Enhancing operational efficiency at SFP Sons

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project Title "**Enhancing operational efficiency at SFP Sons**". I extend my appreciation to **SFP Sons India 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 analysed 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: (**Digital Signature**)

Name : DARSHAN GANATRA

Date : 03/11/2024

1 Executive Summary and Titlle

SFP Sons India Pvt Ltd is a distinguished manufacturer of premium fragrances, offering a wide range of perfumes and personal care products globally. The company is renowned for its unwavering commitment to quality and has established a significant export network supported by modern facilities.

However, SFP Sons faces critical challenges in meeting demand for its best-selling products, largely due to an extensive catalogue that stretches resources thin, leading to missed sales opportunities.

This project seeks to enhance operational efficiency within SFP Sons' B2B distribution chain by prioritizing key products that drive revenue. By conducting a thorough analysis of sales, production, and inventory data, we will pinpoint inefficiencies and devise strategies for optimal resource allocation.

The expected outcome is a significant improvement in order fulfilment, with reduced stockouts and heightened customer satisfaction. By aligning inventory levels more closely with market demand, SFP Sons will minimize excess costs and enhance profitability, creating a dynamic supply chain that supports sustainable growth and reinforces its competitive advantage in the fragrance industry.

2 Organization Background

SFP Sons India Pvt Ltd, founded by Dinesh S. Patel in 1992, is dedicated to "Bringing Fragrance to Life." Originally established as S. F. Patel & Sons (India), the company specializes in high-quality perfumes, attars, essential oils, and body care products, available globally at competitive prices. Renowned for its popular brand, Jass, in the Indian market, SFP Sons excels in exports and contract manufacturing, ensuring high standards through the sourcing of pure raw materials and advanced production technologies.

With an annual turnover exceeding 100 crores INR, SFP Sons continues to expand its reach into home essentials and beauty care. The company operates a 400,000 square foot manufacturing facility across Chennai and Jambusar, Gujarat, featuring state-of-the-art R&D labs to meet increasing demands. Employing over 600 dedicated professionals, SFP Sons boasts a robust distribution network, reaching 20 countries and over 1,000 distributors, solidifying its position as a leading manufacturer and exporter of quality fragrances while maintaining compliance with international standards.

3 Problem Statement

The problem statement for this project is "**Enhancing operational efficiency at SFP Sons**".

Objectives are:

A. To optimize resource allocation by focusing production capacity on high-demand products, minimizing operational strain from an extensive product range, and enabling efficient order fulfilment that aligns with market demand.

B. To enhance sales and revenue through the implementation of effective production strategies that improve overall operational effectiveness and responsiveness to customer demands.

4 Background of the Problem

SFP Sons faces a critical operational challenge with a highly diverse product range that strains its production capacity and hampers demand fulfilment. The issue primarily stems from an extensive catalogue that disperses production resources across numerous product lines, making it challenging to maintain adequate supply levels of key, high-demand items. As a result, SFP Sons struggles to meet timely order fulfilment and loses out on potential sales due to stockouts of popular products.

Several internal factors contribute to this problem, including resource allocation inefficiencies, underutilized capacity, and lack of prioritization in production scheduling. Additionally, the external demand fluctuations put added pressure on production timelines, creating further delays in delivering core products to market. To address these, a focused strategy to streamline production processes is essential.

This project aims to solve these operational bottlenecks by prioritizing high-demand products through optimized resource allocation and enhancing SFP Sons' production strategies. By reducing delays, refining production flow, and ensuring that resources align with demand trends, the company can improve both its order fulfilment rates and its profitability. In doing so, SFP Sons will be positioned for sustainable growth and competitive advantage in the market.

5 Problem Solving Approach

Step 1: Data Collection and Demand Segmentation

Techniques: Historical sales data analysis, K-means clustering

Description: We will gather historical sales and production data to perform K-means clustering,

categorizing products by demand levels and profitability. This segmentation will identify high-priority product categories that significantly impact revenue, facilitating targeted resource allocation.

Step 2: Demand Forecasting for Effective Prioritization

Techniques: Time-series analysis, Multiple regression analysis

Description: By applying time-series analysis, we will project future product demand patterns. Multiple regression analysis will enhance accuracy by considering various factors influencing demand. This forecasting will guide SFP Sons in aligning production resources with anticipated market needs, improving overall fulfilment rates.

