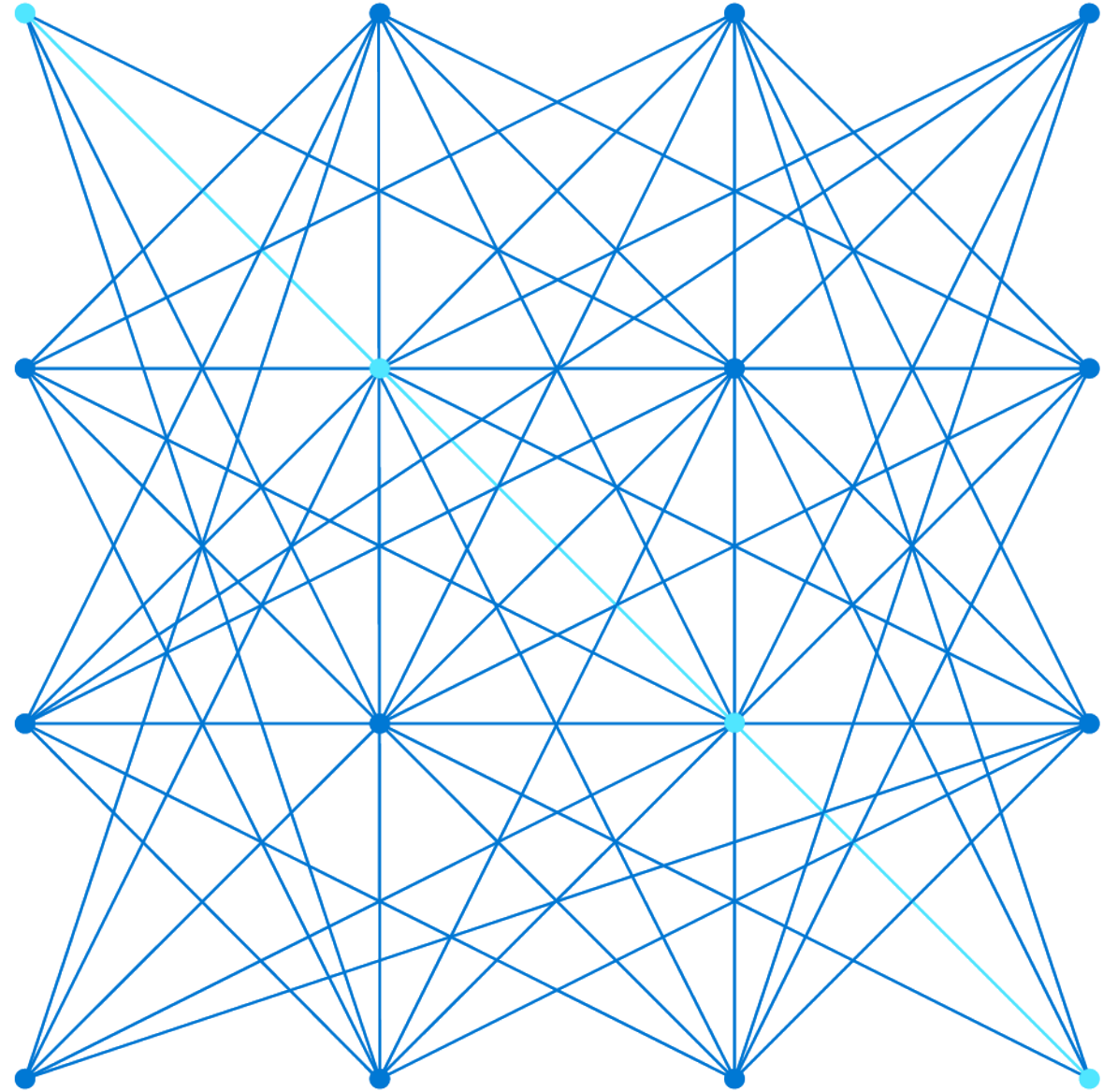


Online Role-based training resources:

**Microsoft Learn**

<https://docs.microsoft.com/en-us/learn/>

# PL-300 Analyzing Data with Power BI



# **Module 7: Create Reports**

# Learning Objectives

You will learn the following concepts:

