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Inventory Management Fuels Supply Chain Optimization

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Supply Chain Management Challenges

For most businesses, the supply chain is not only the primary cost center but one of the most challenging aspects of running a profitable operation. Indeed, today's global supply chain introduces complexities that create challenges across the organization. Businesses struggle with how to deploy inventory in the right quantity, location and time, how to react to unplanned events and uncertainty around demand, all of which can create excess, or deficient, inventory, speculative ordering and more.

The systems created to overcome these challenges can span multiple ERP, CRM and supply chain management tools, making it difficult and inefficient to track and trace products, both internally and across the partner ecosystem.

The common thread between all of these challenges is the lack of inventory visibility.

Without a clear understanding of inventory, none of the other parts of the supply chain can operate at their fullest potential.



Lack of transparency creates weaknesses in the supply chain, which increases your risk of being impacted by disruptions.

This ebook will examine the role of inventory management in each step of the supply chain and share best practices for how businesses can use inventory management to optimize operations. But first, it's important to understand inventory management practices and their impact on the bottom line.

The Impact of Inventory Management on the Supply Chain

Nothing is more frustrating to a customer than placing an order online, only to find out after the fact that it's out of stock. Striking the balance between too much inventory and not enough can be difficult, especially if you're relying on Excel spreadsheets, or worst, on pen and paper. 43% of small businesses either track inventory manually or don't track it at all.

Inventory management is more than knowing how much of something you have on the shelf; it is the tracking and organizing of goods from supplier, through the manufacturing process, and into customers' hands. Holding too much inventory leads to discounting and obsolete inventory and ties up cash that could otherwise be used in other areas of the business. Not having enough ends in lost sales due to out of stocks and disappointed customers.

With an inventory management system in place you have visibility into items across all channels, ensuring the right items are available, at the right time, in the right place.

Inventory management should not only be a concern for the purchasing department, however. It is central to the success of the entire supply chain, from demand planning to customer service, and everything in between. An inventory system that is integrated across the organization not only optimizes inventory to ensure product availability, it enables the entire supply chain to run efficiently and effectively:

- **Demand Planning** – Effective inventory management provides insight into historical demand, including seasonal and promotional periods, providing more accurate forecasting and optimizing inventory levels.
- **Vendor Management** – With the right inventory management practices, businesses can track where vendor components and raw materials came from, improving vendor management and enhancing the vendor scorecard.
- **Production** – Proper inventory management can provide current status and expected availability dates based on real-time data. This can be used to properly schedule production runs and ensure product is available and production runs are scheduled promptly.

- **Warehouse** – Inventory management is key for defining the amount of warehouse space needed and capacity planning.
- **Order Fulfillment** – The right inventory management system can aid in fulfilling orders quickly and accurately because you know exactly where each item is in the warehouse and can optimize picking and packing processes based on location.
- **Quality** – Effective inventory management should link products based on components and raw materials consumed, enabling businesses to identify and rectify quality issues quickly.
- **Customer Service** – The right inventory management practices can provide insight into order status and simplify the return and exchange process.



Demand Planning

Not having enough product to fulfill customer orders is a nightmare, leaving you with unfulfilled orders and lost sales. Customers may go to a competitor or require businesses to spend more on expedited shipping for unplanned replenishment.

At the same time, having too much inventory leaves you with another set of problems. Obsolete inventory that's gone out of season or is close to its expiration date is another problem many companies face when they lack accurate demand planning. Businesses are forced to rid themselves of excess inventory, through discounts or off-price retailers. Both scenarios reduce your profit margin and overall sales.

Striking the right balance of inventory is no simple undertaking, especially when you're managing items across multiple locations. You need a clear understanding of what you have and where. Demand planning is an important tool to ensure the right items are available at the right time, in the right place, but it's only as good as the data you put into it. The process of manually pulling historical sales and existing inventory is time consuming and quickly becomes complex.

Inventory management is not just about managing items you have on the shelf. It allows you to track and keep records so that you can predict and plan for the future based on historical demand. It also takes seasonality and promotions into account. For instance:

Imagine you run a summer promotion on a specific line of products and it's very successful, doubling sales in July. But the next year, you're planning production for July without a promotion. Without visibility into why sales were higher in July, you may accidentally over-forecast demand for the month, or at the very least waste time trying to figure out why sales were higher and the total for non-promotional sales.

