**Adventures Work Analysis Report**

## **Objectives:**

* Identify products with high and low sales performance
* Analyse sales trends across different categories
* Understand customer feedback rating on all products concisely
* Addressing market challenges and developing strategic solutions to reverse sales decline and improve overall business performance

## **Problem Statement:**

Adventure Works, a bicycle manufacturing and retail company, is experiencing significant challenges in maintaining market competitiveness and sustainable growth in the rapidly evolving cycling industry. In many times, the sales of company are fluctuating over time and company wants consistent growth.

## **Data Sources:**

* inventory.csv: ProductID, ProductName, Category, StockLevel, RestockingFrequency, LastRestocked
* sales.csv: TransactionID, ProductID, CustomerID, Quantity, SalesAmount, TransactionDate
* customer\_feedback.csv: FeedbackID, ProductID, CustomerID, FeedbackScore, FeedbackDate

## **Tools and Technology:**

* Excel
* Power BI

## **Insights and Key Finding:**

* **Sales Analysis:**
  + The most revenue generating product *is Kidz-K50, Trail-T900 and Mountain-X500* with $1600 revenue of each product
  + The least revenue generating product *is Mountain-X200 and Touring-T700* with $100 revenue of each product
  + The sales don’t show so much fluctuation in day (like Monday, Tuesday).
  + Most selling category is *Commuter bike* with 23 bike and most revenue sales is *Trial bike* with the revenue of $6800
  + Least selling and revenue category is *Road bike* with 19 bike and revenue of $3400
* **Inventory Analysis:**
  + 52% of stock are of road bike in which 11% stock of total is Roadster-1000.
  + Average stock level of Trial bike is 7 and quantity sold is 21 with the revenue of $6800 and it requires 60 days for restocking.
  + The trial bikes contains 1.91 % of total stock.
  + Commuter-C1000 is lowest stock level product.
* **Customer Feedback Analysis:**
  + Customer Feedback is not so much effective from starting to ending show so much fluctuation.
  + There is not relation shown between sales amount and customer feedback score.
  + Average feedback score is 4.
  + The pattern seen that sales is highest on 4 feedback score and start decline after 4.

## **Dashboard:**

## 

## **Recommendations:**

* **Product Portfolio Optimization Strategy:**

Adventure Works should concentrate on developing and marketing high-performing bike categories, specifically focusing on Commuter and Trial bike segments. By prioritizing successful models like Kidz-K50, Trail-T900, and Mountain-X500, the company can capitalize on existing market strengths while addressing underperforming product lines.

* **Targeted Inventory Management Approach:**
  + Reducing Road bike inventory from 52% to a more balanced 35-40%
  + Increasing Trial bike stock from 1.91% to at least 10-15%
  + The trial bikes contains 1.91 % of total stock.
  + Developing more responsive restocking mechanisms, particularly reducing the current 60-day restocking period for Trial bikes.
* **Customer Feedback Enhancement Program:**
  + Investigate reasons behind feedback score decline after the 4-point mark.
  + Implement a continuous improvement framework that directly links customer feedback to product development

## **Expected Outcomes:**

By implementing these comprehensive recommendations, Adventure Works can potentially:

* Increase overall revenue by 15-20%
* Improve customer satisfaction scores by 25-30%
* Optimize inventory management efficiency
* Develop a more responsive and customer-centric product development approach

## **Conclusion:**

Adventure Works' data analysis reveals significant opportunities for growth by addressing current operational challenges. The research highlights potential improvements in product portfolio, inventory management, and customer engagement strategies. By implementing targeted recommendations focusing on data-driven decision-making, the company can potentially increase revenue by 15-20% and enhance customer satisfaction. The key to success lies in transforming insights into actionable strategies, maintaining organizational agility, and developing a customer-centric approach to drive sustainable business performance in the competitive bicycle manufacturing market.