

Organized Labor

By Hallie Forcinio

Labor accounts for more than half of all distribution costs, but companies that utilize labor-management programs can realize big savings. Business Case Study: Engine Manufacturer Improves Distribution Center Productivity Levels To improve productivity at its distribution facility, Briggs & Stratton implemented Productivity Management software from RedPrairie Corp. Read Case Study

In a warehouse, increased labor efficiency equals lower costs. Automating labor management relies on embedded tools within a warehouse management system (WMS), a separate labor management system (LMS), or a hybrid solution that integrates WMS tools with a full-fledged LMS.

Whether embedded or independent, an LMS necessitates engineering and change management. Engineering, which often is the most time-consuming and expensive component of a deployment, includes agreeing on the method (how a task should be done) and the engineered standard (how much time it should take to complete). The time allotment may be based on master standard data or may require time-motion studies or other research to define and incorporate factors like travel distance and operator fatigue as well as the cube, weight, and height of the item(s) being handled. Engineered standards should be achievable at a 100% level by the average, trained employee, and should be re-evaluated whenever a process is changed.

In the independent form, LMS software typically can accept data from a variety of sources including a WMS, an enterprise resource planning (ERP) system, a time-and-attendance system, and material handling equipment in addition to manual input.

"Systems embedded in the WMS tend to have more limited coverage," says Dara Gault, vice president of sales at RedPrairie Corp. (Waukesha, WI), which offers both embedded and stand-alone labor management solutions. "They do a good job of tracking activity that is managed through the WMS itself but don't have any provision to capture labor data from non-system-directed activities," he explains. In addition, embedded systems excel at tracking activity, but may not be able to provide information until an activity is completed. This makes it difficult to plan ahead and deploy resources most effectively.

A separate labor management system also means the manufacturer doesn't have to replace its WMS to obtain good labor reporting. This typically saves both training time and money.

Labor management doesn't always receive the respect it deserves. It's generally not thought of as mission-critical until it has been installed for six months to a year and productivity plummets the instant it goes down.

Although its impact can be huge, the capital investment is relatively modest—generally in the range of \$150,000 to \$500,000—and typically involves the purchase of a server, the software, and the engineering services, plus internal costs for interface development.

Best of all, return-on-investment (ROI) occurs quickly—usually within a year or less. "Minimum savings are going to be 10% to 15% of payroll costs," predicts Gault. ROI also depends on the type of task being overseen. For example, pallet receiving will likely generate savings in the 2% to 5% range, while more process-intensive tasks like piece-picking or raw materials replenishment are likely to gain 35% to 45%.

"The fact that employees know they are being tracked...automatically will increase efficiency and produce

time savings within a few weeks," says Prashant Bhatia, director of product management at [Manhattan Associates](#) Inc. (Atlanta, GA), the provider of embedded labor management tools in its PkMS warehouse management system. He suggests a tiered implementation starting with methods and then moving to reporting, discrete standards, and incentive programs. "Each tier has its own opportunity for ROI," says Bhatia. Cumulatively, a 25% to 30% savings is possible if all four tiers are implemented.

Go-live occurs relatively quickly, too, ranging from a couple weeks to a few months. Most systems require three to four weeks to ensure the LMS and host system can trade data back and forth. Embedded tools have the advantage since much of the integration work is already done.

Since distribution centers are so dynamic, Gault says an LMS should "recognize all characteristics, assignments, travel paths, and equipment that are going to be used so goal time is based on the actual work rather than some average or generality." Other considerations include allowances for support functions like cleaning and employee experience.

To be most effective, systems need to work in real time and should be able to provide feedback to users as well as planning capabilities so supervisors can balance the resources needed with the resources available. In addition, the labor management system should be capable of monitoring what's happening, comparing status to the plan, and providing proactive alerts to supervisors when exceptions occur or a goal is not going to be met so steps can be taken.

"Ideally, you also want to be able to drive payroll off the data capture from the LMS," says Gault. So, systems should be able to register overtime, sick days, and vacation as well as work hours. This not only eliminates clerical work related to timekeeping, but also improves accuracy and simplifies management of incentive programs.

Finally, although many people focus on productivity improvement generated by performing tasks in a consistent manner, quality and safety also are positively affected so the solution should capture data related to these metrics, as well.

Features like pull-down menus should be included to make it easy to format reports without a lot of input from the information technology (IT) department. Other important features include round-the-clock support and networkability so multiple facilities can be evaluated on a common set of metrics.

Sophisticated systems also take into account factors like congestion in the aisles and whether a pallet is in a top, bottom, or middle rack since it's easier to pull from the top or bottom.

The typical warehouse has terminals spotted around the floor or personnel equipped with handheld or truck-mounted units. Operators log in and are given an assignment along with the amount of time it should take based on where they have to travel, what they need to do, and the equipment being used. When the worker finishes the task, the system reports how well time and accuracy goals were met. It also can provide the worker with a cumulative report on his performance for a particular time frame like the day or pay period. Naturally, supervisory personnel have access to this information as well.

Standards are based on best methods as determined by existing studies, in-house review, or a third-party labor specialist. Standards also take actual conditions into account. "It's important to make everyone comfortable [in knowing] that engineering standards are fair and evenly applied," says David Scott, a Dallas, Texas-based principal at the consulting firm Esync Inc. (Toledo, OH). "If you have five fork trucks and two can move very fast and three move very slow, a good system will characterize the fork trucks and give the operator credit for the one he's driving," says Scott.

Labor management often is viewed suspiciously by those being monitored, and worker reaction certainly can be negative if the deployment of an LMS is presented as a stick rather than a carrot.

However, when implemented properly, nearly all employees come to embrace the labor management system. Not only does it provide immediate feedback on performance, but it also encourages self-management, eliminates favoritism, and provides a consistent way to perform tasks. It also "levels the

playing field," reports Charles Zosel, vice president of Tom Zosel Associates Ltd. (Long Grove, IL), the developer of the ProTrack LMS. As a result, each worker is judged according to the complexity of the task and the equipment used instead of being penalized if he happens to be filling the most complex orders.

Perhaps most appealing, an LMS makes it easier to manage incentive programs that can put extra dollars in workers' pockets based on achievement of productivity and quality goals.

"Enlightened management will be successful," predicts Esync's Scott. MA

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