2025

Project Report

Project Title: **VALUEFRENZY BUSINESS ANALYSIS PROJECT**

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ValueFrenzy Inc.

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1. Company Overview

ValueFrenzy is a well-established supermarket chain specializing in the retail sector, offering a diverse product portfolio across multiple categories. Since its founding in 2006, the company has expanded its operations across the United States, Mexico, and Canada, earning a strong reputation for affordability, quality, and customer satisfaction.

The company's product range is categorized into:

- Low-Tier: Everyday groceries and essential goods.
- Medium-Tier: Household items, appliances, and durable goods.
- High-Tier: Electronics and premium furniture.

With over 200 stores strategically located in urban and suburban areas, ValueFrenzy serves millions of customers annually. In addition to well-known national brands, the company has strengthened its private label offerings, providing cost-effective alternatives while boosting profitability.

To remain competitive in the evolving retail landscape, ValueFrenzy has embraced a customer-first approach, integrating physical stores with a robust online platform to enhance its omnichannel shopping experience. The company is committed to operational efficiency, data-driven decision-making, and strategic growth, ensuring long-term success in a dynamic market.

2. Problem Statement

Between 2021 and 2023, ValueFrenzy experienced a notable decline in revenue and profitability, with the USA market being the most affected. A preliminary review indicated shifts in consumer behavior and changing demand patterns, raising concerns about the company's ability to stay competitive and sustain growth in a challenging economic environment.

To address these challenges, Sarah Jamieson (COO) initiated a business analysis project aimed at identifying the key factors driving this decline. The project focused on analyzing ValueFrenzy's sales performance across the USA, Mexico, and Canada, using the following key performance indicators (KPIs):

- Total Revenue
- Gross Profit
- Quantity Sold
- Total Transactions
- Average Transaction Value (ATV)

The objective was to identify performance gaps, analyze customer purchasing behavior, and assess sales trends across regions and product tiers. Through a data-driven approach, the project aimed to uncover actionable insights to:

- Improve profit margins
- Optimize product offerings
- Enhance pricing and promotional strategies
- Align business strategies with evolving market demands

This analysis serves as a critical step in ValueFrenzy's broader strategy to strengthen its market position, enhance operational efficiency, and drive long-term profitability in an increasingly competitive retail landscape.

3. Key Stakeholders & Their Influence on the Project

Sarah Jamieson (COO):

- <u>Strategic Oversight:</u> Provided the strategic direction for the project, ensuring alignment with operational efficiency and sustainable growth. Emphasized the need for data-driven insights to optimize cost savings, particularly in the USA and Canada.
- <u>Shaped Insights:</u> Directed focus toward operational KPIs, including Quantity Sold and Gross Profit, to address performance gaps.
- <u>Shaped Recommendations:</u> Advocated for a deeper analysis of product-tier performance to enhance both financial and operational strategies.

David Lee (CFO):

- <u>Financial Prioritization:</u> Ensured the project remained financially accountable, emphasizing Total Revenue and Gross Profit analysis. Influenced revenue trend evaluation across regions.
- <u>Shaped Insights:</u> Strengthened financial analysis by examining the relationship between Average Transaction Value (ATV) and profitability.
- <u>Shaped Recommendations:</u> Advocated for enhanced revenue tracking per transaction and inventory optimization to boost profitability.

Amanda Cole (Head of Sales and Marketing):

- <u>Sales Focus:</u> Highlighted the role of marketing and promotions in influencing product sales, particularly for high-value items.
- <u>Shaped Insights:</u> Provided sales data that refined the ATV analysis across regions, linking pricing strategies to customer purchasing behavior.
- <u>Shaped Recommendations:</u> Proposed targeted regional marketing strategies to increase high-tier product sales.

Regional Managers (Michael Rogers – USA, Isabella Martinez – Mexico, Ethan Carter – Canada):

- <u>Regional Perspectives:</u> Provided critical insights into local market challenges, customer preferences, and operational inefficiencies affecting ATV and Gross Profit.
- <u>Shaped Insights:</u> Contributed to the analysis of regional transaction trends and purchasing behaviors.
- <u>Shaped Recommendations:</u> Influenced pricing and inventory management strategies, particularly in the USA and Mexico.

Karen Blake (Head of Product Development and Strategy):

- <u>Product Strategy:</u> Provided insights into underperforming product categories, steering the product-tier analysis.

