

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):

- Strategic Oversight: 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.
- Shaped Insights: Directed focus toward operational KPIs, including Quantity Sold and Gross Profit, to address performance gaps.
- Shaped Recommendations: Advocated for a deeper analysis of product-tier performance to enhance both financial and operational strategies.

David Lee (CFO):

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

Amanda Cole (Head of Sales and Marketing):

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

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

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

Karen Blake (Head of Product Development and Strategy):

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

- Shaped Insights: Identified gaps in medium-tier household products and low-tier groceries, influencing sales strategy refinement.
- Shaped Recommendations: 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 $\text{Total Revenue} \div \text{Total Transactions}$.
- 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. Insights and Recommendations

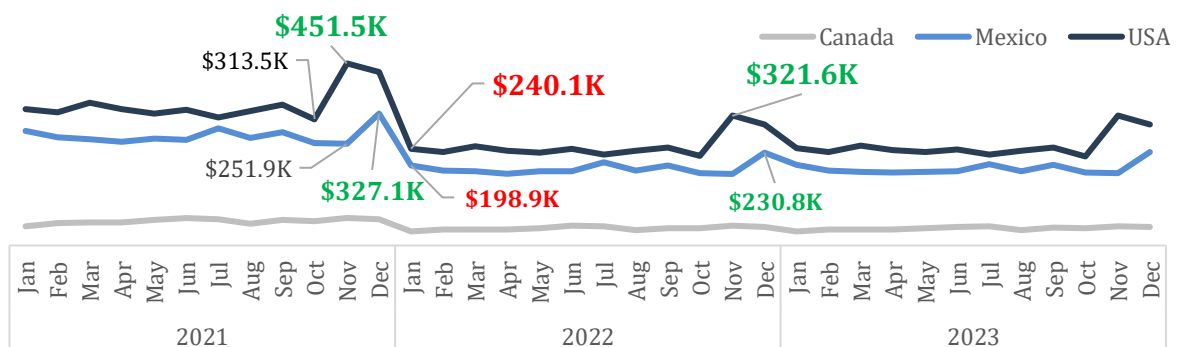
7.1 Insight 1: Declining Revenue and Gross Profit

- **Revenue Drop:** Total revenue declined from \$13.8M (2021) to \$9.7M (2022 & 2023), mirroring a similar gross profit decline (\$8.2M to \$5.8M).
- **Regional Impact:** The USA (51% revenue share) faced steep declines, mainly due to a drop in high-tier product sales, while Mexico remained resilient, driven by medium-tier products. Canada's stability helped mitigate losses.
- **Category Trends:** High-tier products (electronics & furniture) saw the sharpest decline, especially in the USA, while medium-tier products remained the largest revenue contributor.
- **Sales Patterns:** Weekday profits (\$14.1M) significantly outpaced weekend profits (\$5.7M), suggesting an opportunity to drive weekend sales.

Root Cause Analysis:

- Economic downturn & inflation reduced consumer spending on high-value products.
- ATV decline since Dec 2021 further impacted revenue.
- High-tier product struggles in the USA signal the need for targeted regional strategies.

Significant **DECREASE** in **PROFITS** (especially, in the **USA**) from **Nov-2021** to **Jan-2022** due to a significant **DROP** in the overall **Average Transaction Value (ATV)**



7.2 Recommendation 1: Strategies to Address Declining Revenue & Profit

1. Revive High-Tier Sales in the USA:

- Seasonal Promotions: Target peak shopping periods (Black Friday, Christmas) with discounts & bundled offers.
- Flexible Payment Plans: Offer 0% interest financing to encourage high-value purchases.

2. Enhance Customer Engagement Across All Regions:

- Personalized Offers: Use customer data for tailored product recommendations.

- Omnichannel Discounts: Provide exclusive online incentives for registered shoppers.
- 3. Boost Weekend Sales:
 - Weekend-Only Promotions: Launch time-sensitive discounts to increase ATV & foot traffic.
 - In-Store Events: Host flash sales & live product demos to drive engagement.
- 4. Leverage Mexico's Success for Expansion:
 - Adapt Mexico's medium-tier strategies in the USA to stabilize revenue.
 - Expand high-tier offerings in Mexico to capitalize on its growth potential.
- 5. Implement Region-Specific Marketing:
 - Local Market Research: Use data-driven insights to adjust pricing & product mixes per region.
 - Customized Campaigns: Tailor promotions based on consumer preferences & spending patterns.

