

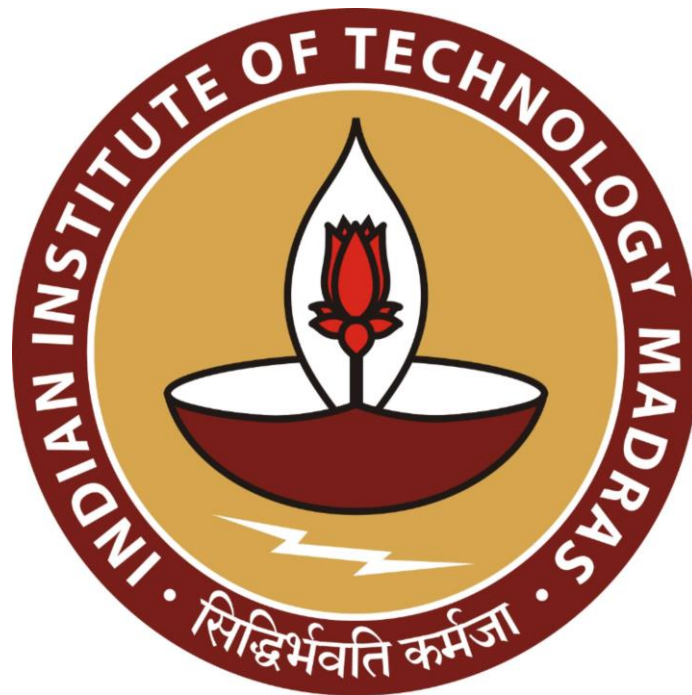
Optimize Cost and Inventory Management for an Interior Designing firm

A Proposal Report for BDM Capstone Project

Submitted by

NAME :- RISHAV KUMAR

Roll No. :- 22f3001352



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

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Declaration Statement

I am working on a Project Title “Optimize Cost and Inventory Management for an Interior Designing firm”. I extend my appreciation to Design De Interiors, 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.

Rishav Kumar

Signature of Candidate: (Digital Signature)

Name: Rishav Kumar

Date: 13th May 2025

1. Executive Summary and Title

Title:

Optimize Cost and Inventory Management for Design De Interiors, An Interior Design Firm.

Design De Interiors is a interior designing company which is focused in designing, planning, and managing interior projects for homes, offices and shops. The firm operates in the B2C model, it delivers in end to end solutions for it clients.

The major business which challenges Design De Interiors is of the instability of finished product costs due to fluctuating raw material prices and waste of materials which arises issues on inventory management. These issues impact the profitability of the firm and makes growth of the venture slow.

This project proposes to address these challenges by collecting and analysing data given by the firm, analysing market trends, and applying analytical models such as dynamic price tracking, predictive inventory analytics, and waste minimization strategies. Through these ways, the firm can make informed decisions on buying of raw materials, optimize inventory, and reduce unnecessary expenses.

The expected outcome is to get reduction in material costs and waste, which would lead to improved cash flow, increased profitability, and better sustainable model for Design De Interiors.

2. Organization Background

Design De Interiors is a promising and renowned interior designing firm based in Ranchi, which was established in 2016. The company focuses on providing interior designing solutions, including planning, project management, and execution for different types of properties including all residential, commercial, and retail. Over the years, Design De Interiors has built a good reputation in its area because of their quality and client satisfaction, completing a diverse range of projects from home makeovers to retail renovations. The firm's team comprises of design experts with technical knowledge, ensuring each project matches to client needs and is delivered on time. As the business has grown, so have the complexities of managing multiple projects, and material inventories. With this growth, the need for more better data management and strategies to maintain cost control, reduce waste arises. As the firm's commitment is to provide quality work under better cost at efficient time.

3. Problem Statement

The primary objective of this project is to help Design De Interiors so that the company can stabilize costs of finished products and also minimize its material waste through better data management. The firm currently struggles with unpredictable raw material prices and inefficient inventory, which leads to increased costs and resource wastage. Addressing these issues will increase profitability and will support better business growth.

