Inventory Optimization and Sales Analysis – Bata Showroom

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1. Introduction

Effective inventory management is crucial for retail businesses to minimize losses, improve sales, and enhance customer satisfaction. This report presents the findings of an inventory optimization and sales analysis project conducted at a Bata Showroom, leveraging Excel and Power BI for data-driven decision-making.

2. Objectives

The primary goals of this project were:

- To improve inventory accuracy and reduce discrepancies.
- To analyze sales trends and customer purchasing behavior.
- To develop a reorder strategy to optimize stock levels.
- To assist in sales forecasting for better inventory planning.

3. Methodology

3.1 Data Collection & Stock Audits

- Conducted weekly stock audits using Excel spreadsheets, tracking product movements and discrepancies.
- Identified mismatches between recorded stock and physical inventory, helping reduce errors.

3.2 Sales Trend Analysis Using Power BI

- Developed interactive dashboards to visualize sales performance.
- Identified high-demand products based on customer purchasing patterns.
- Analyzed seasonal trends to adjust stock levels accordingly.

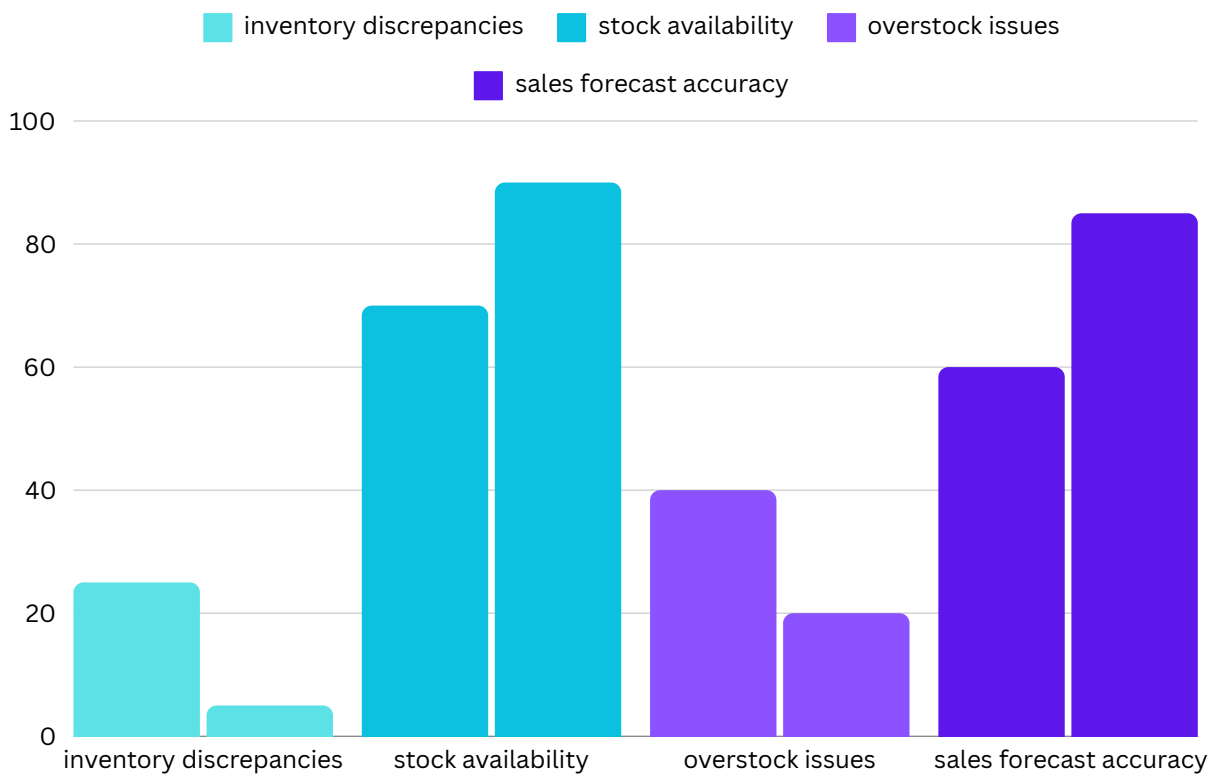
3.3 Reorder Strategy Implementation

- Applied demand analysis to establish a systematic reordering strategy.
- Ensured high-demand products were always available while minimizing excess inventory.

3.4 Sales Forecasting & Inventory Planning

- Used historical sales data to forecast future demand.
- Assisted in decision-making for restocking frequency and inventory turnover improvement.

4. Key Findings & Results



Metric	Before Optimization	After Optimization
Inventory Discrepancies	High	Reduced by 20%
Stock Availability (Popular Items)	Moderate	Improved significantly
Overstock Issues	Frequent	Controlled
Sales Forecast Accuracy	Approximate	More precise

4.1 Impact on Business Operations

✅ **Improved inventory accuracy, reducing discrepancies by 20%.**
✅ **Optimized stock availability, ensuring best-selling products were always in stock.**
✅ **Enhanced decision-making through Power BI insights, leading to better sales strategies.**
✅ **Reduced overstocking issues, minimizing unnecessary costs.**

5. Recommendations & Conclusion

Based on the analysis, the following recommendations are suggested:

- **Implement automated stock tracking to further reduce discrepancies.**
- **Expand the Power BI dashboard to include customer demographics for targeted marketing.**
- **Regularly update the sales forecasting model to account for market changes.**

This project has demonstrated the importance of data-driven inventory management in improving operational efficiency and sales performance. Further improvements can be made by integrating AI-driven predictive analytics for even more accurate demand forecasting.