



Product Performance Analysis using Cognos Analytics

GROUP 7

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Agenda

01

**Overview &
Objectives**

02

**Data Cleaning &
Preprocessing**

03

Modeling & Analysis

04

Recommendations

Introducing Superstore.....

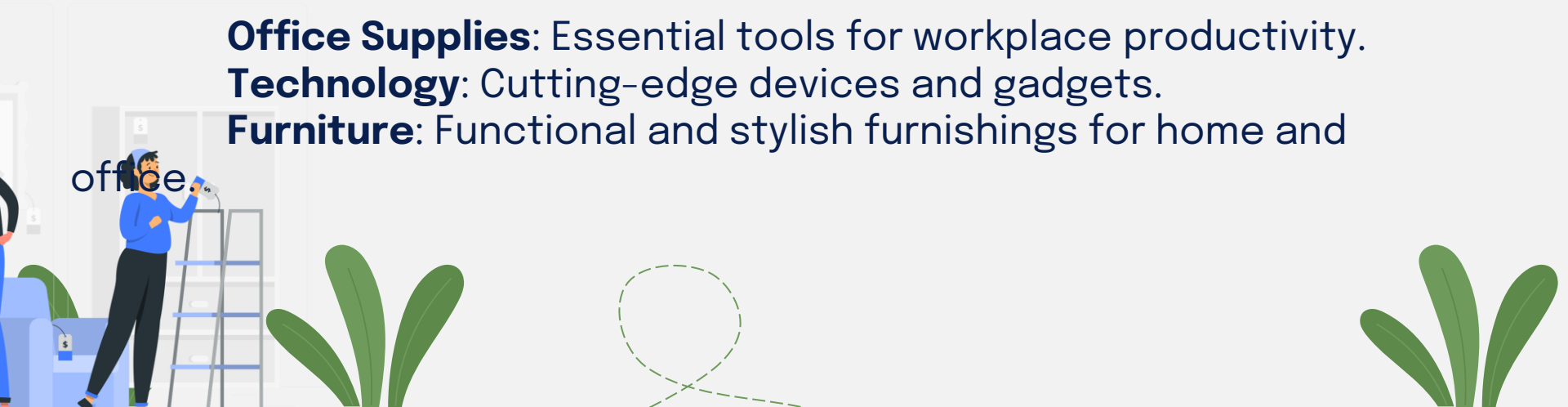
- A prominent retail store in select regions across the **USA** providing a diverse range of quality products and services.
- Specializes in three key categories:

Office Supplies: Essential tools for workplace productivity.

Technology: Cutting-edge devices and gadgets.

Furniture: Functional and stylish furnishings for home and

office



Objectives

- Visualize and analyze Superstore sales data for actionable insights.
- Provide strategic recommendations based on findings to increase the company's sales.

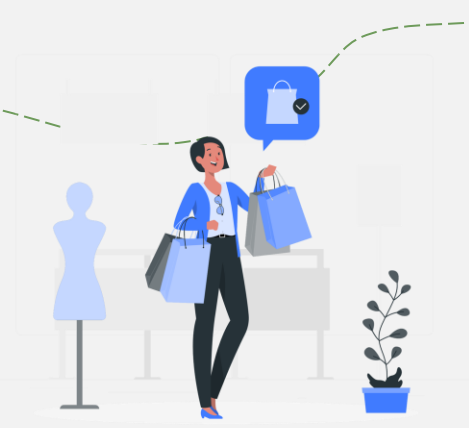


Goals

- Identify top performers by uncovering products driving **maximum sales** and **profitability**.
- Explore **seasonal trends** by analyzing sales patterns across different seasons/timeframes and identify product sales variations based on seasonal trends.



Utilizing.....



About the Dataset

Categories	Column Names
Order related	OrderDate, ShipMode
Customer Related	CustomerID, CustomerName, Segment, Country, State, City, Region
Product	ProductID, Category, Sub-category, ProductName
Sales Related	Sales, Quantity, Discount, Profit

Source: <https://community.tableau.com/s/question/0D54T00000CWeX8SAL/sample-superstore-sales-excelxls>

Data Cleaning

We did the following as part of data cleaning & preprocessing

1

Checking for missing values

2

Removing unnecessary columns

3

Creating new columns 'Month' and 'Year' from 'Order Date'



Quick Dataset Stats

Highest Selling Product Category

Technology

Average Sales (in thousands US\$)

229.86

Average Profit (in thousands US\$)

28.66



Business Questions



Question 1

How does sales and profitability vary across different months of the year, indicating any observed seasonality patterns?

