DATA ANALYTICS PROJECT

Integrated Sales & Business Operations Performance Dashboard

TOOLS USED : Tableau

PRESENTED BY : Safiya Fatima

Introduction

- Data analysis plays an important role in understanding business performance and making informed decisions.
- This project focuses on analyzing sales data using **Tableau** to identify trends, patterns, and insights related to sales, profit, customers, products, and geographical performance.
- Interactive dashboards are created to present data in a clear and meaningful way for better understanding and decision-making.

Objectives

The main objectives of this project are:

- To analyze sales and profit data using visualization techniques
- To identify top-performing products, customers, and countries
- To understand monthly sales and profit trends
- To compare performance across product categories
- To create interactive dashboards for effective data analysis

Methodology

The following methodology was followed in this project:

1. Understanding the dataset and its structure
2. Creating relationships between tables
3. Preparing data for analysis in Tableau
4. Designing worksheets using different chart types
5. Building interactive dashboards
6. Analyzing insights and key findings

Procedures and Tools

Procedures:

- Data was loaded into Tableau Desktop
- Relationships were created between tables
- Calculated fields (Profit) were created
- Filters and actions were applied
- Dashboards were designed for interactivity

Tools Used:

- Tableau Desktop
- Tableau Public
- Microsoft Excel (data source)

Dataset Overview

- Dataset consists of **sales order data**
- Includes information about:
  - Orders
  - Customers
  - Products
  - Countries
  - Sales, quantity, and pricing details
- The dataset was used to perform sales and profit analysis across multiple dimensions.

- **Dataset Source :**

Classic Models Dataset(provided by my mentor)

- Data Access Link:

https://1drv.ms/f/c/e8b5f8901446d194/IgAHFMnZuoIJR44aRe11xMkBAX0y1iQ-rQn4UU6ETHVl_Eg?e=NkjTqi

Dashboards Overview

- The project contains **4 interactive dashboards**:

1. Country-wise sales & monthly profit analysis
2. Product Sales & City-wise Demand
3. Top Customers & Costly Products
4. Global Sales & profit overview

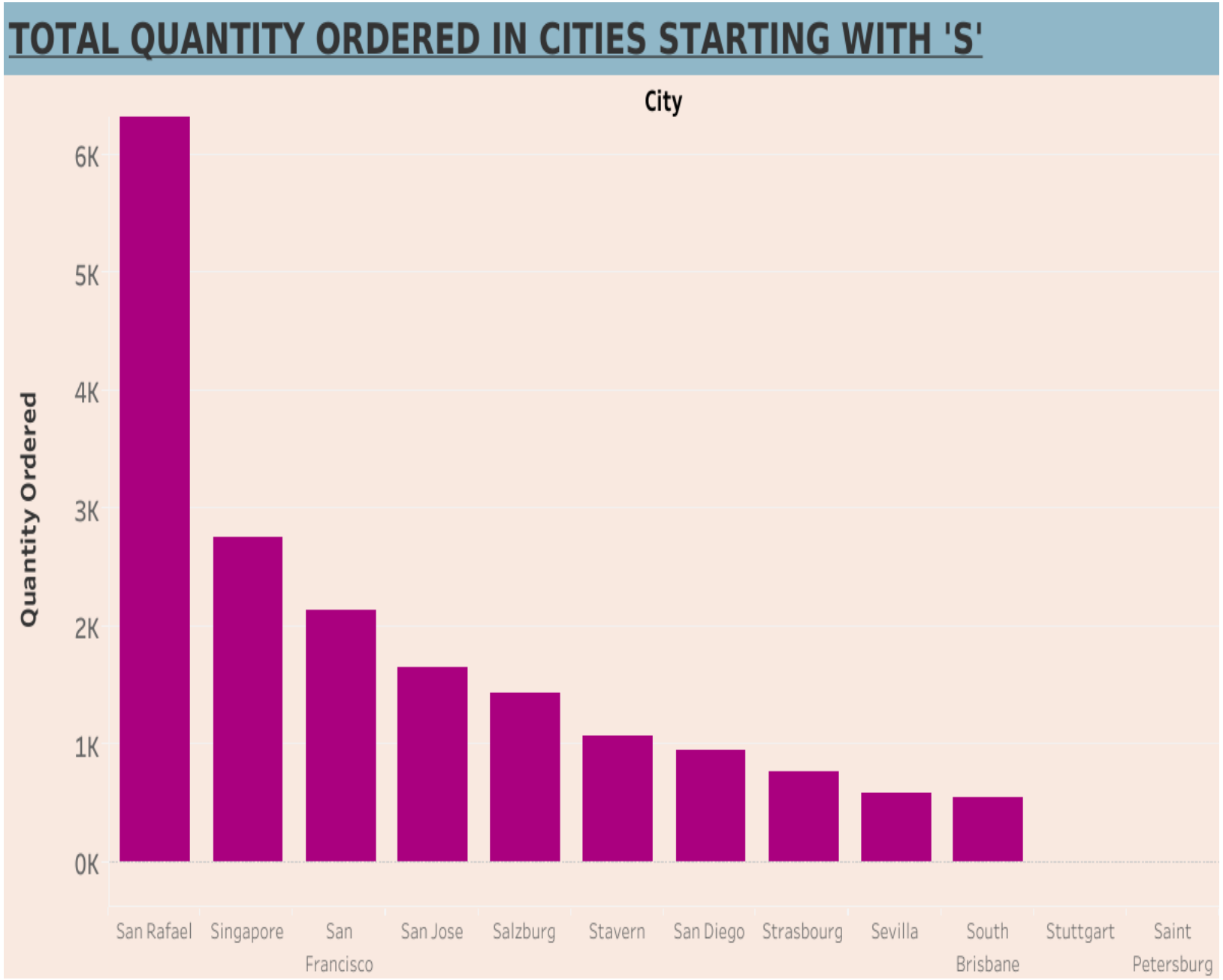
- Each dashboard focuses on different aspects of business performance.
- The dashboards are published on Tableau Public for easy access and sharing.

Dashboard Link

Tableau Public Dashboard Link:

https://public.tableau.com/app/profile/safiya.fatima/viz/IntegratedSalesBusinessOperationsPerformanceDashboard/Dashboard4

The above link contains the complete workbook with multiple dashboards.



DATA GUIDE :- (Sheet 1)

Viz Details :-

- **Viz description :-**

This visualization shows the total quantity of products ordered in different cities(starting with S).
You can customize the chart by applying any filters as per your requirement.
Here , I have used wildcard (starts with) to filter cities.

