AberdeenGroup

Research Brief

Insights and Advice

Supply Chain: Logistics March 2, 2007

The Key to Getting the Most Out of Yard Management Systems

Key Finding

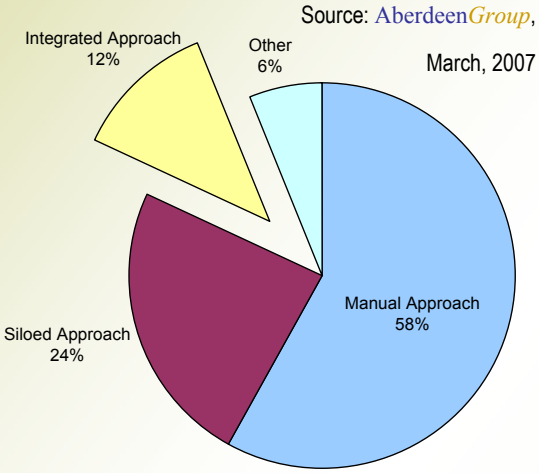
Aberdeen research shows the key to effective yard management is ***integration***.

Research Results and Recommendations

Research Results

The AberdeenGroup recently surveyed companies regarding their methods for managing inbound and outbound trailers in the distribution center yard, and found that companies are following one of three scenarios:

Figure 1: Current Yard Management Methodology

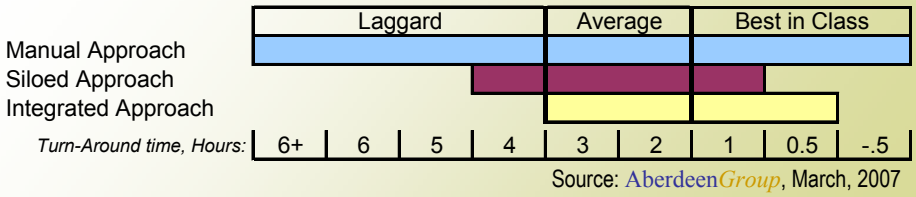


- Manual: 58% of companies use clipboards, spreadsheets, and walkie-talkies.
- Siloed: 24% of companies use a commercial Yard Management System (YMS) that is not integrated with their Warehouse Management System (WMS).
- Integrated: 12% of companies have a YMS that is a module of their WMS.

Companies were then asked to indicate their driver turn around time (gate in/gate out). Best in Class companies (32% of respondents) are able to turn around drivers in one hour or less. (Figure 2).

Those using the integrated approach had the best performance range of all groups. No company with a fully integrated YMS had a turn around time longer than three hours; many specified 30 minutes. The ***siloed approach*** was found to be less effective. Members of this group fell into all three performance categories, but no company reported a time longer than 4 hours. The ***manual approach*** produced widely ranging results. While some companies reported times of less than 30 minutes, members of this group also posted the worst results in the field, with turn around over 6 hours.

Figure 2: Driver Turn-Around Times (Performance Ranges)



Source: AberdeenGroup, March, 2007

Announcement

Help participate in upcoming AberdeenGroup research! Click here to get involved.

Analysis

Inefficient Yard Management Costs Money

The math is simple. When poor management and scheduling create a bottleneck in the dock and yard, more man-power is required. Loose tracking of trailer aging can lead to detention and demurrage charges. Furthermore, poor yard management can reduce sales when inbound goods sit in the yard instead of filling customer orders.

Why Integration Matters

Aberdeen research has consistently shown that companies with ***visibility*** are able to make good decisions. In order to prioritize inbound loads, managers must have the visibility to see which trailers have been in the yard longest. Manual systems do not allow real-time reporting of events—there is an inherent delay in any rolling list of pending loads. Alternatively, automated Yard Management Systems can track and prioritize inbound loads on a first-in/first-out basis. Dock doors can be scheduled and monitored in real-time, maximizing use of available unload resources.

