

How a WMS Can Benefit Your Warehouse

This section explores the five main benefits of a well-designed WMS to your operations. These are:

- Zero information errors
- Zero information lead times
- Maximum labor productivity
- Maximum space utilization
- Improved capacity.

Before discussing the benefits of a warehouse management system, it is important to understand that a WMS is not just an inventory locator system. A locator system locates, tracks, and manages inventory. A WMS manages the warehouse operation. Performing in real time, it directs and manages labor, maximizes equipment, and tracks and controls inventory. In doing this, it increases labor productivity and minimizes errors.

Quite often, an inventory locator system is confused with a WMS. The significant difference between the two is that the locator system does not manage labor. While a locator system can minimize pick path requirements, the locator system cannot optimize all labor by directing putaways, picks, and other tasks in the warehouse. Lift truck operators can spend over 50 percent of their time deadheading in the warehouse. A WMS can help capture some of this time by combining putaway tasks with pick tasks in a real-time environment. A simple locator system cannot.

Five Benefits of a WMS

What does a well-designed warehouse management system do? It integrates computer systems, material handling equipment, storage equipment, and people into a single, cohesive working system. These benefits result in cost savings and improved customer service, which should result in higher sales. The five benefits of a well-designed WMS to your warehouse operations are:

Zero Information Errors

A WMS can eliminate warehouse and customer service errors using several methods. The first method is 100-percent information verification. A warehouse receives, stores, picks, and ships goods. When a product is initially received, it is verified, barcoded, and

entered into the control system. All future movements are tracked against this barcode. The product has now been uniquely identified and the likelihood of tracking errors has been eliminated.

Customer service errors are eliminated through system-directed operations. Every receiving, putaway, picking, and shipping operation is system-directed. A product will only move if it is system-directed, and the operator can only complete the move and go on to the next operation if the previous operation has been verified as correct. Operator errors associated with misplaced inventory and operator carelessness are eliminated.

Another way in which a WMS eliminates customer service errors is by continuous cycle counting. Because every operation in a WMS is system-directed, the system knows the status of every location. When the system directs a pallet to a location and that location is not empty as expected, the system will flag that location for an inventory review. Inventory errors will be caught at the first opportunity. As a result, backorders due to inventory discrepancies will be virtually eliminated.

Zero Information Lead Times

Total information verification results in quality information. Once quality information is attained, the information lead time will decrease and eventually approach zero.

There are two types of information lead times: customer-oriented and warehouse-oriented. Customer-oriented lead time is the time it takes to send and receive customer information in the warehouse. This information includes customer orders, vendor shipments, carrier manifests, and shipment notices. Warehouse-oriented lead time is the time it takes to send and receive operational information. This information includes receiving, putaway, picking, packing, and shipping transactions.

In both cases, zero lead times are achieved by moving from paper-based to electronic transmission. Electronic data interchange (EDI) and radio frequency (RF) communications are two tools used to achieve zero lead times.

Achieving zero lead times for customer and warehouse information generates significant synergies that go straight to the bottom line. For example, electronically captured pick and putaway transactions can be merged with customer-oriented information. This allows a variety of calculations to be performed, such as plans for loading trucks, freight rating, personnel requirements, and order prioritization.

Maximum Labor Productivity

A well-designed WMS increases labor productivity by managing worker tasks. It will select tasks from a queue of all pending activities and, if directed, prioritize the tasks.

In addition to directing labor, the WMS also provides labor planning feedback to management. Based on the expected order loads, the WMS can estimate the number of personnel hours needed to complete the day's expected activities. Management can use this estimate to help plan for peaks and valleys in product activity.

Maximum Space Utilization

A superior WMS can improve space utilization in the warehouse. The system tells an operator where to put an item and attempts to maximize the utilization of each slot by selecting a storage location that best fits the product.

Improved Capacity

An excellent WMS improves warehouse capacity. It does this by allowing goods to move more quickly through the facility.

Companies carry safety stock and active surplus inventory because the existing inventory information is inaccurate or operating information is slow or inaccurate. Because a WMS provides quality information and zero information lead times, it allows you to reduce inventory levels and thus increase the inventory turn rate. This increase in turn rate will ultimately allow you to reduce inventory and increase the dollar value of goods processed per square foot of warehouse space.

A WMS also uses cross-docking techniques to reduce handling and storage requirements. The proper application of cross-docking can be instrumental in achieving continuous flow through the facility. Only a WMS that is able to anticipate receipts, customer orders, and material movements can maximize these cross-docking opportunities.