Applied Filters :-

City

Data in This Viz :-

orders+

- Action (Product Name)
- City
- Quantity Ordered

Data Summary :-

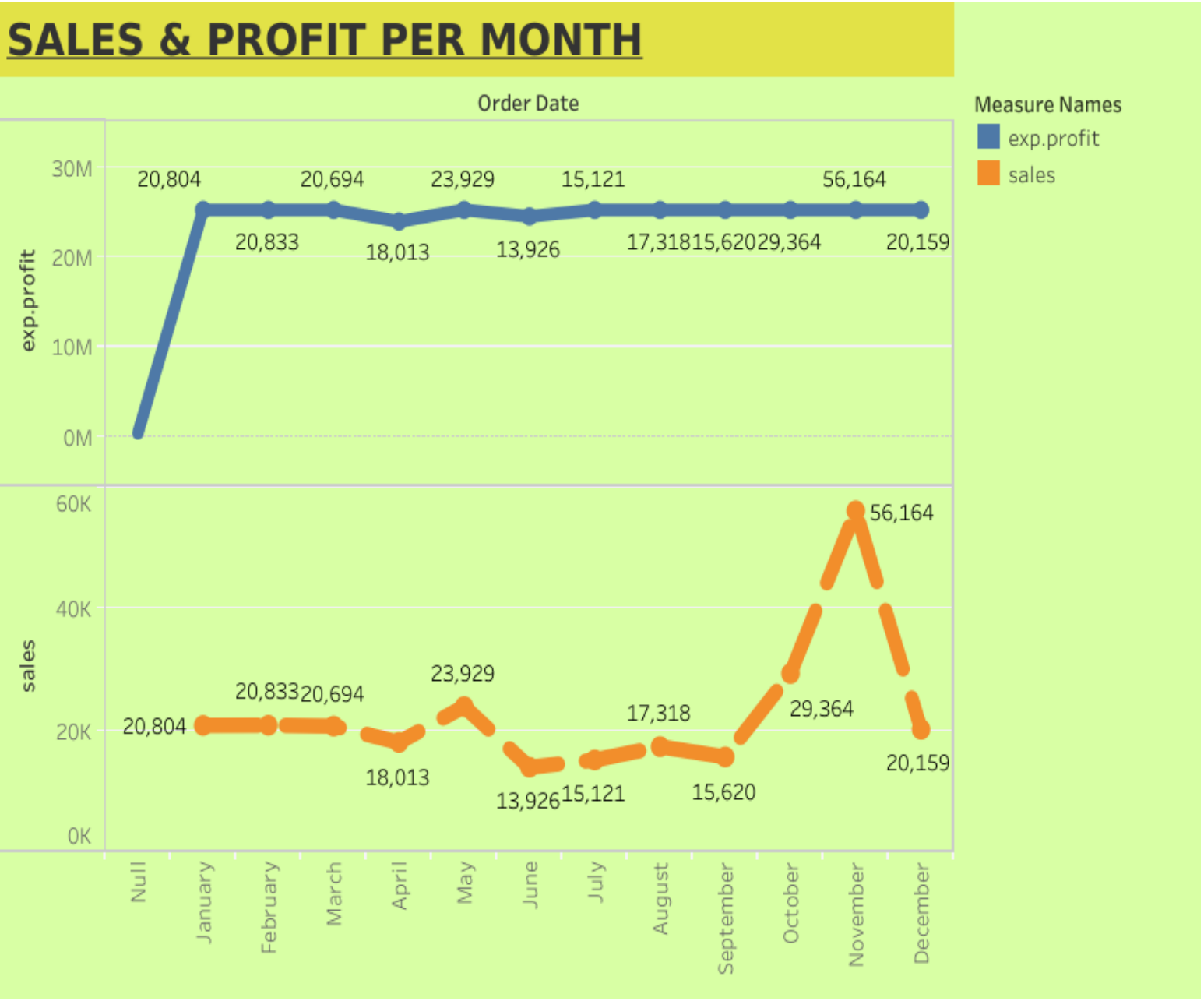
This viz

- Is sorted in a descending order based on City Columns sorting
- Has 10 data points

Detected Outlier (1) :-

Tableau detected these marks as unusual compared to other marks in the selected viz.

High San Rafael
Sum of Quantity Ordered: 6,366



DATA GUIDE :- (Sheet 2)

Viz Details :-

- **Viz description :-**

This line chart shows the monthly trend of sales and profit for the selected year. The months are shown on the X-axis, and the total sales and profit values are shown on the Y-axis. Sales and profit are represented with two different colored lines for easy comparison. The chart helps to identify which months have higher or lower performance. The filters for Year and Order Date allow you to view data for specific time periods and analyze changes over time.

Applied Filters :-

No filters apply to this viz

Data in This Viz :-

orders+

- Abc Measure Names
- Month of Order Date
- exp.profit
- sales

Data Summary :-

This viz

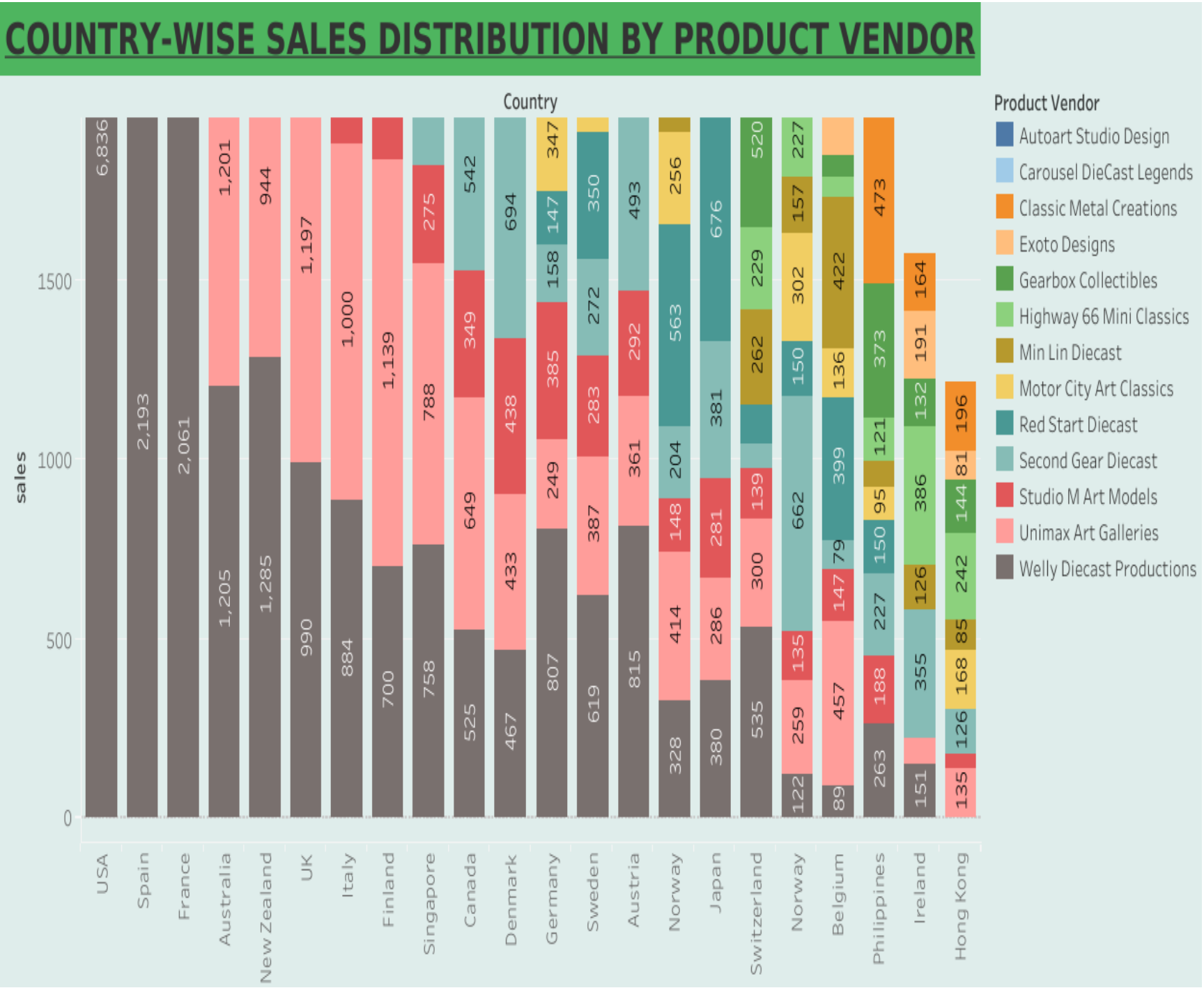
- Has 25 data points

Detected Outlier (2) :-

Tableau detected these marks as unusual compared to other marks in the selected viz.

