

CONNECTIONS: BRIDGING INFORMATION GAPS IN DOCK AND YARD OPERATIONS

At many warehouses and distribution centers (DCs), if you want to know what's happening at loading and receiving docks or in the truck yard, someone has to get up and go look, or call down by phone or walkie-talkie. That information must then be updated and shared, typically through phone calls, emails, spreadsheets, or writing on whiteboards. And because dock and yard activities operate separately, it takes yet more manual effort to get a holistic picture of what's going on inside and outside a facility.

Now, imagine a world without those information disconnects: dock equipment monitoring, controls, and alerts are at your fingertips ... real-time truck and driver status is stored in the cloud and instantly accessible from your desk or mobile device ... and the two realms are connected, informing each other not only of current status, but also of what should happen, and when.

This kind of visibility will be a key element of the "smart" warehouse of the future, where connected devices and equipment work together to enable the efficient flow of product and information. And while that capability is still on the horizon, 4Front Engineered Solutions has made great strides toward that goal with its 4SIGHT™ Connect cloud-based suite of products, Digital Dock™ with a Digital Master Control Panel, and Digital Gate™ with Driver Control and 4SIGHT Connect Hub mobile app. Each module includes features that make your dock and yard a source not only of data but also of *intelligence* to help improve facility and operational efficiency.

These innovative information tools will transform the future of facility management, but there's no need to wait. By revealing previously unavailable data and analytical insights, 4SIGHT Connect is allowing warehouse and distribution center managers to close longstanding information gaps and bring important new efficiencies to their docks and yards right now.

4SIGHT CONNECT DIGITAL DOCK™ ... ON THE INSIDE

4SIGHT Connect Digital Dock provides unparalleled visibility into dock operations. Through the Digital Dock dashboard, users can monitor—in real time, for individual docks or for an entire facility—dock equipment status, truck time at dock, equipment override requests and authorizations, and alarm conditions. Email alerts are triggered when user-selected events occur.

But Digital Dock does much more than manage dock activity as it happens; it can also measure activity against user-specified key performance indicators (KPIs), providing actionable data for planning and analysis. For example, reports such as dock utilization percentages and truck loading and turn times help to uncover and address inefficiencies.

Digital Dock integrates loading and receiving docks into the Industrial Internet of Things (IIoT) by utilizing data from the Digital Master Control Panel, which collects and stores information for each dock door, leveler, and vehicle restraint by dock position. The control panel wirelessly communicates data via a cellular gateway to the cloud-based software platform, where the user interface resides and data is stored.

This architecture provides many advantages, says John Carroll, 4Front's Vice President, Sales and Marketing. For one thing, Digital Dock's control panels and gateway communicate through a network that's independent of existing IT infrastructure or Wi-Fi. And because the platform is cloud-based, customers can access information with any internet-connected device. Importantly, the standalone design and simplicity of deployment make 4SIGHT Connect affordable for businesses with as few as a dozen dock positions. "That's the transformative nature of this system," Carroll says. "We've made that data set more accessible to more facilities, not just Fortune 100 companies, so they can get the benefit of those efficiencies."

What can you do with the wealth of data Digital Dock provides? In two words: *solve problems*. Here are just two examples:

PROBLEM: It's difficult to verify the status of dock positions and equipment, and whether they're being used efficiently.

How Digital Dock can help: The Digital Master Control Panel collects data and transmits it via Digital Dock to the cloud. This information includes dock availability; when doors have been opened and closed, levelers have been deployed and stored, and restraints have been engaged or released; and when a truck arrives and departs from the dock. Users know when and for how long equipment is in use, and whether dock assignments are being properly distributed.

PROBLEM: Detention fees are piling up, and carriers don't accept your assertion that their dwell-time calculations are inaccurate.

How Digital Dock can help: Digital Dock automatically creates a time stamp when a truck arrives at the dock, a restraint is engaged or released, and the truck leaves the dock, documenting each truck's activities and providing an accurate, verifiable record.

4SIGHT CONNECT DIGITAL GATE™ ... INSIDE AND OUT

While Digital Dock provides great value as a standalone product, adding Digital Gate immediately increases efficiency and productivity.

