Before you begin: Access Library in the Education sandbox

The Education sandbox is a shared, cloud-based environment to help you learn about and experiment with MicroStrategy Web and Library.

Use the Education sandbox to complete various report and dossier exercises. Complete the steps below to access the sandbox.

Access Library in the Education sandbox

1 In your browser, navigate to **education.microstrategy.com/MicroStrategy/servlet/mstrWeb**.

2 Log in to the sandbox with your **MicroStrategy Account** credentials.

Open the Tutorial project

3 The MicroStrategy landing page opens. Click the **MicroStrategy Tutorial** project.

The MicroStrategy Tutorial home page opens.

4 Click **Go to MicroStrategy Library**.

5 If prompted, enter your **MicroStrategy Account** credentials, and then click **Log in with Identity**.

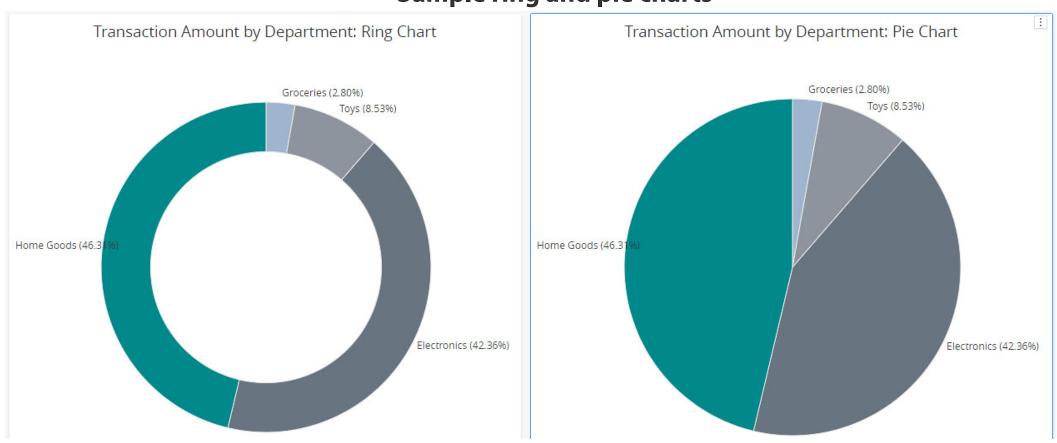
Your Library home page displays.

Exercise: Create a ring chart and pie chart

As a store manager, you want to analyze how much of a customer's total transaction amount they spend in each store department. This can help you determine which departments in your store are most popular and where to focus your marketing efforts.

Create a ring chart and a pie chart to understand the part-to-whole contribution of departments to total transaction amount and how these visualization types display information in a similar way. Your completed ring and pie charts look like the image below.

Sample ring and pie charts

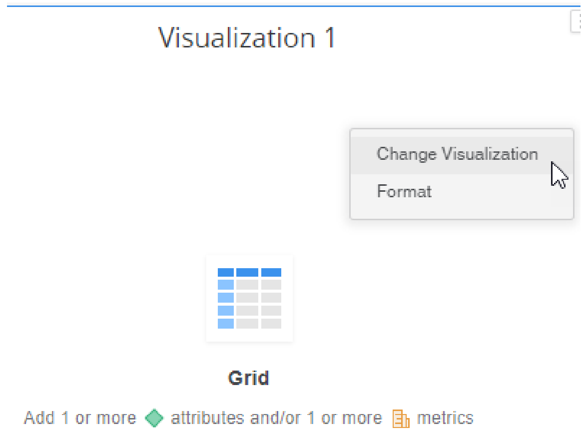


Create a ring chart

1 In the Education sandbox Library, open the **Visualization Types** dossier in Edit mode, if not already there. For a reminder on how to do this, see *Exercise: Access Library in the Education sandbox*, and *Exercise: Add the Visualization Types dossier to MicroStrategy Library*.

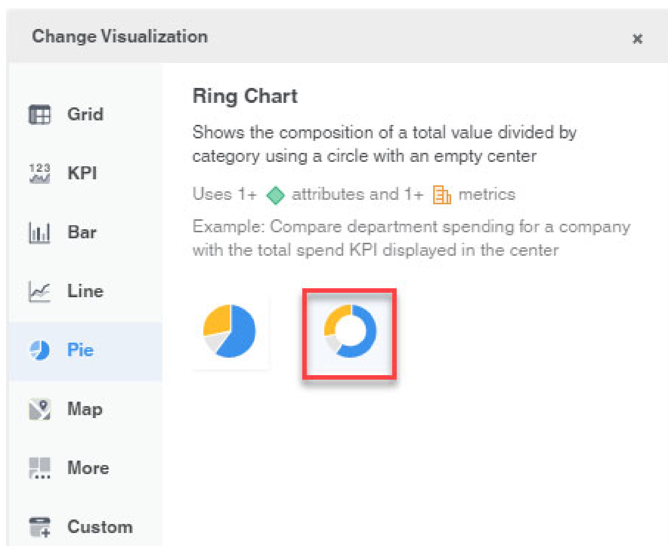
2 In the Contents panel on the left, in the **Part-To-Whole Relationships** chapter, click the **Ring Chart and Pie Chart** page.

