



SUPPLY CHAIN MANAGEMENT

Conquering costs, complexity, and customer demands with warehouse management

Rising costs, increasing complexity, growing customer demands, and expanding global supply chains are all intrinsically linked challenges that manufacturers and distributors face on a daily basis. Meanwhile, expanding omni-channel markets are forcing manufacturers and distributors to not only change how they sell to customers, but also redefine who their customers are. And customers are exerting even further pressure with demands for customization and personalization of products.

Global expansion adds to the challenge of maintaining visibility into inventory, shipping, and tracking—often across borders, continents, and oceans. In addition to making sophisticated warehouse operations even more complex, this all makes it difficult for manufacturers and distributors to remain competitive, keep costs down, and maintain profitability. Ineffective order management, excessive labor costs, and inefficient asset use just exacerbate the problem. To tackle these challenges, manufacturers and distributors must reconsider how their warehouse management practices, processes, and systems need to change in order to improve warehouse productivity, visibility, and costs.

Market drivers

Over the last decade, customers have grown increasingly powerful and now demand more from manufacturers. Customers want orders delivered more quickly, more accurately, and more specifically tailored to their needs—all at lower cost. Manufacturers and distributors are expected to turn around orders on shorter notice than in the past. According to Forbes: “The rise of next- and same-day delivery has created a standard of demand that puts a new kind of pressure on businesses. **Because of this increase in demand, the entire supply chain is rapidly evolving from having a functional orientation to a global and interconnected network of data and processes.**”

Companies can even be punished with fines and chargebacks if orders are improperly labeled, packaged, or delivered. More elaborate packaging has become common as retailers demand more in terms of boxing and delivery formats. Unfortunately, heavy competition and big box retail power mean that suppliers are unable to pass on the added costs associated with these added demands. To add further complication, the exact definition of these customers is also rapidly changing.

Manufacturers and distributors are scrambling to keep up with expanding reaches to markets they might not have previously served, such as online, counter sales, mobile apps, cross-industry, EDI, and even B2C.

Meanwhile, supply chain management has become increasingly difficult as companies source products, components, and materials on a global scale. Manufacturers that once sourced their materials regionally or nationally, now turn to Asia, Latin America, Eastern Europe, and other overseas locations. Similarly, companies are distributing their goods more globally as they seek to penetrate new and growing markets. That means products must travel far greater distances and be stored in more locations, increasing the challenges of visibility and threatening “perfect order” delivery.

Turning challenges into opportunities

While many companies remain wedded to processes, practices, and systems that perpetuate many of the warehouse management problems mentioned here, some companies recognize these challenges as opportunities to strengthen their competitive market positions. They are taking warehouse management to new levels by adopting advanced solutions that help them deliver the perfect order, reduce labor costs, and maximize the use of space and equipment.

These solutions enhance warehouse operations by taking advantage of next-level capabilities, such as inventory management, work and task management, radio frequency (RF) and voice direction, labor management, slotting, and kitting and light assembly. Moving beyond the limitations of enterprise resource planning (ERP) systems, advanced warehouse management solutions position firms to operationally excel and drive profitable growth in today's hypercompetitive markets.

Regulatory challenges also loom. With high-profile recalls on everything from toys to dog food to peanut butter, manufacturers are clearly under growing pressure to track their products with even greater precision. They must have immediate access to data on everything from lots to serial numbers to shipping locations if they are to avoid crushing costs—and legal penalties, in the case of a recall. Lengthening supply chains further contribute to the risk of expensive recalls.

Given these factors, manufacturers and distributors are faced with escalating costs and complexity, which drive demand for greater productivity in warehouse operations. For these companies to remain competitive and profitable, they must find ways to drive warehouse performance to new levels. However, their existing ERP systems often lack the automated capabilities necessary to increase visibility into operations, enhance market agility, and boost warehouse productivity.

Business challenges

The limitations of many companies' warehouse operations often come from these three factors: orders, labor, and the warehouse assets themselves. To drive performance and productivity gains in warehouse operations, manufacturers and distributors must confront the inadequacies of how these issues are handled.

- **Ineffective order management**—Today's customers are more demanding than ever—they expect the perfect order. And to meet this demand, many companies strive to achieve the perfect order delivery rate, which Performance Magazine defines as “**delivered in full, to the customer commitment date, in perfect condition and with accurate documentation.**”

Most companies, however, fall short on these key performance indicators. They allow service levels to diminish, and are vulnerable to fines and chargebacks from powerful retail customers.

