



Getting Beyond Narrow ROI with YMS

Redefining ROI puts Yard Management
Systems at the Top of the Logistics Agenda

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One of the reasons Yard Management and Dock Scheduling software has been slow to be adopted throughout the logistics world is the constant focus on ROI. Vendors, including ourselves, have been guilty of thinking only about the impact our software has on the tractors, trailers and shunters at work in the yard.

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WHAT IS A YMS?

At the most basic level, a Yard Management System is a piece of enterprise-level software that allows logistics operators to control the flow of tractors, trailers and shunters entering the yard of their distribution center.

A properly configured, fully featured YMS, like our Yard Smart product, gives you visibility down to the SKU level for everything in your yard from the gate to the dock and back out the gate again.

Visibility equals flexibility – the flexibility to re-prioritize, create custom loads, fine-tune the flow in your yard, and avoid tie-ups.

That visibility also extends to your other logistics systems. By integrating with WMS, TMS and ERP systems, your YMS becomes a strategic link, turning your yard into a logistics accelerator and optimizer rather than the weak link in your supply chain.

Yes, ROI is important. Yes, you will save money on shunters, driver and trailer detention and a host of other yard costs. Typically, for companies with a fleet over 100 tractors, YMS (Yard Management System) projects reach payback in under a year and generate strong direct savings. But those savings often aren't enough to drive a YMS purchase to the top of a C-level decision-maker's logistics priority list.

Maybe we haven't been including the right factors when we calculate ROI. It's time we started to think outside the yard. It's time to get beyond the narrow definition of ROI and look at the real impact YMS software can have on today's high-velocity logistics organizations.

The Yard - where cutting-edge technology meets clipboards and magnets

Your ERP system allows you to rationalize nearly every aspect of your business – from EDI integration with suppliers and vendors to the most minute purchasing details. Your Warehouse Management System (WMS) has allowed you to minimize inventory and cut costs. Your Transportation Management System (TMS) optimizes your routing and boosts the overall productivity of your trailer fleet. But what happens when a trailer full of merchandise hits the front gate of your distribution center?

What happens is that your freight drops off the screens of your cutting-edge systems and reappears as magnets on a whiteboard. For the duration of its stay in your yard, you lose visibility and control of freight until it reappears in your warehouse or until the trailer is picked up by a tractor and leaves your yard. While the contents of the trailer are in your yard, your logistics system is losing the velocity and control you spent so much to achieve.

Productivity, inventory & service levels - three real-world challenges

Productivity loss

WMS and TMS systems provide a great boost to human productivity in a supply chain.

With a WMS, a fork-lift operator or lumber moves freight a minimum distance either to put it in the optimal shelf space or load a trailer in the most effective unload sequence. But what if the trailer is not at the dock on time? Then the freight needs to be staged and all the hard-earned productivity gains created by the WMS are lost.

With a TMS, your organization gains driver productivity by optimizing the routes and ensuring the right type of trailer is used. But if the driver can't find the right trailer in the yard or picks up the wrong trailer or is delayed at the gate – your productivity gains go up in smoke.

The WMS or TMS combine to provide very precise instructions, for instance, bring an empty 53-ft. trailer at door 94 for loading a specific route with specific freight. But as one national retailer pointed out to us, "If you're relying on a Dock Controller with a radio, the Dock Controller becomes the choke point -calling out one load at a time." At peak times this, too, can erode the productivity gains you invested so much in to attain.

Inventory costs

Order Management Systems (OMS) and WMSs allow companies and buyers to plan proper replenishment of products to match forecasts and sales. These just-in-time systems reduce inventory size, freeing up cash that was traditionally locked up in warehouses or in transit.