- Design a Report
- Enhance a Report

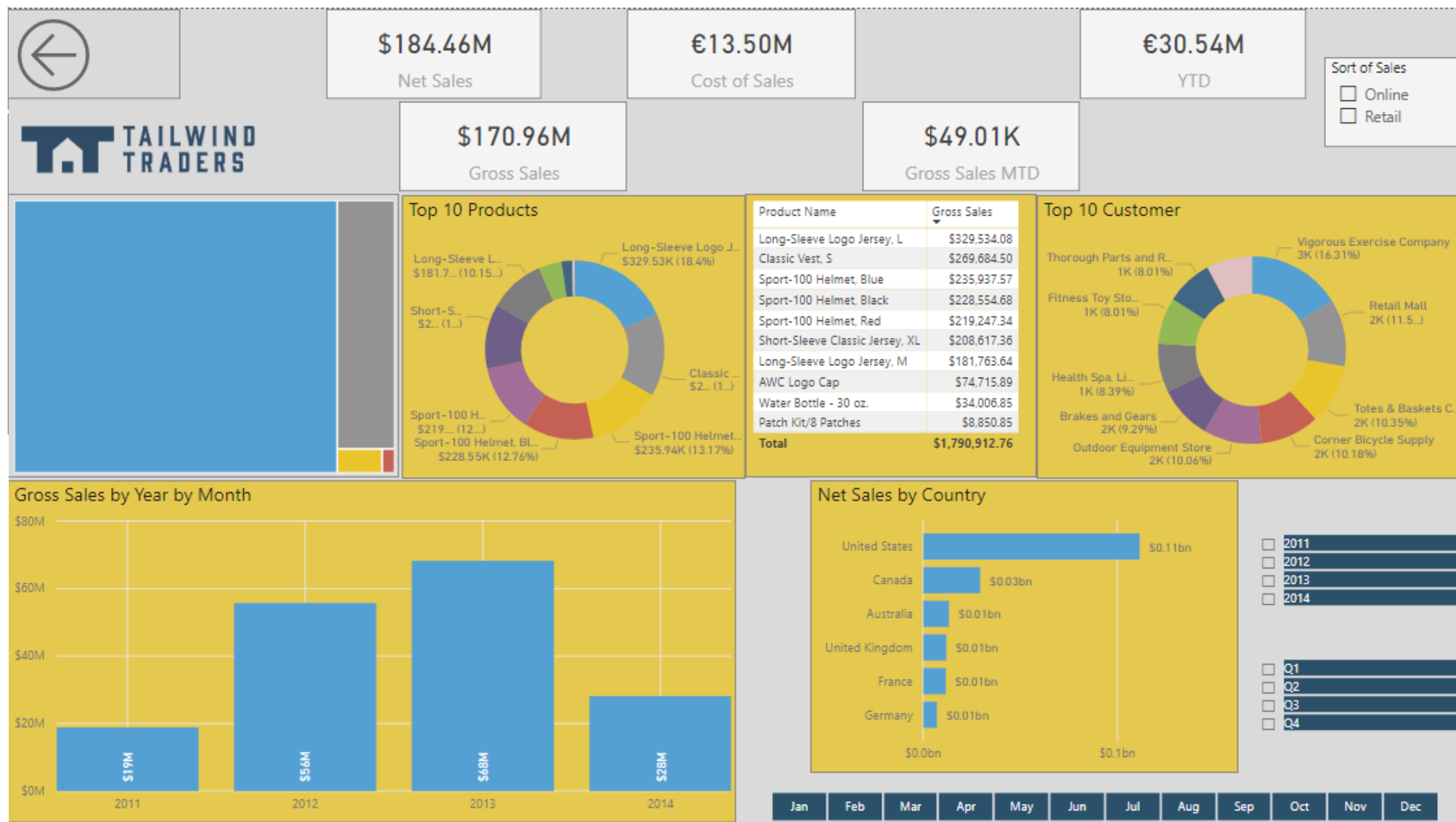
# Lesson 1: Design a Report



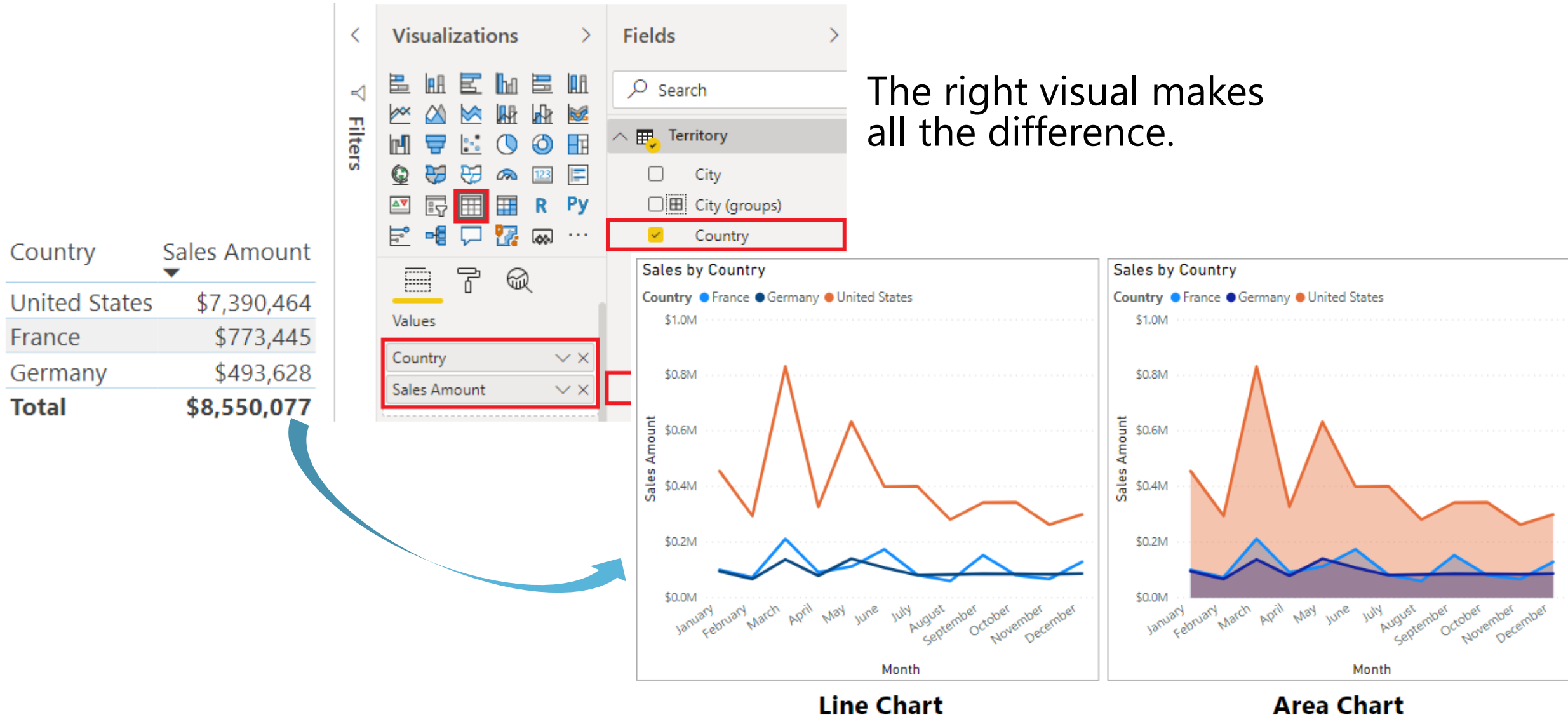
# Introduction

- Visuals allow you to share data insights more effectively.
- Effective visualizations help your users connect and interact with the information.

