

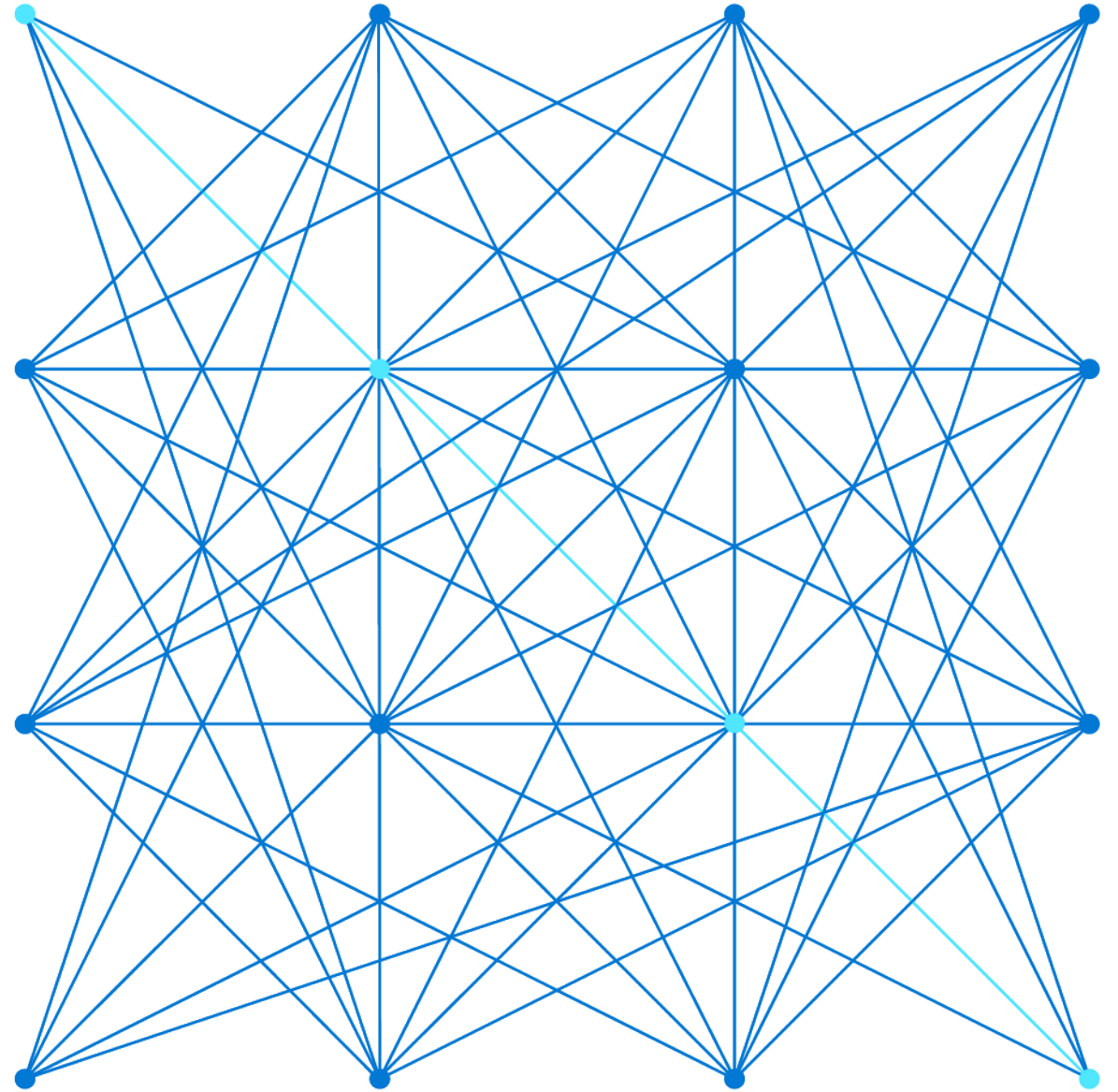
Online Role-based training resources:

**Microsoft Learn**

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

# DA-100 Analyzing Data with Power BI

<Name>, <Title>



# **Module 7: Create Reports**

# Learning Objectives

You will learn the following concepts:

- Design a Report
- Enhance a Report





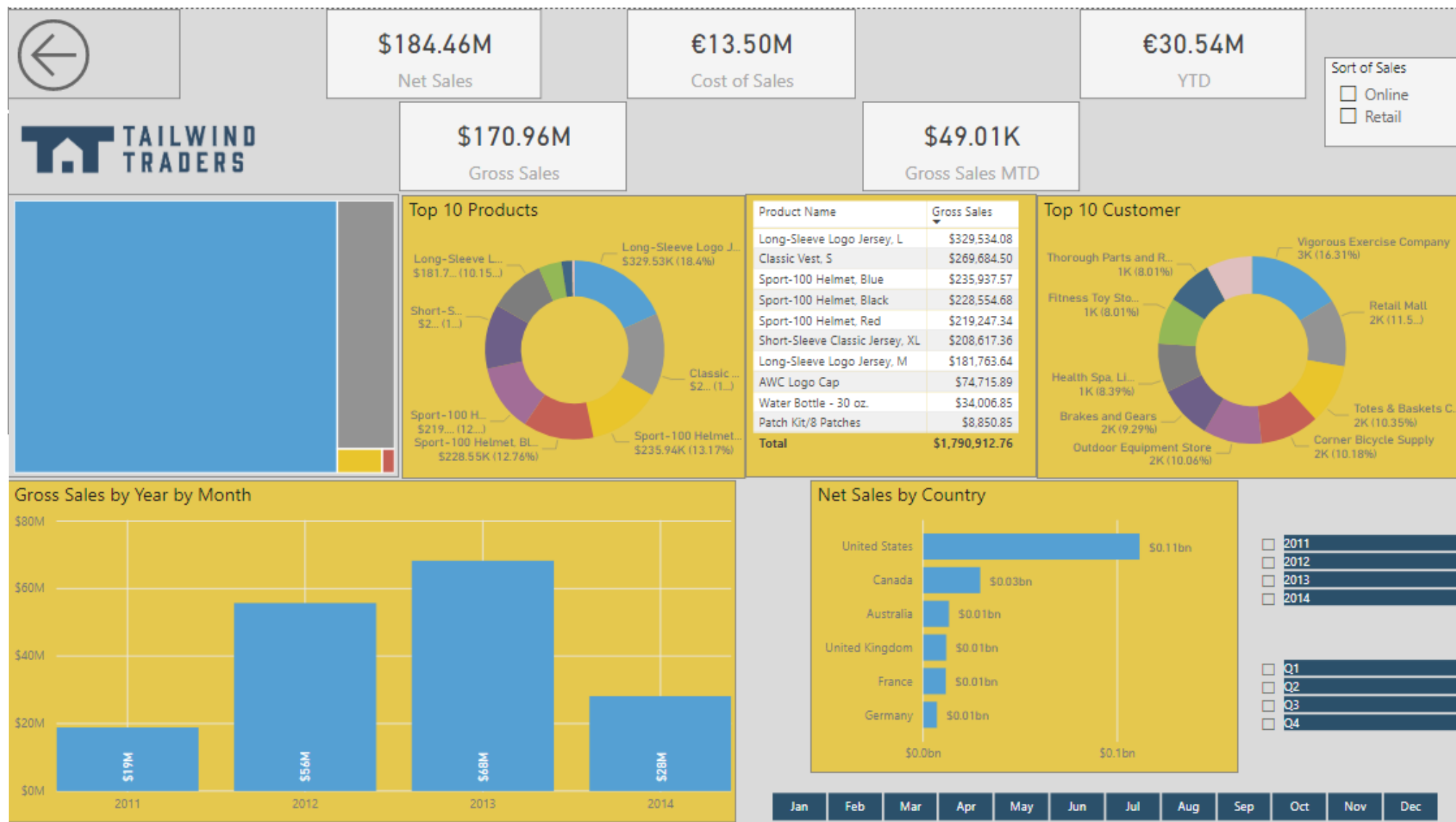
# Lesson 1: Design a Report



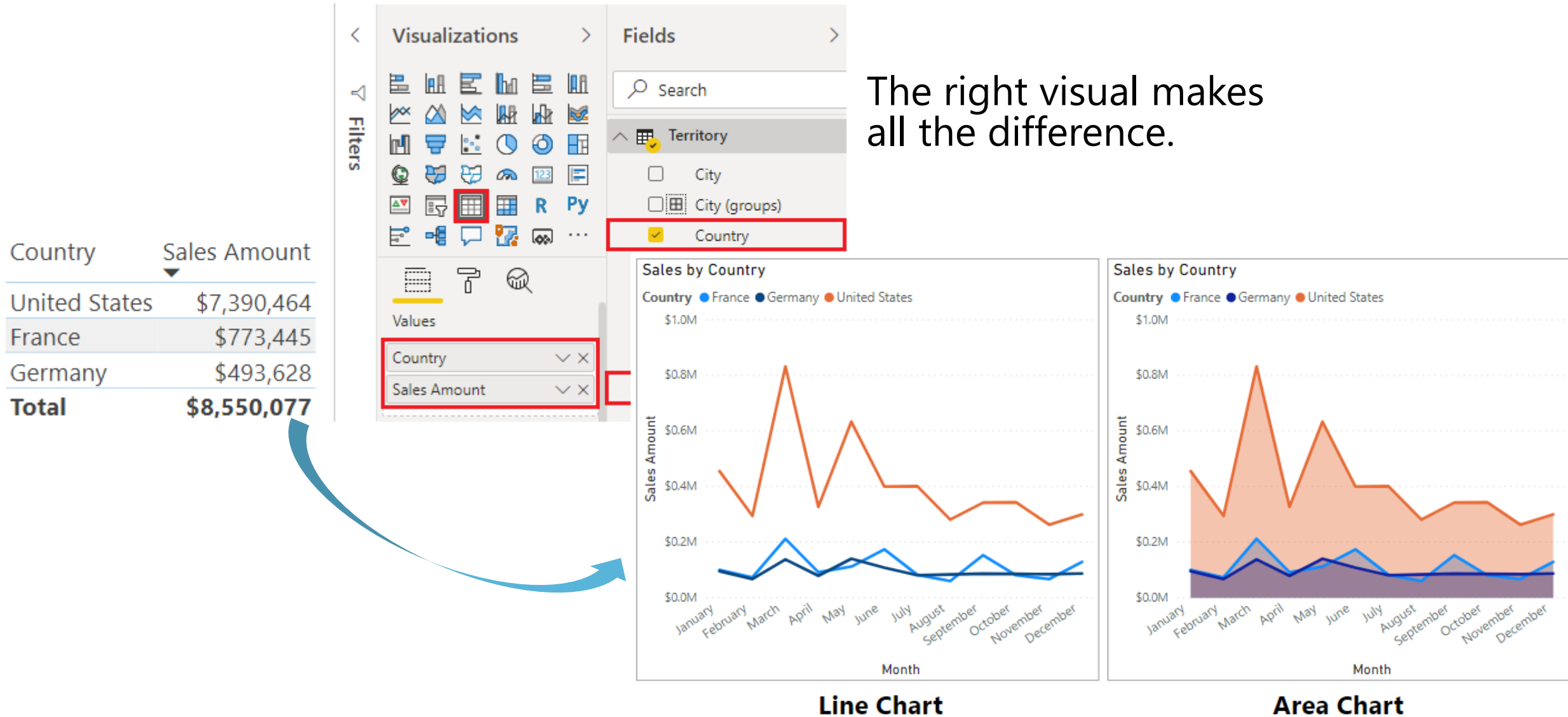
# Introduction

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

# Design a Report Layout

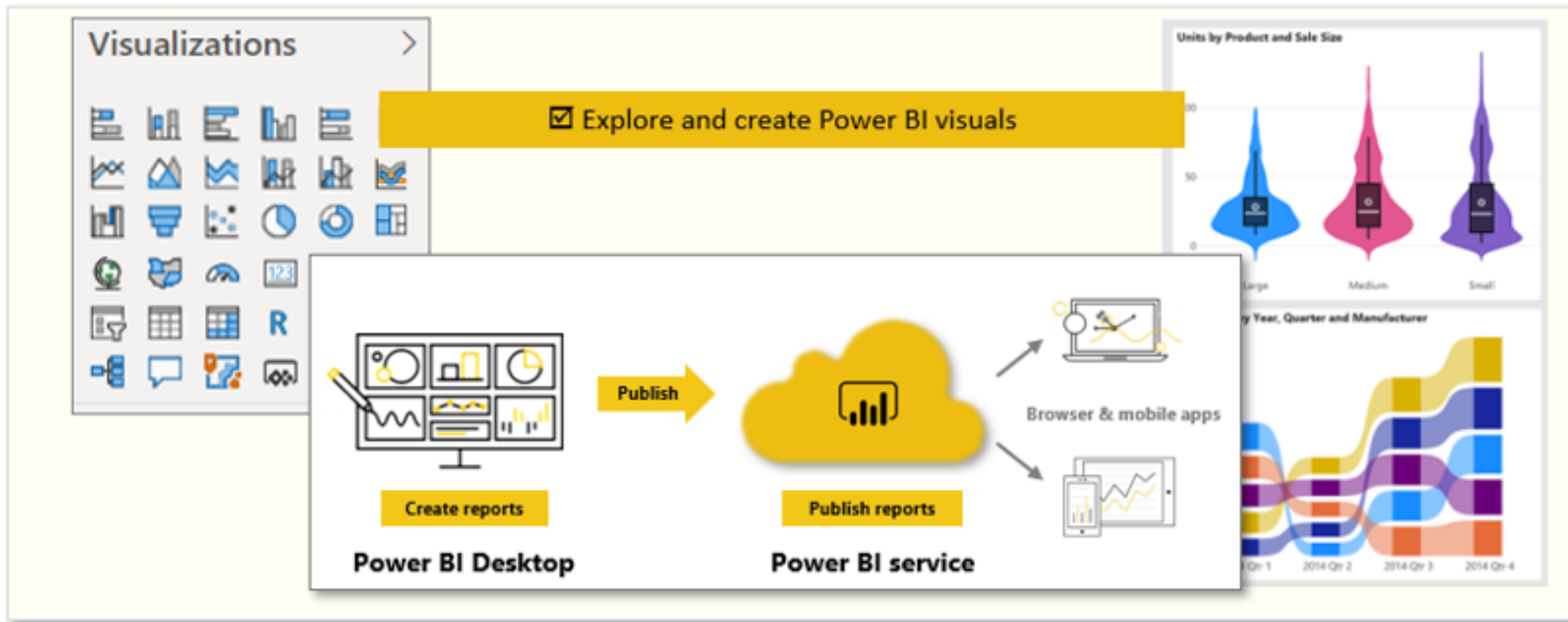


# Choosing Effective Visualizations

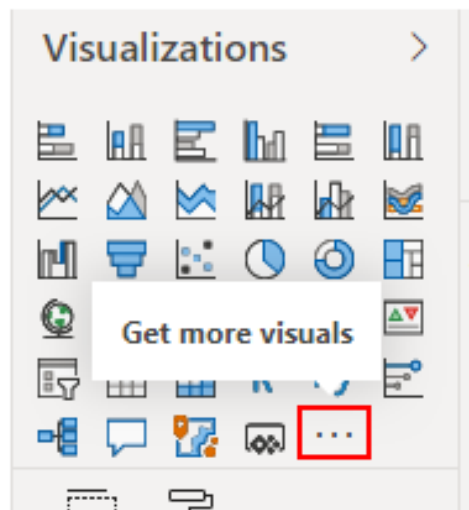




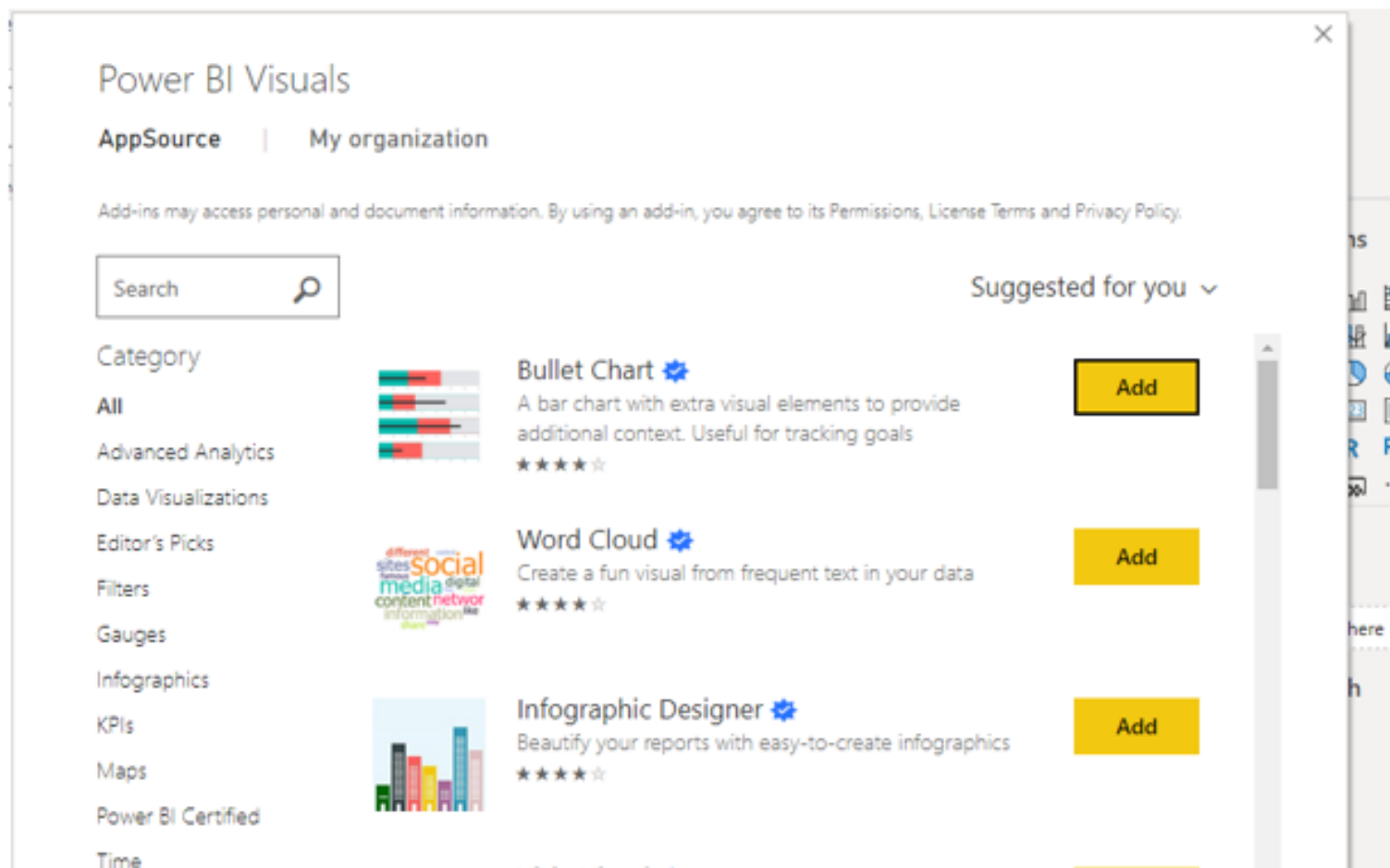