3.1 Problem Statement 1:

Fluctuating raw material prices is a challenge for the firm to maintain consistent project costs, which affects client trust and profit margins.

3.2 Problem Statement 2:

Ineffective inventory management results in a lot of material overuse and waste, which increases operational costs.

4. Background of the Problem

The interior design industry is heavily dependent on various raw materials such as wood, fabrics, paints, cement, plastic materials etc, whose prices are very volatile and is subjected to market fluctuations. For Design De Interiors, this volatility makes it very difficult to predict project costs, which often leads to budget mismanagement and reduced profit margins. Internally, the absence of a decent inventory management system has resulted in over ordering, materials are not used to full potentials, and increased waste. These inefficiencies are big barriers for the firm's expansion and growth, which requires good management across multiple domains. Externally, global supply chain volatility and unpredictable market trends of raw materials further increases price instability and material availability. The lack of material and price analysis has prevented the firm from responding easily to these changes of market volatility and material wastage. Hence, the business faces blocked capital in excess inventory, increased operational costs, and faces many challenges in good cashflow and profit margins. Addressing these issues is very significant for maintaining competitiveness, ensuring client satisfaction, and will also help the firm to grow at much faster rates in long run.

5. Problem Solving Approach

To resolve the given problem statements, the project will implement an analytic and data driven way which will include following ways:

1. Raw Material Price Monitoring:

The first step here will be to have a raw material price monitoring tool or any such APIs which can give us better results in getting the trends of raw material pricing. This will help the firm to track price changes in regularly, and also help in to get seasonal fluctuations trends in specific raw materials, and using current prices against historical data we can conclude a lot about the trends. By having access to updated market information and better price trends, procurement team can make better and informed purchasing decisions, negotiate at better terms, and consider bulk buying as per the seasonal trends.

2. Predictive Inventory Management:

Having an inventory management system will allow Design De Interiors to track material usage across all projects very easily. The system will use barcode or RFID technology for real-time inventory updates and management, while predictive analytics will analyse consumption patterns so that new stocks can be brought at right amount, right time and at better prices. Integrating inventory data with project schedules will support efficient procurement and will help in reducing storage costs.

3. Waste Reduction Practices:

The project will also promote waste reduction principles, which will encourage the reusing and repurposing of material leftovers. Partnerships with suppliers which offers recycling can help the firm in many ways. Better and sustainable design elements can be considered to further reduce on-site material wastage, which would also increase profitability.

4. Data Visualization and Reporting:

A custom dashboard will be developed for better management with real-time insights of material costs, inventory management, and wastage monitoring. Regular reporting will help us to identify issues in our functioning and also in tracking our progress.

