



Create reports in Power BI Desktop

aka.ms/PL300-5



Agenda

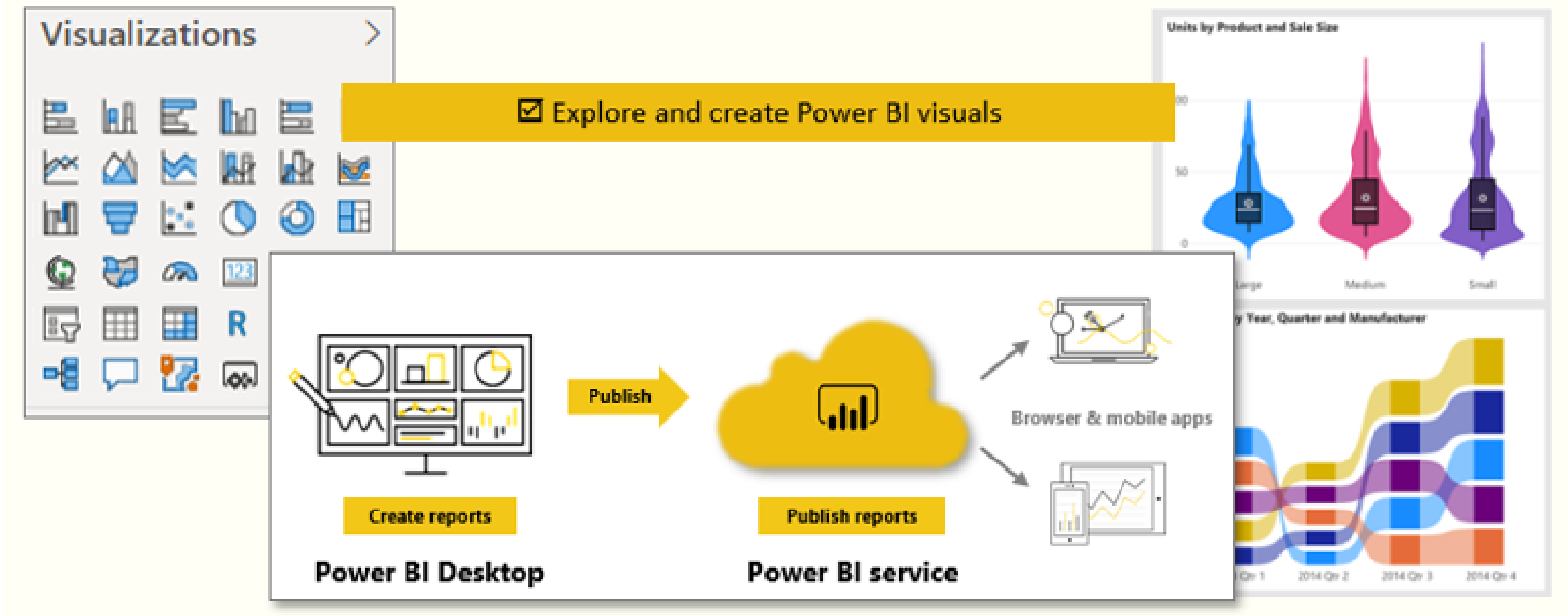


- Work with visuals
- Report layout and interactions
- Navigation and filtering
- Report design elements

Work with visuals



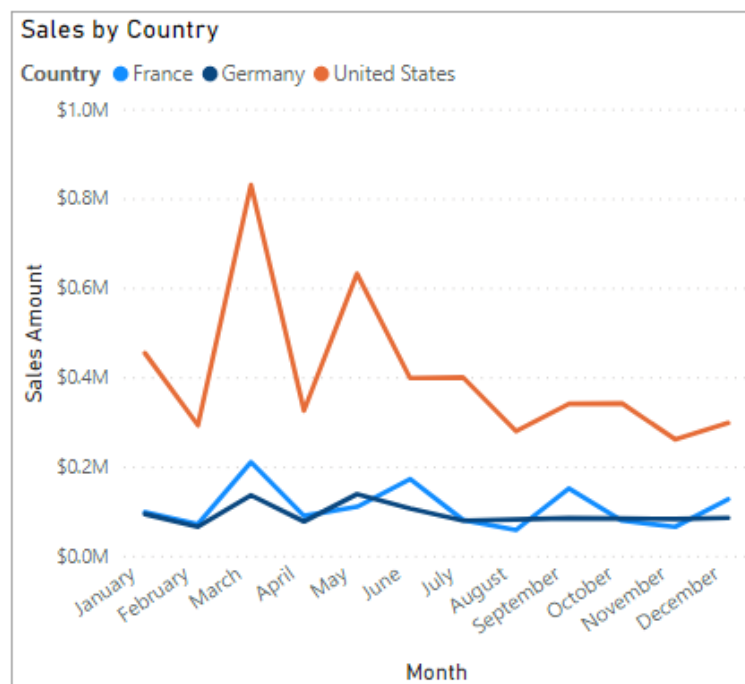
Add visualizations to reports



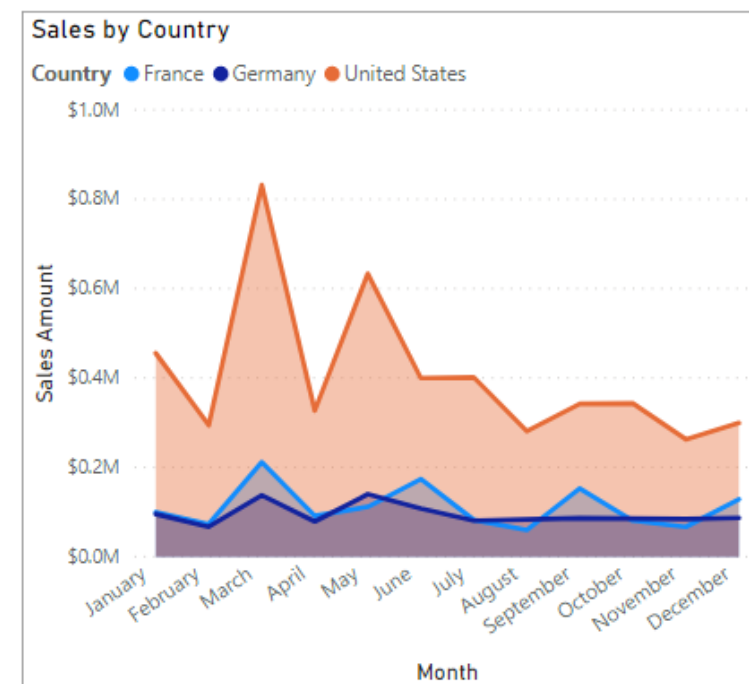
Choose effective visualizations

Country	Sales Amount
United States	\$7,390,464
France	\$773,445
Germany	\$493,628
Total	\$8,550,077

Table

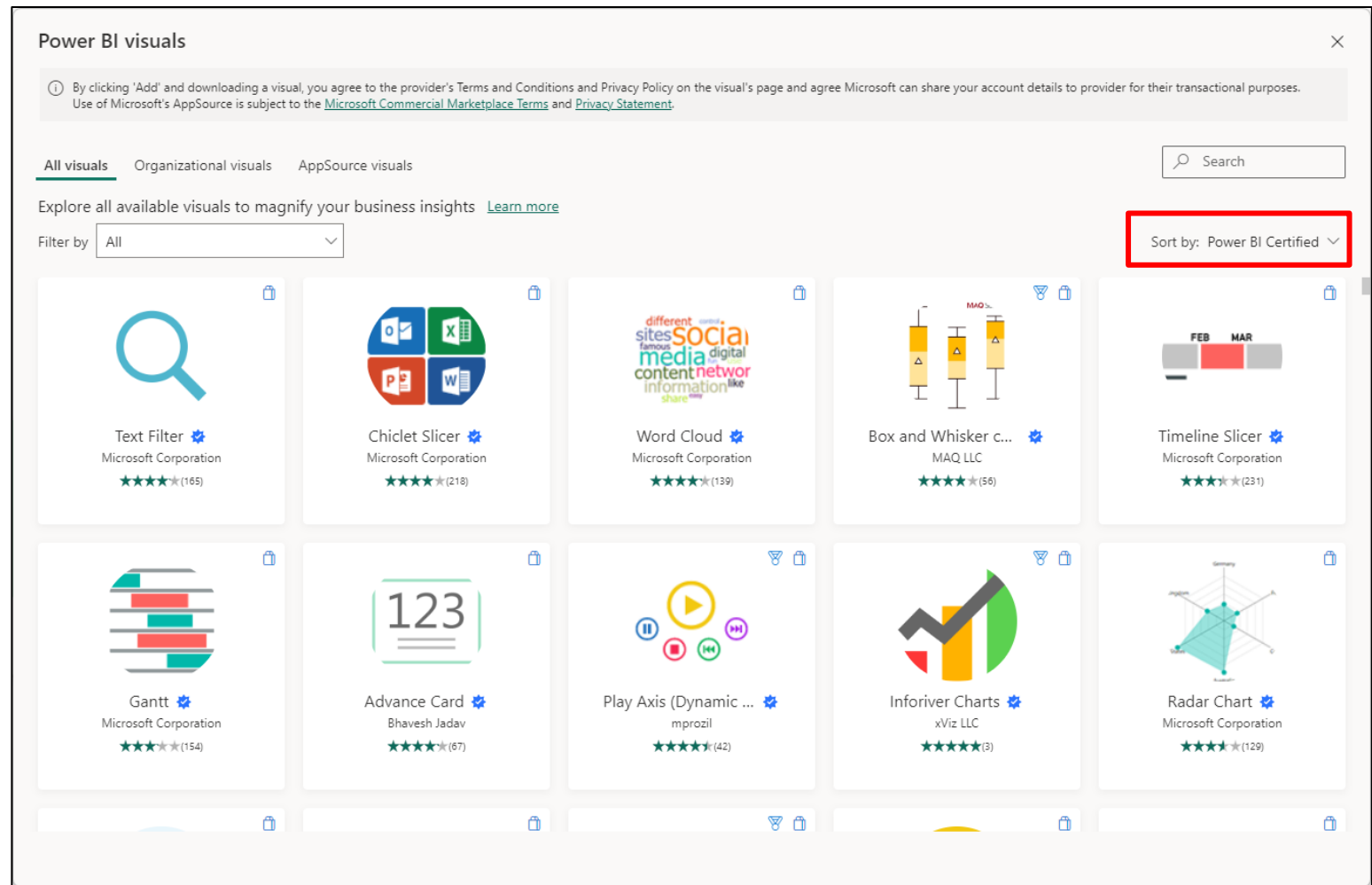
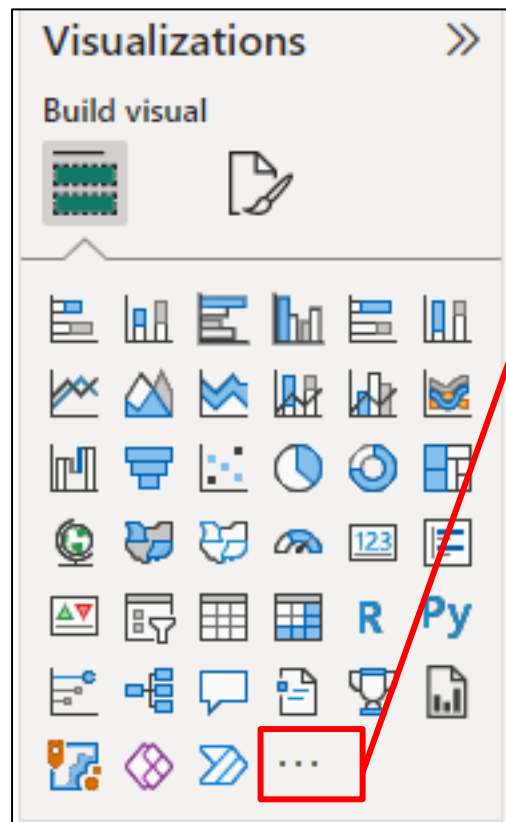


