4SIGHT™ YARD Management:
An Evaluator's Guide

Introduction

The more trailer traffic a facility is required to handle, the more daunting the challenges become. Large yards especially are a dynamic and constantly changing environment where hundreds of daily trailer movements and other time sensitive tasks require tremendous and constant oversight.

Is effective and efficient yard management difficult without the right tools? *Yes*. Is there a better way than the status quo to properly manage your facility's yard? *Absolutely*.

On any given day, you face a variety of potential "what ifs" that left unattended, can either spell success or the failure of your entire yard operation. What if you're unable to locate a specific trailer in your yard? What if you don't know where all your trailers are? Or worse yet, what if you don't even know what type of freight is even on the trailers in your yard?

In addition, have you ever faced logistics problems such as:

- Too much time spent on yard inventory?
- Sending tasks to the yard drivers by radio?
- Inability to control your yard tractor expenses?
- A trailer pool that's too big "just in case"?
- Off-site trailer storage issues?
- Yard driver moves per hour that are too low?

Yard automation provides clear benefits

The answer is to streamline your approach to yard workflow and event management through automation. The benefits of making such a move are clear, but often not well-known. They include:

- Tracking and facilitating priority movement of equipment to the right shipping or receiving doors based on warehouse requirements and loading or unloading schedules.
- Creating automated, system-directed and prioritized tasks for yard drivers based on your site's operational needs.
- The ability to send automatic notifications to carriers when a specific trailer is ready for pick up.

> *The answer is to streamline your approach to yard workflow and event management through automation.*

To realize such important gains for your facility's yard operation, you should carefully evaluate your options and select the yard management system (YMS) solution that can truly deliver these benefits.

This **Evaluator's Guide** will help walk you through that process by explaining 4SIGHT YARD Management's six key features (along with their associated benefits):

- **Carrier Management**
- **Gate Management**
- **Dock Door Scheduling**
- **Yard Truck Management**
- **Yard Visibility**
- **Management Reports**

Carrier Management

Nobody wants to experience losing a trailer, much less the valuable content it contains. Carrier management provides you the capability to send clearly understood automatic notifications to carriers with important information about their trailers and loads at the facility like when a specific trailer is ready for pick up. Following are three inter-related benefits that fall under this all-important capability that will help to ensure a successful yard management operation.

Eliminate inefficient manual communication

To help facilitate trailer movement, automatic notifications will eliminate unreliable and inefficient manual notifications. These could include emails, phone calls or text messages. In large yard operations, that can add up to significant time savings.

Manual notifications are notorious for creating a ping-pong effect in the yard communications stream. Annoying questions will often arise from carriers such as, "Is my load ready?", "Is my load done?", "Is the door ready?", "Did my load leave?", or worse yet, "My trailer…where's my trailer!?"

One of the biggest advantages with automatic notifications is that they can be set up based on your particular operation's needs. Specific events, or moments in time, can act as triggers for such notifications. For example, once a trailer is loaded, 4SIGHT YARD Management will automatically send a notification to a yard spotter who will then pull the trailer from the dock position. That will, in turn, trigger a notification to the carrier that the trailer is ready for pickup.

> *One of the biggest advantages with automatic notifications is that they can be set up based on your particular operation's needs.*

Another type of automatic notification trigger will notify carrier dispatchers when a particular trailer reaches a yard once it arrives at the gate. This provides an accurate timestamp for the trailer arrival and eliminates unnecessary disputes between drivers and dispatchers on arrival times. It can also be used to notify when a hot load has arrived at the facility.

Reduce detentions and demurrage

Automating the tracking of trailer as well as sea container arrivals and departures at the gate is the best way to avoid unnecessary detention or demurrage charges. In effect, 4SIGHT YARD Management will provide you with what can be considered "the ultimate timestamp", enabling you to prove and validate the arrival and departure times of your trailers or sea containers.