# Design a Report Layout

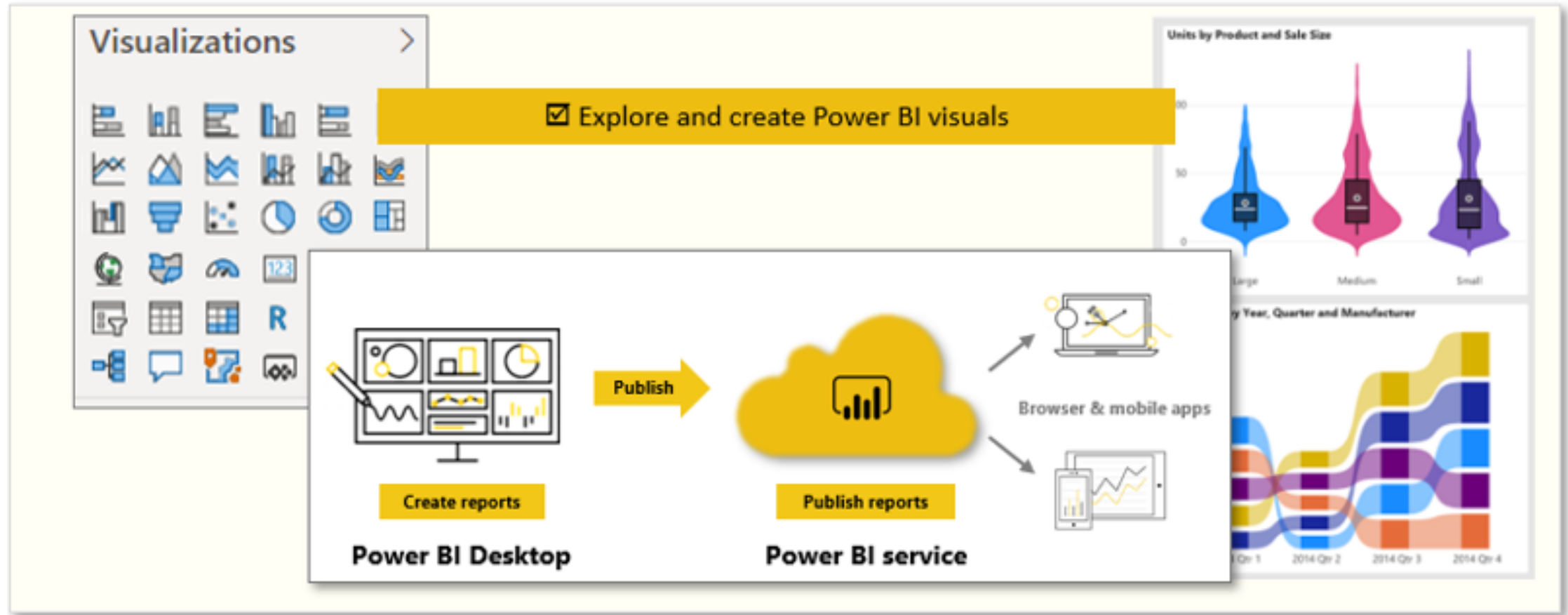


# Choosing Effective Visualizations

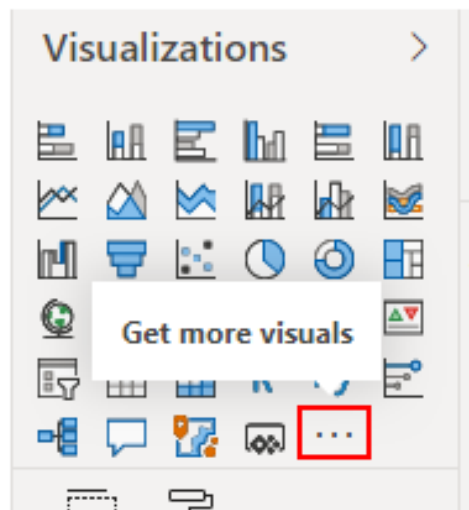




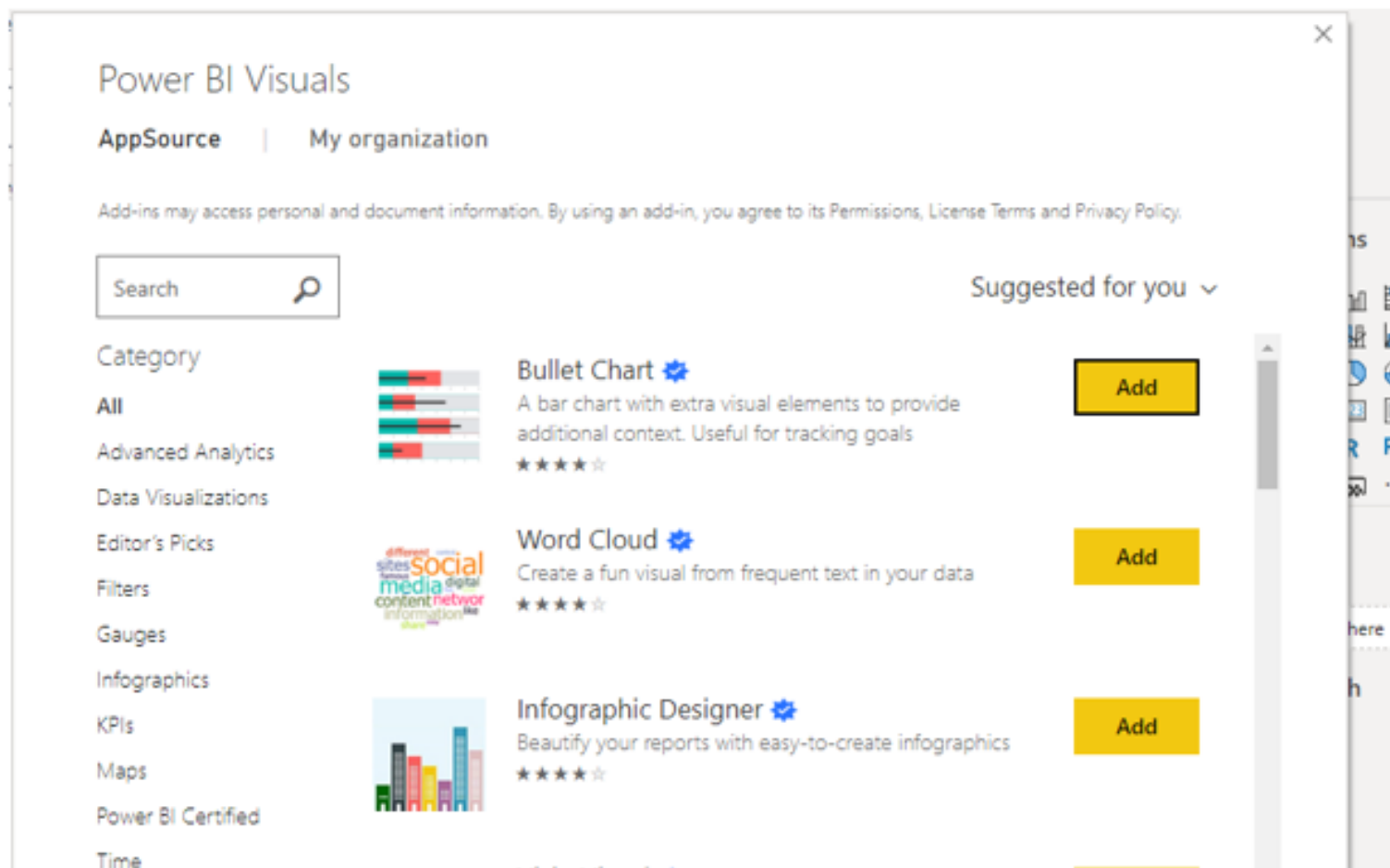
# Adding Visualizations to Reports



# Import a Custom Visual



Use visuals tailored  
for your needs.



# Add an R or Python Visual

- Create advanced analytics and visualizations using R scripts.
- Use Python to visualize your data.

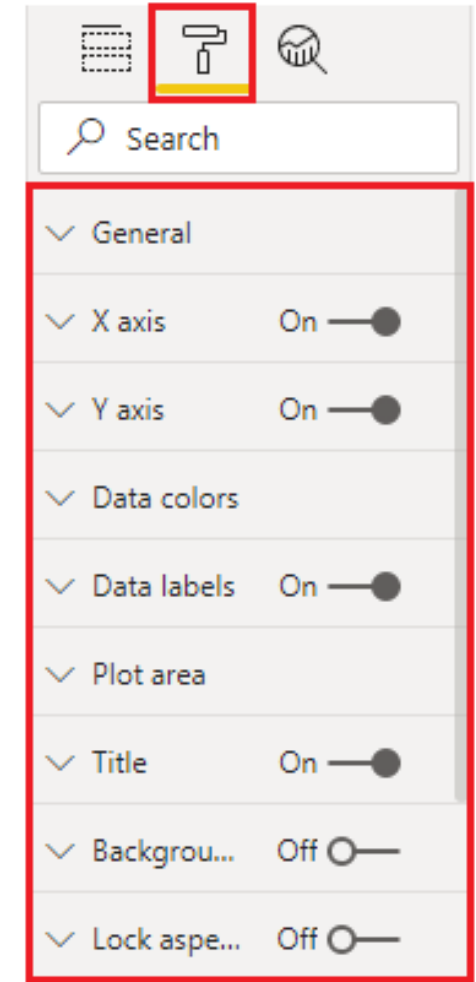
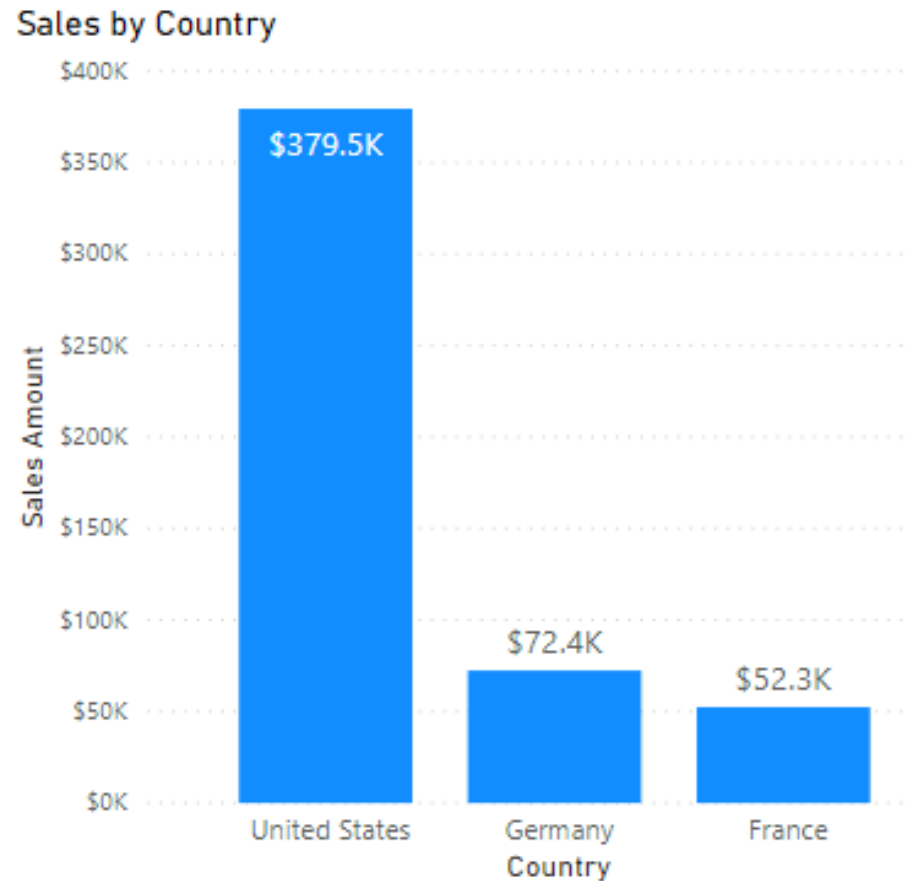


The screenshot shows the Microsoft Power Platform interface. On the right, the 'Visualizations' pane is open, displaying a grid of visualization icons. The 'R' and 'Py' icons are highlighted with a red box. Below the grid, the 'Values' section has a dashed box labeled 'Add data fields here'. The 'Drill through' section has a 'Cross-report' toggle set to 'Off' and a 'Keep all filters' toggle set to 'On'. Below these, there is another dashed box labeled 'Add drill-through fields here'.

