

WHITEPAPER

# 6 ways yard management solutions drive operational excellence

Management beyond the four walls

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# Introduction

Optimizing supply chain processes to meet customer demands requires a supply chain that supports the free flow of products from suppliers through manufacturers and distributors.

## Yard management

### Management beyond the four walls

Today's dynamic business environment is providing supply chain professionals with increasingly complex pressures from a variety of business fronts on a daily basis. Customer requests for reductions in cycle times, time-to-market and operating costs must be met while increasing order accuracy and customer service. Optimizing supply chain processes to meet these customer demands requires a supply chain that supports the free flow of products from suppliers through manufacturers and distributors. Yet many companies today focus on maximizing efficiency within the four walls of their warehouse or distribution center. In doing this, they often overlook the inefficiencies in the yard just outside the warehouse door.

Inefficiencies in scheduling carrier appointments and tracking trailer locations at all times can impair your ability to seize cross-docking opportunities and ensure the security of your facility. Ultimately, such breakdowns can affect your ability to fulfill orders in a timely manner—resulting in increased labor, processing and shipping expenses as well as customer dissatisfaction.

Because of this, the yard has become a focal point for companies striving to improve their overall order fulfillment infrastructure and the speed with which they can meet customer demand. To truly maximize productivity, you must optimize the movement of goods and materials in the yard just as you do inside your warehouse or manufacturing facility. Yet optimizing the movement of vehicles, goods and materials in the yard is not an easy task. Accomplishing this requires an effective yard management solution.





## What is yard management?

As we all know, total supply chain efficiency is no longer about what goes on exclusively within the four walls of the warehouse—which sets the stage for the importance of effective yard management. Yet many logistics professionals lack a detailed understanding of this area of supply chain execution.

A comprehensive yard management system will assist you in several ways. When a trailer is checked in at your gate, the driver is directed, based on your business rules, to take the trailer to a specific yard or door location for loading/unloading. If goods are scheduled to be loaded or unloaded at a dock on a particular side of a building, the system will instruct the driver to park the trailer nearby. When it comes to retrieving trailers from the yard, the system uses “pick logic” based on parameters which you select—such as the trailer with the earliest arrival date—to determine which trailer a yard jockey should bring to the dock. A yard management system also manages your docks so that you can get goods and materials into and out of your facilities as fast as possible.

During the receiving process, you are able to capture a complete and accurate view of your entire inventory, extending visibility beyond the warehouse into your yard.

Throughout these processes, yard jockey activities are directed, optimized and continually verified with the use of radio frequency (RF) devices. A yard management system shows your crew the contents and locations of each trailer in the yard and verifies that the right trailer has been collected. This ensures that no time is wasted looking for trailers and trucks, moving the wrong one or moving one to the wrong location.

For companies managing large numbers of trailers entering, exiting or being stored in their yards, an effective yard management solution offers a powerful proposition. It brings new levels of visibility to key activities and inventory information, optimizes work direction and space utilization, and allows you to run your inbound and outbound operations on schedule and with an eye on overall facility security. The result: measurable cost savings.



Total supply chain efficiency is no longer about what goes on exclusively within the four walls of the warehouse.



# What you will learn in this report

In this report, you will discover six key ways that a yard management system can help you achieve operational excellence within your supply chain. After reviewing each section, you will have a full understanding of how a best-of-breed solution can ensure the continuous movement of goods needed to achieve strategic cost savings and, ultimately, customer satisfaction.

## **Six ways yard management solutions drive operational excellence**

Yard management is a key component of your total supply chain execution solution. Optimizing your yard operations can result in significant contributions to the bottom line and improved service to your customers. With a yard management system, all activities are directed and optimized.

Exception tracking and improved workflow throughout your facility streamline inventory operations. Daily yard checks and physical yard inventories—which are outdated as soon as they are completed—are a thing of the past. Searching manual records for lost shipments and incurring detention charges no longer affect your workflow and budget.



## Before we begin

Before we begin, it is critical to remember that the following efficiencies can be gained only with a yard management system that integrates seamlessly with your existing business systems. Otherwise, you'll be faced with manually re-entering information, a time-consuming and error-prone process that makes true yard efficiency impossible.



Optimizing your yard operations can result in significant contributions to the bottom line and improved service to your customers.



## 1. Achieving 100% visibility of trailers and their contents

A robust yard management solution provides a centralized system of tracking goods and trailers from the moment they arrive in your yard until the moment they leave. In fact, this type of solution extends inventory management to include trailer contents and will allow you to achieve product visibility in containers right down to the SKU level. This visibility is possible with the accuracy derived from directed, optimized work activity using wireless RF communication devices. This method of communication ensures that all personnel have complete, real-time visibility of trailer locations and contents at all times and receive detailed instructions and work verification as tasks are completed.