Line Chart



Area Chart

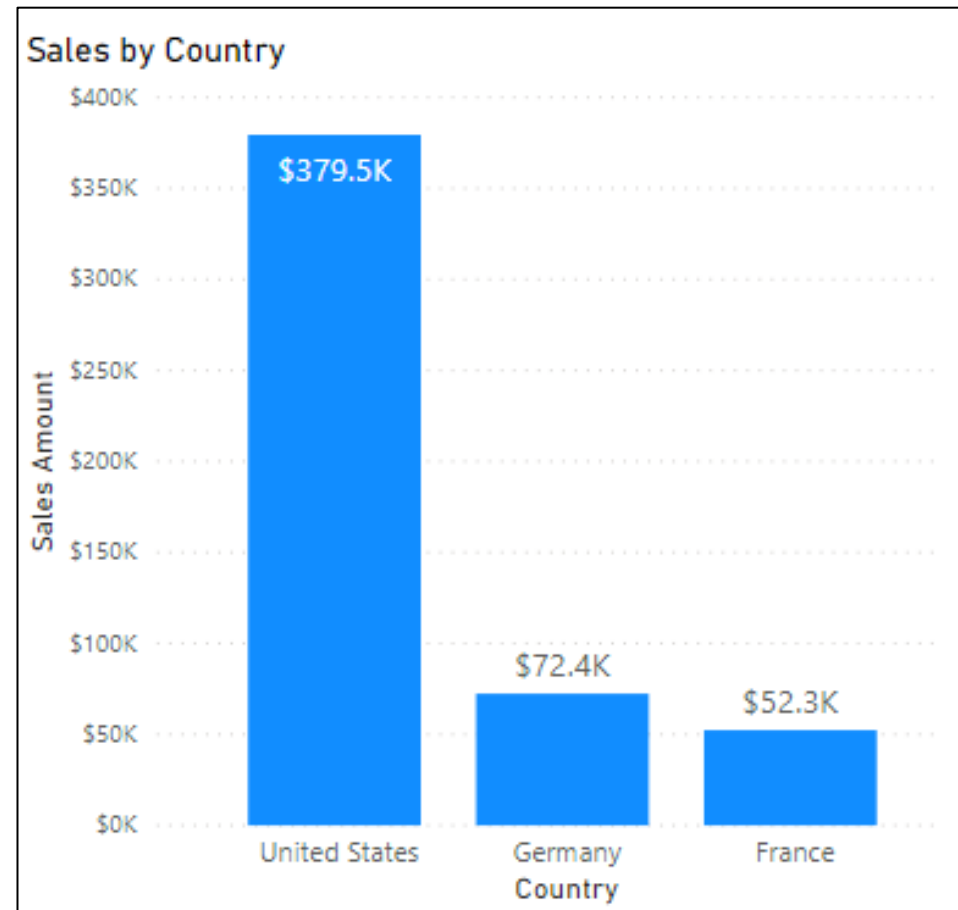
Import custom visuals from AppSource



Format and configure visualizations

Common options:

- Title
- Background
- Border
- Font type/size/color
- Data labels
- Tooltips



Visualizations >>

Format visual

Search

Visual General ...

> X-axis On

> Y-axis On

> Secondary y-axis Off

> Legend On

> Small multiples

> Gridlines

> Zoom slider Off

> Columns

> Lines

> Markers Off

> Data labels Off

> Series labels Off

> Total labels Off

> Plot area background

Configure conditional formatting

Enhance certain visuals with dynamic color schemes.

Visual General ...

Values

> Values

Reset to default

> Column headers

> Totals

> Specific column

Cell elements

Apply settings to

Series

Sales

Background color On

fx

Background color - Background color

Format style Gradient Apply to Values only

What field should we base this on? Sum of Sales Summarization Sum How should we format empty values? As zero

Minimum Lowest value Center Middle value Maximum Highest value

Enter a value

Enter a value

Enter a value

☒ Add a middle color

Learn more about conditional formatting

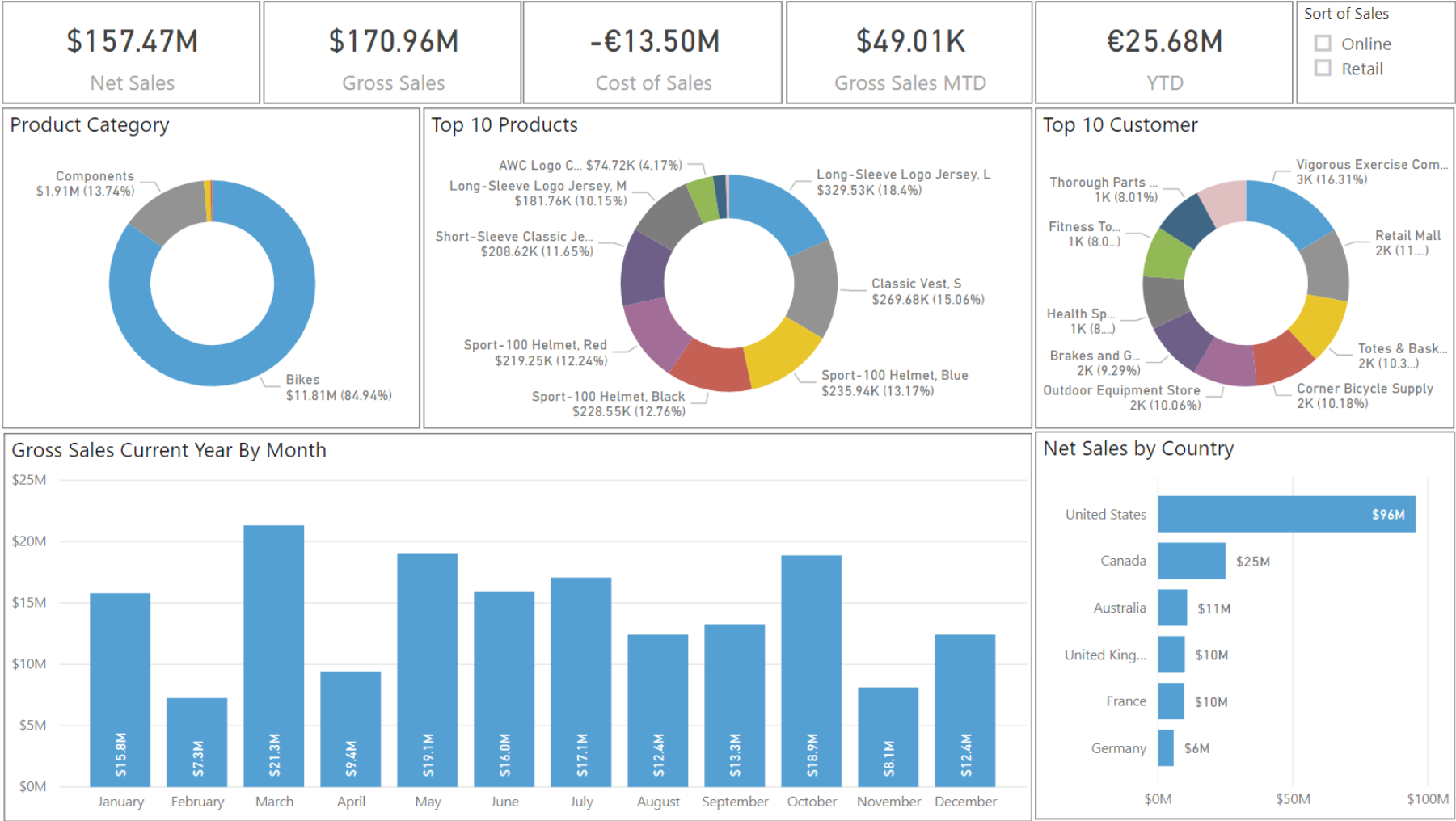
OK Cancel

Region	Sales
Australia	\$1,391,025
Canada	\$13,875,633
Central	\$7,633,387
France	\$4,527,840
Germany	\$1,877,743
Northeast	\$6,715,354
Northwest	\$12,004,822
Southeast	\$7,638,607
Southwest	\$18,001,116
United Kingdom	\$3,883,043
Total	\$77,548,570

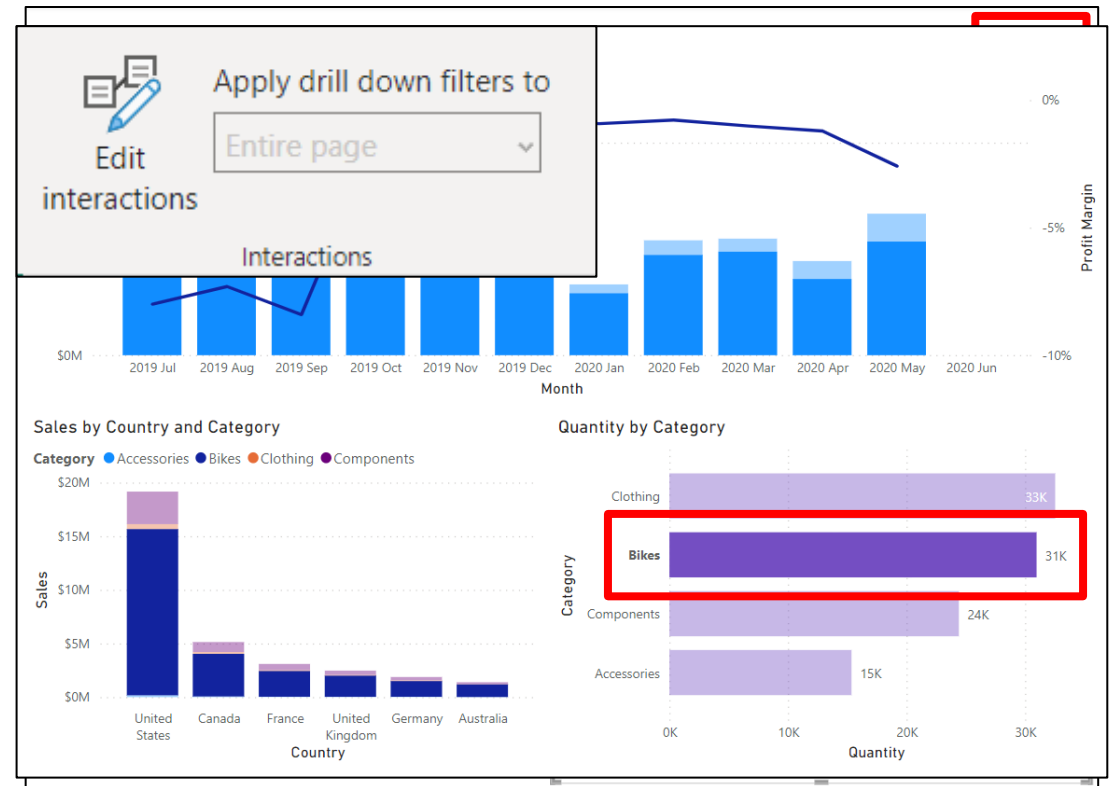
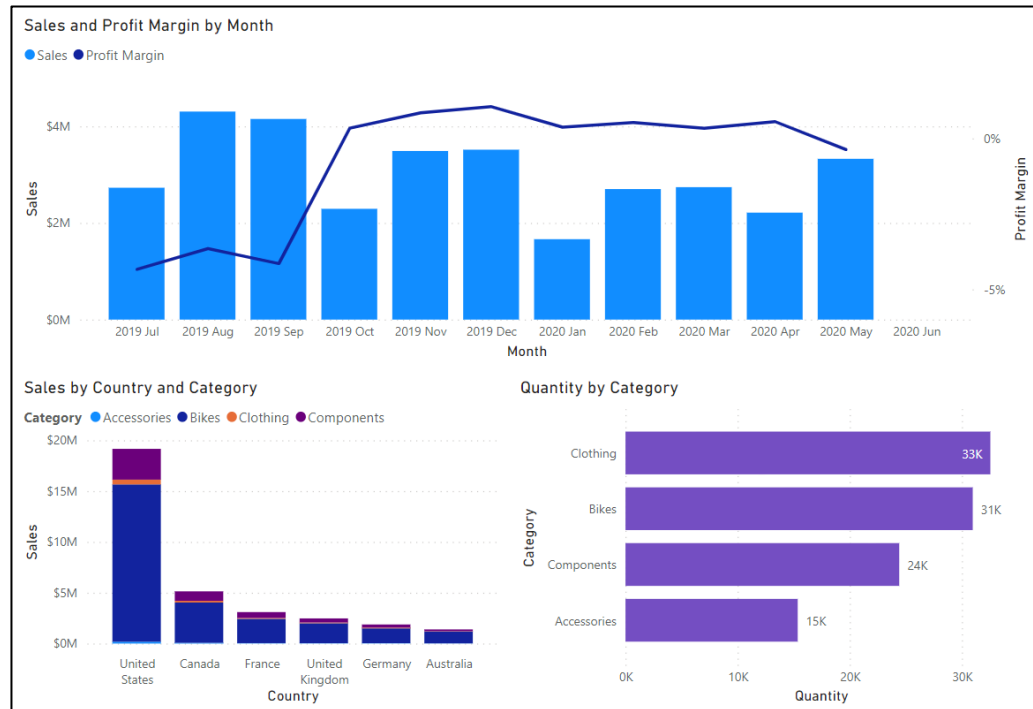
Report layout and interactions