At the bottom, the 'R script editor' pane is visible, containing the text: 'Drag fields into the Values area in the Visualization pane to start scripting.'

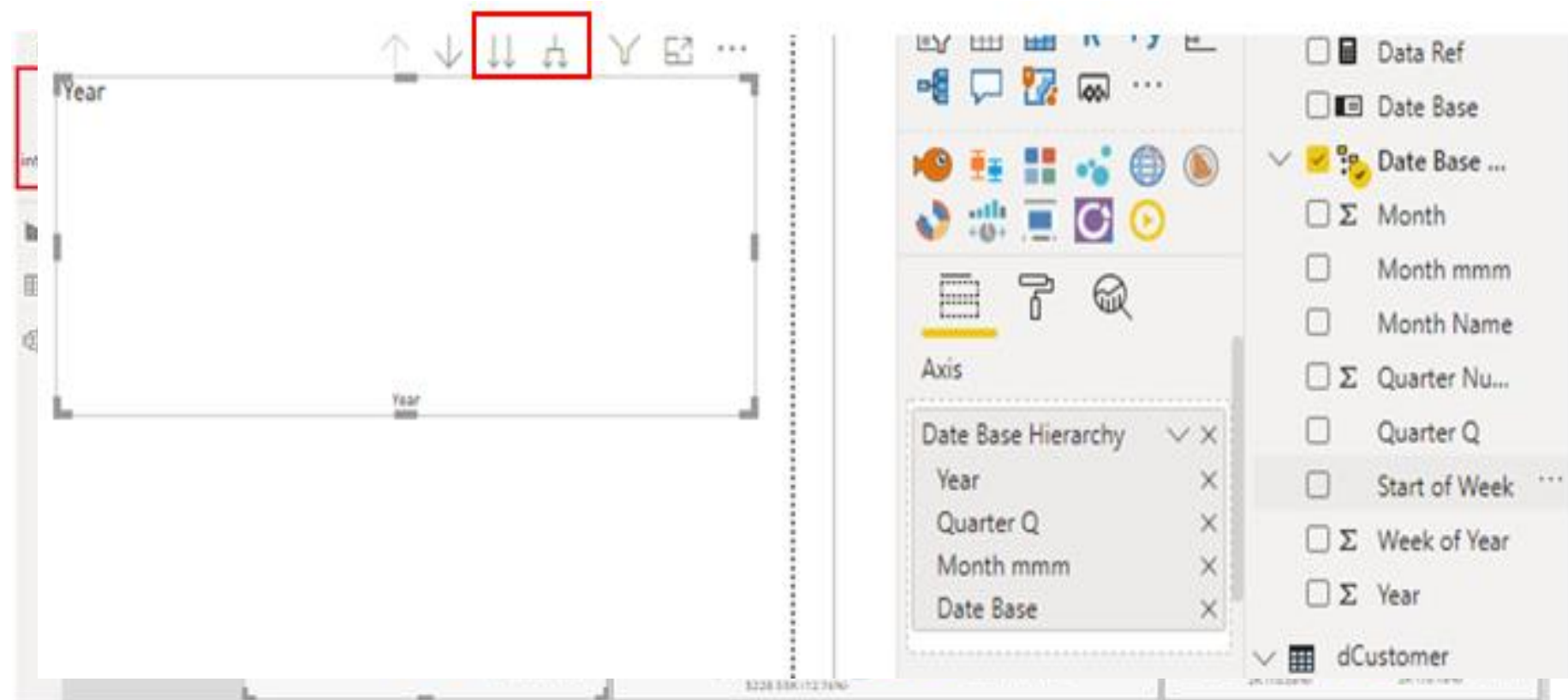
# Format and Configure Visualizations

- Control the look and feel of each visual.
- Format options differ depending on the type of visual selected.

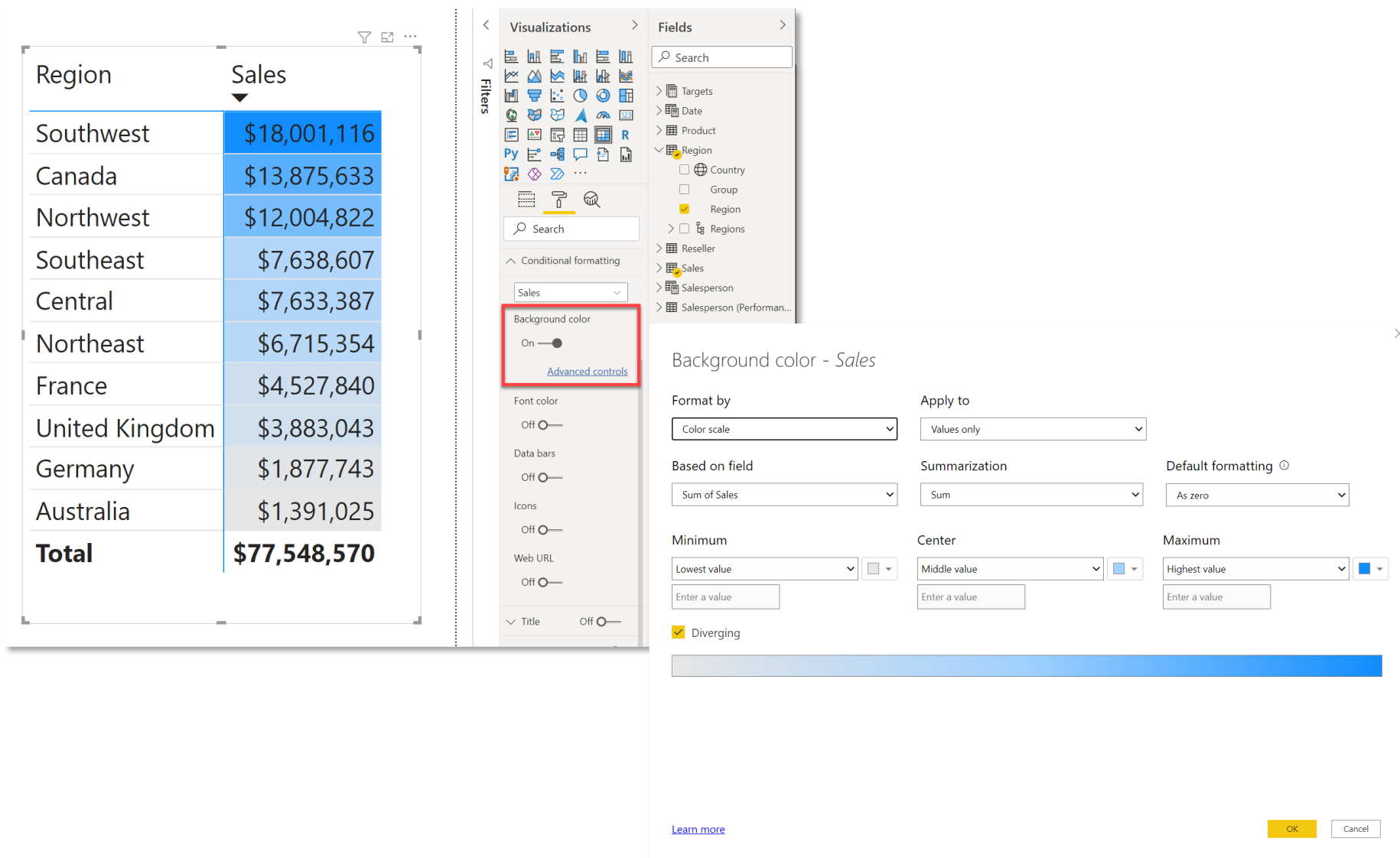


# Basic Interactions

- Use interactions to change how visuals impact each other.
- Use hierarchies to drill down for additional relevant content.



