

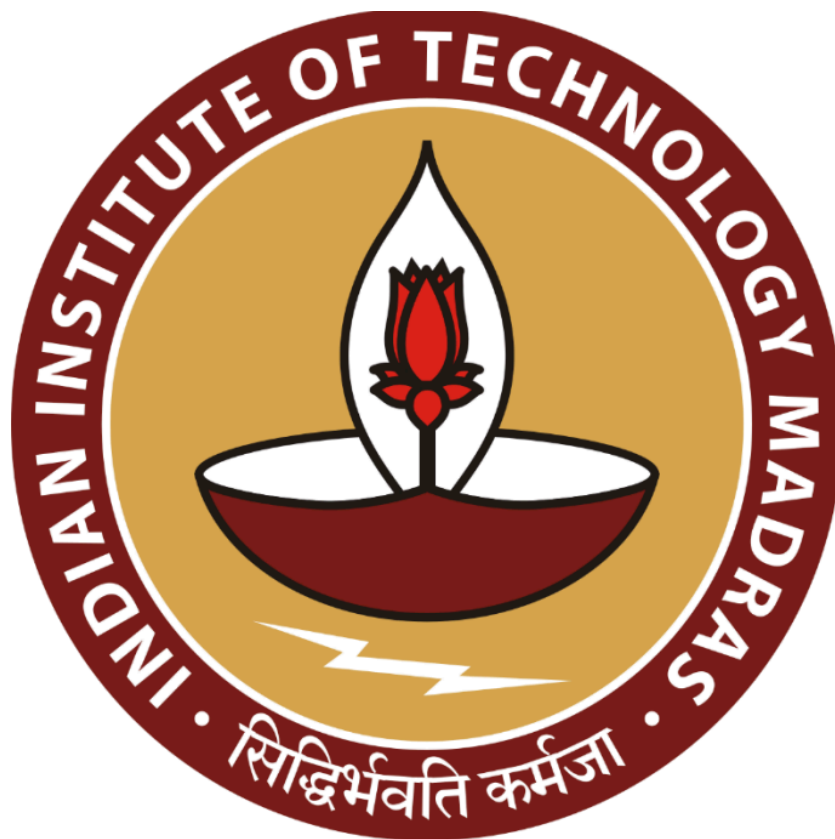
# **Optimizing Working Capital Management through Credit Control at M/S Sarada Builders & Suppliers**

*A Proposal report for the BDM capstone Project*

*Submitted by*

*Name: Sohini Ghosh*

*Roll no: 23f2004366*



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 “Optimising Credit Management and Cash Flow for a Building Materials Supplier Shop”. I extend my appreciation to M/S Sarada Builder’s, 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.

Signature of Candidate: *Sohini Ghosh*

Name: Sohini Ghosh

Date: 13.11.2025

## **1. Executive Summary:**

M/S Sarada Builders & Suppliers is a retail building materials shop catering to homeowners and small builders, providing essential materials like cement, bricks, and steel rods. The business operates on a B2C model, relying on personal relationships and service quality.

The key issue faced by the shop is severe working capital blockage due to delayed payments from customers who purchase on credit. This problem of "getting cash back from buyers" restricts the business's ability to manage inventory, pay its own suppliers on time, and invest in growth, thereby threatening its financial stability and operational efficiency.

This project will address the issue by systematically collecting and analyzing primary data on sales, customer credit history, and payment cycles. The approach will involve descriptive analytics to identify default patterns and root causes. The expected outcome is a data-backed credit control framework, including a revised credit policy and customer segmentation, which will help the organization reduce outstanding receivables, improve cash flow, and enhance profitability.

## **2. Organization Background:**

The business that I am working with is M/S Sarada Builders & Suppliers, which is a for-profit retail building materials supplier shop located in Swarupnagar Bazar, North 24 Parganas, West Bengal, Pin Code: 743424. The firm was established to meet the growing demand for quality construction materials in the local area. It primarily operates on a B2C model, catering to homeowners, small contractors, and individual builders by supplying essential construction materials such as cement, sand, stone chips, bricks, and steel rods.

Over time, the business has built a strong reputation for its reliable service, fair pricing, and trustworthy relationships with customers. The shop sources materials from reputed manufacturers and ensures timely delivery to support smooth construction activities. Through consistent service quality and customer satisfaction, M/S Sarada Builders & Suppliers has positioned itself as a dependable name in the local construction material market.

