



# Managing risks in global supply chains

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# If something can go wrong, it probably will

Supply chains are not without risk. Every business knows that. But too many businesses view those risks too simplistically.

Of course, natural disasters threaten the smooth operation of supply chains. Wars, terrorist attacks, infrastructure collapses, harvest failures—such threats are tangible, and real.

But they're also relatively low-frequency, isolated events. The impact can be significant, but the probability of occurrence is low.

Instead, we believe that businesses should also be focused on a much more pervasive threat. A threat to land-based logistics operations in the form of cargo theft, organised crime, violence to employees, 'false pickups', and other intrusions on the smooth operation of businesses' supply chains.

The cost of such threats? Billions, in short. The reputational damage to business affected by them? Potentially enormous.

But businesses are not without a means of fighting back. Read on to discover how.



Prof. Dr. Omera Khan  
Executive Strategy Advisor

# Managing risks in global supply chains

Disruptions to supply chains, whether they are natural, accidental or intentional, are increasingly distorting supply chain performance. Given that such disruptions are unlikely to decrease in the short term, risk management will play an increasingly significant role in global supply chains.

Prof. Dr. Omera Khan

On a mid-August weekend in 2017, a refrigerated trailer loaded with 20 tonnes of Nutella chocolate spread and Kinder Surprise chocolate eggs, worth €70,000, was stolen from the German town of Neustadt. A day earlier, several hundred miles away to the north, in the town of Wittenburg, a trailer loaded with 30 tonnes of fruit juice, of similar value, had likewise vanished.

In both cases, experts quickly concluded that the thieves were well aware of what they were stealing. Branded foodstuffs carry no serial numbers, and are easily sold to buyers happy to ask no questions when offered an attractively-priced bargain.

And according to the Theft Protection in Freight Transport and Logistics Working Group, a grouping of several German business associations led by the Transported Assets Protection Association (TAPA)—a worldwide membership organisation focused on reducing cargo theft within supply chains—the thefts in question were just two of almost 26,000 cargo thefts from trucks in Germany that year, which collectively resulted in losses of almost €1.3 billion.

Most such thefts were of partial loads, often carried out by slashing a soft-sided trailer or truck cover, and targeting—perhaps opportunistically—likely-looking freight: thefts of whole trucks or trailers are less common, although far from unknown. In both cases, professional—and often international—criminal gangs are to blame, skilled at both identifying and stealing high-worth cargo such as consumer electronics or gaming consoles, and also having the means and contacts to quickly and profitably dispose of it.

Europe's well-publicised lack of secure parking for trucks adds to the risk. According to TAPA and ESPORG, the European Secure Parking Organisation, there are just under a hundred currently-accredited secure parking areas across Europe. In short, while European policy-makers mandate strict rest-breaks for drivers, Europe's infrastructure fails to follow-through with an accompanying investment in secure parking areas where drivers can leave their truck to eat, shower, and rest, knowing that their truck—and its cargo—will be safe, protected by fences, cameras, and ideally, security guards as well.

Provision is gradually being added, notes **Mike Sturgeon, executive director of the Brussels-headquartered Association of European Vehicle Logistics (ECG)**, but even as more secure parking areas are opened, Europe's legislators advance new and tighter driver rest regulations which add to the difficulties faced by drivers and truck operators.

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cargo thefts



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“The lack of cheap secure parking across Europe is a real problem. The logistics industry is a fairly low-margin business, and a couple of unanticipated overnight stays can turn a low-margin load into a loss-making load.”

Robert Windsor, executive director of the British International Freight Association (BIFA)

“The lack of cheap secure parking across Europe is a real problem,” says Robert Windsor, executive director of the British International Freight Association (BIFA). “The logistics industry is a fairly low-margin business, and a couple of unanticipated overnight stays can turn a low-margin load into a loss-making load.”

And thefts of, and from, cargo-carrying trucks aren’t the only problem. ‘False pickups’, in which thieves make off with cargo from warehouses and logistics facilities, having first presented fraudulent documentation, are another ever-present danger. Moreover, thanks to cyber-crime, in which companies’ computer networks are hacked, and information stolen, such fraudulent documentation can appear devastatingly genuine.

In January 2017, for instance, thieves made headlines after driving into Jaguar Land Rover’s Solihull assembly plant in the UK’s West Midlands, hooking up a trailer loaded with car engines, and driving off, presenting forged documents to get out of the plant. Daringly, having stolen one trailer, they then returned to steal another, also loaded with car engines. The raids totalled twelve minutes in duration, took place in full view of security cameras, and resulted in the thieves escaping with engines valued at £3 million.

