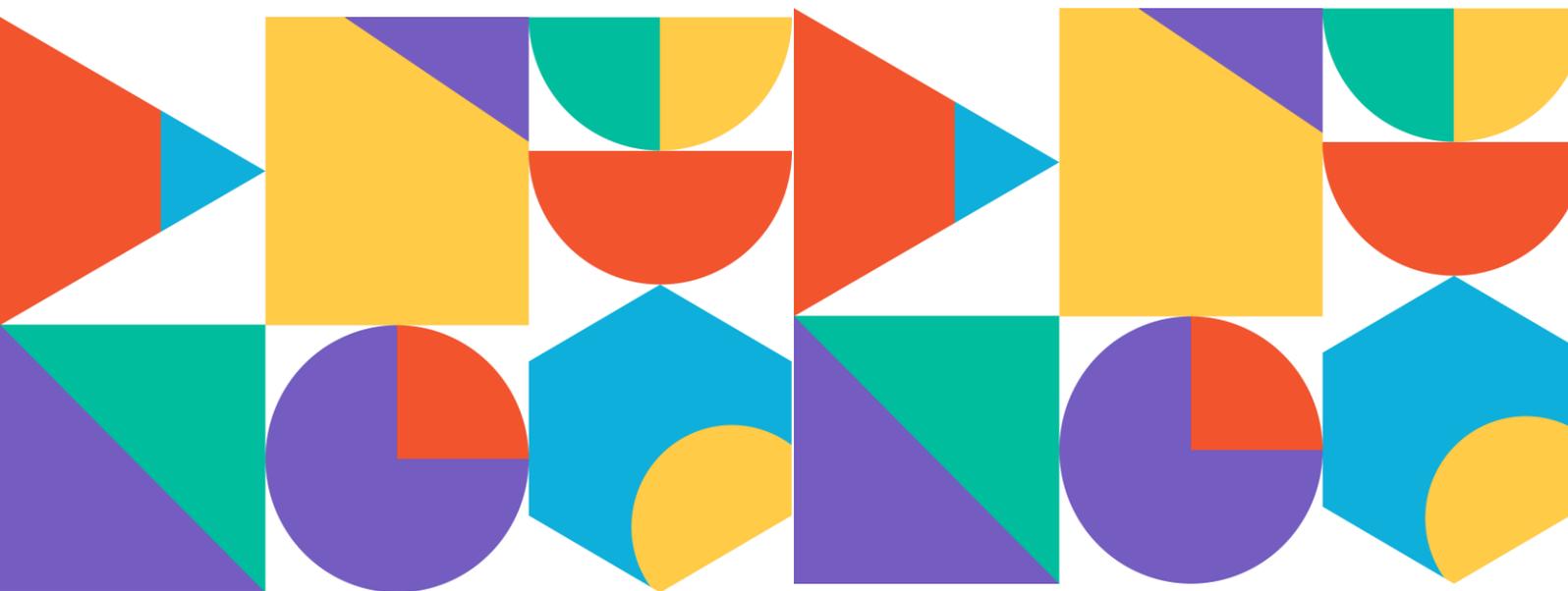




# Creating Content for Accessibility

Best practices for how to create content that conforms with Web Content Accessibility Guidelines (WCAG).

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# Introduction

Content for visually impaired or color-blind users must be adjusted to cater for their needs. This document describes how to create content in Pyramid that conforms with the Web Content Accessibility Guidelines (WCAG).

## Section 508 compliance

Section 508 is part of a 1998 amendment to the Rehabilitation Act of 1973 that requires all Federal electronic content to be accessible. While Section 508 deals primarily with static HTML5 based content, Pyramid has endeavored to produce single page, React based single page web application software that adheres as closely as possible to the Section 508 standards.

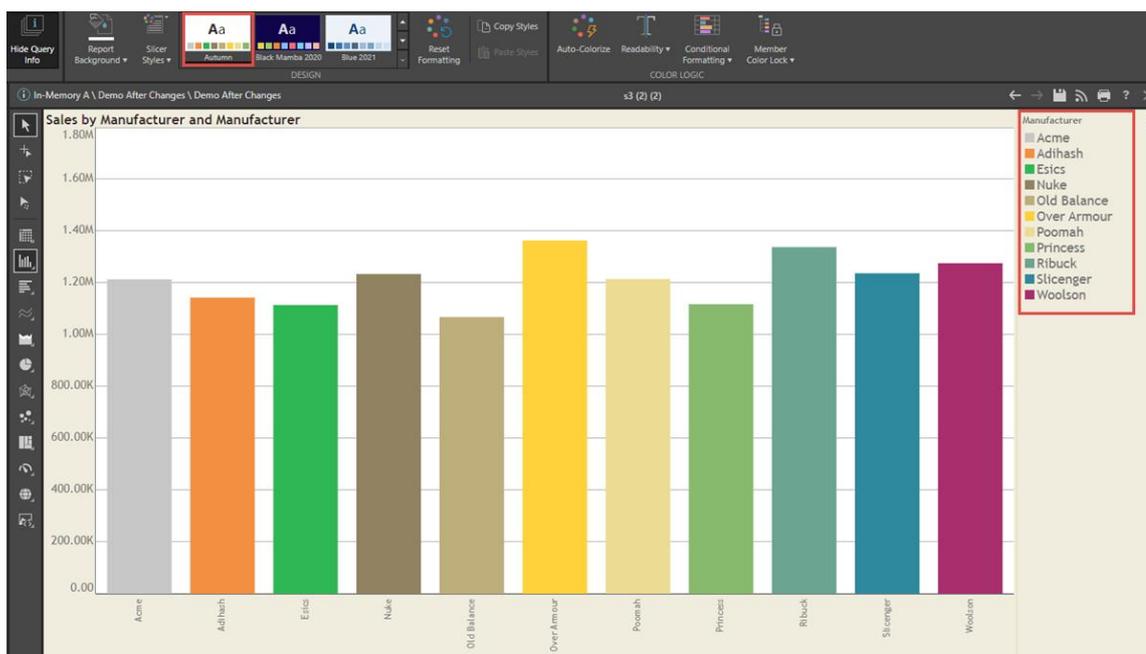
In order to take full advantage of the specific visual adjustments to support Section 508, the Pyramid client should be run in LIGHT mode.

Running Pyramid in DARK mode will not provide the additional formatting, color and font elements that enable a high level of compliance.