5. Change Management and Staff Training:

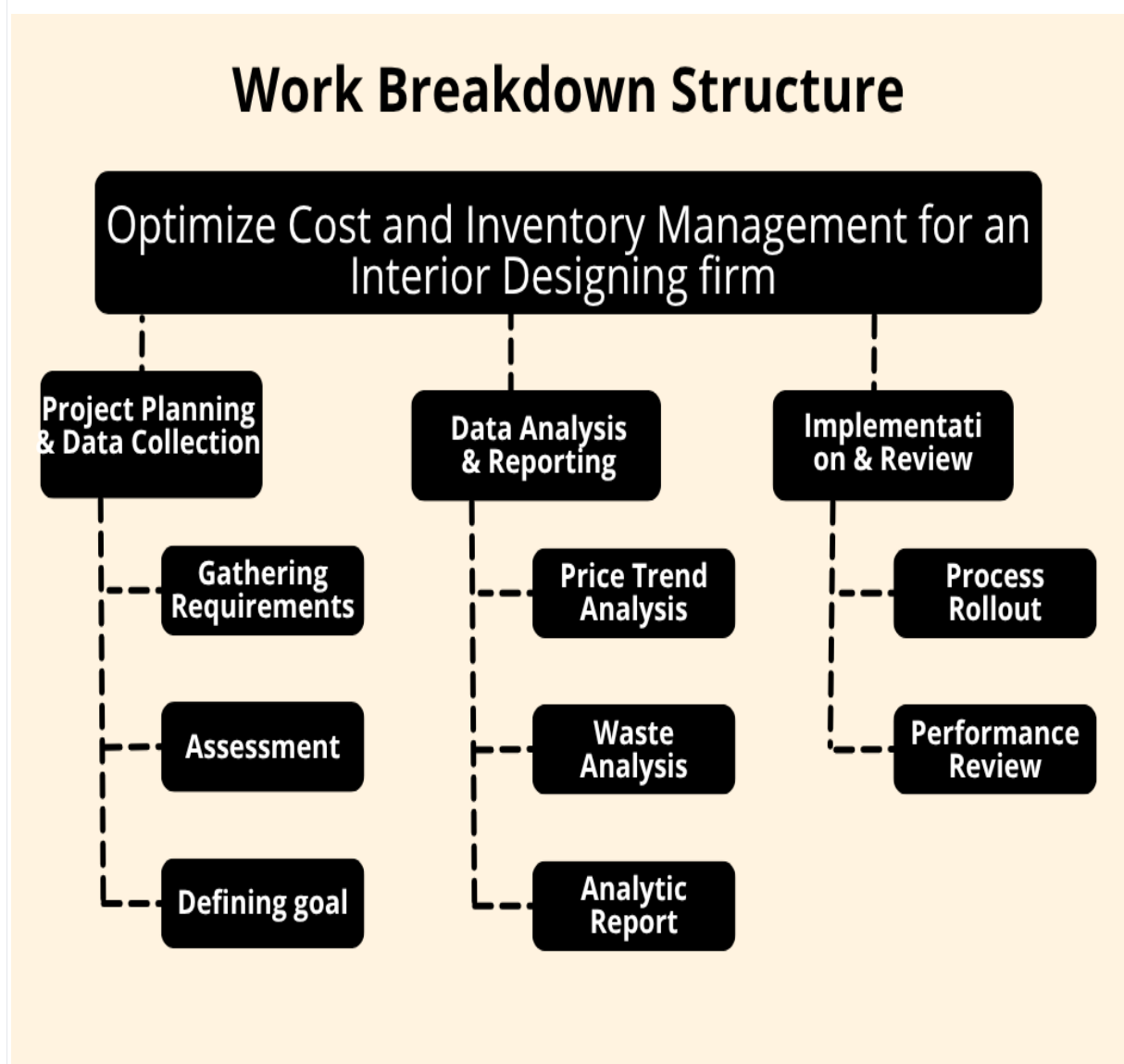
Some training programs will be delivered to staffs can effectively use new systems and work in a better manner. Changing few management strategies will be done to achieve our goals in smooth manner which would maximize the benefits of our other new practices.

