

# Power BI — Sales Data Visualization & Storytelling Report

## Executive Summary

This report demonstrates a Power BI-oriented approach to visualizing and telling the story of sales data. The included sample charts are generated from a synthetic sales dataset and illustrate common dashboard pages and KPIs you would implement in Power BI for a sales organization.

## Recommended Power BI Dashboard Pages

1. Executive Overview — total sales, MTD/YoY growth, top regions, KPI cards (Sales, Orders, Avg. Order Value, Profit Margin).
2. Sales Trends — time-series analysis, moving averages, seasonality.
3. Product Performance — top products, product category filters, contribution to revenue.
4. Regional Performance — map (if lat/long available) or choropleth; region filters and drill-through to territories.
5. Operational Insights — sales vs targets, order-level distribution, outlier detection.
6. Customer & Cohort Analysis — repeat customers, churn, LTV (if customer data available).

## Key KPIs to include

- Total Sales
- Sales Growth (MTD, YoY)
- Average Order Value (AOV)
- Units Sold
- Profit Margin
- Sales vs Target (variance)

## Example DAX measures

Total Sales = SUM('Sales'[Sales])

Total Units = SUM('Sales'[Quantity])

AOV = DIVIDE([Total Sales],[Total Units])

Sales MTD = TOTALMTD([Total Sales], 'Sales'[OrderDate])

Sales Variance = [Total Sales] - SUM('Sales'[Target])

## Data Model & ETL Guidance

- Use a star schema: a central fact table (Sales) and related dimension tables (Date, Product, Customer, Region).
- Pre-calculate clean columns (OrderDate as date type, product categories, region codes).
- Handle missing values and outliers before import. Use incremental refresh for large datasets.
- Add surrogate keys for dimensions and maintain slowly changing dimensions where needed.

## Storytelling Flow (example)

1. Start with the headline metric: Are sales up or down? (Executive Overview).
2. Show trend supporting the headline (time-series). Highlight anomalies and explain causes.
3. Drill into contributors: Which products or regions drove change?
4. Show operational metrics (sales vs target) and actions (reprioritize promotions, restock top sellers).
5. End with recommended next steps and owner assignments.

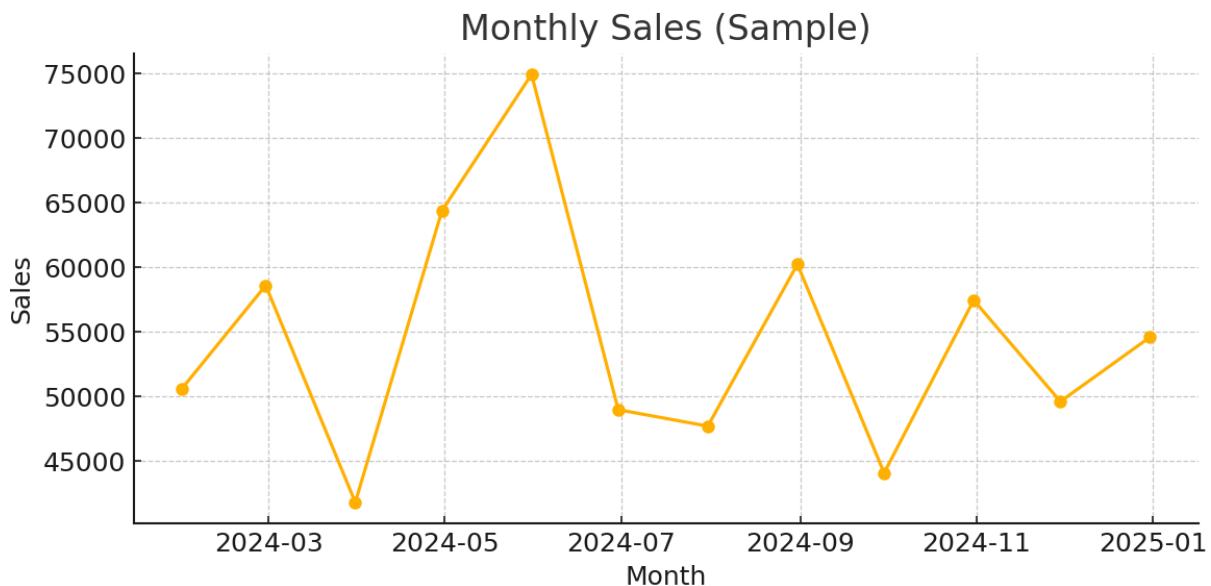


Figure 1 — Monthly Sales (sample)

