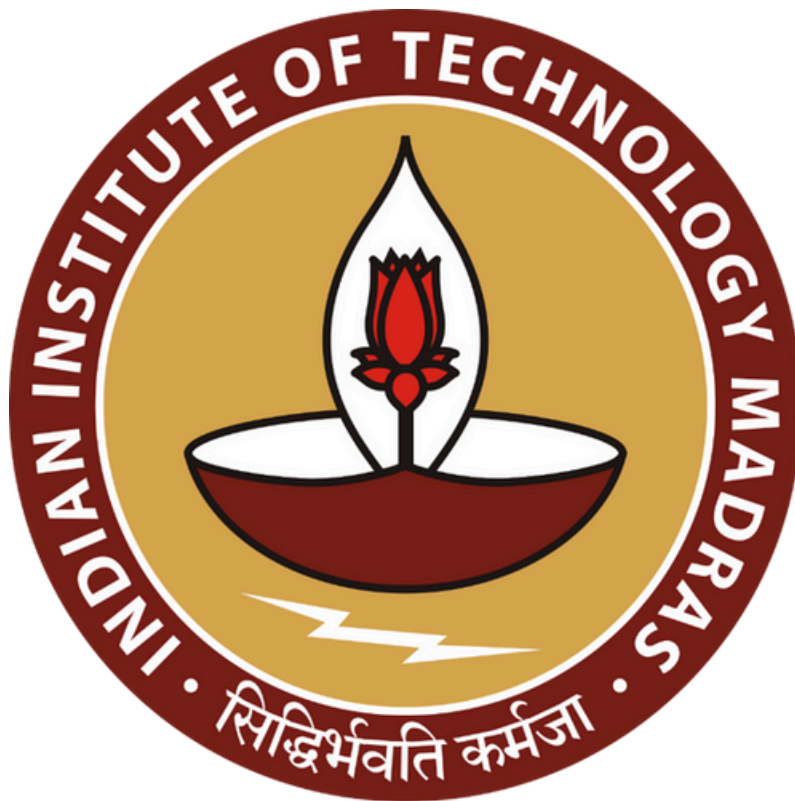# Stock Optimization to Increase Market Recognition and Expand Business

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project Title "**Stock Optimization to Increase Market Recognition and Expand Business**". I extend my appreciation to **TVS- Sneha E Auto Rickshaw Pvt Ltd**, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I agree that all the recommendations are business-specific and limited to this project exclusively, and cannot be utilized for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Aayush Krishna

Signature of Candidate: (**Digital Signature**)

Name: Aayush Krishna

Date : 01-11-2024

1. Executive Summary

Sneha Auto is a B2C vehicle dealer that is situated at NH -30 ,Dasratha, adjacent to the Yati Automobiles-Yamaha , Sipara , Patna . The company communicates directly with consumers, offering them superior CNG-rickshaws .

The main problem Sneha Auto faces is its operational challenges that limit profitability and market reach, including managing inventory effectively and enhancing brand visibility in a competitive landscape. Being a well-known automaker with a loyal fan base makes it difficult for Sneha Auto to differentiate itself from the competitors. This competition limits the company's ability to grow its market share, which reduces profitability.

The issue will be addressed by a data driven stock optimization techniques can greatly enhance brand recognition and financial performance. They can maintain an ideal inventory of CNG rickshaws by examining consumer preferences and sales trends using various methods such as ABC analysis, real-time inventory analysis, predictive analysis. This allows them to minimize extra stock of slower-moving commodities while guaranteeing that popular models are always accessible. This strategy makes pricing more competitive, boosts cash flow, and lowers holding costs.

The expected outcomes include improved inventory management, enhance market recognition, stronger competitive presence and increased profitability through a strategic combination of inventory optimization, customer insights, and targeted marketing.

2. Organization Background

Company Name :- TVS-Sneha Auto Pvt Ltd

Founder's Name :- Mr. Sushant Shekhar

Business Type :- Business to Customer (B2C)

Sneha Auto was established in 2018 and has a solid reputation in the automotive industry. It specializes in the retail and repair of a broad range of vehicles. Situated at NH -30 ,Dasratha, near Yati Automobiles-Yamaha, Sipara, Patna, Bihar, the company has gained the confidence of local customers by offering exceptional automotive solutions and customer service.
Sneha Auto ensures that customers can get assistance by operating six days a week from 10 AM to 7 PM with a committed staff of about 20 people. The company takes pleasure in providing high-quality, sustainable transportation solutions that help to protect the environment and improve urban transportation efficiency.
The business provides a wide range of CNG rickshaw models, such as TVS king Kargo, TVS king Deluxe, etc. authentic replacement parts, and accessories made to satisfy their clients' needs. Sneha Auto is renowned for its expert post-purchase assistance, including upkeep, repairs, and personalization services that put the longevity of the rikshaw and client satisfaction first.
Supported by a skilled sales team and a solid after-sales care system, Sneha Auto is a trustworthy and customer-focused rikshaw dealership in the area that is committed to developing sustainable mobility solutions.

3. Problem Statement

3.1 Increasing Revenue Through Improved Market Recognition

Due to its low market recognition, especially online, Sneha Auto has a small customer base and low market penetration.