3 By default, a new page displays a blank grid visualization on the canvas. To change the visualization to a line chart, right-click inside the visualization and select **Change Visualization**.



The Change Visualization window opens, displaying the Visualization Gallery.

4 In the Visualization Gallery, point to **Pie**, and then click the **Ring Chart** icon.



The dossier canvas displays a blank ring chart.

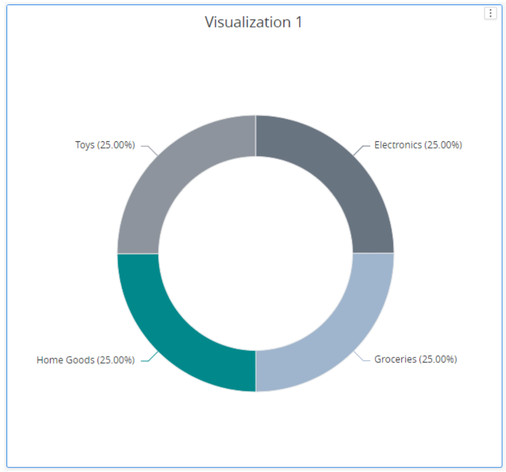
5 Specifically, you are interested in the transaction amount when your store is running promotions, so you use sales data from the Promotions dataset. In the Datasets panel, click the arrow icon to the left of the **Promotions** dataset to expand it. The dataset's attributes and metrics display.

6 To focus on the objects in the Promotions dataset rather than the other datasets, collapse any other datasets that are expanded by clicking the arrow icon to the left of the dataset name.

7 Click the **Editor** icon to display the Editor panel, if not already displayed.

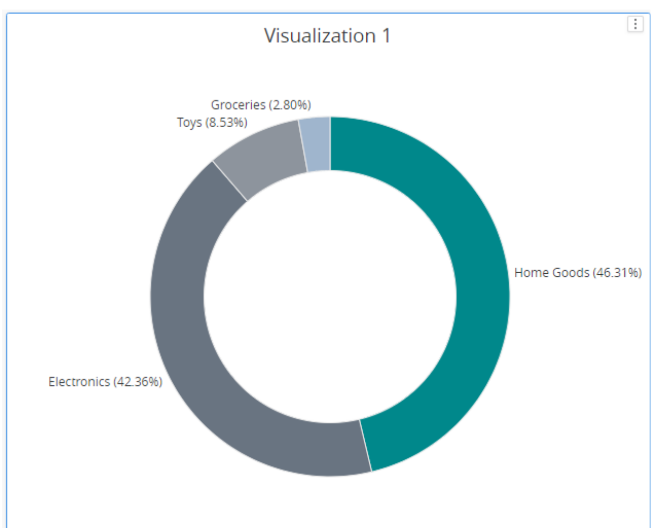
8 You want the ring chart slices colored by department. From the **Promotions** dataset, double-click **Department** to add it to the **Color By** and **Slice** drop zones in the Editor panel.

The slices are split by Department, and the different colors help you to distinguish the departments at a glance.



The Department labels display outside of each slice, along with a percent contribution label. At this stage of creating the visualization, you have not added a metric to calculate the sizes, so the four departments each make up 25% of the ring.

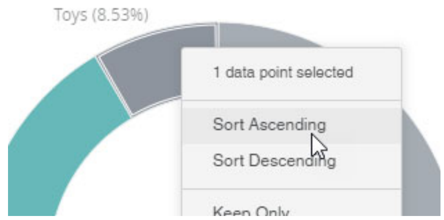
9 You want the slices of the ring chart to be sized by the average dollars per transaction. From the Promotions dataset, double-click the **Avg $ per Transaction** metric to add it to the **Angle** drop zone, so that the slice sizes are calculated by the metric's values.