Low **Null**
Sum of exp.profit: 390,980

High **November**
Sales: 56,164



DATA GUIDE :- (Sheet 3)

Viz Details :-

- **Viz description :-**

This bar chart shows the total sales in different countries. Each bar is divided by product vendors to compare how much each vendor contributed to the total sales. You can filter the chart by year, order date, or month to see the sales for a specific time period.

Applied Filters :-

Action (MONTH(Order Date))

Country

Data in This Viz :-

orders+

Action (MONTH(Order Date))

Country

Abc Product Vendor

sales

Data Summary :-

This viz

- Is sorted in a descending order based on Country Columns sorting
- Has 270 data points

No Outlier Marks Found

DATA GUIDE :- (Sheet 4)

Viz Details :-

- **Viz description :-**

- This bar chart shows the Top 10 Best-Selling Products based on total sales. It visually represents which products have generated the highest revenue in the dataset.
- The Rows contain Product Name, and the Columns display Sales, making it easy to compare sales amounts across products.
- In the Marks card, Sales is added to Color, which applies a gradient effect—darker shades represent higher sales, helping to quickly identify the top-performing products. The Product Name is added to Label to display the product names clearly on each bar.
- A Filter on Product Name is applied with a Top 10 condition by Sales, ensuring that only the ten highest-selling products appear in the visualization.
- This chart provides a clear and focused view of sales performance, allowing users to instantly recognize which products contribute most to overall revenue.

Applied Filters

Product Name

Data in This Viz

orders+

Abc Product Name
=# sales

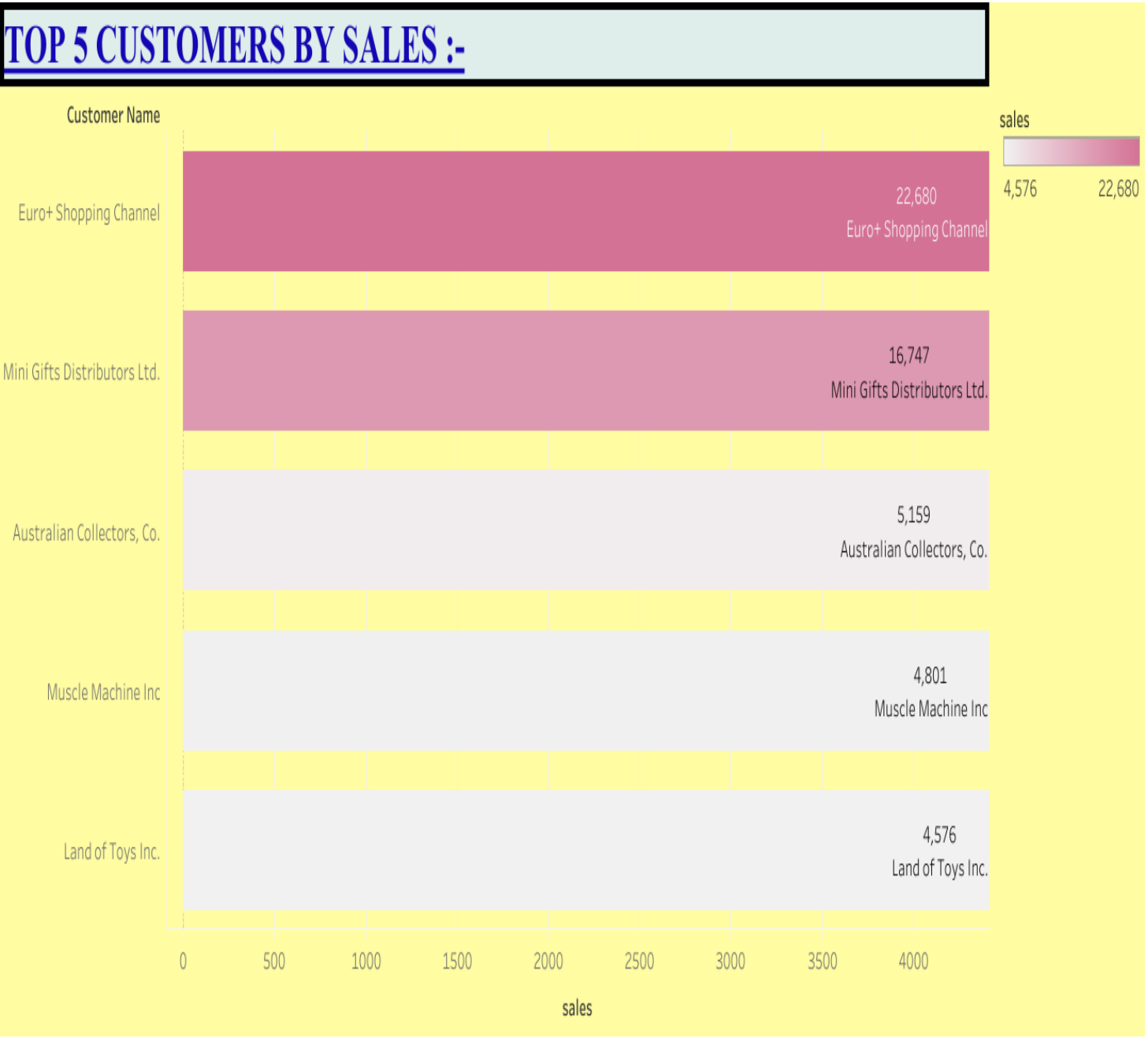
Data Summary

This viz
- Is sorted in a descending order based on Product Name Rows sorting
- Has 10 data points

Detected Outlier (1)

Tableau detected these marks as unusual compared to other marks in the selected viz.

High 1992 Ferrari 360 Spider red
Sales: 8,074



DATA GUIDE :- (Sheet 5)

Viz Details :-

- **Viz description :-**

➢ This chart shows the top 5 customers who made the highest total sales.
➢ The darker color bars represent higher sales amounts.
➢ By looking at this chart, we can easily identify which customers are most valuable to the business.
➢ Filters for product name, country, and year help to view customer sales in different categories or time periods. Here , I have used customer name in filter and limited it to top 5 by sales.

