SALES ANALYSIS

Project Overview:

This project involved the analysis of sales data consisting of approximately 2,000 records, covering the period from January 1, 2022, to December 31, 2023. The dataset was provided in Excel format and was largely clean. After gaining an understanding of the data structure and business context, minimal preprocessing was performed. The prepared data was then loaded into Power BI to develop an interactive dashboard and generate insights to support data-driven decision-making.

Problem Statement & Objective:

The dataset contains sales data spanning two years, during which overall sales remained largely stagnant, with only a marginal increase of approximately 1.3%, negatively impacting profit growth.

The objective of this analysis was to identify the underlying causes of stagnant sales by examining key factors such as business categories, regions, and customer segments, and to recommend actionable strategies to improve future performance.

Tools used:

- Excel
- Power BI

Procedure:

1) **KPI**

Key performance indicators were calculated using DAX measures and displayed using card visuals. These KPIs included Total Transactions, Total Revenue, Total Expenses, Total Profit, and Year-on-Year (YoY) Sales Growth.
The KPIs indicate a healthy financial position, with a profit margin of approximately 38%, generating 20.49M in profit from 53.97M in revenue. However, the YoY sales growth metric clearly highlights that sales growth remained minimal.
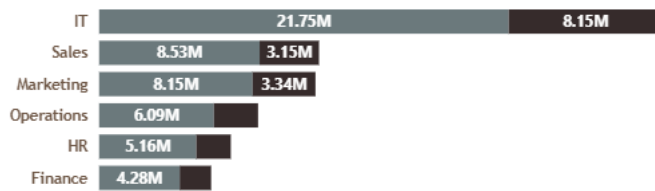
Transactions	Revenue	Expenses	Total Profit	YOY Sales Increase
2000	53.97M	33.47M	20.49M	1.32%

2) **Revenue and Profit by Department:**

A stacked bar chart was used to visualize revenue and profit across departments. The IT department emerged as the highest contributor to both revenue and profit, while the Finance department recorded the lowest performance in both metrics.

Revenue And Profit By Department

| Department	Revenue	Profit
IT	21.75M	8.15M
Sales	8.53M	3.15M
Marketing	8.15M	3.34M
Operations	6.09M	
HR	5.16M	
Finance	4.28M	

3) Monthly sales trend:

A line chart was used to analyze monthly sales trends. The analysis shows a decline in sales during February, followed by a recovery. Sales remained relatively flat from June to October, indicating limited momentum during this period


4) Revenue collected by payment method:

A donut chart was used to examine revenue distribution by payment method. The analysis reveals that cash payments were the most preferred option among customers, while PayPal was the least utilized payment method.

Total Revenue by Payment Method

- PayPal 14.31%
- Bank Tr... 17.58%
- Cash 42.63%
- Credit Card 25.49%
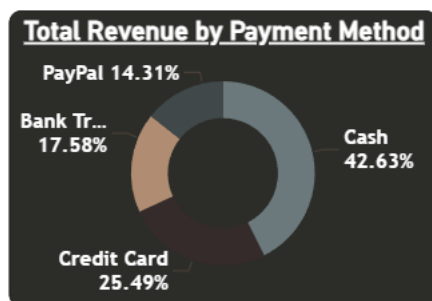
5) Revenue by product line:

A stacked column chart was used to compare revenue across product lines. The Healthcare segment generated the highest revenue, more than double that of the second-highest category, while Furniture contributed the least to total revenue.

Revenue by Product Line
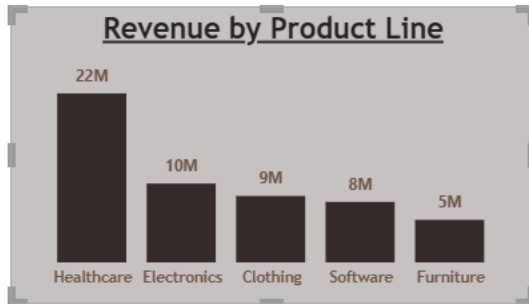
6) Expenses by category:

A donut chart was used to analyze expense distribution by category. Research and Development (R&D) accounted for the largest share of expenses at 42.97%, while Operational expenses were the lowest at 12.82%, indicating strong operational cost control.

Total Expense By Category
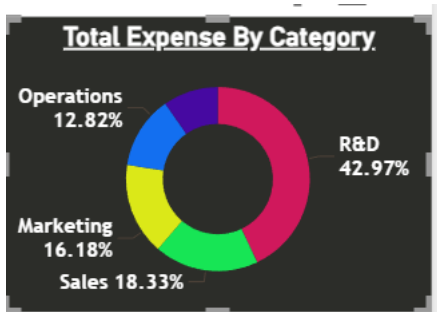
7) Slicers:

Slicers were incorporated to enhance dashboard interactivity and data segmentation. The slicers included Year, Region, and Customer Segmentation, allowing users to dynamically explore trends and performance across different dimensions.

 Key Findings:

- Overall revenue remained flat despite a B2B sales increase of slightly over 5% in 2023. Typically, growth in B2B sales should significantly impact total revenue due to higher transaction volumes; however, this effect was limited.
- Africa recorded the highest regional growth at 16.46**%**, indicating strong expansion potential.
- Sales performance in Africa was positive across all customer segments. Notably, B2C sales increased by 12.8%, despite a nearly 17% increase in R&D expenses for the B2C segment. This investment is expected to drive further sales growth in future years.
- Asia Pacific experienced an overall sales decline of 5.65%. Although B2B sales grew by approximately 20**%**, significant declines in B2C and SMB segments negatively affected total sales.
- Europe recorded a slight overall decline in sales. Despite a substantial 30% growth in the SMB segment, sharp declines in B2B, Enterprise, and B2C segments offset this growth.
- North America achieved a strong 27% increase in B2B sales; however, a significant decline in SMB sales resulted in an overall sales decrease of 3.2%
- South America experienced a decline across all customer segments, leading to an overall reduction in sales of 19%.
- Electronics and Furniture demonstrated strong growth potential in Africa, while Furniture showed promising opportunities in Asia Pacific, suggesting the need for further market exploration in these regions.

Conclusion:

Although overall sales remained stagnant over the two-year period, the company's financial health remains strong. The IT department and Healthcare sector were the primary drivers of revenue and profit, both of which require sustained investment in research and development. With approximately 43% of total expenses allocated to R&D, the company is well positioned to achieve sales growth in the coming years.

Operational expenses accounted for only 12.82% of total costs, reflecting effective cost management. While Sales and Marketing expenses represented 34.5% of total expenses, the healthy profit margin of approximately 38% provides sufficient flexibility to increase investment in these areas.

Regionally, Africa presents significant growth potential, particularly in the Electronics and Furniture segments. Targeted marketing initiatives such as discount campaigns and bundled offers could help expand market share and drive future revenue growth.