Question 2

Can we identify any seasonal trends or patterns in the sales of specific products?

Business Questions



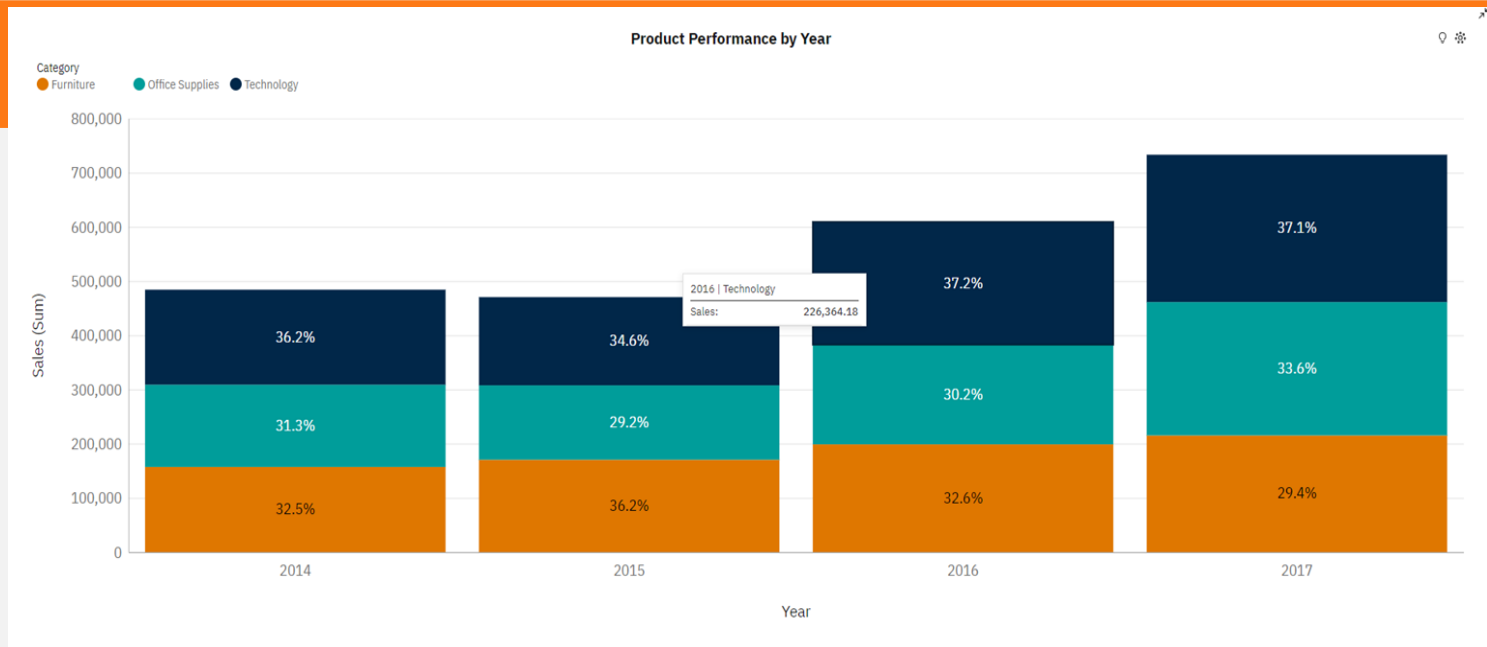
Question 3

Are there regional variations in total profit? If so, what factors contribute to these differences?

Question 4

Can we identify opportunities for market expansion based on geographical analysis?

