

Managing The Yard With Technology

A smart yard is the first step to a well-run and efficient distribution center. By April Terreri

Although yard management systems (YMS) may not be a very sexy topic for boardroom executives, these solutions are gaining interest with yard and warehouse managers who understand their dramatic impact on improving the bottom line by optimizing operations not only within the yard, but within the warehouse or DC as well.

Consider, for example, a real-life incident as reported by Simon Bragg, European research director for ARC Advisory Group in Cambridge, England. One U.S. retailer routinely lost a truckload of refrigerated meat every year before it invested in a YMS for its yard. Left unattended and sitting for a few days, the reefer's fuel finally expired and the load spoiled, costing the DC about \$50,000.

As uncommon as it might sound, Bragg notes "a surprising number of companies will admit that they do lose track of the odd truck here and there."

Eliminating The Pain Points

Although interest levels are rising, implementation is still quite slow according to a March 2007 report issued by Aberdeen Group, which concluded that 58 percent of companies surveyed still used a manual system. Another 24 percent are using a YMS not integrated with their WMS and 12 percent use an integrated system that includes a YMS module of the WMS.

The reality is the real pain is felt in the warehouse if the yard is ill-managed, notes Chuck Bealke, vice president of transportation solutions for Plano, TX-based Retailix USA Inc. "The way that pain is alleviated is through very tight integration and very robust optimization engines. The No. 1 priority of a YMS should be to optimize the DC demand first. If you improve the operations in your yard, your DC will operate more efficiently."

Other pain points include detention charg-



es, which could be costing companies millions of dollars a year, adds Michelle Meng-Hsiung Kiang, founder of PINC Solutions in Berkeley, CA. "Companies are also wrangling with productivity issues and the optimal utilization of equipment resources and human resources. Although the problems vary, the common theme really is the lack of visibility and actionable data."

Even the decision to purchase a YMS is getting easier as YMS solutions offer scalable solutions to meet current and future needs. For instance, a company can start with monitoring the gate activities, suggests Kiang. "You might want to consider a solution that can address your mission-critical issues right away, with the idea that as your business needs grow the system is expandable to include additional features."

Road Scholars

The vendors we interviewed offered these top categories as a litmus test against which to determine the intelligence of your yard

management system.

Visibility: High-quality, real-time data enables optimal and intelligent decision-making, says Kiang. "You can send people out to do yard checks, but those processes take up to several hours and by the time you are done, the data is already outdated."

It is critical to have visibility to all the trailers and containers in your yard, adds Chad Collins, vice president of global strategy for Eden Prairie, MN-based HighJump Software. "Companies also need to know the inventory of the contents of those trailers in order to prioritize them when they move to the warehouse for unloading. With companies importing thousands of containers, they need to be able to schedule containers into the warehouse to turn those products around to satisfy outbound shipments. But if warehouse capacity is constrained, they need to keep a significant amount of inventory in the yard, so visibility is extremely important."

Systems integration: Integration is the "meat and potatoes" of a YMS, says Bealke.

"This means the system knows exactly what needs to happen before it happens. It should not be a question of someone having to react to something like discovering there is no trailer at the door or there aren't enough 53-foot trailers to load today. The system should already have looked at that and know if a trailer needs to go out to a specific route at 7 p.m. which means you need a trailer at a specific door. Knowing it takes four hours to load this route, the system advises making a reefer trailer ready at the door at 3 p.m."

Process integration: A YMS solution can help enforce your yard management business processes, says Collins. "The system knows where trailers and containers are located in the yard, optimizing jockeys' activities and resulting in a higher level of yard management efficiency, allowing companies to manage their yards with less labor."

Yard activities can help or hinder warehouse operation. For example, a DC might expect a hot product that absolutely needs to get to the outbound as quickly as possible, says Collins.

"From the yard perspective, as soon as that truck arrives, it is immediately sent to a specified dock door for unloading and appropriate

trailers are put to the proper outbound dock door locations. This synchronization between warehouse activities and what needs to happen in the yard is supporting the warehouse."

Dock scheduling: Online dock scheduling tightens planning in the yard and DC before trailers arrive, notes Bealke. This keeps trailers flowing in and out of the yard as quickly as possible, eliminating bottlenecks in the yard.