# Adding Visualizations to Reports



# 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.

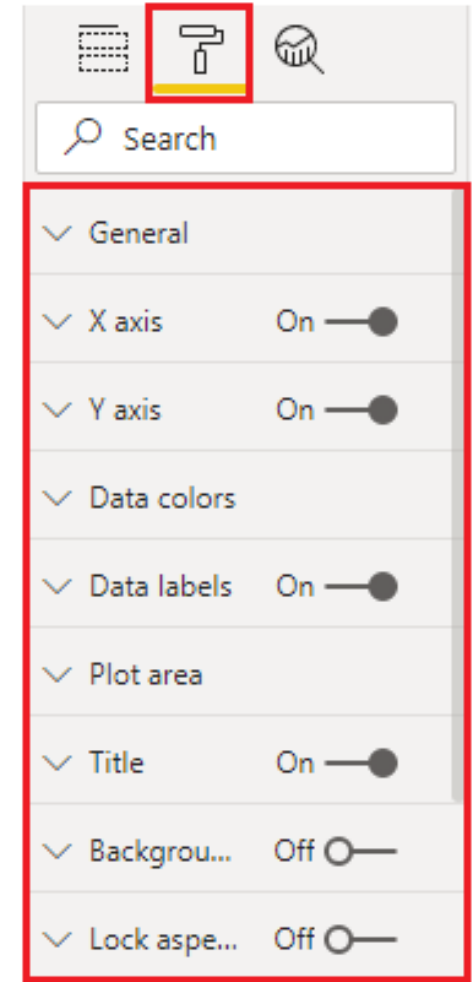
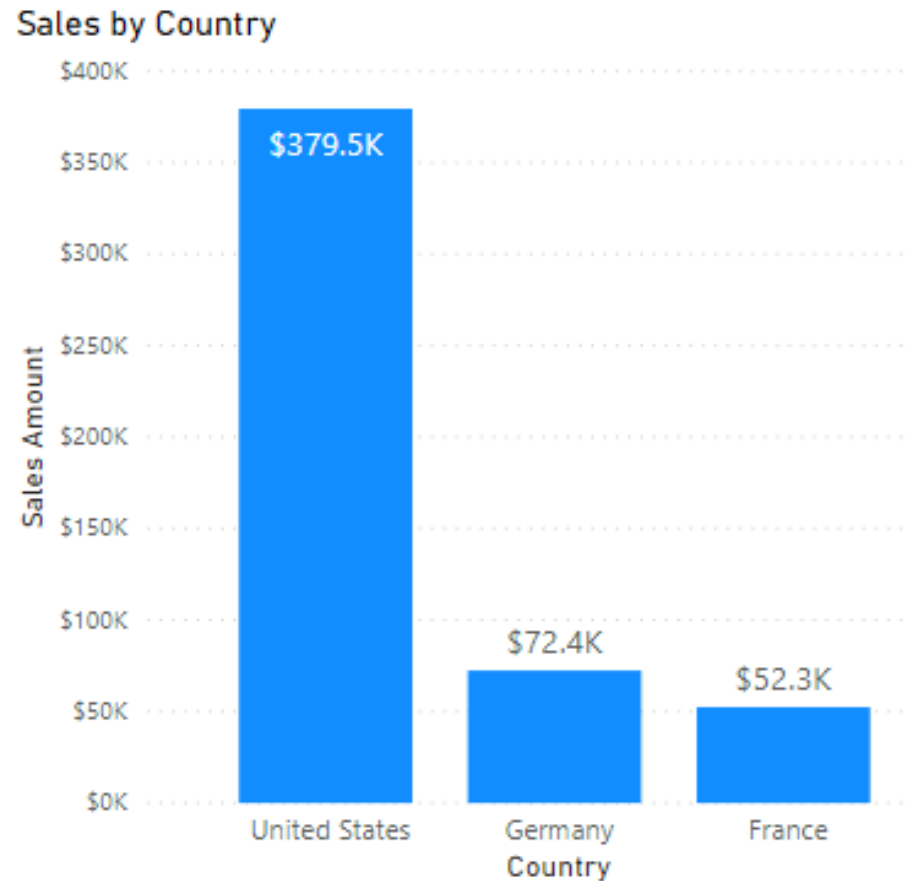


The screenshot shows the Microsoft Power Platform interface. On the right, the 'Visualizations' pane is open, displaying a grid of visualization icons. The 'R' and 'Py' icons are highlighted with a red box. Below the grid, the 'Values' section has a dashed box labeled 'Add data fields here'. The 'Drill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

Below the main visualization area, the 'R script editor' pane is open. It has a title bar 'R script editor' and a toolbar with icons for play, settings, and zoom. The main area of the script editor contains the text: 'Drag fields into the Values area in the Visualization pane to start scripting.'

