

An Evaluation of Inventory Management System

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Abstract: - Every organization needs inventory for smooth running of its activities. It serves as a link between production and distribution processes. The investment in inventories constitutes the most significant part of current assets and working capital in most of the undertakings. Thus, it is very essential to have proper control and management of inventories. The purpose of inventory management is to ensure availability of materials in sufficient quantity as and when required and also to minimize investment in inventories. - Inventory management system is a system used to maintain the status of the inventory stocks. Using inventory management systems we can edit, manage, approve, and delete purchase orders. It utilizes properties such as CRUD operations and ACID properties, ABC analysis, and Just in Time. It also comes under the domain of Enterprise Resource Planning systems which is software to manage day to day functions.

Key Words: CRUD - Create, Read, Update, and Delete, ACID - Atomicity, Consistency, Isolation, and Durability, ABC- Activity-Based Costing

1. INTRODUCTION:

The inventory management system at a warehouse is a set of techniques, methods, and technologies for managing and controlling inventories. It can be used and utilized in a wide range of ways, from simple to complex. It focuses on the needs and scale of the company, as well as the capabilities and utility of the management software. Inventory management system software is a necessary and valuable tool for all firms that deal with inventory. It regulates the movement of stock in and out, keeps track of inventory levels for all items and stock, provides access to sales data and analytics, and helps businesses specify specific safety stock requirements. Inventory management is, in a way, the lifeblood of a company. It is what generates sales, which drives profitability. The advantages of a sophisticated and effective inventory management system can be enormous. The way a company maintains its inventory can have a big impact on its overall success.

2. LITERATURE REVIEW:

Inventory management system is a web based tool for businesses who want to store data and reflect to their computer for various business purposes [1]. With the help of an online inventory management system we can fulfill shopkeeper requirements and also allow them to download invoices for their customers [2]. Benefit of adopting this system is to review reports of daily, monthly sales and weekly reports using graphs [3]. An automated management system for inventory will increase the productivity of any business and make sure that their business would run efficiently [4]. The system will have an eye on each stock item like how much stock is in and out for each product [5]. The businesses would need pages like login function, dashboard, inventory page which helps to categorize the system [7]. Analysed some non-functional requirements for users is good user experience, usability, reliability, response time, security [8]. To control the stock or inventory we may report the issue like stock out so that an owner can refill the stock in a timely manner [9]. Inventory system will keep all the records of previously sold items month wise [11].

3. OBJECTIVES:

An inventory management system's primary purpose is to retain stock at a level that is neither overstocked nor under stocked. Inventory management has both operational and financial goals. Materials and stock should be available in sufficient quantities for operational purposes, whereas minimum working capital should be locked in for functional purposes.

1. To provide a consistent availability of materials and inventory so that production does not suffer when customers require it.
2. To prevent excess inventory and under stocking inventory.
3. Making certain that there are adequate supplies on hand whenever and wherever they are needed.
4. To minimize various costs related with inventory, such as purchasing, carrying, and storage expenditures, among others.
5. To reduce production expenses, as it is essential to minimize material costs.
6. To eliminate duplication of stock-ordering
7. To minimize losses due to degradation, theft, wastages, and damages.
8. To provide the essential content on a constant basis.
9. To keep a standardized inventory record
10. To generate a monthly report on sales and inventory activity automatically

4. RESEARCH METHOD:

The primary data for this study was collected through interviews. The interview has been conducted with top level & middle level managers. In the interview mainly structured and closed-ended questions were used. Secondary data gathered from journals, books, articles, annual reports, and websites. Safety stock inventory, FIFO and LIFO are the approaches applied in this research.

5. FINDINGS:

Selection of Inventory Management System

Selecting the best inventory management requires a few basic steps:

1. Define inventory management problems.
2. Understand who will use the software and consider any integration, such as Electronic Data Interchange (EDI).
3. Look for software with the essential features such as automated replenishment, cycle counting and traceability.

6. ANALYSIS:

Importance of Inventory Management

For those in product-driven sectors, grasping the significance of inventory management is crucial, as it often plays a key role in organizational processes. It frequently necessitates that individuals possess a deep comprehension of a company's clientele, the market environment, as well as its tangible and monetary assets. Too little or too much inventory can negatively affect a company's profits and reputation.