"We find that many of our customers need a component such as our's that allows carriers and vendors to log onto the Web to schedule their deliveries. Then the system determines how long it should take them to unload; it does this through optimization calculations that considers past history in unloading specific products from a specific shipper. This helps with asset management in that you are using your dock doors and labor to unload trailers more effectively," Bealke adds.

Collins agrees scheduling is key to eliminating congestion areas and capacity issues at the dock and maximizing dock-door utilization. It also is becoming increasingly important because of HOS regulations. In the past, there was no penalty for a driver who had to sit and wait. But today, hours spent waiting are being charged against a driver's hours

of service. "So this is an incentive for DCs to optimize getting their drivers in and unloading them as quickly as possible using a scheduling system."

Scheduling also reduces instances of trucks dropping trailers. They unload live, minimizing bottlenecks in the yard. "Dropped trailers complicate the situation from a transportation management standpoint," explains Collins. "Those dropped trailers need to be matched on the inbound side with loads that will be going out on the outbound side. A YMS can help manage all of that, enabling you to initiate decisions and executions."

Kiang at PINC adds that YMS solutions can even help companies eliminate drop zones and the space they occupy. "This visibility also allows companies to eliminate an additional movement when trucks first enter the yard. The trailer can go to the right location immediately. These efficient flows can help companies design future yard layouts that eliminate a drop zone, equating to savings."

Bird's Eye Yard View

A good first start in thinking about YMS implementation is looking at your gate activities, suggests Kiang. "People need to know

Layer Saver™ is Here & Ready To...



- Lower Shipping Costs
- Hit A Sustainability Home Run
- Eliminate Crushed & Damaged Products

Layer Saver™ is a revolutionary new product that is going to change the way you ship, receive and store products — by allowing you to do more with the same resources.

This is a collapsible, reusable pallet shipping vessel made from recycled plastic material in line with the sustainability effort. You can claim many benefits such as cube utilization on your next vendor's scorecard! Layer Saver™ is available for lease without the "pooling" concept. You list the origin and destination and we'll do the rest.

Layer Saver™ is a 2-layered pallet shipping vessel made to withstand more weight than conventional wood or plastic pallets. Its unique design allows for the first tier to hold several rows of corrugated product (just like a traditional pallet) and then with its easy-to-extend Layer Saver™ second tier, the pallet expands its capacity to hold at least 25% (and sometimes 50%) more product all within the same footprint of a standard pallet!

With gas prices on the rise it is time to stop shipping trucks that are 50% AIR! Fill your trucks with product — that won't be crushed or damaged — and lower your freight costs today.



866-LYR-SAVR or 866.597.7287 | www.layersaver.com

where the trailers are, whether they are loaded and how long they've been in the yard. They also need to know if there are any exceptions to deal with."

By tracking yard activities, you can determine the productivity of yard trucks and yard jockeys. Bealke at Retalix notes that the yard layout, integrated into the YMS, can help maximize jockey efficiency and reduce overall costs. "When the system knows where they are positioned in the yard, this helps minimize their travel as they work. So you can optimize which moves are directed to a particular jockey because the system knows what and where the last move was."

Efficient jockey utilization leads to better throughput, adds ARC Advisory's Bragg. "Directing them more efficiently doesn't mean they have to work harder—it means you are giving them more sensible instructions, especially when you can find a move for a jockey close to where he just shunted a trailer into position."

HighJump's Collins notes a graphical user interface offers additional benefits to optimization. A drawing of the yard is imported into the YMS so users see an actual physical layout of the yard. "Users can click on trailers and containers and examine things like inventory

contents. Then if you want to initiate a yard move from one location to another, you do so by dragging the trailer from one point to another. This information is automatically dispatched to the right jockey in the yard. Once he has made the move, that will show up on your graphical user interface."

Alerts transmit to jockeys, who receive requests in their task queue of all the activities they need to do in the yard.

Scale drawings of the yard show the location of every pad and the distance between pads. "We know all the metrics related to the yard, including the distances of dock doors from the gate," Bealke says.

All activities in the yard are recorded in sub-second timing, allowing accurate data to help managers see who is closest to a trailer that needs to be taken to a dock door.

