



Power BI Case Study – Global Superstore Orders Dashboard

1. Business Problem Statement

A retail company wants to understand its overall sales performance across different regions, product categories, and customer segments.

The goal is to develop an **interactive Power BI dashboard** that provides an **overview of key metrics** and an **in-depth drill-down analysis** to help business leaders make data-driven decisions.

Objectives:

- Understand which **segments, regions, and customers** drive the most orders.
 - Identify **shipping patterns** and potential bottlenecks.
 - Monitor **trends over time** to support decision-making.
 - Enable **interactive navigation** between overview and details.
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2. Data Dictionary

Column Name	Description
Order ID	Unique identifier for each order

Order Date	Date when the order was placed
Ship Date	Date when the order was shipped
Ship Mode	Shipping type (Standard, Second Class, First Class, Same Day)
Customer ID	Unique identifier for customer
Customer Name	Customer's name
Segment	Customer segment (Consumer, Corporate, Home Office)
Country	Country (United States)
Region	Region (Central, East, South, West)
State	State name
City	City name
Postal Code	Postal code
Product ID	Unique identifier for product

Category	Product category (Furniture, Office Supplies, Technology)
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Sub-Category	Product sub-category (Chairs, Phones, Binders, etc.)
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Product Name	Product description
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Sales	Sales revenue amount
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Quantity	Number of items sold
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Discount	Discount applied
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Profit	Profit earned
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3. Univariate Analysis Questions (Single Column)

- Which **product category** generates the most sales?
- Which **customer segment** contributes the most profit?
- Which **shipping mode** is most frequently used?
- Distribution of **profit margins** across products.
- Which **state/city** has the highest number of orders?

👉 **Visuals:** Bar charts, column charts, pie charts, KPI cards.

4. Bivariate Analysis Questions (Relationship Between Two Variables)

- What is the relationship between **Sales vs. Profit**? (scatter plot)
- Which **segment vs. region** combination is most profitable?
- Which **sub-categories vs. discount** lead to losses?
- How does **quantity ordered** affect **profitability**?
- Compare **ship mode vs. delivery time**.

👉 **Visuals:** Scatter plots, stacked bar charts, matrix visuals.

5. Time Series Analysis Questions

- What are the **monthly/quarterly/yearly sales trends**?
- Which months see the **highest profit dips**?
- Compare **YoY growth in sales vs. profit**.
- Seasonal spikes in **consumer segment orders**.

👉 **Visuals:** Line charts, area charts, stacked area charts.

6. Geographical Analysis Questions

- Which **region** contributes the most revenue?
- Which **states/cities** are most profitable?
- Which **regions are loss-making** despite high sales?

- Geographic heatmap of **sales and profit distribution**.

👉 **Visuals:** Map charts, filled maps, tree maps.

7. Dashboard Plan

We will design a **two-page dashboard**:

- **Page 1 – Overview Dashboard:** A high-level summary of business performance.
 - **Page 2 – In-depth Analysis Dashboard:** Detailed insights for decision-making.
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Page 1 – Overview Dashboard Questions

1. What is the total sales, total profit, and total number of orders in the Category?
 2. How have sales and profit trends changed over time (monthly/yearly)?
 3. What is the sales distribution by customer segment?
 4. Which regions generate the highest sales?
 5. Which are the top 5 City by total sales?
 6. Which shipping mode is most getting total sales?
 7. Who are the top 10 customers by total sales?
 8. What is the profit distribution across different product categories?
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Page 2 – In-depth Analysis Dashboard Questions

1. Which **states** have the highest and lowest profit margins?
 2. Which **products** contribute the most to total sales?
 3. Which **sub-categories** are most profitable?
 4. What is the **average discount** given per category and its impact on profit?
 5. How do **sales and profit** vary across different shipping modes?
 6. Which **cities** generate the most orders?
 7. How does **sales contribution by category** change over the years?
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8. Page Navigation Setup

1. Create **two report pages** in Power BI:
 - Page 1 → Rename as “Executive Overview”
 - Page 2 → Rename as “Detailed Analysis”
 2. Insert a **Blank Button** on both pages.
 3. Go to **Format** → **Action** → **Page Navigation**.
 4. Set target page:
 - On Page 1 → Navigate to Page 2.
 - On Page 2 → Navigate to Page 1.
 5. Style buttons with icons and hover effects for a professional feel.
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9.Expected Insights

By the end of this dashboard:

- Management will **quickly identify** the most valuable customer segments and regions.
- Logistics teams can **see shipping mode usage patterns** across regions.
- State-wise and city-wise breakdowns will **support targeted marketing and delivery improvements**.
- Seasonal and yearly trends will help in **inventory and staffing decisions**.