# Configure Conditional Formatting



The screenshot displays a Power BI report with a table of sales data. The table has two columns: 'Region' and 'Sales'. The 'Sales' column is formatted with a blue background color, indicating a diverging scale. The 'Conditional formatting' pane is open, showing the 'Background color' section with 'On' selected. The 'Advanced controls' dialog is also open, showing the 'Background color - Sales' settings.

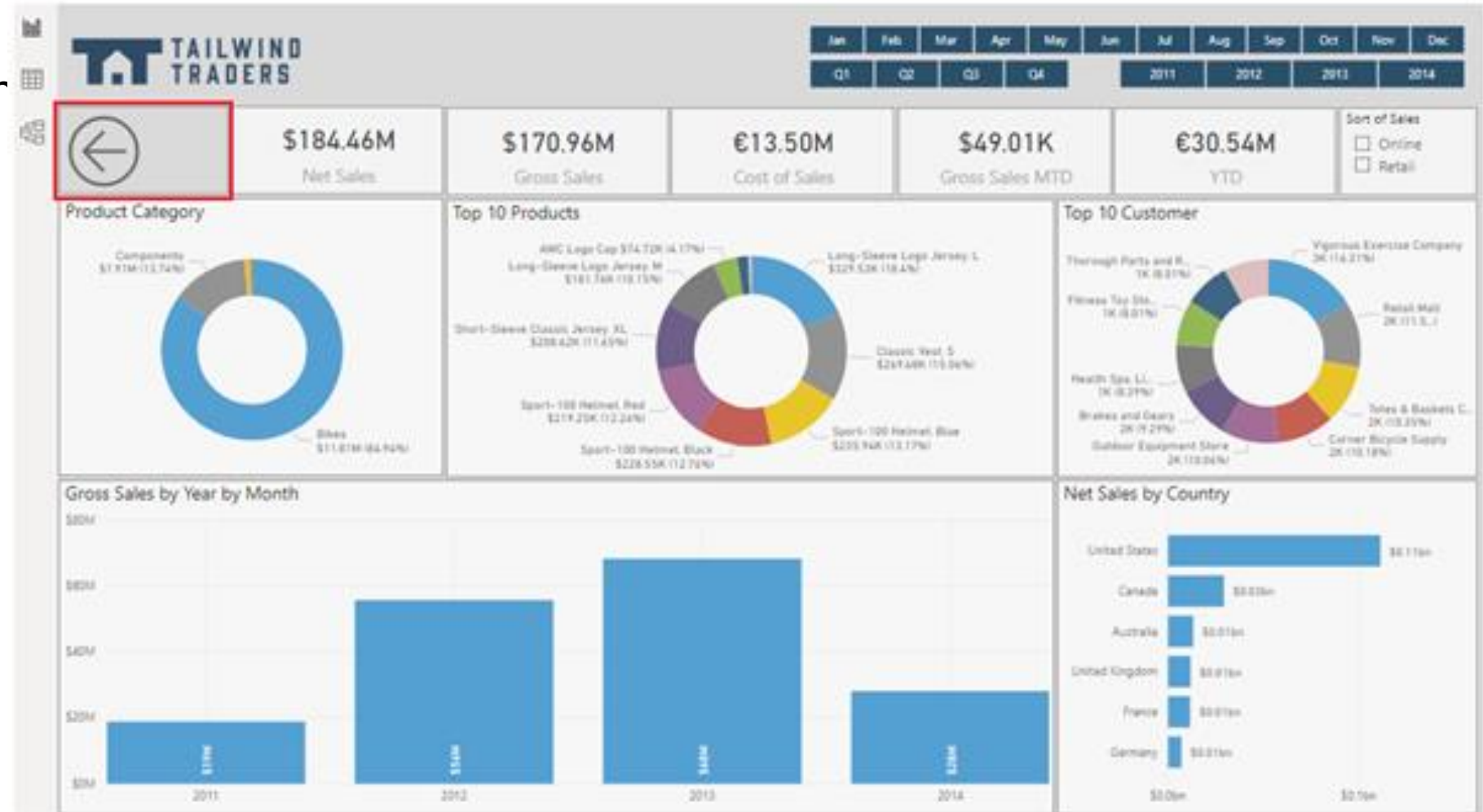
Region	Sales
Southwest	\$18,001,116
Canada	\$13,875,633
Northwest	\$12,004,822
Southeast	\$7,638,607
Central	\$7,633,387
Northeast	\$6,715,354
France	\$4,527,840
United Kingdom	\$3,883,043
Germany	\$1,877,743
Australia	\$1,391,025
<b>Total</b>	<b>\$77,548,570</b>

**Conditional formatting settings:**

- Background color:** On
- Format by:** Color scale
- Apply to:** Values only
- Based on field:** Sum of Sales
- Summarization:** Sum
- Default formatting:** As zero
- Minimum:** Lowest value
- Center:** Middle value
- Maximum:** Highest value
- Diverging:** Checked

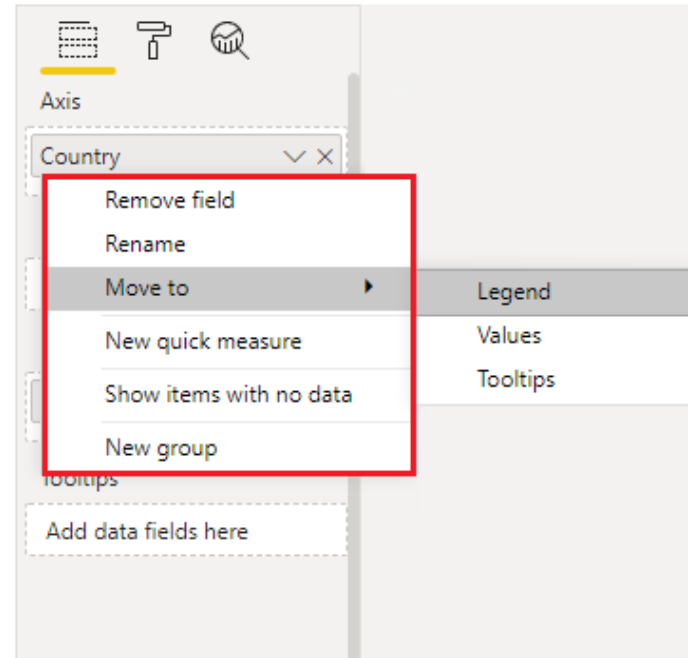
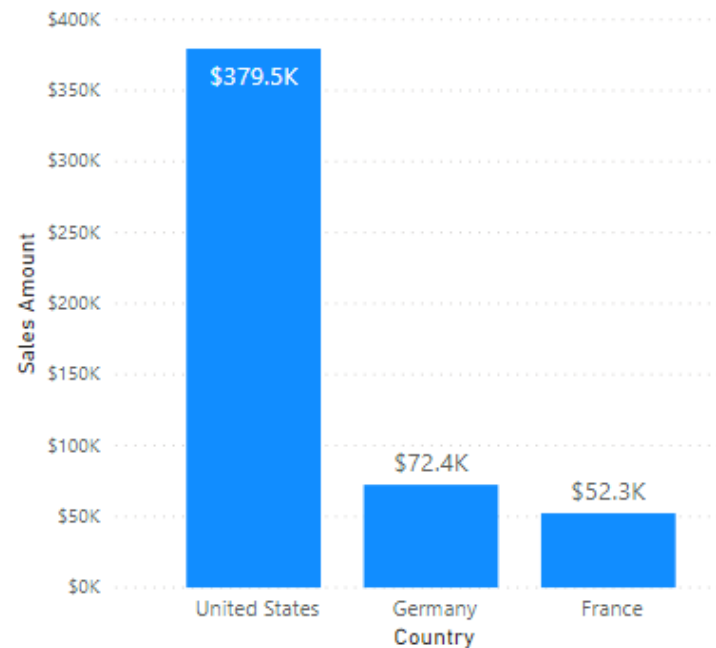
# Design Report Navigation

- Move users between pages.
- Use buttons, bookmarks, or conditional formatting.