Despite the cost of such heists, relatively few such instances of cargo theft—and especially ‘false pickups’—make it into the public domain, say supply chain experts such as **Richard Wilding, the world’s first professor of supply chain risk, and professor of supply chain strategy at Cranfield University’s Cranfield School of Management.** Companies are not only generally embarrassed to own up to the problem, he points out, but also fear the consequences of publicising how easy such thefts might be. Another very real risk, he adds, is the consequent reputational damage to companies’ brands.

Thieves escaping with engines valued at

**£3 million**

Organised crime can have costly implications to supply chains and have serious impact to brand reputation.

“No company wants to let its customers imagine that there’s some kind of parallel distribution chain out there, from which they might be offered stolen goods—particularly if the brand is seen as prestigious or upmarket. The damage to the brand can easily dwarf the actual cost of the theft.”

And true to form, perhaps, newspaper reports suggest that Jaguar Land Rover management initially tried to keep the news of the theft under wraps, letting only senior management and security staff in on the secret. News eventually leaked out to the Birmingham Mail, which then broke the story.



“We may never know the true figure, but we know that it runs into many billions of euros a year.”

Thorsten Neumann, chair of TAPA EMEA

“False pickups are a growing problem,” notes BIFA’s Windsor. “It’s a crime that is getting more sophisticated, and more subtle—which means that criminals are far more likely to get away with it.”

Just recently, for instance, his organisation has dealt with a case where criminals had intercepted communications between a warehouse and a truck driver scheduled to make a collection. They then contacted the warehouse to bring forward the supposed collection time by an hour, and arrived ahead of the genuine truck, collected the cargo—having presented plausible-looking documentation—and duly drove off.

‘Insiders’—perhaps working alongside organised crime networks—are another ever-present danger, warns logistics industry veteran **Stephan Freichel, professor of distribution logistics at Köln University of Applied Sciences**, and a former operations manager within a German logistics services provider.

“Consignments of automotive spare parts would go missing, often in regions of the world where family connections are strong, and organised crime is rife. Employees would insist that the consignment was loaded on to the truck, and other employees at the receiving end would insist that it wasn’t on board when the vehicle arrived. Criminals would threaten staff, and tell them that they knew where they and their family lived.”

### Counting the cost

But despite the prevalence of cargo theft, estimating the global cost of cargo theft crime is difficult. Endemic in some countries—think Mexico, Nigeria, and South Africa, for instance—it can be so commonplace that crimes are rarely reported, far less investigated. In other countries, cargo theft crime can be so exceptional that it goes unrecorded for want of a category of crime in which to report it. And in still other countries, officials don’t actually record and categorise cargo theft crime—even when they should. One of the complaints of Germany’s Theft Protection in

Freight Transport and Logistics Working Group, for instance, is that German law enforcement agencies do not keep detailed cargo crime statistics.

Losses of  
**€154**  
million



According to TAPA’s annual report 2018, reported losses by TAPA members from its supply chains in EMEA of €154 million.

Even so, it’s clear that the scale of the cargo theft problem is daunting. Taking Europe as an example, TAPA’s annual report for 2018 cites reported losses by TAPA members of €154 million from supply chains in Europe, the Middle East and Africa (EMEA)—the highest in TAPA EMEA’s 21-year history, and a peak likely to be mirrored in the broader European and national-level overall crime figures across both members and non-members of TAPA.

For, as Thorsten Neumann, chair of TAPA EMEA points out, these reported incidents equate to “only a very small percentage of the true level of cargo crime in our region”—the tip of the iceberg, as it were. Over 20 years ago, for instance, a European Parliament study estimated the cost of cargo theft in the EU at €8.2 billion, a figure that is surely far higher today. “We may never know the true figure, but we know that it runs into many billions of euros a year,” says Neumann. “That is why incident reports are such a source of valuable insight, and why we welcome each and every one: because every incident we receive gives us more knowledge and intelligence which can be used to prevent subsequent cargo crimes from occurring.”





Cargo theft  
cost shippers  
**€53,625**



As calculated by TAPA the average incidence of cargo theft cost to shippers.

For whatever the cost of cargo crime in aggregate, individual losses are far from incidental. TAPA calculated that the average incidence of cargo theft cost shippers €53,625—although some individual losses were many times that. Food and drink shipments were frequently targeted (10.9% of reported incidents), as were tobacco shipments (11.2%). In-demand consumer electronic equipment such as smartphones, household appliances, car parts, high-value metals—all were popular targets of criminals.