3.2 Improving Inventory Management to Reduce Costs and Increase Profits

The overall profitability is reduced as a result of the increased warehousing costs that result from stockholding. They have many of the less well-liked CNG-Rikshaw models, which takes up money and important storage space. The dealership is unable to invest in more profitable models.

4. Background of the Problems

Expanding the issues :-

- **Low Market Recognition :**

Sneha Auto finds difficulty establishing a sizable consumer base and achieving widespread market penetration as a result of its low level of market recognition, especially online. The dealership's present marketing activities are mostly offline, with a focus on referrals and local awareness, limiting its reach. Potential buyers looking for eco-friendly rickshaws online may ignore Sneha Auto, missing out on a cost-effective and sustainable solution. A lack of a strong digital presence, including social media and focused digital marketing, has limited the dealership's ability to reach a larger consumer base, especially among younger, tech-savvy purchasers.

- **Improving Inventory Management to Reduce Costs and Increase Profits:**

Inventory management is crucial to the success of auto dealerships, as capital is locked up in stock until it is sold. Sneha Auto's present inventory policies have resulted in a surplus of slow-moving CNG rickshaw models, which takes up valuable storage space and increases holding expenses. The funds tied up in this excess stock could be utilized to purchase in-demand models or to engage in marketing to attract new customers. Furthermore, the dealership's irregular inventory management frequently results in insufficient supply of popular models, leading to missed sales chances when client demand cannot be fulfilled.

This inefficiency results from a lack of real-time inventory tracking and demand forecasting. Without visibility into sales trends and client preferences, the dealership fails to match stock levels to actual demand. As a result, slow-moving models accumulate, raising costs for storage, maintenance, and insurance, while failing to generate money.

In conclusion, these backgrounds contextualize each problem, showing the obstacles and potential for increasing revenue through market awareness and optimizing inventory management for cost reduction and profitability. Therefore, it is important to identifying the underlying background of the issue and their root cause.

5   Problem Solving Approach

The issue faced by Sneha Auto is hindering the growth and market of their business . Therefore , a systematic problem solving framework needs to be implemented to tackle their issue and expand the business . Below are the methods to tackle their challenges :-

1. **Data Collection and Analysis:**
   - *Sales and Inventory Data:* Gather historical sales figures, inventory levels, and turnover rates for each CNG rickshaw model sold in last 6 months. This data will provide insights into demand patterns, seasonal trends, and stock movement, allowing for the identification of high-demand and slow-moving models.
   - *Customer Insights:* Conduct surveys and collect customer feedback on product preferences, purchasing behavior, and brand perception. Data from CRM tools can be valuable for understanding demographic information and repeat customer behavior.

2. **Quantitative Analysis for Inventory Optimization:**
   - *ABC Analysis:* Using ABC analysis to classify CNG rickshaw models on their turnover rates and value. This study will assist the dealership in determining which models generate the most money, allowing them to prioritize high-demand items while reducing excess stock of slower-moving models.
   - *Demand Forecasting:* Using previous sales data and seasonality research, will apply time series forecasting techniques to project future demand for each CNG rickshaw type. This allows for optimal stocking by forecasting high-demand periods, which reduces stockouts and overstocking.

3. **Digital Marketing and Customer Engagement Analysis:**
   - *Conversion Rate Optimization (CRO):* Using A/B testing on digital marketing initiatives (e.g., social media ads, search engine ads) to determine what strategies yield the best levels of engagement and conversion. The findings from these tests will guide funding to the most effective channels, maximizing digital reach.
   - *Customer Segmentation and Targeting:* Employ clustering analysis to discover distinct client segments (for example, price-sensitive customers and eco-conscious buyers). This segmentation will help guide specialized marketing techniques for each consumer group, such as targeted digital ads and personalized offers.

4. **Implementation and Continuous Monitoring:**
   Create key performance indicators (KPIs) to track progress in stock turnover, customer acquisition, and online engagement. Regular data updates will be integrated into the inventory and marketing systems to enable for real-time modifications, allowing Sneha Auto to react quickly to market changes and demand fluctuations.

By following the above strategies, Sneha Auto could enhance inventory management, increase satisfaction with clients, reduce operational inefficiencies, and considerably expand its market presence. All of these operations will help the dealership's overall profitability and expansion.

6 **Expected Timeline**

6.1 Work Breakdown Structure

Fig 1.1

- Discussion with shop owner : 18 October,2024
- Collect relevant data : 21 October,2024 to 22 October,2024
- Data cleansing : 26 October, 2024 to 28 October 2024
- Data Analyzing : 29 October, 2024 to 9 November 2024
- Submitting Project : 11 November,2024

Here , it is my gantt chart

Fig 1.2

7.<u>Expected Outcome</u>

The goal of this project is to close the gap between academic knowledge and real-world business concerns by applying analytical tools such as Excel, programming language like Python with the use of Machine learning models to Sneha Auto's inventory management issues. Through this project, I hope to gain hands-on experience analyzing actual company data and identifying the practical discrepancies between textbook concepts and real-world scenarios. The analysis will focus on tackling the primary concerns of stocking, with the goal of improving

- Inventory management.
- Competitive edge by faster decision-making .
- Expanding potential client base.