# Format and Configure Visualizations

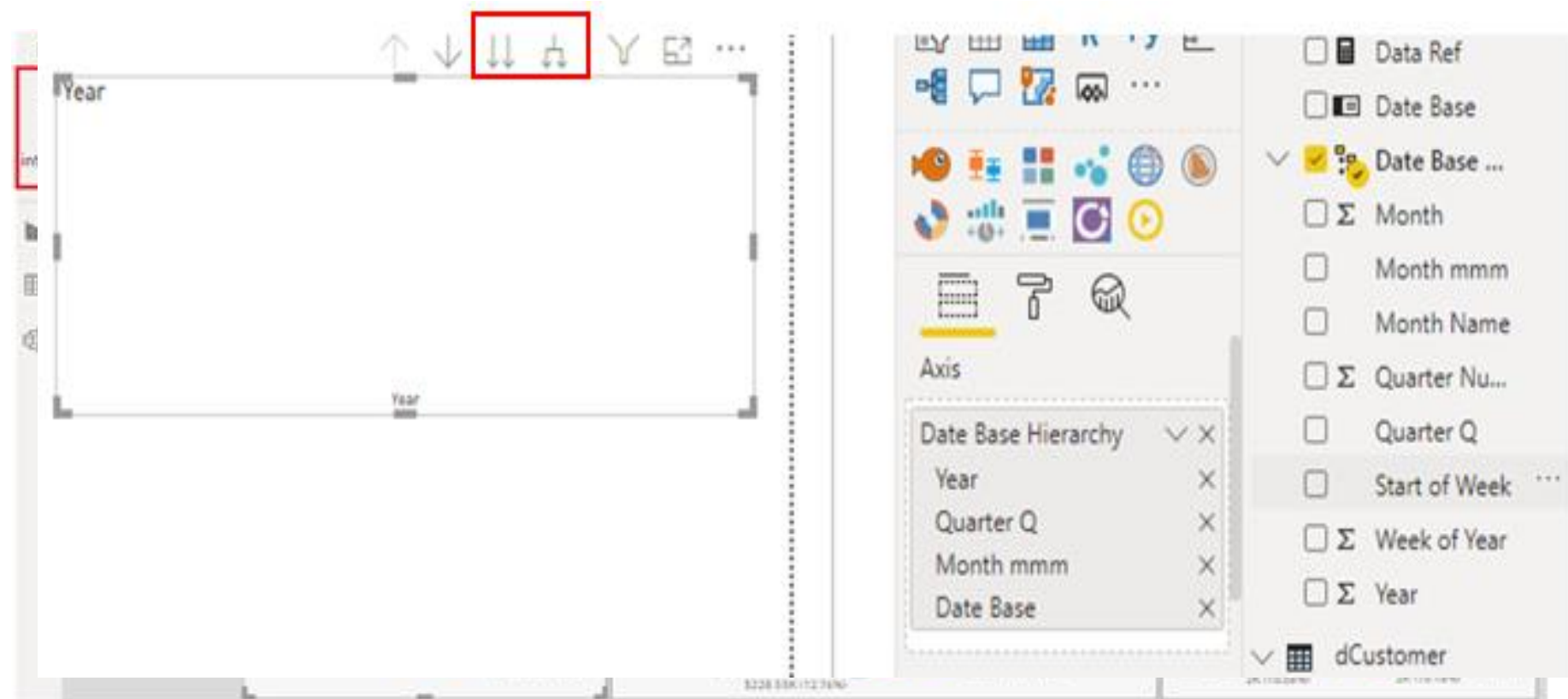
- Control the look and feel of each visual.
- Format options differ depending on the type of visual selected.





# Basic Interactions

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



# Configure Conditional Formatting

Background color - SalesAmount

Format by: Color scale

Apply to: Values only

Based on field: Sum of SalesAmount

Summarization: Sum

Default formatting: As zero

Minimum: Lowest value

Maximum: Highest value

Enter a value

☐ Diverging

OK Cancel

Visualizations

Conditional formatting

SalesAmount

Background color

On

Advanced controls

Font color

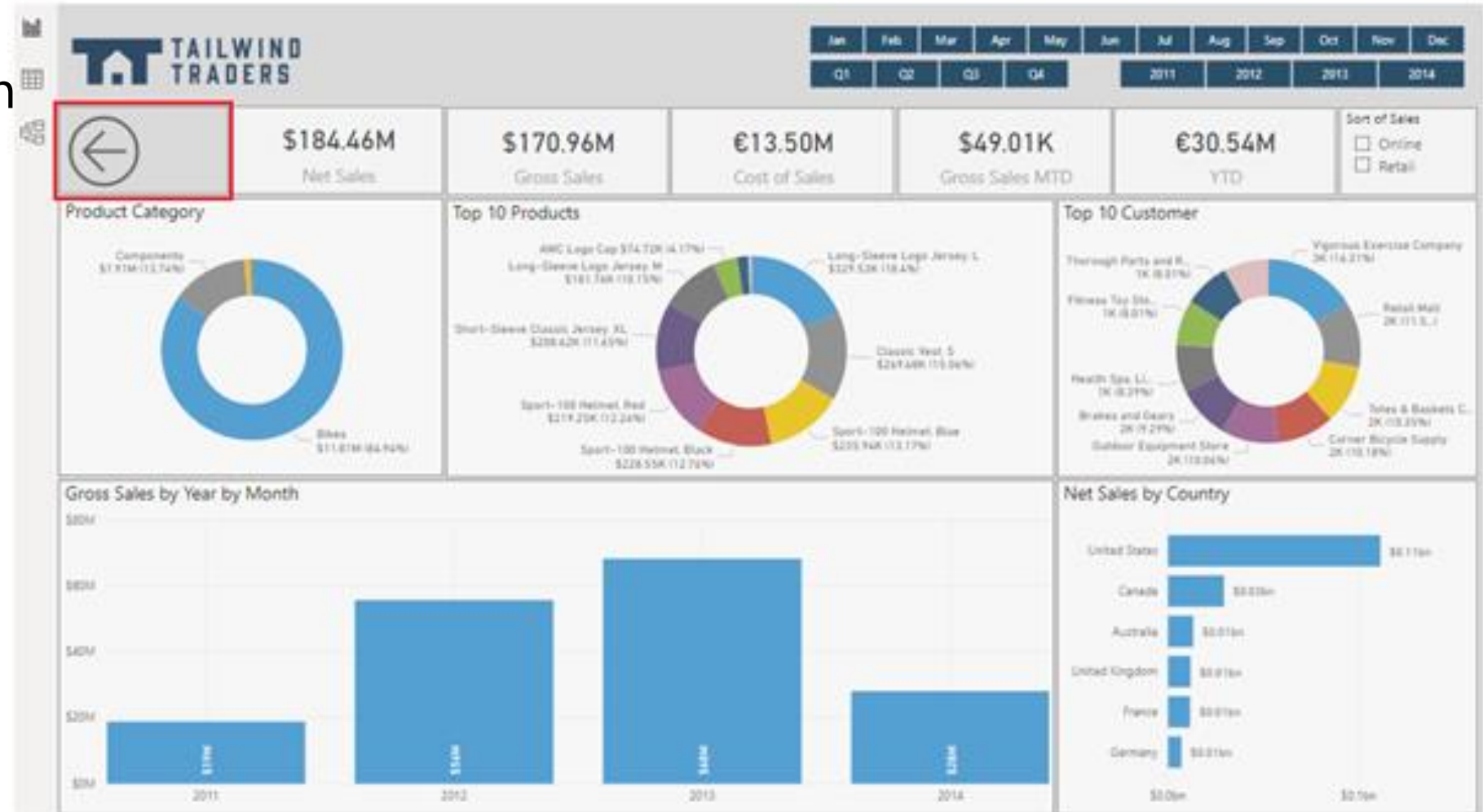
Off

Data bars

Region	SalesAmount
France	\$1,693,909.04
Germany	\$485,155.88
USA	\$1,250,085.09
Total	\$3,429,150.01

