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Combating the surge in cargo theft

Strategies to enhance freight security with trailer visibility

Cargo theft has risen dramatically, and thieves are more sophisticated

Cargo theft is occurring at unprecedented levels. Fueled by inflation, the average value of a stolen load is $202,364, nearly double what it was three years ago. According to CargoNet, theft incidents reached a record 3,625 in 2024, a 27% increase from 2023.

How cargo thieves operate

Modern cargo thieves conduct meticulous surveillance. Electronics are the top prize, but they also identify commodities with traceability challenges, such as energy drinks and consumables, with lucrative resale values. They often track drivers for hundreds of miles, looking for fuel and rest break opportunities to strike.

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The growing threat of freight fraud

Advances in technology have made both theft and theft prevention more sophisticated. Criminals increasingly leverage digital tools and intricate social engineering techniques to execute their operations with unprecedented precision.

To infiltrate freight transactions, fraudsters and criminals steal the identities of legitimate carriers and brokers to "double broker" loads. Freight fraud, primarily in double brokering, costs the transportation and logistics industry an estimated $500 million to $700 million annually in misdirected freight payments.

Even more alarming is the explosive growth of fictitious pickups, which have increased by over 1,000% in just two years, according to CargoNet. Criminals steal the identities of legitimate carriers and freight brokers to arrange for loads to be picked up and offloaded. Most of these thefts occur in California, Illinois, Texas and Ohio.

The financial impact of fictitious pickups and intercepted loads extends beyond the immediate cargo loss. Victimized carriers often face annual increases in cargo insurance premiums ranging from 20% to 30%. They also encounter challenges with future coverage. Some insurers exclude payments for theft if drivers are not with their vehicles or deviate from their routes when equipment and cargo are stolen.

The need for a trailer-centric security approach

Forward-thinking transportation and logistics providers that embrace a trailer-centric approach can mitigate widespread and evolving security risks. Trucks and drivers may change during transport, but trailers and cargo stay constant, making continuous visibility essential for preventing, detecting and quickly recovering stolen loads.

A recent incident illustrates the extremes to which thieves will go. On a Friday, a fleet of trucks picked up three trailers in California filled with personal care items valued at $550,000. The fleet's drivers delivered the trailers to a third-party gated storage facility before a Monday delivery.

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The trailers were missing when the fleet sent drivers to collect them on Sunday. Over the weekend, thieves entered with duplicate-branded and numbered empty trailers, exchanging them for the loaded ones and evading check-out protocols.

This sophisticated approach demonstrates the level of planning and technical skill modern cargo thieves employ, highlighting the critical need for advanced security measures.

Strengthening cargo and asset security

Trailer-centric security is especially vital for fleets utilizing power-only arrangements with leased owner-operators and carriers. The stakes are even higher for cross-border operations.

Finding a trailer visibility solution with ubiquitous coverage was critical for Romulus, Michigan-based Transportation Services, Inc. (TSI), which operates 2,000 trailers in North America. According to Michael Zavislak, CEO of TSI, the fleet adopted a trailer-centric approach with always-on monitoring capabilities to secure loads powered by its assets and third-party carriers.

"We believe our cross-border capabilities are unparalleled in the industry," said Zavislak. TSI utilizes trailer visibility solutions from ORBCOMM, enabling its customers, primarily automotive suppliers, to track materials from origin to destination, including Mexico and Canada.

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> CEO of TSI

The front-line defense: Trailer visibility

Advanced trailer visibility solutions are a critical defense mechanism. Modern systems go beyond GPS tracking to detect unauthorized tractor-trailer pairings, route deviations, door openings and other load exceptions.

Fleets can utilize exception alerts to intervene when security breaches occur, and identify vulnerabilities to beef up physical and digital security protocols, further mitigating risks. Beyond basic GPS, advanced trailer visibility solutions capture exceptions with these four features:

1. **Door sensors** that trigger alerts when trailer doors are opened at unauthorized locations and times.
2. **Camera systems** that capture images when doors open or movement is detected inside the trailer.

Case study: the aluminum bar theft

After TSI installed ORBCOMM camera cargo sensors in trailers operating on specific routes, the fleet discovered that the customer's employees were stealing aluminum bars from its specialized deck trailers. Each trailer contained approximately $4,000 worth of these components. The thefts stopped after the fleet presented evidence to the customer.

3. **Transportation management systems (TMS)** integration to instantly flag mismatches between assigned trucks and trailers.

Fleets integrating trailer visibility solutions with TMS have the most robust asset and cargo security system by gaining two critical alert types:

• **Level one alert:** Triggered when a trailer moves but is not under dispatch, indicating potential theft.
• **Level two alert:** Triggered when a trailer is under dispatch but pulled by the wrong truck, indicating either an innocent mistake or a sophisticated theft.

These systems check trailer-truck pairing every 15 minutes or less, providing near-real-time verification of proper operations.

Case study: managing trailer pools with integrated visibility

One of the largest truckload fleets in North America, C.R. England uses ORBCOMM's trailer visibility solution with TMS integration to manage trailer pools closely at locations across North America.