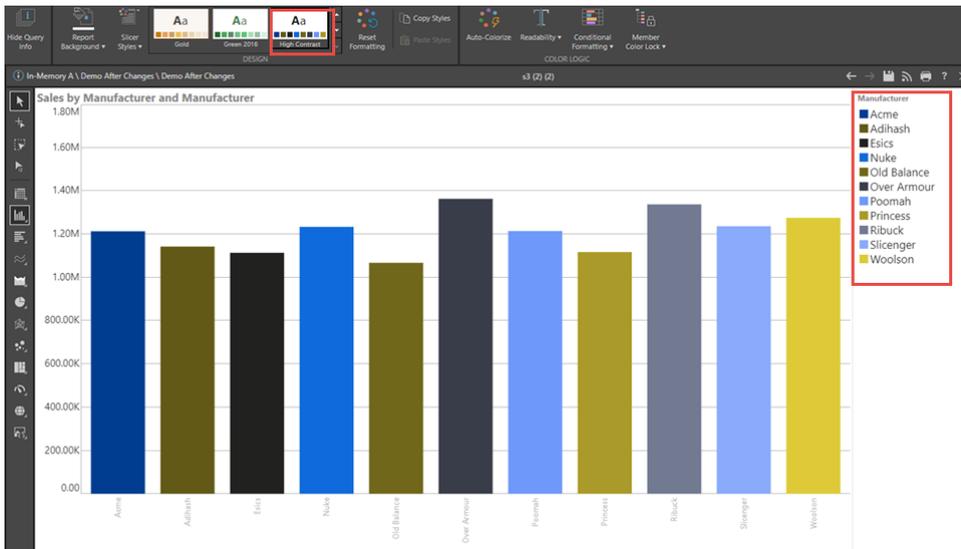
## Color, contrast, and shapes

### Use high contrast theme for Discovery content

The “Autumn” theme used in this Discovery uses red, green, blue, orange, gray and yellow – these colors are difficult to distinguish between for people with color vision deficiency (CVD).

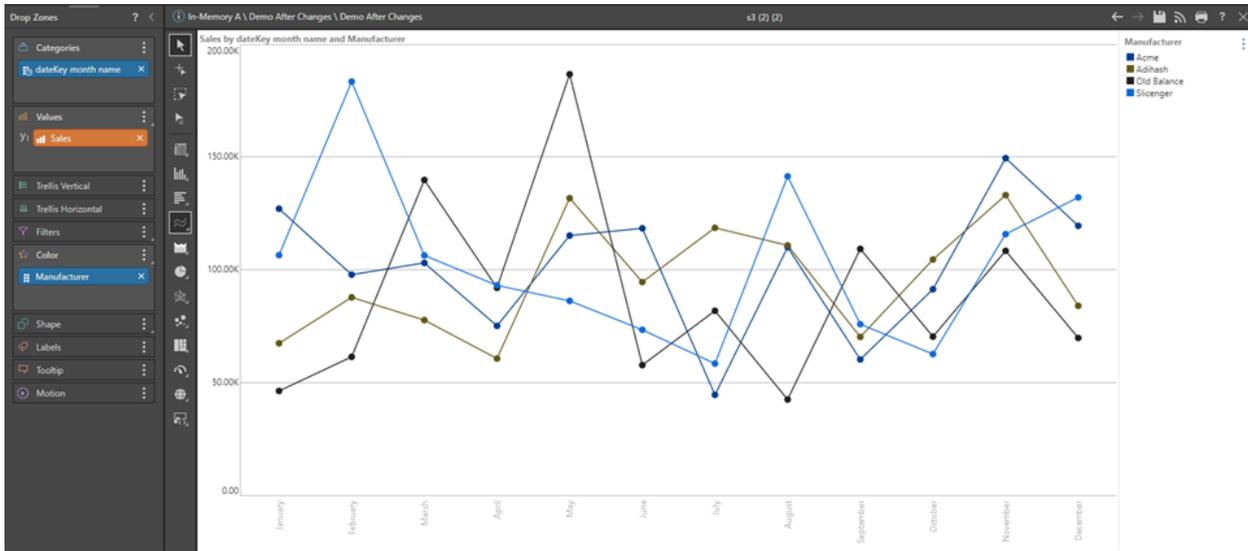


By selecting Pyramid’s “High Contrast” theme (in red box) for the Discovery, the automatic selection of colors and large differences in contrast make for easy distinction for CVD users.

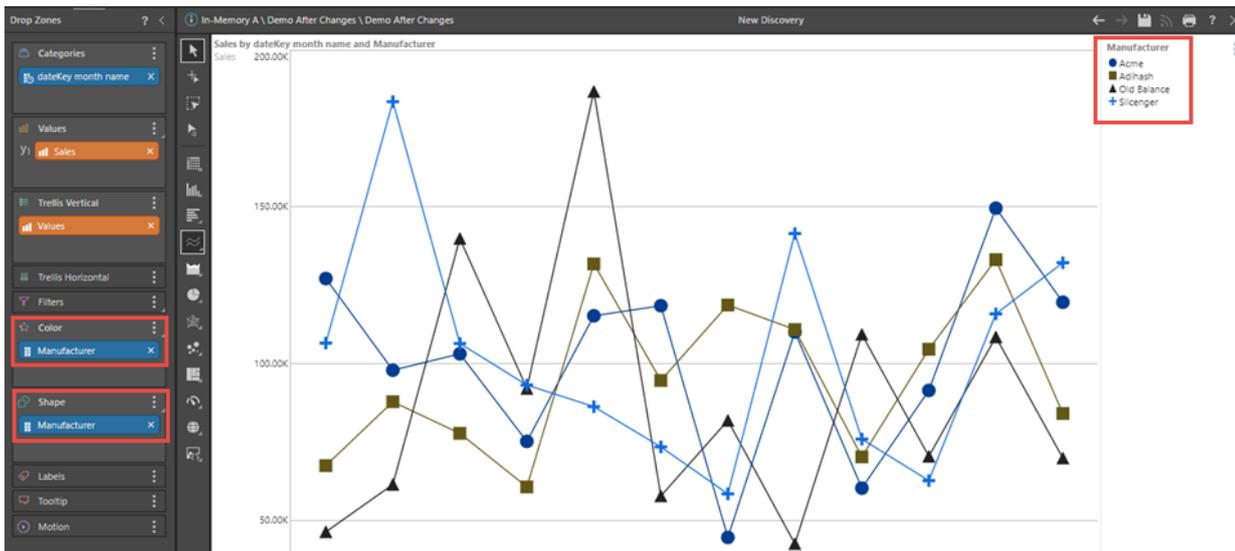


## Use color and shapes to add variation to visualizations

When different colors are used for the manufacturers, it can be difficult to distinguish between the different points when lines intersect or are very close.