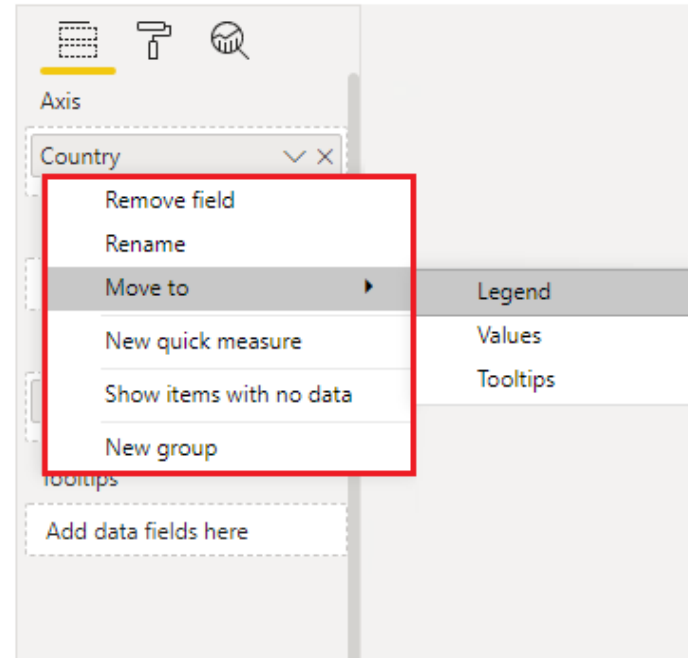
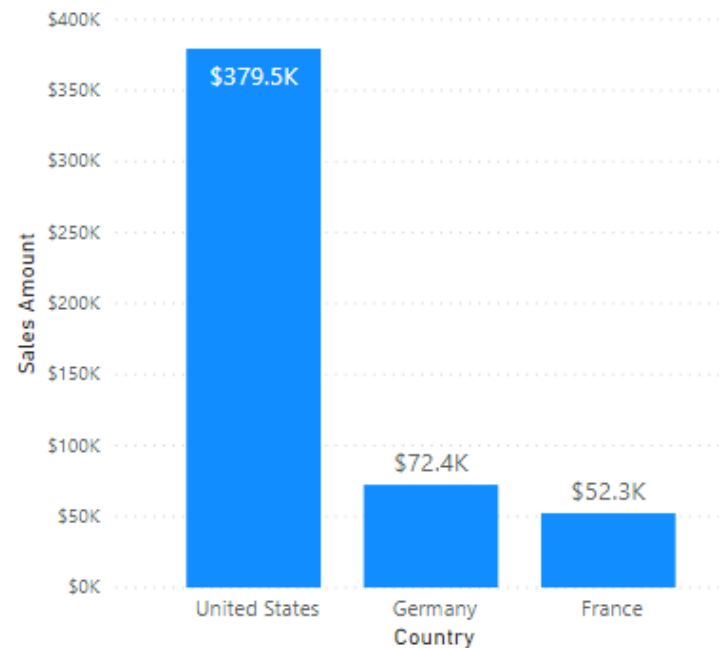
# Design Report Navigation

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

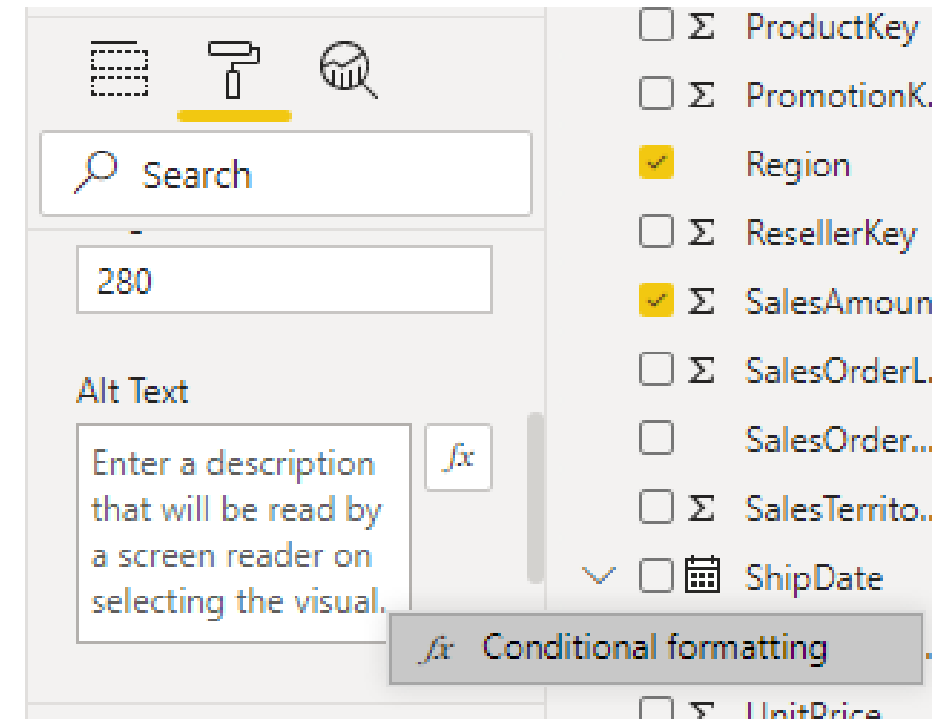


# Design for Accessibility

Sales by Country



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





# Review Questions

- Q01 – What is the benefit of using a report tooltip?
- A01 – To give users additional information about a report visual, such as the author and date/time it was created.
- Q02 – Do you need to import custom visuals each time you want to use them when you are developing a new report?
- A02 – Yes, custom visuals must be imported from AppSource each time you start developing a new report.

