



## Global Superstore Command Center: Interactive Power BI Dashboard for Sales & Profit Intelligence

### 1. Background & Context

Global Superstore is a multinational retailer selling office supplies, furniture and technology products across North America, EMEA and APAC. As competition intensifies and margins tighten, leadership needs actionable insights into how pricing, promotions and logistics drive both top-line growth and bottom-line profitability.

### 2. Business Objectives

1. **Revenue Growth:** Identify under-penetrated regions and product lines with high growth potential.
2. **Margin Improvement:** Quantify how discounting strategies affect profitability, and recommend optimal discount thresholds.
3. **Operational Efficiency:** Benchmark delivery performance by shipping mode and region to balance cost vs. customer satisfaction.
4. **Customer Profiling:** Uncover which customer segments (Consumer, Corporate, Home Office) deliver the greatest lifetime value.

### 3. Key Research Questions

- Which **regions** and **sub-categories** consistently outperform or underperform against sales and profit targets?
- At what **discount rate** does incremental volume begin to outweigh margin erosion?



- Does **expedited shipping** generate sufficient uplift in repeat business or premium pricing to justify its cost?
- Which **cities** show spikes in returns or late shipments, and what corrective actions can be taken?
- How do **seasonal trends** (monthly, quarter-over-quarter) inform inventory planning and promotional calendars?

#### 4. Data & Scope

- **Tables:** Orders (order-level transactions), Returns, People (customers, segments)
- **Fields:** Order Date, Ship Date, Ship Mode, Region, Country, City, Category, Sub-Category, Product Name, Sales, Quantity, Discount, Profit
- **Time Window:** January 2016–December 2019
- **Scope:** Build a single Power BI report that supports interactive exploration across all dimensions above. Do **not** import external data.

#### 5. Technical Requirements

- **Data Modeling:**
  1. Create a star schema with Date, Customer (People), Product (Category/Sub-Category), and Shipping dimensions.
  2. Define calculated columns for “Order Lead Time” (Ship Date – Order Date).
- **DAX Measures** (minimum):
  1. Total Sales, Total Profit, Profit Margin (%)



2. Average Discount, Discount-to-Profit Correlation
  3. Year-Over-Year Growth Rate (Sales & Profit)
  4. Average Lead Time by Ship Mode
- **Visualizations:**
    1. **Dashboard Page:** KPI cards, trend lines, and overall heatmap by Region
    2. **Category Analysis:** Drill-down bar charts for Category → Sub-Category
    3. **Discount Impact:** Scatter plot of Discount % vs. Profit Margin %
    4. **Logistics:** Box-and-whisker of Lead Time by Ship Mode and Region
    5. **Map View:** Filled map of Profit Margin % by Country/City
    6. **Segment Comparison:** Small multiples or slicer-driven tables for Consumer vs. Corporate vs. Home Office

## 6. Success Criteria

- **Functionality:** All visuals are filter-sync enabled and drill-through works end-to-end.
- **Performance:** Report loads in under 5 seconds on sample hardware.
- **Insightful:** Dashboard surfaces at least three non-obvious, data-driven recommendations.
- **Presentation:** A 5-minute verbal walkthrough deck (5 slides) summarizing findings and next steps.



**Artifacts to be generated (For Learners):**

- PBIX File, Presentation File
- Artifacts generated need to be submitted in vLearn on or before the deadline.
- PBIX File Name:
  - File name: firstname\_lastname\_CPDA\_batch.pbix
  - E.g., Kartik\_Mudaliar\_CPDA\_B1.pbix