For instance, just because a particular driver might move his trailer outbound beyond the gate at a certain time, he might just decide to pull over beyond the gate and take a three-hour nap. Because his onboard GPS is not accurate, his position may indicate that he's still within the confines of your facility's yard. As a result, you could end up receiving an invoice for those three hours of detention time. Should you encounter such an argument, 4SIGHT YARD Management will ensure you have the information to prove when the trailer left the gate heading outbound.

Because sea containers typically sit in yards longer than trailers, they can quickly multiply in number unless properly managed. 4SIGHT YARD's container management will timestamp when a sea container is ready for the shipping company to pick up. That not only avoids unnecessary demurrage charges but can also result in reverse demurrage. This means your facility can now hold the shipping company accountable for when its sea containers are removed from your yard.

Avoid breached trailer pool contracts

Warehouse facility operations are often required to abide by contracts between manufacturers and carriers that stipulate how many trailers are required on-site at any given time to ensure priority loads or loading times. A YMS carrier management component will remove the risk of breaching contracts in such cases.

For example, if a carrier requires your operation to have 25 trailers onsite at all times, and suddenly you only have 24, 4SIGHT YARD Management will send you an alert. Your carrier will also receive the same notification to alert them that your operation is one trailer short of the contracted number.

Gate Management

The yard gate is often one of the most overlooked links in a warehouse or distribution center operation. Yet, your gate plays several vital functions as the primary point of entry and exit. When effectively managed to efficiently process trailers using various technology—whether RFID, bar code scans or other tracking methods—the gate can be a key contributor to your entire facility operation.

Express lanes speed up dedicated trailer processing

To help speed up inbound and outbound dedicated trailer traffic, 4SIGHT YARD Management provides you the ability to establish an express lane. After all, why should dedicated trailers be forced to wait in line with the OTR trailers for time-consuming manual process identification?

> *The yard gate is often one of the most overlooked links in a warehouse or distribution center operation.*

Using RFID readers or barcode scanning, along with physical gate controls, your dedicated trailers can then quickly enter or exit your yard. A driver only needs to slow down enough so your YMS reads the RFID or scans the barcode. Instead of personnel communicating with the driver, 4SIGHT YARD Management can communicate to the driver via a large LED reader board that displays who the driver is, where they are supposed to go, along with all of the necessary information about their load.

As a result, express lanes will help to turn your yard into a much more efficient and faster operation.

Mobile tablets increase efficiency and safety

Providing your guards mobile tablets is a much better way for your gate personnel to communicate with drivers and provide visual verifications. Instead of relying on drivers to walk between their cabs and the gate, putting your guard personnel in more control with tablets is more efficient and safer.

Tablets also provide your gate personnel the capability to obtain driver signatures, take photos of inbound and outbound trailers as part of the inspection process and record a variety of other information on the spot. Drivers can then safely stay in their cabs. This will accelerate your inbound and outbound processes as well.

From simple to more elaborate trailer inspections, mobile tablets can also help your gate personnel record the existence of a seal on a trailer and verify that the seal matches the B/L documents. With guards engaging more with the inspection process and providing verification via their mobile tablets—such as reefer temperature and fuel levels—the entire inspection is cleanly connected digitally to each and every trailer transaction with all of the necessary documentation included. This is opposed to separate pieces of paper being filed into separate folders and becoming disconnected.

Overview cameras ensure better inspections

In addition to tablets, overview cameras on both sides of a gate lane are your extra security measure that will help visually document whether a trailer was damaged prior to entering your yard or after it left. Similar to avoiding bogus detention and demurrage charges, possessing images of visual proof that clearly indicate a trailer's condition on each side—while entering and leaving your yard gate—will protect your company from bogus damage charges from unscrupulous carriers.

Overview cameras also provide several added benefits:

- Eliminate the need for someone to physically walk around a trailer taking photos each time a trailer enters or leaves your yard, saving on unnecessary manual labor.
- Protect product integrity and the personnel loading the trailer, especially food loads that might otherwise be rejected upon arrival at their destination due to a damaged trailer with a ripped open sidewall.
- Confirm that an outbound trailer was properly unloaded and that there are no undocumented items left in the trailer. This eliminates the need for guards to inspect trailers on foot using a time-consuming manual process versus from inside their guard gate via a computer monitor or tablet.