Applied Filters

Action (Product Name)
Customer Name

Data in This Viz

orders+

Action (Product Name)
Country
Customer Name
sales

Data Summary

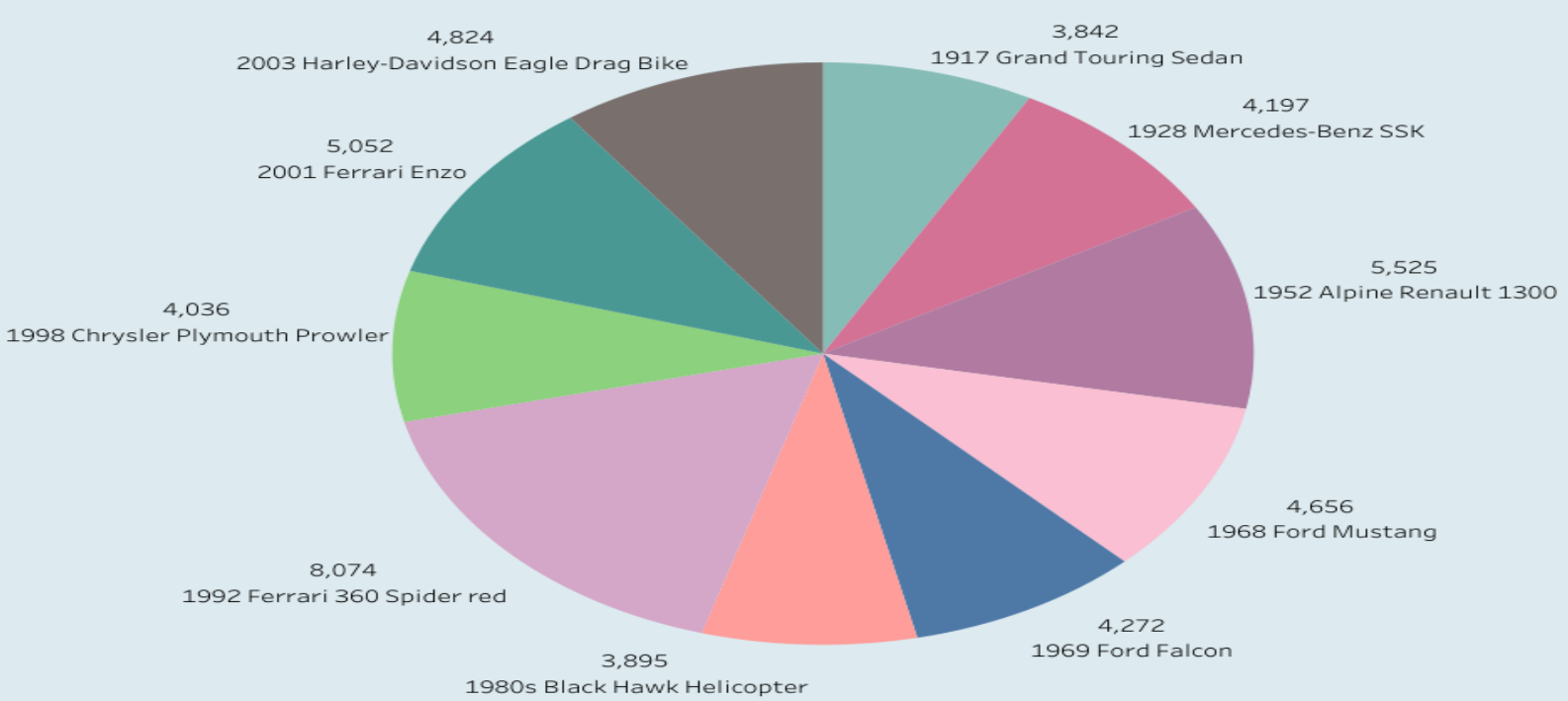
This viz
- Is sorted in a descending order based on Customer Name Rows sorting
- Has 5 data points

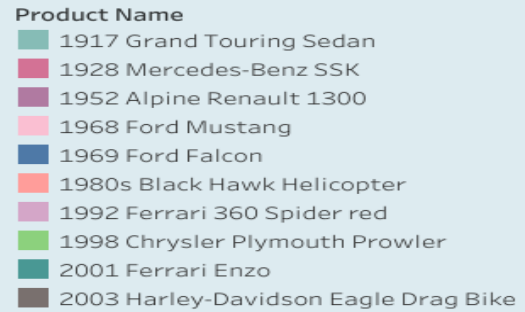
Detected Outlier (1)

Tableau detected these marks as unusual compared to other marks in the selected viz.

High Euro+ Shopping Channel
Sales: 22,680

10 MOST EXPENSIVE PRODUCTS





DATA GUIDE :- (Sheet 6)

Viz Details :-

- **Viz description :-**

- This pie chart displays the top 10 most expensive products based on their Price Each value.
- Each slice represents a product, and the greater the angle size, the more expensive and higher selling the product is.
- Colors help to distinguish between products easily, and labels show sales value and product names clearly.
- This helps in understanding which products are the most premium and contribute the most to total revenue.

Applied Filters

No filters apply to this viz

Data in This Viz

orders+

- Action (Customer Name)
- Abc Product Name
- sales

Data Summary

This viz

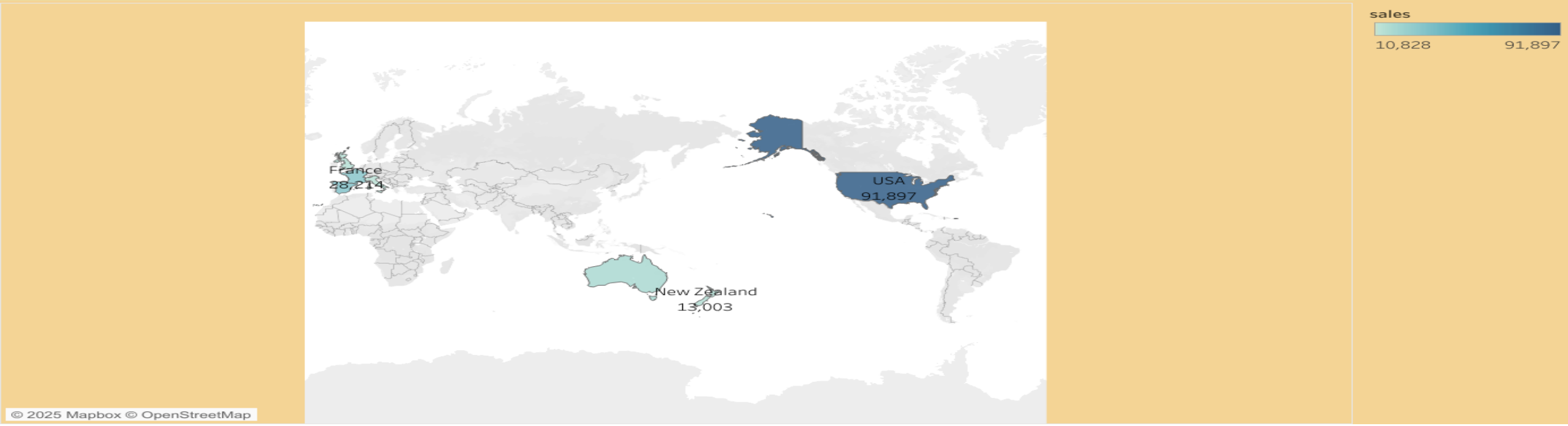
- Has 10 data points

Detected Outlier (1)

Tableau detected these marks as unusual compared to other marks in the selected viz.

High 1992 Ferrari 360 Spider red
Sales: 8,074

TOP 7 COUNTRIES BY SALES :-



DATA GUIDE :- (Sheet 7)

Viz Details :-

- **Viz description :-**

➢ This filled map shows the Top 7 Countries with the Highest Sales.

➢ Each country is filled with a color shade based on its total sales - the darker the color, the greater the sales.

➢ The map gives a quick global view of which regions contribute most to the company's revenue.

➢ Users can hover over each country to view the exact sales amount and country name.