Proper inventory management can also provide visibility into products across all locations, including retail locations. It is important to have visibility into all locations and past demand to best utilize the inventory you already have before ordering more. An example:

You have two warehouses and five retail stores and notice you're running low on a certain product in your warehouses and at three stores, so you automatically refill these items. However, with better inventory visibility across the organization, you would realize the other two retail locations haven't sold through the item, and sales history suggests there's enough to fulfill upcoming demand. You should move that inventory to other locations or use it to fulfill online orders. Either way, it prevents obsolete inventory down the road.

Proper inventory management provides a real-time view of inventory quantities, location and status, which feeds into the demand planning tool. The more accurate your inventory management, the more accurate your demand planning.



Vendor Management

In order to minimize risk within the supply chain, many companies source the same item from multiple vendors to reduce the effects of a major disruption. If one vendor is unable to fulfill an order, the business can react quickly and increase the order size from another vendor, eliminating a disruption in production and, ultimately, product availability.

Without an inventory management system in place, however, there is no way to tell which components, or raw materials, came from which vendor after they're received. If a component is faulty and a recall is necessary, you will have to recall all items produced within a certain timeframe, versus being able to drill down to find out which vendor made the faulty piece and only recalling those.

Using lot management or serialized tracking, you can forward trace and backward trace products. This gives you visibility into each component used to make a product and the vendor it came from, as well as what customers received something with that component. Traceability reduces your waste and operating costs.



Furthermore, an inventory management system can hold vendors responsible for the quality of their products beyond the receipt and inspection process. It acts as a vital tool in developing a thorough vendor scorecard and proactively managing the vendor relationship, especially when multiple vendors supply the same item. It also allows a company to track returns by vendor, and monitor and ensure vendor quality, ultimately leading to better, more reliable suppliers.

Production

Production is one of the most critical—and complex—elements of delivering product on time. Orchestrating a plan that seamlessly ensures material availability, positions items in workstations, schedules employees and reserves machines and work centers requires organization and enterprise-wide visibility. Without accurate inventory visibility, employees and machines can be reserved for a scheduled production run only to discover the required components are not available. That results in frustration, increased overhead costs and decreased yield and utilization.

Utilizing material availability status and shortage reports within an inventory management system allows you to know exactly when the material is going to be available and schedule production accordingly. Sometimes things don't go according to plan, unexpected delays and shortages can cause bottlenecks in the production plan, tying up resources, machinery and labor for jobs that aren't ready to be completed. While these are unavoidable, an inventory management system updates the inventory record in real

time, enabling you to proactively adjust production plans as necessary. Based on this, you know when the work order should be finished and are better able to deliver inventory to customers as promised.

If you're producing many different products using the same components or raw materials, understanding which materials are allocated to specific work orders requires an inventory management system. The system can even let you allocate specific parts to a work order or a customer order before the inventory is even within your warehouse's walls.

That prevents a number of potential problems like:

- Over-allocating the same components to multiple builds, leaving you short and unable to complete the build on time.
- In-stock inventory reserved for a future build being used for a less important build that's completed first, since there is no way to change its availability status.
- Unplanned, expedited replenishment orders as a result of unfulfilled work orders.

Additionally, an inventory management system enables you to track items by production run. If you identify any production issues, or if a certain run is produced outside of specification, you can update the inventory record so that if any quality issues occur, it links back to the specific production run. The solution also allows you to update the inventory record quickly and disposition the inventory, if necessary (scrap, rework or approve as is).

An inventory management system is especially important if you need to rework or scrap the inventory, as it will potentially impact the delivery date. If a rework or scrap is necessary, the system allows you to quickly schedule another work order and purchase order for additional component inventory.

Inventory management makes the production cycle more efficient and enables staff to schedule production based on availability while quickly responding to required reworks.



Warehouse Management

The key to streamlining your warehouse operations is a thoughtfully laid out and meticulously organized facility. When each product has a specific place in the warehouse, it prevents staff from moving about inefficiently and maximizes labor efficiency. But these processes are only as good as the inventory records that drive them.

Effective inventory management gives you visibility into an item from the supplier purchase order (PO) to the customer order, and every step in between. When an item is received at the warehouse, an employee can make notes in the inventory record confirming qualification specifications as well as any irregularities. Furthermore, an inventory management system supports mobile devices to scan item barcodes and enter data directly into the system. These devices allow staff to complete daily functions quicker and improves inventory and order accuracy.

