Enhancing Operational Efficiency and Employee Retention for Sustained Growth in HSK Enterprises Firm

A Proposal Report for the BDM Capstone Project

RAHUL SHARMA 23F1001879 MAY'24 TERM



B.S. DEGREE IN DATA SCIENCE AND APPLICATIONS INDIAN INSTITUTE OF TECHNOLOGY, MADRAS, CHENNAI TAMIL NADU, INDIA, 600036

Contents

1.	Declaration Statement		2
2.	Executive Summary		3
3.	Organization Background		3
4.	Problem Statement		4
	4.1.	Employee Satisfaction and Retention	4
	4.2.	Manual logging and Time management	4
	4.3.	Operational Costs and Inefficiencies	4
5.	Background of the Problems		4
6.	Problem-Solving Approach		5
7.	Expected Timeline		6
8.	Expected Outcome		7

Declaration Statement

I am working on a Project titled "Enhancing Operational Efficiency and Employee Retention for Sustained Growth in HSK Enterprises Firm". I extend my appreciation to HSK Enterprises, 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:

RahulSharme

Name: Rahul Sharma

Date: July 4th, 2024

Executive Summary

The project focuses on the service-based firm 'HSK Enterprises' located near DDA Public Park area in Shalimar Bagh, Delhi. The business provides small to medium-level printers to a diverse B2B customer base including IT services firms, educational institutions, export houses, nursing homes and chemical firms

The primary challenge faced by HSK Enterprises is high employee turnover due to dissatisfaction with salaries, overtime, and travel requirements. Adding to that problem, the firm also suffers from operational inefficiencies resulting from manual data logging and inadequate use of technological tools, complicating the management of customer logs, engineers logs, and maintenance data of machines.

To address these issues, the project aims to recommend a simple straightforward approach which includes the implementation of basic digital tools for logging and data management. Doing regular feedback sessions to understand employee concerns and implementing policy changes that will enhance job satisfaction without significant cost increases.

The expected outcomes will help the business in identifying improved employee retention and satisfaction, enhanced operational efficiency and better service. Thus increasing customer satisfaction and better profitability.

Organization Background

Established 8 years ago under the sole proprietorship of Mr. Sukhpreet Singh, HSK Enterprises is located in Shalimar Bagh, Delhi. The firm caters small to medium-level printers to various IT firms, educational institutions, export houses, nursing homes, and chemical firms. HSK Enterprises currently employs a total of 5 staff members, including 3 engineers, 1 trainee, and 1 business manager(owner). Their services include:

- **Printer Rental Services:** Offering a range of printers for short-term and long-term rentals to various clients. Providing on-site and off-site printer maintenance and repair services to ensure continuous operations.
- Collaboration with Educational Institutions: Partnering with schools and colleges to offer specialized printer solutions tailored to educational needs.

• **Remote Support Services:** Offering technical support and troubleshooting services through calls and on-site service.

Currently, HSK Enterprises operates primarily through references, emails, and calls. Although the owner has yet to establish a physical office presence, the business currently relies to grow through strong local networks and customer referrals.

Problem Statement

The business owner of HSK Enterprises expressed satisfaction in maintaining high customer retention rates, an impressive average of around 85%. This achievement does underscores the business's commitment to delivering quality and reliable printer services, but despite this, a significant challenge persists in ensuring employee satisfaction and retention and keeping account of business data logs.

The problems faced by HSK Enterprises:

- Employee Satisfaction and Retention: Engineers are dissatisfied with their salaries, leading to high turnover rates which results in a continuous cycle of hiring. This cycle increases operational costs and reduces the overall productivity.
- Manual Logging and Time Management: The absence of digital record-keeping complicates managing accounts and logs, forcing the owner to handle technical issues personally, reducing time for strategic business growth and further complicating the record-check process.
- Operational Costs and Inefficiencies: The lack of an effective employee management system and digital record-keeping results in significant operational costs and inefficiencies, resulting in a lot of missed opportunities for other factors vital for overall growth for the business.

Background of the Problems

Further breaking down the problems:

• Employee Satisfaction and Retention: One of the primary challenges faced by the owner is the dissatisfaction among engineers regarding their salaries. Despite the business owner's efforts to provide various perks and compensation for overtime, he remains unable to pinpoint the reasons behind the high turnover rate. Consequently, this constant turnover disrupts

workflow and adversely impacts overall service metrics, with the average employee retention period being roughly four months.

- Manual Logging and Time Management: The owner expresses his struggle with manual logging and time management due to the inability to keep records digitally. This manual process is time-consuming and error-prone, leading to the inefficiencies in managing accounts and operational data. The owner, overwhelmed by these tasks, often has to step in as an engineer to solve problems, further reducing his time for other management tasks.
- Operational Costs and Inefficiencies: The combination of high turnover and the need for constant training of new hires results in increased operational costs. Inefficient work allocation and the inability to identify and implement cost-saving measures exacerbate these issues. And because of this ineffective employee management system, it becomes difficult to track performance, manage workload and optimize other operations, resulting in growth hindering and overall profitability.

