

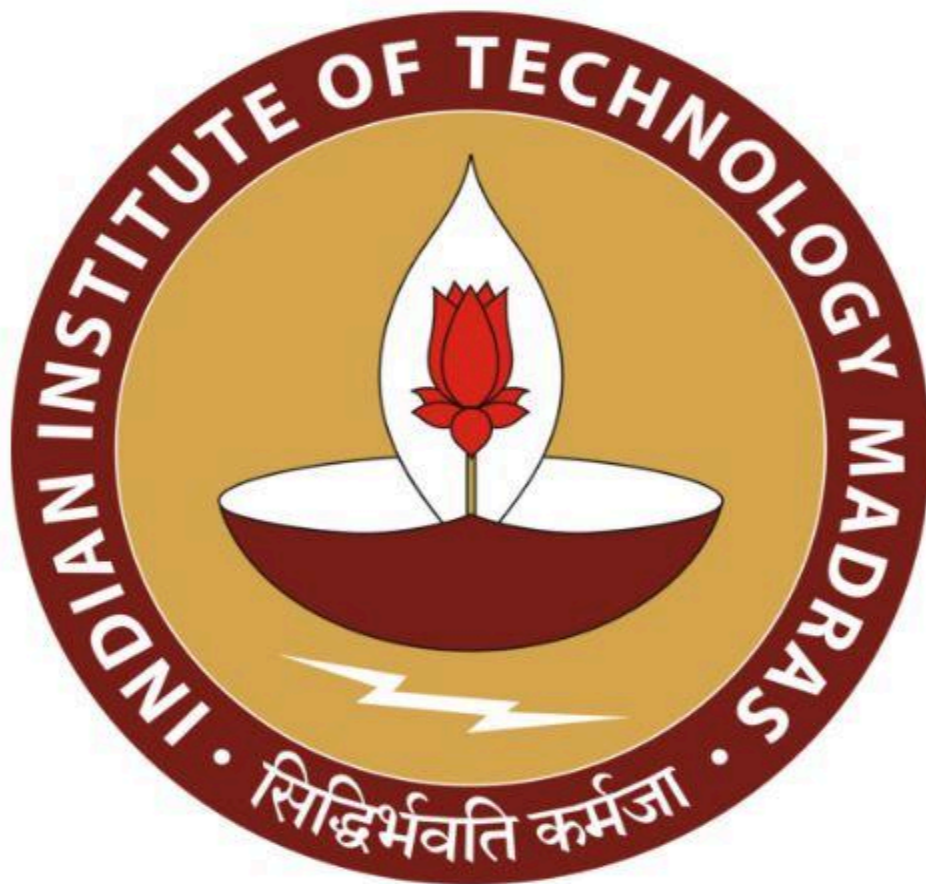
Optimising Business Operations : A Case Study on a Local Cafe

A Proposal Report for the BDM Capstone Project

Submitted By

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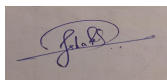
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DECLARATION

I am working on a Project Titled “Optimising Business Operations : A Case Study on a Local Cafe”. I extend my appreciation to Bihan Canteen, 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:



Name: Isha K S

Date: 20 April 2025

1. EXECUTIVE SUMMARY

The project focuses on a small food service outlet, Bihan Canteen, located within the NIT Raipur campus, managed by a Raipur-based entrepreneur, primarily serving students and faculty. It operates on a B2C model serving a variety of snacks, beverages and affordable meals.

The cafe faces prominent challenges which impact its operational efficiency and customer satisfaction. These issues include a lack of marketing , which limits the awareness among new students, uncollected or delayed orders, which lead to food wastage and customer dissatisfaction and limited menu innovation, which affects its ability to adjust to varying customer preferences and attract wide range of customers.

The issues will be addressed by applying basic business analysis techniques and data-driven strategies. Data on customer footfall, order timings, sales data, and customer feedback will be collected through discussions with employees and the business owner to identify key patterns and operational inefficiencies. Approaches such as demand estimation, basic sales trend analysis and survey-based feedback collection will be used.

The expected outcome is to reduce food wastage, improve order management and enhance customer satisfaction which will ultimately help the cafe in improving daily sales and better serve the campus community.

