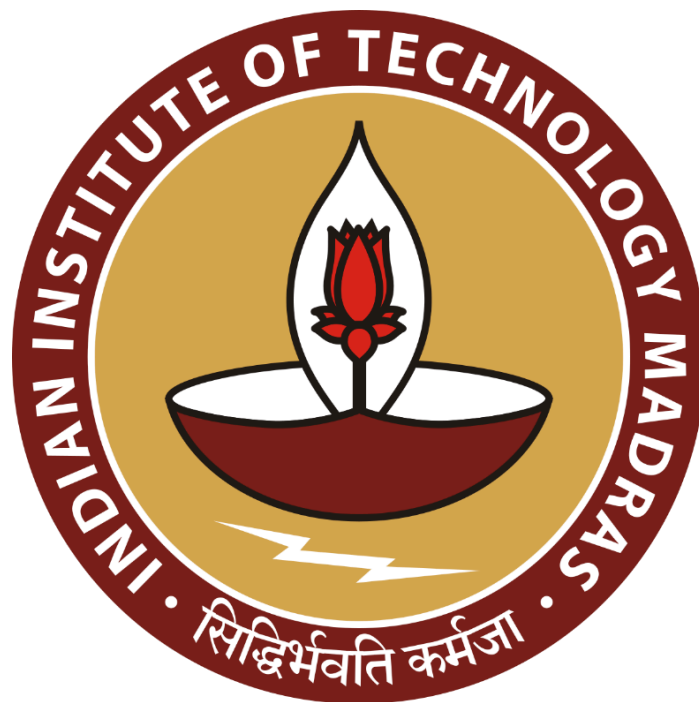# Supply Chain Efficiency and Seasonal Sales Stability in FMCG Distribution

A Proposal report for the BDM capstone Project

Submitted by-

Name: Riya Chandrabel

Roll number: 22f3003173

IITM Online BS Degree Program,

Indian Institute of Technology, Madras, Chennai

Tamil Nadu, India, 600036

Contents

Declaration Statement

I am working on a Project Title Supply Chain Efficiency and Seasonal Sales Stability in FMCG Distribution.

I extend my appreciation to Khai Khajani House, 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.

Signature of Candidate: *Riya Chandrabel*

Name: Riya Chandrabel

Date: 03/03/2025

1 Executive Summary and Title

About the Organization

Khai Khajani House is a trusted B2B wholesale distributor of chocolates, wafers, juices, biscuits, sweets, and other packaged food products (FMCG) . Established in December 2023 by Aditya Sharma, the company focuses on delivering high-quality products at competitive prices, ensuring retailers and wholesalers can efficiently meet consumer demand. With an annual revenue of ₹50 lakh and a 5% profit margin, the business aims to optimize its operations for sustainable growth.

About the Problem

1. Order Fulfillment Delays: Inefficient logistics and manual processes lead to late deliveries, impacting customer satisfaction and business expansion.
2. Seasonal Sales Fluctuations: Sales decline during off-peak seasons, causing revenue instability and excess inventory holding costs.
3. Inventory Overstocking and Stockouts: Poor demand forecasting leads to overstocking of slow-moving products and stockouts of high-demand items, increasing costs and lost sales opportunities.

Proposed Approach and Solution

To address these challenges, data-driven solutions will be implemented, including:
- Demand Forecasting Models: Analyzing past sales trends and market patterns using predictive analytics to optimize inventory levels.
- Supply Chain Optimization: Implementing automated order processing and delivery tracking systems to reduce fulfillment delays.
- Sales Trend Analysis: Identifying seasonal demand patterns and recommending promotional strategies to stabilize revenue.

The expected outcome is improved inventory management, reduced operational inefficiencies, and enhanced profitability by minimizing losses due to stock mismanagement and delayed deliveries.

2   Organization Background

1. The business I am working with is Khai Khajani House, a B2B wholesale distributor specializing in chocolates, wafers, juices, biscuits, sweets, and other packaged food products. Based in Dumartarai Wholesale Market, the company was founded in December 2023 by Mr. Aditya Sharma, who invested ₹20 lakhs to establish the business.

2. Khai Khajani House focuses on providing high-quality products at competitive prices, ensuring that retailers and wholesalers can efficiently meet consumer demand. Despite being a relatively new venture, the company has grown steadily, generating ₹50 lakh in annual revenue with a 5% profit margin.

3. Operating with a small but efficient team of four employees, the business aims to optimize its logistics, inventory management, and demand forecasting to improve profitability and customer satisfaction. By addressing key operational challenges, Khai Khajani House strives to become a leading distributor in the FMCG sector.

3   Problem Statement

1. **Order Fulfillment Inefficiencies:** The manual order processing and lack of a streamlined logistics system cause delivery delays, leading to decreased customer satisfaction and potential loss of business.