Applied Filters

Country

Data in This Viz

orders+

Action (Product Line)
Country
sales

Data Summary

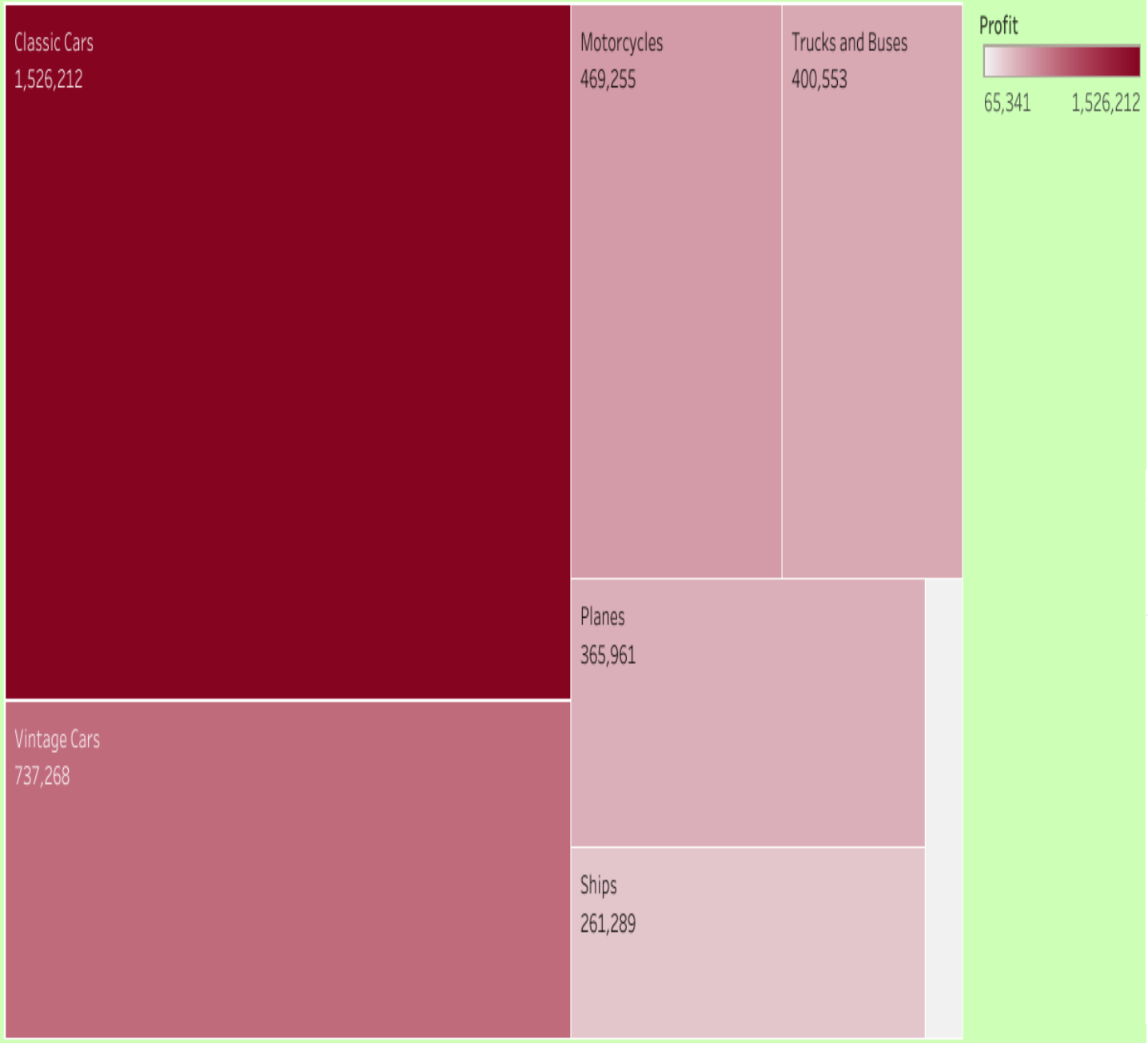
This viz
- Has 7 data points

Detected Outlier (1)

Tableau detected these marks as unusual compared to other marks in the selected viz.

High USA
Sales: 91,897

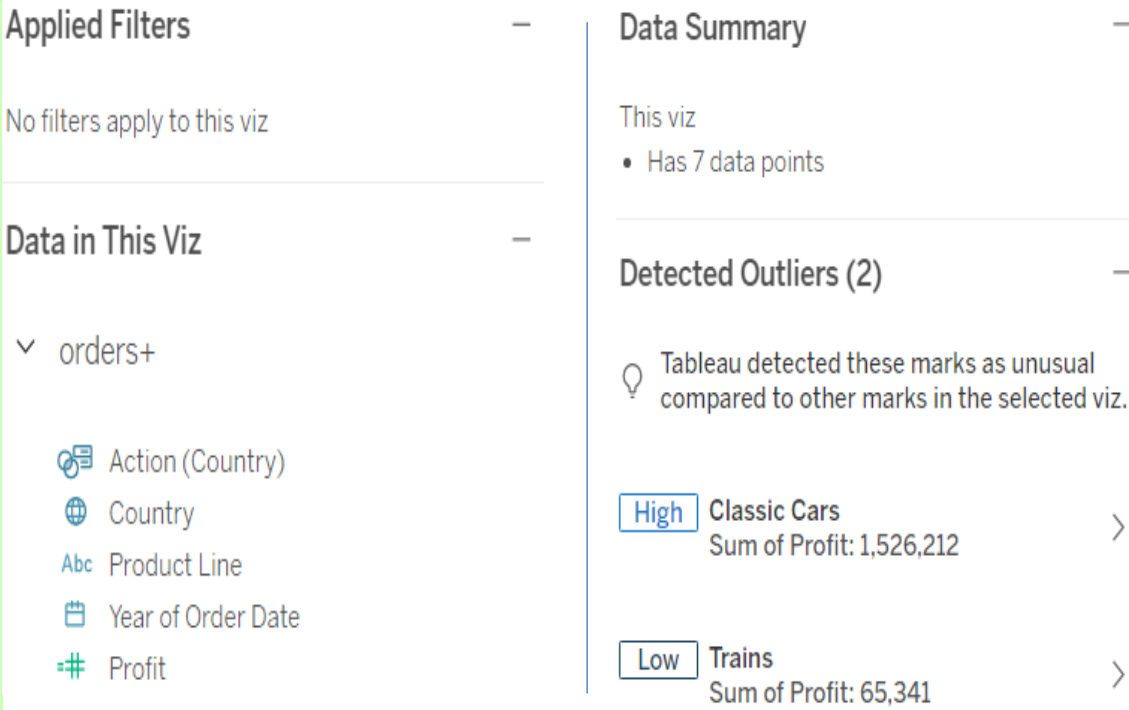
PROFIT FROM PRODUCT LINE :-



DATA GUIDE :- (Sheet 8)

Viz Details :-

- **Viz description :-**
  - This tree map shows the profit from different product lines(product category).
  - Each box represents one product line.
  - The bigger the size of the box, the greater the profit that product line has made.
  - Also, the darker the color, the higher the profit value, and the lighter colors show lower profits.
  - This chart helps to easily compare which product lines are performing well and which are earning less profit.
  - Filters like Year, Country, and Product Line can be used to view profits for specific time periods or regions.