The challenges faced by HSK Enterprises in employee satisfaction, retention, and operational costs highlight the need for an effective management system. By focusing on improving salary structures and conditions, enhancing training structure, and implementing efficient resource management practices, the firm can mitigate these problems and ensure sustainable growth and profitability.

Problem-Solving Approach

To address the challenges of employee satisfaction, retention, and operational costs at HSK Enterprises, a comprehensive problem-solving data-driven and logical approach is required. This approach encompasses a mix of methods, data collection strategies, and analysis tools, each justified for their role in optimizing employee management and minimizing operational costs.

→ Initial Analysis Used

The project will implement a data-driven approach to identify and address the root causes of the issues faced by HSK Enterprises. By leveraging historical employee and operational data, the project will pinpoint specific areas for improvement. Employing the **SWOT analysis** method to assess the business strengths and weaknesses, then implementing **Root Cause analysis** will further help in identifying the underlying causes for high turnovers and operational inefficiencies. Thereafter further steps after these initial analyses will be implemented.

→ Data Collection

The intended data collection for this project includes comprehensive employee and operational

metrics:

- Employee data
- Customer Data
- Budget Data
- Machines Data

The owner is willing to provide the necessary data for the analysis approach. This comprehensive data collection approach will be instrumental in quantifying employee turnover patterns and identifying the potential bottlenecks.

→ Analysis Tools

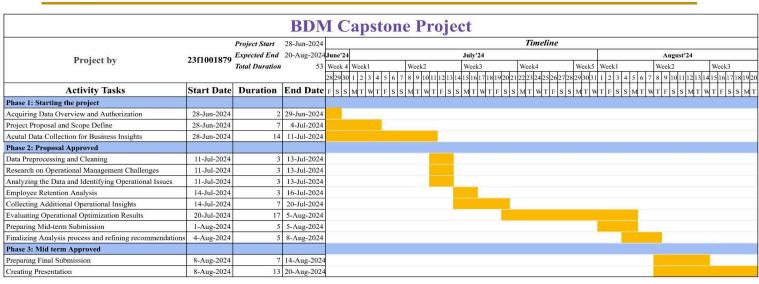
Microsoft Excel: Excel will be used for initial data organization and simple analysis. As it allows for efficient data calculations, and generation of basic trends to track employee performance, customer interactions, and operational costs. Pivot tables and graphs will help visualize those trends and identify key issues.

Python Libraries: Python which offers numerous libraries and frameworks, such as Pandas and NumPy, will be employed for more complex data analysis. These tools will facilitate in-depth statistical analysis, trend identification, and correlation studies. Python will also be used to automate data processing tasks, ensuring consistency and accuracy in the analysis.

→ Online presence and monitoring

Helping the owner with setting up online platform presence such as LinkedIn, Facebook and other social media profiles which will help in attracting potential customers and new hires and the analytics tools those platforms provide will be set up to track the growth and performance of the business in real-time. These tools will provide valuable data to inform future decisions and measure the impact of implemented solutions helping the business.

Expected Timeline



 ${\it Fig~1}.$ Expected Timeline for Project Completion

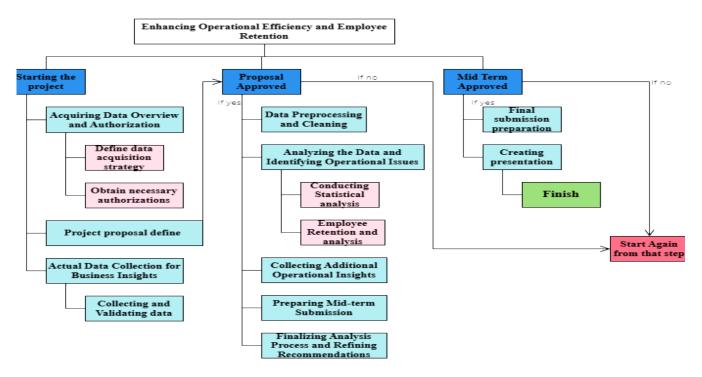


Fig 2. Work Breakdown Structure

The project is anticipated to be completed within the projected timeframe given in the above Gantt chart/ WBS. The overall timeline of this project is expected to span around 53 days/ 7.5 weeks.

Expected Outcome

The implementation of the proposed strategies is anticipated to yield some significant improvement in the operational efficiency and a substantial reduction in employee turnover.

- Enhanced Operational Efficiency: Suggesting modern management tools such as CRM
 (Customer Relationship Management) and ERP (Enterprise Resource Planning) systems along
 with utilizing Excel will streamline the record keeping process eliminating the need for manual
 logging resulting in quicker service delivery and better maintenance scheduling.
- Improved Employee Retention: By addressing issues such as dissatisfaction with salaries, overtime, and travel requirements through potential salary benchmarking and enhanced employee management practices, we can expect a notable reduction in employee turnover. This will lead to higher job satisfaction and engagement levels.
- Identification of Bottlenecks and Cost-Saving Opportunities: Detailed data analysis will help identify key operational bottlenecks and inefficiencies. By addressing these issues, the business can optimize their resource allocation, leading to reduced operational costs and smoother operations.

These outcomes will contribute to the overall improvement of the business, making it a more productive and an efficient service provider.