



Distribution Center MANAGEMENT

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Managing people, materials and costs in the warehouse or DC

From the Golden Zone

Build your distribution center with vision and a solid foundation of inventory management

By John T. Phelan Jr., TriFactor LLC

As a material handling systems integrator, I see many different business operations spread across multiple industries. Although the products are different, the goals are typically very similar — receive, store, pick, pack, and ship as quickly and efficiently as possible.

Over time, the companies that grow profitably are those that have established a vision — and a plan to achieve that vision. Businesses that address only short-term and recurring issues either plateau or lose market share.

For DC managers, creating the vision, or at least a rough understanding of the vision, should not be a daunting task. It starts with understanding the market that is served and the sales channel used to serve that market.

That's right, the vision must be customer focused and not internally focused. For example, a customer-focused vision in the healthcare supply industry using a direct-to-consumer sales channel might include 100 percent order accuracy or zero-defect shipments. On the other hand, a non-customer-focused vision might include 100 percent inventory accuracy, unless of course an improperly accounted inventory negatively affects the customer more than it does the inventory manager (I doubt it).

Here are some possible standards to consider:

- Fastest lead time in the industry (one hour, one day, one week, one month, whatever is fastest)
- Lowest cost per unit shipped in the industry
- 100 percent real-time order tracking
- 100 percent order accuracy
- 100 percent zero-defect shipments

Moving from vision to plan

Now that the vision is established, a plan must be put in motion so it becomes more than a dream. Understand that the vision might never be attained, but it should always be the goal.

Just as in planning the construction of a building or a bridge, a significant amount of attention must be paid toward laying a solid foundation. Processes are the foundation of an effectively operating warehouse. Once the processes are in place and as organized as possible, automation comes next.

In the comparison to building construction, the foundation is the processes and the walls are automation. The mortar that ties the walls and the foundation together should be a robust warehouse control system (WCS), which manages daily activities such as inventory control, order fulfillment, and shipping, as well as communicating in real time to the warehouse management system. To keep

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your mortar strong, consider these inventory operations:

- Directed putaway based on WCS slotting routines is a good way to manage the location of the inventory effectively so that downstream tasks are as efficient as possible. By storing items in locations that match their pick velocities, order picking improves significantly. Higher-velocity items are stored at the easiest and closest locations while slower items are not taking up premium real estate within the warehouse.

- Another WCS inventory operation that improves downstream processes is putaway by multiple pick methods. SKUs can be picked in eases, cases, or full pallets. A WCS should understand SKU levels in different storage mediums that match the various pick methods. For example, if a case of items is received and the inventory level in the “each” pick operation for that item is low compared to the inventory level of that same item in bulk storage, the operator should be directed to replenish the each picking operation instead of defaulting to bulk storage.

- Additionally, a WCS controlled replenishment process lets operators define low-level thresholds for eases, cases, and pallets to reduce the amount of shorted orders or to reduce the labor required for order pickers to stop what they are doing and pull from bulk storage to fill orders. Similarly, a WCS inventory management system can direct operators to top off certain SKUs in their pick locations based on the upcoming wave of orders

that will be dropped to the picking operation.

- Finally, a robust WCS inventory management system can improve inventory accuracy through multiple types of cycle counting as well as physical inventory without the use of spreadsheets or cumbersome paper files. The system should allow inventory managers to cycle count by day, month, quarter, etc., as well as by SKU or location in the warehouse.

Even in an order-picking process using basic paper to fulfill orders, a WCS that manages the waves of orders to be picked and thereby controls the printing of the pick tickets will provide dramatic improvements in productivity and performance. The WCS should understand the SKUs to be picked in the wave and will balance the workload for the order pickers appropriately.

Whether grouping orders by specific attributes such as shipping methods, delivery zones, order types or location of picking zones, the WCS will assign the most efficient order picking instructions to the operators. This is a far superior alternative to simply downloading the orders for the shift, printing out the pick tickets, and then distributing the tickets to the order pickers at random.

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