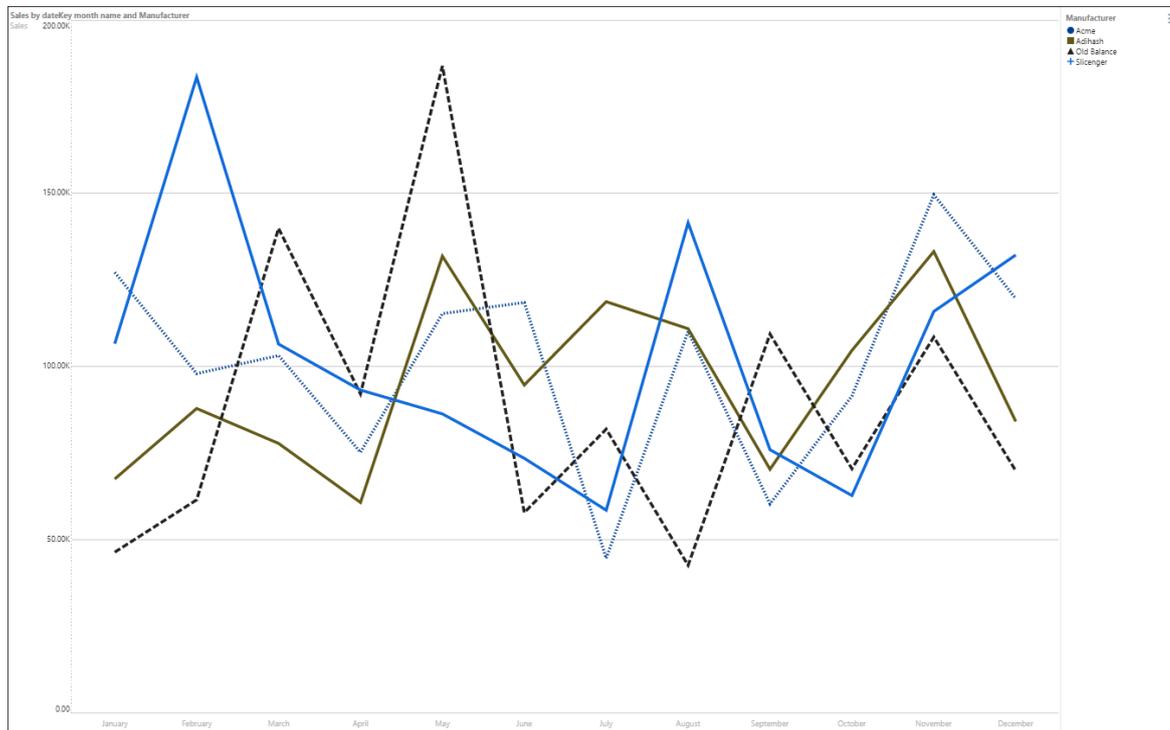


Pyramid's shape dropzone can be used to further distinguish between manufacturers, so the use of both color and shapes makes it easier to visualize the different trends in manufacturers .



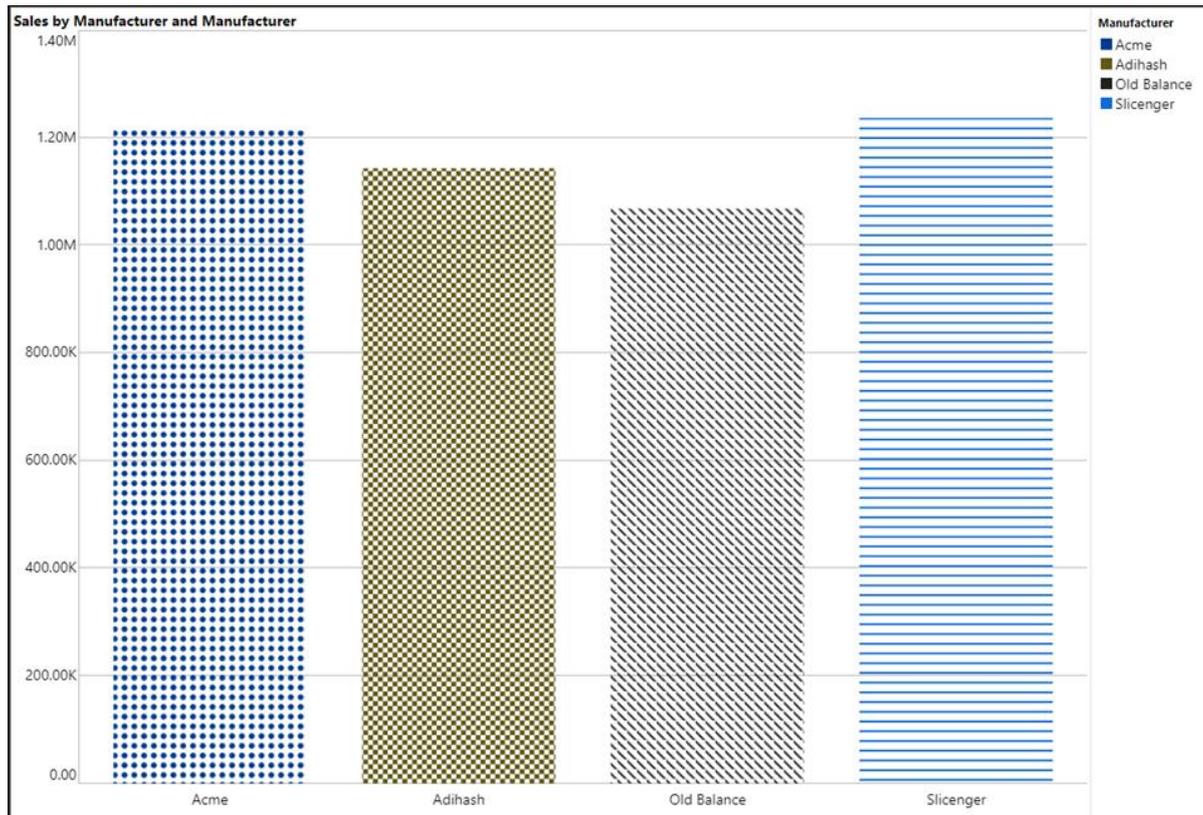
## Use solid, dotted or dashed line styles

Different [line styles](#) assist in varying the display of lines, increasing the intuitive relationship between the line and the legend



