	$1,049,584.37	0.23%
		partially awarded	1	0.02%	$9,500.67	0.00%
	Department of the Army	awarded	16	0.29%	$596,157.85	0.13%
		partially awarded	2	0.04%	$2,184.97	0.00%
	Department of the Interior	awarded	3	0.05%	$7,661.13	0.00%
		partially awarded	1	0.02%	$1,233.47	0.00%

2. Switch to the Mekko Chart visualization that you imported in the previous activity
3. Ensure each section is populated by the appropriate attribute or metric:
    - Animate By: **Year attribute**
    - Series: **Agency Name attribute**
    - Group By: **Quote Status attribute**
    - Horizontal Axis Metric: **Percent to Total (Quote Price) metric**
    - Vertical Axis Metric: **Percent to Total (RFQCount) metric**
4. Challenge: View Filter
    - With so many agencies, filtering by the Top 5 Agencies for the visualization would be beneficial…
5. Your D3 Visualization should now be animated and resemble this:

Adding an Image to a Dossier

1. At the top of the Dossier Editor, click on the image icon:
2. After the image object has been added to the dossier, paste in an image path (this can either be a web-based URL or you can browse your local machine or network to select an image) into the **Format Editor panel** and click **OK**.
    - A good example for this exercise would be the GSA logo: (https://www.gsa.gov/sites/gsa.gov/templates/resources/images/nav-logo.jpg)
    - Now that the image has been uploaded, it can be formatted to best fit the Dossier Design. By default, it will be set to "Fit to Container" which will make the image as large as possible without changing the aspect ratio of the image.

Adding Text to a Dossier

1. At the top of the Dossier Editor, click on the text icon:
2. After the text field has been added, key in a title e.g. **eBuy Procurement Activity Analysis**
3. Next, format the text by increasing the font to **36**, and set the font color to **white**, and the background to GSA logo blue, hex code **004F87**
4. The title for your dashboard will now look like this;