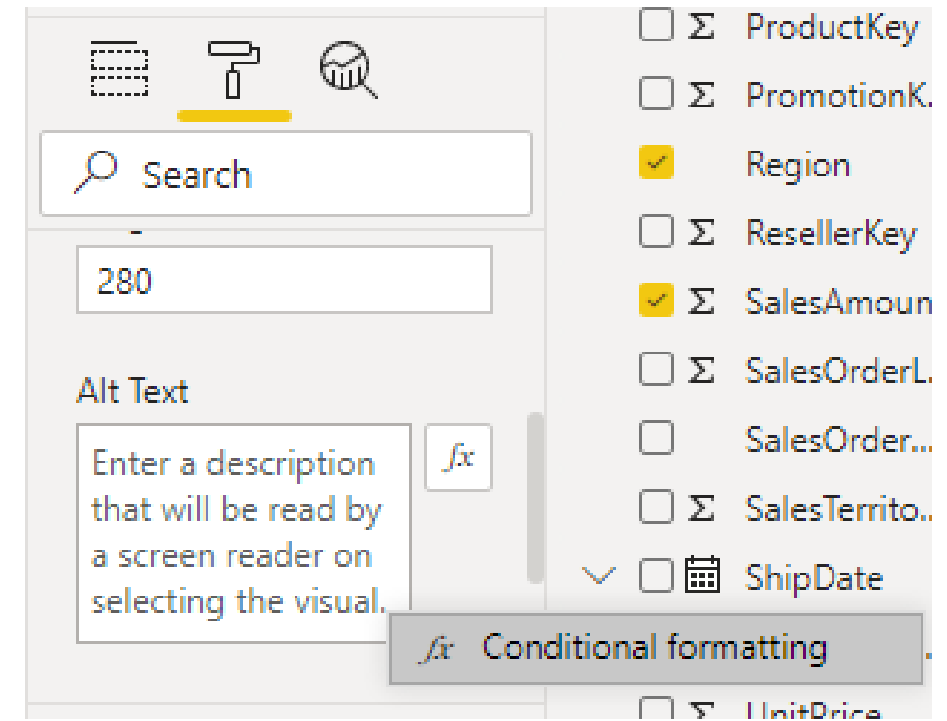


# Design for Accessibility

Sales by Country



Design a report that adheres to accessibility standards and makes use of accessibility features.





# Lesson Review

- Visuals allow you to share data insights more effectively.
- Using effective visualizations help users connect and interact with the information.

# Lesson 2: Enhance the Report



# Introduction to Report Enhancement

- Organizations rely on report information when making decisions.
- Reports drive organizational behavior and action.

# Apply Slicing, Filtering, and Sorting

The screenshot displays the Microsoft Power BI interface for a report titled "TAILWIND TRADERS". The interface includes a left-hand navigation pane, a central data table, and a right-hand pane for filters, visualizations, and fields.

**Left-hand navigation pane:**

- Category Name:** Accessories, Bikes, Clothing, Components (selected).
- Country:** United States, Canada.
- Category Name:** Components.
- Total:**

**Filters pane:**

- Filters on this visual:** Region is (All), SalesAmount is (All).
- Filters on this page:** DueDate - Year is (All).
- Filter type:** Advanced filtering.
- Show items when the v:** is less than.

**Visualizations pane:**

- Visualizations:** A grid of icons for various chart types.
- Fields:** SalesDataByRegi..., DueDate.

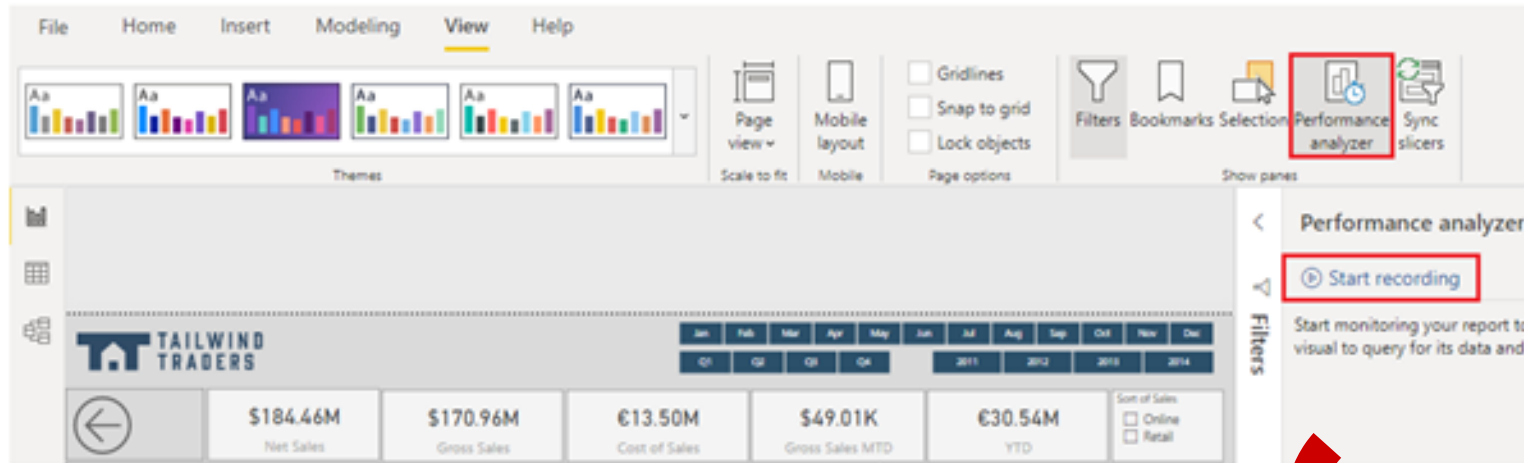
**Central data table:**

Country	Category Name	Product Name	Gross Sales	Net Sales
United States	Components	HL Road Frame - Red, 62	\$88,753.00	\$304,153.46
United States	Components	ML Road Frame-W - Yellow, 44	\$86,250.35	\$448,007.20
United States	Components	HL Road Frame - Red, 44	\$85,890.00	\$301,290.46
Canada	Components	ML Road Frame-W - Yellow, 44	\$71,974.43	\$295,107.66
United States	Components	HL Road Frame - Black, 44	\$70,143.50	\$244,562.33
Canada	Components	HL Road Frame - Red, 44	\$64,417.50	\$237,697.95
Canada	Components	HL Road Frame - Red, 62	\$62,986.00	\$206,670.38
United States	Components	LL Road Frame - Black, 52	\$57,664.62	\$482,362.68
Canada	Components	HL Mountain Frame - Silver, 38	\$57,309.00	\$170,169.35
United States	Components	ML Road Frame-W - Yellow, 38	\$54,129.53	\$357,545.73
United States	Components	ML Road Frame-W - Yellow, 48	\$52,345.04	\$348,680.80
Canada	Components	HL Mountain Frame - Silver, 46	\$51,851.00	\$157,214.50
Canada	Components	HL Mountain Frame - Black, 42	\$51,284.80	\$164,136.99
<b>Total</b>			<b>\$1,910,621.88</b>	<b>\$2,910,341.02</b>

**Right-hand pane:**

- Export data**
- Show as a table**
- Remove**
- Automatically find clusters**
- Spotlight**
- Sort descending**
- Sort ascending**
- Sort by:** Country, Category Name, Product Name, Gross Sales, Net Sales.