2. ORGANIZATION BACKGROUND

Bihan canteen, established in 2022, is a campus food outlet within the National Institute of Technology, Raipur. It is managed by a Raipur-based entrepreneur, designed to serve affordable and hygienic meals to students, faculty and staff. Situated a few yards from the academic building, the cafe offers a variety of snacks, beverages and combo meals. Despite being relatively new, Bihan has managed to create a loyal base of regular customers due to its consistent quality and budget-friendly pricing. It is operated by a small team including three cooks, four helpers, and a cashier, with overall management managed by the owner himself. The

cafe functions six days a week, from Monday to Saturday, between 9:00 am and 7:00 pm. With a growing customer base and an ambition to improve service quality and efficiency, Bihan Canteen is now aiming to streamline its operations and enhance the overall customer experience.

3. PROBLEM STATEMENT

3.1 Problem Statement 1:

The Canteen suffers from low visibility and limited marketing outreach, resulting in a significant portion of the student population being unaware of its offerings. This directly impacts daily footfall and revenue.

3.2 Problem Statement 2:

There is a recurring issue of delayed or uncollected food orders, especially during peak hours, which disrupts workflow, leads to customer dissatisfaction, and causes operational inefficiencies.

3.3 Problem Statement 3:

The current menu lacks regular updates based on student preferences and seasonal trends, reducing overall customer interest and limits the ability to attract and retain a wider audience.

4. BACKGROUND OF PROBLEM

Bihan Canteen, despite being located within the NIT Raipur campus, faces several challenges that hinder its growth and operational efficiency. One of the primary issues is its lack of visibility and marketing. With limited online presence and almost no promotional activities, many students, especially new entrants, remain unaware of the canteen's offerings. This results in fewer customers visiting the canteen and a loss of potential income.

Another key issue is the mismanagement of food orders during peak hours. Due to the absence of a structured order-handling system, orders are often delayed or left uncollected. This causes confusion among the staff, disrupts workflow, and ultimately affects customer satisfaction.

Additionally, the canteen menu has remained mostly unchanged, failing to adapt to the evolving tastes and preferences of students. This lack of innovation discourages repeat customers and impacts long-term engagement.

Internal causes of these problems include poor order management, a lack of customer feedback collection, and the absence of data-driven decision-making. External factors include rising competition from nearby food stalls, changing student expectations, and growing demand for convenience and variety.

5. PROBLEM SOLVING APPROACH

5.1 Methods

To tackle Bihan Canteen's key issues - lack of marketing strategies, delayed or uncollected orders, and an outdated menu—a mixed-method approach will be employed. This includes qualitative methods (such as customer interviews and feedback forms) and quantitative techniques (like frequency analysis and correlation studies).

Qualitative methods provide context-specific insights into customer preferences and expectations, which are vital for updating the menu and improving service quality. Quantitative techniques enable measurable evaluation of operational inefficiencies like order delays. Together, they ensure a balanced, data-informed strategy tailored to the small-scale, student-oriented nature of the outlet.

5.2 Data Collection

Data will be gathered through online surveys, interviews, and canteen order records (manual or digital). Key data points include:

- **Order time stamps and status** (placed, prepared, collected): to identify bottlenecks in service delivery.
- **Menu item-wise sales and frequency**: to detect outdated or low-demand offerings.

- **Customer demographics and taste preferences:** for designing targeted marketing and menu changes.
- **Social media metrics** (reach, likes, engagement): to assess current visibility and plan campaigns.
- **Pricing sensitivity and buying patterns:** for evaluating demand elasticity and combo offers.

These variables are directly linked to the core issues. For instance, tracking order statuses reveals reasons for delays, while feedback and popularity data justify which menu items to retain or revise. Collecting social media data aligns with addressing poor marketing.

5.3 Analysis Tools

- **Google Forms** : For easy and cost-effective data collection from students.
- **Excel/Google Sheets:** For data cleaning, pivot tables, and trend identification—suitable for small datasets.
- **Python (Pandas, Matplotlib):** To conduct deeper data analysis and visualize trends effectively.
- **Instagram Insights/Canva:** To track marketing performance and redesign posts for higher engagement.

These tools are selected for their accessibility, affordability, and alignment with the technical skills available in a student-led environment. They enable efficient handling of both numerical and textual data, crucial for a comprehensive analysis and actionable strategy formulation.

