

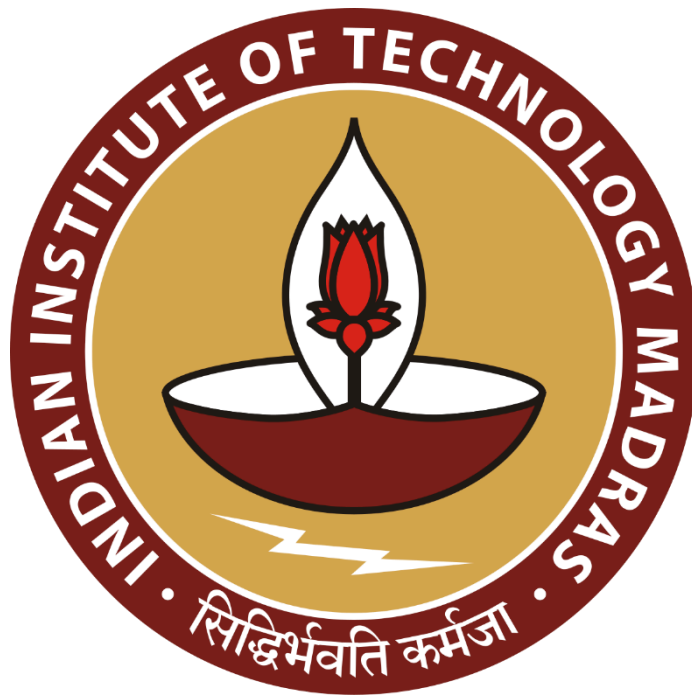
Optimizing Inventory and Sales Management for Rishabh Enterprises: A Comprehensive Approach

A Proposal report for the BDM capstone Project

Submitted by

Name: ASHUTOSH UTSAV

Roll number: 22F2001659



IITM Online BS Degree Program,
Indian Institute of Technology, Madras, Chennai
Tamil Nadu, India, 600036

Contents

1	Executive Summary and Title	3
2	Organization Background	3
3	Problem Statement	4
3.1	Inventory management	4
3.2	Operational Efficiency	4
3.3	Seasonal Sales Analysis	4
4	Background of the Problem	4
5	Problem Solving Approach	5
6	Expected Timeline	7
7	Expected Outcome	7

Declaration Statement

I am working on a Project titled “**Optimizing Inventory and Sales Management for Rishabh Enterprises: A Comprehensive Approach**”. I extend my appreciation to **Rishabh Enterprises**, for providing the necessary resources that enabled me to conduct my project.

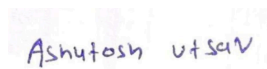
I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

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: Ashutosh Utsav

Date: 05-06-2024

1 Executive Summary

Rishabh Enterprises which is a B2C business, a well-known utensil shop in the small town of Sheohar , Bihar, has been selling good quality utensils to the market for several years. Before Jan 2023, they used to run their shop from a less well-known location, resulting in relatively lower sales After Covid hit all the businesses, strategically they relocated after that, After moving to an area with higher foot traffic, their sales have increased significantly.

Although moving to the more busier area proved to be effective, Rishabh Enterprises experiences one major issue, that is managing stock. The shop formerly worked without an inventory system and hence, it experienced major challenges in managing its stock levels when sales were going high; it either ran out of stock or overstocked most of the time it was overstock. As a result, there were considerable lost sales and a higher number of operating expenses. Since the transition, sales have increased, but absence of an efficient inventory system to track the flow of products has exacerbated the problem and calls for an efficient solution to this problem now than before.

To solve the inventory management challenge of Rishabh Enterprises, a multi-faceted solution is required. The first and most effective measure that can be taken is the establishment of an effective inventory management system for minimizing the risks associated with stockouts and overstocking in inventory management. Furthermore, with the help of incorporating sales data into this system, it will be possible to gain significant insights into the patterns of sales and customer preferences that should be helpful in making decisions.

2 Organization Background

Rishabh Enterprises, a prominent utensil shop in the small town of Sheohar (Bihar) has established itself as a trusted provider of high-quality kitchenware over several years. Founded by Jitendra Kumar, the shop originally operated from a less crowded location, which

limits its customer base and sales. However after covid hit the business had to increase the sales to survive in the competitive market so they took a strategic decision to relocate to the main area of Sheohar (which is in Gandhi Chowk) in Jan 2023. After the strategic move the shop has recovered from the covid hit. The shop offers a wide range of utensils, including various types of steel and metal cookware, catering to the diverse needs of its customers. Previously the shop was small and had all the products without the catalog, but after relocation the shop has been in a good form. They are running the shop with proper management, which helps the customers with a fast-paced shopping experience. After relocation they have got a big space compared to the previous shop so they can fit more products and serve a wide range of customer demands.

3 Problem Statement

- **Inventory Management:** The shop lacks a proper inventory management system, leading to a frequent stock out, missed sales, increased operational costs and poor customer service.
- **Operational Efficiency:** The manual processes currently in place are inefficient and time consuming, hindering the shop's ability to maintain the growing demands of customers.
- **Seasonal Sales Analysis:** The shop becomes inefficient at analyzing sales data to understand trends during festive seasons, which is crucial for optimizing stock levels and maximizing sales during these peak periods.

3 Background of the Problem

Rishabh Enterprises, a prominent utensil shop in Sheohar, Bihar, operated from a small store before 2023. Despite its limited size, Rishabh Enterprises established a significant presence in the market. The COVID-19 pandemic adversely affected businesses, but Rishabh Enterprises responded proactively by relocating to the main market of Sheohar. This strategic move substantially increased their sales and facilitated recovery from the pandemic's impact. However, the relocation brought a new and serious challenge: inventory management.

