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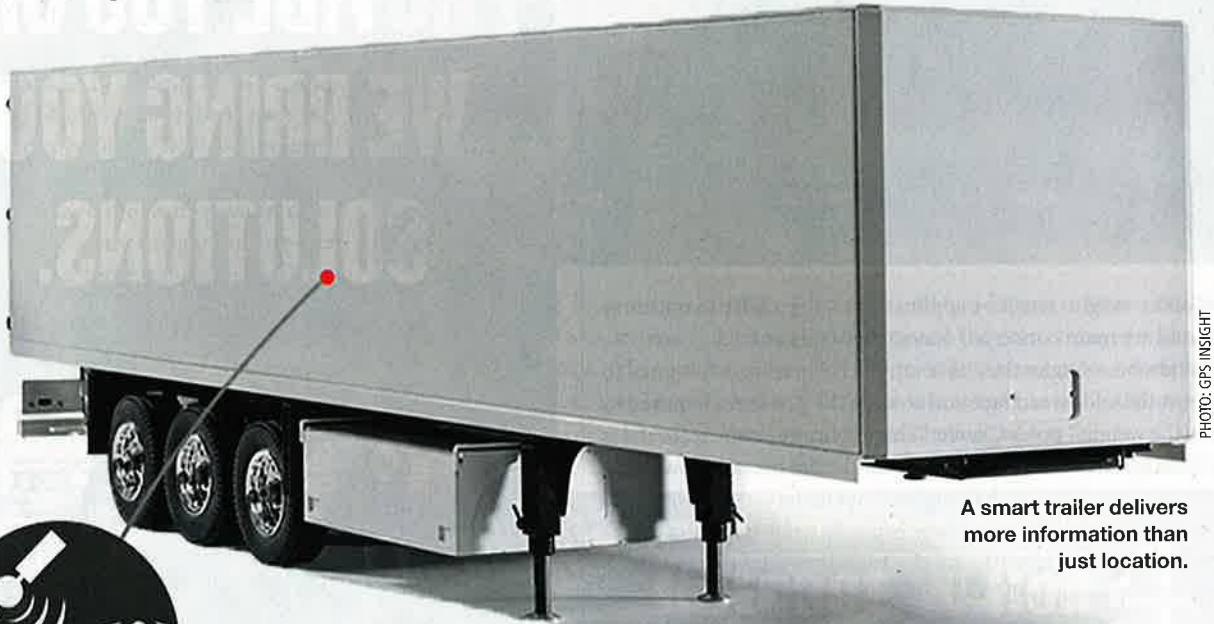
Do you need smart trailers?

5 questions to ask yourself about trailer tracking.

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A smart trailer delivers
more information than
just location.

Fleets have known about the benefits of trailer tracking technologies for some time, as it allows them to know where their trailers are. Today, technologies have evolved that can monitor and report on a variety of things beyond location, such as tire pressure, box temperature, reefer condition, and battery levels, that can be reported directly to fleet managers in real time. In face, recognizing how crucial these technologies are for many of their customers, trailer rental/leasing firms now offer smart trailer technologies. For instance, Xtra Lease announced in April that it was installing SkyBitz's solar-powered devices on more than 50,000 of its over-the-road dry vans and reefers.

How do you know if these technologies are right for your fleet? A "yes" to any of the following questions may mean your fleet can benefit:

Do you sometimes not know where all of your trailers are?

1 "With tightening capacity, if you don't know where all of your trailers are, you can't leverage your fleet to its maximum potential," says Ben Wiesen, vice president, products and services, for Carrier Logistics Inc., which provides trucking software for transportation companies.

"Knowing where a trailer is located is key," says Roni Taylor, vice president of strategy and business development for tracking and fleet management provider Spireon. That information allows fleets to determine if they have the right number of trailers for their needs. For instance, after analyzing a customer's trailer location data, Spireon was able to determine that 11% of its trailers never moved "That got them thinking about whether they needed those trailers that didn't move," she explains. After more evaluation, the customer found it could improve turns by moving those particular trailers to another location where they would be used.

Can your drivers easily find the right trailer when they need it – and is that trailer always ready to roll?

2 Truck driving often puts a unique set of frustrations and stresses on drivers. Having to look all over a yard for the trailer they are supposed to pick up, then finding that trailer has a flat tire, are pre-

The number one benefit from using trailer tracking technology is being able to know where all your assets are located.

ventable stresses. Plus, it's inefficient.

"Local delivery operations may have drivers checking trailers to see if they are ready because the trailers can't tell them," Wiesen says. "That prevents them from doing something more productive with their time."

Trailer tracking technologies can also tell you if the trailer is ready to roll, or not. "Anytime you can keep wheels moving and mitigate driver frustrations, you win," says Gerry Mead, executive director of innovation for Phillips Connect Technologies, which is working to consolidate the information generated by multiple intelligent trailer systems through its TrailerNet platform. "Fleets can make sure that when a driver picks up a trailer, there are no problems – no flat tires, for instance."

But it goes beyond tires. Dead batteries on other trailer devices or equipment such as liftgates are another possible source of driver frustration. Smart trailers can tell you how much charge a liftgate battery has left before the driver picks it up, Taylor notes.