Unmanned kiosks have advantages, but still require tight controls

Even though there is an increasing demand for unmanned kiosks at the yard gate to reduce labor costs, tight controls on inbound and outbound trailer procedures are still required.

> *A YMS must have the flexibility to handle whichever technology makes the most sense for your yard operation.*

Due to the variety of incoming and outgoing loads, it's often challenging to prepare for and coordinate every scenario. Having the right cameras at the right location, multi-lingual interaction capability as well as available audio intercoms in case human intervention is required, are two important considerations with unmanned kiosks.

Unmanned kiosks work equally well (depending on your requirement) with RFID readers or barcode scans. Unmanned kiosks can also be equipped with a barcode dispenser printer, a RFID tag dispenser or both, depending on a yard's particular requirements. Most importantly, a YMS must have the flexibility to handle whichever technology makes the most sense for your yard operation.

Dock Door Scheduling

Without automated system-directed dock door scheduling, handling complex yard issues, such as coordinating staged trailer loads with live drivers, can be extremely difficult. Dock door scheduling via a YMS will allow you to coordinate and optimize such loads more efficiently throughout all of the doors on your dock. This function also substantially expands the capabilities of your existing warehouse management system (WMS).

Beyond the WMS's role of scheduling a load to the proper dock door—or group of doors by zone—4SIGHT YARD Management will ensure that the load reaches the right door or door in a zone at the right time based on automatic schedule builders. Manual override capability, however, remains a key factor here as well.

For example, if dock door #8 goes down unexpectedly, you would then be easily able to move that load to dock #10 because the existing schedule indicates that dock has a light amount of activity. 4SIGHT YARD Management will then communicate with the WMS as well to confirm if such a move will work. This then enables 4SIGHT YARD Management to drive the yard truck system directed moves that might be impacted by this type of change in the schedule.

Key approaches to designing efficient dock door scheduling take into account several factors including:

- how dock doors are being scheduled;
- current methodologies and rules;
- driver volume and associated triggers;
- zone placement;
- changes in crew size and capacity;
- any dynamics that are constantly changing and that require more control.

Robotic warehouses are no exception

Even for facilities that use laser guided vehicle (LGV) trailer loading, there exists a need for very precise dock door scheduling. Because such facilities strive to have a trailer at every dock door at all times, they also have yard spotters in play who are waiting excessive amounts of time for the LGVs to load trailers.

4SIGHT YARD Management dock door scheduling will optimize yard spotter movement and integrate that with the LGV's trailer loading schedule. This will significantly reduce the amount of yard spotters who are sitting idle and ensure that dock doors are never without a trailer.

Yard Truck Management

Visualize for a moment your entire yard operation. Are you seeing a lot of yard trucks moving about without trailers attached as yard spotters search for their next trailer? If so, that's a sure sign of an inefficiently managed yard.

> *A truck should always have a trailer attached to maximize the efficiency of your operation.*

Ideally, you should not see any yard trucks moving without a trailer attached. A truck should always have a trailer attached to maximize the efficiency of your operation. That's where 4SIGHT YARD Management will step in to automate your yard truck movements. 4SIGHT YARD Management will, in turn, optimize your yard truck efficiency, save you time, and reduce fuel usage that's otherwise going up in smoke through your yard trucks' exhaust pipes.

Outdated approaches are now bad approaches

Without a truly effective YMS, yard truck management essentially comes down to three inefficient methods:

- manually writing down your trailer moves on a piece of paper and handing it to one of your yard truck drivers who may or may not be the most optimal person to make the move;
- using a radio to blanket broadcast to drivers when a trailer move is ready, and then having them waste time talking amongst themselves to figure how who's available to make the move;
- or, if a home-grown YMS or YMS via WMS is in use, sending a trailer move alert to all drivers and terminals at the same time; the first driver who then hits "accept" gets the move, but that driver may not be the right person to actually make the move.

Without a system-directed approach to yard truck management, you're leaving that aspect of your operation up to human decision. For example, a driver might pick a specific move primarily due to convenience, or perhaps the yard area involved is one that a driver likes to work in. These types of real-world scenarios can create a lot of inefficiencies over time.