### Risk assessment

Supply chains are risky: everyone in business knows that. Observers point regularly to the threats posed by trade wars, terrorist incidents, raw material shortages, geopolitical uncertainty, infrastructure failings, and natural disasters.

Take the Japanese earthquake and ensuing tsunami of 2011, for instance. Or the 2010 eruption of Iceland's Eyjafjallajökull volcano, which filled European air space with high-altitude ash clouds, and led to the closure of much of Europe's air space. Or the disruption to supply chains between the UK and Europe in 2015, brought about by a combination of striking French ferry workers, and migrants seeking to enter the UK by stowing aboard

trucks. The impact of such events on the smooth running of supply chains is rightly feared. Unfortunately, though, such events are also notoriously difficult to predict, and model.

“Modelling can provide some indication of the frequency of a threat, provided that there is suitable data in existence,” notes **Alan McKinnon, professor of logistics at Hamburg's Kühne Logistics University**. “But even so, it's difficult: these are high-impact, low-frequency threats that not only cannot be modelled on a generic basis, but which can also interact between each other—a natural disaster may bring about infrastructure failings and raw material shortages, for example.”

Cargo theft is a subtly different proposition, though. Compared to events such as natural disasters, it is undeniably of a lower impact. But its frequency of occurrence makes it worth tackling. Put another way, while the cost of an individual cargo theft may not be high, cargo thefts in aggregate can make up the vast proportion of an individual company's actual losses—especially if its shipments are of high-risk categories. Moreover, incidents of cargo theft can occur alongside other crimes: a violent assault on a driver, for instance, or kidnapping, or theft of the entire vehicle.

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Alan McKinnon, professor of logistics at Hamburg's Kühne Logistics University



“Insurance only covers companies against tangible losses: it doesn’t—and cannot—insure companies against consequential losses, the loss of customer goodwill, reputational damage, and that fact that production lines stand idle because a consignment of computer chips was stolen.”

Hans Tino Hansen, CEO at Risk Intelligence A/S

Costs  
**5 to 7**  
times higher

The true costs of cargo crime can be a lot higher than the value of goods stolen.



Moreover, says experts, the costs and consequences of cargo theft extend significantly beyond the actual monetary loss of the stolen cargo itself. TAPA, for instance, cites research estimating that the true cost of cargo crime can be five to seven times greater than the value of goods stolen, once all subsequent factors are taken into consideration.

And these extended losses, adds Risk Intelligence’s Hansen, are why insurance isn’t a satisfactory solution to the problem of cargo theft: while insurers can to some extent quantify the risks involved as freight moves from location to location, getting a handle on consequential loss is a much tougher proposition.

“Insurance only covers companies against tangible losses: it doesn’t—and cannot—insure companies against consequential losses, the loss of customer goodwill, reputational damage, and that fact that production lines stand idle because a consignment of computer chips was stolen. In today’s lean and ‘Just in Time’ supply chains, any disruption has consequences: there are simply too many dependencies. If a product isn’t on a retailer’s shelves because it has been stolen en route, that retailer’s shelves won’t stand empty—a competitor’s product will be displayed, and a competitor’s product will be sold.”

“The losses stemming from a major natural disaster or 9/11-style terrorist event can be many, many times the losses caused by cargo theft,” points out Hans Tino Hansen, chief executive at Risk Intelligence, a specialist supply chain risk advisory group. “But the fact is, for many companies, losses from cargo theft form the greater part of the supply chain risk losses that they experience: cargo theft is a day-to-day reality, whereas some of these other threats are far more sporadic, especially in Europe.”



Even so, tackling cargo theft isn't without its challenges. While it's possible to make general observations about high-risk locations and likely threats—areas close to international borders, for instance, where criminal gangs can exploit bureaucratic inefficiencies and different policing jurisdictions—the incidence of cargo theft varies widely between regions, and over time.

“Just recently, Sweden has become something of a ‘hot spot’, just as it was ten years ago—but in between, incidents of cargo theft had been relatively low,” says Lars Albaek, security expert and founder of Danish cargo crime security advice specialists AL-kon. “You get the sense that gangs move in, operate until things get too hot, and then move on. Basically, you're talking about international criminal gangs, each with a different modus operandi, moving from region to region, and country to country.”