### **3. Problem Statement:**

The core business problem is the inefficient management of customer credit, leading to delayed payments, blocked working capital, and constrained operational growth.

#### **3.1 To analyze the extent and impact of delayed customer payments on the firm's cash flow.**

Explanation: This will quantify the problem by identifying the average delay period and the amount of capital regularly tied up in receivables.

#### **3.2 To identify the customer segments and product categories most associated with payment delays.**

Explanation: This will pinpoint whether specific types of customers or products are the main contributors to the credit issue.

#### **3.3 To develop a data-driven framework for optimizing the credit policy.**

Explanation: This objective aims to provide actionable recommendations on credit limits and payment terms for different customer segments to mitigate future risks.

### **4. Background of the Problem**

The problem of delayed payments arises from the common industry practice of selling on credit to retain customers in a competitive market. Customers, primarily individual homeowners undertaking construction, often request credit due to the high upfront costs of materials and the phased nature of payments for their projects.

Internally, the business lacks a formal system for assessing customer creditworthiness or enforcing strict payment terms. Transactions are often based on verbal agreements and trust, making it difficult to track and follow up on dues systematically. This leads to an ad-hoc collection process.

Externally, factors such as customers' own cash flow issues, price sensitivity, and the absence of immediate consequences for late payment contribute to the problem. As noted in the problem identification document, customers in B2C contexts often exhibit conditional loyalty and may delay payments if not financially bonded, while the business fears losing them by enforcing terms strictly. This creates a cycle where the business bears the financial burden of funding its customers' projects.

## **5. Problem Solving Approach**

The problem-solving approach will be grounded in a systematic process of primary data collection and analysis, directly aligned with the stated objectives.

**5.1. Data Collection & Justification:** Primary data will be collected from the business's transaction records and through discussions with the owner.

(i) **Data Types:** Historical sales data (last 12-24 months) including customer names, sale dates, invoice amounts, credit terms, payment due dates, and actual payment dates. Supplementary qualitative data on customer profiles and past follow-up actions will also be gathered.

(ii) **Justification:** This primary data is essential to understand the specific patterns of this business. Online datasets (secondary data) would be irrelevant as they cannot capture the unique customer relationships and transaction history of M/S Sarada Builders & Suppliers.

**5.2. Methods & Justification:** The analysis will employ a mix of descriptive and diagnostic analytical methods.

(i) **Descriptive Statistics:** Will be used to summarize the data, calculating metrics like Average Collection Period, Ageing Analysis of Receivables (categorizing dues as 0-30 days, 30-60 days, etc.), and identifying the percentage of revenue tied up in credit.

(ii) **Data Visualization:** Graphs such as time-series plots of cash inflow vs. credit sales, and bar charts comparing payment delays across different customer segments or product categories will be created.

(iii) **Justification:** These methods are chosen to meet the objectives. Ageing Analysis directly identifies chronic defaulters (Objective 1). Tracking the Average Collection Period quantifies the impact on cash flow (Objective 2). Segmenting customers based on payment behavior provides the foundational insight needed to build a new credit policy (Objective 3).

### **5.3. Analysis Tools & Justification:**

Microsoft Excel and Python will be the primary tools for conducting the analysis.

#### **(i) Microsoft Excel:**

Excel will be used for data cleaning, organizing transaction records, performing initial descriptive statistics, and generating pivot tables for customer and product segmentation. Its accessibility, simplicity, and built-in functions make it ideal for summarizing financial data and creating quick, easy-to-understand charts for the business owner.

#### **(ii) Python (Pandas, Matplotlib, Seaborn):**

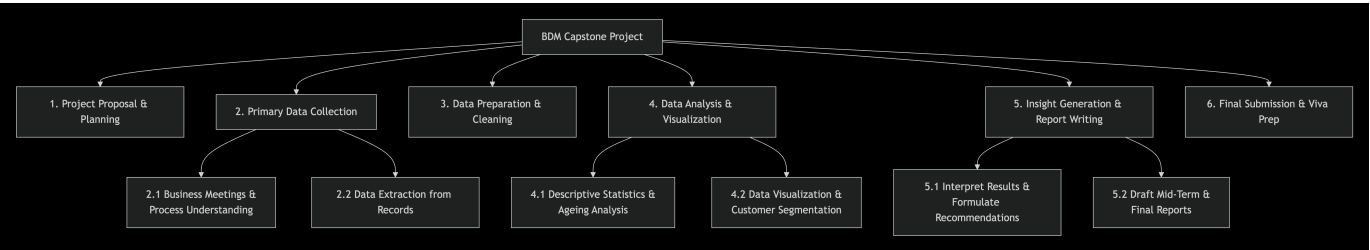
Python will be employed for advanced data manipulation, statistical analysis, and high-quality visualizations. Pandas will streamline data handling and computation, while Matplotlib and Seaborn

will help create insightful visual representations—such as box plots and trend analyses—to compare payment delays across customers or products.

