INVENTORY MANAGEMENT
PROPOSED SOLUTION

Introduction:

Inventory management a crucial component of supply chain management is the process of tracking stock levels and the movement of goods, whether it be delivering raw materials to manufactures or fulfilling orders for finished products.

Inventory management is the fundamental building block to longevity, helping businesses to minimize costs, improve cash flow and boost profitability.

When your inventory is properly organized, the rest of your supply chain will fall into place. Without it, you risk a litany of mistakes like mis-shipments, shortages, out-of-stocks, spoilage (when dealing with perishable stock items), overstocks, mis-picks and so on.

Nonetheless, 43% of small businesses still don't track their inventory, and, on average, U.S. retail operations have a supply chain accuracy of only 63% — which means many retailers aren't taking advantage of the inventory management software available.

Unlike an Enterprise Resource Planning(ERP) system, an inventory management system focuses on one supply chain process. They often come with the ability to integrate with other software systems — POS (point of sale), sales channel management, shipping so you can build a personalized integration stack to meet the unique needs of your business.

Process of Inventory Management:

Before building an inventory management plan, you'll need to have a solid understanding of each step in the inventory management process. This is crucial to minimizing error and choosing the most effective inventory management software for your business.

1. Goods are delivered to your facility. This is when raw materials and subcomponents for manufacturers or finished goods for consumers first enter your warehouse.
2. Inspect, sort and store goods. Whether you use dropshipping, cross-docking or a different warehouse management system, this when inventory is reviewed, sorted and stored in their respective stock areas.
3. Monitor inventory levels. This may be through physical inventory counts, perpetual inventory software or cycle counts and helps minimize the chance of error.
4. Stock orders are placed. Customers place orders either on your website or in-store.
5. Stock orders are approved. This is when you pass the order to your supplier, or it may be automated through your POS system.
6. Take goods from stock. The necessary goods are found by SKU number, taken from stock and shipped to the manufacturer or customer.
7. Update inventory levels. Using a perpetual inventory system, you can automatically update inventory levels and share with necessary stakeholders.
8. Low stock levels trigger purchasing/reordering. Restock inventory as needed.

To better visualize these eight steps, try creating an inventory process map like the one below. Track and review each step of the process in order to minimize out-of-stock and overstocked inventory.

Inventory Management Techniques:

Especially for larger apps with lots of moving parts, inventory management can become complex, encompassing several techniques and strategies. Let's take a look at some inventory control techniques you may choose to utilize in your own warehouse.

Economic order quantity:

Economic order quantity (EOQ) is a formula for how much inventory a company should purchase with a set of variables like total costs of production, demand rate and other factors. The formula identifies the

greatest number of units in order to minimize buying, holding and other costs.

Minimum order quantity:

Minimum order quantity (MOQ) is the smallest amount of inventory a retail business will purchase in order to keep costs low. However, keep in mind that inventory items that cost more to produce typically have a smaller MOQ, as opposed to cheaper items that are easier and more cost effective to make.

ABC analysis:

This technique splits goods into three categories to identify items that have a heavy impact on overall inventory cost.

- Category A is your most valuable products that contribute the most to overall profit.
- Category B is the products that fall in between the most and least valuable.
- Category C is for small transactions that are vital for overall profit but don't matter much individually.

Consignment inventory:

If you're thinking about your local consignment store here, you're exactly right.

Consignment inventory is when a consigner (vendor or wholesaler) agrees to give a consignee (retailer) their goods without the consignee paying for the inventory upfront. The consigner offering the inventory still owns the goods, and the consignee pays for them only when they sell.

Perpetual inventory management:

Perpetual inventory management is simply counting inventory as soon as it arrives to deliver real-time insights.

It's the most basic type of inventory management system and can be recorded manually on pen and paper or an Excel spreadsheet. Or, by

using handheld devices that scan product barcodes and RFID tags, you may use an inventory system that automates inventory balances as soon as stock is moved, sold, used or discarded.

Idea Proposed:

The retailers needs a way to manage the stock details, purchase details and cash flow so that he can maintain stock details without any default.

This proposed system will have a daily update system whenever a product is sold or it is renewed more.

The product availability is tracked daily and an alert system in again kept on to indicate those products which falls below the threshold limit.

All the customers can register their accounts after which they will be given a login credentials which they can use whenever they feel like buying the stocks.

The application allows the customers to know all the present time available stocks and also when the new stock will be available on the store for them to buy.

Business Model:

Hereby we can provide a robust and most reliable inventory management system by using:

ML algorithms for all the prediction purposes using all the past dataset since datasets are undoubtedly available in huge amounts.

Can deploy the most appropriate business advertising models.

To establish a loss preventing strategy.

And to ensure the all time, any where availability of products system.

Novelty:

Certain machine learning algorithms are used to predict the seasonal high selling products which can be made available during that time.

Prediction of the best selling brand of all certain products based on their popularity, price and customer trust and satisfaction will be implemented.

Notifications will be sent to the retailers if any product that the customers have been looking for is not available so that the product can be stocked up soon.

Conclusion:

Whether you're a brick-and-mortar, ecommerce or multichannel retailer, inventory management is crucial if you want to seriously compete and give your customers the experience they want. Without implementing inventory management techniques, you'll never get ahead.

Sign up with an inventory software that masters the basics of inventory management and acts as a catalyst for your growth, or choose an ecommerce platform like BigCommerce that allows you to centralize your store's inventory management across all channels.