## Use "pattern" in the fill type for data points

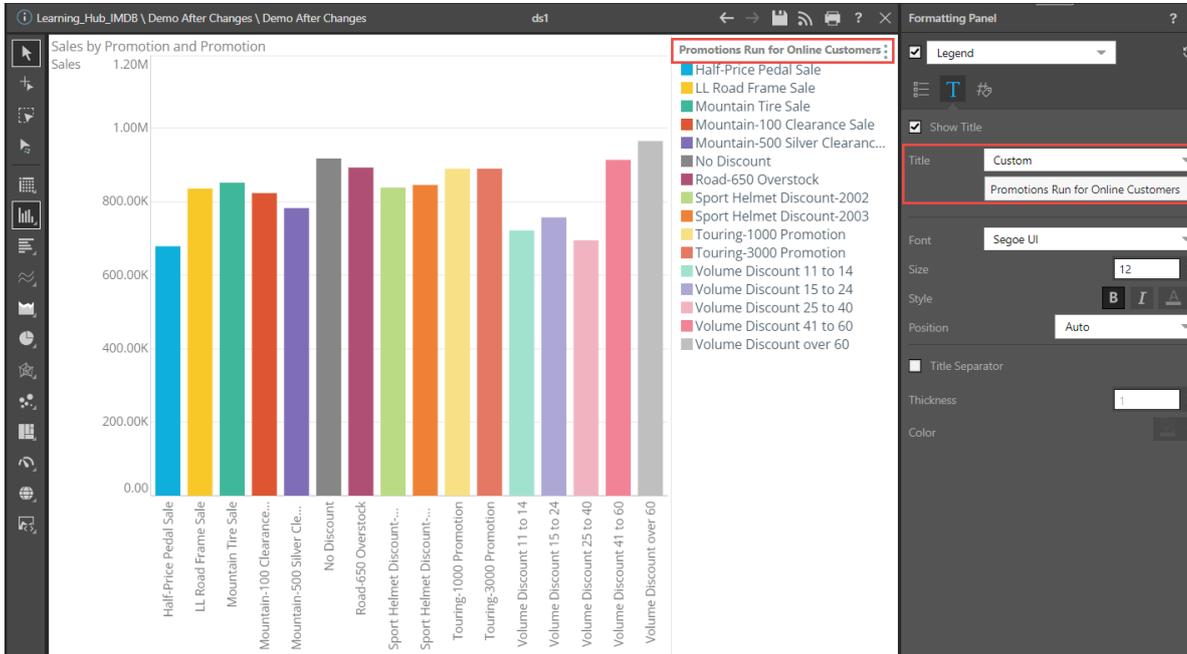
By changing the [fill type](#) to pattern, you can select different patterns to accentuate differences between hierarchies



# Descriptive Text

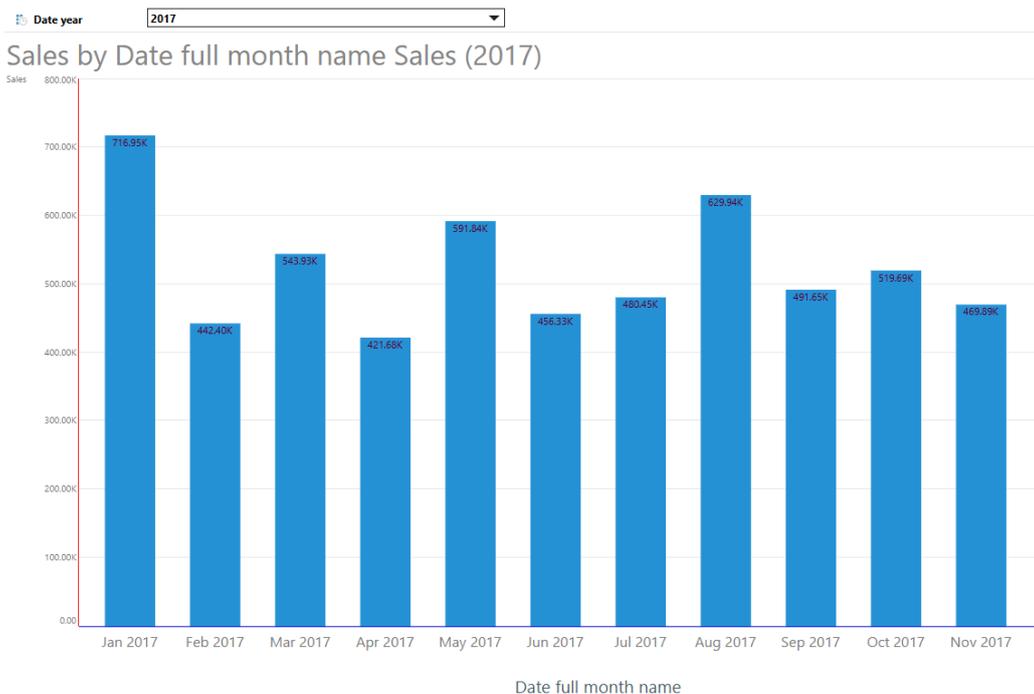
## Use the formatting panel to edit titles and captions

The [formatting panel](#) allows users to provide automatic or custom edited titles to allow users to apply more descriptive text for captions and titles used in Discovery reports and presentations



## Text Resizing, Data Labels and Chart Padding

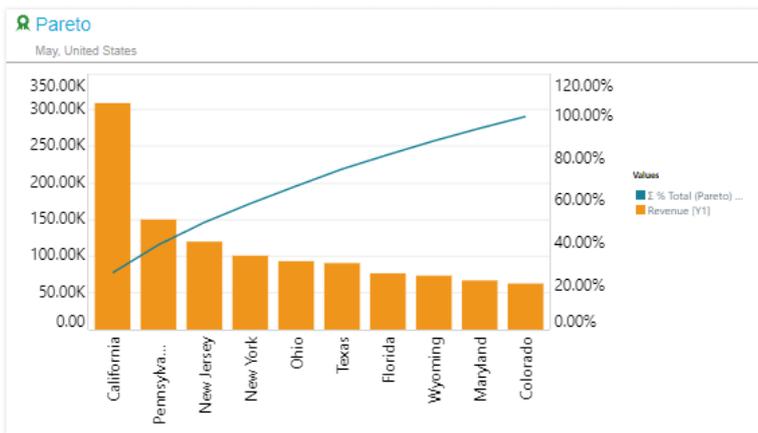
Text can be resized to meet visual requirements. Data labels can be added making charts easier to read and chart padding can be increased or decreased to provide clear boundaries between data points.



## Use Pyramid's dynamic text feature

Dynamic text can be generated from within discoveries using the [dynamic text](#) feature . In this example, the dynamic text uses the underlying query to reveal important underlying information about margin, net profit and the prior record month that is not available from the visualization.

California has the highest revenue: - \$154,960  
 The margin was 40.0% and the net profit was \$34,729  
 They outperformed the previous record month of \$146,149 in June by 6.0%



## Meaningful text-based insights using "Smart Insights"

In this visualization, relevant snippets of information are gleaned for the various product categories (Incumbents, Newcomers) using [Smart Insights](#). Data is compared using net margin, quantity, and sales measures. Additional outlier insights are also generated.