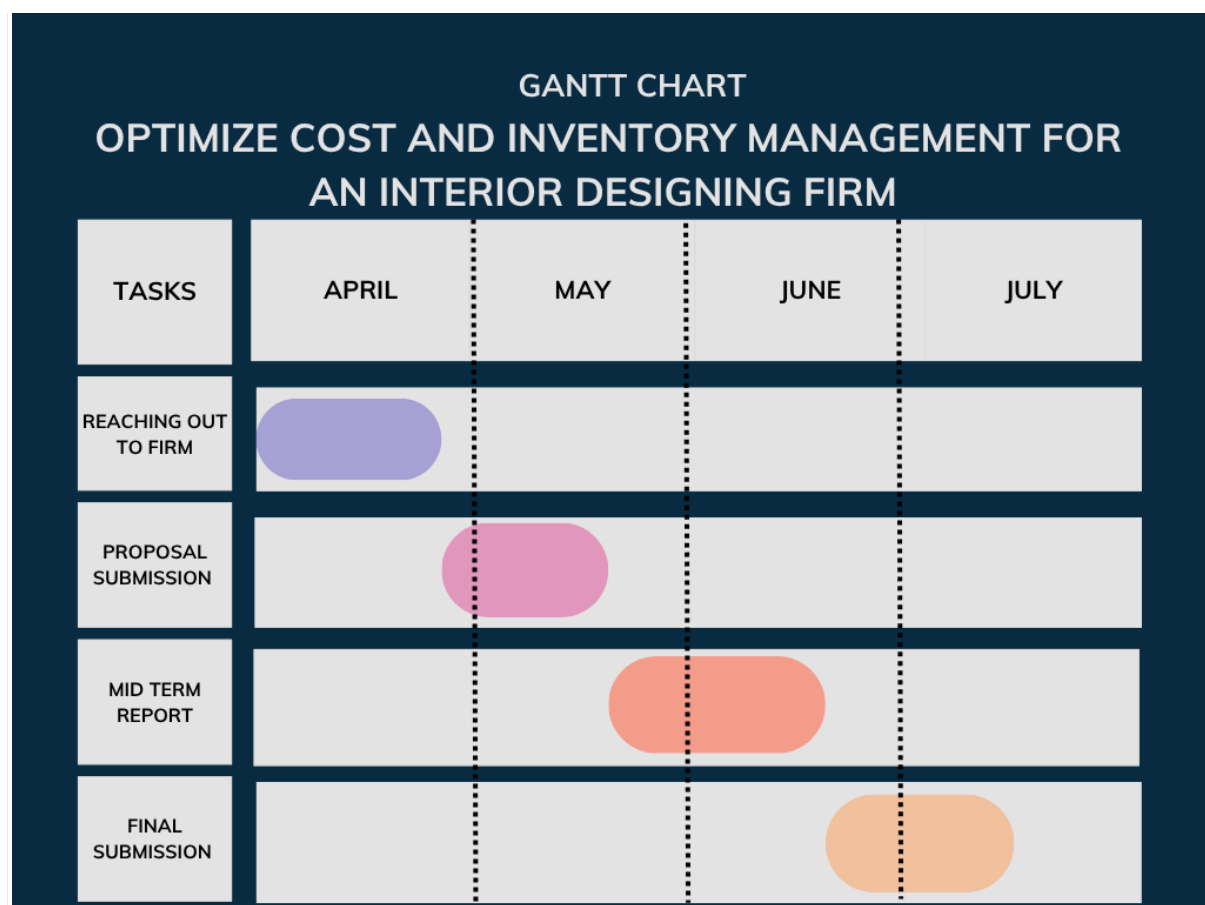
Work Plan:

- Phase 1: Project planning and data collection
- Phase 2: Data analysis and reporting
- Phase 3: Implementation and review

By following this approach, Design De Interiors will gain greater control over material costs, reducing waste, and building a model with better profit margins.

6. Expected Timeline





7. Expected Outcome

The successful implementation of this project is expected to deliver various benefits for our firm, Design De Interiors. By using advanced analytics and efficient managing models, the firm will achieve better control over raw material costs, leading better decision making and also a control over its material wastage, leading to better profit margins and good cashflow. The introduction of the inventory management will minimize over purchasing of goods and reduce material wastage, freeing up working capital and decreasing operational costs at many levels. Adoption of wastage reduction designs and better inventory managing practices will further enhance the functioning of the firm in many ways. Management will have access to good insights with help of analytical tools, dashboards, which will help in data driven decision making. Therefore, the project will support Design De Interiors in increasing profitability, improving client satisfaction, better cashflow, less material wastage and will also help in having a efficient business model that can adapt to volatile market.