# Lesson Review

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

# Lab: Designing a Report in Power BI





# 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

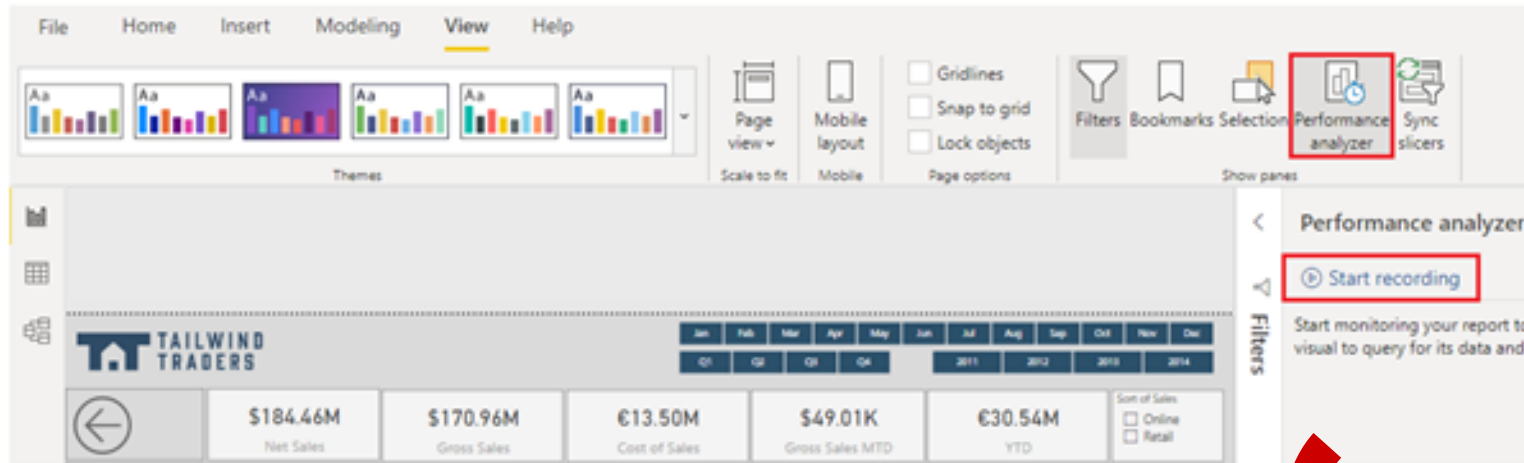
The screenshot displays the Microsoft Power BI interface for a report titled "TAILWIND TRADERS". The interface is divided into several sections:

- Filters:** Includes a search bar and a list of filters. The "Region" filter is set to "is (All)". The "SalesAmount" filter is also set to "is (All)". The "DueDate - Year" filter is set to "is (All)".
- Visualizations:** A list of visualization options is shown, including bar charts, line charts, and maps.
- Fields:** A list of fields is shown, including "Country", "Category Name", "Product Name", "Gross Sales", and "Net Sales".
- Table:** A table of sales data is displayed, showing columns for Country, Category Name, Product Name, Gross Sales, and Net Sales. The table includes a "Total" row at the bottom.
- Advanced filtering:** A red arrow points to the "Advanced filtering" button in the "Filters" section.
- Sort by:** A dropdown menu is open, showing options to sort by "Country", "Category Name", "Product Name", "Gross Sales", and "Net Sales".

The table data is as follows:

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>

# 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. The main area shows a report with a donut chart titled 'Customer' and a bar chart titled 'Sales by Country'. The donut chart shows the distribution of sales across various customer segments, with 'Vigorous Exercise Company' being the largest at 16.31%. The bar chart shows sales by country, with the United States leading at \$0.11bn. On the right side, a 'Comments' sidebar is open, showing a 'Post' button and a 'Start a conversation' section with a placeholder image of a laptop displaying a report.

**Customer Sales Data (Donut Chart):**

Customer	Value	Percentage
Vigorous Exercise Company	3K	16.31%
Retail Mall	2K	11.5...
Totes & Baskets C...	2K	10.35%
Corner Bicycle Supply	2K	10.18%
or Equipment Store	2K	10.06%
nd Gears K	9.29%	
s. Li...	3.9%	
y Sto...	3.01%	
Parts and R...	1K	0.01%

**Sales by Country Data (Bar Chart):**

Country	Sales
United States	\$0.11bn
Canada	\$0.03bn
Australia	\$0.01bn
England	\$0.01bn
France	\$0.01bn
Germany	\$0.01bn

**Comments Sidebar:**

- Search bar
- Reset to default, Bookmarks, View
- Comments section header
- TAILWIND TRADERS
- Previous, Next navigation
- Whats next? input field
- Post button
- Start a conversation section
- Share your feedback on reports or specific visuals.
- Close button



# 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

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

Home  
Favorites  
Recent  
Apps  
Shared with me  
Learn  
Workspaces  
My workspace

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

← \$184.46M Net Sales \$170.96M Gross Sales €13.50M Cost of Sales \$49.01K Gross Sales MTD €30.54M YTD

Map of Canada and United States with bubble sizes representing sales volume. A context menu is open over the map with options: Show as a table, Include, Exclude, Drill through. The 'Drill through' option is highlighted, and a red box highlights the 'Order Detail [Tailwind Traders Orders]' link.

Get data

Main Dashboard  
Advanced Analytics

Product Category  
Components \$1,91M (13.34%)

Top 10 Products  
ARC Logo C, \$74,72K (1.17%)  
Long-Sleeve Logo Jersey M, \$187,74K (11.13%)  
Short-Sleeve Classic Jr., \$228,42K (11.45%)  
Sport-100 Helmet Red, \$219,25K (12.24%)