- <u>Shaped Insights:</u> Identified gaps in medium-tier household products and low-tier groceries, influencing sales strategy refinement.
- <u>Shaped Recommendations:</u> Suggested renegotiating supplier contracts to improve gross margins on low-tier products and repositioning medium-tier products to drive sales across all regions.

4. Key Performance Indicators

4.1 Total Revenue

- Definition: The overall income generated across all regions (USA, Mexico, and Canada) and product categories.
- Purpose: Evaluates regional revenue contributions, identifies trends, and measures the impact of strategic decisions on overall income.

4.2 Gross Profit

- Definition: Total Revenue minus the Cost of Goods Sold (COGS).
- Purpose: Provides insights into profitability across regions and product tiers, supporting cost management and margin optimization.

4.3 Quantity Sold

- Definition: The total number of units sold across all regions and product tiers (low, medium, and high).
- Purpose: Assesses product demand, sales performance, and the effectiveness of sales strategies.

4.4 Total Transactions

- Definition: The total number of customer transactions processed across all regions.
- Purpose: Helps analyze customer activity and engagement while assessing its impact on revenue generation.

4.5 Average Transaction Value (ATV)

- Definition: The average value of a single transaction, calculated as Total Revenue ÷ Total Transactions.
- Purpose: Gauges customer spending behavior, identifies upselling opportunities, and aligns pricing strategies with market demand.

5. Rationale Behind Selected KPIs

In our analysis of ValueFrenzy, we focused on five key performance indicators (KPIs): Total Revenue, Gross Profit, Quantity Sold, Total Transactions, and Average Transaction Value (ATV). This selection was based on the following considerations:

- **Alignment with Analysis Objectives:** These KPIs directly support the project's primary goals—understanding revenue generation, profitability, and customer purchasing behavior across regions and product tiers. They provide actionable insights into ValueFrenzy's operational performance and financial health.
- **Data Availability and Quality:** The analysis prioritized reliable and complete data. While metrics like Total Returns or Return Rate are valuable in retail, they were excluded due to the absence of relevant data. Incorporating incomplete or speculative metrics would have compromised the accuracy and credibility of the analysis.
- **Simplicity and Actionability:** Focusing on five core KPIs ensured a targeted and actionable analysis, avoiding unnecessary complexity. This approach allowed us to derive clear insights and recommendations without overwhelming stakeholders with excessive data.
- **Economic Context:** Given the challenging economic conditions and ValueFrenzy's declining revenue and profitability, the selected KPIs addressed the most pressing concerns, including regional performance, transaction trends, and profitability drivers.
- **Industry Best Practices:** These KPIs align with retail industry standards, where revenue, transaction volumes, and customer behavior patterns are key drivers of business decisions.
- **Future Exploration:** While this analysis focused on the most relevant metrics for current objectives, other valuable KPIs could be considered in future assessments, including:
  - Total Returns & Return Rate: To evaluate product performance and customer satisfaction.
  - Customer Retention Rate: To measure long-term customer loyalty.
  - Inventory Turnover: To assess operational efficiency and stock management.

These additional KPIs could provide deeper insights into ValueFrenzy's overall business dynamics in future analyses.

6. Methodology

The project followed a structured business analysis and data analytics approach to assess ValueFrenzy's sales performance, ensuring data-driven insights aligned with strategic decision-making. The methodology involved six key phases:

6.1 Defining Key Performance Indicators (KPIs)

- Identified critical business metrics (Total Revenue, Gross Profit, Quantity Sold, Total Transactions, and Average Transaction Value) based on ValueFrenzy's business objectives and stakeholder priorities.
- Ensured KPIs provided actionable insights for revenue trends, profitability, and customer purchasing behavior.

6.2 Data Collection

- Gathered raw sales and transaction data (2021–2023) in CSV format, covering product categories, regions, and customer transactions.
- Assessed data completeness and relevance for analysis.

6.3 Data Cleaning and Transformation

- Addressed missing values, duplicates, and formatting inconsistencies using Excel's Power Query.
- Standardized data across regions and product categories for accurate comparisons.
- Ensured data integrity before analysis.

