

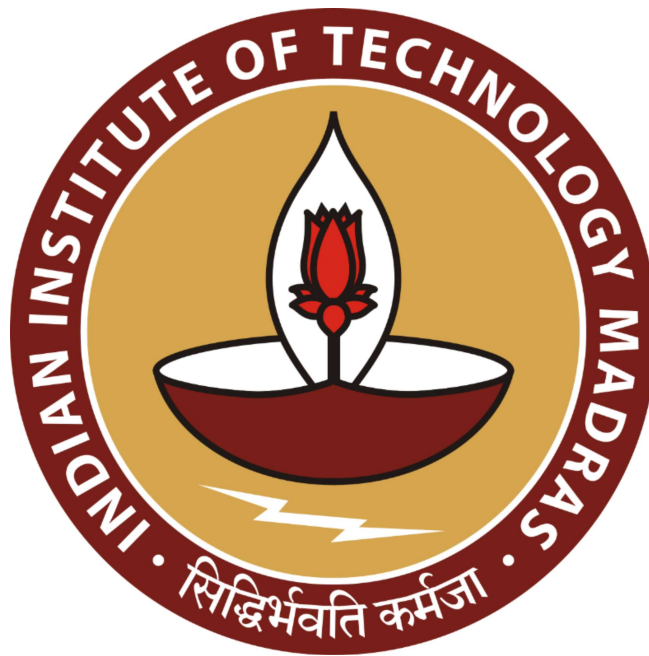
Improving Operations & Suggesting Business Growth Strategy at Shanvi General Store & Dairy Products

A Proposal report for the BDM capstone Project

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Declaration Statement

I am working on a Project titled “Improving Operations & Suggesting Business Growth Strategy at Shanvi General Store & Dairy Products”. I extend my appreciation to Shanvi General Store & Dairy Products, 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 from 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 principles 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 understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate: 

Name: Prem Kumar

Date: 07-09-2023

1 Executive Summary and Title:

Shanvi General Store & Dairy Products is a small grocery and dairy shop situated in Saketpuri, Patna, India. It caters to both B2B and B2C customers, serving as a vital resource within the local community.

The primary challenge confronting Shanvi General Store pertains to profitability. The store grapples with substantial inventory management issues, particularly in the realm of dairy products. These challenges create financial bottlenecks, hindering the store's ability to meet customer demands efficiently, especially during periods of high demand due to the dense local population. This issue significantly impacts the overall profitability of the business.

To tackle these multifaceted issues, the project will employ various data analytics approaches. These methodologies encompass real-time inventory tracking, demand forecasting, and the implementation of efficient inventory replenishment strategies. By implementing these measures, the project aims to mitigate the financial blockage caused by excessive inventory and better handle surges in customer demand driven by the densely populated area. The envisioned outcome of this project is a more streamlined and profitable operation, positioning the store as a dependable and efficient supplier of grocery and dairy products within Saketpuri, Patna. This transformation will enhance customer satisfaction and strengthen the store's reputation as a trusted local source for daily essentials.

2 Organization Background:

Shanvi General Store & Dairy Products, established in the early months of 2023, has swiftly garnered attention and patronage within its local community in Saketpuri, Patna, India. This recent establishment strategically opened its doors this year to tap into the burgeoning demand for grocery items, dairy products, ice creams, and beverages in the area.

The timing of its launch has proven to be advantageous, drawing a substantial influx of customers due to its novelty and the convenience it offers to the community. As a result, Shanvi General Store has quickly become a focal point for residents seeking a one-stop destination for their daily essentials.

With its customer-centric approach and commitment to providing quality products, the store aims to consolidate its position as a trusted supplier in the neighborhood. This newfound presence in 2023 marks the beginning of an exciting journey for Shanvi General Store & Dairy Products as it strives to address operational challenges and further enrich the shopping experience for its valued patrons.