"All the inefficiencies have been taken out of the process and yard management becomes more like WMS so you know immediately where all the 48-foot trailers are located when you need one right away at a dock door."

Bealke adds an often-overlooked area is salvage management, especially for the food industry. An intelligent YMS initiates the salvage process of cleaning the trailer and getting

it back into service again.

Smart Yards: Fast, Fluid

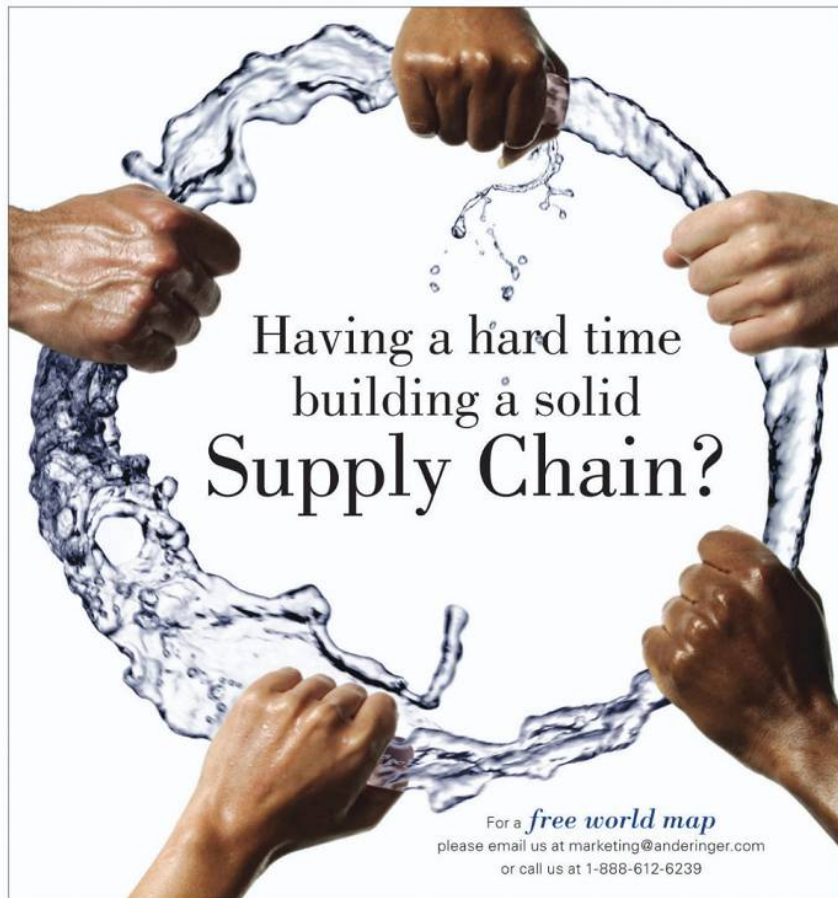
The more efficient the yard process, the larger the increase in the velocity of your yard, Kiang at PINC says. "Things won't have to stay in your yard as long so you are effectively increasing your yard capacity."

The customer service benefit is obvious, especially when the relevant parties can share data. "The way other departments within the company get their information is via faxes once or twice a day—but that is not real-time information," explains Kiang. "Customers can see the status of their orders online, eliminating the need for phone calls and faxes."

So with all of these inherent benefits of YMS solutions, why aren't top-level executives enthusiastic about more deployments? Belke notes many still don't truly understand the value of a YMS.

"I hear time and time again from people that they never realized yard management entailed as much as it does," she says.

Even so, Belke reports 2007 was a record year for Retalix yard management deployments and notes deployments in general have increased significantly over the last year. ❖



Having a hard time
building a solid
Supply Chain?

For a *free world map*
please email us at marketing@anderinger.com
or call us at 1-888-612-6239

We build relationships.

Since 1919, we've been setting the standard for trade and logistics management. Today, we continue to build relationships with companies of all sizes — helping to deliver products to customers, on time and in compliance.

- CUSTOMS BROKERAGE
- FREIGHT FORWARDING
- WAREHOUSING AND DISTRIBUTION
- CARGO INSURANCE
- CONSULTING

DERINGER®
Managing Logistics • Maximizing Opportunity

Contact our service specialists for information on our wide range of services.

1-888-612-6239

www.anderinger.com