6.EXPECTED TIMELINE

The project will follow a structured sequence starting with problem identification and data collection, followed by detailed analysis and strategy formulation. The final phase will involve compiling insights into a comprehensive report and preparing for presentation. Detailed

breakdown is given in the form of flowchart (Figure 2) and the expected timeline in the form of Gantt chart (Figure 1) .

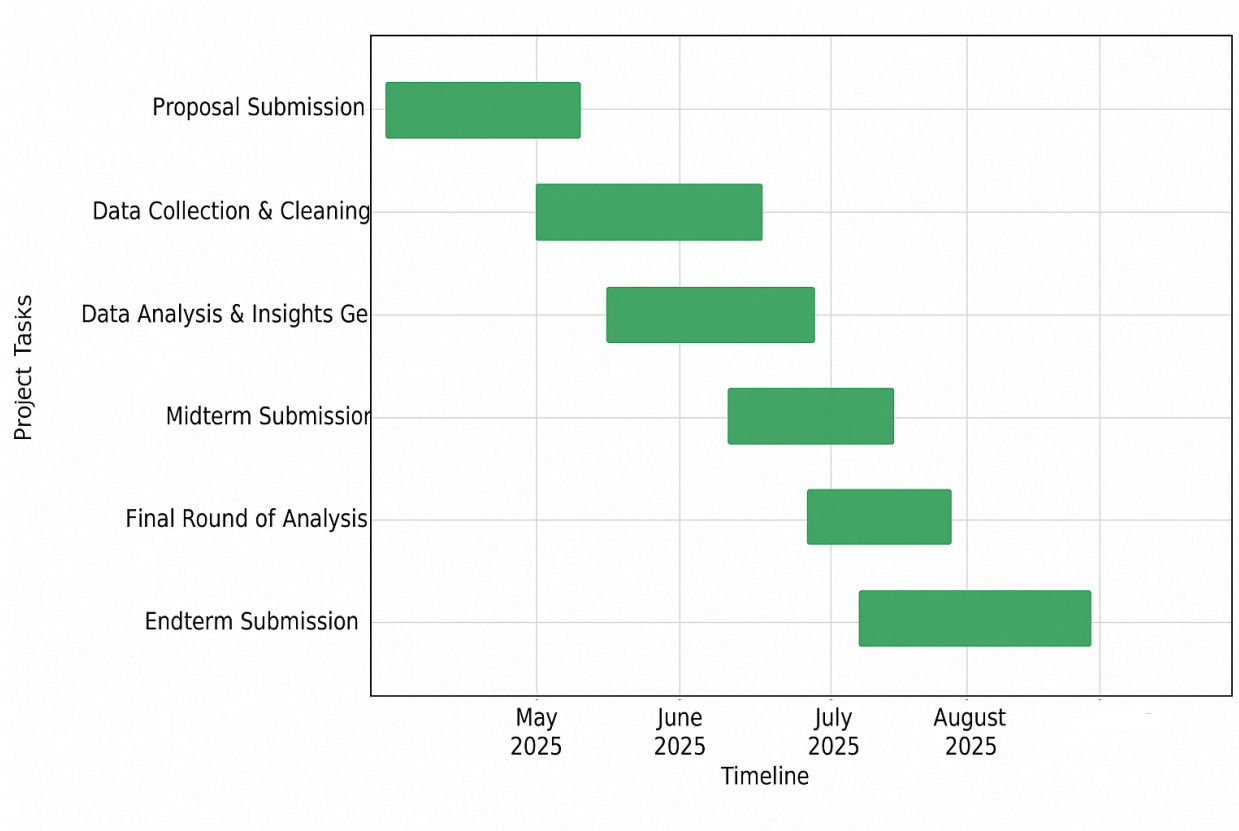


Figure 1 - Gantt Chart

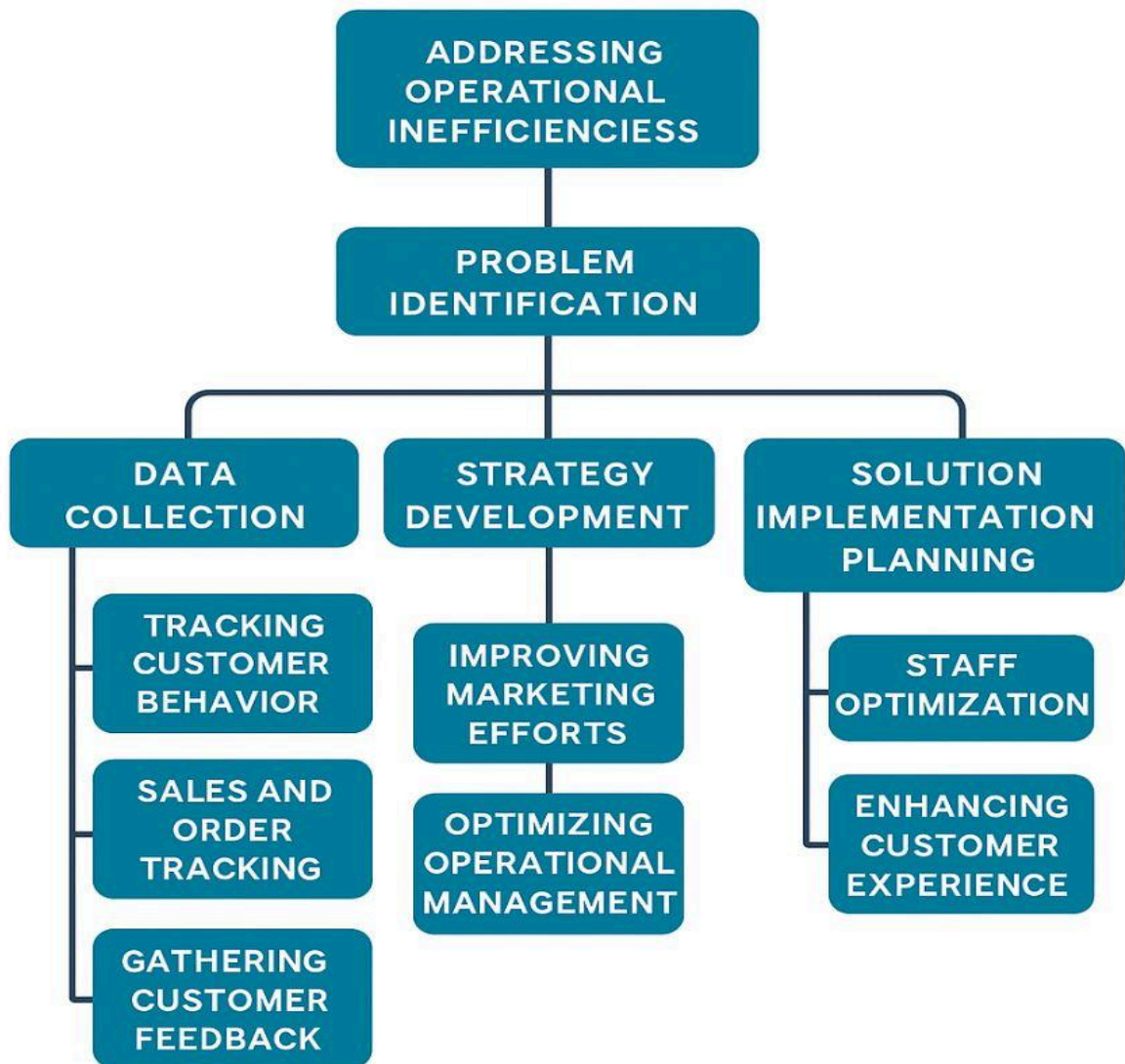


Figure 2 - Work Breakdown Structure

7. EXPECTED OUTCOME

The primary outcome of this project is to generate actionable insights that help Bihan Canteen improve its operations and customer satisfaction through data analysis.

7.1 One of the expected results is a clearer understanding of customer footfall patterns across different hours and days, allowing the canteen to manage staffing and food preparation more efficiently during peak periods.

7.2 By analyzing data related to order delays and uncollected items, we aim to identify the root causes of operational bottlenecks. This will help the team implement better queue management or digital ordering solutions to reduce service delays.

7.3 The project will also provide insights into student food preferences by tracking sales of individual items. This will guide menu updates, helping the canteen offer more relevant and appealing options to its customers.

These outcomes will help the canteen make informed decisions, enhance customer experience, and ensure long-term operational improvement.