3 Problem Statement:

Problem Statement 1: The store encounters difficulties in efficiently managing customer flow during peak hours, which negatively affects overall customer satisfaction.

Problem Statement 2: Inventory management challenges, especially concerning dairy products, lead to financial inefficiencies and product wastage, thereby impacting profitability.

4 Background of the Problem:

The challenges faced by Shanvi General Store & Dairy Products in efficiently managing its operations, particularly during peak hours, and its inventory management issues, especially concerning dairy products, stem from a combination of internal and external factors.

Internal Problems:

Internally, the store grapples with limited staffing, which, despite their dedication, sometimes struggles to cope with the high customer demand experienced during peak hours. This internal constraint exacerbates the challenge of managing customer flow effectively and maintaining optimal service levels.

Additionally, the store faces internal inventory management problems. The overstocking of dairy products and the lack of real-time tracking systems contribute to product wastage and financial inefficiencies. Inadequate demand forecasting and replenishment strategies further compound these internal inventory challenges.

External Problems:

Externally, the store operates in a densely populated locality, leading to significant fluctuations in customer demand. The fluctuating demand patterns create external challenges in predicting and accommodating customer numbers adequately. The store's location within a bustling community contributes to both the opportunities and difficulties it faces.

Furthermore, external market dynamics, such as changes in consumer preferences and competition from nearby retailers, add to the complexity of maintaining profitability and ensuring customer satisfaction.

In summary, Shanvi General Store & Dairy Products confronts a multitude of internal and external challenges. These encompass staffing limitations, inefficient inventory management practices, fluctuating customer demand due to its location, and external market dynamics. Addressing these issues requires a comprehensive approach that considers both the store's internal operations and its external environment.

5 Problem Solving Approach:

Addressing the operational challenges faced by Shanvi General Store & Dairy Products requires a comprehensive, data-driven strategy. To tackle these issues, we will implement several key strategies:

Our first step is to introduce a real-time customer flow management system. This system will monitor customer traffic, predict busy periods, and optimize staff allocation during peak hours, reducing wait times and enhancing the shopping experience.

Next, we will develop demand forecasting models tailored to dairy products, using historical sales data and advanced analytics. This will lead to better inventory planning, minimizing overstocking, and reducing wastage while ensuring product availability.

Efficient replenishment strategies will also be introduced, including setting reorder points and quantities based on demand patterns, lead times, and shelf life. Building strong supplier relationships will ensure timely replenishment.

Centralizing data from sales records, customer feedback, and supplier information will enable data-driven decision-making. This approach will help identify trends, optimize pricing, and make informed choices to improve overall store efficiency.

To enhance customer satisfaction and loyalty, we will implement customer engagement initiatives such as loyalty programs, targeted promotions, and personalized recommendations based on customer preferences and purchase history.

Recognizing the importance of well-trained staff, we will institute training programs covering customer service, inventory management, and data utilization. Competent employees are crucial for successful strategy implementation.

We will integrate modern technology solutions, including inventory management software, point-of-sale systems, and analytics tools. These technologies will provide real-time insights and automate various aspects of inventory and customer management.

Lastly, we will establish a continuous monitoring and feedback loop to track the effectiveness of these strategies. This feedback loop will allow for adjustments and refinements to ensure our approaches remain aligned with evolving customer needs and market conditions.

Through this comprehensive approach, Shanvi General Store & Dairy Products aims to systematically address its operational challenges. We aspire to become a model of efficiency and customer

satisfaction in the local retail landscape of Saketpuri, Patna, while mitigating existing issues and driving sustained growth.

Tech Stack use for Problem Solving Approach:

MS Excel, Google Sheet for gathering and entering data.

MS Excel, Google Colab (using python libraries like numpy & pandas) for data cleaning and data framing respectively.

MS Excel & Data Analysis Tool for performing analysis on the data and finding the insights.

Some charts like pareto chart, and histogram are also used to analyze the stock and sell data.

