

In-Transit Supply Chain Visibility with Real-Time Technology

Gaining supply-chain visibility while shipments are in transit is taking greater hold in the pharmaceutical industry with real-time technology. Location data married with temperature sensors is helping manage and protect its supply chains—from cargo security to logistics performance management—by enabling real-time interventions to reduce risk.



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PHARMACEUTICAL COMMERCE: Can you provide a brief snapshot of Sensitech?

SURPITSKI: Sensitech has been monitoring supply chains for 30 years. We are well known for our TempTale® instrumentation, but we have provided real-time services and technologies since the early 2000s. Real-time monitoring was first introduced for cargo security but has since expanded into logistics visibility and real-time intervention with shipments that are experiencing some type of event or spike in temperature. The aggregated shipment data can also be used to drive supply-chain improvements.

PHARMACEUTICAL COMMERCE: What newer technologies and capabilities are companies looking to utilize?

SURPITSKI: We've seen a surge in the use of real-time technology for product-release decisions. The broader service provider industry is helping to enable this surge—carriers and freight companies have developed services to help facilitate the response to these real-time escalations.

For example, if the temperature in a container is trending outside of specification, the technology enables visibility to that event and a real-time control tower response. IoT devices also deliver operational efficiencies such as automated downloading, which increases compliance.

PHARMACEUTICAL COMMERCE: What have been some of the challenges for pharmaceutical companies distributing the COVID-19 vaccines safely from a cold chain and a security perspective?

SURPITSKI: Supply chains are seeing more global movement within manufacturing. For example, shipments of active pharmaceutical ingredients (APIs) to facilities for fill/finish packaging. And every time you introduce a lot of movement into a supply chain, it introduces threats. Couple that with the challenge of temperature risk (these products need to be stored and transported at specific temperatures), adds additional complexity to supply chains.

We've heard reports of increased theft targeting of cold-chain shipments. However, most likely due to the broader industry's preparedness and proactive approach, we have not seen this

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increased risk of theft met with much success in the United States and Europe to date. The risk of specific targeting of vaccines, however, changes in emerging parts of the world where supply is constrained, the vaccination process will take longer, or the cold chains are not as mature.

Overall, the industry has done a good job of preparing for what is an extremely complex and dynamic supply chain.

PHARMACEUTICAL COMMERCE: What are some of the key risk areas in cargo security today?

SURPITSKI: Cargo criminals are becoming more sophisticated and brazen. We have seen tremendous variation among different countries and regions in how cargo thefts take place. Sensitech tracks these various modus operandi (MO) that are used by cargo-theft criminals, so we're able to advise our customers on the best mix of service solutions to counteract the predominant theft types in the lane.

Further, the outsourcing of transportation by some third-party logistics providers to subcontractors is a potential risk. We encourage our clients to have a full understanding of every partner that is potentially handling product within their supply chain; and if possible, audit each of those partners to ensure they are adhering to the specific standards of care.

There is also a lack of visibility into driver behavior while in transit. As an industry, we do a good job of putting up fences, providing secured access to facilities, etc., but then we load millions of dollars' worth of products into the back of a truck and hand it over to someone we just met. Visibility into driver behavior is an area that needs attention. There are a number of tools available to provide this visibility.

Another risk is supply chains are longer and more complex. Oftentimes, we might see overnight stops, a lack of secure parking, or a lack of transoceanic air flights that lead to hand-offs at connecting airports.

PHARMACEUTICAL COMMERCE: What are you seeing in terms of methods of criminal theft?

SURPITSKI: One area that we see increasing is deceptive pickups and fake carriers. We've also seen instances where individuals use social engineering to penetrate a facility, i.e., criminals are dressed in a similar uniform, and, in some cases, use the organization's equipment to load up a truck and drive away during working hours.

Hijacking has also increased in high-risk countries such as Brazil and Mexico, particularly around COVID-19 vaccines. These folks are typically armed and targeting full truckloads. Additionally, drivers of these high-value cargo shipments have reported they are under surveillance by criminal gangs while leaving origin sites. Counter surveillance of your facility is critical, so you understand who is sitting in your parking lot waiting for a full truckload to leave.

Rolling theft also remains a threat. Essentially, a vehicle gets close to the back end of a trailer and individuals get out of the sunroof, walk over the hood of the car, open the truck, and move boxes out while the vehicles are moving down the highway. It's pretty sensational.

Migrants are also looking to gain access to trailers while they are being staged in order to travel from country to country, which increases risk.

PHARMACEUTICAL COMMERCE: What action steps can companies take to mitigate these kinds of risks?

SURPITSKI: Organizations need to develop a culture of security within their company—from in-house employees to carriers and control towers—starting with education on cargo-security theft events. All parties need to understand security risks, internal SOPs, and best practices to prevent disruptions and theft. Additionally, receiving buy-in from transportation service providers, either through quality technical agreements or ongoing coaching from a driver or carrier compliance perspective is critical.

We also recommend that companies adopt a risk-based approach—conducting audits of critical warehouse facilities, looking at the various carriers from an operational perspective, understanding what measures they have in place to prevent or respond to disruptive events, and background checks on drivers. And given that budgets are often constrained, focus on the areas of greatest impact—we help companies assess their risk by reviewing the value of shipments, looking at origins and destinations, risky waypoints or different modes of transportation, etc.—and then review the intelligence for those variables, so it matches the solution most cost effectively.

This is where aggregated security data plays a role. For example, if a driver deviates from an approved route, the control tower can reach out to that driver to mitigate risk proactively. Moreover, if it's happening every day on every shipment, then companies need to look at it more holistically.