Because very few facility managers have actually spent time in yard trucks, they often don't understand the mindsets of their drivers and why they make the decisions they do. In addition, your transportation department might fully understand carrier management, but may not be at all familiar with yard truck management.

The smart approach to yard truck management is to let an intelligent system such as 4SIGHT YARD Management determine when to make trailer moves and who will make them by communicating with yard truck drivers via their tablets. That eliminates both paper and excessive radio chatter that are still so commonly relied on today. If for some unforeseen reason a driver cannot make the YMS-directed move—due to a sudden trailer maintenance issue or other red-tag reason such as a flat tire or frozen brake line—the yard driver does have the option to place the move on hold.

Aligning with your operation's priorities

The most important benefit to remember for proper yard truck management with YMS is that the system will select the best driver to make the most efficient trailer move at just the right time. This happens because the system is also calendar driven, meaning that it can predict the future. The system knows your operation's priorities, what trailers you want at which dock doors and at which time.

> *System-directed, prioritized tasks force drivers to make the most optimal moves for your operation.*

Envision for a moment a driver (John) who is directed to bring trailer ABC2463 to dock door 18. Once that move is started, 4SIGHT YARD Management will then analyze the pending que of moves and look for future moves around dock door 18 and save them for John. The system is always looking ahead for moves to make in the same proximity to maximize efficiency. In this situation, if a trailer close by needs moved from dock door 20, the YMS will save that trailer for John to move. Dock door 20 will know he'll soon be on his way, and so on.

With YMS, system-directed, prioritized tasks force drivers to make the most optimal moves for your operation. Bottom line, shorter cycle times per move mean your drivers are driving less to make each move and you then become more efficient.

The downside of relying on humans to make such decisions—especially those that involve pulling trailers away from dock doors instead of delivering them—is that there's always more work involved and more can go wrong. That means getting out of the truck, closing doors on trailers, putting on seals, verifying it's safe to pull the trailer or even deal with a trailer restraint that's still engaged because the operations personnel inside forgot to release it.

Hooks per hour gains significant

An important goal with yard truck management via 4SIGHT YARD Management is to obtain the highest number of hooks per hour (HPH) in the safest and most efficient way possible. The table below shows the potential gain in hooks per hour once you convert from a home-grown computerized automation method or early generation YMS that you might be using.

Projected Gains in Hooks per Hour (HPH)	
(when converting from limited computerized method or home-grown YMS to full YMS)	
Automatic Location Only Version	Projected 15% gain in HPH
Automatic System-Directed Moves Version	Projected 25% gain in HPH

Source: 4SIGHT Logistics Solution

For an operation that converts from old-school paper or radio communication to full YMS, the projected gains in hooks per hour is even significantly greater as shown in the table below.

Projected Gains in Hooks per Hour (HPH)	
(when converting from paper and/or radio communication to full YMS)	
Automatic Location Only Version	Projected 25% gain in HPH
Automatic System-Directed Moves Version	Projected 35% gain in HPH

Source: 4SIGHT Logistics Solution

Yard Visibility

The single most common yard management concern among facility managers is, "We need to see what's going on." Or, "What do I currently have in the yard…what's actually out there?" If you've ever found yourself asking these same questions, you're definitely not alone.

You may know that you have 400 trailers in your yard. You may be well aware of their various types of inventories. You might even know how many are full or empty. But what's most concerning is that you don't know where they are.

4SIGHT YARD Management can eliminate those worries by providing you, real-time accuracy concerning where assets are in your yard at any given moment day or night.

Yard walks become a thing of the past

Before the advent of YMS, the best way for facility managers to gain a real-time snapshot of yard inventory was to conduct time- and labor-intensive yard walks. Yard walks done once or twice per shift to gauge yard inventory are only accurate and up-to-date, however, until the first trailer is moved.

Even if you go to the extreme of manually conducting yard inventories every two hours, your inventory's accurate for about five minutes out of every 120 minutes or for one hour out of each day. In actuality, that could even be a fair assessment since such information might be 90% accurate most of the time.