Complete Findings

For the **Complete findings** from *"The Extended Warehouse Benchmark Report"* including:

- √ Implications & Analysis
- √ What are Best-in-Class Companies Doing Differently?
- √ Recommendations for Action

Click Here to download the report.

Even greater benefits can be realized when the Yard Management System is tied into the Warehouse Management System. In addition to first-in/first out, inbound loads can also be prioritized based on each trailer's contents. A manager can decide whether a recently arrived trailer should be moved to the head of the line if it contains goods which are vitally needed to fill outbound orders that day. This level of integration maximizes dock resources, minimizes detention charges, and positively impacts the fill rate and back orders.

The Role of Real-Time Location Systems (RTLS)

For companies that utilize drop-trailer unloads, RTLS can be a valuable tool to provide an accurate, up-to-the-minute picture of ***where*** trailers are located. On busy days when trailers may be shuffled from one location to the next, it can be easy to forget or simply choose not to record trailer moves. RTLS automatically records these moves, serving as a safety net for any trailers that may not show up on the radar for one reason or another.

RTLS relies on a certain combination of RFID, Wi-Fi (802.11), and Global Positioning Systems (GPS). In traditional systems, each trailer is outfitted with an active RFID tag, and the yard is equipped with a network of RFID readers that triangulate the position of each trailer. This provides immediate visibility of assets, but requires an extensive network of readers.

A newer approach is to equip each trailer with a passive RFID tag. The yard truck is equipped with RFID readers and a dual GPS/Wi-Fi transmitter. The yard truck reads the RFID tags on the trailers as they are moved. The GPS locates the yard truck at the exact moment the trailer tag was read, and transmits that information back to the server via the Wi-Fi device. This approach can be implemented with minimal disruption to an operation, as there is no RFID reader network to be deployed in the yard. It can be considered a "near real time" system, as positions of trailers are only verified when the yard truck drives by them. Since the yard truck is required to move trailers, it would be unlikely for any of the assets to relocate without the move being recorded.

260 Franklin Street
Boston, Massachusetts 02110-3112

Telephone: 617 723 7890
Fax: 617 723 7897
www.aberdeen.com

Vendor Landscape

Source: AberdeenGroup, March, 2007

Table 1: Solution Providers, Best of Breed YMS

These vendors specialize in yard management solutions that are robust and feature-rich. Although they may not offer WMS or ERP functionality, their systems can usually be tightly linked with other applications to produce the "integrated approach" that is so effective.

Vendor	Website
C3	www.c3solutions.com
Navis	www.navis.com
Yardview	www.yardview.com

Table 2: Solution Providers, Supply Chain Execution Vendors

These vendors offer a variety of applications such as Yard Management, Warehouse Management, and Transportation Management. Their solutions are typically bundled in a suite that can provide end-to-end functionality for supply chain execution. These vendors provide the highest level of integration to other applications. Some vendors, however, may not focus as many product development resources on the yard management component as a best of breed provider.

Vendor	Website
Catalyst International	www.catalystwms.com
HighJump	www.highjumpsoftware.com
Infor	www.infor.com
Manhattan Associates	www.manh.com
Red Prairie	www.redprairie.com
Retalix	www.retalix.com
Softeon	www.softeon.com
Sologlobe	www.sologlobe.com

Table 3: Solution Providers, Real Time Location Systems

These vendors focus on technology solutions designed to locate tagged assets in the yard. Some of these vendors work in close concert with a third-party YMS vendor for application functionality, while others offer a YMS application themselves.

Vendor	Website
Fluensee	www.fluensee.com
PINC Solutions	www.thepinc.com
WhereNet	www.wherenet.com

Related Research

Warehouse Automation—What's Really Working for Pallet, Case, and Piece Pick Operations; January, 2007

The Extended Warehouse Benchmark Report; December, 2006

Author: Ian Hobkirk, Senior Analyst, Supply Chain: Logistics (ian.hobkirk@aberdeen.com)