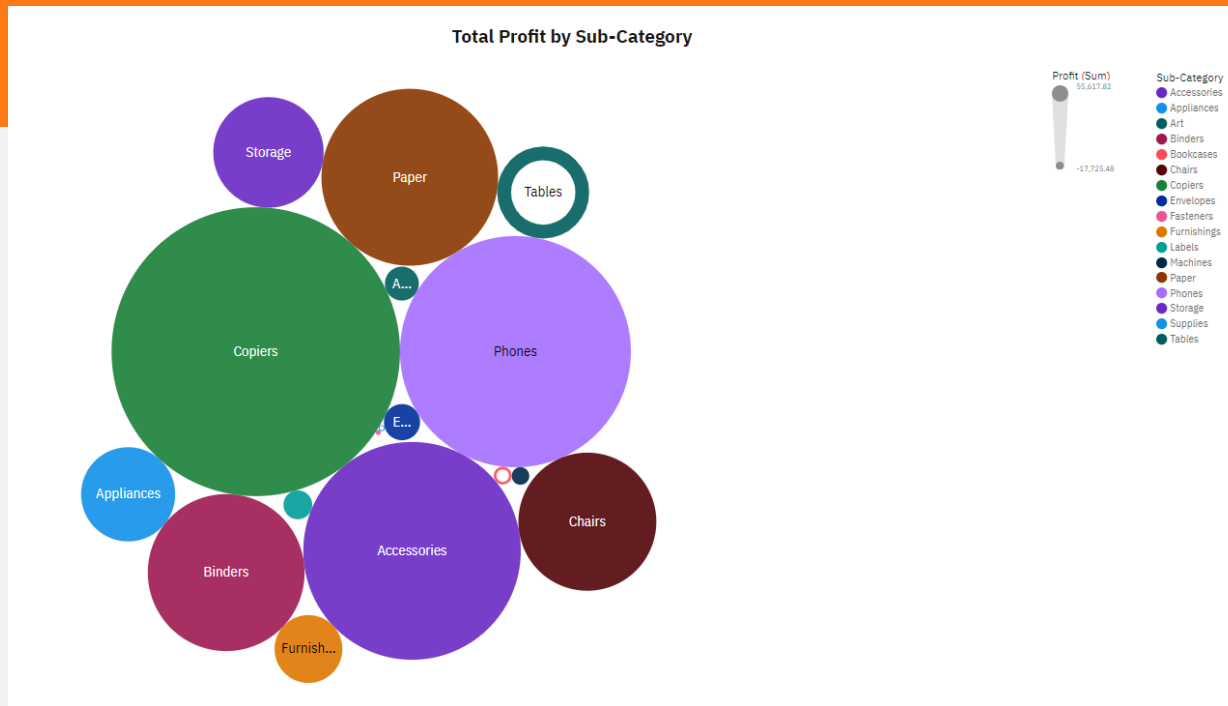
Modeling and Analysis



Product Performance

- **Technology** maintained a high and stable sales percentage each year
- **Office Supplies** consistently increased in sales, reaching a peak in 2017.
- **Furniture** category exhibited some sales fluctuation, experiencing a slight dip in 2017.