2. **Inventory Management Challenges:** Ineffective demand forecasting results in overstocking of slow-moving products and stockouts of high-demand items, increasing operational costs and reducing profitability.

3. **Seasonal Sales Fluctuations:** The business experiences significant revenue variations due to seasonal demand shifts, leading to inconsistent cash flow and excess inventory during low-demand periods.

By leveraging data analytics and process automation, the company aims to optimize supply chain operations, improve inventory turnover, and stabilize revenue across different seasons.

4   Background of the Problem

Khai Khajani House, a B2B FMCG distributor, faces operational challenges that hinder its growth and profitability. One of the major issues is order fulfillment inefficiencies, primarily caused by manual processing and an unstructured logistics system. Late deliveries result in dissatisfied customers and lost sales opportunities, impacting business reputation and customer retention.

Another critical challenge is inventory mismanagement, stemming from inaccurate demand forecasting. Overstocking leads to excess capital being tied up in slow-moving products, while stockouts result in lost sales and unmet customer demand. This inefficiency affects cash flow and limits the company's ability to scale.

Seasonal sales fluctuations further contribute to financial instability. Demand for certain products rises and falls unpredictably, leaving the company with surplus inventory in off-peak months. Without strategic planning and data-driven sales forecasting, inventory holding costs increase, reducing overall profitability.

Key Factors Affecting the Problem

- **Internal Factors:** Lack of automated inventory tracking, inefficient supply chain processes, and reliance on manual order management.
- **External Factors:** Market demand fluctuations, competition-driven pricing pressures, and supplier delivery delays.

Addressing these issues through data analytics, inventory optimization, and process automation will help improve operational efficiency, stabilize revenue, and enhance profitability.

5 Problem Solving Approach

To address the key challenges faced by Khai Khajani House, a structured, data-driven approach will be implemented, focusing on optimizing inventory management, streamlining logistics, and stabilizing revenue fluctuations. The following methods will be utilized:

1. Data Collection and Analysis

The first step involves collecting and analyzing historical sales, inventory turnover, and delivery time data. By identifying demand patterns and operational inefficiencies, the company can make informed decisions on stocking levels, delivery scheduling, and order processing improvements.

2. Demand Forecasting and Inventory Optimization

- Implementing predictive analytics models using historical sales data to forecast demand for different products across various seasons.
- Using ABC analysis to classify products based on their sales volume and profitability, allowing for better inventory allocation.
- Introducing an automated inventory management system that sends alerts for restocking fast-moving items while reducing over-purchasing of slow-moving products.

3. Logistics and Supply Chain Optimization

- Streamlining order fulfillment by implementing a Warehouse Management System (WMS) to track inventory in real time and reduce manual errors.
- Optimizing delivery routes using GIS-based route planning tools, ensuring faster and more cost-effective distribution.
- Partnering with third-party logistics providers to improve last-mile delivery efficiency.

4. Sales Trend Analysis and Seasonal Adjustment Strategies

- Identifying seasonal demand variations using time series analysis to optimize stock levels and avoid surplus inventory.
- Introducing promotional campaigns and discounts during off-peak seasons to boost demand and maintain revenue flow.
- Diversifying the product portfolio by adding non-seasonal high-demand products to reduce the impact of fluctuating sales.

5. Process Automation and Digital Transformation

- Implementing an ERP (Enterprise Resource Planning) system to integrate order management, inventory tracking, and financial reporting, improving operational efficiency.
- Utilizing chatbots and automated customer support to handle order inquiries and complaints, reducing response time and enhancing customer satisfaction.

