

JA Majors Adapts to Changing Market, Increased Business without Adding Personnel with WMS and Material Handling System

Application

Upgrade to Majors' pick, pack and ship operations at its Lewisville, Texas distribution center. The project includes a new Warehouse Management (WMS) System, takeaway conveyor system, shipping area conveyor system, mezzanine, and flow storage.

The Situation

JA Majors is a distributor of medical, technical, and educational publications located in metro Dallas, Texas. JA Majors provides customers with the best possible service, drawing on motivated, customer-oriented people, innovative use of technologies, and a personal touch.

A problem of growth

The company had a good problem—its business was growing—but the nature of the business has also changed in recent years, presenting challenges to Majors' distribution operations.



Majors consolidated two smaller distribution centers into its Lewisville, TX warehouse and was experiencing high order volumes because of the consolidations and a 50% increase in orders



"Our answer to increased business has always been more people," said Tom Stockstrom, Majors Vice President of Distribution.

Majors' customers count on the company to quickly and accurately ship orders from its inventory more than ever before. In the past, customers placed larger, less frequent orders. Today, orders come more often, and with a demand for faster fulfillment.

This creates the need to quickly process orders of any size. Customers who don't inventory books know they can get them from Majors when they need them, and expect nothing less than to be able to do so.

"Our customers utilize us as their warehouse," Stockstrom said. "They save money not having it tied up in inventory. They let us do that."

Another trend that has affected

"Due to WMS, we can get our staff in the right place at the right time in the right numbers. We can plan a day's work better than ever"



Major's business is publishing industry consolidation. In the educational publishing industry over recent years, larger publishers have often purchased smaller ones. Since the larger publishers have more working capital and the ability to produce more new titles, the result is often an increase in published titles—and a demand on distributors like Majors to handle an increasing volume. "If they add 200 new products a year, our SKU's will reflect that increase," Stockstrom said.

In its warehouse, Majors utilized carts and totes in a manual system to move orders through the facility from picking to packing to shipping.

In the face of a consolidated distribution operation, a swelling number of orders, and new demands from customers, it was clear to Stockstrom that he had to upgrade his operation.

The Desired Solution

Majors' chief product is service to customers, and all its goals flow from that. "We have to be error free," Stockstrom said.

Stockstrom knew his operations needed to become more efficient in fulfilling customer orders, and that adding additional staff would not be enough. "We had to handle the new business without hiring more people. We turned to the warehouse management system to answer that, so we wouldn't have to add labor."

The company inventories 40,000 SKU's supplied by 350 different publishers. Stockstrom wanted to be able to enhance all aspects of the customer order operation: picking, packing, and shipping.

The solution: WMS and handling system implementation

The process began with a CEI Logistics WMS consultation process to define Majors' WMS and facility needs. This analysis resulted in the integration of a TrackStar Warehouse Management System with conveyors and other new material handling equipment to address its concerns.

The process:

1. High level distribution center plan (phased implementation)
2. Definition of what type of software was needed
3. Definition of software functionality
4. Selection process for WMS software supplier
5. Support of the System's Requirement Document
6. Implementation partner

7. Final system acceptance

"I want to emphasize the importance of the Systems Requirement Document," Stockstrom advises.

"If there's one single place along the way along the path that is the most important, the SRD is far and away number one. There is a lot of information exchanged along the way, and there is a lot of understanding of the basic business that's imported in those sessions. CEI Logistics helped us organize ourselves and brought us the right software vendor. I don't know if we would have found the right WMS application without their input."

In the warehouse, Majors installed a mezzanine to expand its operating space. The mezzanine gives the company more room without the need to move into a larger facility. "We'll save in moving expense and in renegotiating a lease at a higher cost per square foot with the mezzanine," Stockstrom said. The mezzanine, which hosts Majors' slowest moving items, is the beginning pick zone. Incline horizontal belt conveyor connects the mezzanine pick zone to the rest of the facility.

The company utilizes extensive



"We used the system to eliminate our annual physical inventory by utilizing cycle counting—an annual savings of \$70,000"

amounts of conveyor in the new operation. Orders are picked into totes and placed on the conveyor to move between pick zones. There are parallel conveyor lines: One for completed orders that transports totes to the quality control and shipping area, and one for yet-to-be complete orders that conveys totes between various picking zones to be filled.

Beneath the mezzanine, the most popular items are stored in carton flow rack, which makes it easier for workers to quickly and efficiently pick and

employees having to push stuff in carts in this pick and pass scenario."

The Results

When asked how effective the system was, Stockstrom didn't hesitate: "The WMS system was more than what we thought it would be. We got efficiencies that I didn't think we would get."

The system was designed to increase the company's ability to handle escalating business. "Our pickers became more efficient with fewer steps," said Stockstrom. "They spend more time picking and less time walking. The velocity of items to the various picking positions was increased. And we can measure people's productivity a lot better than we could before."

The system also helped Majors to maintain its customer service standards by virtually eliminating errors in the order fulfillment process.

"We didn't have a bad error rate before the new system, but we just don't commit mistakes anymore. We have had 100% accuracy since the system went live. We have the right items at the right quantities shipping to the right customer."

Majors has been able to utilize cycle counting to eliminate its annual physical inventory, resulting in a yearly savings of \$70,000.



Not only did the company not have to increase head count to handle the 50% increase in business, it actually reduced warehouse staff, and is easily able to fill orders.

Majors was able to gain more control of its operations than ever before due to the new system. "Because we could control where we locate velocity items—fast movers vs. slow movers—the travel time for pickers was cut dramatically. We never had the tools to track or identify that before," said Stockstrom.

"We're able to measure the productivity of our warehouse, which we'd never been able to do before. It helps us plan labor better. We can get our staff in the right place at the right time in the right numbers. We can plan a day's work better than we've ever been able to."



replenish those fast-moving items. The conveyor lines run through intermediate pick zones, where books are picked from rows of industrial rivet shelving. The more frequent the pick, the closer to the conveyor lines it is located. On the opposite side from the takeaway conveyor lines, large bulks of inventory are stored in pallet racks.

"The conveyor let us eliminate carts," Stockstrom said. "We've eliminated



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