

# INVENTORY MANAGEMENT SYSTEM

## Reduction in the delay time:

Using a supplier based stateside can automatically reduce your lead time by two weeks or more — that's about how long it takes for parts to ship from many foreign countries. Adding to potential delays is the language barrier that often can complicate communications.

Have you typically placed one large bulk order, thinking it saves you money? If it means longer lead times, you may discover that's really not the case when you factor in potential lost sales or increased labour for inventory management. Do a total cost analysis to determine if there truly is a savings — you may discover it's a wash. If that's the case, consider ordering smaller quantities more frequently to help reduce lead times and carrying costs

Managing delay times requires more than just managing suppliers. Have you considered the amount of time you spend coordinating multiple vendors? If trying to keep them all straight and having to handle multiple purchase orders and relationships means you aren't able to get your orders placed in a timely manner, lead times will suffer. While it's common practice to have at least one backup supplier so you aren't completely dependent on one source, it's unlikely you'd need more than two backup suppliers. When possible, consider condensing your supply chain to reduce the time spent handling multiple accounts, and/or implement vendor management software that can help streamline your processes and create efficiencies. You'll likely find that consolidating or changing suppliers can add value in many ways.

## Implementation of electronic inventory systems:

An electronic based inventory management system is a computerised system designed for a user to manage the stock / inventory of the company, customer, suppliers, sales and generation of reports. The stand-alone inventory management systems have been deployed extensively as web applications. However, in order to maximise return on investment while also improving on a company's efficiency and performance it is imperative to focus on organisations and use technology to develop such computer based management systems to boost their operation. A research and analysis on the current system and searching technique was done to get a better understanding of the system. The waterfall methodology used in this project development implements iterative development which is suitable for standalone applications requirements that changes from time to time. The programming tools used in the design of the system includes programming languages; PHP, HTML, Cascading style sheets for styling the web pages and JavaScript as a scripting language for the front end. The back end of the system was designed using MYSQL as the database. The system was tested by the

administrator and proved more efficient than the system that existed. Testing is done at every phase of the development life cycle to make sure that the system is working properly. As a final result, this system was completed, installed on a computer hence fulfilling all the research objectives.

### **Achieving 100% accuracy in Tracking:**

Inventory accuracy refers to any inconsistencies between the actual quantity or type of physical inventory and what is recorded or is supposed to be. In most cases, it is the difference between what's recorded in an inventory management system and what you have available for sale in a store, warehouse, or storage location.

Inaccurate inventory is obviously problematic as it can translate to incorrect customer orders, a shortage of product, theft, damages, loss for your business, or even trouble selling through what you have before it becomes obsolete. Inventory reconciliation, or the process of comparing physical inventory counts with records of inventory on hand, helps reduce stock discrepancies and understand why there are discrepancies in the first place. This method for calculating inventory accuracy is an inventory accounting practice and is done by counting the value of the inventory you have on hand (physical inventory), and then dividing it by the value of the inventory you are supposed to have in whatever you use to track inventory data. This method is not as accurate, as you are not comparing each item in your inventory.

### **Getting Accurate Stock Details:**

Inventory changes constantly. Throughout each day, sales, returns, new receipts—even damage and theft—affect your stock levels. While daunting, keeping track of it all in real time is one of the most important jobs in a successful retail or wholesale business. Check out the top 10 reasons careful inventory tracking—the underpinning for the rest of your business—needs to be a top priority. To be successful in retail, you need to invest your cash wisely by buying the right quantity of each product—enough to keep sales going and prevent stock-outs, but not so many that some just sit on the shelf. Keeping accurate inventory reports helps. You can quickly identify slow-moving products, so you can mark them down and clear them out—to free up cash to invest in new products, marketing, and more.