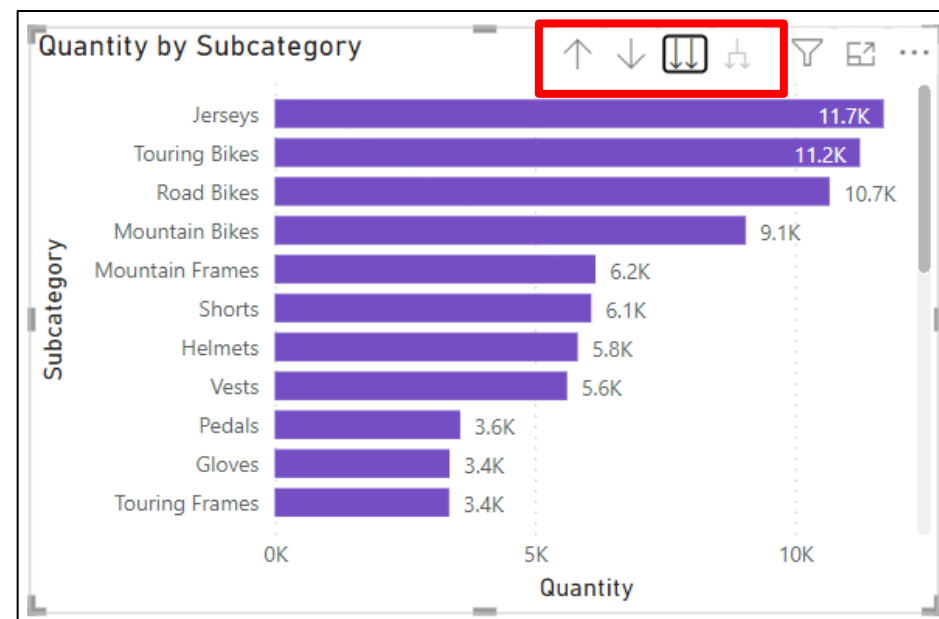
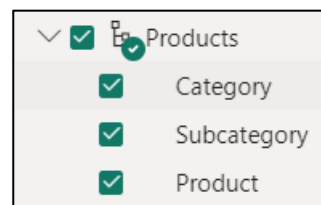
Design an appealing report layout



Cross-highlight between visuals



Drill down through a hierarchy in a visual



Lab: Design a report in Power BI Desktop (45 minutes)



[Design a Report | GitHub Exercise](#)

In this lab, you'll create a three-page report. You'll then publish it to Power BI, whereupon you'll open and interact with the report.

- Design a report
- Configure visual fields and format properties

Knowledge check: create reports



Is conditional formatting available for all visuals?

- ☐ Yes, all default included visuals in Power BI Desktop.
- ☐ No, only custom visuals imported from AppSource.
- ☒ No, only table and matrix visuals in Power BI Desktop.

What is the default interaction between visuals?

- ☐ There's no interaction between visuals by default.
- ☒ All visuals will cross-highlight and slicers filter other visuals.
- ☐ Slicers will filter other visuals, but visuals don't cross-highlight.

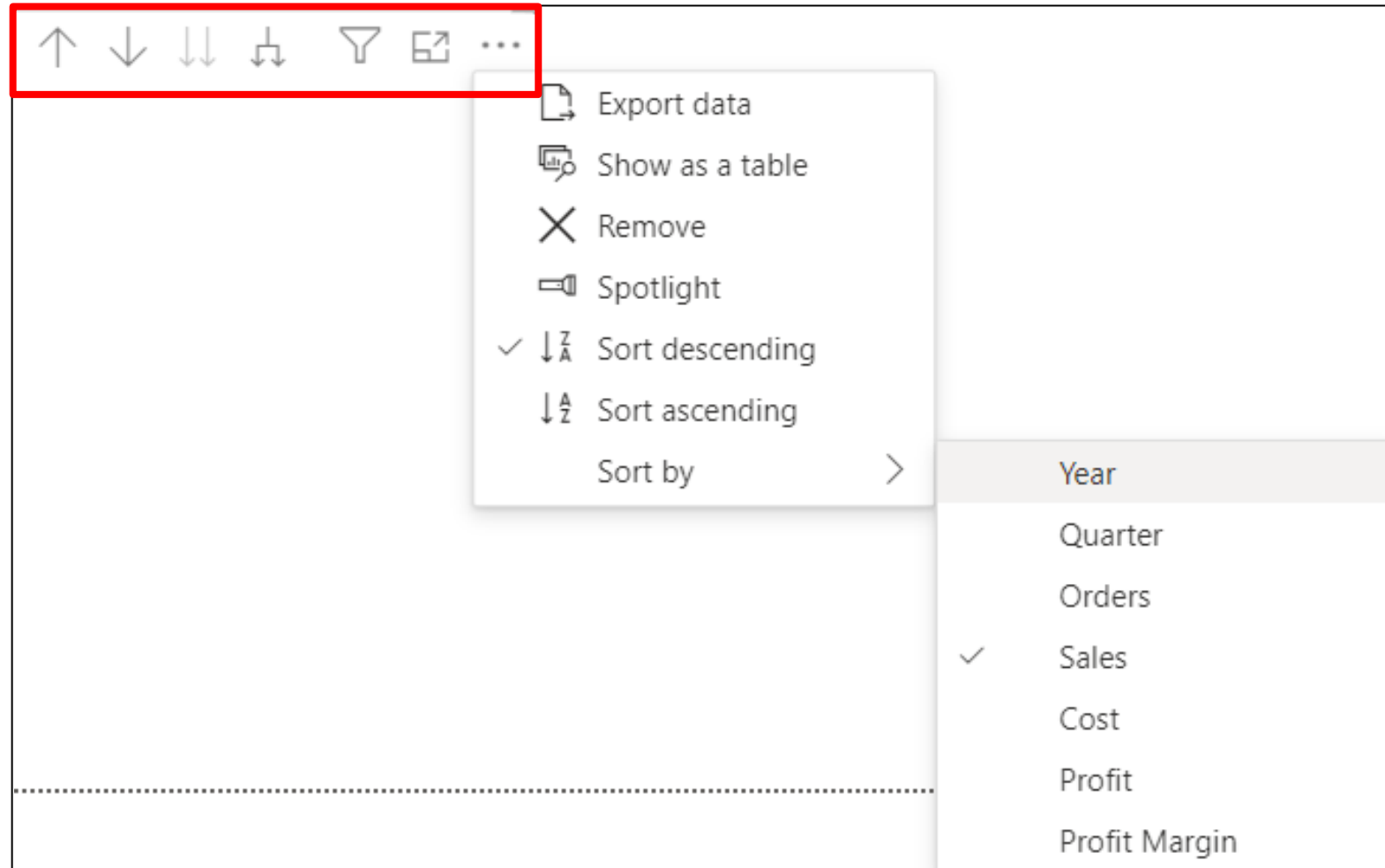
Navigation and filtering



Design functional report navigation



Sort visuals in the most effective order



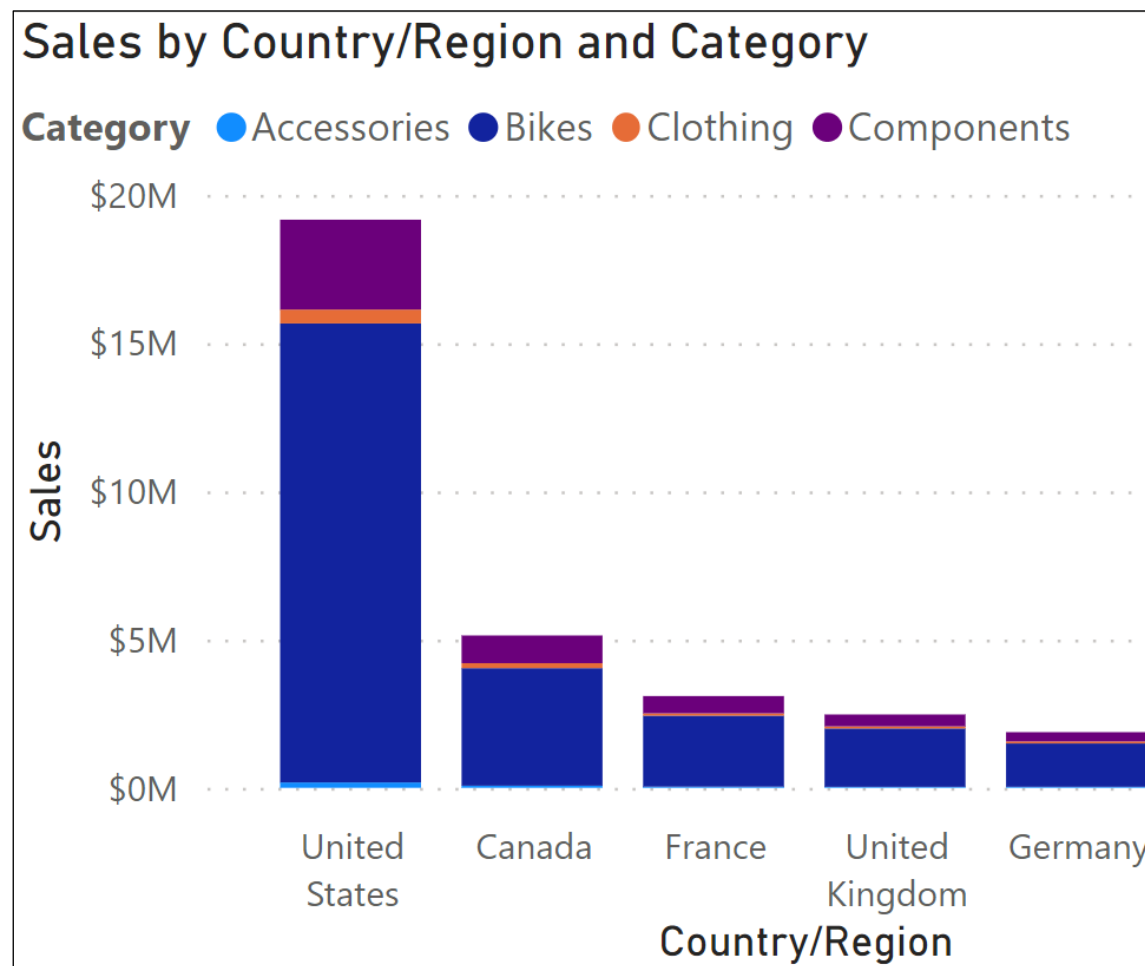
Use the Slicer visual to provide on-report filtering



Year ▼
FY2020 ▼

Group, Country, Region

- ☐ Select all
- ▼ ☐ Europe
- ▼ ☒ North America
- ▼ ☐ Pacific



Sync slicers >> ✕

Add and sync with all pages, or select specific pages:

Page name	Refresh	Sync
Overview	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Profit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
My Performance	<input type="checkbox"/>	<input type="checkbox"/>
Product Details	<input type="checkbox"/>	<input type="checkbox"/>