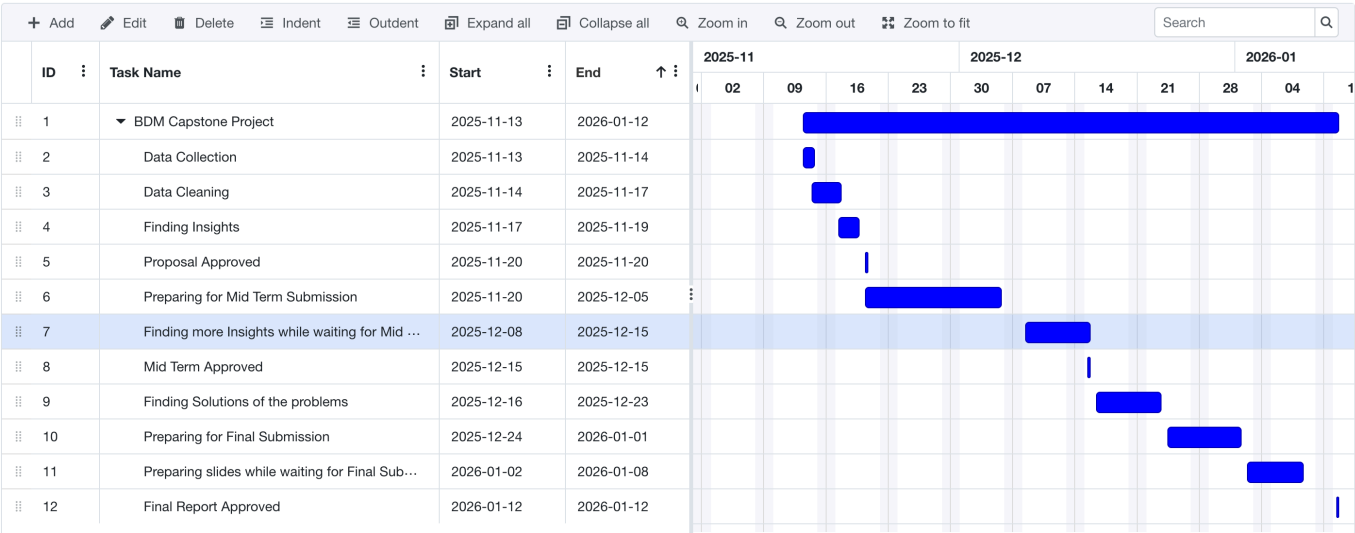
(iii) **Justification:** The combination of Excel and Python provides both simplicity and analytical depth. Excel ensures transparency and ease of interpretation, while Python offers scalability, reproducibility, and the ability to handle larger datasets efficiently. Together, they enable comprehensive, data-driven insights into payment behavior and credit performance.

6. Expected Timeline

6.1 Work Breakdown Structure:



6.2 Gantt Chart:



## **7. Expected Outcome:**

The project is expected to deliver tangible, data-backed outcomes for M/S Sarada Builders & Suppliers.

1. **Identification of High-Risk Customers:** The business will gain a clear profile of customer segments that are most likely to delay payments, enabling targeted and efficient follow-up actions.
2. **A Structured Credit Control Framework:** The primary deliverable will be a recommended credit policy, including guidelines for credit limits, standard payment terms, and a systematic process for sending reminders and escalating persistent defaults.
3. **Improved Cash Flow Management:** By implementing the recommendations, the organization can expect a measurable reduction in its Average Collection Period. This will unlock blocked working capital, providing more financial flexibility to manage inventory, negotiate better terms with suppliers, or invest in business growth.
4. **Informed Decision-Making:** The owner will transition from an intuitive, relationship-based approach to a data-informed strategy for managing customer credit, thereby reducing financial risk and enhancing long-term stability.