Step 3: Optimization of Production Resources

Techniques: Linear programming, Simulation modelling

Description: We will implement linear programming to optimize production schedules, ensuring efficient resource allocation. Simulation modelling will allow us to test different production scenarios, identifying the best strategies to balance labour and materials effectively while minimizing downtime.

Step 4: Implementation of Targeted Production Strategies

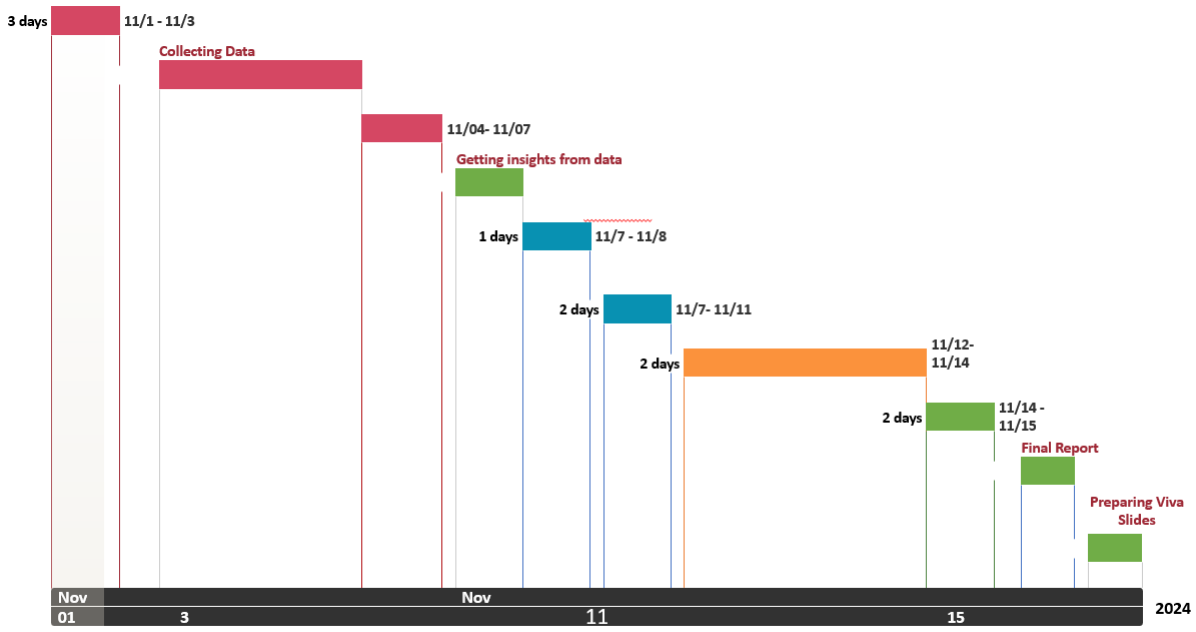
Techniques: Lean manufacturing, Value stream mapping
Description: We will adopt lean manufacturing principles to streamline processes, focusing on reducing waste and increasing productivity. Value stream mapping will identify bottlenecks in production workflows, allowing for targeted improvements. These strategies will enhance production efficiency and responsiveness to high-demand products.

6 Expected Timeline

Start Date	End Date	Task
01/11/24	03/11/24	Proposal Submission
04/11/24	07/11/24	Collecting Data
07/11/24	08/11/24	Data Cleaning and getting insights from the data
07/11/24	10/11/24	Midterm Submission
11/11/24	12/11/24	Further Insights from the data
12/11/24	14/11/24	Analysing the Data and Finding Problem Solution
14/11/24	15/11/24	Final Report preparation and Preparing Slides for Viva

Work-Breakdown Structure

Gantt Chart



7 Expected Outcome

By following the above mentioned approach we can get the following outcomes

Improved resource allocation will streamline manufacturing workflows, allowing SFP Sons to focus on high-demand products, reducing production delays and operational strain.

By aligning production with actual market needs, SFP Sons will fulfil orders more consistently, reducing stockouts and enhancing customer satisfaction.

Efficient use of production resources and prioritized product lines will drive sales and boost revenue, creating a more agile, demand-responsive operation that supports sustainable growth.