Increasing Warehouse Productivity

System Directed Operations | www.FORTE-Industries.com

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Next to gaining greater control of inventory and order fulfillment accuracy, increasing labor productivity is the largest driver of warehouse management system (WMS) implementation in warehousing and distribution; in fact, it is often the dominant consideration. While working harder and smarter can get some of the job done, today's logistics systems depend on technology to realize breakthrough gains in productivity. Increased labor efficiency is gained through the cumulative impact of a variety of improvements possible through the implementation of WMS and Labor Management Systems (LMS). The key area of these labor savings are reviewed below.

ELIMINATION OF PAPERWORK & DATA ENTRY

This is one of the key arguments for implementing a WMS. Scanners and portable data terminals free floor operations from handwriting various forms (e.g., receiving documents and pick sheets). The clerical staff is no longer required to later manually key enter this paper-based data into the host computer system. Additionally, and no less important, there are also overall operational benefits from accuracy, which eliminates the cascading impact of information errors on downstream processes.

REDUCE SEARCH TIME

The stock locator component of a WMS using RF technology accesses a location database allowing operators to record all put-away, move and pick transactions, updating the database in real time and with near 100 percent accuracy. This eliminates the time lost searching for product to perform subsequent transactions. In a large facility, this savings can be significant. Additionally with the task tracking capability of most WMS's, the time required to identify and correct an error or discrepancy is greatly reduced and also provides information to improve processes.

REDUCTION OF "QA" PROCESSES

Non-automated warehouses and distribution centers often use significant labor to check and recheck work to catch errors. This is primarily in the packing and shipping functions. A WMS validates order picking transactions at the time of the pick, improving the accuracy of picked orders enough so redundant verification is no longer needed. Alternatively, if a verification step is required, verification can be accomplished by rapid scans of product rather than manual counting. The ability to verify at the time of pick, allows employing a "Pick to Carton" process, eliminating several handling steps compared to a "Pick to Tote" operation. In addition to significantly improving productivity vs. the previous manual verification process, the system also generates carton content data necessary for creating Advance Ship Notices, required by many retail customers.

SYSTEM-DIRECTED ACTIVITIES

Today's WMS software systems direct operations to accomplish specific tasks in specific locations, allowing the computer's processing power and logic to drive operations. For example, pickers are directed to the proper pick locations in the most efficient path possible. There are a wide number of other labor-saving cases in point; a put-away driver receives instructions via RF terminal for where to put away a pallet or carton, rather than trying to find an empty location. Or if the pallet is dropped at the end of an aisle, the system notifies the put-away operator that the load requires attention. When a forward pick location falls below system minimums, a task is generated and communicated through RF in time to the closest operator with the correct equipment to complete the task minimizing the wait time for the picking slot to be filled to complete the order.

TASK INTERLEAVING

A more advanced implementation of directed activity is task interleaving. This capability involves combining different work assignments in a continuous flow that minimizes non-productive time, such as vehicle deadheading. WMS programs combine predefined tables of types of equipment and task capabilities with dynamic queues of available work, organized by type and priority of task. As a given task is assigned or completed, a second task that recognizes the operator's current position and status is also assigned. One example would be combining a put-away with a cycle count of an inventory location in that same area. Task interleaving is a tremendously powerful concept that has been the catalyst for many companies to move from locator level warehouse software systems to higher level WMS packages.

LABOR STANDARDS AND REPORTING

Higher level WMS systems maintain labor performance statistics and track productivity against these standards. Typically, the performance standards are developed based on historical data, then modified based on actual data captured by the WMS. The WMS will maintain a complete audit trail of all transactions, time- and date- stamped by employee. This data is easily collected through the scanning process employed for all transactions, using RF terminals that operators have logged onto with their individual IDs. Typically, the WMS software will provide a variety of standard reports using this labor data. For other "views" or queries, the software will either provide "report writer" type functionality, or else allow the data to be exported to a spreadsheet or database for further analysis.

WORK TASK MANAGEMENT

Related to the above, higher level WMSs determine the amount of labor required to meet various work requirements. This allow supervisors to ensure that the right resources are available to meet the work requirements at hand (e.g., to complete pick waves to fill scheduled carrier appointments); it is also a tool that can help balance interrelated activities to ensure that the flow is smooth and that operators are neither overwhelmed nor underutilized.

Why FORTE

- Single-Source Accountability

  Whether we're helping you develop a strategic plan, design and build a distribution facility, or optimize a distribution operation through performance metrics and analytics, FORTE provides a true single point of contact responsible for the complete performance of your distribution network. No finger pointing. No fragmentation of responsibility. No multiple suppliers for technical support. You have performance goals, and it's our job to make sure they're met on an ongoing basis.

- Total Objectivity

  We don't manufacture equipment. We don't develop WMS software. We don't have commercial arrangements with any suppliers for expected volumes of business. We're simply interested in delivering the most efficient distribution solutions at the lowest total cost. Our client-side service approach means our only allegiance is to our customers. So with every engagement, you know we'll choose the most appropriate level and blend of technologies integrated into an effective operational system.

- Expertise

Our team is deeply rooted in the hands-on implementation of distribution center design and warehouse automation. FORTE's engineers and technicians integrate today's best practices in supply chain management and distribution center operations while developing next-generation technologies. As a result, our solutions employ the best combination of practical advice, data-driven analysis and technology-enabled systems. With FORTE, you get:

- More accountability than a consultant
- More experience than a systems integrator
- More objectivity than a manufacturer

That's why the world's fastest-growing companies are making distribution their FORTE.

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