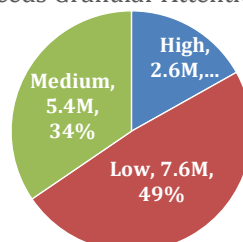
7.3 Insight 2: Stable Quantity Sold but Declining Profit Margins

- Sales Volume: ValueFrenzy sold 15.7M units, but shifts in the product mix impacted profitability.
- Low-Tier Dominance: 49% of sales came from low-tier products (groceries), reinforcing their role as volume drivers. However, sales declined from Dec 2021 to Jan 2022, likely due to supply chain disruptions and economic pressures.
- Medium-Tier Stability: Medium-tier products maintained a steady share, but growth was slow, especially in Canada.
- High-Tier Challenges: Despite having the highest ATV, high-tier products contributed only 17% of total sales, highlighting profitability concerns.

Root Cause Analysis:

- Economic Constraints: Consumers prioritized essential goods over discretionary purchases.
- Demand Shift: High-tier sales declined, particularly in the USA, due to reduced spending on premium products.
- Product Strategy Gaps: Limited cross-promotion & bundling strategies restricted medium- and high-tier sales.

17% of **High-Tier** units sold,
despite having the highest ATV,
Needs Granular Attention



7.4 Recommendation 2: Optimize Product Mix and Drive High-Tier Sales

1. Boost Medium- & High-Tier Growth with Regional Strategies:

- Mexico: Position premium products as affordable luxuries by showcasing their quality & durability.
- Canada: Leverage reliability as a selling point, offering extended warranties or free accessories.
- Brand Positioning: Promote medium- & high-tier products as long-term investments rather than luxury splurges.

2. Leverage Cross-Selling & Bundling:

- Product Bundles: Pair electronics with accessories or offer discounts on household items with grocery purchases.
- AI-Powered Recommendations: Use purchase history to suggest relevant add-ons (e.g., small kitchen appliances for grocery buyers).

3. Strengthen High-Tier Marketing & Promotions:

- Seasonal Campaigns: Focus high-tier promotions on peak shopping periods (holidays, back-to-school).
- Targeted Incentives: Offer trade-in deals for electronics and financing options for large purchases.

4. Monitor Product Performance & Adjust Strategies:

- Regular Product Mix Reviews: Detect early signs of profitability declines & adjust offerings.
- Regional Feedback Integration: Align inventory with local demand trends to maximize sales.

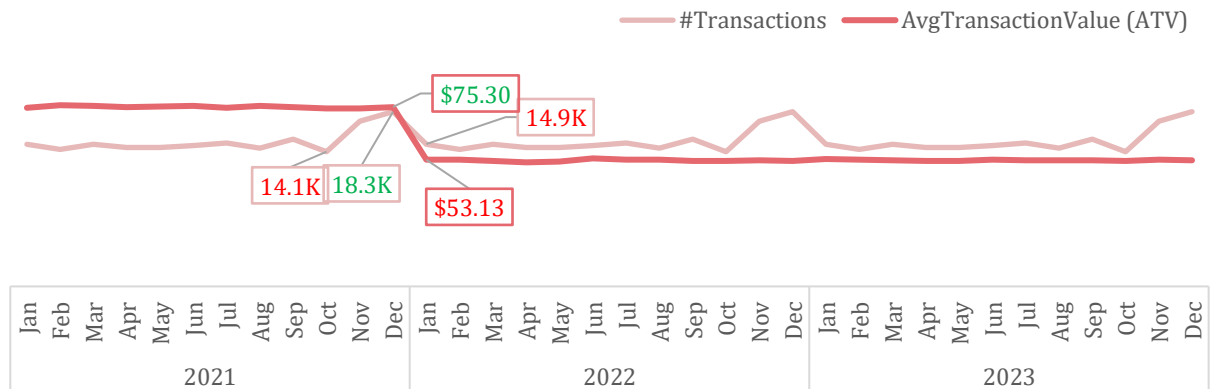
7.5 Insight 3: Disparity Between Transactions and ATV Trends (Oct–Dec)

- Transaction Surge: Sales volume increased steadily from October to early December across all three years, peaking during the holiday season.
- Flat ATV: Despite higher transaction volumes, Average Transaction Value (ATV) remained stagnant.
- Holiday Decline: A sharp ATV drop from \$75.30 to \$53.13 between Dec 2021 and Jan 2022, with sustained lower levels in 2022 and 2023.
- Stable Non-Holiday Trends: ATV showed minimal fluctuations outside peak seasons, indicating a consumer focus on essentials over discretionary spending.