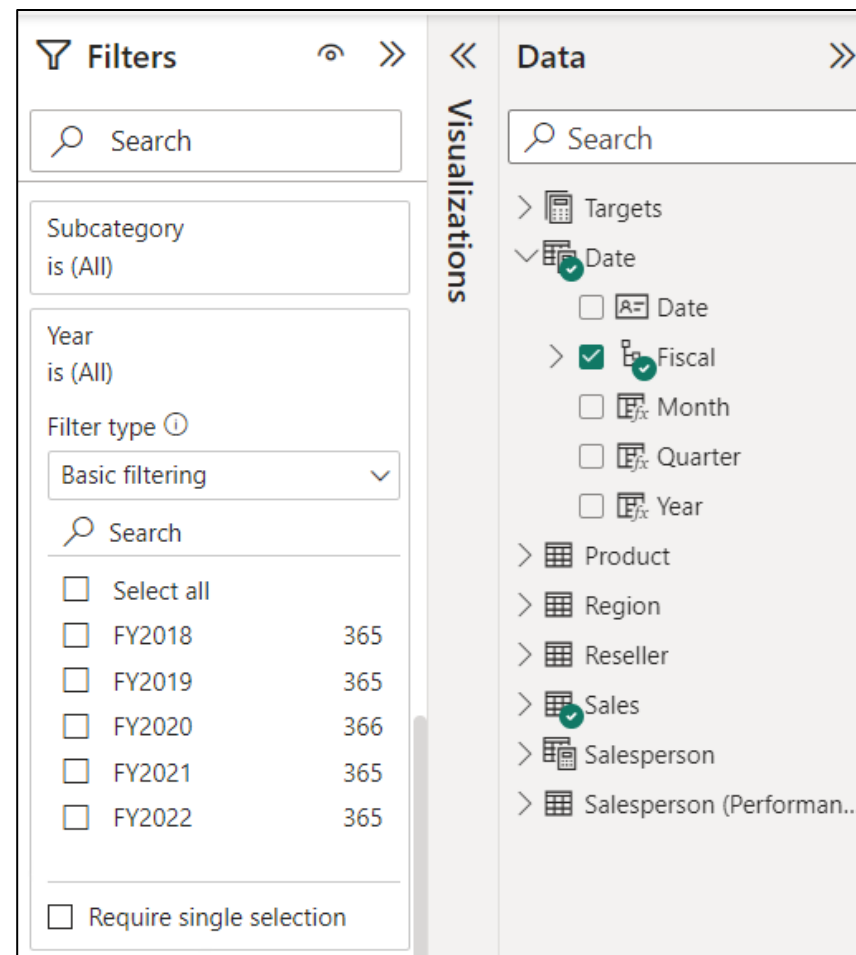
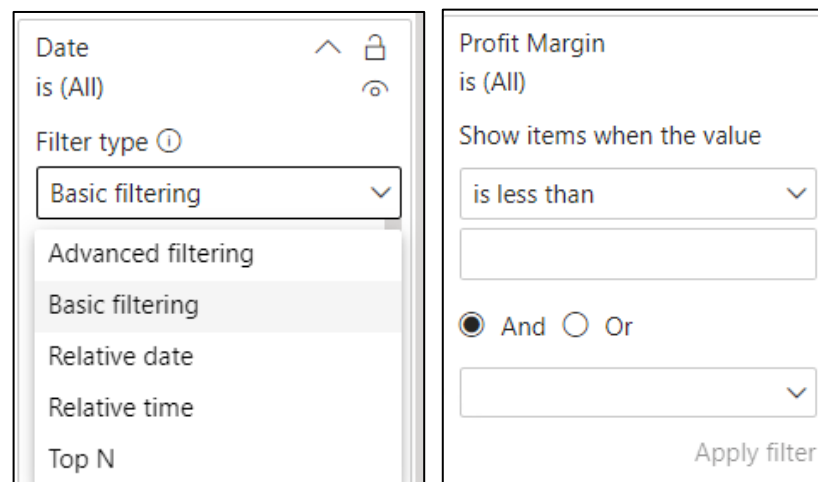
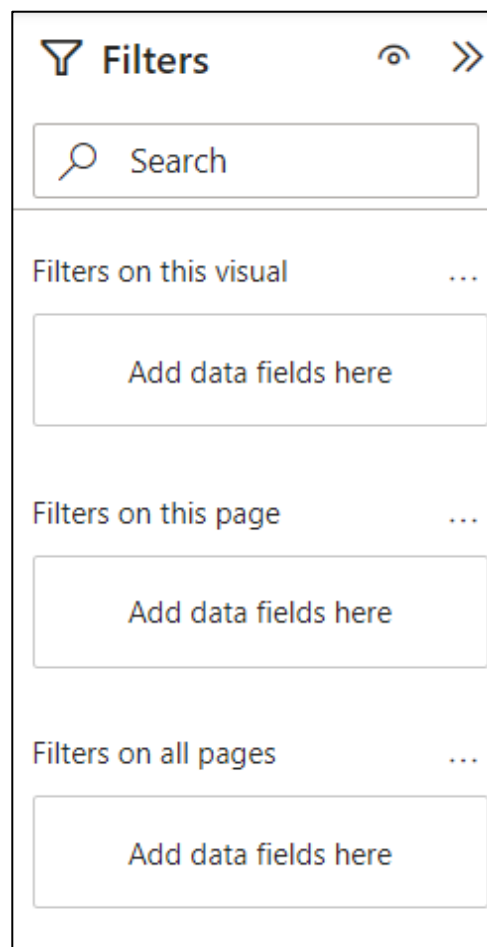
▼ Advanced options

Enter a group name to sync selection to any other visuals with that group name

Region

- ☒ Sync field changes to other slicers
- ☒ Sync filter changes to other slicers

Create complex filter conditions with the Filter pane



Enhance design with report elements

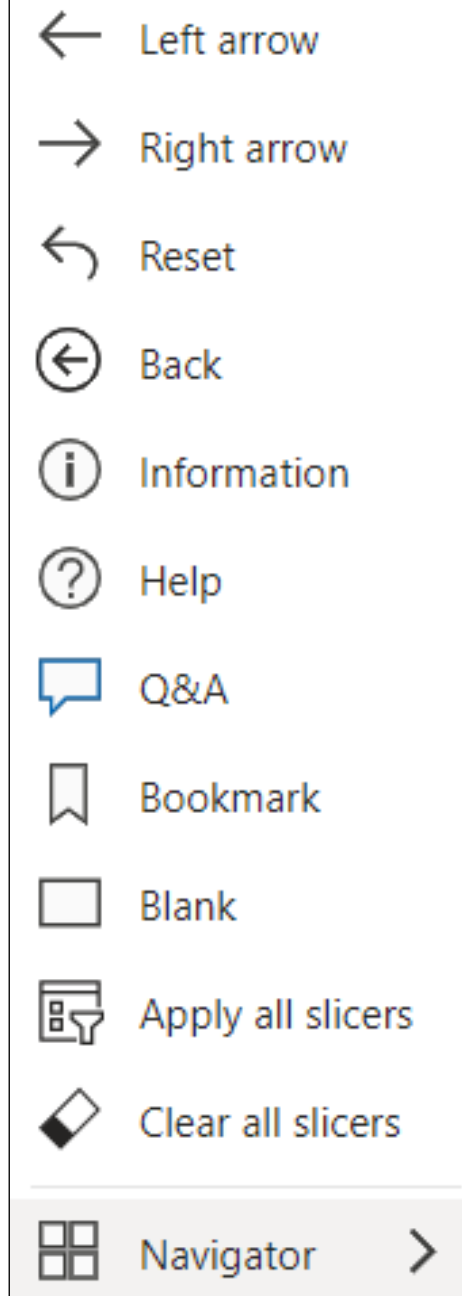
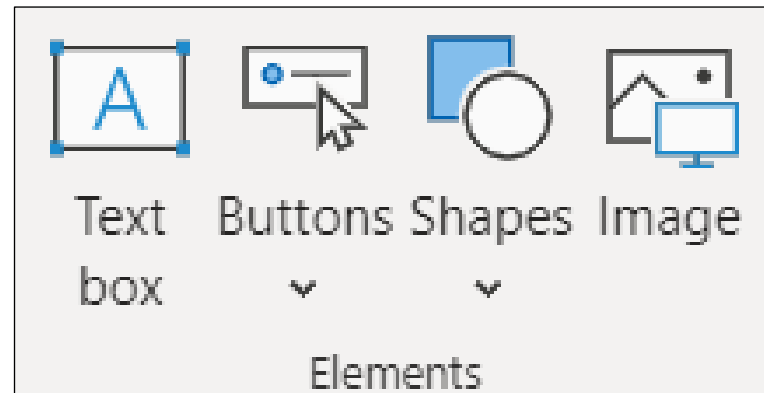


Add shapes and buttons

Enhance reports with:

- Text boxes
- Images
- Shapes

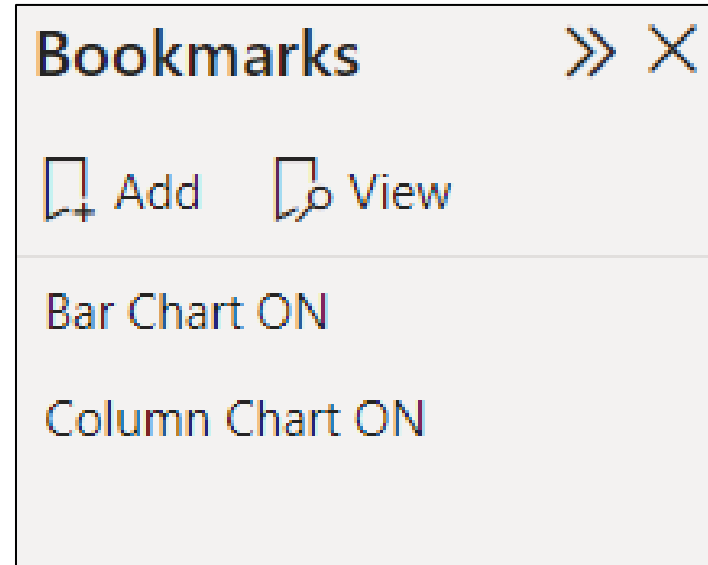
Improve navigation with Buttons.



Preserve report state with bookmarks

Bookmarks capture:

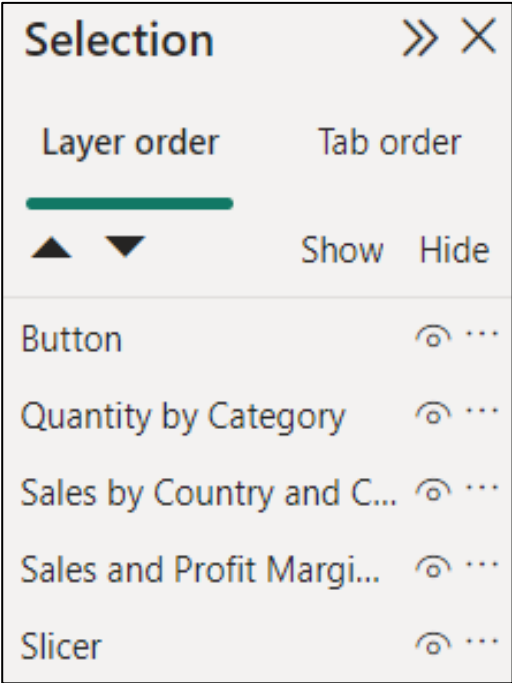
- Current page
- Filters
- Slicers
- Sort order
- Drill location



Use selection order for accessibility

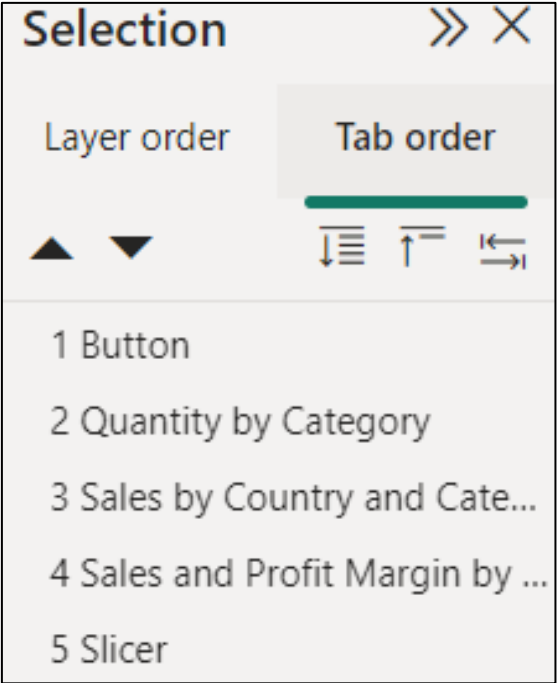
Layer order:

Defines the order of visuals.