### Incumbents

For total **Net Margin**, Incumbents ranks in 2<sup>nd</sup> place. For total **Quantity**, Incumbents ranks in 2<sup>nd</sup> place. For total **Sales**, Incumbents ranks in 2<sup>nd</sup> place

- Incumbents **Net Margin** is 349.15 in total and is 81.81% less than New Comers **Net Margin**. Increases in Incumbents **Net Margin** also see increases in New Comers **Net Margin**.
- Incumbents **Quantity** is 2,861 in total and is 81.65% less than New Comers **Quantity**.
- Incumbents **Sales** is 6,332,470.42 in total and is 88.08% less than New Comers **Sales**.

#### Relationships

- For Incumbents, **Net Margin** and **Quantity** are closely related, moving together in a **positive** direction.
- For Incumbents, **Quantity** and **Sales** are highly related, moving together in a **positive** direction.

### New Comers

For total **Net Margin**, New Comers ranks in 1<sup>st</sup> place. For total **Quantity**, New Comers ranks in 1<sup>st</sup> place. For total **Sales**, New Comers ranks in 1<sup>st</sup> place

- New Comers **Net Margin** is 634.79 in total and is 81.81% more than Incumbents **Net Margin**. Increases in New Comers **Net Margin** also see increases in Incumbents **Net Margin**.
- New Comers **Quantity** is 5,197 in total and is 81.65% more than Incumbents **Quantity**.
- New Comers **Sales** is 11,910,167.75 in total and is 88.08% more than Incumbents **Sales**.

#### Relationships

- For New Comers, **Net Margin** and **Quantity** are highly related, moving together in a **positive** direction.
- For New Comers, **Net Margin** and **Sales** are closely related, moving together in a **positive** direction.
- For New Comers, **Quantity** and **Sales** are highly related, moving together in a **positive** direction.

### Outlier Items

There are 145 outliers in this dataset. The top 3 data points that are the most outstanding across all combinations of **Date full month name**, **Product Category**, **Promotion Category**, **Manufacturer Grouping** and **Market** are:

- Dec 2019, Bikes, Reseller, New Comers, Stable
- Aug 2019, Bikes, Reseller, New Comers, Stable
- Jan 2019, Bikes, Reseller, New Comers, Stable



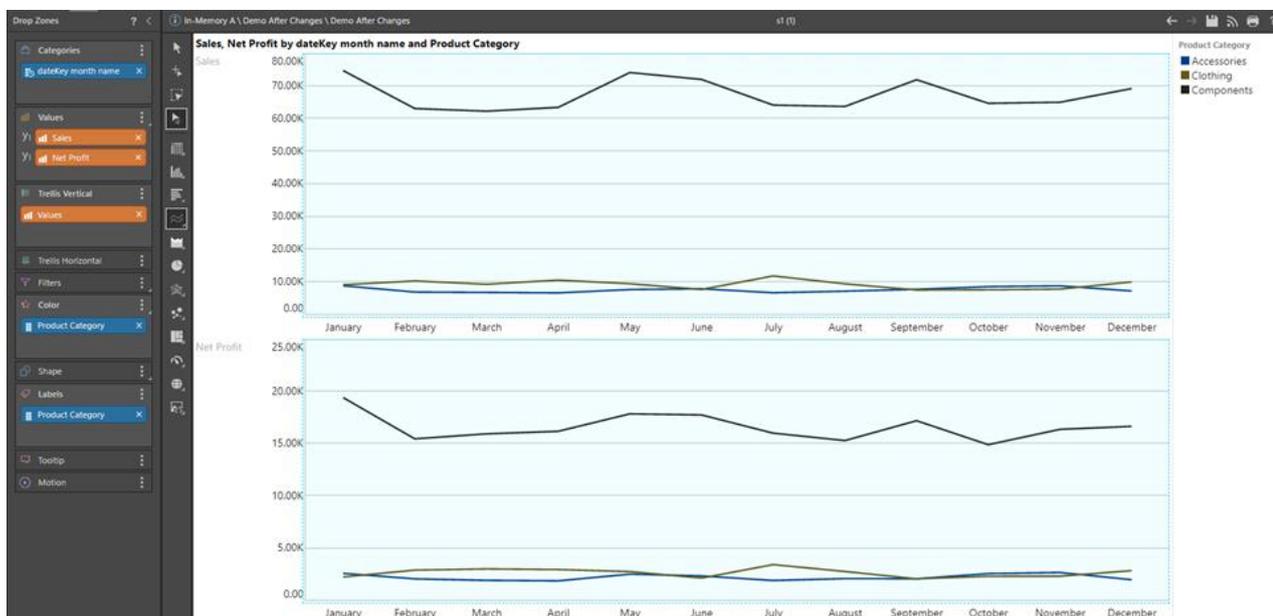
# Reduced hierarchies and data points

## Use aggregation to reduce data points

This report displays sales and net product per product category and product subcategory. The number of subcategories makes it difficult to read.

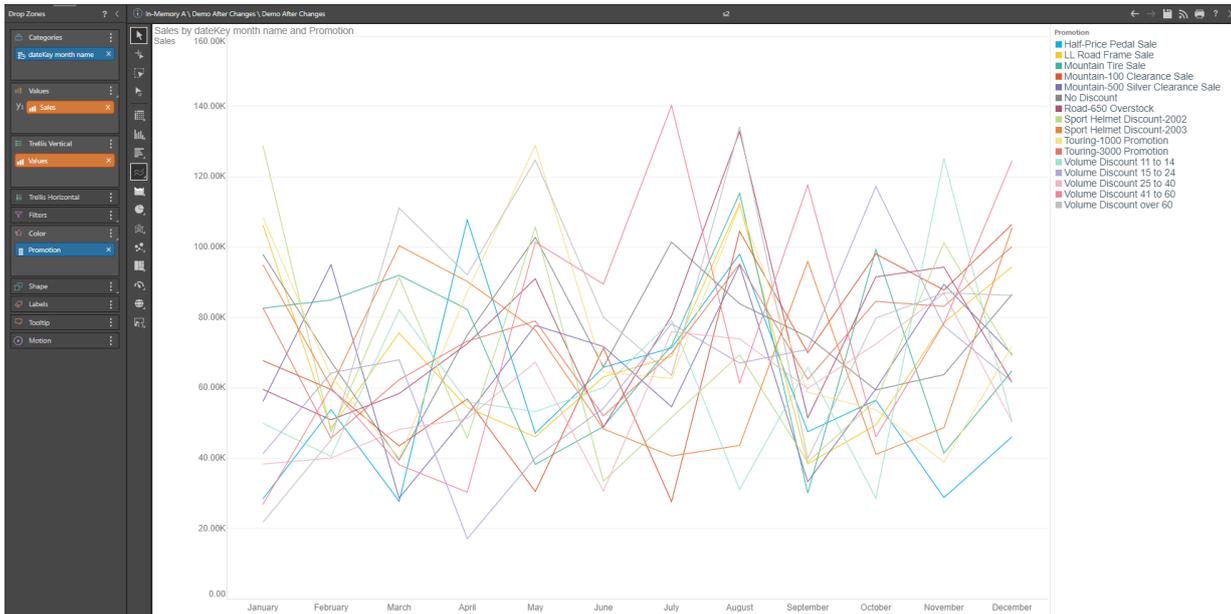


By removing the subcategories, the report is much easier to read, but nevertheless still portrays sufficient information required for analysis.