Post-relocation, sales surged by 150-200%, necessitating an efficient inventory management system to meet the heightened demand. Over the past year, the shop has struggled with inventory issues, often resulting in overstocking. Despite their efforts to manage inventory to the best of their capacity, the absence of a proper inventory system has led to sales losses. According to the owner, Jitendra Kumar, the shop also lacks precise seasonal sales data. While they have an estimated understanding of seasonal sales trends, a comprehensive analysis of sales data would be highly beneficial. Such an analysis would enable them to optimize outcomes with minimal resources. Consequently, the two primary issues are inadequate inventory management and insufficient sales data analysis.

Addressing these challenges is crucial for Rishabh Enterprises to sustain its growth and enhance operational efficiency. Implementing a robust inventory management system will prevent overstocking and stockouts, thereby reducing costs and improving customer satisfaction. Additionally, a thorough analysis of seasonal sales data will provide valuable insights, allowing the business to align inventory with demand more accurately and capitalize on peak sales periods. By focusing on these areas, Rishabh Enterprises can ensure continued success and stability in a competitive market.

4 Problem Solving Approach

The issues that Rishabh Enterprises is facing in the areas of inventory management and sales data analysis need to be addressed step by step in a methodical and thorough manner. To better understand the trends and challenges of the current scenario, relevant sales data needs to be collected. This can be achieved by collecting sales numbers for each day, the categories of products, the seasonal trends in sales, the time of peak sales, and also the choice of products by the client. In addition, to analyze such data, operational and financial numbers

such as godown space, product shelf space, storage capacity, selling price, cost price, and profit margins are also needed.

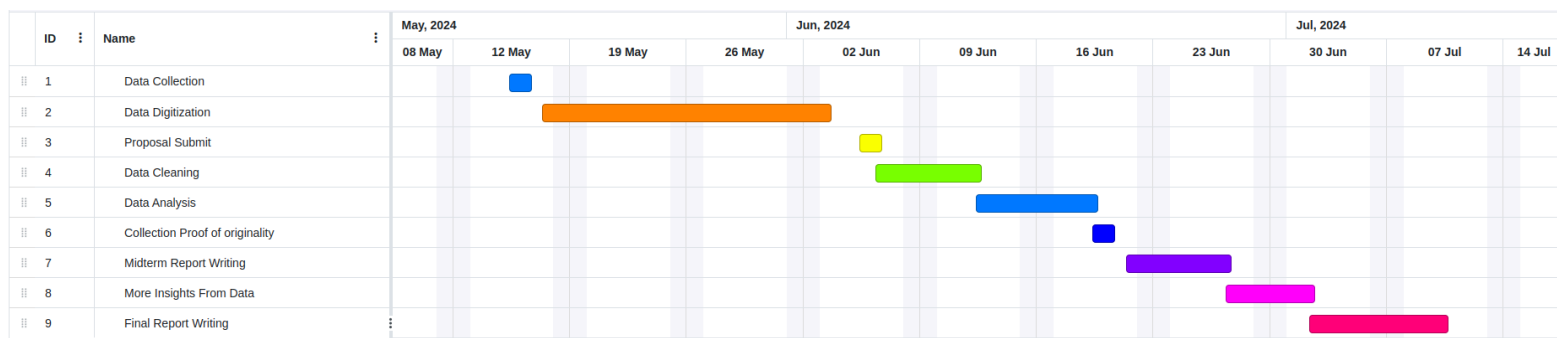
After collection, sales data is analyzed in an in-depth manner for the identification of various patterns, trends, and seasonality. Trend analysis is conducted to detect the trends in sales over time by using the statistical techniques of moving averages and time-series analysis. Seasonality analysis is done to identify the seasonal peaks and troughs in the sales data, which can provide insights into which products are usually in high demand during particular times, such as festive seasons. Product demand is also analyzed to identify key products that have continuous high demand or that witness a spike during particular seasons.

Based on the established patterns and trends, statistical methods such as time-series analysis and regression analysis are employed for demand forecasting. Time-series analysis is used to forecast future sales based on historical sales patterns, and regression analysis helps to point out all factors that affect sales. It can therefore make a more accurate demand forecast. These forecasting exercises are essential to determining the most optimal inventory, so that products are available as and when needed without stockpiling. Safety stock must be calculated appropriately to provide a cushion against the uncertainties of demand, and the inventory turnover ratio should be calculated to determine the most optimal stock level to avoid shortages and reduce holding costs.

Computerized billing and inventory management systems are introduced to streamline operations. A POS system that integrates with inventory management enables real-time updates of stock levels with every transaction. An inventory management software application deployed tracks inventory levels, alerts reorder levels, and reports inventory status. A system is responsive to the changes in demand only if there is constant monitoring of real sales data. Deviations from forecast can be checked frequently by scrutinizing the sales data, and a refined demand forecast can be made along with inventory level. KPIs, including stockout rates, overstock rates, and inventory turnover, indicate the level of effectiveness.

A comprehensive approach paves the way for Rishabh Enterprises to maintain proper inventory levels and to increase operational efficiency while capitalizing on the sales trend. The approach also mitigates overstocking and stockout situations that result in losses; rather, it retains customers through a proper inventory level, satisfaction, and business growth.

5 Expected Timeline



6 Expected Outcome

At the conclusion of the project, it is expected that it will result in enhanced inventory management for Rishabh Enterprises. Additionally, it is expected that the project will give improved insights into sales data, enabling Rishabh Enterprises to optimize stock levels in anticipation of seasonal demand fluctuations. Furthermore, the project aims to enhance customer service. These anticipated outcomes underscore the project's objectives to streamline operational processes and enhance the overall efficiency and effectiveness of Rishabh Enterprises' business operations.