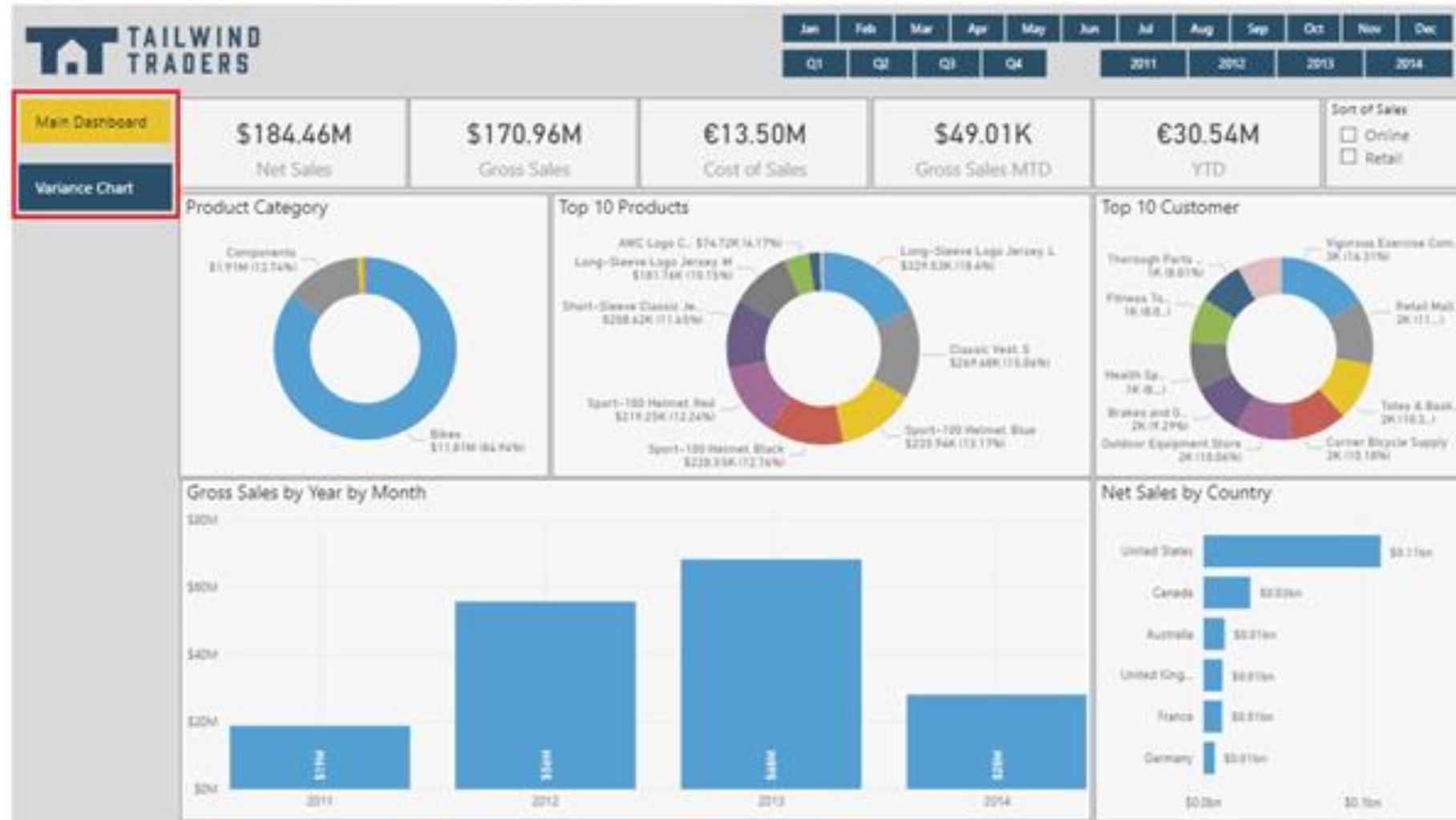
Show as a table  
Group data  
Include  
Exclude  
Drill through  
Group  
Copy

Detail Page

← \$2.91M Net Sales \$1.91M Gross Sales €999.72K Cost of 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✓

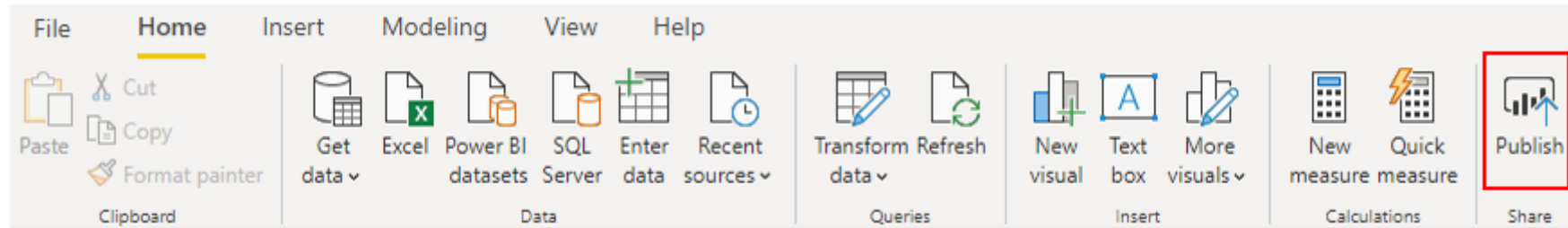
Goal: \$4,461,252 (+912.82%)

TotalUnits and Last Year Sales ...

1.08M!

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

# Publish and Export Reports



# Review Questions

- Q01 – Which filter is not available in Power BI reports?
- A01 – Page Type
- Q02 – How can you analyze performance of each of your report elements?
- A02 – By using performance analyzer.
- Q03 – Can you use bookmarks to create a slide show in Power BI?
- A03 – Yes, you can, by adding buttons as navigation to go between saved bookmarks.

# Lesson Review

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



# Lab: Enhancing Power BI Reports with Interactions and Formatting

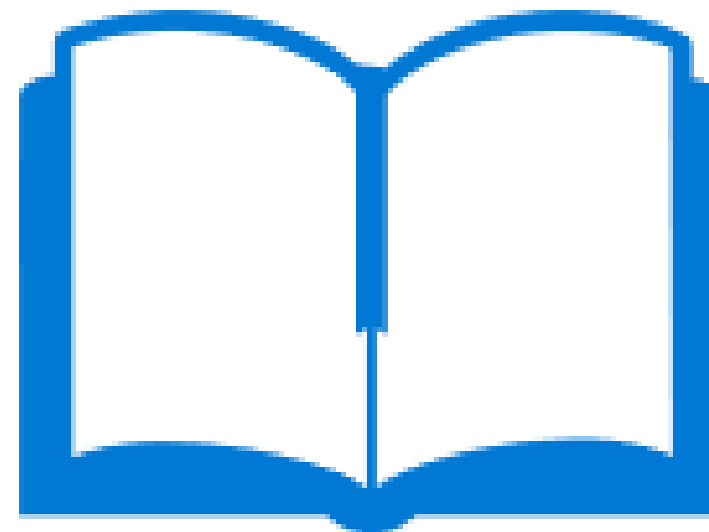
# Module Overview

We covered the following concepts:

- Design a Report
- Enhance a Report

# References

- DA-100 Work with Power BI visuals  
<https://docs.microsoft.com/en-us/learn/modules/visuals-power-bi/>
- DA-100 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