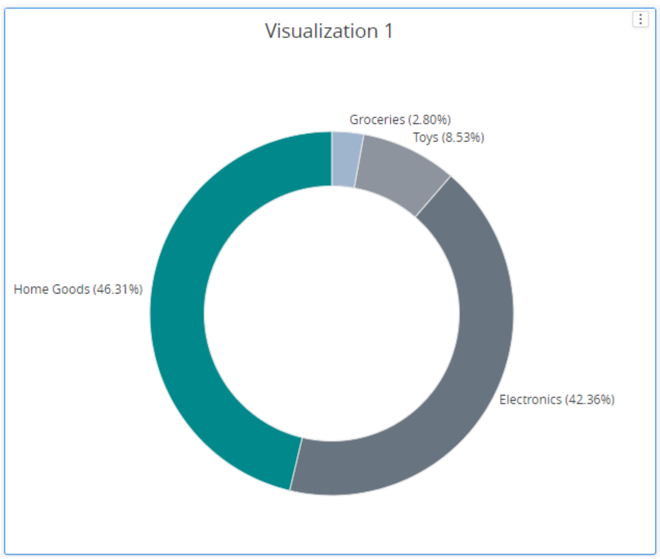
- Slices that represent departments with higher Avg $ per Transaction values display larger than slices that represent departments with lower Avg $ per Transaction values, and the percent contribution labels adjust to reflect the department's contribution to total Avg $ per Transaction.

- The slices are displayed in descending order, clockwise, of each department's contribution to total Avg $ per Transaction. This means that the department with the highest Avg $ per Transaction is displayed to the right of the 12:00 position on the ring, with lower values shown clockwise from that point.

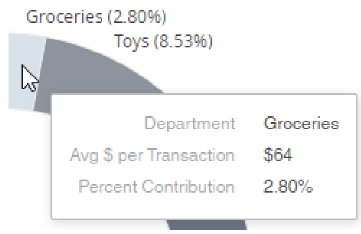
10 To display the slices in ascending order, right-click one of the slices, and select **Sort Ascending.**



The department slices are now displayed in ascending order, clockwise, with the department with the lowest Average $ per Transaction displayed to the right of the 12:00 position on the ring.

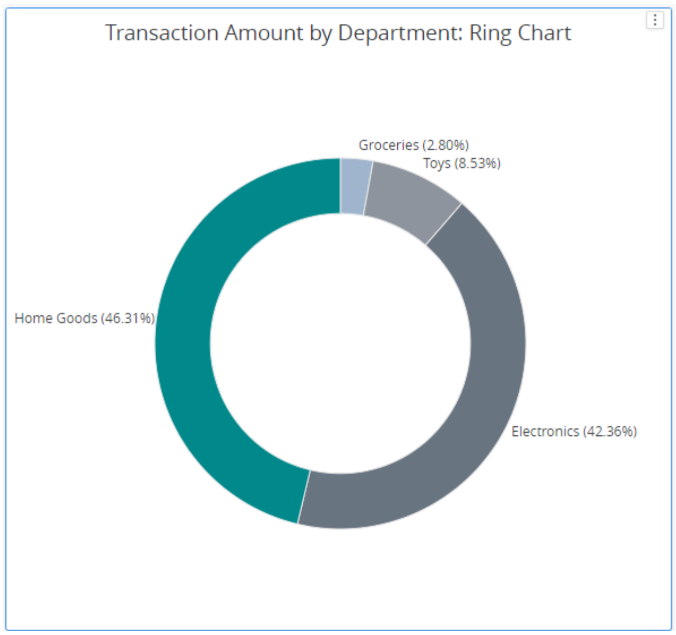


11 Hover over a slice to display a tooltip with data details, as shown in the image below.



12 To rename the visualization, double-click the **Visualization 1** title, and type **Transaction Amount by Department: Ring Chart**.

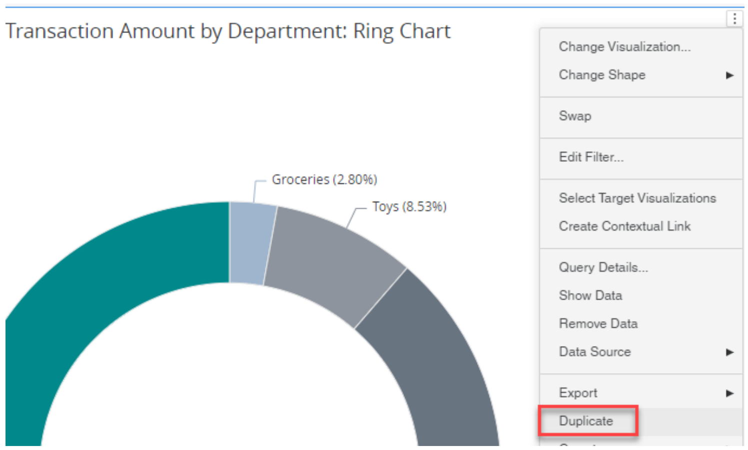
Your ring chart looks like the image below.