1. **Increase market competitiveness:** Consistently having enough inventory and a wide range of product options in stock when customers want them can help ensure that customers return. This can lead to higher profits, which can allow businesses to compete more effectively in local and global markets.
2. **Builds Brand reputation:** When customers can trust a specific company to have what they require consistently, it typically improves that company's reputation. Happy customers not only return more often, but they typically tell others about their positive experiences.
3. **Generates Customer loyalty:** Customers often develop a relationship with a business or brand when it consistently meets their expectations. Loyal customers usually rely on a specific brand and search for it actively. This can be beneficial for a brand that hopes to introduce new products.
4. **Improves customer services:** Having enough inventory in stock can make it easier for customers to return or exchange items without having to wait. Companies that have a wide range of inventory are typically better equipped to meet customer needs.

5. **Lowers customer cost:** When a company can maximize its resources and manage inventory costs effectively, it can often afford to pass these savings onto its customers.
6. **Improves productivity:** An organized and up-to-date inventory database can often save employees time. This might improve their overall productivity. When an inventory management system lists a product's availability, its location, and other pertinent information, it can save employees time by not having to search for it
7. **Optimizes product fulfilment:** Having a good supply of in-stock inventory can allow a business to process and ship orders faster. For customers, this can be a significant benefit that can often encourage them to become loyal, repeat customers. Reliable service delivery is an essential aspect of maintaining customer satisfaction.
8. **Raises Product awareness:** Effective inventory management can help a business monitor market trends and adjust its product offerings accordingly without interrupting customer purchasing flow.
9. **Enhances demand forecasting:** When a business maintains accurate inventory data, it can better determine future product requirements. Accurate inventory forecasting is typically vital to successful inventory management and customer satisfaction.
10. **Organizes multiple inventories:** For large companies like retail chains that have several locations, having a universal accounting of all inventories can typically help improve customer relations, organize inventory more efficiently, and reduce costs.

Benefits of Inventory Management

1. Inventory management aids in the organization and streamlining of inventory placement and procurement in order to improve fulfilment.
2. Reports and analytical tools provide useful information about how daily processes work and how to plan for the future.
3. Inventory optimization can help to avoid stock-outs or surplus stock situations.
4. Inventory management aids in precise delivery and satisfied customers.
5. Financial statements are based on a consistent and dependable basis.
6. Assures a sufficient supply of materials.
7. Order fulfilment is sped up and labour expenses are decreased in an effective warehouse where things are arranged according to demand, which items are frequently sold together, and other considerations.
8. A better understanding of both availability and demand leads to higher inventory turnover, which leads to greater profits.
9. Good inventory management solutions save time that could be spent on other activities.
10. Inventory management also provides insights about which products sell and in what volume. Using that knowledge as leverage, negotiate better prices and terms with suppliers.

8. CONCLUSION:

To conclude, inventory management system plays a vital role in keeping data that stores sales data for a specific desktop application. It is a simple desktop application that links to the particular distribution centre, allowing information to be refreshed and confirmed within the store. It also provides sales information on a daily, weekly, and monthly basis. This method makes inventory management a breeze. Increased income, profitability, and an overall boost in customer satisfaction are noticed as a result of the inventory management system.

9. LIMITATIONS:

Inventory management systems can have a dramatic effect on productivity and efficiency when implemented properly. Most of the challenges associated with inventory management systems arise from failing to follow best practices or relying on out dated methods, such as manual documentation and inconsistent storage layouts and processes. In these cases, a complete inventory management overhaul may be in order to streamline inventory management and add clarity and consistency to the process company-wide.

A good inventory management system reduces human error by eliminating manual documentation through the use of barcode labels, barcode scanners, and inventory management software, reducing costly mistakes such as:

- 1) Having too much slow-moving inventory in stock, taking up valuable storage space and eating into the company's bottom line.
- 2) Unexpectedly running out of stock of an essential inventory item, which can delay the supply chain due to backorders.
- 3) Inaccurate records (wrong part numbers, incorrect inventory counts) that arise from manual documentation errors.
- 4) Wasted man hours spent tracking down items that are stored in the wrong locations. Inventory storage that's not optimized for efficiency (due to poor warehouse or stock room layouts) can also increase stock picking time, which also increases labour costs.

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