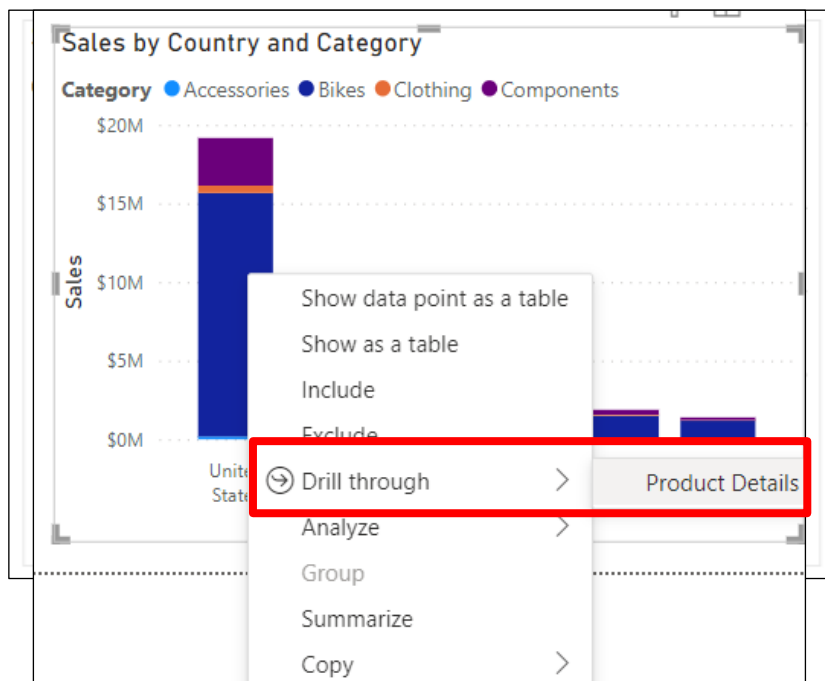


Tab order:

Controls keyboard user navigation.



Drill through from one visual to another



Bikes				
Subcategory	Color	Quantity	Sales	Profit Margin
Mountain Bikes	Black	2,501	\$2,484,496	8.69% ●
Mountain Bikes	Silver	3,384	\$2,603,065	7.56% ●
Road Bikes	Black	3,040	\$2,389,419	-6.13% ◆
Road Bikes	Red	205	\$300,532	-6.07% ◆
Road Bikes	Yellow	3,938	\$3,380,758	-6.60% ◆
Touring Bikes	Blue	2,988	\$2,627,332	-5.65% ◆
Touring Bikes	Yellow	2,065	\$1,696,351	-16.63% ◆
Total		18,121	\$15,481,954	-2.62%

Drill through

Cross-report ☐ Off

Keep all filters ☒ On

Category is Bikes

Country is United States

Year is FY2020

Choose when to use paginated reports


Buying Group	Tailspin Toys	Location	Absecon, NJ,Aceituna...	View Report
Invoices From Date:	05/01/2016	Invoices To Date:	05/31/2016	

Buying Group Account Statement

Invoice Range: May 01, 2016 to May 31, 2016

Buying Group: Tailspin Toys, 201 Customers Selected

Floor 20, Import Plaza
105 Silk Road
Tradesville
WA 99999



Invoice No: **73507-70431**

Invoice 2 of 3

Invoice Date: May 31, 2016

Delivery Time:

Purchase Order No: 16826

Received By:

Billed To: Tailspin Toys (Head Office)

Delivery Information: Suite 150, 1959 Sarma Road

Item	Quantity	Unit Price	Tax	LineTotal
DBA joke mug - you might be a DBA if (White)	7	\$13.00	\$13.65	\$104.65

Lab: Enhance a report in Power BI Desktop (45 minutes)



[Enhance a Report | GitHub Exercise](#)

In this lab, you'll enhance the Sales Analysis with advanced design features.

In this lab you learn how to:

- Sync slicers
- Create a drill through page
- Apply conditional formatting
- Create and use bookmarks

Knowledge check: enhance reports



What type of report visual can effectively show the stock levels at a company?

- ☐ Bar chart
- ☐ Pie chart
- ☒ Line chart

What type of report visual can show detailed sales values over time and by type?

- ☒ Matrix
- ☐ Table
- ☐ Treemap

Recap

In this section, we covered:

Choosing effective visuals and add to canvas.

Formatting and configuring visuals.

Designing report layout and interactions.

Configuring navigation and filtering.

Enhancing design with report elements, including bookmarks.

Setting tab and layer order to increase accessibility.

How to use drill down and drill through for additional insights.

When to use paginated reports.



Perform Advanced Analytics with Power BI Desktop

aka.ms/PL300-6



Agenda

Explore insights with Advanced Analytics

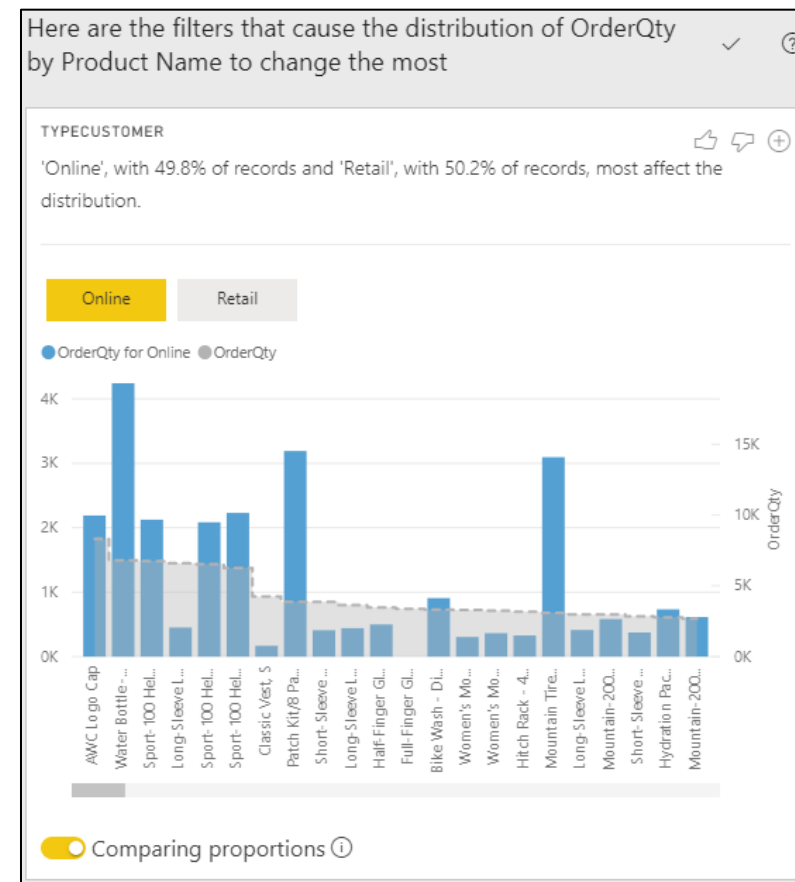
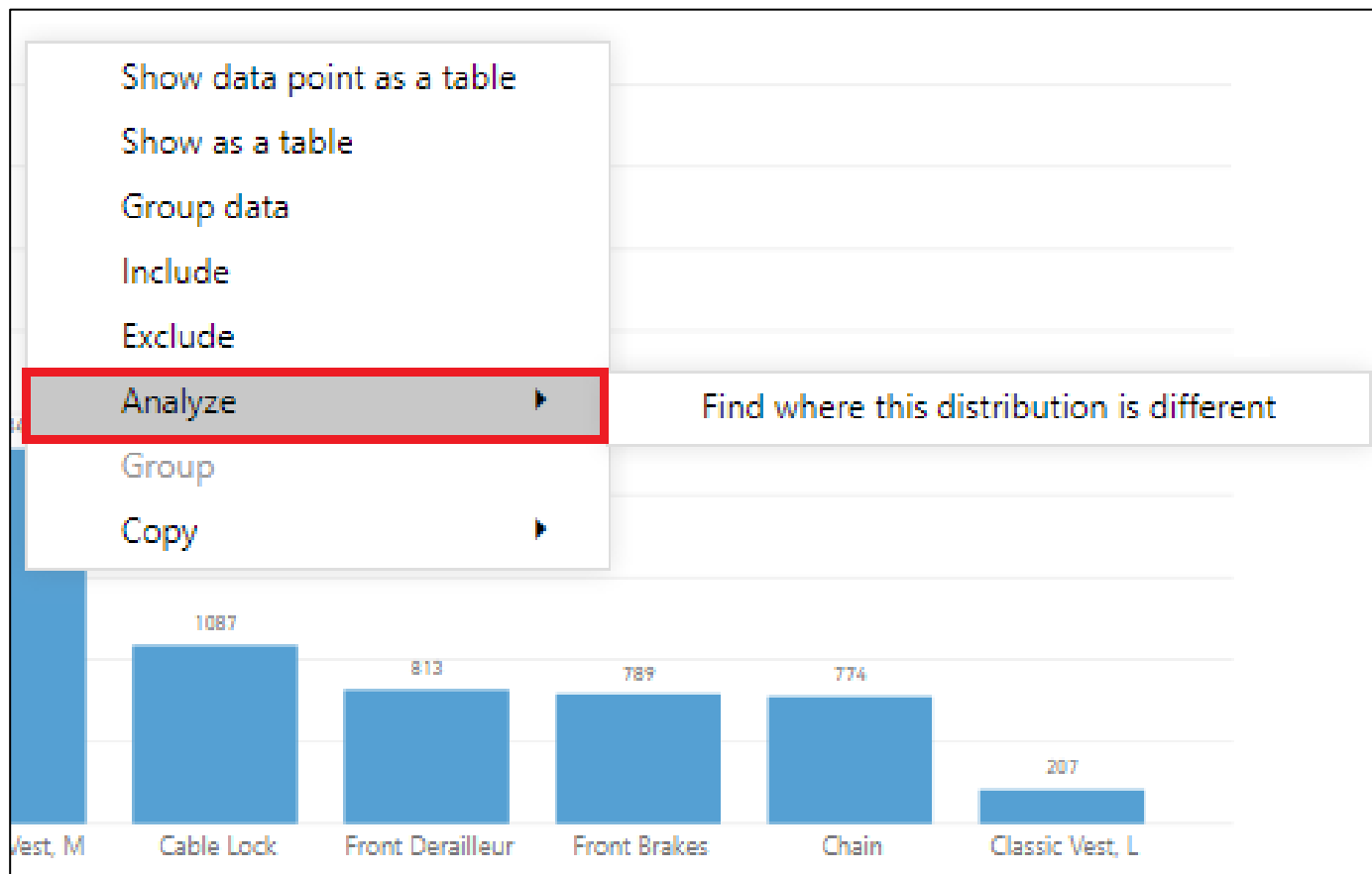
- Data comparison with Analyze feature.
- Group and bin data.
- Cluster data and find outliers with Scatter chart visual.
- Key Performance Indicator visual.
- What-if parameters for scenario planning.