Display the ring chart as a pie chart

A pie chart displays the same information as a ring chart, except the slices fill to the center of the chart. To see how these visualization types are similar and different, view them side by side by duplicating the ring chart and changing it to a pie chart.

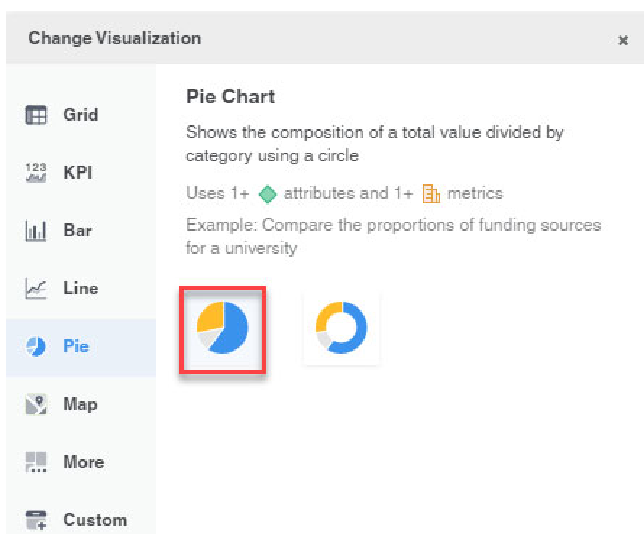
1 Click the menu icon ⋮ to the right of the ring chart title, and select **Duplicate**.



A copy of the ring chart displays to the right of the original ring chart, indicated by **copy** at the end of its title.

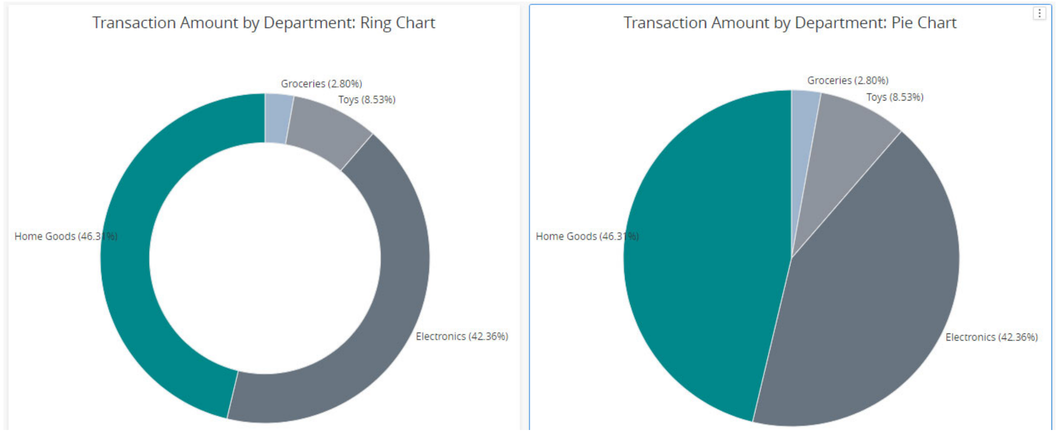
2 Right-click inside of the ring chart visualization copy, and select **Change Visualization**.

3 In the Visualization Gallery, ensure that **Pie** is selected in the pane on the left, and then click the **Pie Chart** icon.



The copy of the ring chart is changed to a pie chart.

4 Rename the pie chart visualization to **Transaction Amount by Department: Pie Chart**. Your visualizations look like the image below.



The ring and pie charts display the same information, but the ring chart has white space in the center. The white space can be helpful for adding additional context. For example, using free-form layout, you can add a key performance indicator (KPI) visualization to the center of a ring chart. To learn more about using free-form layout, see the Enterprise Analyst learning path.

5 Click **Save** in the upper right of the dossier toolbar.

Analyze the ring chart and pie chart

1 Interact with the charts and answer the following questions:

- How quickly can you determine which department contributed the most to the total transaction amount? What characteristics of the ring chart and pie chart make it easy or difficult to complete this analysis?

  The relative size of each slice provides a glimpse of its proportion to the whole. You can see detailed information for each slice by hovering over the desired department.

- Would you adjust any colors or labels to ease the analysis?
- Is the information easier to analyze using the ring chart or the pie chart?
- How might you augment the empty space in the center of the ring chart?

  You can display additional information in the center of a ring chart. For example, you might display a Total Transaction Amount value in the center.