Moreover, he adds, thieves' tactics have evolved as counter-measures have been developed to render cargo theft either more difficult, or more dangerous for the perpetrators. No longer, for instance, do thieves aspire to steal an entire truck, or a truck and trailer, and then drive it to a quiet location where it can be unloaded, and even possibly sold on the ‘black market’: the use of tracking devices, which transmit a truck's location, has made this too risky. Consequently, says Albaek, the incidence of such theft has reduced sharply in recent years.

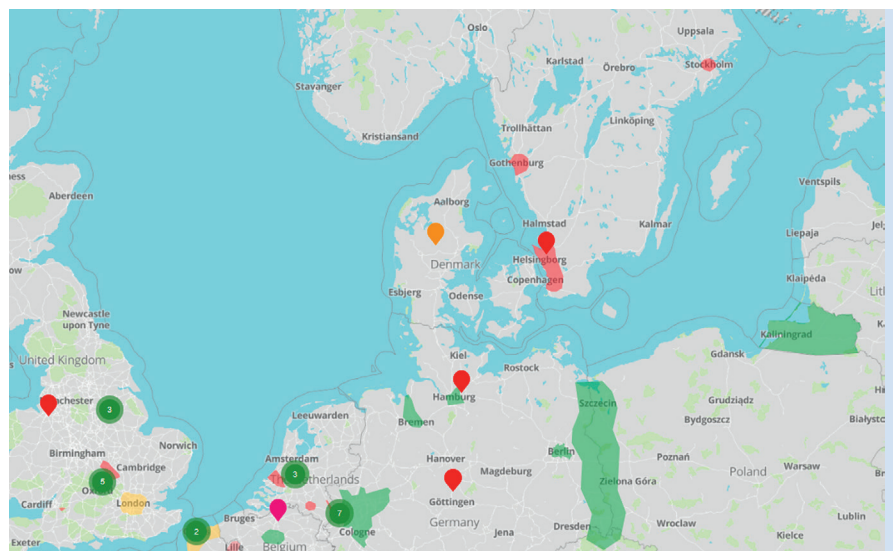
Instead, he notes, thieves will target either part of the load, or the entire load—usually while the vehicle is parked overnight. And in the process, he adds, the thieves will usually go to considerable lengths to avoid coming into contact with the driver. Their logic: from a judicial sentencing point of view, any interaction with the driver, especially if threats are involved, is likely to be classed as robbery, which carries stiff penalties. Simply stealing a vehicle's contents, though, is classed as theft, which attracts lighter sentences.

## Best practices make a difference

So if cargo theft is a threat that companies must address, how precisely should they go about this?

Self-help plays an important role, agree most experts. BIFA's Windsor, for instance, points to a recent UK Border Force survey which found that one-third of the trucks travelling through the port of Dover each day were unlocked, without even a bonding cord in place. Recently, he adds, BIFA undertook a joint event with Brussels-headquartered CLECAT—the European Association for Forwarding, Transport, Logistics and Customs Services—precisely to promote better security awareness.

“Better locks, more secure parking—and more mandated use of secure parking by drivers: simple preventative measures can go a long way. Driver screening before employment is another obvious measure: do drivers have a criminal past? The industry is notorious for not doing this, and the present tight labour market doesn't help. With a Europe-wide shortage of drivers, employers don't like to turn away prospective drivers.”



Hot spots in Sweden, Risk Intelligence System.



*“The lesson is clear: use the information and best practices that are available, and minimise your exposure to cargo theft.”*

Lars Thomsen, police officer and head of the joint Danish-German border team in Denmark’s anti-crime Police and Customs Cooperation Centre

Electronic trackers can play a vital part in the battle against cargo theft, too. Tracking devices attached to trucks are reasonably commonplace now, says AL-kon’s Albaek, but they must be attached to trailers, too, and also to pallets and (ideally) individual items within-pallet loads. Aware of the growing use of tracking devices, explains Albaek, thieves increasingly unload cargoes by hand, to avoid inadvertently taking away a tracking device as well as the cargo.

Another tip, stresses police officer **Lars Thomsen, head of the joint Danish-German border team in Denmark’s anti-crime Police and Customs Cooperation Centre**, is to encourage drivers to report cargo theft, even when under time pressure to complete their journeys, or when they may not be fluent in the local language.

“Without good real-time data on what has been stolen, police forces struggle to respond,” says Thomsen. “We might intercept and stop a truck that appears suspicious, but not know if its contents have been stolen, and so let it proceed. Hours later, it’s then too late: the load will have already been broken up and distributed.”