More perfect orders mean fewer imperfect orders; and it's the costs of correcting those imperfect orders that eat into margins. Premium freight costs, excessive overtime, and extended cash-to-cash cycle times all damage overall profitability.

- **Excessive labor costs**—Given the increasing complexities associated with today's customer and supply chain relationships, companies are struggling to meet performance expectations without adding labor resources.
- **Inefficient asset use**—Yet another factor limiting the performance of today's manufacturers and distributors is the tendency to underuse assets such as equipment and warehouse space. Considering the growing demands they face, the natural tendency is to spend more on warehouse equipment such as forklifts, pallet racks, and conveyors. Companies are also likely to contract for more warehouse space—often at premium rates. Rather than better utilizing the assets they currently possess—and keeping costs in check—companies instead see costs rise as they acquire more assets. As a result, they are likely to be out-manuevered by high-performing competitors with the ability to generate more from less.

Companies must enhance warehouse productivity and visibility if they are to remain competitive, protect their profitability, and position themselves for continuing growth.

Underlining the challenges of all three of these factors—orders, labor, and assets—is an absence of clear visibility into operations.

Most manufacturers and distributors still use legacy ERP systems that lack detailed inventory tracking capabilities, which makes it difficult to support the same product housed in different discrete locations within a warehouse. Different pallets become one bundle of inventory or lot in their systems. Manufacturers are unable to track the lots and expiration dates of those pallets.

Space optimization is another problem, resulting in workers failing to put products in appropriate bins or supporting the proper rotation of products out to customers. Principles such as first in, first out (FIFO) and first expire, first out (FEFO) become difficult, if not impossible, to follow. When warehouse employees grab the first product available, products expire in the warehouse and become obsolete.

Legacy ERP systems lack the capabilities necessary to proactively manage and monitor labor productivity. There's no way to direct activities in the warehouse for maximum efficiency to ensure that workers are performing in the most productive fashion. It's not possible to monitor a shift a person has performed in a given day, accounting for time and attendance.

Manufacturers and distributors that intend to remain competitive—driving warehouse productivity to best-in-class levels—must move beyond their existing ERP systems and adopt advanced capabilities.

Business solution: advanced warehouse management

By investing in advanced warehouse management solutions, manufacturers and distributors can maximize product placement strategies, prioritize tasks, implement productivity standards, and increase logistics efficiency. These warehouse management solutions use criteria such as item, location, quantity, and order information to manage stock.

While conventional warehouse management systems typically concentrate on merely locating inventory, advanced systems manage the whole process of material flow: receiving, put-away, cycle counting, picking, replacement, packing, and shipping. These advanced warehouse management solutions can help manufacturers and distributors reach new levels of warehouse visibility, agility, and productivity.

Key capabilities of an advanced warehouse management solution include:

Inventory management

This allows identification and tracking of inventory with sufficient granularity to allocate, fill, and deliver orders as accurately as possible, as often as possible. Users can view and monitor the location, condition, and amounts of all finished goods, components, and raw materials in warehousing operations, as well as rotate inventory according to FIFO/FEFO principles and other relevant factors. Lot control, serial number capture, date code tracking, catch weights, inventory aging, and expiration dates all provide additional visibility and flexibility.

As customer demands rise and supply chains grow increasingly global, companies need to drive gains in warehouse productivity and performance to avoid crushing costs.

Order management

This enables transactions to be processed quickly and seamlessly—regardless of how and where a sale takes place. Users gain easy access to the information needed to process orders and requests, including detailed customer sales history, product specifications, photos of various product offerings, and replacement products that are available to order.

Work and task management

This manages the ebb and flow of demand by balancing workloads and tasks with available resources. Multitasking enables increased productivity through the use of common workflows, customer requirements, and business processes. Task interleaving allows grouping of work orders and locations with similar or complementary attributes into batches and waves so that orders are received, picked, packed, kitted, and shipped in a timely fashion. Individual worker productivity improves by combining complementary tasks to increase output and limit travel time.

RF and voice direction

These capabilities help improve the productivity of distribution and fulfillment processes by using hands-free connections and advanced speech-recognition technology to voice-enable order selection, replenishments, put-aways, transfers, and receiving. Workers can operate hands-free without reliance on cumbersome lists, labels, and scanners—vastly improving productivity and order accuracy.

Labor management

This helps maximize worker performance in the warehouse with workforce planning, staffing, and execution capabilities, as well as the ability to monitor direct and indirect labor and provide feedback to workers and supervisors as picking, packing, and shipping activities are completed. Real-time performance measurements give supervisors visibility into operations so they can identify bottlenecks, labor performance problems, and other barriers to productivity, and take corrective action.