6. Performance Monitoring and Continuous Improvement

- Setting up Key Performance Indicators (KPIs) to track improvements in inventory turnover, order fulfillment time, and profit margins.
- Conducting monthly performance reviews to assess the effectiveness of implemented strategies and make necessary adjustments.
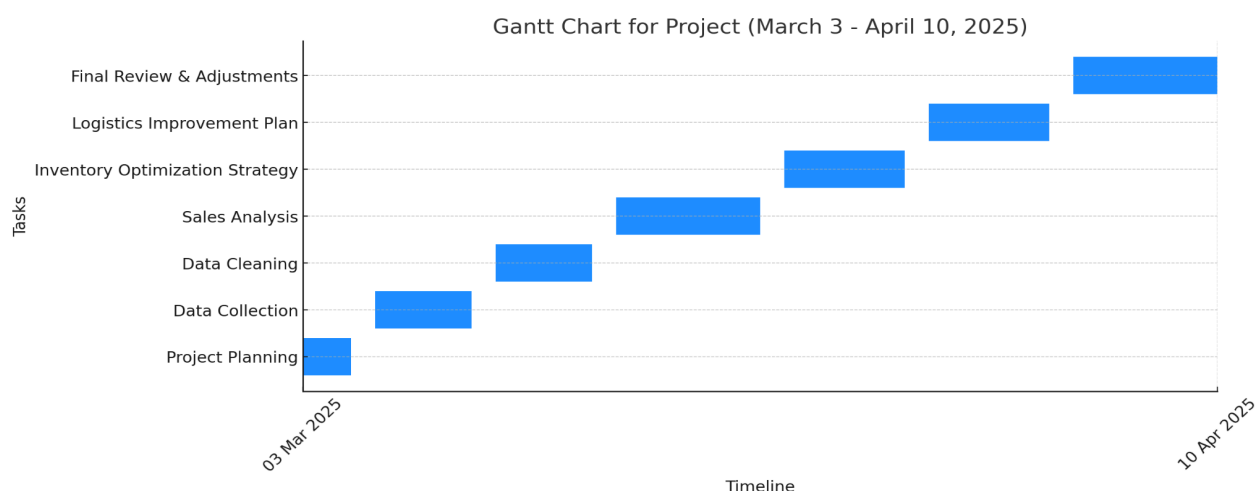
By leveraging data analytics, automation, and process optimization, Khai Khajani House can significantly enhance its efficiency, reduce costs, and improve overall profitability.

6 Expected Timeline

Work Breakdown Structure (WBS)

Gantt Chart

Gantt Chart for Project (March 3 - April 10, 2025)
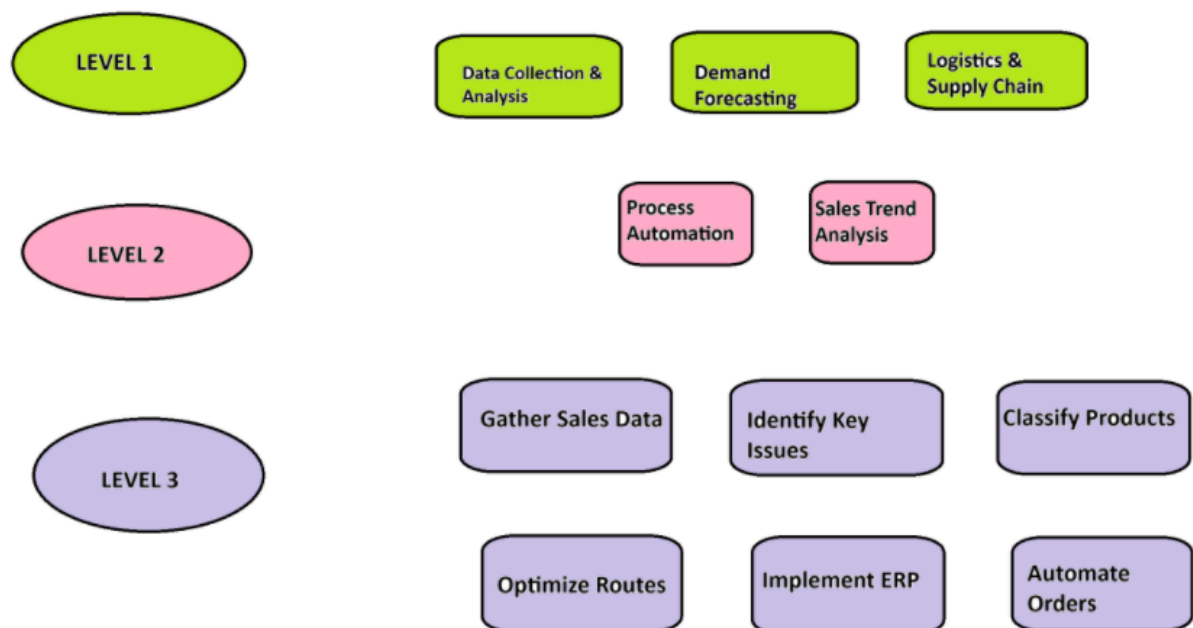
7   Expected Outcome

Implementing a data-driven approach will help **Khai Khajani House** optimize its operations, leading to significant improvements in profitability and efficiency. By analyzing sales trends, the company will gain insights into **fast-moving and slow-moving products**, enabling better inventory planning and reducing excess stock. This will **free up capital blocked in unsold inventory**, improving cash flow and overall business sustainability.

Furthermore, identifying **seasonal sales fluctuations** will help in developing better procurement and promotional strategies, ensuring stock availability during peak demand periods while avoiding overstocking during slow months. Additionally, optimizing the **logistics and order fulfillment process** will reduce delays and improve customer satisfaction, leading to stronger business relationships with retailers.

By implementing these analytical insights, **Khai Khajani House** can **reduce inventory holding costs**, minimize operational inefficiencies, and **increase its profit margin beyond the current 5%**. This data-driven strategy will ultimately create a more agile and competitive business in the FMCG distribution industry.