Leverage AI visuals

Explore insights with Advanced Analytics

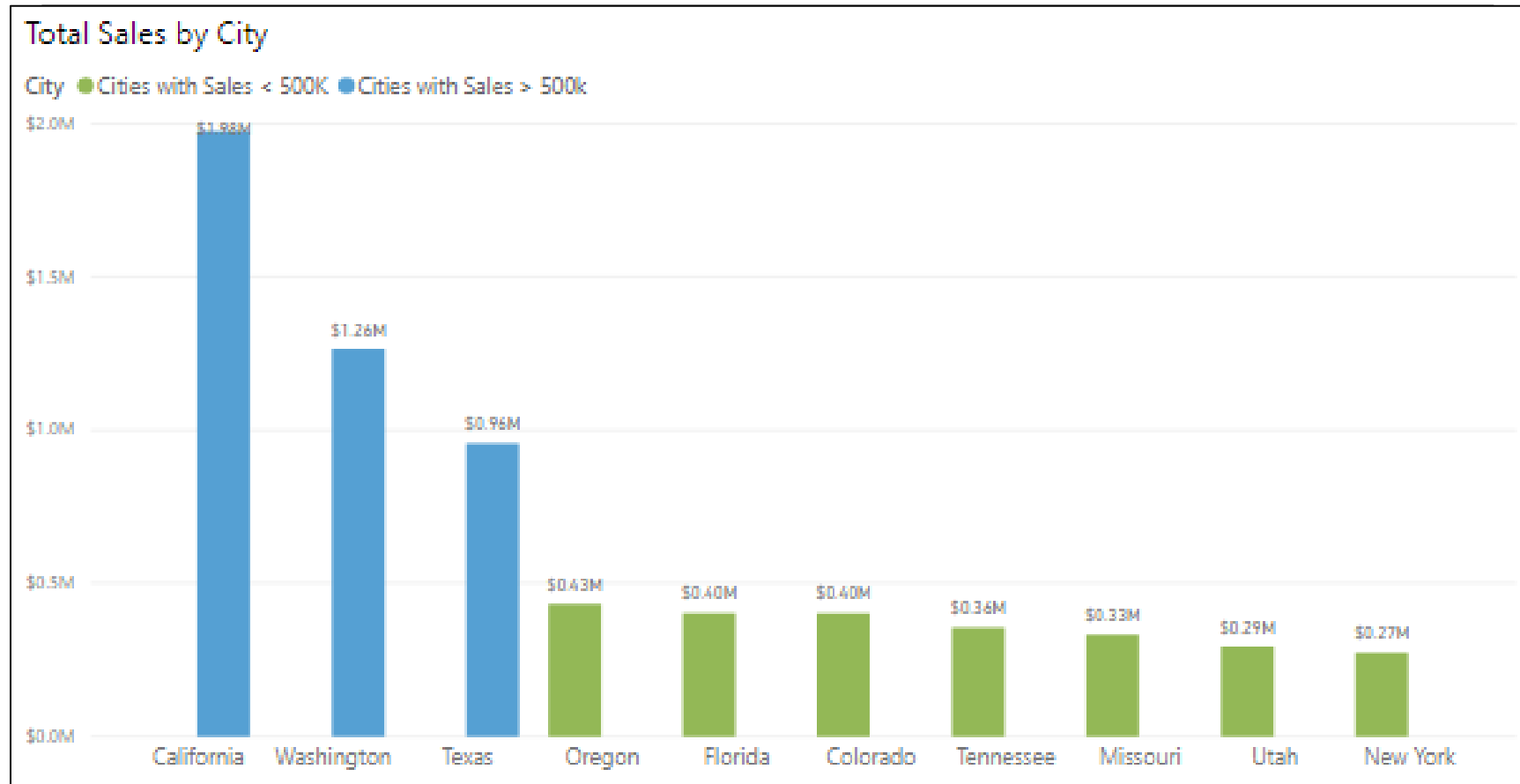


Compare data with the Analyze feature



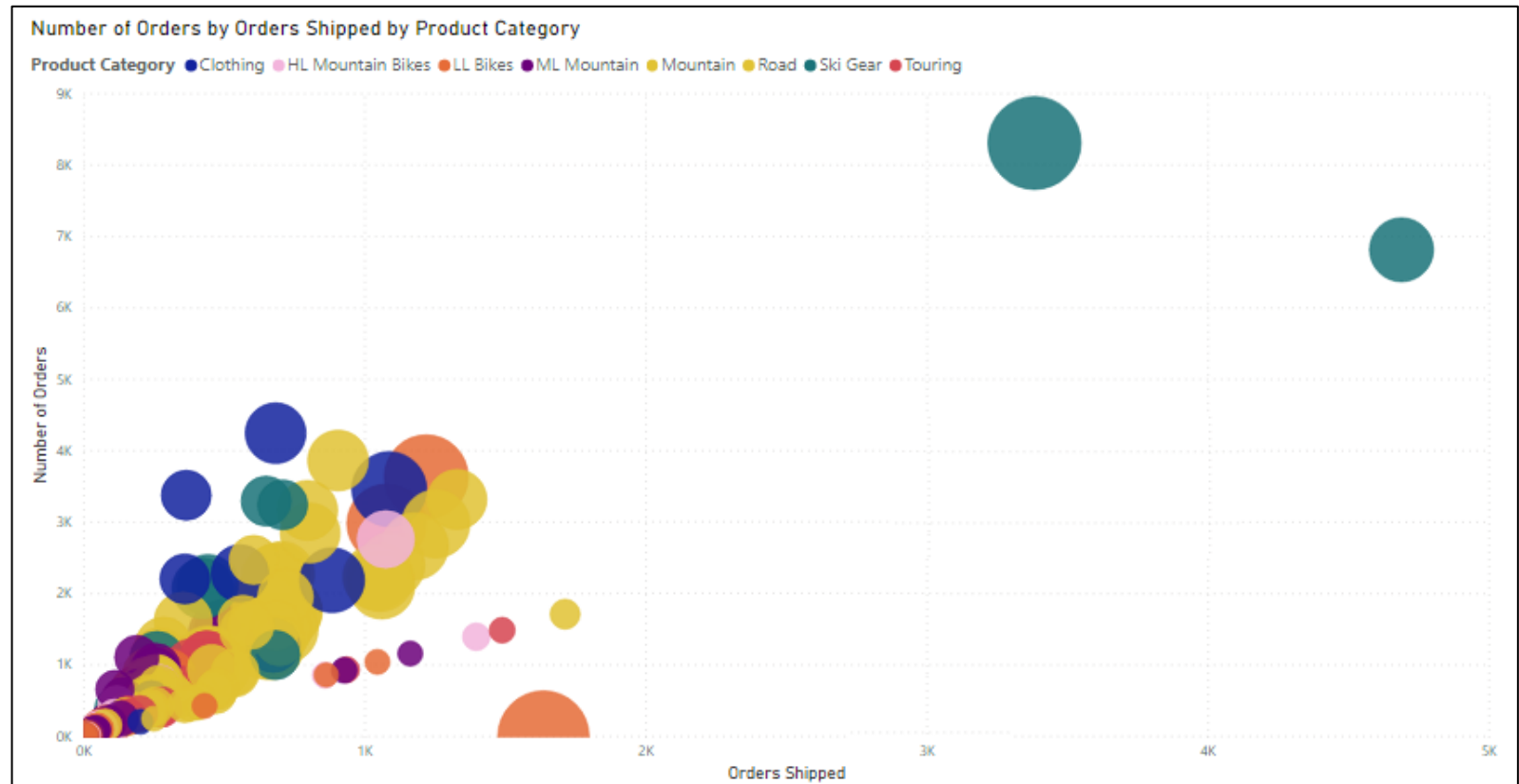
Group and bin data

Organize data into categories or intervals to better analyze and visual data.



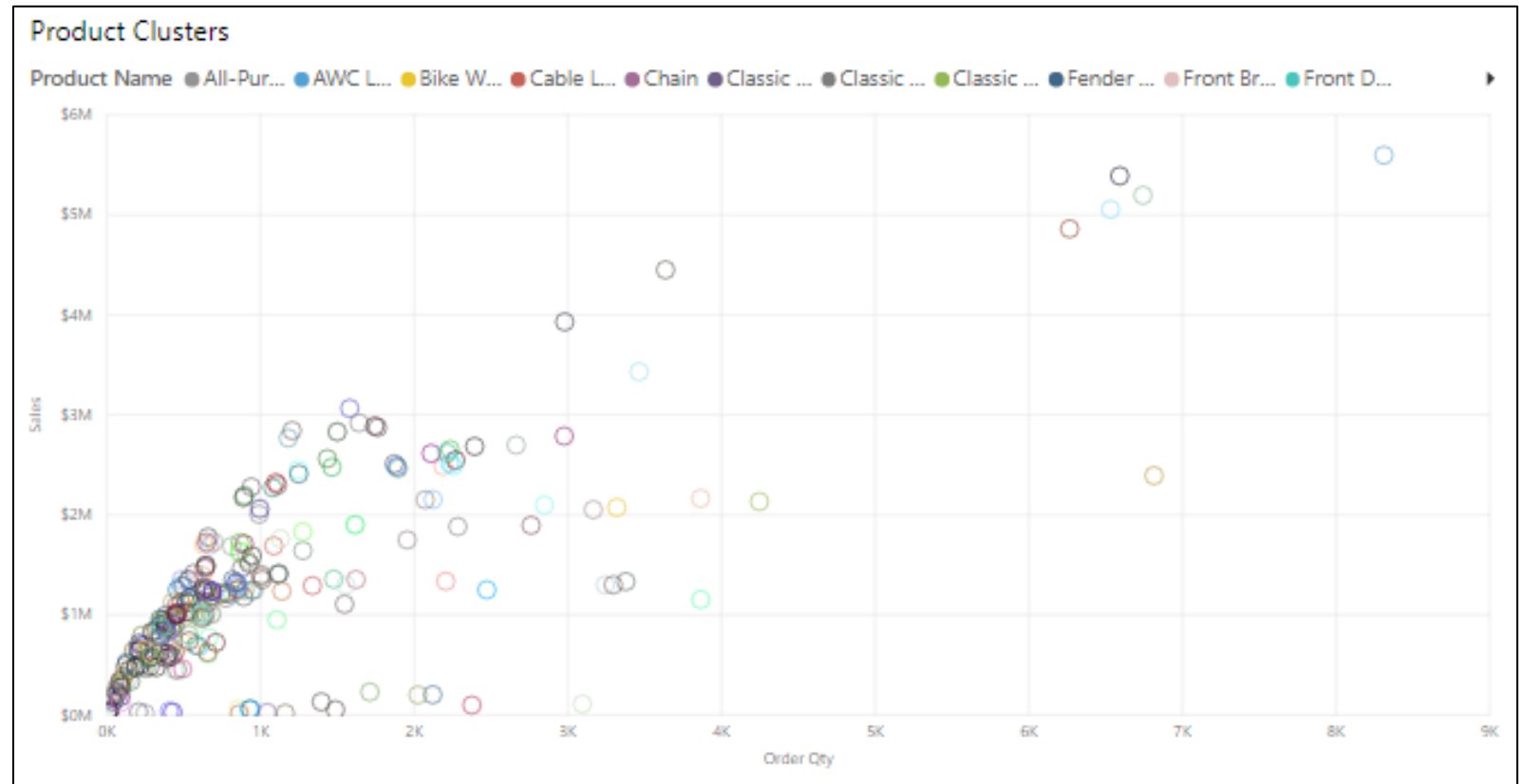
Identify outliers in data

- Unexpected deviations in data.
- Scatter charts can detect outliers.
- Use DAX to define and analyze outliers dynamically.



