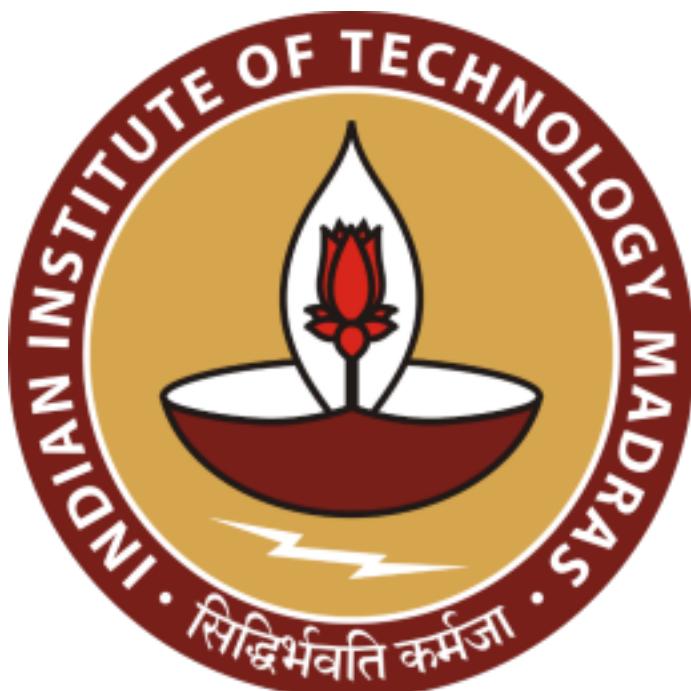


## **OPTIMISING FURNITURE SALES POTENTIAL**



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## **Declaration Statement**

I am working on a Project titled "**Optimising furniture sales potential**". I extend my appreciation to **Good Luck furniture**, for providing the necessary resources that enabled me to conduct my project.

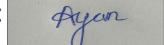
I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analysed to assure its reliability.

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 utilised for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Candidate Signature: 

Name : Ayan Hussain

Date : 04/09/2024

# **OPTIMISING FURNITURE SALES POTENTIALS**

## **Executive summary**

The project “optimising furniture sales potential” points to explore strategies to optimise sales of Good Luck Furniture, a small-scale furniture commerce in Rajrooppur Prayagraj. This activity examines the current obstacles and challenges that business faces during peak sales periods like lagan season and festive seasons, supply chain inefficiencies, and declining sales of outdated product designs. Stock Outs during high-demand periods lead to significant loss and eroded customer trust. Supply chain disruptions, driven by a limited supplier base and logistical delays, disrupt production timelines, long waiting periods ,ultimately compromising customer satisfaction. Additionally, misaligned product designs, which no longer resonate with evolving consumer preferences, result in stagnant sales and capital being tied up in unsold inventory.

To overcome these challenges, a vital approach is proposed. Demand forecasting, leveraging historical sales data, will enable more accurate inventory planning, preventing stock shortages. Implementing just-in-time inventory practices and broadening providers will enhance supply chain agility, reducing delays and operational bottlenecks.

The expected outcomes include improved stock availability during peak periods, decreased overabundance of stock, stronger alignment with consumer pattern, and enhanced cash flow. These initiatives will not only boost revenue and customer fulfilment but also position Good Luck Furniture for sustained growth and market competitiveness.

## **Organisation background**

Good Luck Furniture is situated in Rajrooppur ,Prayagraj, Uttar Pradesh, run by Mr Abad Hussain with one manager and two craftsmen. It is a small-scale furniture firm known for its handcrafted wooden furniture, fabric-based products and custom-designed furniture. The shop has built a reputation for producing high quality, durable furniture that blends traditional craftsmanship with modern functionality. Good Luck Furniture operates both as a showroom and workshop, they use third party craftsmen to fulfil customer needs, offering a range of products, from living room sets to custom-built furniture solutions. The sales throughout the year are scattered but in festive months and lagan periods it spikes.

Good Luck Furniture, while rooted in tradition, recognizes the need to modernise its operations to maintain its competitive edge, optimise its supply chain, and better align its product offerings with market trends.