With the events of the recent past, facility security has taken on increasing importance. A yard management system leverages RF-driven processes to promote visibility and security in several forms. It verifies trailer appointments and drivers at check-in and departure and associates a specific trailer with an advance shipping notice (ASN) or purchase order (PO) at the gate. While trailers are in your yard, you can perform cycle counts at the ID or seal number level. It also checks outbound trailers to make sure the driver assigned is the one operating the vehicle, and that the appropriate contents (or lack thereof) are on the vehicle.

Achieving global visibility of all trailers in the yard allows you to direct drivers to the appropriate location depending on the activity scheduled. Trailers can be directed to a dock, door or space in the yard or any other non-yard facility. Not only will you be able to achieve visibility into pre-planned movements and communicate them via RF to all involved, you can receive confirmation of completed movements. During this process you can also measure performance for both drivers and dock doors to monitor productivity.

For outbound trailer activities, a yard management system provides you with the information you need to determine trailer capacity. You also have the visibility to track trailers between your yard and any other non-yard facility. Tracking trailers at any point in the process helps you avoid detention charges for overdue equipment.

Finally, other benefits to your facility include the ability to proactively identify and resolve bottlenecks and locate empty trailers and containers for quick turnaround. This increased visibility and information accuracy empowers you to seize cross-docking opportunities—which in turn increases fill rates and on-time shipments. Additionally, you have real-time load visibility and control for WMS-like asset management capabilities.



## 2. Leveraging a single point of yard command and control

Quickly assessing real-time information about all the activities occurring in your yard is important to maintaining efficiency. A yard management system that features a web-based interface will provide an invaluable visual reference for pinpointing the exact location of all trailers and their current positions in the yard. This enables you to organize inbound and outbound shipments easily with drag and drop trailer moves that generate RF-directed work dispatched to yard drivers. An intuitive interface will also include graphical yard work queue management to display completed and outstanding tasks. At-a-glance symbols support visual tracking of attributes such as carrier, trailer type, status, disposition, ownership, which trailers are damaged/out of service, demurrage days and fuel levels. Finally, the ability to schedule dock door appointments with common calendar interfaces (such as Microsoft® Outlook®) keeps all parties updated, even when dock assignments shift at the last minute.

### 3. Managing shipping events proactively

Shipments that arrive late to your facility affect your ability to ship outbound orders on time, as well as your ability to deliver on customer promises.

A proactive approach to the management of shipping exceptions empowers you to reduce or even eliminate the costs associated with expedited shipments. Complementing your yard management system with an event management application gives managers real-time notifications (via email/phone/pager, etc.) of events that will impact scheduled operations.

Managers then have the ability to proactively resolve problems such as late shipments and pickups. In fact, notifications can even be sent as particular events are occurring using work queue-driven activities.

For example, the system can send a notice when an anticipated event occurs—such as the arrival of a “hot” product—or when exceptions happen. Notification of late shipments, pickups and upcoming product expirations also provides for opportunistic cross-docking, which improves fill rates and customer service.

Finally, you can monitor trailer exceptions by tracking the length of time trailers remain in the yard and taking action quickly when they need to be moved.



### 4. Maximizing yard space utilization

In many ways, the trailers in your yard are like the inventory in your warehouse: You need to know the exact location of what you have on hand as well as how much space it requires. Reducing wasted space gives you additional room for temporary and permanent trailer storage—and eliminates the need to expand your facility unnecessarily.

Overall, leveraging RF-based communications allows you to achieve real-time visibility of space utilization in your yard as well as receive updates on trailer locations and moves. This visibility allows you to direct a trailer to a space closest to the dock door where it will be unloaded, reducing the distance and time involved with trailer retrieval. Similarly, placing trailers closer to their unloading point speeds up cross-docking.

A yard management solution also offers the ability to segment available space depending on your particular needs. For example, improved capacity utilization can be achieved to reflect the seasonality of your business. Or, you can organize trailers by age to ensure rotation and equalize wear and tear. Yard management systems can also divide your yard into zones that provide you with flexibility in organizing multiple vendors delivering products simultaneously.

This process allows you to organize trailer placement by type of carrier—parcel, less-than truckload (LTL) and truckload (TL)—to facilitate faster loading/unloading. Support for multi-yard configurations also maximizes your available options for trailer storage.