Root Cause Analysis:

- Customer Spending Behavior: Increased transactions were driven by frequent low-tier purchases (groceries), limiting ATV growth.
- Economic Constraints: Inflation & reduced disposable income suppressed high-tier spending.
- Promotional Gap: Seasonal promotions focused on increasing transactions, not ATV, missing an opportunity to maximize holiday sales.

Sharp **ATV DROP** from **\$75.30** to **\$53.13** between **Dec-2021** to **Jan-2022**. **ATV** remained consistent across regions and product tiers due to **STABLE PURCHASING PATTERNS**. Despite a **TRANSACTION INCREASE** in late 2021, **ATV** remained steady, driven by **FREQUENT** low-tier purchases.



7.6 Recommendation 3: Boost Average Transaction Value (ATV)

1. Launch a Targeted Loyalty Program:

- Exclusive Rewards for Larger Purchases: Introduce a tiered loyalty system where higher spending earns points redeemable for medium- and high-tier products.
- Holiday Promotions: Offer bonus points for holiday purchases, encouraging both increased transactions & higher-value sales.

2. Enhance Upselling & Cross-Selling:

- Dynamic Product Suggestions:
 - Electronics: Recommend accessories (chargers, screen protectors).
 - Groceries: Suggest related household products, such as bulk cleaning supplies.
- Bundled Offers: Pair high-tier products with frequently purchased low-tier items, offering small discounts to encourage bulk spending.

3. Implement Holiday-Specific ATV Campaigns:

- Personalized Offers: Use targeted marketing (emails, app notifications) to present curated product bundles & discounts on high-value items.
- Flexible Payment Options: Offer 0% interest financing or installment plans for high-tier products to incentivize larger purchases.

4. Monitor & Optimize Promotional Impact:

- Analyze ATV & Transaction Trends: Track program effectiveness and adjust strategies.
- Refine Seasonal Offers: Use insights from past campaigns to optimize holiday promotions for maximum profitability.

Impact of Recommendations:

By incentivizing higher-value purchases and leveraging customer data for targeted upselling, these strategies can:

- Increase ATV without compromising transaction volumes.
- Strengthen customer loyalty by offering tangible value through rewards and personalized offers.
- Align holiday promotions with profitability goals, maximizing the seasonal surge's impact.

7.7 Insight 4: Impact of Macroeconomic Conditions on Purchasing Patterns

- Fewer High-Ticket Purchases: Inflation, rising operational costs, and shifting customer preferences reduced high-value sales, especially in electronics & furniture.
- Increased Demand for Essentials: Customers prioritized affordability, opting for low-cost groceries & private-label products, negatively impacting ATV & profit margins.

Root Cause:

- Inflationary Pressures: Higher costs reduced disposable income, limiting high-ticket purchases.
- Operational Challenges: Global supply chain disruptions raised costs, squeezing profit margins.
- Shift in Consumer Preferences: Economic uncertainty drove a focus on essentials over discretionary spending.

Overall Impact: Macroeconomic factors significantly influenced KPIs, product tier performance, and regional purchasing behavior, requiring a strategic approach to balance profitability & affordability.

7.8 Recommendation 4: Adapt to Macroeconomic Conditions

- **Strengthen Private Label Strategy:**
 - Highlight Cost Savings: Market private label products as affordable, high-quality alternatives to national brands.
 - Targeted Promotions: Run campaigns emphasizing value-for-money to attract budget-conscious customers.
- **Optimize Operational Efficiency:**
 - Supply Chain Improvements: Invest in logistics optimization to reduce costs & enhance product availability.
 - Lean Operations: Implement cost-saving measures to maintain competitive pricing without eroding profit margins.
- **Recover Revenue in High-Margin Categories:**
 - Strategic Pricing & Bundles: Offer discounted bundles combining high-margin products with essentials to drive profitability.
 - Flexible Payment Options: Introduce installment plans or promotional financing to make high-ticket items more accessible.

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. 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.

9. 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.