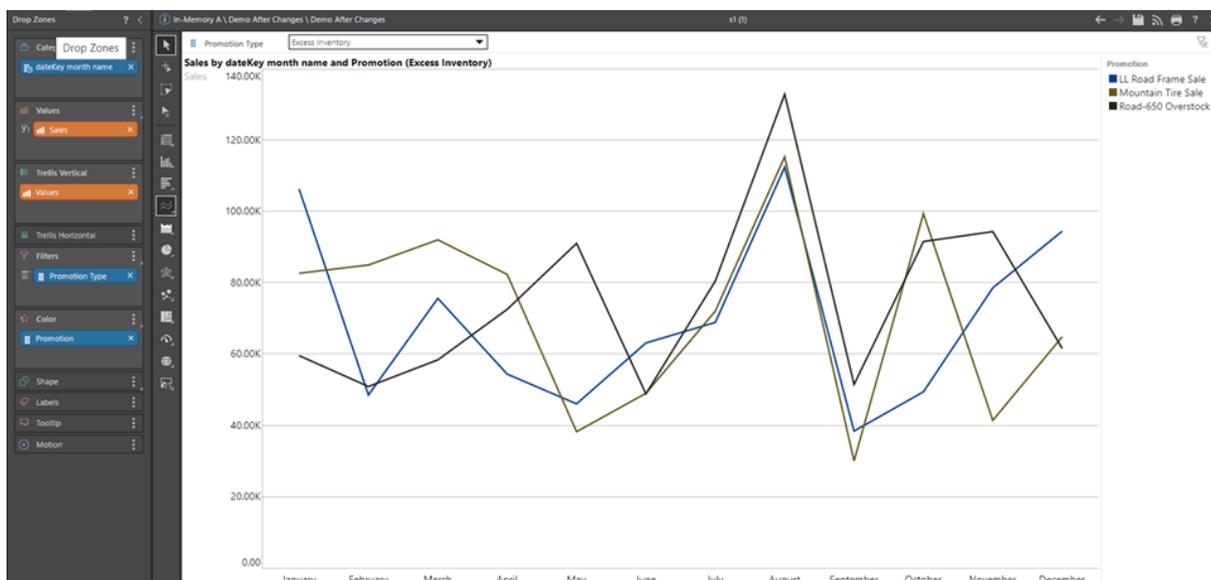


## Use filters to limit members

In this report, we want to view the different promotions, but viewing them all together doesn't allow for an easy understanding as the resultant visualization is "too busy"



By applying the "Promotion Type" filter, the number of promotions is limited to a few at a time, and the user can select different promotion types, viewing all promotions in a staggered, more understandable fashion.

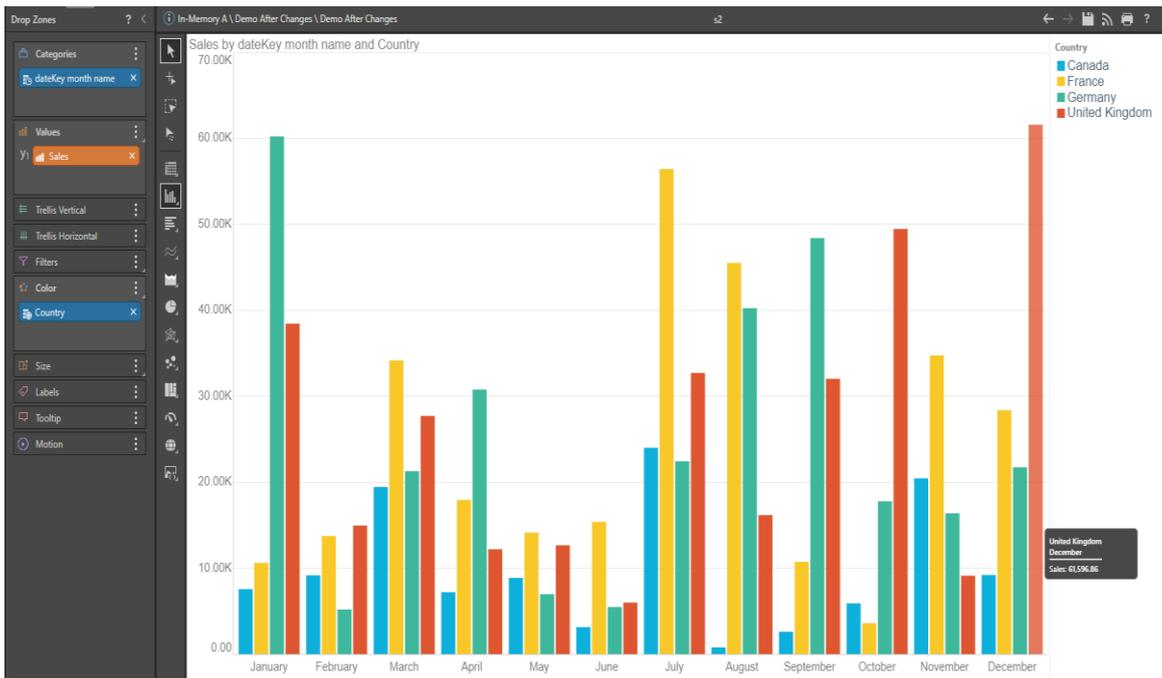


## Eliminate members

Often a single member causes the entire scale of the visualization to be shifted, rendering the other differences between the other members to be insignificant. The Sales for the United States makes it difficult to gain a clear understanding of the other countries.

