OPTIMIZING BUSINESS EFFICIENCY WITH INVENTORY MANAGEMENT PROFICIENCY

A Proposal Report for the BDM Capstone Project

Submitted by

Name: Ripusudan Kumar Jha

Roll number: 23f2004705

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 **"OPTIMIZING BUSINESS EFFICIENCY WITH INVENTORY MANAGEMENT PROFICIENCY"**. I extend my appreciation to TVS - Anjana Motors, for providing the necessary resources that enabled me to conduct my project.

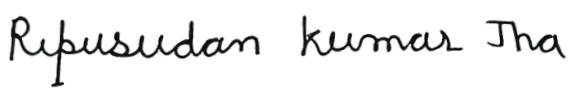
I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered through primary sources and carefully analyzed to assure its reliability.

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: (**Digital Signature**)

Name: Ripusudan Kumar Jha

Date: 03 October 2024

1. EXECUTIVE SUMMARY

A B2C Automobile Dealer, TVS Anjana Motors specializes in selling TVS two-wheelers, located at Dekuli Mirzapur, Bahadurpur, Darbhanga Dist, Dekuli, Bihar - 846002 and provides a large assortment of motorbikes and scooters.

The major business issues that the TVS Anjana Motors is facing due to poor stock level monitoring for several two-wheeler models, they experiences serious inventory management issues. This problem leads to an overabundance of less well-liked two-wheeler, tying up funds and storage space while also creating stockouts of popular models. The mismatch in inventory has a negative impact on customer satisfaction, which results in missed sales opportunities and makes it more difficult for the dealership to react quickly to market demands.

The implementation of an effective inventory management system is vital for the optimization of business efficiency. Through the utilization of technology for real-time tracking, data analytics, and demand forecasting, the dealership can efficiently meet market demands, and maintain balanced stock levels.

This competence increases overall operational performance, increases sales opportunities, and improves client pleasure.

2. ORGANIZATION BACKGROUND

TVS Anjana Motors is a well-known two-wheeler dealership in Darbhanga, Bihar. It was founded in 2016 and is owned by Mr. Rajeev Jha.

The dealership focuses in providing a wide variety of motorcycles and scooters that are customized to satisfy the different tastes of customers. It is an authorized dealer of TVS Motor Company. Ever since its establishment, They concentrated on providing outstanding customer care and a thorough shopping experience, guaranteeing that customers find the ideal two-wheeler for their requirements.
The dealership is dedicated to upholding strict quality and dependability requirements that align with the TVS brand's reputation.

TVS Anjana Motors has developed a devoted customers in the area over the years, which has helped the regional auto industry flourish. With an emphasis on innovation and efficiency.

3. PROBLEM STATEMENT

3.1 Overstocking of Less Popular Models:

- TVS Anjana Motors has too many of the less well-liked two-wheeler models, which takes up money and important storage space. The dealership is unable to invest in more profitable models.

3.2 High-Demand Model Stockouts:

- Popular TVS models are frequently sold out, this imbalance the supply and demand, thus dealership is unable to profit from periods of high purchasing.

3.3 Imprecise Sales Projections:

- TVS Anjana Motors faces challenges with imprecise sales forecasting as a result of ineffective inventory tracking, which makes it challenging to project future demand and efficiently schedule purchases.

4. BACKGROUND OF THE PROBLEM

Extending the Problem,

1. Overstocking of Less Popular Models:

- The dealership have overstocked less popular TVS models, which is expensive and takes up valuable storage space. They find difficulty to meet more profitable, in-demand vehicles due to this oversupply. Furthermore, the expenses linked to maintaining this surplus inventory, such as maintenance and storage fees, are rising.

2. High-Demand Model Stockouts:

- On the other hand, TVS Anjana Motors regularly encounters stockouts of its most well-liked models due to high demand. In addition to missing out on sales chances. Because high-demand models are out of stock when clients are ready to buy, the dealership is unable to take advantage of periods of peak demand. This illustrates an imbalance between supply and demand.

3. Imprecise Sales Projections:

- The sales forecasting process at TVS Anjana Motors is hampered by ineffective data analysis and inventory tracking. The dealership cannot efficiently manage its purchases and stock levels in the absence of precise sales projections. This lack of vision causes models that sell quickly to be understocked and slow-moving models to be overstocked. As a result, the dealership finds it difficult to maximize its inventory, which causes a mismatch in the demand from customers and supply.

In conclusion, figuring out the root cause of the issues is essential to coming up with workable answers for the commercial difficulties that TVS Anjana Motors are facing.

5. PROBLEM SOLVING APPROACH

A comprehensive, data-driven, and systematic strategy is necessary to handle the inventory management issues which TVS Anjana Motors is facing. Below mentioned approach optimizes inventory control and lowers operating costs by combining many data collecting and analysis techniques. TVS Anjana Motors can optimize its inventory procedures by incorporating advanced tools solutions like automated stock monitoring, real-time tracking, and predictive analytics. By using these techniques, product intake and outflow can be precisely tracked, and highly demanded models stockouts can be avoided. Each approach and instrument selected is intended to boost efficiency, facilitate decision-making, and eventually enhance overall corporate operations while cutting down on unnecessary expenditures. Below are the methods to tackle the challenges.

Method Used:

- **Data-Driven Inventory Management**

1. Examine past sales information to determine which models are less popular and move slowly.
2. Implement demand forecasting technology that keeps an eye on market trends and customer preferences at any given moment.
3. Based on the prediction, modify inventory purchasing strategies by placing fewer orders for less popular models.
4. To prevent overstocking, regularly assess stock levels and make adjustments to the purchase strategy.