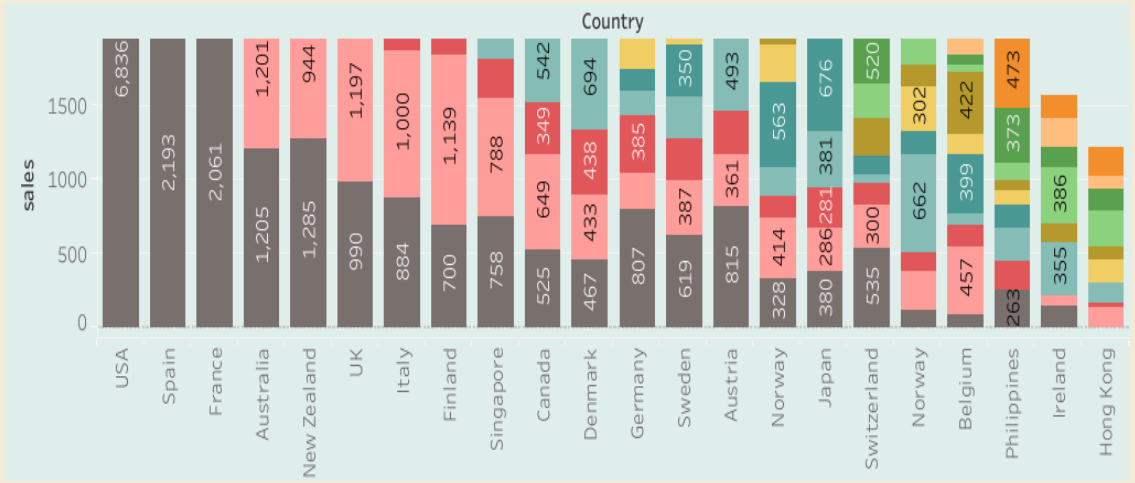


COUNTRY-WISE SALES & MONTHLY PROFIT ANALYSIS :-

Country
All

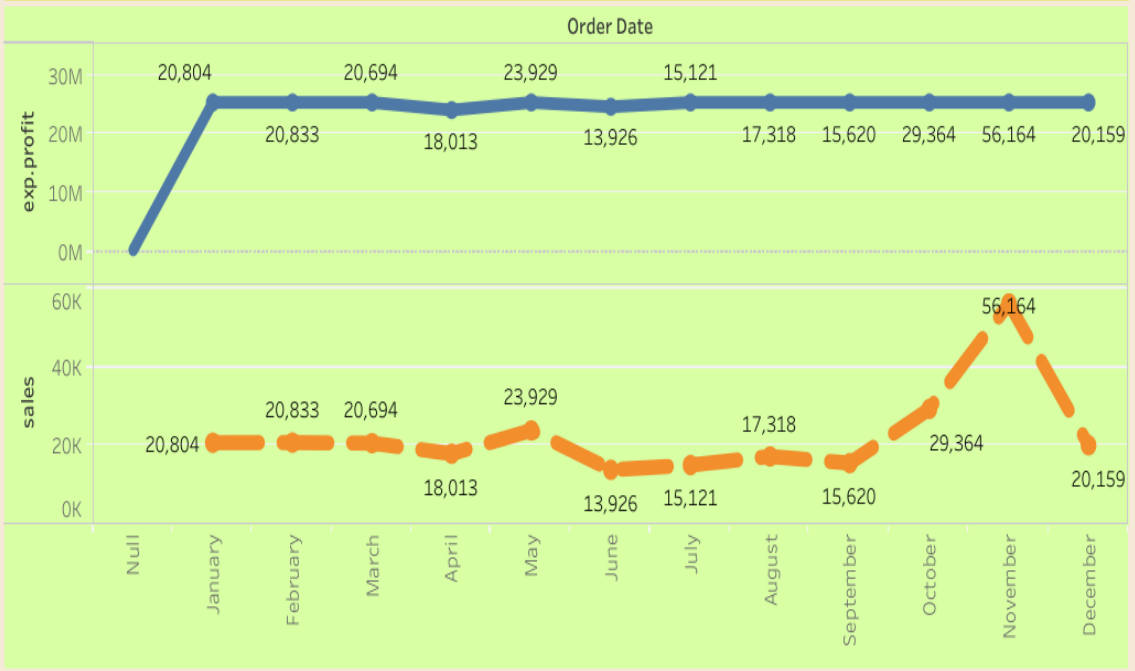
Year of Order Date
All

COUNTRY-WISE SALES DISTRIBUTION BY PRODUCT VENDOR



Measure Names
exp.profit
sales

SALES & PROFIT PER MONTH



DATA GUIDE :- (Dashboard 1)

Dashboard Details :-

- **Dashboard description :-**

➢ **Countrywise Sales and Monthly Profit Analysis:-**

➢ This dashboard gives an overall view of sales and profit in different countries and months.

➢ The first chart, Country-Wise Sales Distribution by Product Vendor, shows how much each vendor sold in different countries. It helps to know which countries and vendors have the highest sales.

➢ The second chart, Sales and Profit per Month, shows how sales and profit change from month to month. It helps to find which months have better performance.

➢ Filters like Country, Year of Order Date, and Measure Names help users to focus on specific data.

➢ Also, when we click on any point in the monthly line chart, the above chart automatically updates - making the dashboard interactive.

➢ Overall, this dashboard helps to understand where the sales come from and how the profit changes over time.

Data in This Dashboard

> orders+

Detected Outliers (2)

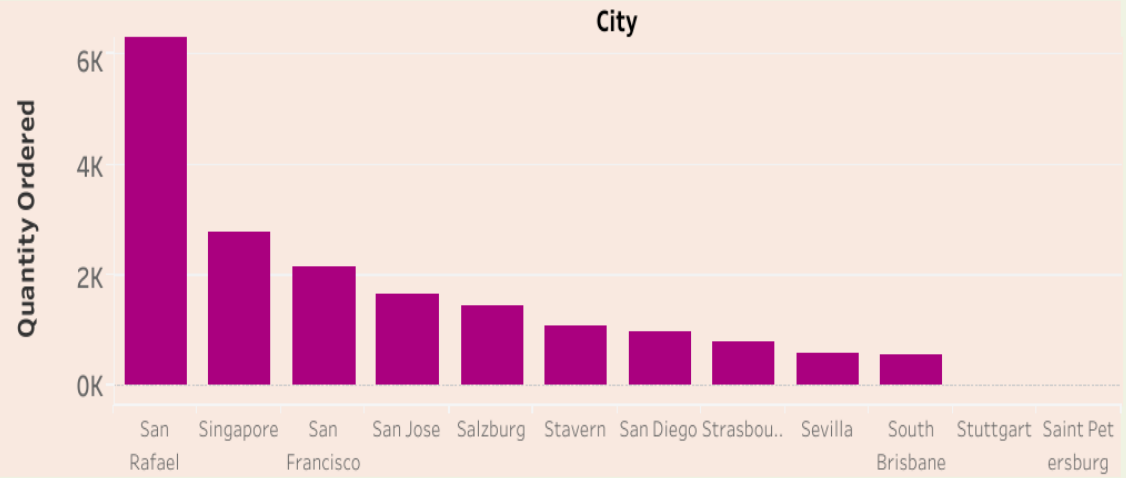
Tableau detected these marks as unusual compared to other marks in the same viz.

Low **Null**
Sum of exp.profit: 390,980 >

High **November**
Sales: 56,164 >

PRODUCT SALES & CITY-WISE DEMAND :-

TOTAL QUANTITY ORDERED IN CITIES STARTING WITH 'S'

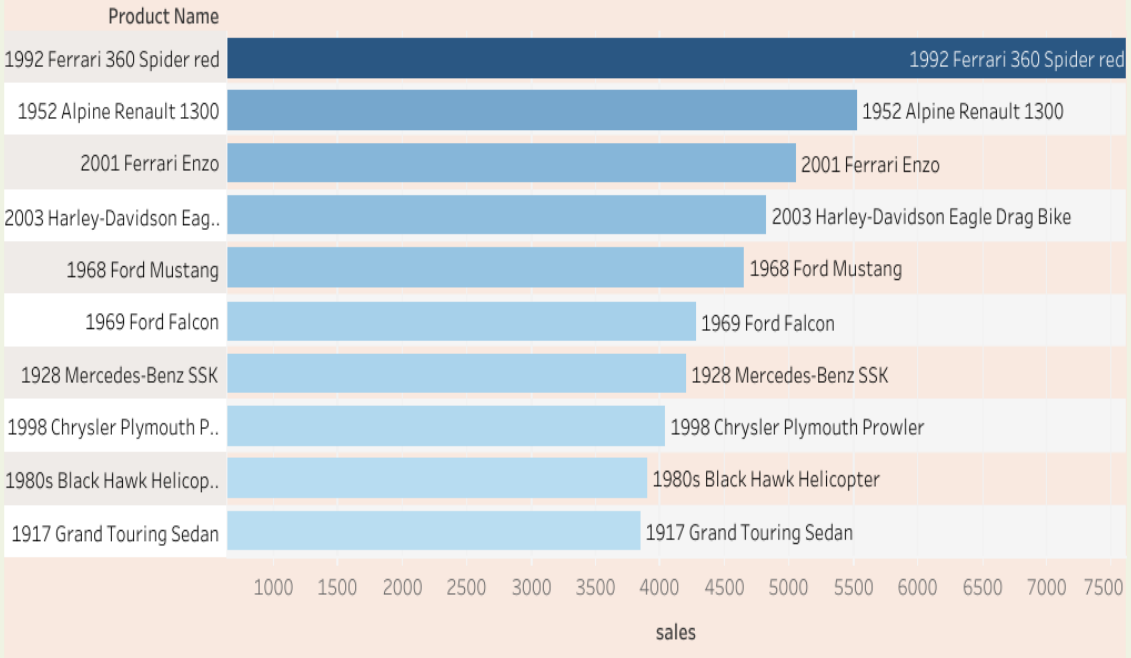


City
Starts with "S"