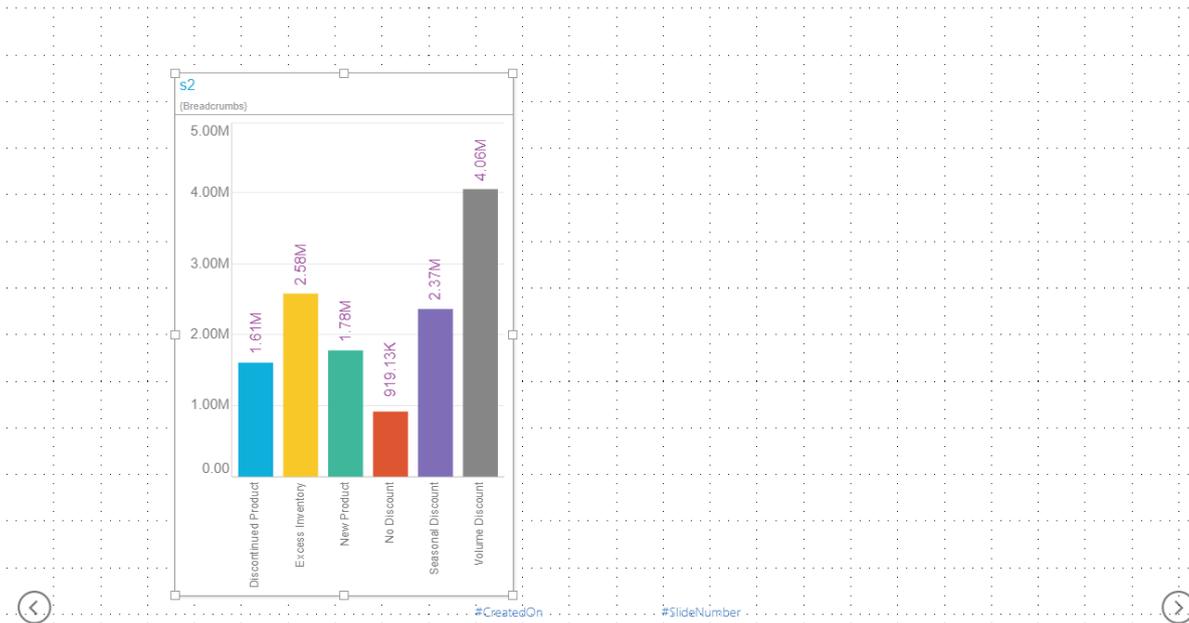


By [eliminating](#) the United States and Australia, the differences between the other countries is now significant.

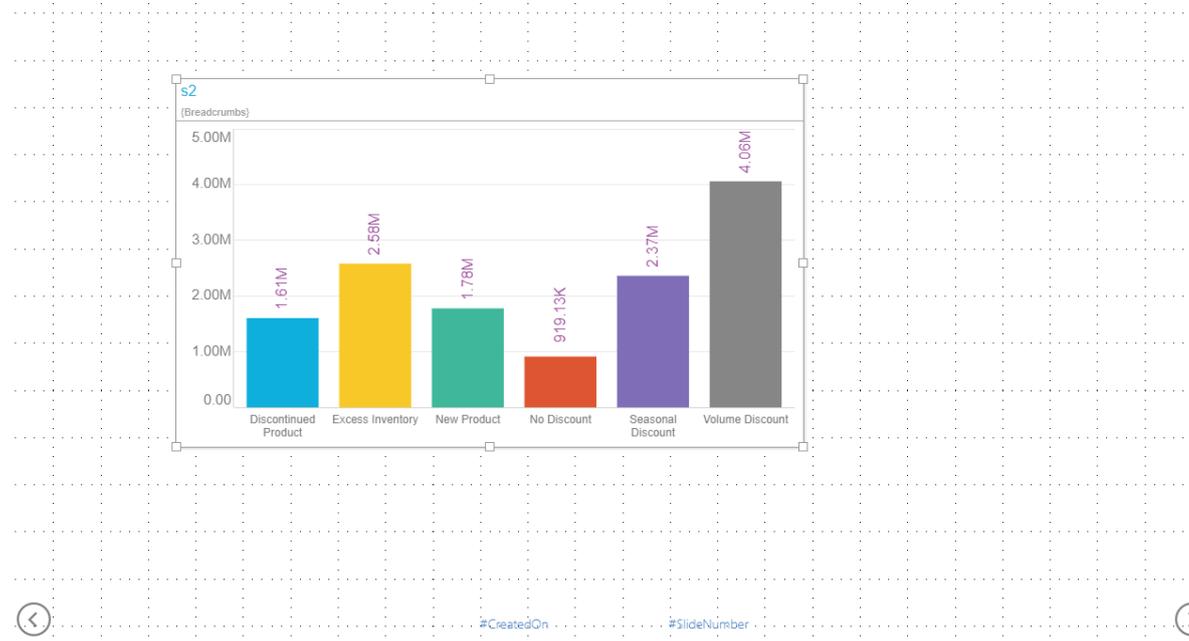


## Expand content to allow labels and headers to be displayed

In this visualization, the descriptions on the X axis are displayed vertically, making them more difficult to read.



By selecting, dragging and dropping the visualization, it is extended within the dashboard, allowing the labels to be automatically adjusted to be displayed horizontally.

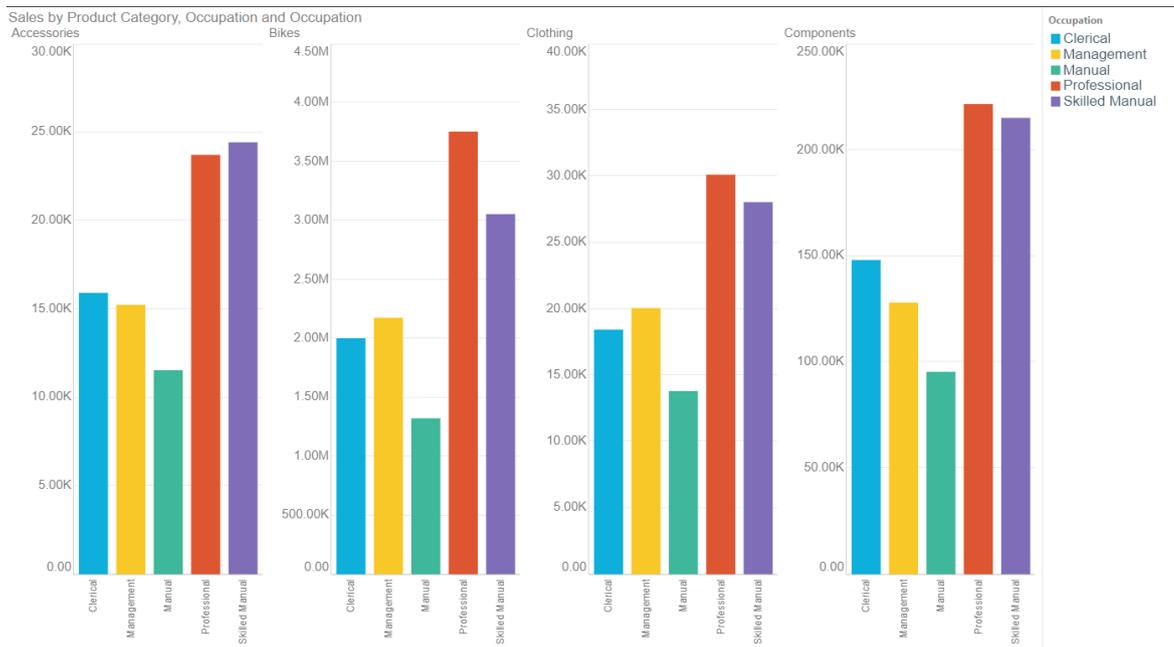


## Use simple visualizations for a more streamlined view

This visualization uses a heat map, making it difficult to decipher for some users.