6.4 Business & Data Analysis Techniques

- Applied business analysis techniques alongside data analytics to uncover deeper insights:
  - SWOT Analysis → Identified ValueFrenzy's internal strengths, weaknesses, and external market factors.
  - Benchmarking Analysis → Compared performance metrics against industry standards to assess competitive positioning.
  - Process Mapping → Examined key retail processes (e.g., inventory, pricing, checkout) to identify inefficiencies.
  - Stakeholder Interviews (Hypothetical) → Designed structured BA interview questions to simulate real-world business discussions.
  - Gap Analysis (As-Is vs. To-Be) → Defined the current vs. future state of key business functions to highlight areas for improvement.

6.5 Data Modeling & Structure

- Created a relational data model in Excel's Power Pivot, linking fact tables (sales transactions) with dimension tables (products, regions, dates).
- Enabled efficient data aggregation and drill-down analysis.

6.6 Analysis & Visualization

- Used pivot tables, calculated fields, and DAX measures for in-depth sales performance analysis.
- Developed an interactive Excel dashboard to visualize trends, identify anomalies, and present findings effectively.

6.7 Stakeholder Feedback & Iteration

- Engaged with stakeholders iteratively to refine insights and recommendations.
- Adjusted focus areas based on business concerns, such as declining profitability and regional sales variations.
- Ensured final recommendations were aligned with ValueFrenzy's strategic goals.

This structured approach combined business analysis methodologies with data analytics techniques, ensuring a comprehensive and actionable assessment of ValueFrenzy's performance.

For a deeper dive into Business Analysis techniques applied in this project, refer to the "Business Insights & Process Analysis" document.
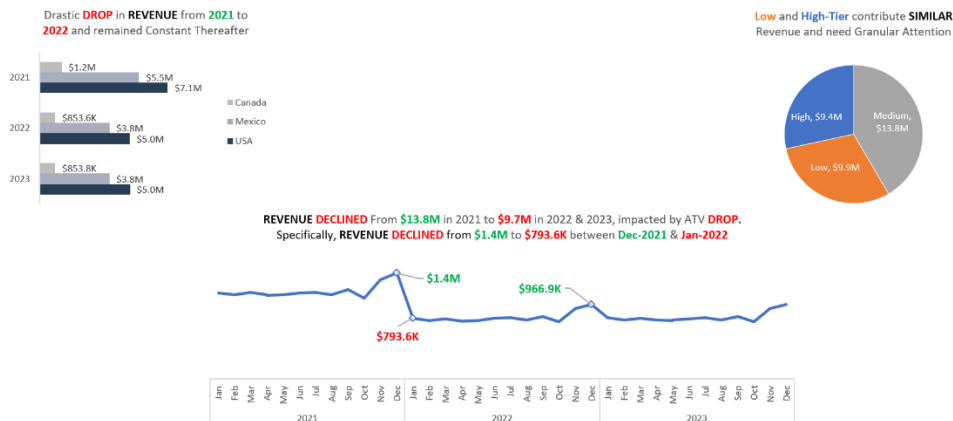
7. Key Business Insights

7.1 Declining Revenue and Gross Profit:
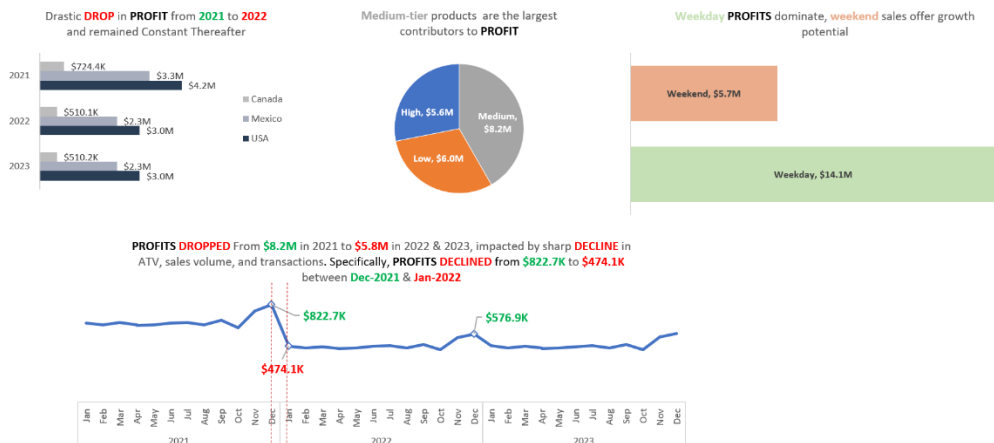
Total Revenue (2021-2023)

Revenue (Across all Regions): $33.1M – USA (51%), Mexico (40%), Canada (9%)