Product Name
- ✓ 18th century schooner
- ✓ 18th Century Vintage ..
- ✓ 1900s Vintage Bi-Plane
- ✓ 1900s Vintage Tri-Pla..
- ✓ 1903 Ford Model A
- ✓ 1904 Buick Runabout
- ✓ 1911 Ford Town Car
- ✓ 1912 Ford Model T De..
- ✓ 1913 Ford Model T Sp..
- ✓ 1917 Grand Touring S..
- ✓ 1917 Maxwell Tourin..
- ✓ 1926 Ford Fire Engine
- ✓ 1928 British Royal Na..
- ✓ 1928 Ford Phaeton De..
- ✓ 1928 Mercedes-Benz ..
- ✓ 1930 Buick Marquett..
- ✓ 1932 Alfa Romeo 8C2..
- ✓ 1932 Model A Ford J-..
- ✓ 1934 Ford V8 Coupe
- ✓ 1936 Chrysler Airflow
- ✓ 1936 Harley Davidson..
- ✓ 1936 Mercedes Benz ..
- ✓ 1936 Mercedes-Benz ..
- ✓ 1937 Horch 930V Lim..
- ✓ 1937 Lincoln Berline
- ✓ 1938 Cadillac V-16 Pr..
- ✓ 1939 Cadillac Limousi..
- ✓ 1939 Chevrolet Delux..
- ✓ 1940 Ford Delivery Se..
- ✓ 1940 Ford Pickup Truc..

Limit
Top 10 by [sales]

TOP 10 BEST-SELLING PRODUCTS



sales
3,842 8,074

DATA GUIDE :- (Dashboard 2)

Dashboard Details :-

- **Dashboard description :-**

➢ Product Sales and City-Wise Demand:-

➢ This dashboard shows the top 10 best-selling products and their corresponding quantities ordered in cities that start with the letter 'S'. The bottom bar chart displays the top products based on total sales, and the top chart represents the quantity ordered in each city. The dashboard is interactive - when a product is selected in the bottom chart, the top chart automatically updates to show how that product performs in different cities.

➢ This helps in understanding product popularity across multiple locations and identifying which products have strong sales in specific cities

Data in This Dashboard

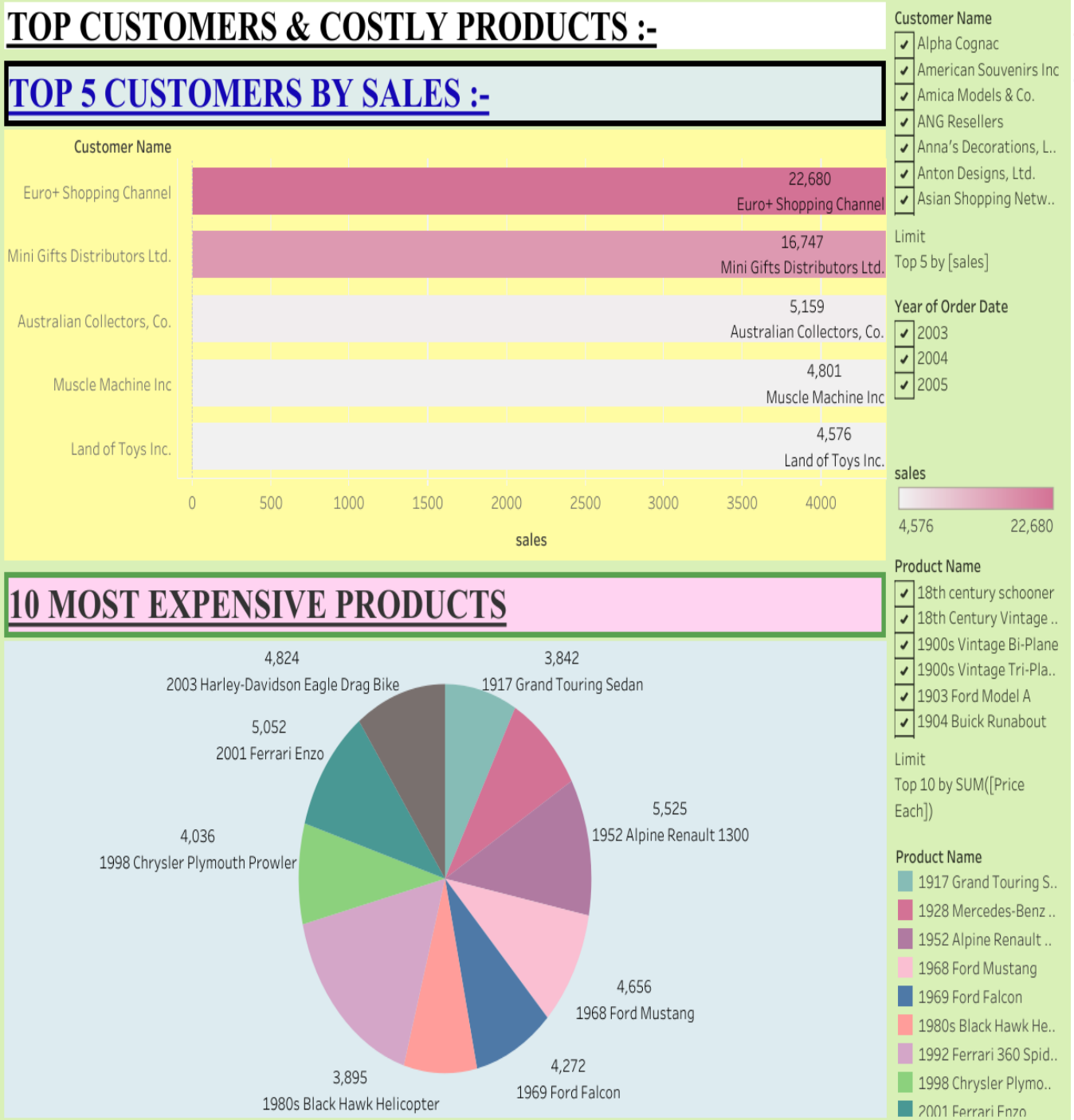
> orders+

Detected Outliers (2)

Tableau detected these marks as unusual compared to other marks in the same viz.