Slotting

This helps maximize productivity and minimize travel time from location to location by determining the most advantageous arrangement of SKUs within a range of pick faces or slots. Slotting minimizes disruptions that result from demand variability by allowing adjustment of product placement according to seasonality, special promotions, and changes in customer order patterns.

Kitting and light assembly

This allows the adoption of postponement strategies and enables the mass customization of products at the time of distribution and fulfillment to ensure customer requests are fulfilled correctly at the lowest total supply chain cost.

Kitting and light assembly facilitate personalization and other product enhancements, single- and multi-station kitting and assembly, packaging and labeling operations for existing products, and complex final assembly operations for customer-specific products. As a result of these capabilities, companies can better accommodate changing customer tastes and product requirements.

According to Jamie Saltos of Kapco Global, an aerospace parts distribution company, “For businesses that regularly perform the same types of repairs and procedures, **custom kitting can help to cut down on time-consuming errors and make the inventory management process more fluid under stringent deadlines.**”

Multiple benefits

Manufacturers and distributors can reduce costs, protect profitability, and enhance overall market competitiveness by remaining focused on the key performance indicators that drive warehouse performance. Through the implementation of an advanced warehouse management solution, companies can:

- **Strengthen order management**—With customers now demanding the perfect order, manufacturers and distributors can take advantage of advanced solutions to reach higher order completeness, order on-time rates, and order accuracy.

- **Increase labor productivity**—With labor cost pressures rising in relation to new demand and supply changes, companies with advanced warehouse management capabilities can enhance workforce performance and accomplish more with less. Labor cost increases—which otherwise would have risen heavily—will be minimal or non-existent.
- **Maximize asset use**—Rather than investing more capital in equipment and warehouse space, companies can rely on their advanced warehouse management systems to fully deploy their existing warehouse assets.
- **Reduce inventory costs**—With most ERP and legacy warehouse management systems, inventory identification is possible only by location. Advanced warehouse management solutions allow users to make inventory buying decisions based on visibility into inventory throughout the entire network, and help them make intelligent decisions on intra-facility movement of that inventory relative to buying more. Since inventory is a tremendous cost burden, companies can drive clear and compelling return on investment by addressing this area.

Advanced warehouse management solutions can reduce operating costs and increase overall revenue.

Technology enablers

To reach top performance, a company should view and operate its entire supply chain as a unified whole that encompasses participants both inside and outside the company—including customers, contractors, and suppliers. Studies show that **companies with the most fully integrated supply chain technology invariably rank among the top industry performers in every respect.**

By integrating warehouse management, labor management, transportation management, and third-party logistics (3PL) billing into a unified solution, manufacturers and distributors gain end-to-end supply chain visibility and an efficient execution system that can help them make better decisions and execute those decisions more quickly and profitably.

Whether a company implements an advanced warehouse management solution or a fully integrated supply chain execution solution, these modern solutions take advantage of a number of key technologies that can help companies improve operational efficiencies and reduce costs. These technologies may include:

- **Mobile**—A mobile warehouse technology can help increase warehouse efficiency, improve inventory data accuracy, and even reduce picking errors. It does this by freeing warehouse workers from fixed terminals and time-consuming, cumbersome, and error-prone paperwork.
- **Social collaboration**—Extensive collaboration tools can give companies wide-reaching business collaboration capabilities for their warehouse and logistics operations. Users can follow people, tasks, events, and processes, so the users can quickly react to changing customer and market requests.
- **In-context business intelligence**—Industry-specific dashboards that provide relevant in-context metrics and KPIs gives users a seamless and direct approach for evaluating and applying data, responding quicker to changes, and improving critical decision-making capabilities.
- **Consumer-grade user experience**—A familiar, intuitive, modern user interface allows users to learn faster, complete tasks quicker, and be more productive than with complicated legacy interfaces with disorderly and confusing screens.

Winning in hypercompetitive markets

Enormous gains in warehouse performance can be realized through the implementation of an advanced warehouse management system. Manufacturers and distributors that invest in an advanced warehouse management solution can strengthen order management, increase labor productivity, and maximize their use of warehouse assets.

As customer demands rise and supply chains grow increasingly global, companies need to drive gains in warehouse productivity and performance to avoid crushing costs. These investments also provide a greater ROI in terms of greater warehouse visibility, agility, and productivity. They lay the foundations for profitable growth and market success in the hypercompetitive markets of today and tomorrow.

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