## 5. Facilitating carrier appointment scheduling

Well-planned and well-communicated carrier appointments can dramatically improve the smooth operation of your yard activity. The ability to schedule carrier appointments with common calendar interfaces such as Outlook gives dispatch operations a planning tool by providing a view of all inbound and outbound appointments. For inbound shipments, the use of ASNs and real-time location status prepares your receiving personnel for the arrival of freight, which speeds the process of unloading.

Docks and labor can be assigned based on live unload versus drop, empowering accurate labor planning. Dock assignments can also be made so that goods are dropped at the door closest to their put-away location.

Establishing and adhering to a tight schedule allows you to push overdue carriers to later time slots instead of beginning a pick-up or drop-off late and causing a ripple effect throughout your other appointments. This results in cost savings as you avoid demurrage charges from carriers whose load or unload appointments were delayed due to other carriers arriving late or general inefficiencies in your facility. Furthermore, for time sensitive products that require refrigeration or special handling, loading/unloading on schedule is the only way to preserve quality and ensure that expensive refrigeration equipment isn't wasting money lingering in the yard.



## 6. Ensuring vendor and carrier compliance

Creating a complete and accurate record of your vendor and carrier activity ensures your ability to aggregate performance metrics to identify which vendors and carriers are following your established set of best practices and which are not. A clear account of activities, dates and times is useful in contract negotiations, especially when there's room for improvement.

This capability also allows you to improve on-time carrier rates by providing incentives and imposing penalties. updated, even when dock assignments shift at the last minute.





# The results

The sum of the benefits you can achieve with a yard management solution will pave the way for you to achieve fast return on investment (ROI) for your system. Complete visibility into trailers and their contents increases fill rates and decreases the likelihood that orders will go unfilled—and income lost—due to products sitting misplaced in the yard. Quickly utilizing inventory after it arrives in the yard prevents problems associated with inventory aging and also empowers you to reduce the number of tractors and trailers leased for storage. Detention charges will also be reduced as you leverage visibility into trailers that have been sitting idle in your yard for extended time periods.

Similarly, you'll realize direct bottom-line results through better utilization of your yard personnel. Reducing data entry positions and labor hours spent locating lost trailers and waiting for equipment to arrive at dock doors allows you to achieve efficient utilization of work hours. Similarly, by identifying and seizing cross-docking opportunities, you reduce product touches and handling costs.



Improved efficiency and better utilization of yard labor and equipment yield significant cost savings.

Furthermore, you'll be able to negotiate more favorable transportation rates as you present vendors and carriers with detailed accounts of their on-time status. Likewise, proactively managing shipping exceptions reduces your need to expedite packages, enabling significant cost savings and improvements in customer service.

# Choosing a yard management system vendor

As you begin to research yard management system vendors, you'll discover that there is a variety of functionality available at a variety of price points.

It is critical for you to fully understand your individual company's needs when it comes to functionality and system scope. You want to get the right amount of functionality for your requirements. An internal audit of your needs is a good first step.

Another key area of concentration will be the system's ability to accommodate your changing business requirements and those of your customers. With the speed of change in today's distribution environment, the ability to configure your system quickly in-house is essential to maintaining customer satisfaction. As you work with each vendor to evaluate functionality, request specific information and demonstration regarding their protocol for configuring business processes to meet your unique needs.

Most vendors modify code to make your requested changes; this can be a costly and time-consuming process. Look for a vendor offering a flexible system that does not require code-based configuration.

This ability to make changes, and how changes are carried forward during an upgrade, will be important to consider in determining your long-term total cost of ownership and ability to respond to new customer requests.

You'll also want to consider each potential vendor's breadth of product offering. Some software providers offer a very limited scope of solutions. It's important to consider your supply chain operations as one entity that likely encompasses warehouse operations, manufacturing, suppliers and other trading partners, as well as your end customers. A supply chain

execution solution set built on a common platform will help you link a variety of elements spanning source-to-consumption processes.

Finally, consider the involvement of an experienced consulting systems integrator during the vendor evaluation process. A consultant can help expedite this process and bring relevant information around potential software vendors to meet your specific functional needs, technology standards and price point. Consultants with system implementation and integration experience can also help you identify all project costs early, eliminating any surprise expenditures during the project.







## CONCLUSION

A supply chain is only as strong as its weakest link. In the past, management beyond the four walls has been more concept than reality. Yard management has become a critical component for companies focused on optimizing their supply chains. Today's yard management systems bridge the gap between what happens in the warehouse and what happens just outside its walls.

**For more information**

To learn more about yard management:

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