Drastic **DROP** in **REVENUE** from **2021** to **2022** and remained Constant Thereafter

Year			
2021	$1.2M	$5.5M	$7.1M
2022	$853.6K	$3.8M	$5.0M
2023	$853.8K	$3.8M	$5.0M

- Canada
- Mexico
- USA

Low and **High-Tier** contribute **SIMILAR** Revenue and need Granular Attention

High, $9.4M
Medium, $13.8M
Low, $9.9M

REVENUE **DECLINED** From **$13.8M** in 2021 to **$9.7M** in 2022 & 2023, impacted by ATV **DROP**. Specifically, **REVENUE DECLINED** from **$1.4M** to **$793.6K** between **Dec-2021** & **Jan-2022**

$1.4M

$966.9K

$793.6K

| 2021 | 2022 | 2023 |

Gross Profit (2021-2023)

Profit (Across all Regions): $19.8M – USA (51%), Mexico (40%), Canada (9%)

Drastic **DROP** in **PROFIT** from **2021** to **2022** and remained Constant Thereafter

Year			
2021	$724.4K	$3.3M	$4.2M
2022	$510.1K	$2.3M	$3.0M
2023	$510.2K	$2.3M	$3.0M

- Canada
- Mexico
- USA

Medium-tier products are the largest contributors to **PROFIT**

High, $5.6M
Medium, $8.2M
Low, $6.0M

Weekday PROFITS dominate, **weekend** sales offer growth potential

Weekend, $5.7M

Weekday, $14.1M

PROFITS **DROPPED** From **$8.2M** in 2021 to **$5.8M** in 2022 & 2023, impacted by sharp **DECLINE** in ATV, sales volume, and transactions. Specifically, PROFITS **DECLINED** from **$822.7K** to **$474.1K** between **Dec-2021** & **Jan-2022**

$822.7K

$576.9K

$474.1K

| 2021 | 2022 | 2023 |

- Total revenue decreased from $13.8M in 2021 to $9.7M in both 2022 and 2023, with gross profit dropping from $8.2M to $5.8M. The drop was drastic for both revenue and profit between Dec-2021 and Jan-2022.
- While there were similar contributions from Low and High-tier products between 2021 and 2023, the medium-tier category contributed maximum towards revenue and profit. Also, Mexico's contributions are on-par with USA's contributions and that's a huge plus for ValueFrenzy.

- The core issue was a decline in high-tier sales, particularly in the USA, driven by economic strain, inflation, and a drop in ATV since Dec-2021. Additionally, weekday profits totaled $14.1M, while weekend profits were lower at $5.7M, indicating a need to boost weekend sales.

7.2 Drop in the Overall Quantity Sold

- The total quantity sold is high at 15.7 million units, but there has been a significant decline in the overall quantity sold, especially in low-tier products, from Dec-2021 to Jan-2022. Despite its significant decline, low-tier products (groceries) account for 49% of total sales, indicating they drive volume.
- Despite having the highest ATV, high-tier products contributed 17% of total quantity sold, which happens to be the lowest amongst three categories, and needs granular attention. This decline was significant as consumers prioritized essential goods over discretionary items.

Total Transactions (2021-2023)

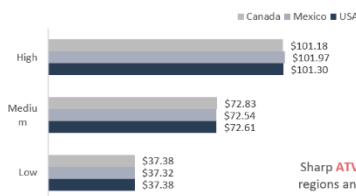Total Transactions: 548,649 – No Change in YoY Transaction Volume across regions and product tiers
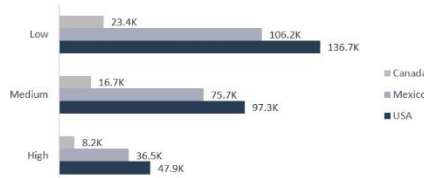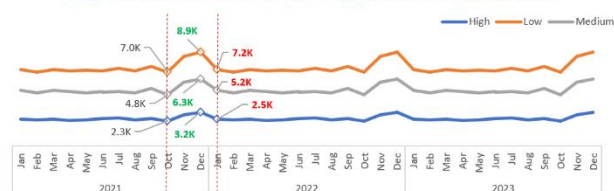
Average Transaction Value/ ATV (2021-2023)