6 Expected Timeline:

Work Breakdown Structure:

Project Initiation

- Define project scope and objectives

Data Gathering and Preparation

- Gather historical sales data
- Collect customer feedback
- Gather supplier information
- Set up data collection tools (MS Excel, Google Sheet)

Real-Time Customer Flow Management

- Predict peak hours
- Optimize staff allocation

Demand Forecasting for Dairy Products

- Utilize historical sales data
- Apply advanced analytics (Google Colab)
- Optimize inventory planning

Efficient Inventory Replenishment

- Set reorder points and quantities
- Consider demand patterns
- Build strong supplier relationships

Project Evaluation and Closure

- Assess project outcomes
- Ensure objectives are met
- Prepare project closure report

Project Documentation and Reporting

- Document all project activities
- Share insights and lessons learned

6.1 Gantt chart

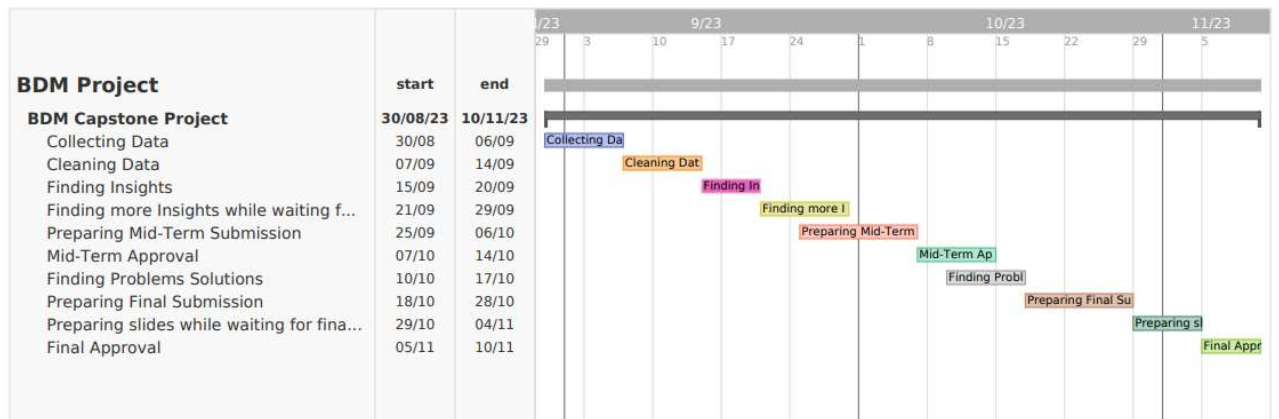


Figure 1 Expected timeline for completion of project.

7 Expected Outcome:

The implementation of our comprehensive problem-solving approach at Shanvi General Store & Dairy Products is expected to yield significant improvements across various operational aspects, resulting in a more efficient and customer-centric business.

Firstly, the project anticipates better inventory planning and management. With demand forecasting models in place, the store will gain a clear understanding of which products are in high demand and which are less popular. This will lead to reduced overstocking, minimized wastage, and optimized stock levels, ultimately improving profitability.

Furthermore, the project will shed light on the primary reasons behind product returns, enabling the store to identify and address any quality or operational issues promptly. By understanding which products have a high return percentage, the store can take corrective actions to enhance product quality and customer satisfaction.

In terms of customer engagement and service, the project aims to achieve a democratic distribution of customers by effectively managing peak-hour traffic. Real-time customer flow management will reduce wait times and improve the overall shopping experience, thereby attracting and retaining a more diverse customer base.

Overall, the expected outcome of this initiative is a transformed retail operation. It will be characterized by streamlined inventory control, reduced wastage, improved product quality, enhanced customer engagement, and a more efficient allocation of resources. Shanvi General Store & Dairy Products aspires to become a trusted and preferred destination for grocery and dairy needs in Saketpuri, Patna, ultimately driving increased profitability and sustained growth in the local market.