> *You want to know where that trailer is and what's on it every minute of the day to protect the goods on board.*

But that level of accuracy may not be good enough, especially if you are moving around trailers with high-value products and need to know exactly where they are at all times. Such high-value goods could include expensive and sensitive electronics or possibly perishable foods that require adequate temperatures and fuel levels.

Just relying on hitting the side of a trailer with a rubber mallet during a yard inventory to determine if it's full (thud sound) or empty (hollow sound) isn't exactly a very smart approach.

A lost trailer could quickly turn a good day sour

Having the capability to know where your yard trailers are in real-time via a high-resolution visual interface, along with Google-type search capability, offers a huge advantage that only a robust YMS can provide. Nobody wants to face the reality of losing a trailer full of expensive water-based latex paint when outdoor temperatures fall below freezing. You want to know where that trailer is and what's on it every minute of the day to protect the goods on board.

For example, 4SIGHT YARD Management uses predictive typing so it will show everything on the yard with the typed in numbers or letters—such as shipping numbers, B/Ls or trailer IDs—and will show up in a drop-down menu. You can then focus in on what you're looking for, including what's on the trailer, what's in specific cartons, how many cartons are on board and more.

From a security standpoint, yard visibility via YMS provides several benefits as well. While trailer theft from yards is not as much of a risk as it is once trailers leave your gate—such as at truck stops—it can still happen. Virtual security as part of 4SIGHT YARD Management helps to ensure that once a trailer arrives at the dock and is secured via restraints placed in security mode, it cannot leave that location without proper authorization.

Because trailer theft out of the yard is always a real threat—and one that would most likely be orchestrated from inside your operation—it's important to not fall into the trap of thinking "that will never happen to us." As careful as you might be, it's always best that your YMS contain the necessary safeguards that will who and who's not authorized to unload specific trailers that contain high-value goods.

Management Reports

If you don't have good data, you have no way of generating the kinds of management reports that will ensure that your yard is operating as efficiently as possible. In other words, good data equals good management. And you can't improve what you don't measure.

> *Good data equals good management.*
> *You can't improve what you don't measure.*

If you've never tracked data like hooks per hour per yard trailer, then it's difficult to know what the turn time should be in your yard based on your operation's needs.

Tracking the right kinds of data and being able to evaluate that data using 4SIGHT YARD's management reporting, combined with carrier management, will also help you easily validate—or invalidate—the detention invoices you're receiving from carriers.

Just how long has that trailer been sitting there?

With 4SIGHT YARD Management, you'll be able to create management reports that would be impossible to generate without capturing the right data. In fact, the very lack of data that you should be monitoring can easily become a black hole in your yard operation.

For example, do you know how well your yard spotters are performing? You can't unless you have substantive metrics connected to your yard spotter activity that is over time (i.e. a week) monitoring system-directed moves versus spotter-directed moves. What about carrier management? Do you have a firm handle on how many trailers you have on site at any given time? What about gate activity during various shifts? Are you adequately being covered with enough gate personnel to handle changes in the amount of live driver or dedicated drop trailers moving through your gate(s)?

With 4SIGHT YARD Management, you'll avoid hearing comments such as:

- "We don't know why those trailers that have been sitting on the lot for three weeks when they should have been gone in a week…obviously, we haven't been tracking that very well."
- "For some reason, the info we typically collect on our clipboard during our latest yard inspection didn't get transferred onto an Excel spreadsheet with trailer time limits set on it. It must have been thrown in a file and we just forgot about it."
- "Why has that trailer been there so long in the back corner of the yard? It's been there forever…just checking."

For detention monitoring, you may have a system in place that tracks check-in and check-out times at the gate. Should you get a detention charge, you would then need to go back to those documents to prove that a trailer was only on-site for two hours instead of the carrier's claim that it was there four hours.

Keep in mind, however, that you would then have to laboriously go through a lot of paperwork to find that proof and hope that it was filed correctly in sequential, dated order and that the guard's handwriting is legible. Then, you'd need to find the exact record you need, scan it and then send it to the carrier and hope that your record-keeping meets the carrier's expectations for proof.