Businesses can also optimize receiving and putaway by using an inventory management system. Putaway functions can be grouped by location or zone to keep staff from moving back and forth throughout the warehouse to put away items. Similarly, routine warehouse functions, such as cycle counting, can be integrated into everyday business operations without disrupting productivity.

An inventory management solution also enables lot and serial tracing so items can be back and forward traced—this links them to their supplier PO and ultimately the customer order. Lot and serial numbers can specify whether or not lots and batches can be mixed within the same bin. They inform picking strategies, as well, ensuring the soonest-expiring products are used to fulfill customer orders first, for example.

As with demand planning, streamlining warehouse operations is difficult enough with a single location, but managing it across multiple locations can be much more challenging without the right system in place. Without inventory visibility across multiple locations, you have to operate each warehouse as a standalone unit, meaning you need sufficient stock in each location.

An inventory management system that allows you to see inventory levels across all locations will significantly reduce the amount of stock on hand because a business can strategically fulfill orders from the warehouse with adequate stock.

Inventory visibility is central to a streamlined warehouse. It provides the insights necessary to optimize everyday processes and increase labor efficiency, reducing costs and delivering products on time.



Order Fulfillment

Customers expect the right product on their doorstep quickly and without hassle. Order fulfillment excellence is an opportunity for brands to differentiate themselves and create loyal customers who become brand advocates. But executing a flawless fulfillment strategy across multiple selling channels requires enterprise-wide visibility and coordination.

Without visibility into inventory, the fulfillment process can quickly become muddled and unprofitable. If orders are sent for fulfillment to the closest warehouse without checking inventory availability, you risk being able to only partially fulfill the order and then paying for the remaining items to be picked and shipped from another location. This increases overhead and negatively impacts the customer experience.

An inventory management system helps with fulfillment by providing visibility into item quantities and location across all sites, including retail stores. With this insight, companies can execute a cross-channel fulfillment strategy that could include:

- Direct shipping from the warehouse.
- Fulfill and ship from stores.
- Drop shipping on behalf of other retailers.

Orders can be automatically cross-checked against global inventory availability and routed to the most efficient location, based on a set of pre-defined rules, such as: fulfilling from the closest warehouse location, always assigning certain items to a select warehouse or prioritizing VIP customer orders.

Once the order has been sent to fulfillment, inventory management systems aid in expediting the fulfillment process. By consolidating the picking process and following an optimized pick path, staff can pick multiple orders at once and pick all items from each zone at once. This minimizes the steps they are taking and reduces the need to revisit the same area multiple times.

Inventory management also helps companies use their inventory smarter. As with warehouse management, lot and serial numbers are used to better manage what inventory is used to fulfill customer orders. Lot and serial numbers allow inventory to be tracked by expiration date and you can set fulfillment rules so that orders are fulfilled based on the expiration date. This is especially important for items that may spoil or expire and promotional SKUs.

Inventory management is a key component in expediting the fulfillment process and optimizing inventory use across all selling channels, leading to minimal obsolete inventory and happy customers.

Quality and Customer Service

Your brand is defined by its quality and consistency. But quality and consistency don't happen by chance. Designing, manufacturing, distributing and selling the same product and experience every time requires a company-wide commitment to excellence and a system to ensure it meets those standards.

Without an inventory management system to link components to finished goods to customer orders, it is hard to track quality issues, hold suppliers accountable and provide exceptional customer experiences.

Inventory records that trace a product through the supply chain empower customer service reps to more accurately and quickly address customer issues, including order status, exchanges and returns. Furthermore,

inventory visibility across all selling channels and locations gives customer service reps the information they need to help customers get the product they need instead of potentially losing the sale due to out-of-stocks at one location.



Inventory management plays a key role in providing a seamless customer experience and empowers sales and customer service reps. It gives them everything they need to proactively solve customer issues on the spot, saving the sale and fostering loyal brand advocates.

Inventory Management is the First Step to Supply Chain Efficiency

Inventory management provides valuable insight into the status, movement and availability of items throughout the supply chain. To build a more efficient supply chain, companies must first address weaknesses in their inventory visibility and enable real-time visibility of items as they enter, move through and depart the supply chain.

Learn more about [selecting the right inventory management system for your business](#).

A close-up photograph showing a person's hands holding a smartphone over a cardboard box. The box has a shipping label with a barcode and some text. The background is blurred, suggesting an indoor setting like a warehouse or office.

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