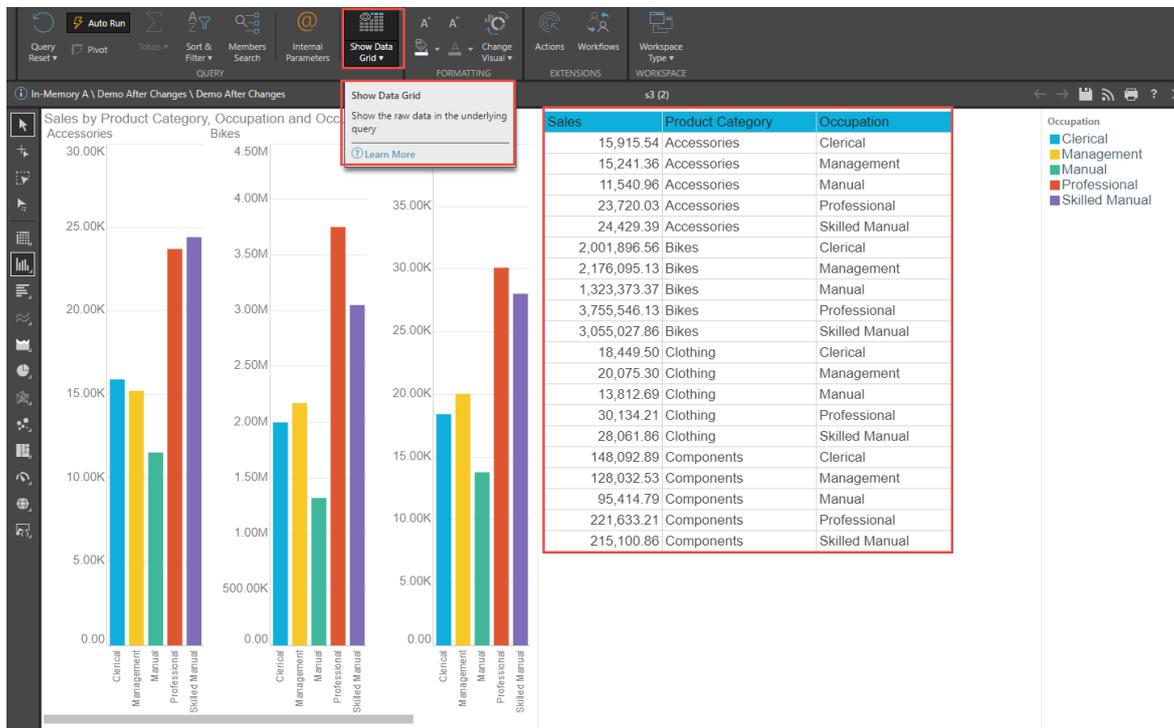


The simpler, more intuitive choice of a column chart makes the visualization easier to understand.



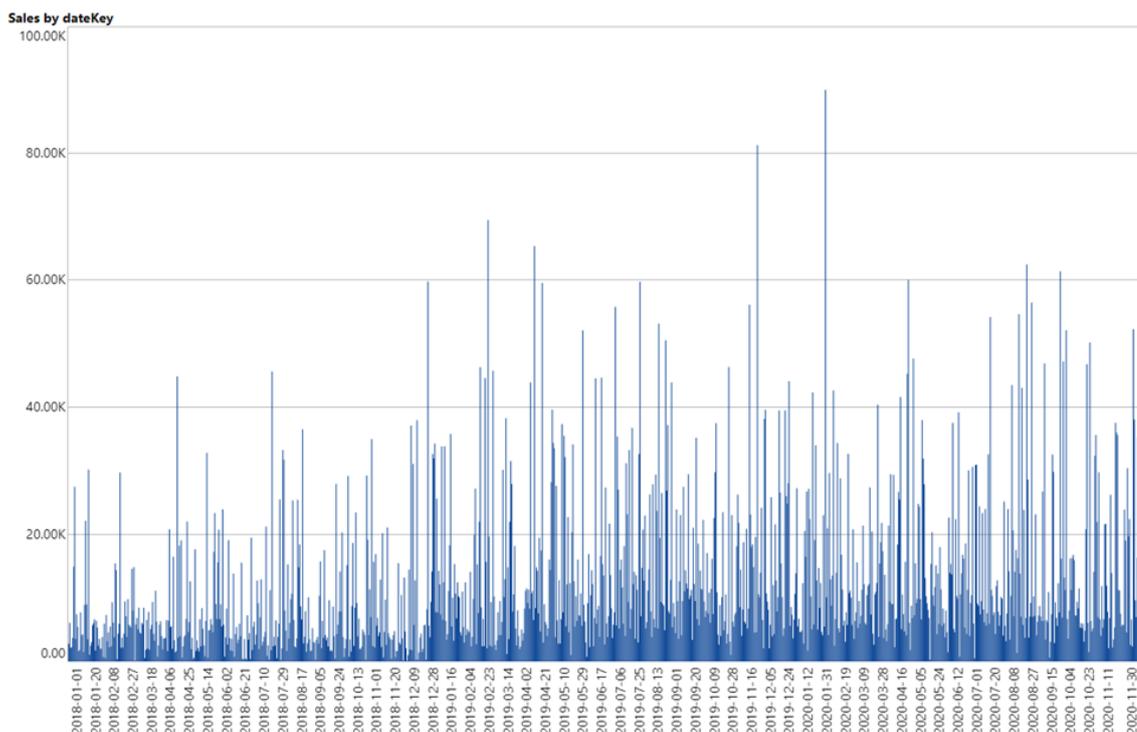
## Using the “Show Data Grid” feature.

A column chart or other visualization alone might not provide sufficiently detailed information for analysis. By simply clicking on the [“Show data grid”](#) feature, users can simultaneously display both the visual and the data grid underlying the visualization.



## Use the “Range Slider” to reduce data points

When graphs have many points on the x-axis, users often might want to view only a certain range of data on the x-axis at a time.



The [range slider](#) provides users the opportunity to slide along the x-axis and adjust the slice of data being viewed (red arrow)