# Performance Tuning Reports



The performance of a report depends on how quickly data can load into the report page.

Performance analyzer

Start recording Refresh visuals Stop

Clear Export

Name	Duration (ms)
Recording started (16/06/2020 00:13:52)	-
Changed page	-
Net Sales	1435
MTD card	1491
DAX query	46
Visual display	31
Other	1414
Copy query	
YTD card	1983
Cost of Sales	1550
Cross Sales	1655
Gross Sales by Year by Month	1312
Net Sales by Country	1831
Top 10 Products	1355
Top 10 Customer	1587
Product Category	2023
Sort of Sales	1034
Slicer	1726
Slicer	1190
Slicer	1896
Image	305
Button	115



# Commenting on Reports

- Used for personal comments or for collaborating with a colleague.
- Available for paginated reports, dashboards, and visuals.
- Anyone with permissions can see comments.

The screenshot displays a Microsoft Power Platform report interface. On the left, a report is visible with a donut chart titled 'Customer' and a bar chart titled 'Sales by Country'. The donut chart shows data for various customers, with 'Vigorous Exercise Company' being the largest at 16.31%. The bar chart shows sales by country, with the United States being the highest at \$0.11bn. On the right, a 'Comments' sidebar is open, showing a 'Post' button and a 'Close' button. The sidebar also includes a 'Filters' section and a 'Comments' section with a 'Post' button and a 'Close' button.

Search

Reset to default Bookmarks View

Filters

Comments

TAILWIND TRADERS

Previous Next

Whats next?

Post

Start a conversation

Share your feedback on reports or specific visuals.

Close

# Advanced Interactions and Drill-Throughs

**Power BI** My workspace > **Tailwind Traders** Tailwind Traders | Data updated 6/16/20

File Home Insert Modeling View Help **Format** Data / Drill

Interactions: Apply drill down filters to, Edit interactions, Bring forward, Send backward, Selection, Align, Group

**TAILWIND TRADERS**

Main Dashboard: \$184.46M Net Sales, \$170.96M Gross Sales, €13.50M Cost of Sales

Advanced Analytics: Product Category, Top 10 Products

Product Category: Components (\$1.91M (13.34%))

Top 10 Products: AWC Logo C, \$74,726 (4.17%), Long-Sleeve Logo Jersey M, \$187,748 (10.13%), Short-Sleeve Classic Jr., \$228,429 (11.45%), Sport-100 Helmet Red, \$219,258 (12.24%)

Get data

**TAILWIND TRADERS**

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Q1 Q2 Q3 Q4 2011 2012 2013 2014

Sort of Sales: ☐ Online ☐ Retail

Map showing sales data for Canada and United States. Drill through: Order Detail [Tailwind Traders Orders]

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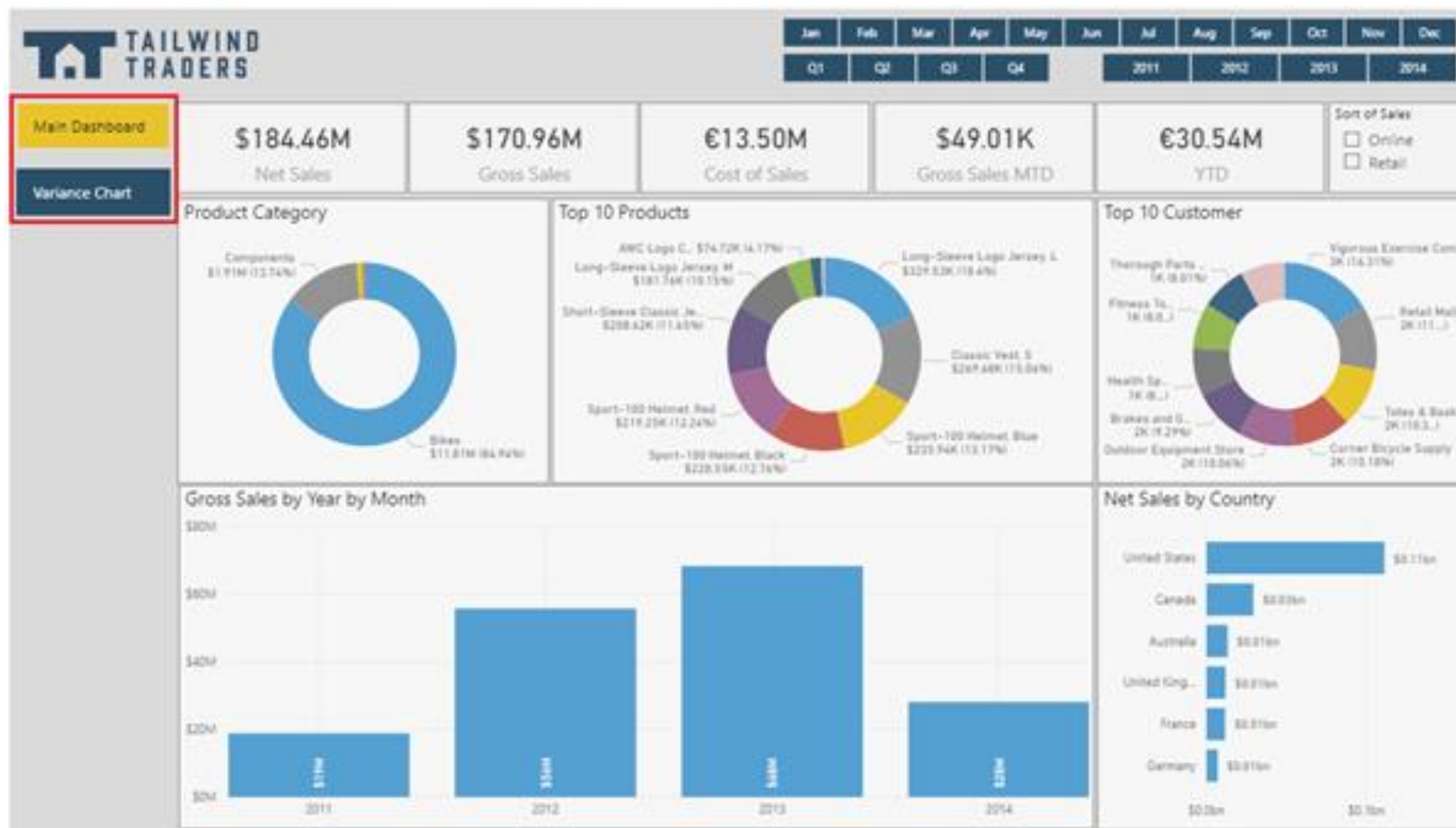
**TAILWIND TRADERS**

Main Dashboard: \$2.91M Net Sales, \$1.91M Gross Sales, €999.72K Cost of Sales

Advanced Analytics: Country, Category Name, Product Name, Gross Sales, Net Sales

Country	Category Name	Product Name	Gross Sales	Net Sales
United States	Components	ML Road Frame-W - Yellow, 44	\$86,250.35	\$448,007.20
Canada	Components	ML Road Frame-W - Yellow, 44	\$71,974.43	\$295,107.66
United States	Components	LL Road Frame - Black, 52	\$57,664.62	\$482,362.68
United States	Components	ML Road Frame-W - Yellow, 38	\$54,129.53	\$357,545.73
United States	Components	LL Road Frame - Black, 58	\$32,710.34	\$328,946.58
Canada	Components	LL Road Frame - Black, 58	\$32,035.90	\$267,869.53
Canada	Components	LL Road Frame - Red, 44	\$28,326.48	\$200,708.54
<b>Total</b>			<b>\$729,936.88</b>	<b>\$1,489,832.44</b>

# Adding Buttons, Bookmarks, and Selections





# Key Performance Indicators

- An excellent source in helping track toward a specific goal over time.
- Best when used in a series (e.g., daily, monthly, etc.).