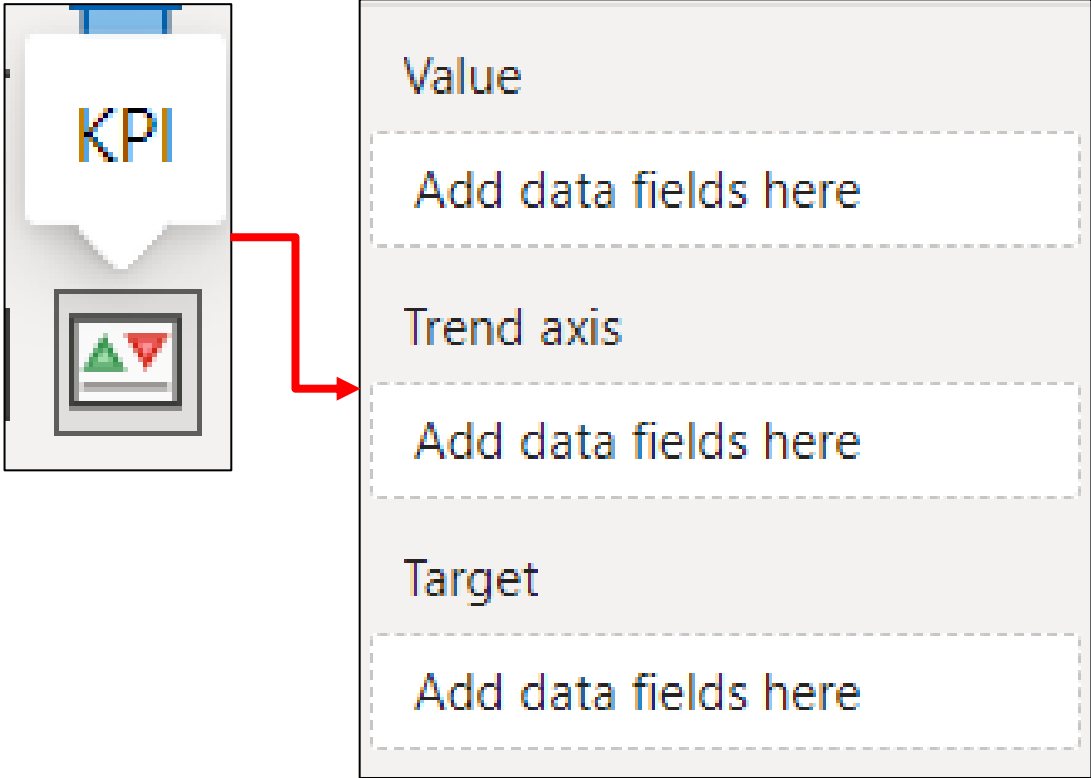
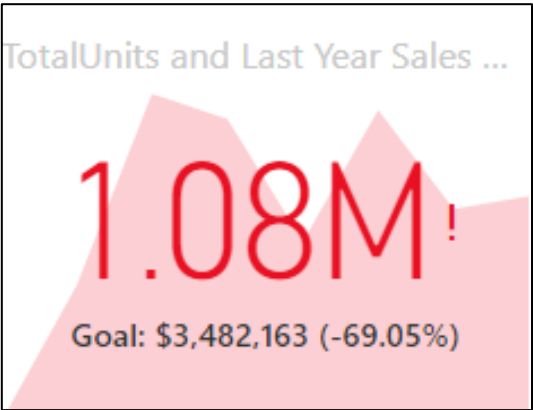
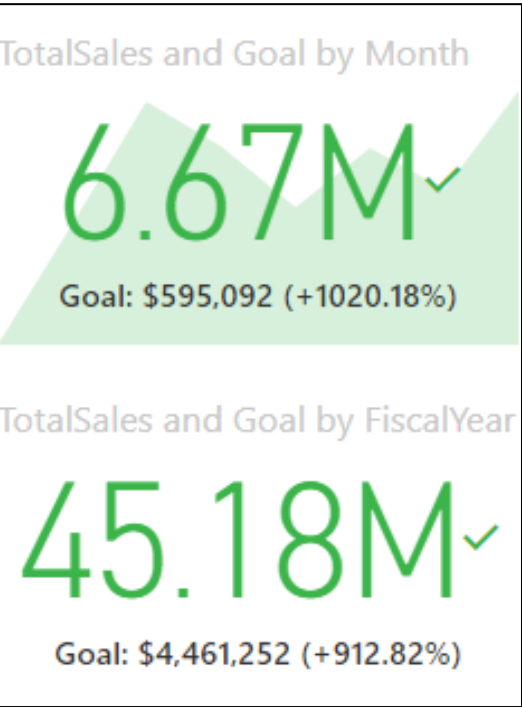
Clustering with Scatter chart visual

- Automatic data grouping.
- Enhance pattern recognition and insights.
- Simplify data understanding and analysis.



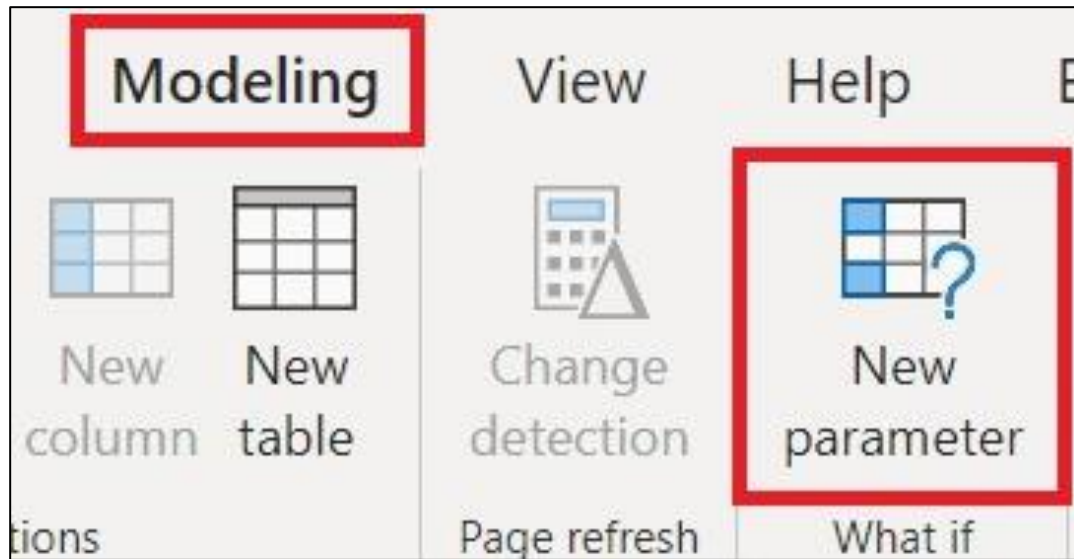
Key Performance Indicator visual

At-a-glance insights into performance against predefined targets.



What-if parameters

Enable scenario planning and interactive exploration for better decision-making.



What-if parameter

Name

Data type

Minimum

Maximum

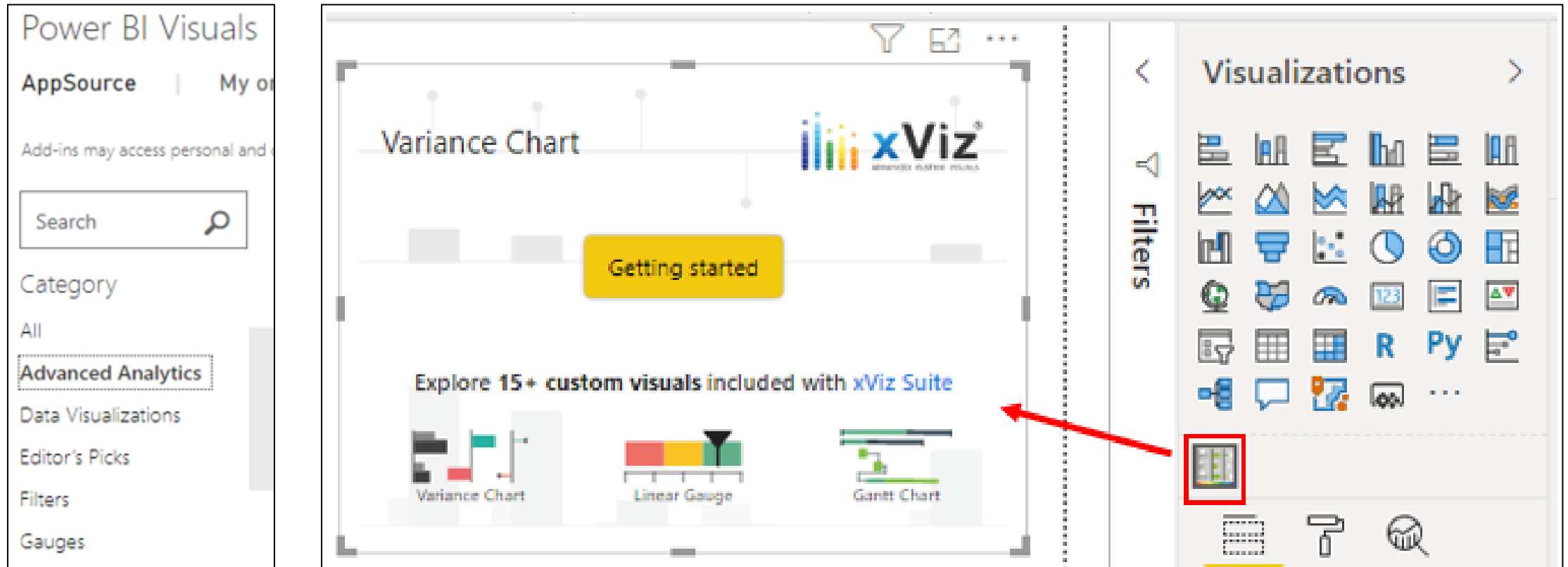
Increment

Default

☒ Add slicer to this page

Advanced Analytics custom visuals

Discover additional visuals developed with Advanced Analytics in mind.



Leverage AI visuals



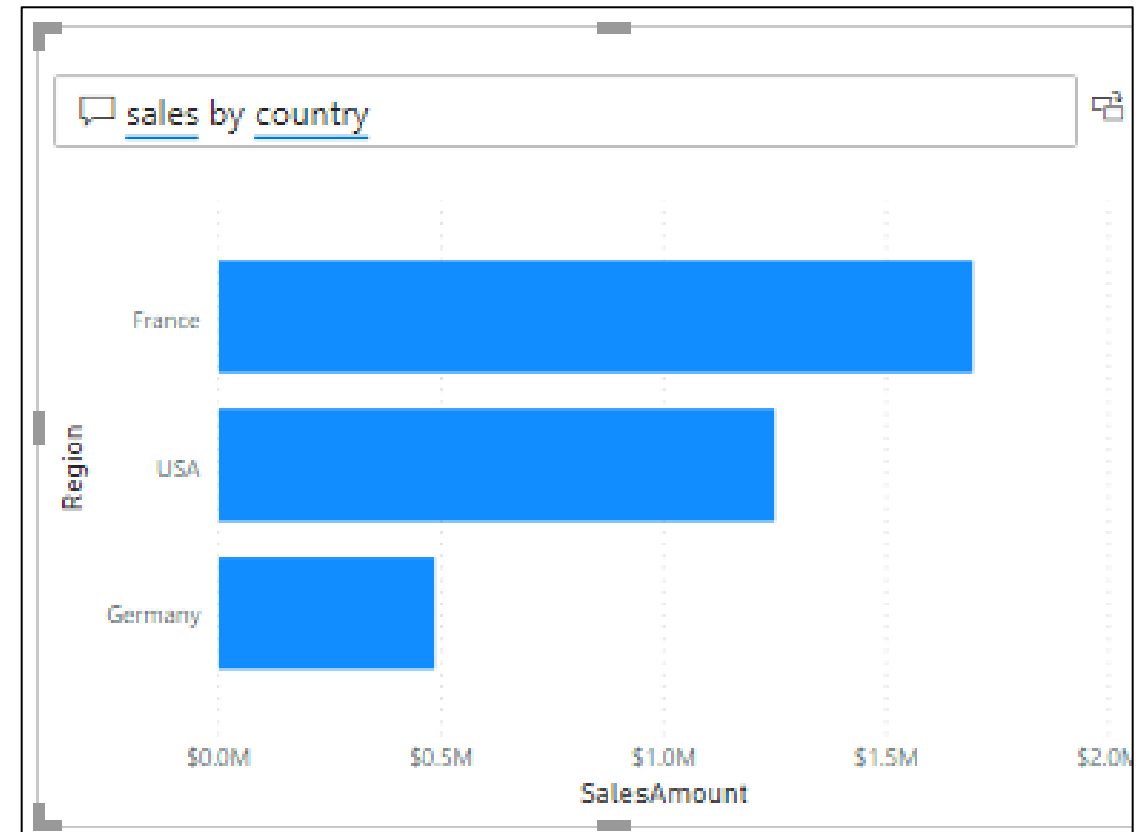
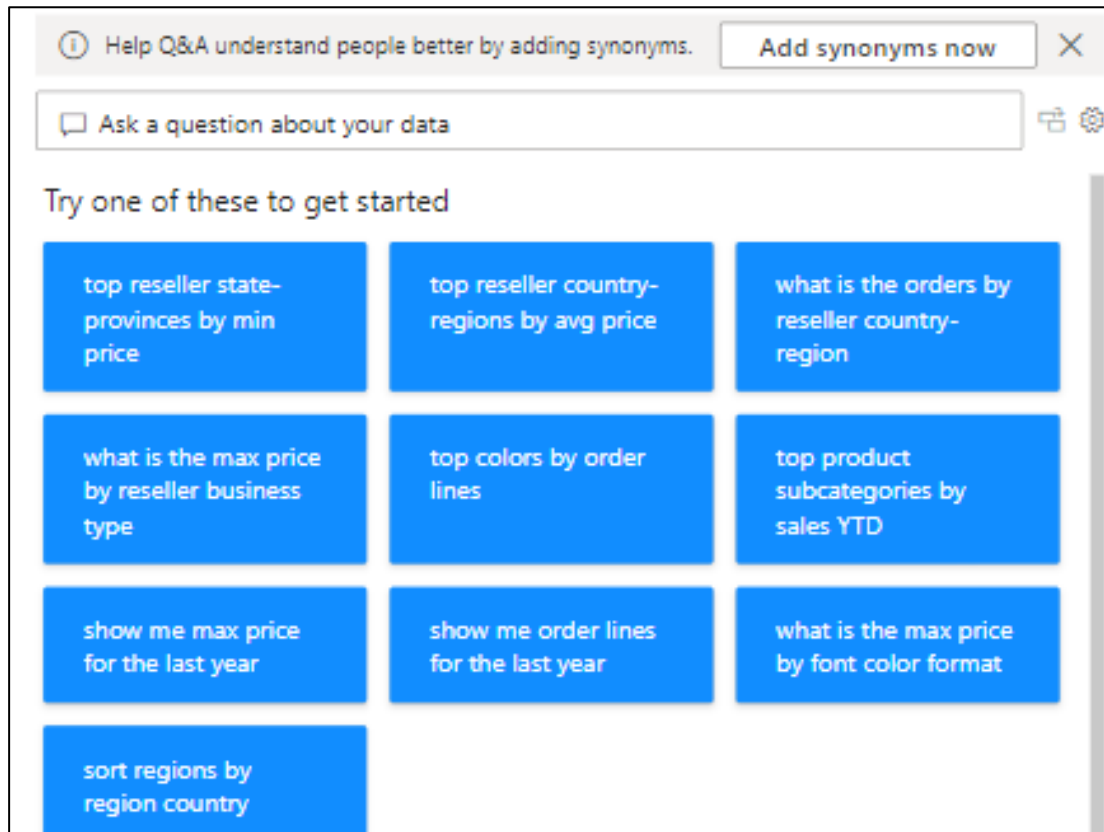
AI Insights for data preparation in Power Query Editor