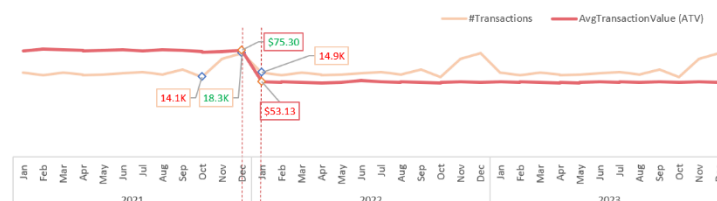ATV (Across Regions): Canada ($60.45), USA ($60.40), Mexico ($60.33)

- Transaction volume remained steady, indicating consistent customer purchases.
- However, ATV declined sharply from over $75 in 2021 to around $53 in 2022 and 2023. This suggests more customers were buying lower-value items, resulting in smaller spend per transaction.
- The decline in ATV was driven by a shift in customer behavior, with fewer high-value transactions and an increase in low-cost purchases, particularly essentials

like groceries. This trend reflects a decrease in customer spending power, influenced by external factors such as inflation.

The insights and root causes show how KPIs are interlinked and affected by economic factors, product tier performance, and regional disparities. The primary focus should be on recovering revenue and profit margins by improving sales in high-margin categories while maintaining steady performance in core product areas like groceries and household goods.

By implementing these data-backed strategies, ValueFrenzy is well-positioned to overcome its current challenges and achieve sustainable growth across all markets.

8. Business Impact Summary

Understanding the business impact of our findings was crucial in shaping actionable recommendations.

1. **Revenue Decline & Profitability Challenges:** One of the most significant trends was the decline in both revenue and gross profit post-2021. This pointed to potential pricing inefficiencies and gaps in promotional strategies. While sales continued, margins were shrinking, indicating the need for a more strategic pricing approach.

2. **Regional Performance Variances:** Each region displayed unique challenges and opportunities. The USA, our largest market, contributed the most revenue but struggled with profitability. Meanwhile, Mexico maintained steady sales but at lower margins. Interestingly, Canada, despite lower overall sales, had the highest ATV. This indicated an opportunity to leverage premium product strategies in the region.

3. **Shifting Customer Behavior:** One of the key behavioral trends was the increase in transaction volume without a corresponding rise in ATV. This suggested that customers were making more frequent but smaller purchases, possibly due to economic constraints or evolving shopping habits. Understanding these shifts was vital for shaping future marketing and pricing strategies.

4. **Product Tier Influence:** Revenue was heavily driven by high-tier products, but transaction volumes were primarily fueled by low and mid-tier products. This reinforced the importance of a balanced pricing and inventory strategy—one that maximized high-tier sales while maintaining strong engagement with lower-tier products.

5. **Strategic Implications:** Overall, these insights underscored the need for region-specific strategies, dynamic pricing models, and optimized product positioning to enhance revenue and profitability. A one-size-fits-all approach wouldn't be effective—tailored interventions were necessary to drive sustainable business growth.

9. Refining Recommendations Through Stakeholder Collaboration

Refining our recommendations was not just about analyzing numbers; it was an iterative process shaped by collaboration with key stakeholders to ensure feasibility and real-world impact.

1. **Initial Insights & Hypotheses:** Initially, our recommendations were purely data-driven, identifying straightforward correlations, like declining revenue indicating a need for price adjustments. However, business decisions are rarely that simple.
2. **Stakeholder Feedback & Business Context:** To create strategies that were both practical and impactful, we engaged stakeholders across different functions, including the COO, CFO, Sales, and Product Strategy teams. Their insights revealed critical business realities that raw data alone could not capture.
3. **Refinement & Finalization:** Through data-driven discussions, our initial hypotheses evolved into actionable, high-impact strategies. Every recommendation was aligned with both business priorities and market realities, ensuring a balance between profitability, customer engagement, and operational feasibility.
4. **Key Takeaway:** Data alone doesn't drive decisions; collaborating with stakeholders transforms insights into strategic, real-world solutions.

10. Finalized Recommendations for Strategic Growth

With stakeholder feedback incorporated, we finalized a set of focused, high-impact recommendations aimed at reversing revenue decline, optimizing operations, and strengthening ValueFrenzy's market position.