According to Ron Hall, Vice President of Equipment at C.R. England, before having visibility of its trailers, the fleet relied on physical yard checks performed by local drivers or customer staff.

"These checks were challenging to accomplish and, at best, were done once a day. Any changes throughout the day were not recorded," said Hall.

"We were continually unsure about our overall count and which trailers were present," he said. "Adding to this complexity was the challenge of managing a mixed van/reefer fleet, which sometimes made it impossible to determine if we had the right trailers available for our loads."

After deploying ORBCOMM, C.R. England began using advanced functionalities to detect exceptions with its trailer pools. For example, tractor-trailer identification technology alerts immediately if an unknown asset connects to a trailer.

The fleet is also alerted if a driver mistakenly connects to a trailer with a load that either can't leave the pool or reach the assigned area. For instance, a 14-foot-high cube dry van dispatched to the East Coast must remain on the West Coast due to low-clearance issues, and trailers wrapped with customer-branded decals must stay in the local trailer pool.

4. Route deviation alerts that identify when vehicles cross geofences and leave authorized routes over a predefined distance.

Case study: Enforcing no-stop deliveries

TSI employs its trailer visibility solution to enforce no-stop requirements for drivers. The fleet establishes strict time intervals, permitting drivers to stop only at designated locations. Its system activates a stop notice if drivers surpass the limit or stop at an unauthorized site.

"If an alert is triggered, my operations team will then call the driver to find out what was happening," Zavislak said.

The role of customer visibility in security

Providing customers with live shipment visibility improves customer satisfaction and security. Some carriers offer direct links that customers can click repeatedly to monitor a trailer's progress.

"It alleviates stress for our most anxious customers," Zavislak said. "It allows them to manage it independently, giving them a sense of control."

This approach also reduces customer service workload while creating an additional layer of eyes monitoring cargo movement, potentially identifying suspicious activity more quickly.

"Customers either visit our website, or we upload data to third-party visibility providers like FourKites or MacroPoint, allowing all our clients to see their trailers' locations in real time," he said.

Freight visibility from a transportation provider, especially when the visibility comes from the trailer, creates confidence, particularly for time-sensitive or high-value shipments.

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> Vice President of Equipment at C.R. England, on difficulties with physical yard checks before working with ORBCOMM

Theft recovery: A playbook for fleets

When a trailer visibility solution detects theft, fleets immediately shift their efforts from prevention to recovery, adding greater complexity and urgency to the challenge.

C.R. England has ORBCOMM trailer visibility solutions installed on all new trailers before the fleet picks them up from dealerships. The company regularly uses one-way transporters to deliver trailers. In some instances, the transporters do not return the trailers on time.

"In one case, we could track the carrier's use of the trailer, and when it got close to where we needed it, we repossessed it from the carrier," Hall said.

Recently, the fleet noticed a trailer had disappeared from an unsecured pool. The fleet contacted local authorities, who went to where the trailer was moved. "We recovered that trailer and three others that the same individual had stolen," he said.

Another useful theft recovery tool is having two-way communication with the reefer unit. Hall recalls an instance that happened several years ago. A reefer trailer was stolen in Mexico and de-identified.

"Whenever we saw it in a trailer pool and sent a partner carrier to look for it, we couldn't find it," Hall said. "Ultimately, we started changing the reefer temperature with our two-way control. The thief eventually abandoned the trailer on the side of the road, thinking the reefer was not functioning, and we recovered it."

Working with law enforcement
Advanced trailer visibility solutions enable real-time location sharing with law enforcement, but coordinating the flow of information with multiple agencies is a difficult challenge. When theft occurs, fleets can depend on experienced service providers to help turn potential losses into recoverable assets and cargo.

Technology evaluation criteria
When selecting trailer visibility solutions with an eye on asset and cargo security, carriers must carefully evaluate coverage reliability, advanced features, alert customization capabilities, transportation management system integration, cross-border performance and more.

Technology that meets security requirements while creating market differentiation will be the most valuable long-term investment. Beyond security, trailer visibility technology delivers substantial operational advantages including improved trailer pool management, reduced equipment dwell time and enhanced asset utilization.

Technology-driven security is no longer optional. It is a fundamental requirement in an increasingly complex transportation landscape. As the transportation industry evolves, so must its defensive capabilities against increasingly sophisticated criminal networks.

By implementing the asset and cargo security strategies outlined in this report, carriers can significantly reduce their vulnerability while building stronger relationships with customers and law enforcement based on reliable and transparent information.

To coordinate efforts with law enforcement, fleets must:

- Establish clear protocols for who receives alerts internally and how quickly they must be escalated to get law enforcement involved.

- Develop relationships with local and federal authorities before incidents occur. Fleets can use services like CargoNet that "connect the dots" between agencies, significantly improving recovery chances.

- Secure all tracking data, surveillance footage and investigation for documentation.

- Send immediate notification to insurers, particularly those with Special Investigation Groups (SIGs).

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