If you're keeping an eagle eye on your inventory levels, you'll spot problems right away—instead of months later during annual stock takes when they may have already cost you a lot of money. Maybe a step in your warehouse process is being missed or one of your salespeople is making mistakes on sales orders. You

need to know now! The best way? By constantly reconciling sales and purchases through a tightly maintained inventory system. Exact inventory reports also help you provide better customer service. When customers say they haven't received one of the products they ordered, you need to be able to check your report and confirm that you have one extra in the warehouse. Likewise, if you regularly keep on top of inventory levels, you can identify incorrect shipments sooner. And if your stock system is up to date with purchase orders, you'll be able to sell customers the products they want because you'll know more are just about to arrive. This kind of communication encourages your customers to trust you, which in these competitive times, is a valuable asset.

### **Using Warehouse Space Well:**

Extending racks up is usually the "lowest hanging fruit" to create more warehouse storage space. Typically, new buildings have ESFR which is a fire suppression sprinkler system, and you can store inventory within 18 inches of that area. There are some pitfalls of rack extension – the racking uprights or base plates may not be sized properly. In that case, a structural engineer and a PE can confirm that rack extension is a viable option. One of the best ways to increase warehouse capacity is to add a mezzanine. Installing a mezzanine above a floor-level process, like a shipping or receiving area, can nearly double floor space. Of course, there are pitfalls with a mezzanine as well. The floor loading must be able to handle it. There will be columns and base plates that now drop down to the floor that could be in the way of the process that's below it, but it is much better to add a mezzanine, if possible, than to expand the building.

A wide aisle can range from 10 to 12 feet, but if that can be reduced to anywhere from five to eight feet, 15 to 20 percent of the area can be saved. When considering this option, lift equipment must be evaluated. Is the equipment capable of following or working in those narrow aisles? There is also the added expense of wire guidance in a very narrow aisle situation. Another option for increasing warehouse capacity is to change the storage medium to higher density equipment, moving from single-deep racking systems to double-deep racking systems for example. A double-deep rack requires a reach truck to load pallets. Push-back or drive-in racks are also higher density equipment alternatives. These options are great for adding storage, but the problem becomes FIFO: first in, first out. Higher density limits accessibility to the first-in pallets. Adding half-pallet locations can save space since some products come in only a half-pallet quantity. We see that as fluid volume as opposed to just what's in that area. Think of it as ice cubes in a glass. If I pour water in a glass, there is a lot more liquid.

## **Changing Customer Demand:**

Customer demand theory states that demand decreases over time. Even if you have a hot-selling item, the longer you offer it, the more indifferent your customers will become. Recognize that decreasing demand naturally occurs and be prepared to offer new products or new versions of old products to stimulate new demand. Lowering the price of a product does not change how much the customer desires or needs it. Do not confuse desire and need with demand. A demand arises after a customer desires something and has the ability and willingness to buy. Lowering a price can increase demand by making the price affordable, but the desire must already exist in the customer before you can turn that desire into demand.

The greater quantity a customer buys, the less satisfaction that customer experiences. Though your goal may be to sell as many products as possible to each customer, remain aware that bulk purchases can drive demand down. Change your marketing approach from time to time so that you offer a product that customers do not tend to buy in bulk, then go back to a product that encourages bulk buying.

## **Improving supply chain operations:**

Supply chain efficiency is a business's ability to use resources, technology, and expertise in order to minimise logistics costs and maximise profits. The goal of an efficient supply chain is to save money and maximise profits by optimising the processes and stages in the supply chain. Communication with your suppliers is key! When you have a good relationship with your suppliers, you can plan better and avoid any shortages, delays, or issues early on. A dependable supplier is responsible for tracking the work-in-process inventory phase (i.e., the movement of raw materials being processed into finished goods), which impacts the quality of the products you sell and how quickly you can obtain more inventory. Suppliers that are inconsistent in delivering a quality product can slow down your supply from the very beginning, so it's important to be selective and weed out suppliers that are consistently causing issues or delays to your sourcing. Once you have discovered suppliers that are both responsible and flexible, you'll need to continually foster those relationships through clear and open communication and conflict resolution.