Route-planning, too, is sensible good practice, especially when traversing regions where cargo theft is known to be a problem, he adds. Knowing where secure parking locations can be found—and ideally, booking space in them in advance—makes it easier for companies to plan drivers’ journeys so that legally-required rest-breaks take place in secure locations, rather than in roadside lay-bys and unofficial truck stops.

Again and again, emphasises Thomsen, police forces see the value of companies adopting risk-conscious corporate policies and sensible planning, underpinned by possessing—and making use of—dynamically-updated information on threats and risks.

“Companies that take the trouble to assess the risks that they face, and plan routes accordingly, and which have policies about using secure parking, and which avoid using small contractors who may ‘cut corners’ when it comes to security, definitely appear to experience fewer cargo theft incidents,” he sums up. “The lesson is clear: use the information and best practices that are available, and minimise your exposure to cargo theft.”





Risk Intelligence’s LandRisk tool helps companies to protect their cargo shipments from a wide range of threats, says Niels Worsoe, Risk Intelligence’s LandRisk project manager. Terrorism, truck hijackings and robberies, stowaways, kidnapping, simple cargo theft, ‘false pickups’—the list is long.

Central to it, though, is one core theme: that each threat brings potential jeopardy to the smooth running of a company’s supply chains. Cargo theft, certainly—but also threats to the vehicles carrying that cargo, the drivers in charge of those vehicles, and the integrity and timeliness of the cargo itself.

And for ‘integrity and timeliness’, notes Worsoe, read finished products, raw materials, and inbound components that either don’t arrive at their destination, or which are delayed, or which arrive potentially contaminated or adulterated.

“In the pharmaceutical industry, for instance, shipments that have been subject to unauthorised opening in transit have to be junked: you can’t assume that the contents won’t have been contaminated,” notes Worsoe. “In some industries, such as the chemical industry, dilution and adulteration are an ever-present problem.”

LandRisk, stresses Worsoe, provides companies with up-to-date and accurate information about such threats. Where do threats exist? Which specific threats are they? And what is the magnitude of the threats in question?

In the language of risk management and risk mitigation, he explains, a ‘threat’ is very different from a ‘risk’—and it is vital to understand the difference between the two.

“A ‘threat’ becomes a ‘risk’ when a company has understood its own vulnerabilities, assessed those risks and mitigates them—better locks, choosing a different route, mandating the use of secure parking, and so on. The better you know your enemy, the better you can mitigate the threats it poses. It’s about ‘hardening’ your supply chains and shipments, and making them more resilient to the threats that are out there. And the more you know about where those threats are, and the modus operandi of the perpetrators, the better you can do this.”



Moreover, says Worsoe, it’s important to understand that greater threat awareness and supply chain ‘hardening’ are investments, rather than just costs. Put another way, he stresses, they have a definite ROI.

“Not all insurers will necessarily offer a discount on premiums, but some do offer a discount if that discount is then spent on security measures. But the real underlying ROI goes far beyond the cash dimension: with better threat awareness and better threat mitigation, companies see fewer incidents, and so incur fewer consequential losses, fewer disappointed customers, and fewer disrupted production lines. And don’t forget the ‘duty of care’ dimension, either: if they can mitigate the threat of their employees being confronted with robbery or violence, than that is a plus, too.”

Greater threat awareness and supply chain ‘hardening’ can actively unlock new possibilities, too, he adds: the better that a company understands the risks it faces, the better it can understand the opportunities open to it.

“A lot of companies won’t transit through Nigeria, say, because they look at the news headlines and get a distorted picture of the situation on the ground. But if you know the actual risks, not the imagined ones, you can take a more informed view, and perhaps reach a different conclusion. As ever, hard data on threats is vital: without that hard data, companies are simply working in the dark, trusting to luck, and relying on gut instinct and hearsay. LandRisk, as part of a holistic risk intelligence system stretching across the entire end-to-end supply chain, from factory to final customer, provides exactly this hard data.”



## About Risk Intelligence

Risk Intelligence provides independent, unbiased, intelligence-led advisory services to private and governmental clients on security threats and risks.

Risk Intelligence has been specialising in analysing threats from and interaction between piracy, organised crime, terrorism, insurgency and military conflicts since 2001.

We take a holistic approach to these threats and include studies into the types of organisations and tactics as well as the root causes of their existence.

Risk Intelligence advises on preventing maritime security incidents at both vessel and company level as well as providing maritime security analysis to private and governmental organisations.

We believe that a thorough understanding of threats in combination with insights into our clients' operations and needs enables us to produce high-quality threat and risk assessments and advisory services.

Please visit [riskintelligence.eu](http://riskintelligence.eu)

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