Leverage AI analysis of text, images, and use Azure Machine Learning models.



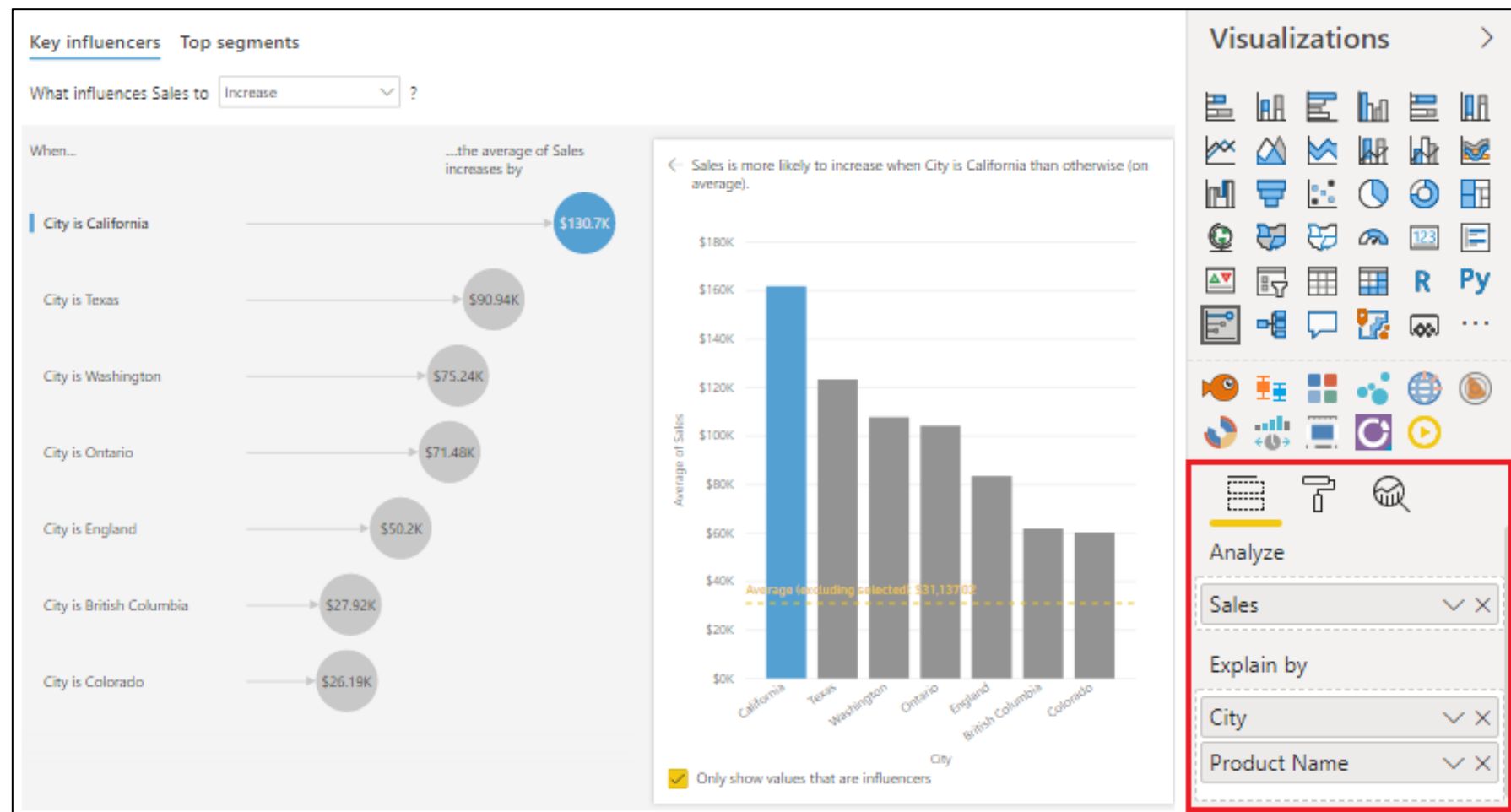
AI in the Q&A feature

Use natural language to ask questions about data and create visuals for insights.



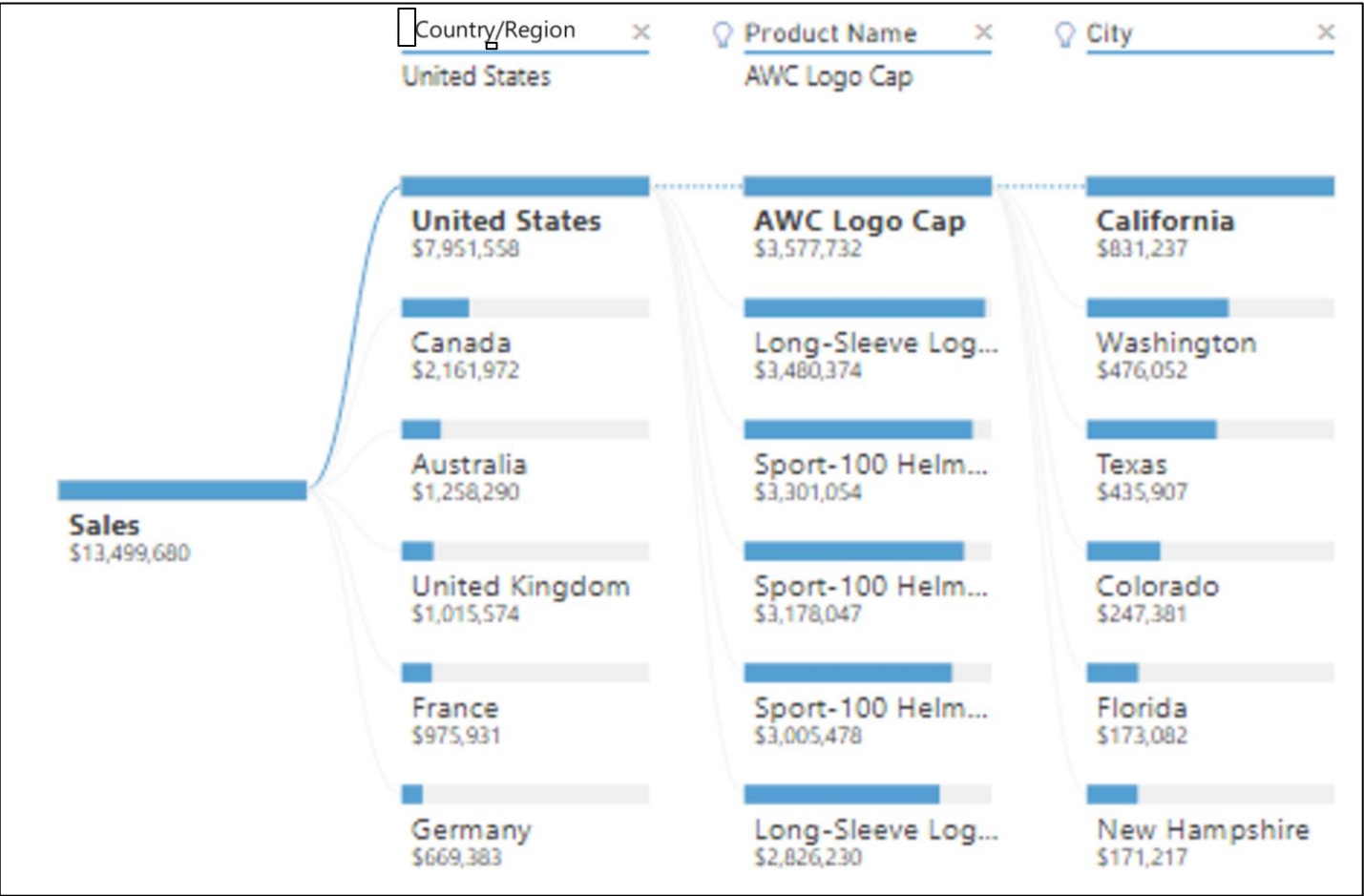
Key influencers visual

Identify factors driving variations in a chosen target metric.



Decomposition tree visual

Visualize data hierarchies for in-depth exploration and pattern discovery.



Lab: Perform data analysis in Power BI (30 minutes)



[Perform Data Analysis | GitHub Exercise](#)

In this lab, you'll create the Sales Exploration report.

In this lab you learn how to:

- Create animated scatter charts
- Use a visual to forecast values

Knowledge Check: AI Visuals



Where are time series charts located?

- ☐ The filter pane is where all filters on visuals and pages are located.
- ☒ Time series charts can be imported from AppSource.
- ☐ The fields pane is where all charts are located.

What visual should be used to display outliers?

- ☐ The line chart is best-suited to display outliers.
- ☒ The scatter chart is best-suited to display outliers.
- ☐ The clustered column chart is best-suited to display outliers.

Recap

In this section, we covered:

Grouping and binning and the Analyze feature to compare data.

Clustering data and finding outliers with the Scatter chart visual.

Scenario planning with what-if parameters.

Leveraging AI during data preparation.

Discovering trends and patterns with Key Influencers and Decomposition Tree visuals.

Thanks

Resources

[Design Power BI reports](#)

[Configure Power BI report filters](#)

[Enhance Power BI report designs for the user experience](#)

[Perform advanced analytics in Power BI](#)