## **Reduce ecommerce business costs:**

One of the most rudimentary rules of keeping ecommerce costs low is to keep products in customers' hands with minimal returns. When a good is returned, it is not a simple case of voiding the sale. More likely, the business will absorb the expense of shipping, the effort associated with transporting the item back and the money related to the packaging. Then there is the cost of inspecting the product to determine if it's damaged and the potential that you can't resell it as new.

Ascertain that consumers understand what they are purchasing before making a purchase. Extend the descriptions on your product pages and include additional images from various perspectives to give shoppers a more accurate impression of what they're buying. Extending the time frame for returns is another approach to use here. Although it may appear counterintuitive, extending the time window for returns can reduce return rates. More extended return policies help alleviate the temptation to return the product as quickly as possible, giving customers more time to change their minds and opt to retain it.

## **Improves Cash Flow and Saves money:**

Since leasing supplies, equipment, and real estate usually ends up being more expensive than buying, doing so may seem counterintuitive to someone who is only paying attention to the bottom line, or your income after expenses are paid off. But unless your company is flush with cash, you're going to want to maintain a cash stream for day-to-day operations.

By leasing, you pay in small increments, which helps improve cash flow. An added bonus is that lease payments are a business expense, and thereby can be written off on your taxes.

## **Time Management:**

Just-in-time, also known as JIT, is an inventory management method whereby labour, material and goods (to be used in manufacturing) are re-filled or scheduled to arrive exactly when needed in the manufacturing process.

JIT approach has the capacity, when adequately applied to the organisation, to improve the competitiveness of the organisation in the market significantly by minimising wastes and improving production efficiency and product quality. JIT is a

manufacturing management process. It was first developed and applied in the Toyota manufacturing plants in order to meet consumer demands with minimum delays. Taiichi Ohno of Japan is referred to as the father of Just In Time. Toyota met the increasing challenges for survival through a management approach that was entirely focused on people, systems and plants.

Toyota realised the Just In Time approach would only be successful if every person within the Toyota was committed and involved in it, and if plant and processes were properly arranged for maximum efficiency and output, and if the quality of the goods produced and production programs were scheduled to meet demands exactly.

### **Provide access with correct data:**

Inventory management is vital to a company's health because it helps make sure there is rarely too much or too little stock on hand, limiting the risk of stockouts and inaccurate records. Public companies must track inventory as a requirement for compliance with Securities and Exchange Commission (SEC) rules and the Sarbanes-Oxley (SOX) Act. Companies must document their management processes to prove compliance.

Inventory is often called stock in retail businesses: Managers frequently use the term "stock on hand" to refer to products like apparel and housewares. Across industries, "inventory" more broadly refers to stored sales goods and raw materials and parts used in production. Some people also say that the word "stock" is used more commonly in the U.K. to refer to inventory. While there is a difference between the two, the terms inventory and stock are often interchangeable.

### **Calculate more data entries at a time:**

Cycle counting is a method of checks and balances by which companies confirm physical inventory counts match their inventory records. This method involves performing a regular count and recording the adjustment of specific products. Over time, they have counted all their goods.

Warehouse managers and supply chain professionals often prepare the plan for staff to audit inventory. The most efficient inventory management plans lead to minimal transaction error rates and extremely high stock record accuracy without taking away from staff's essential tasks.

Regardless of whether a company uses periodic or perpetual inventory practices to track their inventory, regular cycle counting is a necessary auditing process to manage inventory counts.

### **Movement of items into and out inventory:**

Inventory is constantly in a state of flux because items move into and out of inventory as required. Inventory managers need to manage this movement effectively so that the current level of inventory is recorded, an optimum level of stock is maintained, and costs to the organisation are controlled. Reservable assets are loaned for a period and then returned to inventory. Reservable assets include tools and test equipment that are reserved for use on specific tasks, conference room equipment that is reserved for a meeting, or vehicles that are reserved from a motor pool. You can use the Inventory Manager form to view existing reservations and create new reservations.

