# Sales Report Dashboard – Power BI Analytics Project Documentation

## 1. Project Overview

This Power BI project analyzes comprehensive sales and aggregated supply chain data to generate actionable insights about operations, profit distribution, customer behavior, and supply chain efficiency.

The report contains four main dashboard pages:
 **Sales**, **Orders**, **Profit**, and **Details**.

Data was cleaned, modeled, and aggregated using DAX measures stored in a dedicated folder named **_Measures**.

## 2. Business Objectives

The project aims to:

- Analyze total revenue and profit distribution by category, segment, and city.
- Monitor important KPIs such as Total Sales, Total Profit, Total Orders, and Total Cost.
- Identify trends in sales, orders, and profit over time.
- Determine the best-selling and most profitable products.
- Understand order behavior by weekday and sub-category to evaluate operational efficiency.

## 3. Data Model Summary

The data model includes three main datasets:

1. **Superstore Sales**
   Contains all sales transaction data such as Order ID, Order Date, Ship Date, and Ship Mode. This is the primary fact table in the model.

2. **supply_chain**
   Includes product details, inventory information, pricing, availability, and the number of products sold.

3. **Calendar**
   A date dimension containing fields like Year, Month, and Day to support time intelligence functions.

### Power Query Transformations Applied

- Promoted the first row to headers
- Removed blank rows and error values
- Removed duplicates
- Corrected and unified data types

---

## 4. Key DAX Measures

The report includes several key measures, all placed in the **basic** folder under **_Measures**. These include:

- **Total Sales**: Represents all sales revenue (approximately 2.26M).
- **Total Orders**: Counts the number of orders (approximately 5K).
- **Total Profit**: Net profit generated (approximately 2.21M).
- **Total Cost**: Represents the cost of goods sold or other cost components.

- **Total Costs**: Additional aggregated cost measure.
- **Avg Sales per Order**: Average revenue per order.
- **Total Manufacturing Cost**: Total value of manufacturing-related expenses.
- **Total Shipping Cost**: Total amount spent on shipping.
- **Total Units Sold**: Number of units sold across the dataset.

---

# 5. Dashboard Pages

## 5.1 Sales Page

This page highlights overall revenue performance.
 Key visuals include:

- Sales trend by year using a line chart
- Sales distribution by category using a donut chart
- Sales by city, segment, and customer name through bar charts and tables

The focus of this page is understanding where revenue comes from and which categories or locations contribute the most.

---

## 5.2 Orders Page

This page focuses on the overall order activity.
 Visuals include:

- Orders trend by year
- Orders by weekday to detect patterns

- Orders breakdown by category, segment, product name, and sub-category

The goal is to identify order behavior over time and understand which products receive the highest number of orders.

---

## 5.3 Profit Page

This page presents profitability insights.
 Visuals include:

- Profit over time using a line chart
- Profit distribution by category
- Profit by city and segment

The main purpose is to understand net profit performance and identify the highest profit drivers.

---

## 5.4 Details Page

This page offers a more detailed, searchable breakdown of all products.
 It includes a comprehensive product-level table showing:

- Product ID
- Product Name
- City
- Sub-category
- All major KPIs (sales, profit, orders, costs)

This page supports deeper investigation and helps compare individual product performance.

## 6. Filters and Slicers

The dashboards include slicers for:

- City
- Region
- Year
- State

These filters allow users to perform dynamic and flexible analysis across all pages.

## 7. UI/UX Design

The report follows a dark theme with purple and magenta gradients as the main colors. Visual accents include pink and blue highlights.

The layout places KPIs at the top of each page, followed by visuals arranged cleanly in sections. Donut charts are used for distributions, line charts for trends, and bar charts for comparisons of top-performing cities and customers.

## 8. Insights Summary (Inferred)

### Revenue and Profit Insights

- The Technology category generates the highest share of sales and profit.

- The Consumer segment contributes the most revenue and profit.

- New York City leads as the top-performing city in both sales and profit.

## Order Insights

- Tuesday records the highest number of orders.

- The Binders sub-category has the highest order volume, followed by Paper.

---

# 9. Conclusion

This Power BI project provides a complete analytical view of sales and supply chain activities. With structured measures and interactive dashboards, it helps decision-makers:

- Identify top and low-performing products and cities

- Understand ordering patterns

- Improve pricing, sales, and profitability strategies