While they provide great visibility on inventory in transit or in the warehouse, visibility is lost between the gate and the warehouse shelf. When buyers lose sight of inventory, typically they will over-buy to create a buffer. This effect can be magnified when inventory transits through a third-party DC or cross dock. With supply chains often stretching from Asia to a store shelf thousands of miles from the closest DC, not having visibility and control of inventory in the yard or at a cross-dock facility can cause a major degradation in the efficiency of a just-in-time supply chain.

Service levels

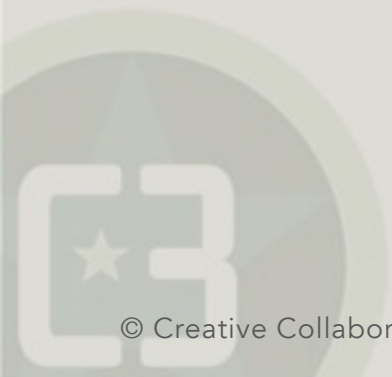
Your ERP, TMS, WMS, OMS are all working together to make sure that where there is demand, there will also be supply. Meeting market demand on time with the right product at the right price is now a basic requirement of any top-tier organization in any competitive market.

But what happens when there's none of your brand of toothpaste on the pharmacy shelf or car parts don't make it to a dealership on time or the strawberries featured in your flyer show up a day late? The easily quantified answer is that you lose sales on the day. The more difficult question is: "What's the impact on customer satisfaction?" Will your clients switch to the new toothpaste they tried, will they think twice before buying their next car from you, will they get fed up and switch to another grocer?

While all the systems listed above have increased service levels and reliability, customer expectations have grown at the same pace. What about a missed shipment caused by shutting down a manufacturing line because components were stuck in a warehouse? What about late grocery route caused by not being able to forecast trailer demand? Or even an advertised special sitting incognito in a trailer somewhere in the yard just waiting its turn to be unloaded? Are these types of events acceptable? After you've invested so much in your supply chain, is it acceptable that the yard is the last weak link in the chain?

Increasing productivity, reducing inventory & optimizing service with YMS

Investing in a full-featured, modern YMS will bootstrap your yard out of the 19th and into the 21st century and allow it to become an effective part of your overall logistics chain. Here are a few examples of how a YMS can work with your existing systems to provide real improvements in logistical performance.

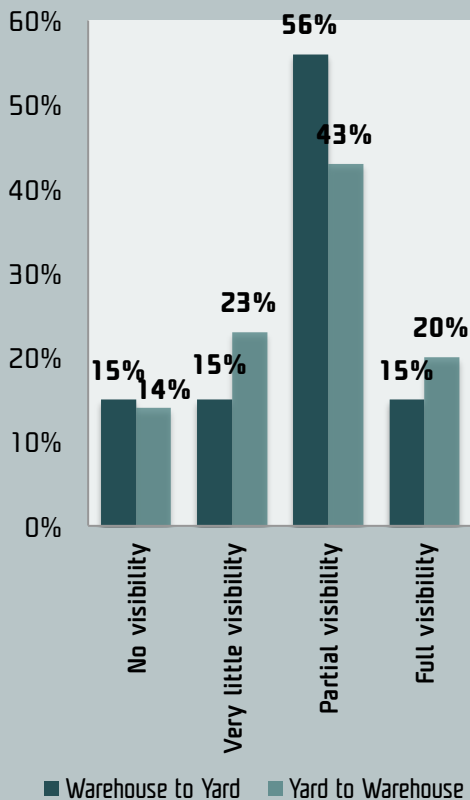


5 HOURS FROM DOCK TO STOCK

Visibility between the yard and warehouse is incomplete at a vast number of companies. 41% of companies report it takes them 5 hours or more to move inbound goods from dock to stock.

38% of companies report that it takes them 3 hours or more to turn around drivers.

8/10 companies do not have full visibility to dock and yard activities.



From the *Extended Warehouse Management Benchmark Report (2006)* by The Aberdeen Group

Productivity gains

One of North America's largest retailers experienced a 12.5% leap in throughput when it implemented a YMS. With no increase in warehouse staff or shunters, the retailer was able to increase throughput from 1.6 to over 1.8 million cubic feet per week.