1. Key Takeaway became a priority, ensuring adjustments were based on regional spending patterns and product-tier performance. Instead of broad price cuts, we proposed targeted promotions and dynamic pricing strategies to maximize revenue without sacrificing margins.
2. We also identified the need for product mix optimization. High-tier products were the primary revenue drivers, but low and mid-tier products fueled transaction volumes. By realigning inventory and matching regional demand trends, we could ensure efficient stock allocation and improved sales performance.
3. To boost transaction value, we recommended personalized promotions and upselling tactics to encourage customers to spend more per visit. This would increase Average Transaction Value (ATV) without relying solely on price increases.
4. Another key focus was leveraging customer insights. Transactional data could be used to personalize marketing campaigns, improving customer engagement and retention while strengthening brand loyalty.
5. Finally, operational efficiency and cost control were critical. By streamlining supply chain operations and managing COGS effectively, we could maintain profitability without compromising on competitive pricing.

11. Limitations of the Analysis

While this project provided valuable insights and actionable recommendations, certain limitations from both data analytics and business analysis perspectives should be acknowledged:

1. **Data Availability & Scope (Analytical Limitation):**
    -   The analysis was based on historical data (2021–2023), which may not fully reflect recent market trends, emerging consumer behaviors, or seasonal variations in the current year.
2. **Lack of External Data for Contextual Analysis (Analytical Limitation):**
    -   The project primarily leveraged internal sales and transaction data, excluding external factors such as competitor strategies, broader market conditions, supply chain disruptions, and macroeconomic trends that influence customer behavior.
3. **Business Strategy Implementation Challenges (Business Limitation):**
    -   While recommendations suggest strategies like loyalty programs, upselling, and operational improvements, their implementation feasibility depends on financial constraints, stakeholder buy-in, and execution timelines.
4. **Consumer Behavior & Market Responsiveness (Business Limitation):**
    -   The analysis assumes that customers will respond predictably to promotions and pricing strategies, but actual consumer behavior is influenced by brand loyalty, personal preferences, and unforeseen external factors.
5. **Operational Constraints & Execution Risks (Business Limitation):**
    -   Implementing certain recommendations, such as supply chain optimization or pricing adjustments, requires cross-functional collaboration, investment, and operational readiness, which may vary across regions.
6. **Tool Constraints & Analytical Depth (Analytical Limitation):**
    -   Excel was the primary tool used, which, while powerful, has limitations in handling very large datasets and performing advanced statistical modeling compared to SQL, Python, or Power BI.
7. **Granularity of Regional Insights (Analytical Limitation):**
    -   The analysis was conducted at a country level (USA, Mexico, Canada), but city-level or store-specific insights could provide a more localized understanding of purchasing behaviors and regional disparities.
8. **Static Analysis Without Predictive Forecasting (Analytical Limitation):**
    -   The analysis focused on historical performance trends but did not include predictive modeling or forecasting to anticipate future market shifts or demand fluctuations.

Why Acknowledge These Limitations?

- Balances both data and business perspectives, ensuring realistic decision-making.
- Recognizes execution risks and operational challenges beyond just analytics.
- Identifies areas for future improvement, such as integrating external market data and testing business strategies in phased rollouts.

12. Conclusion

This business analysis of ValueFrenzy's sales performance (2021–2023) provided critical insights into market trends, sales dynamics, and operational efficiency. While initially focused on data analytics, the project evolved into a comprehensive business analysis, addressing key strategic areas such as market positioning, sales optimization, customer engagement, and digital transformation.

Through a deep dive into Total Revenue, Gross Profit, Quantity Sold, Total Transactions, and Average Transaction Value (ATV), the study identified profitability challenges, regional performance gaps, and evolving customer preferences. However, these challenges also highlight growth opportunities:

- Optimizing sales strategies through targeted pricing, bundling, and loyalty programs.
- Enhancing customer acquisition & retention via omnichannel engagement and personalized promotions.
- Improving operational efficiency through supply chain refinements and cost control.
- Leveraging digital strategies to strengthen ValueFrenzy's market positioning.

By aligning business strategies with data-driven insights, ValueFrenzy can boost revenue, strengthen its market presence, and drive sustainable growth. This project serves as a blueprint for strategic decision-making, equipping the company to thrive in a dynamic retail landscape.