

# Problem Statement

- Sales data was scattered and not presented in a centralized dashboard.
- It was difficult to identify top-performing customers, cities, or product categories.
- No clear insights into order volumes by category (e.g., Classic Cars, Motorcycles).
- Sales trends over the years (2003–2005) were not visible for comparison.
- The company lacked data-driven tools to support strategic sales decisions.
- City-wise sales performance and contributions were hard to track without visuals.

## Tools Used in Excel

- **Pivot Tables**
    - Used to summarize large datasets quickly.
    - Helped in analysing total sales, orders by category, customer, and year.
  - **Pivot Charts**
    - Created visual representations like bar charts, pie charts, and line graphs from pivot tables.
    - Helped visualize trends, top performers, and yearly comparisons.
  - **Excel Formulas**
    - Functions like SUMIFS, COUNTIFS, IF and TEXT used for custom calculations and data preparation.
    - Enabled conditional logic and extraction of metrics from raw data.
  - **Data Cleaning Tools**
    - Features like **Text to Columns**, **Remove Duplicates**, **Data Validation**, and **Find & Replace** were used to clean and structure raw data.
  - **Slicers and Timelines**
    - Added to pivot tables/charts for dynamic filtering by year, category, or customer.
  - **Conditional Formatting**
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- Used to highlight key metrics like high sales, top categories, and growth trends

## Dashboard Overview

### 1. Sales Overview Section

- Displays total sales, total orders, and total customers as KPIs.
- Helps users instantly understand overall business performance.
- Year-wise breakdown available to compare growth and patterns over time.

### 2. Top Customers Insight

- Highlights customers contributing the most to revenue.
- Helps the sales team prioritize and retain high-value clients.
- Visuals such as bar or column charts used to display top 5 or top 10 customers.

### 3. Product Category Performance

- Shows which product categories (e.g., Classic Cars, Motorcycles, Trucks) perform best in terms of sales and quantity.
- Includes KPIs or pie charts showing percentage contribution of each category.

### 4. Geographic Performance

- City-wise or region-wise sales visualization using bar charts or maps (in Power BI).
- Helps identify strongest markets and underperforming locations.
- Useful for regional strategy planning.

### 5. Year-wise Sales Trends

- Line charts show how sales have evolved over time (e.g., 2003–2005).
- Helps identify seasonal spikes, growth phases, or drop periods.
- Enables Year-over-Year (YoY) comparison.

### 6. Orders Analysis

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- Shows which product categories or customers placed the highest number of orders.
- Includes comparison charts like stacked bars for orders by year and category.

## 7. Interactive Filters & Slicers

- Users can filter the entire dashboard by year, city, customer, or category.
- Enhances usability and allows dynamic exploration of data.

## 8. Clean, Professional Layout

- Dashboard is organized for clarity: KPIs at the top, trends in the middle, and detailed breakdowns below.
- Colour coding and consistent formatting improve readability and user experience.



# Problem Faced

## 1. Data Quality Issues

- Incomplete and inconsistent data (e.g., duplicate names, missing entries) required extra cleaning time.

## 2. Complex Relationships

- Merging multiple tables led to relationship issues and inaccurate results until corrected.

## 3. Measure Errors

- Creating accurate KPIs (like YoY sales or top customers) in DAX/Excel involved multiple trial-and-error steps.

## 4. Layout Challenges

- Limited space caused overcrowding; dashboard layout needed optimization for clarity and balance.

## 5. Filter & Slicer Conflicts

- slicers initially returned wrong data; fixed by improving data model connections.

## 6. Tool Limitations

- Some advanced Excel features weren't supported in older versions, affecting sharing and compatibility.
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## Key Insights

1. **Classic Cars and Motorcycles** were the top-selling product categories, contributing most to revenue.
  2. A **small group of customers** drove the majority of sales, highlighting the need for focused retention strategies.
  3. **Cities like Paris, Madrid, and New York** performed strongly, while others showed room for growth.
  4. **YoY sales trends** revealed steady growth, helping identify high-performing years.
  5. **Deluxe and Gourmet supermarkets** underperformed compared to regular supermarkets.
  6. Some categories like **Planes and Ships** had very low sales and may need strategy revision.
  7. Sales and orders were **unevenly distributed** across stores, cities, and customers—suggesting improvement areas.
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