

# WHITE PAPER

## WAREHOUSE CONTROL SYSTEM: ORCHESTRATING WAREHOUSE EFFICIENCY



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## EXECUTIVE SUMMARY

Reducing costs while improving productivity and customer satisfaction is the goal of every company, and one of the challenges facing warehouse managers on a daily basis. Many companies, especially those with high-volume pick, pack, and ship requirements, have invested in material handling equipment (MHE) and implemented warehouse management systems (WMS) to drive cost reduction and improve operational efficiency. While these changes have yielded numerous benefits, companies are still looking to achieve more savings and efficiency.

We have written this white paper specifically for warehouse managers, vice presidents of distribution, and system integrators and consultants working in the field of warehouse management. We examine the role of the Warehouse Control System (WCS) and how it interacts and integrates with corporate systems such as WMS and MHE.

Warehouse **Management** System and Warehouse **Control** System may seem similar, but they perform very different tasks in managing the entire warehouse operation. Implementing a WCS can be a cost effective alternative to adding more equipment, or upgrading/replacing a WMS. With a WCS, you can fine-tune your operations, and optimize your current investment in software and material handling equipment. This paper will help you decide if a WCS is right for your warehouse, and some of the key questions you should ask potential software vendors.

## BUSINESS CHALLENGES

Managing distribution and warehouse operations today requires that you do more with less. Senior management is demanding cost reductions year-over-year in labor, shipping, and space, with continuous improvement in productivity, throughput, and inventory accuracy. Customers are demanding compliance, value-added services, and shorter delivery lead times. Your company must address these cost challenges to remain competitive.

As part of the solution, companies are using some combination of automated equipment and software. Material handling automation equipment such as conveyors, sorters, carousels, AS/RS, RF, Pick-to-Light, A-frame, and other technologies have enabled many companies to increase throughput, reduce labor costs, and decrease order lead times.

Many companies are also be using software systems, such as Enterprise Resource Planning (ERP) and Warehouse Management Systems (WMS), to get greater visibility over operations, and the tools to plan and manage orders and inventory. These systems have much to offer, including increased inventory accuracy, forecasting, productivity and on-time deliveries, and the ability to accommodate value-added services.

According to a Benchmark Performance study conducted by the Georgia Institute of Technology, only 20-30 percent of warehouse operations are considered "efficient", and as investment in equipment goes up, system efficiency goes down.

The problem is that while material handling equipment and WMS/ERP software systems can independently deliver considerable benefits, they are often unable to communicate effectively with each other, leading to inefficiencies. To address this issue, many companies are now turning to the Warehouse Control System (WCS).

## WHAT IS THE ROLE OF A WCS?

A WCS bridges the gap between corporate software applications such as ERP and WMS Host systems, and the Programmable Logic Controllers (PLC) and/or PC-based cell controllers that control the material handling equipment. The WCS provides a single point of control to efficiently direct and manage automated material handling and order processing within your warehouse. This will enable you to fine-tune your operations, and optimize your current investment in software and material handling equipment. Implementing warehouse control software can be a cost effective alternative to adding more equipment, or upgrading/replacing a WMS or ERP system.