- **Automated Stock Resupply System**

1. Establish relationships with suppliers to facilitate quicker delivery of well-liked models in the event that inventory levels fall.
2. Put in place a system that continuously monitors the stock levels of well-liked models.
3. Take note of feedback from customers to predict future demand for well-liked models.

- **Using Predictive Analytics to Get Precise Predictions**

1. To create prediction models, gather and examine previous sales data along with the state of the market.
2. Build algorithms that forecast future sales based on patterns, seasonality, and advancement using programs like Python or Excel.
3. Take into consideration external factors that affect demand, such as regional celebrations or the overall condition of the economy.
4. To increase accuracy, the forecasting model should be continuously improved using sales data.

TVS Anjana Motors will effectively address their stock level optimization, inventory management problems, and enhance overall business performance by implementing these systematic approaches.

6. EXPECTED TIMELINE

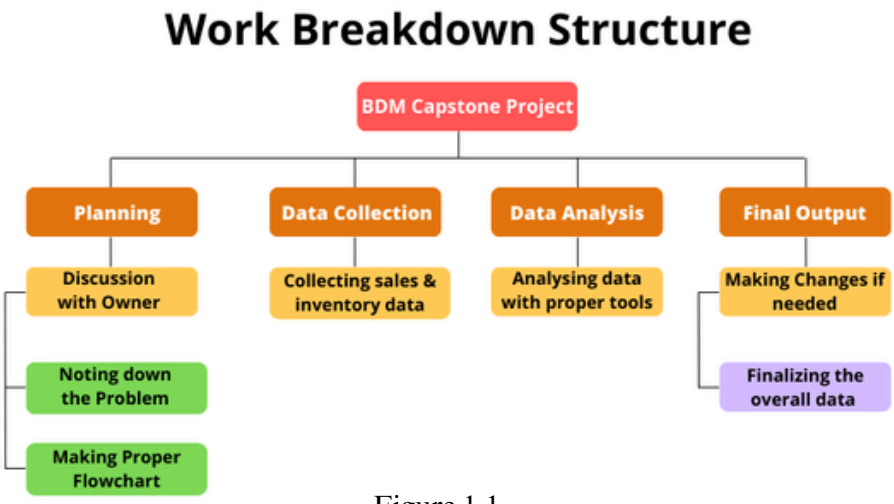


Figure 1.1

- **Discussion with the shop owner :** 16 Sept - 17 Sept
- **Collect relevant data:** 20 Sept to 25 Sept
- **Data Cleaning :** 26 Sept - 27 Sept
- **Data Analyzing :** 28 Sept - 1 Oct
- **Submitting my final project :** 21 Nov

Here is the Gantt chart to present my expected timeline:

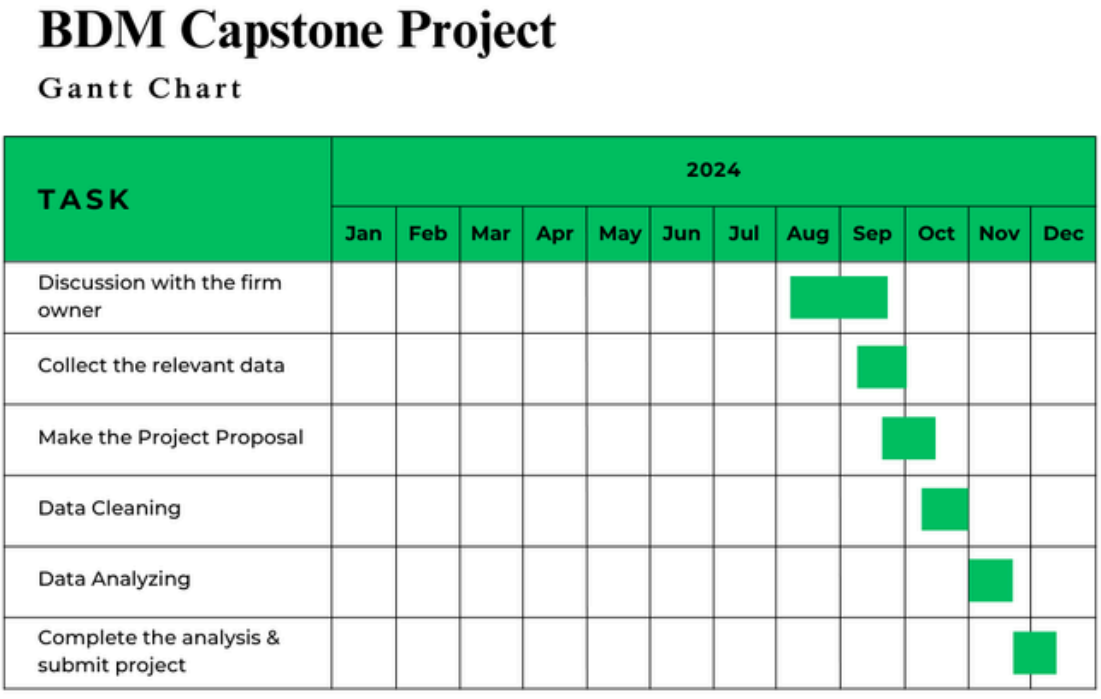


Figure 1.2

7. EXPECTED OUTCOME

This Project Aimed at optimizing inventory levels for TVS Anjana Motors is projected to enhance both operational and financial performance through precise monitoring and control of stock levels. By keeping popular two-wheeler models consistently available, this will decrease excess stock and stockouts, resulting in lower operating costs and higher customer satisfaction.

Because of this project I am able to understand real world scenarios with the help of textbook learning. This project's goals are to apply theoretical knowledge to practical situations and get knowledge using tools like Excel to analyze real-world data.

In the end, this project's execution will enhance

- Minimizing of surplus inventory and lowering stockouts.
- Support its long-term success in the Two Wheeler sector.