### **Creation and maintenance of inventory:**

Inventory management is an attempt to have the right stock, in the right place, at the right time, and at the right cost. The goal is to minimise cost by helping facilities know when to purchase more inventory based on normal usage rates. The way you define inventory depends on your industry. For a retail store, inventory is the products the store is trying to sell customers, like suits or dresses. When it comes to maintenance, inventory is the parts used to make assets function properly, like motors, bearings, fans or filters. The aim for maintenance teams is to have the right inventory on hand in the right amounts to repair or improve assets, while also considering the space available in their budgets and storerooms.

The three main problems of poor inventory management are having too much stock, too little stock, and stock you can't find. All can cause chaos and damage the bottom line. It can be all too easy to mismanage and overspend when it comes to purchasing inventory. The typical cost of storing extra parts is between 12% and 20% of the purchase cost. That means if you're spending \$100,000 every year to purchase stock, you can go ahead and add another \$12,000 to \$20,000 to your budget for storage space and administration. Buying too much inventory makes this problem even worse.

## **Setting up and maintaining inventory locations:**

Inventory locations are the places where inventory is stored and distributed. You can configure the inventory location hierarchy with as many levels as are required. Examples include geographic areas, store rooms, mobile carts, service trucks, shelves, and bins. The highest level of the inventory hierarchy is the inventory group, which is an optional level. An inventory group can be a geographical area, for example, the Las Vegas area. Inventory groups can also be used to group inventory of a particular type, for example, office supplies.

A primary location represents the primary record for the storeroom where the inventory is kept and distributed. Examples include store rooms, mobile carts, service trucks, outdoor storage yards, and motor pools. You create a primary location for each of your storerooms. The inventory storage area is the bin, cabinet, or shelf where the inventory is kept. For example, you can have a storeroom with aisles, racks, shelves, and bins. You can create many levels of storage area in the inventory hierarchy.

## **Work done without multiple follow ups:**

So you've sent two or three follow-up emails to your prospect and heard nothing back. It may be time to pick up the phone. Alternatively, if you keep calling and they're always too busy to speak to you, you might have more luck by sending an email instead. Don't stop at just telephone and email, either. Obviously I'm not suggesting you track someone down on every platform you can think of, but if you're connected on a professional platform such as LinkedIn, there's no reason you can't use that to follow up.

In short, if you're not sure what someone prefers, try different follow-up methods. People prefer different methods of communication, and what gets one person's attention will go ignored by another. On the other hand, if someone specifies a particular method of communication, respect that. You won't endear yourself to a prospect if you keep calling them after they've said they like to do all business by email.

## **Constant follow up:**

Using manual inventory tracking procedures across different software and spreadsheets is time-consuming, redundant and vulnerable to errors. Even small businesses can benefit from a centralised inventory tracking system that



includes accounting features. Inventory management controls at the warehouse is labour-intensive and involves several steps, including receiving and putaway, picking, packing and shipping. The challenge is to perform all these tasks in the most efficient way possible.

Customer demand is constantly shifting. Keeping too much could result in obsolete inventory you're unable to sell, while keeping too little could leave you unable to fulfil customer orders. Order strategies for core items, as well as technology to create and execute an inventory plan, can help compensate for changing demand. When your inventory is hard to identify or locate in the warehouse, it leads to incomplete, inaccurate or delayed shipments. Receiving and finding the right stock is vital to efficient warehouse operations and positive customer experiences.

### **Managing resources are time consuming:**

Appropriate inventory management strategies vary depending on the industry. An oil depot is able to store large amounts of inventory for extended periods of time, allowing it to wait for demand to pick up. While storing oil is expensive and risky—a fire in the UK in 2005 led to millions of pounds in damage and fines—there is no risk that the inventory will spoil or go out of style. For businesses dealing in perishable goods or products for which demand is extremely time-sensitive—2021 calendars or fast-fashion items, for example—sitting on inventory is not an option, and misjudging the timing or quantities of orders can be costly.

Inventory represents a current asset since a company typically intends to sell its finished goods within a short amount of time, typically a year. Inventory has to be physically counted or measured before it can be put on a balance sheet. Companies typically maintain sophisticated inventory management systems capable of tracking real-time in.