Such paper-based record keeping might work fine for a yard operation that manages 20 trailers a day through one gate. In contrast, though, if you're tracking 700 trailers each day through three separate gates, that's an entirely different issue. A YMS then becomes paramount at that level of operation.

4SIGHT In Action:
Nebraska Furniture Mart–Texas

Omaha-based Nebraska Furniture Mart (NFM) is widely known for conducting business on a very large scale compared to most home furnishing companies. When NFM decided to go big—really big—with its latest furniture showroom and distribution center, it couldn't find a better location to call home than The Colony, just north of Dallas, Texas. And thus, NFM–Texas, the single largest home furnishing store in the U.S., was born in early 2015.

At nearly 2 million square feet, with 1.3 million square feet alone dedicated to a massive distribution center the size of nine football fields, NFM-Texas is certainly living up to the notion and popular phrase that "everything's bigger in Texas."

4SIGHT: the secret sauce behind the scenes

With a 168 dock door distribution center the size and scope of NFM-Texas—which handles 45 to 65 trailers a day—NFM needed a robust automated system to avoid the chaos that would exist without it. You might even say 4SIGHT is the "secret sauce" that's working behind the scenes 24 hours each day to ensure that NFM-Texas's distribution center runs as smoothly and efficiently as possible.

4SIGHT manages not only a high volume of inbound and outbound trailer traffic from NFM-Texas's gate to 24 receiving dock doors and everything in between, it also provides a unique solution to efficiently processing the amount of retail customer traffic flowing through the store's 12-lane-wide, 100-plus bay product pick-up area.

NFM-Texas worked hand-in-hand with Entrematic's 4SIGHT team to incorporate the dedicated software that runs both 4SIGHT's yard management and dock management systems, a wide array of loading dock equipment, associated hardware, and integrated security, along with numerous industrial HVLS fans throughout NFM-Texas's warehouse. The 4SIGHT team also worked closely with NFM-Texas to custom-design the system that handles half of the store's visitors who prefer to take their purchased items home instead of having them delivered.

For a closer look at how NFM–Texas is using 4SIGHT to maximize its distribution center productivity from the gate to the dock, go to http://www.4sightsolution.com/tools-resources/#resources to download the full case study.

Conclusions

This **4SIGHT YARD Management: An Evaluator's Guide** white paper has provided a comprehensive overview of the six key features and associated benefits of using a YMS to manage your facility's yard operation.

These include more effectively managing your carriers to avoid financial penalties, efficiently processing inbound and outbound trailers at your gate, tracking and facilitating activity at your shipping or receiving doors, allowing the YMS to create system-directed yard driver moves, knowing what's happening at all times in your yard via real-time representation as well as producing meaningful carrier management as well as yard driver productivity and yard activity reports.

Without a YMS, you simply won't have the resources in place that will allow you to take advantage of the level of intelligence you need to operate the yard as efficiently and smoothly as possible. That, in turn, will cost your company in both wasted time, labor resources and money, ranging from increased reliance on additional personnel to unnecessary detention or demurrage charges due to lack of improper yard management.

To learn more about integrated yard management solutions visit
http://www.4sightsolution.com.

About 4SIGHT™

4SIGHT is an advanced yard management system that solves logistical challenges from the guard gate to the loading dock. 4SIGHT can also manage the doors and assets inside your warehouse. 4SIGHT combines the loading dock, the yard and the warehouse into one comprehensive unit, providing managers with the visibility, reporting metrics and productivity tools they need to increase efficiency and profitability.

4SIGHT is comprised of a module-based system which makes it easy to choose the solutions you need to solve your operation's particular challenges, and 4SIGHT modules can be integrated with your existing business systems. 4SIGHT is part of the ASSA ABLOY Entrance Systems portfolio of products, which brings even more well-known door and entrance control brands and experience. ASSA ABLOY Entrance Systems, based in Stockholm, Sweden, also expands our already extensive global presence and provides a larger platform of solutions to customers worldwide.

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