Data Analysis

**Report on the Group 2 project**

Sales Analysis on Adventure Works

horizontal line

# Placeholder image

# **Introduction**

This report details the sales analysis of Adventure Works Cycles, a fictional global manufacturer of cycling equipment and accessories. The analysis was conducted using SQL for data extraction and cleaning, and Power BI for data visualization and further insights.

**Team:**

1. Amr Mahmoud Mohamed Aly
2. Doaa Wafek Mohamed
3. Wesam Mohamed Saad
4. Hend Ahmed Mohamed ElGhazaly
5. Sabry Elsayed Ali Mashaal

**Objectives:**

1. Analyze sales data to identify key trends, patterns, and drivers of sales performance.

2. Evaluate the profitability and performance of different product lines to identify opportunities for optimization.

3. Identify areas for improvement in sales processes, team performance, and customer relationships.

**Methods and Tools:**

* Data Source: AdventureWorks sample database
* Data Cleaning: Power Query
* Data Analysis: SQL
* Data Visualization: Power BI

**Insights:**

The team identified 25 key sales insights using SQL. Here are some key findings:

### **Sales Performance**

* **Top Salesperson by Total Sales:** [Identify the top salesperson]
* **Sales Trend Over Time:** [Analyze sales trends over time, including seasonal patterns and growth rates]
* **Average Sales per Reseller:** [Calculate the average sales generated by each reseller]
* **Sales by Business Type:** [Compare sales performance across different business types]
* **Reseller Sales by Product:** [Analyze which products are most popular among different resellers]
* **Target Achievement by Salesperson:** [Evaluate how well salespeople are meeting their sales targets]
* **Salesperson with Highest Sales Growth:** [Identify the salesperson who has achieved the most significant sales growth]
* **Reseller Performance by Country:** [Compare sales performance across different countries or regions]
* **Top Resellers by Sales:** [Identify the top-performing resellers based on total sales]
* **Salesperson Contribution to Company Sales:** [Assess the contribution of each salesperson to overall company sales]
* **Target Achievement by Salesperson (including monthly comparison):** [Compare monthly target achievement for each salesperson]
* **Salesperson Sales per Region:** [Analyze sales performance by region for each salesperson]
* **Top Performing Salespeople:** [Identify the top-performing salespeople based on overall performance]

### **Products**

* **Top 10 Products by Sales:** [Identify the best-selling products]
* **Sales by Product Category:** [Compare sales performance across different product categories]
* **Profit Margin per Product:** [Evaluate the profitability of each product]
* **Top 5 Products by Profit Margin:** [Identify the most profitable products]
* **Cost vs Sales Analysis by Product:** [Compare the cost and sales of each product]
* **Sales by Product Subcategory:** [Analyze sales performance within each product subcategory]
* **Product Sales by Region:** [Identify the regions where certain products are most popular]

### **Others**

* **Sales Orders by Reseller Location:** [Analyze the geographic distribution of sales orders]
* **Unsold Products (optional - not included in all sample databases):** [Identify products that are not selling well]

**Next Steps:**

* Team has used Power BI to create interactive dashboards and reports for further visualization and exploration of the sales data.
* Developed insights based on the visualizations to inform strategic decision making for Adventure Works Cycles.

Power Bi dashboard is attached to the project documents.

**Conclusion:**

This analysis provides valuable insights into the sales performance of Adventure Works Cycles. By utilizing SQL and Power BI, the team was able to extract and analyze key sales data, identifying trends and opportunities for improvement. The findings can be used to optimize sales strategies, target high-performing regions and resellers, and develop targeted product marketing campaigns.