Power management is key for trailers, she adds. Some fleets have several different sensors on their trailers. Many of these are wireless and may have their own batteries. Unless a carrier has dedicated personnel visiting each and every trailer parked in a yard (or yards) on a regular basis, the only way they can know for certain the condition of the trailer is to use a trailer tracking solution that can monitor these device batteries – including those on the tracking device itself.

Do you know the temperature inside your refrigerated vans?

3 Spoiled loads due to improper temperature control can hurt the bottom line. Plus, recently enacted rules regarding food transport authorized by the Food Safety Modernization Act require carriers to be able to document the condition of all food products under their control from pickup to delivery, which includes the product and reefer temperature. While monitoring the temperature inside a refrigerated trailer has always been a major consideration, the new rules add regulatory teeth.

Reefer unit manufacturers offer services to monitor the reefer's performance and sensors inside the trailer monitor the box, as well as how many times (and for how long) doors have been opened. When asked, a carrier must provide a record that "perishable goods were transported at the correct temperatures," says Ryan Driscoll, director of marketing for GPS Insight, "or if a door remains opens too long."

Are you having trouble tracking trailer maintenance?

4 Mead says the maintenance benefits of smart trailers are huge. And he should know, as the previous executive vice president of maintenance at U.S. Xpress. "The ROIs speak for themselves."

Many truckload carriers set maintenance schedules using a pre-determined time-based system that may not deliver the best results. Instead, using a mileage-based scheduling with data supplied by

WHAT MAKES A TRAILER 'SMART'?

A lot of devices today are referred to as "smart." There are smartphones, smart TVs, smart cities. When referring to trailers, it generally means one equipped with devices that gather a host of data.

Ryan Driscoll, director of marketing for GPS Insight, describes a smart trailer has one that "has location intelligence coupled with load sensor technology to know if a trailer is full or has capacity for another pickup, and door sensors to know when the door is open/closed," along with other information.

"What that means to me is connectivity," says Gerry Mead, executive director of innovation, Phillips Connect Technologies. "You may have GPS or other functionality, but it's not really connected."

Advancements in a number of technologies, just as with cell phones and other devices, have upped the intelligence of trailers. These include advances in battery life, solar-powered devices, faster broadband networks, and less-expensive and better sensors, such as load sensors, door sensors, and temperature sensors.

Sensors also help with planning loads. Imaging technology such as Spireon's FleetLocate Cargo Sensor, which uses optical imaging and lasers, can show fleet managers a better picture of what's inside each trailer and help determine if there has been any damage to the cargo.

Smart technology also can be used in intermodal operations, with chassis and container tracking devices that can tell a fleet whether a chassis is loaded or not and which container is on which chassis.

Perhaps the main thing, says Mead, is the ability to collect data into one place in the cloud, so it can be used.

trailer tracking devices, fleets can be sure they are bringing their trailers in at the right time. "For things like brake lights and tires, if you can cut those costs by a few percent, that's huge," Mead adds. "Breakdowns are costly. If I can cut those costs by 25% by being more predictive with

maintenance, that's a huge maintenance upside that improves the bottom line."

Truck-Lite recently reported on a customer's experience using its Road Ready trailer telematics system and its SmartBridge Integrator, which ties in to the trailer's existing devices such as tire pressure inflation and door monitoring systems. As the Stemco tire inflation system kicked in, the customer received an alert on his cell phone. Not only did he know that one of his axles was receiving pressure, he knew exactly which one.

Does your trailer tracking system integrate with your back office software?

5 The data that a trailer tracking device and other systems gather becomes even more useful if it easily integrates with the dispatch and truck management system in the back office. Knowing a trailer has a flat tire is one thing. Knowing when that trailer is scheduled to be picked up is much better.

The same is true for other sensor information, according to CLI's Weisen. "Integrating the data into the ERP (enterprise resource planning) application means the TMS (transportation management system) software can connects the dots," he explains. "The TMS knows the context – which driver, which facility, for instance."

While the trailer device knows where the trailer is, the TMS is able to use that data and other trailer sensor data to perform automated functions. Knowing the temperature of a refrigerated trailer is important. If you also know that trailer is hauling ice cream that needs to stay below zero, that is another layer of information that only the TMS knows, he says.

Driscoll says that "In today's world, it is always preferred to have related apps integrate so that the data is more meaningful and found in one place." But he notes that not all fleets feel it is necessary to have such integration. "Some organizations are not integrating their trailer tracking with other platforms and use it as a standalone, while some cannot function without" pushing data to other systems.

The vast majority of providers offer such integration with most major TMS program, and most of that integration is seamless.

"I've seen a little more consistency between the features that can be integrated over the last five years," Wiesen says. Third-party providers are creating products that may have distinguishing features, but fleets expect those products to communicate with their TMS. "At home, you may not have the same brand TV or DVD player, but the expectation is that they will work together. The same applies to these types of systems."

The five questions above are by no means an exhaustive list. There are many other areas that smart trailer technology can help fleets improve their bottom line. And that is what it's all about. ⬤