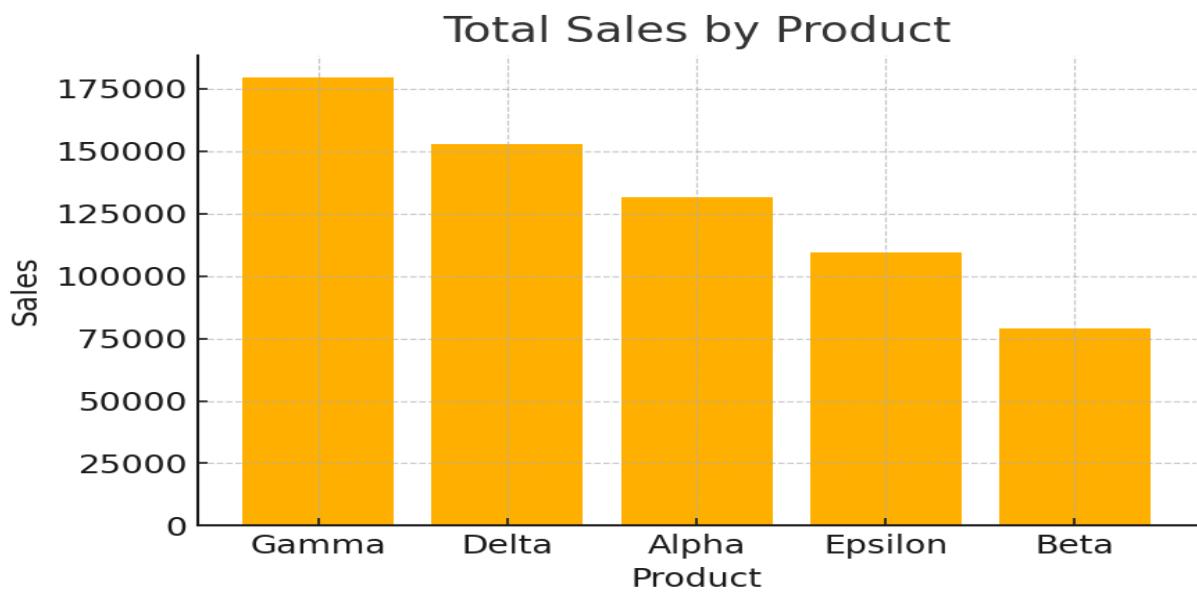


Figure 2 — Total Sales by Product

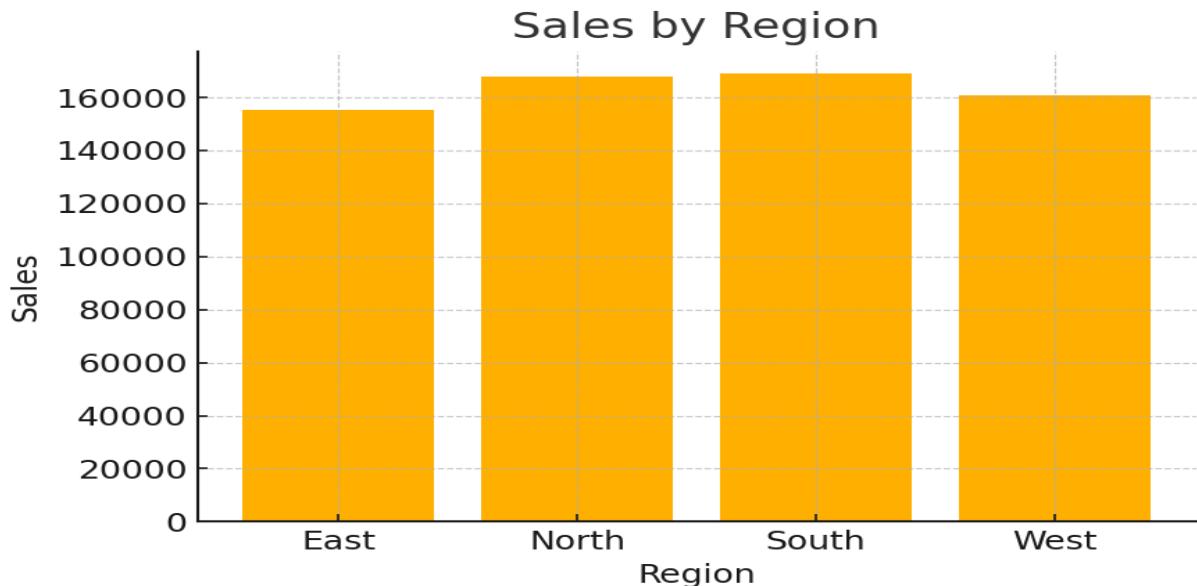


Figure 3 — Sales by Region



Figure 4 — Sales vs Target (sample orders)

#### Next steps to implement in Power BI

- Import cleaned fact and dimension tables into Power BI Desktop.
- Build measures with DAX (examples above) and set up a model with proper relationships.
- Design pages with consistent filters, slicers, and drill-through options.
- Publish to Power BI Service and set up scheduled refresh and row-level security as needed.
- Collect stakeholder feedback and iterate on the story and visuals.