Before a truck backs into a dock, it has to approach the yard, check in, and be assigned to a dock position. Cloud-based 4SIGHT Connect Digital Gate and the optional 4SIGHT Connect Hub Mobile Xpress feature handle those and related transactions quickly and efficiently. Managers can use Digital Gate's web-based dashboard to schedule appointments, create and edit schedules, view the day's scheduled shipments and their status, and see alerts. The system also aligns appointment information and status updates (arrived, checked in/out, turned away/reason refused, departed) between carriers and facilities in real time. "There's no emailing back and forth between the carrier and the facility; the product automates the entire process," explains Senior Business Analyst/Scrum Master Rhonda Reece.

When they arrive and access the Driver Control application or use the Mobile Xpress feature in the mobile app, drivers select their language (English or Spanish) and process (check in or out). They then enter their name, mobile phone number, and appointment number, if applicable, plus optional information, such as trailer number. The system checks them in (or turns them away, if necessary). Mobile Xpress users will be assigned an identifying QR code for quick check-in at the facility. Checked-in drivers receive a text message instructing them where to go; an "intercom" function in the software lets them speak directly with the facility at any time. Before they can check out, drivers are notified that their load/unload has been completed. On the Driver Control or mobile application, they must enter their mobile phone number, verify that all information is correct, and provide a signature. Every transaction is automatically time/date-stamped to produce a complete and accurate record of the truck's activities and dwell time.

4SIGHT Connect Digital Gate was designed to solve real-life problems while reducing costs and boosting efficiency. Here are just two examples:

PROBLEM: You don't know when high-priority shipments are available until they've been received, scanned, and put into inventory in the warehouse.

How Digital Gate can help: Digital Gate tracks each shipment's arrival and dock location and can send an alert to any specified party. "For example," Carroll explains, "if Purchasing is looking for a particular inbound load, as soon as the driver checks in, they can receive an alert and know when that shipment will hit the dock." Similarly, logistics could be alerted when a hot outbound shipment leaves the gate.

PROBLEM: To help protect from COVID-19, you need to minimize person-to-person contact with truck drivers.

How Digital Gate can help: The 4SIGHT Connect Hub Mobile Xpress feature in the mobile app allows drivers to conduct all transactions on their phones, without leaving their trucks. This minimizes person-to-person interaction, allowing touch-free check-in and check-out.

READY FOR THE FUTURE

In these times of uncertainty, the 4SIGHT Connect suite of solutions can help warehouse and DC managers meet some of today's biggest challenges.

For example, many are under growing pressure for more and faster throughput and to reduce truck dwell times. With 4SIGHT Connect's real-time visibility into truck and dock status and instant communication with stakeholders, facilities can improve turn times and dock efficiency while increasing shipment velocity. Moreover, managers can receive an alert when a trailer has exceeded a specified time for loading or unloading. "When a facility sets and watches that metric, and takes action when there's a problem, they see an increase in throughput and real gains in productivity," Carroll notes.

While 4SIGHT Connect is highly effective for managing the here and now, it will keep evolving, Reece says. In the future, Digital Dock and Digital Gate will be able to directly communicate, share data, and route drivers to docks in real time, helping facilities

make even more data-driven decisions and improve work and operational efficiencies. Another initiative will allow data within 4SIGHT Connect to integrate with customers' software, such as ERP, YMS, and WMS systems. "The goal is for 4SIGHT Connect to be a centralized hub of data and processes," she says.

Such an integrated system will be an important resource as companies prepare for the connected warehouse of the future. Dock operations will have to interface and communicate with robotic equipment both inside and outside the facility—autonomous forklifts, driverless highway trucks, and automated yard shuttles. "The data that our digital dock and yard management products provide will be critical to getting visibility of what automated equipment is doing," Carroll says. Warehouse, dock, and yard automation "is coming a lot faster than many people think," he continues. "We have to be able to integrate with that—that's definitely in our future."

For more information about the 4SIGHT™ Connect suite of digital yard and dock management tools, go to 4sightsolution.com.