TotalSales and Goal by Month

6.67M✓

Goal: \$595,092 (+1020.18%)

TotalSales and Goal by FiscalYear

45.18M✓

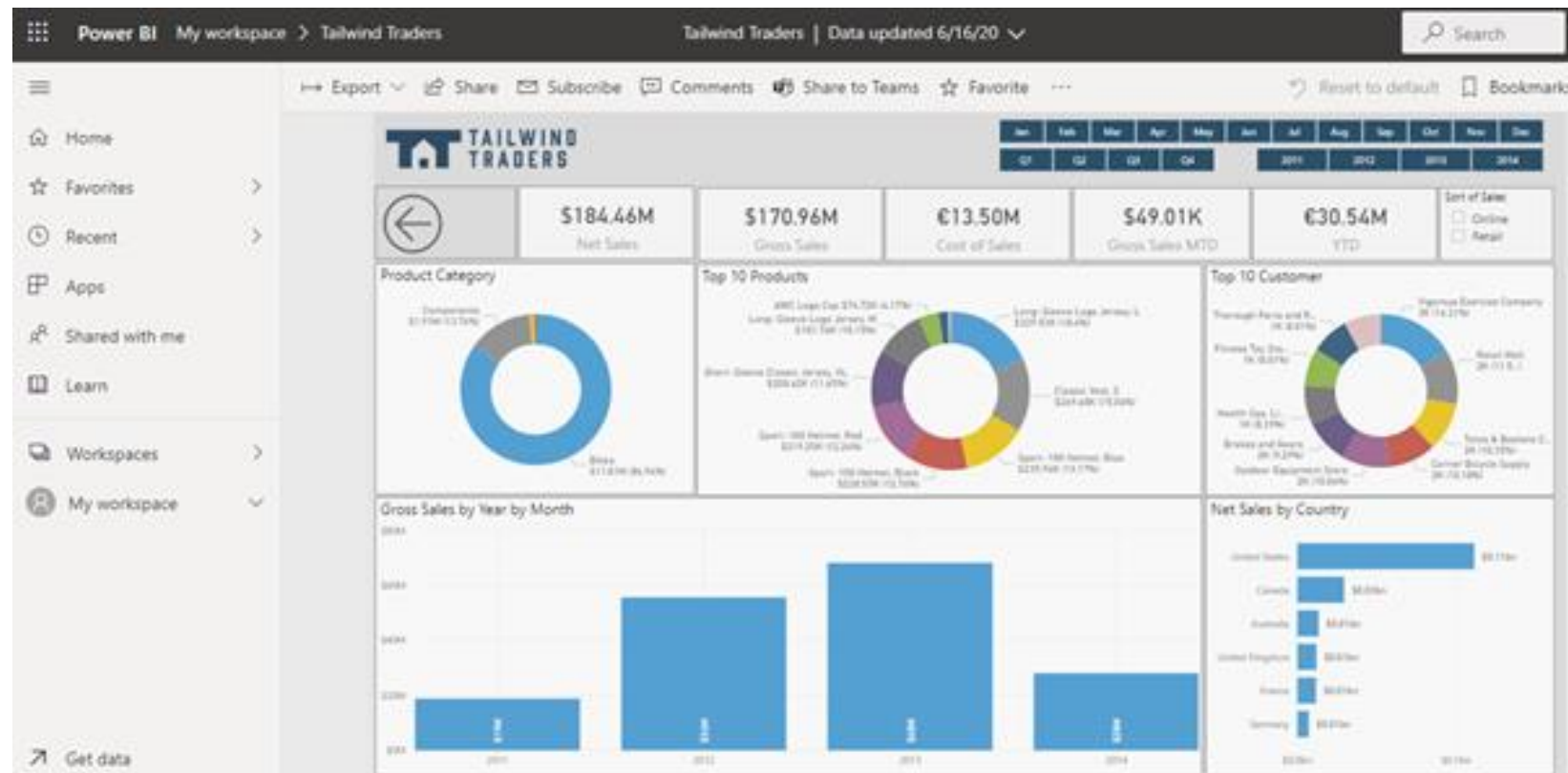
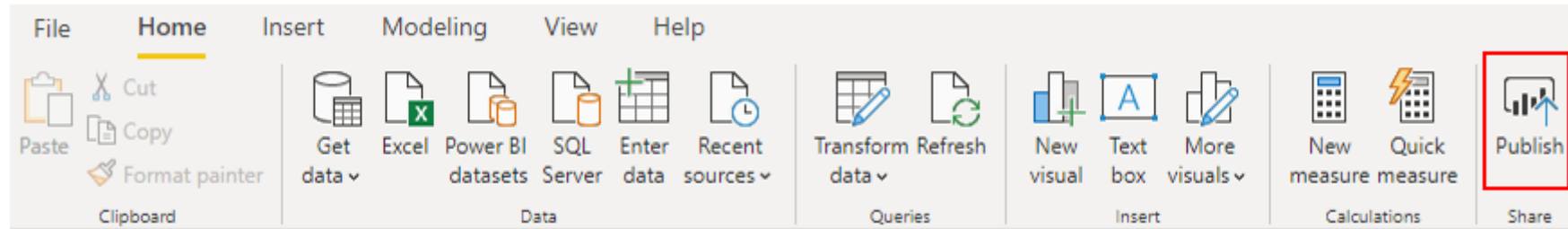
Goal: \$4,461,252 (+912.82%)

TotalUnits and Last Year Sales ...

1.08M!

Goal: \$3,482,163 (-69.05%)

# Publish and Export Reports



# Lesson Review

- Organizations rely on report information when making decisions.
- Reports drive organizational behavior and action.

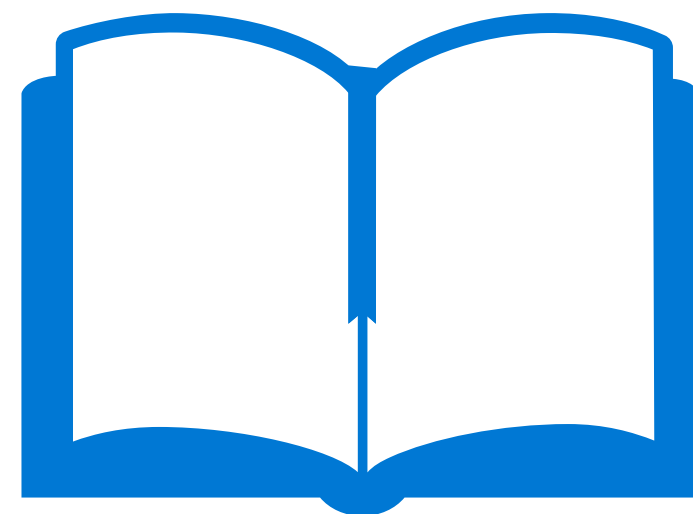
# Module Overview

We covered the following concepts:

- Design a Report
- Enhance a Report

# References

- Microsoft Learn – Design effective reports in Power BI  
<https://docs.microsoft.com/en-us/learn/paths/power-bi-effective/>
- PL-300 Work with Power BI visuals  
<https://docs.microsoft.com/en-us/learn/modules/visuals-power-bi/>
- PL-300 Create a data-drive story with Power BI  
<https://docs.microsoft.com/en-us/learn/modules/data-driven-story-power-bi/>



# Azure Technical Trainer Role Based Training