Project Overview

Client: TBM Consumer Products Pvt. Ltd.

Background:
TBM is an FMCG company operating across multiple channels and regions in India. The management requires an Operations Dashboard that integrates Sales, Inventory, and Procurement data to enhance decision-making at store, regional, and product levels.

Analyst Role:
As an analyst, your responsibility is to build a professional, interactive Power BI report using the provided datasets. The report focuses on Operations, Inventory, and Procurement, leveraging data from multiple Excel files provided by the client.

Objective:
Deliver a 3-page Power BI report (Overview, Inventory, Procurement) with interactive visuals, slicers, and insights. The dashboard aims to support data-driven decisions by providing a comprehensive view of sales performance, inventory health, and procurement efficiency.

Scope:

- Connect to the provided Excel files and create a star-schema model in Power BI.
- Develop the specified KPIs and recommended visuals.
- Provide brief documentation explaining data sources, transformations, and KPI calculations.

DAX Calculations – FMCG Operations Dashboard

Sales & Revenue Metrics

1.Total Sales = SUM(FactSales[SalesAmount])
2.Total Quantity Sold = SUM(FactSales[QuantitySold])
3.Average Unit Price = AVERAGE(FactSales[UnitPrice])

Procurement Metrics

1.Total Received Quantity = SUM(FactInventory[ReceivedQty])
2.Purchase to Consumption Ratio = SUM(FactInventory[ReceivedQty])
/SUM(FactSales[QuantitySold])
3.Products Received = DISTINCTCOUNT(FactInventory[ProductKey])

Inventory Stock Metrics

1.Total Opening Stock = SUM(FactInventory[OpeningStock])
2.Total Closing Stock = SUM(FactInventory[ClosingStock])
3.Closing Stock = SUM(FactInventory[ClosingStock])
4.Current Stock = SUM(FactInventory[ClosingStock])
5.Average Stock per Store =
SUM(FactInventory[ClosingStock]) / DISTINCTCOUNT(FactInventory[StoreKey])

Time & Demand Metrics

1.Number of Days = DISTINCTCOUNT(DimDate[Date]) (based on selected date range)
2.Average Daily Sales = Total Sales / Number of Days

Inventory Efficiency Metrics

1.Sell Through Rate = Total Quantity Sold / (Total Quantity Sold + Current Stock)
2.Stock Coverage Days = Closing Stock / Average Daily Sales

Trend Metrics

Closing Stock by Month = Total Closing Stock calculated at Month level

Data Quality Checks Performed

Missing Values: Ensured there were no missing keys (ProductKey, DateKey, StoreKey) in fact tables and no null values in crucial fields.

Non-Negative Quantities: Verified that all quantity fields (e.g., QuantitySold, ReceivedQty) were non-negative.

Date Consistency: Confirmed that all dates were within the range of 2023-2025 and matched the DimDate table.

Referential Integrity: Checked that all fact tables had corresponding dimension keys to maintain data integrity.

Duplicate Records: Identified and removed any duplicate records in transactional data.

Aggregation Validation: Cross-verified aggregated measures in Power BI with raw data to ensure accuracy.

These checks ensure that the data is reliable and accurate for meaningful analysis and decision-making.