

## Problem Statement:

**Objective:** Develop a comprehensive sales report in Power BI to provide insights into sales performance, customer behaviour, and product trends. This report should help stakeholders make data-driven decisions to improve sales strategies and operational efficiency.

## Scope:

1. **Sales Overview:** Display total sales, sales trends over time, and comparison with previous periods.
2. **Customer Insights:** Analyse customer demographics, purchasing patterns, and customer lifetime value.
3. **Product Performance:** Identify top-performing products, product categories, and inventory levels.
4. **Sales Channels:** Evaluate performance across different sales channels (e.g., online, retail, wholesale).
5. **Geographical Analysis:** Assess sales performance across different regions and territories.
6. **KPIs:** Key performance indicators like average order value, return rate, and sales per representative.

## Steps to Create the Power BI Sales Report:

1. **Data Collection:**
  - Gather sales data from different sources such as databases, spreadsheets, and cloud services.
  - Ensure data includes relevant fields like sales date, product details, customer information, sales channel, and geographical data.
2. **Data Preparation:**
  - Clean the data to remove duplicates, correct errors, and handle missing values.
  - Transform the data into a suitable format for analysis, such as normalizing date formats, categorizing data, and creating calculated columns for KPIs.
3. **Data Integration:**
  - Import the cleaned data into Power BI.
  - Establish relationships between different tables (e.g., linking sales transactions with customer details and product information).
4. **Building the Report:**
  - **Sales Overview Dashboard:**
    - Create line charts to show sales trends over time (daily, monthly, yearly).
    - Use card visuals to display total sales, percentage growth, and comparison with previous periods.
  - **Customer Insights:**
    - Use pie charts and bar graphs to show customer demographics (age, gender, location).
    - Create a heatmap to visualize customer purchasing patterns.
    - Use scatter plots or bubble charts to highlight customer lifetime value and purchase frequency.
  - **Product Performance:**
    - Use bar charts to display top-performing products and categories.

- Implement matrix or table visuals to show detailed product sales data.
  - Use KPI indicators to track inventory levels and stock turnover rates.
- **Sales Channels:**
  - Use stacked bar charts or 100% stacked bar charts to compare sales performance across channels.
  - Implement funnel charts to visualize the sales pipeline across different channels.
- **Geographical Analysis:**
  - Use maps to show sales distribution across regions and territories.
  - Use choropleth maps to visualize sales density and regional performance.