High San Rafael
Sum of Quantity Ordered: 6,366 >

High 1992 Ferrari 360 Spider red
Sales: 8,074 >



DATA GUIDE :- (Dashboard 3)

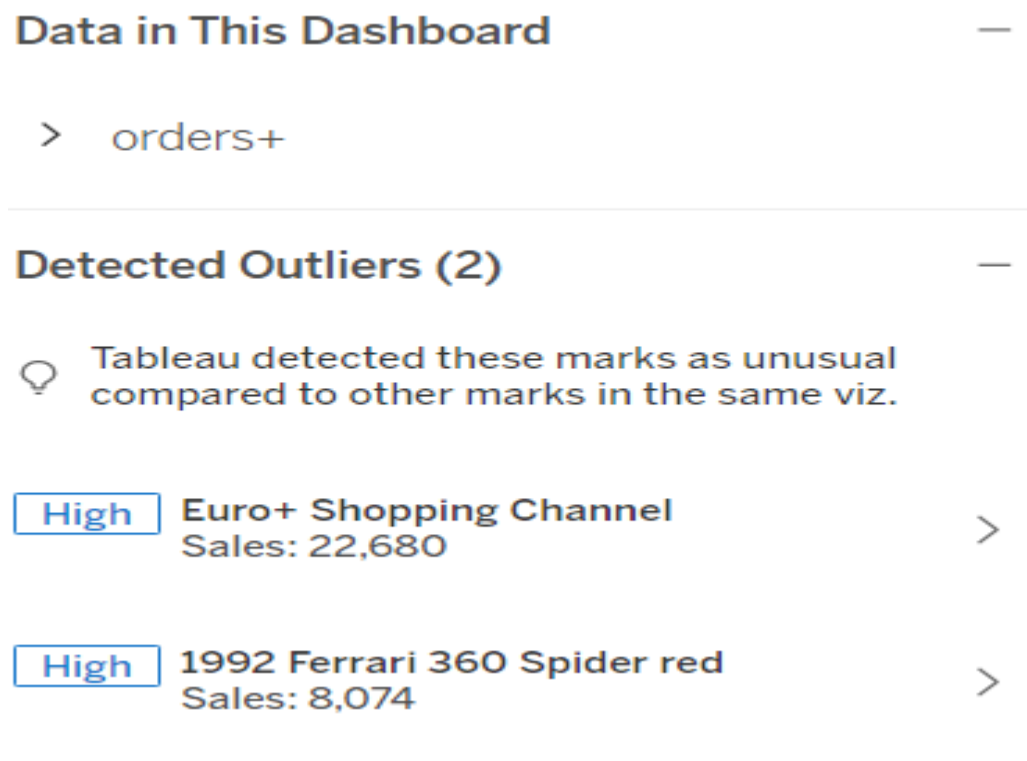
Dashboard Details :-

- **Dashboard description :-**

➢ This dashboard displays the Top 5 Customers by Sales and 10 Most Expensive Products to analyze business revenue from both customer and product perspectives.

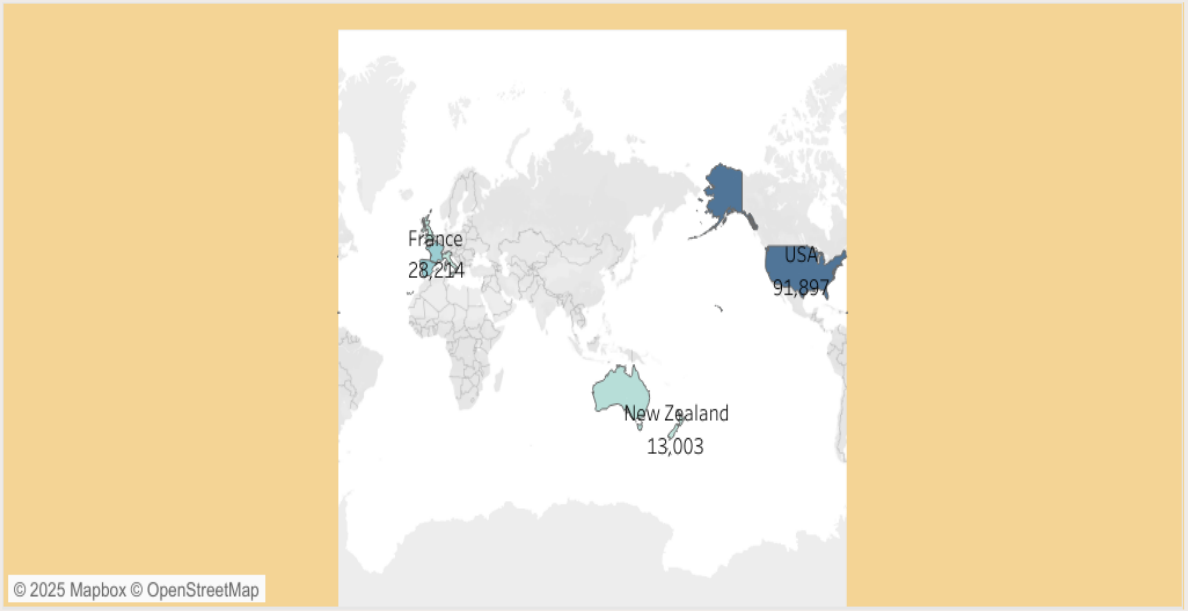
➢ The dashboard is interactive - selecting a customer or product dynamically filters the other chart to show related insights.

➢ Users can explore sales patterns, identify key customers, and review high-value products through simple click interactions, making the analysis more engaging and meaningful.



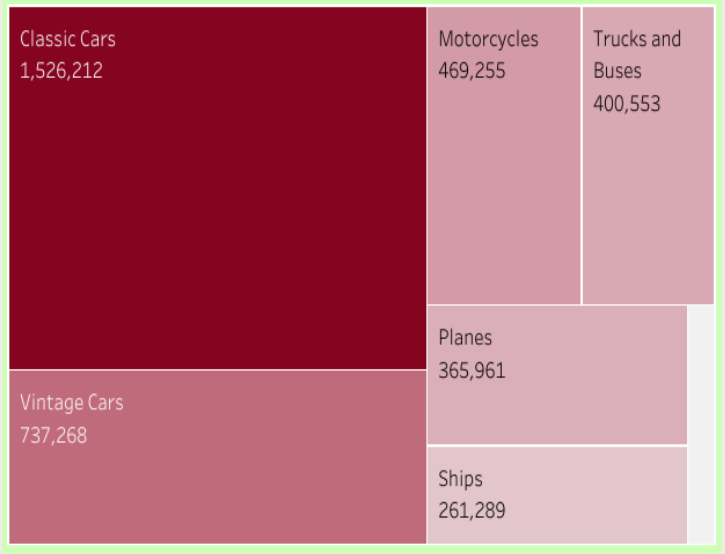
GLOBAL SALES & PROFIT OVERVIEW :-

TOP 7 COUNTRIES BY SALES :-



Country
- Australia
- Austria
- Belgium
- Canada
- Denmark
- Finland
- France
- Germany
- Hong Kong
- Ireland
- Israel
- Italy
- Japan
- Netherlands
- New Zealand
- Norway
- Norway
- Philippines
- Poland
- Portugal
- Russia
- Singapore
- South Africa
- Spain
- Sweden
- Switzerland
- UK
- USA

PROFIT FROM PRODUCT LINE :-



Limit
Top 7 by [sales]

sales
10,828 91,897

Profit
65,341 1,526,212

DATA GUIDE :- (Dashboard 4)

Dashboard Details :-

- **Dashboard description :-**

➢ This dashboard gives a clear view of how sales and profits are spread across different countries and product types.

➢ The map shows the Top 7 countries by sales - darker shades represent higher sales values.

➢ The tree map displays the profit from each product category - bigger and darker boxes indicate higher profit.

➢ Together, they help identify which countries and product lines perform the best overall.

Data in This Dashboard

> orders+

Detected Outliers (3)

Tableau detected these marks as unusual compared to other marks in the same viz.

High USA
Sales: 91,897 >

High Classic Cars
Sum of Profit: 1,526,212 >

Low Trains
Sum of Profit: 65,341 >

Key Findings

Some key insights obtained from the analysis include:

- Sales are concentrated in a few top-performing countries
- Certain product categories generate higher profit compared to others
- Monthly sales and profit show clear trends over time
- A small group of customers contributes significantly to total sales
- Outliers represent high-performing products or regions

Conclusion

- This project successfully demonstrates the use of Tableau for data analysis and visualization.
- By using interactive dashboards, complex sales data was transformed into meaningful insights.
- The dashboards provide a consolidated(overall) view of sales, profit, customers, products, and regions, helping to identify high-performing areas and support data-driven decision-making.

References

- Dataset provided for academic use(by my mentor)
- Tableau Official Documentation
- Tableau Public Learning Resources

THANK YOU