## **Problem Statements**

### **1. Stock shortage during festive months**

**Explanation :** During peak festive season, the shop struggles to maintain adequate stock levels, leading to missed sales opportunities. The high demand during this periods often outplace the shop's inventory planning and supply capabilities

### **2. Supply Chain Issues**

**Explanation :** Delay in raw material delivery, disrupts production schedules, leading to delayed deliveries to customers.

### **3. Underperforming Product Designs**

**Explanation :** Some of the product designs are not resonating with customers preferences, leading to stagnating sales.

## **BACKGROUND OF THE PROBLEM**

### **Stock shortage during festive months:**

During festive periods like Diwali, there's a significant surge in demand for furniture as customers seek to rejuvenate their living spaces. Stock-outs transpire when the available supply of products falls short of meeting this heightened demand. For Good Luck Furniture, this translates to running out of in-demand items precisely when consumer interest peaks.

#### **Cause of Inventory shortage**

- **Inadequate Demand Prediction :** Underestimating the volume of demand during festive seasons often results in insufficient inventory levels.
- **Deficient Inventory Management :** Poor inventory practices can lead to inadequate restocking prior to the festive period.

#### **Impacts**

- When key products are out of stock, the business forfeits potential sales as customers seek out competitors who have the desired items. This results in a significant loss of revenue at a time when profits could have soared.
- When customers cannot find what they're looking for during a peak shopping season, their trust in the brand erodes. This eroded trust can lead to a decline in customer loyalty, making it harder to retain them over time.

### **Supply Chain Issues**

Good Luck Furniture typically relies on a limited number of suppliers for raw materials like wood, fabric, and hardware. These suppliers may themselves be small operations with limited capacity. As a result, any disruption, delay in shipments, shortages of materials, or quality issues can cause significant delays in production. Good Luck

Furniture don't have the leverage to expedite deliveries or demand priority treatment, as a result delay in delivering finished product causes customer dissatisfaction.

#### **Cause of Supply Chain issue**

- **Limited Supplier base :** Good Luck furniture often rely on a limited number of suppliers, which means they have fewer options when it comes to sourcing materials. This reliance can make them vulnerable to disruptions if one supplier faces delays or quality issues.
- **Logistical Challenges :** Without the resources to own and operate their own logistics networks, small businesses rely on third-party providers, who may not prioritise their shipments. This can lead to delay in delivery of finished products and increased costs leads to consumer dissatisfaction.

#### **Impacts**

- When raw materials or components don't arrive on time, production schedules are delayed. This leads to delays in fulfilling orders, which can frustrate customers and harm the business's reputation.
- Delays in production and delivery, combined with potential increases in costs, can lead to dissatisfied customers. This dissatisfaction can manifest as negative reviews, reduced customer loyalty, and a decline in repeat business.

### **Underperforming Product Designs**

In this evolving world of design, Good Luck furniture faces the peril of falling behind trends, leading to what can be termed as a curse of outdated product design. As a result, some designs of product's sales decrease and lead to stagnating sales. Despite being part of the inventory, these products are not generating the expected sales volume, tying up capital in unsold goods and occupying valuable space that could be used for more profitable items.

#### **Cause of Underperforming Product Designs**

- **Misalignment with Market Trends:** The designs might not align with the latest trends or consumer tastes, making them less attractive to new generation buyers who are looking for more contemporary or fashionable options.

#### **Impacts**

- When certain designs fail to sell, the business experiences a direct loss in revenue. Each unsold product represents a missed opportunity to generate income, which can accumulate over time and significantly affect the overall financial health of the business.
- Money invested in producing and storing these unsold designs is effectively locked up, reducing the business's liquidity. This can create cash flow issues, limiting the company's ability to invest in new designs, marketing, or other growth opportunities.

## **Problem solving Approach**

### **Demand Forecasting**

Method: Implement robust demand forecasting tools to analyse historical sales data from previous festive periods.

Justification: This will help predict the expected surge in demand for specific Products and help to find reorder points where product needs to reorder.

Data Collection: Past sales records, monthly, quarterly, and annual sales figures for previous years, especially during the same festive period. This helps identify trends and patterns.

Analysis Tools: Organise data, create pivot tables using spreadsheets(Excel, google Sheets) and data manipulation, analysis, and modelling using python libraries like numpy, pandas and scipy

### **Customer Feedback and survey**

Method: Gather data and feedback from various parts of the supply chain (e.g., production, logistics, distribution) to pinpoint specific problems.