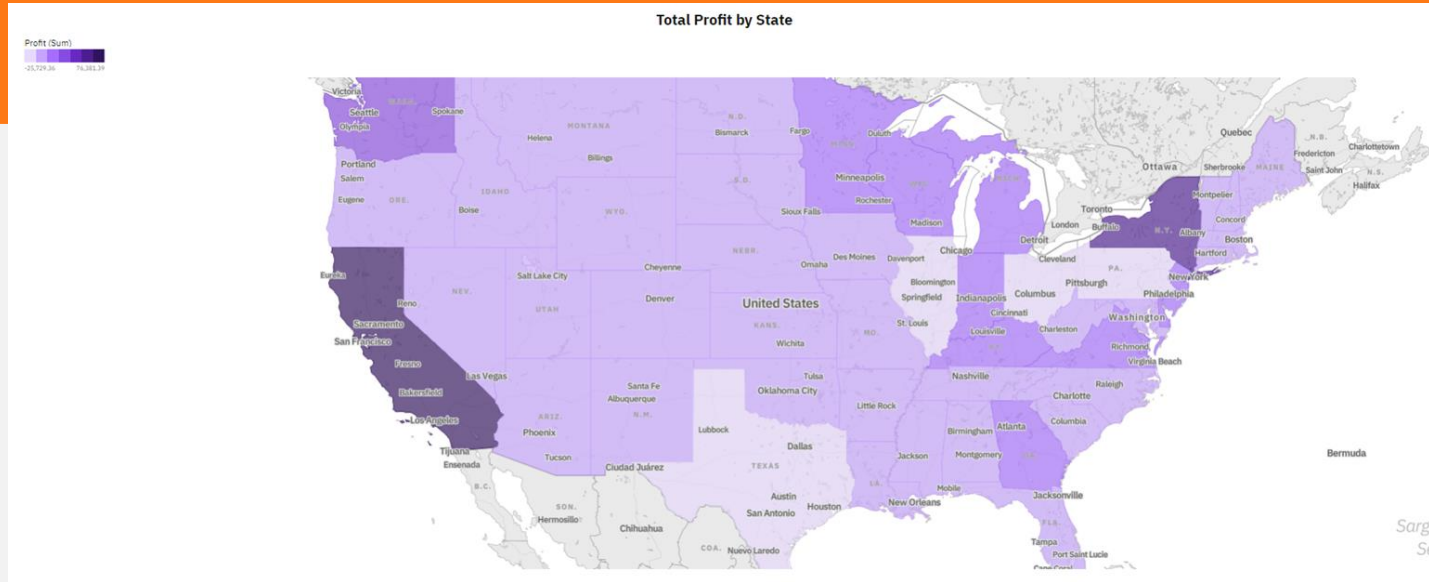
Modeling and Analysis



Profitability

- Within the Technology category, **Copiers** consistently stood out in terms of profitability.
- **Phones and Accessories**, also part of the Technology category, displayed commendable profitability, notably after the successful performance of Copiers.

Modeling and Analysis



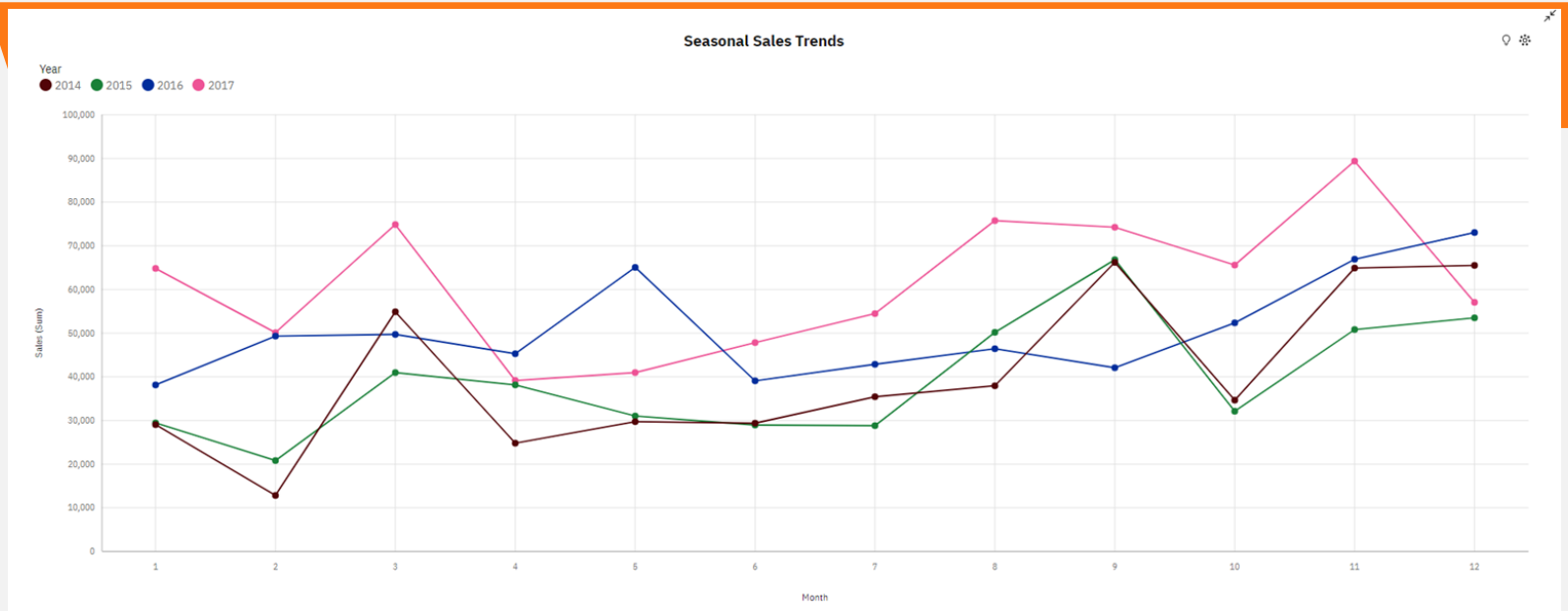
Regional Variation in Total Profit:

- Higher profits in **California and New York**
- Moderate profits in **Minnesota, Virginia, Indiana, Georgia, and Washington**

Factors affecting Regional Variation:

- Population Density
- Market Demand
- Competitive Landscape

Modeling and Analysis

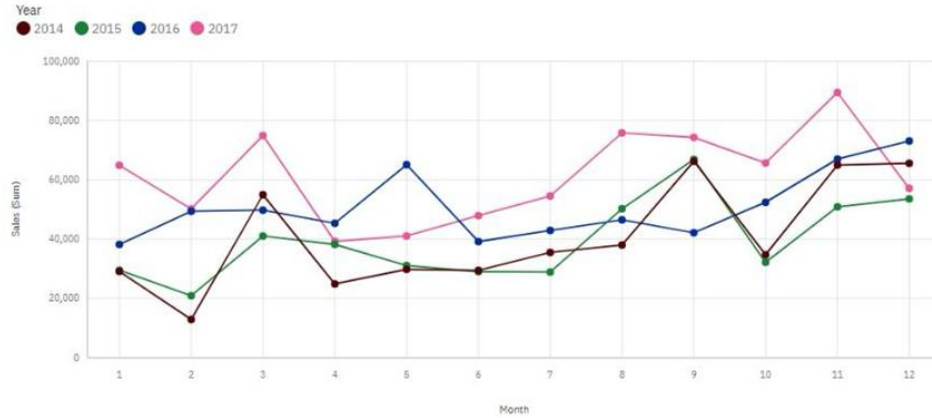


Seasonal Trends

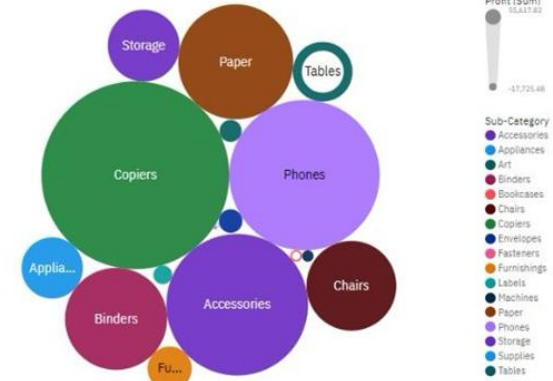
- Peaks in **March, September and November**.
- **January** tends to have lower sales, possibly reflecting post-holiday consumer behaviour.

Dashboard

Seasonal Sales Trends



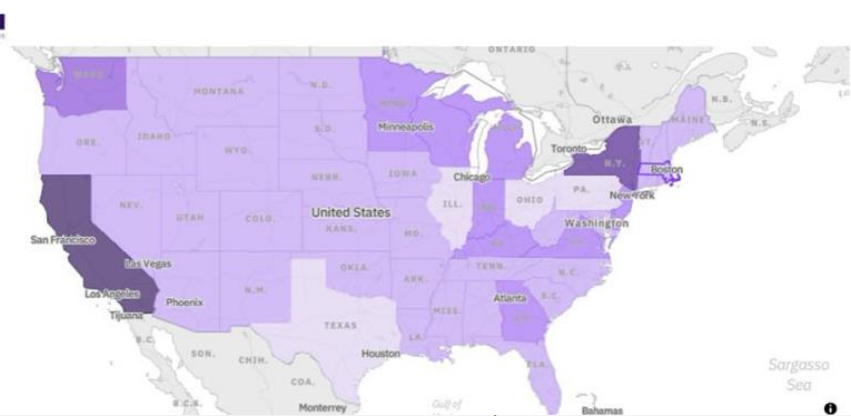
Total Profit by Sub-Category



Product Performance by Year



Total Profit by State



Challenges Faced

Trend Analysis

Issues splitting the sales data by year.

Interactive Map

Deciding on variables to use.

Visual Choice

Identifying suitable visuals to solve our business problem.



Recommendations

Product Performance

Implement **cross-promotional strategies**, such as bundling Furniture with Office Supplies or offering special discounts on Phones and Accessories with the purchase of Copiers, to encourage customers to explore and purchase multiple product categories.

Seasonal Trends

Address the post-holiday sales dip in January by focusing on **clearance sales**, **promotions**, or **loyalty programs** to re-engage consumers.



Recommendations

Regional Variation in Profit

Adopt **competitive pricing strategies** and **promotions** based on the competitive landscape in each region.



Market Expansion

Target areas with **high population growth** and **economic development**.

Tailor product offerings based on the **specific preferences** and needs of each region.



Q & A

