

AI AND OPEN PLATFORMS IN CARGO PROTECTION

Brad Wareham, Director of Key Accounts at Salient Systems explains how to enhance security and efficiency in logistics operations

In the fast-paced world of logistics, ensuring the safe and timely delivery of goods is critical. However, cargo theft, transit damage and carrier negligence has made safeguarding valuable freight more challenging. According to CargoNet, cargo thefts surged by 68% year over year (y/y) in Q4 2023 and by 57% in Q3 compared to the same period in 2022. This trend has prompted logistics companies to invest in advanced security systems to protect their assets, mitigate risks and streamline operations.

From transit damage to late deliveries and employee theft, logistics operators must tackle a variety of challenges that impact their bottom line. To overcome these hurdles, the integration of modern technologies, such as AI-assisted video management systems (VMS), offers a solution to enhance safety, security and overall operational efficiency.

Cargo claims

When it comes to managing cargo claims, three main areas come into play: transit damage, delivery issues (such as delays or lost shipments) and carrier negligence. These issues can lead to costly claims and disruptions.

For instance, delivery issues such as lost or late shipments can significantly impact a business' reputation. In transit, cargo can suffer damage due to poor handling or accidents, further increasing claims. In response, a comprehensive monitoring system can help provide evidence in case of disputes. Using AI-powered cameras linked to a VMS, logistics teams can track cargo in real-time, ensure it is handled properly and maintain a log of its journey from origin to destination.

This kind of tracking can help reduce carrier negligence by holding drivers and carriers accountable for proper cargo care. The visibility that comes with such technology also improves transparency, which benefits both logistics operators and customers alike.

Rising cargo theft

As cargo theft continues to rise, protecting goods in transit and at rest has become a significant priority. Theft can occur in various forms, including employee theft (involving drivers, dock workers and logistics employees) and theft from terminals or during transit stops, where shipments rest for short periods.

Cargo at rest, whether in terminal yards or at warehouses, has long been a ►

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prime target for criminals. Even with traditional mitigation measures like trailer alignment, locks and lighting, thefts persist. Here, technology offers a game-changing solution.

By using an open platform VMS coupled with video analytics, logistics companies can greatly enhance pre-event detection and deter theft. The VMS allows for real-time monitoring, offering immediate alerts when suspicious activity is detected in a yard or terminal. Features like license plate recognition (LPR) and optical character recognition (OCR) can identify and track vehicles entering or exiting, further tightening security. Additionally, VMS systems can trigger actionable alerts and response protocols.

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Ensuring safety compliance

Logistics terminals and warehouses are high-traffic environments, where safety compliance is critical for the well-being of employees and the flow of operations. An integrated VMS system can help monitor and enforce safety measures such as designated pedestrian walkways, speed limits, safety equipment and forklift operation compliance. Opportunities for employee training or upgrades to personal protective equipment or signage may be identified.

By providing real-time alerts, such systems ensure that safety violations are addressed immediately, preventing accidents and enhancing compliance with workplace regulations. This not only reduces the risk of workplace



injuries but also lowers the chance of costly lawsuits and downtime.

Comprehensive surveillance

The interior of a logistics terminal is the heart of operations. From the moment freight arrives on the warehouse floor to the time it departs, surveillance is key to ensuring the process is handled efficiently and securely.

A fully integrated VMS solution provides 24/7 video retention of all access points, loading/unloading activities and cargo at rest or in motion. This constant monitoring helps ensure that packaging failures, damaged goods or incomplete shipments are quickly identified and addressed. Moreover, it mitigates the risk of theft, both from external actors and employees, while providing an audit trail.

Protecting the perimeter

Perimeter protection is another critical aspect of logistics security. Terminal yards, especially those with high cargo volumes, are attractive targets for thieves. Cameras can monitor all exterior entry points, fuel islands and parking areas and provide real-time alerts for unauthorized access.

Controlled gates and fences further enhance security by limiting access to authorized personnel and vehicles. With advancements in technology,

the integration of analytics for companies can provide tracking of every vehicle entering and exiting.

The future of logistics

Analytics is transforming the logistics industry, providing actionable insights and automated responses to security and operational challenges. Integrated with a VMS, analytics allows for the parsing of metadata and the detection of unusual patterns, triggering pre-emptive alerts that improve operational efficiency.

Whether deployed at the edge, on-premises or in the cloud, analytics offer logistics companies the flexibility to scale their operations while maintaining tight security protocols. The integration of access control, cybersecurity and mobile apps further enhances the functionality of these systems, providing logistics operators with a single-pane-of-glass approach to managing their security and safety.

Conclusion

As cargo theft and claims continue to rise, logistics companies must leverage modern technology to protect their assets, ensure safety and maintain efficiency. VMS systems offer a proactive approach, allowing logistics operators to monitor their cargo and terminals in real-time, identify potential threats and respond swiftly to any incidents. ■