Justification: Feedbacks provide qualitative and quantitative insights, which guides in decision making and find the specific problems

Data Collection: Conduct a periodic customer satisfaction survey, post purchase surveys, collect data like date of purchase waiting period delivery date etc.

Analysis Tools: Survey tools like Google Forms to collect data and analyse customer feedback.

### **Market Research and Trend Analysis.**

Method: Invest in continuous market research to understand evolving customer preferences.

Justification: It helps to find evolving customer preferences, industry trends, and competitor offerings. Incorporate these forecasts into the product development process to ensure new designs resonate with consumer demands.

Data collection: Monitor Social media traffic, engagement (likes, shares), and customer interaction data across digital platforms to measure customer engagement.

Analysis Tools: Utilise social media insights for tracking public engagement and use google analytics to monitor people engagement on websites related to furniture.

### **Product Portfolio Review**

Method: Track the performance of each design of product and use it to rearrange inventory.

Justification: Analyse sales data to identify underperforming designs. Focus on key metrics such as sales volume, turnover rate, and profit margins to determine which products are lagging.

Data Collection: Collect sales data, gather and analyse customer feedback on specific designs, understanding why certain products are less appealing.

Analysis Tools: Organise data, create pivot tables using spreadsheets(Excel, google Sheets) and data manipulation, analysis, and modelling using python libraries like numpy, pandas and scipy.

### **Inventory Optimization**

Method: Offer discounts, bundle deals, or clearance sales to move unsold inventory quickly.

Justification: offering discounts helps recover some of the capital invested and clears space for new designs.

Analysis Tools: Use inventory management tools to track and optimise stock levels. Implement just-in-time inventory practices to reduce excess stock and align production more closely with demand.

## **Expected Timeline**

### **Stage 1: Data Collection**

Activity 1: Collection of data from Good Luck Furnitures

### **Stage 2: Data Cleaning**

Activity 2: Cleaning the Data using Excel

### **Stage 3: Research and Analysis**

Activity 3: Conduct statistical analysis to identify trends, customer preferences, and sales opportunities.

Activity 4: Analyse customer feedback and purchasing behaviour data.

Activity 5: Analyse market trends.

Activity 6: Identify gaps and opportunities for furniture sales on data insights.

### **Stage 4: Idea Generation**

Activity 7: Develop ideas and plan based on analysed data.

Activity 8: Use google and facebook marketing strategies to increase overall customer reach.

### **Stage 5: Strategy Development**

Activity 9: Refine and categories generated ideas into actionable strategies.

Activity 10: Select promising ideas for further development based on insights.

Activity 11: Define carryout steps and timelines for selected strategies.

### **Stage 6: Proposal Presentation**

Activity 13: Prepare a presentation defining proposed ideas and strategies.

Activity 14: Create detailed plans, including timelines and resource requirements.

Activity 15: Present findings and propose recommendations to owners for implementation.

### **Stage 7: Final Documentation**

Activity 16: Compile a final report summarising the project findings and proposed strategies.

## Gantt chart



## Expected Outcomes

### **Improved stock Availability**

By utilising demand forecasting based on historical data, Good Luck Furniture will be able to keep up ideal stock levels during peak months. This will help avoid stockouts and guarantee that high-demand products are available, leading to increased sales and client satisfaction.

### **Reduction in Over-Stocking and Dead Inventory**

Inventory optimization techniques, such as implementing just-in-time (JIT) practices, will diminish abundance stock. This minimises capital tied up in unsold items, frees up distribution centres, and reduces holding costs.

### **Better Alignment with Market Trends**

Continuous market research and trend analysis will permit the firm to stay ahead of advancing consumer preferences. This guarantees that new product designs resonate with customer demand, increasing sales and brand relevance.

### **Improved Cash Flow**

By reducing stockouts, clearing unsold inventory, and optimising production, Good Luck Furniture will progress its cash stream. This will give more liquidity for reinvesting in new designs, marketing efforts, and development initiatives.

Overall, the outcome of this problem-solving approach will lead to **higher deals, enhanced operations, better inventory management, and more grounded client connection**, driving both profitability and growth.