But even more importantly, they were able to use information from the OMS to capitalize on the extended visibility they had on product in trailers in the yard to prioritize unload sequences for trailers containing the products that need to ship soonest. This level of information on inbound shipments allowed the retailer to cope with increasing peak demand periods without building new facilities or adding manpower.

Inventory optimization

A major North American car manufacturer implemented a YMS system at one of the world's largest parts re-distribution centers. The YMS implementation was part of an overall initiative to streamline the facility to handle high-volume parts, to trim inventory levels by a whopping \$500 million, and to network the center to 23 other satellite distribution centers.

With the YMS in place, the car manufacturer replaced inventory with information. Before the YMS, a typical shipment of parts would come to Detroit, sit in the yard a few days, get put away in the warehouse and often get shipped out the next day. The process was slow and imprecise because between the time the TMS lost sight of the trailers as they passed through the gate and the time the WMS picked up the product when it arrived on the warehouse shelves, the parts were basically lost. Now, with inventory visibility in the yard, priority shipments can be pulled directly to dock. In many cases, the shipments can be cross-docked straight onto an outbound trailer – saving on inventory holding costs and ultimately allowing the manufacturer to buy parts in much smaller lots. All this translates into lower inventory costs and higher velocity.

Improved service levels

Britain's Royal Mail was facing a brand new challenge: competition. With an already established reputation for high-quality service, the real challenge was to drive down cost while maintaining its strict service level promise that any of the 82 million pieces of first-class mail posted daily up to 7 p.m. would be delivered anywhere in the U.K. by 9 a.m. the following day.

The answer to the challenge was to move to a centralized mail distribution center and to make that center as efficient as possible. The first step was to select a YMS with simulation and visualization capabilities. Royal Mail was able to use the software to optimize the design of its brand new cross-dock facility with an optimal layout to avoid the congestion problems that typically affect high-volume yards.

Royal Mail uses a team of Yard Marshals with handheld devices to log the status of the inbound trailers and, in combination with a team of controllers and the information provided by the YMS, they are able to prioritize trailers with the most time-sensitive cargo and ensure the trailers don't wait for docks, and docks don't wait for trailers at peak times.

The net result has been a 53% reduction in the number of shunting vehicles needed and a 40% reduction in control-room staff over predicted staffing levels and, even more important, an overall fleet reduction of 5%. All while maintaining Royal Mail's already sky-high service levels. Royal Mail is planning to push the project even further with the integration of GPS tracking that will further reduce manpower needs and increase efficiency.

Keep thinking outside the Yard

The current generation of YMS can integrate with or complement other systems in your supply chain, giving you constant visibility. But more than that, a YMS gives you the power to adjust, prioritize, and optimize operations at one of the most critical junctures in your supply chain.

The real message here is that for YMS to become widely adopted and effectively implemented, we need to move the issue to the top of the logistics agenda where it belongs. Narrowly defined ROI alone simply isn't a compelling enough argument. But the systemic benefits of overall logistics integration are compelling. Increased velocity. Increased flexibility. Increased visibility. Increased profitability. Those are the factors that have yet to be quantified.

By focusing on the real-world benefits that all logistics organizations are striving to achieve, we can reframe the debate about the relative importance of YMS. We can make sure that decision-makers understand that a YMS is a must-have for logistics excellence.

About C3 Solutions

C3 Solutions is an information technology company specialized in **yard management** (YMS) and **dock scheduling** (DSS) systems. Since its founding in 2000, C3 has gained the confidence of clients around the world and across many industries including retail, grocery, distribution, manufacturing and parcel post. Headquartered in Montreal (QC), Canada and privately owned, C3 is dedicated to developing, implementing and supporting the most complete yard management and appointment scheduling products on the market today.

For more information, visit www.c3solutions.com

