SUPPLY CHAIN & PROCUREMENT

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CUSTOMS

Under the radar: why the UK's imports are at risk after Brexit

A lack of EU oversight means that it's more important than ever for British businesses to take supply chain monitoring into their own hands

Chris Stokel-Walker

Two-and-a-half years ago, the British public was told that the EU Withdrawal Agreement was an "oven-ready deal". Barriers to trade, which had become a bogeyman for those who opposed Brexit, would not be an issue. Industry could continue as normal without any supply chain disruption.

Today, that oven-ready deal looks underdone. For all intents and purposes – and despite all the furore over checks on goods passing into the single market from Great Britain – the EU now seems to have largely stopped carrying out inspections on goods going in the opposite direction, into Great Britain. The latest negotiations about the Northern Irish border have dominated Whitehall's thinking, leaving supply chain standards more generally to wither on the vine.

"Northern Ireland at the moment is a constantly changing environment, with little beyond agreements in principle on data sharing," says Andrew Thurston, customs duty consultant at accountancy firm MHA MacIntyre Hudson. The constant changes mean that nothing is nailed down or absolute. "At the moment, there is the risk that labelling might be wrong and [importers] might not be meeting the right standards," he explains.

It all adds up to a problem for businesses which are reliant on global supply chains. Just take the food industry. "What Brexit has meant is that we have become divorced from the European food safety and food fraud monitoring systems," says Chris Elliott, professor at the Institute for Global Food Security at Queen's University Belfast.

The irony for Brexiteers is that, despite their grousing about the EU's failings, it was to mainland Europe we had outsourced many of the vital safety checks on goods coming into the UK.

> "At the moment, there is the risk that labelling might be wrong – and consequently [importers] might not be meeting the right standards"

And it's not just food safety that's at risk as a result of the changes brought about by Brexit. Customs checks don't just establish whether health and safety standards have been followed by manufacturers. They also help with aspects of compliance, tax management and supply chain visibility. Losing all of those – or replacing what was a widespread, well-working standard with something that has less transparency and oversight – may increase the liability for those selling goods imported into the UK.

"In this period of uncertainty, there is a definite risk to importers, distributors and retailers that poor-quality products could reach the UK market, with the attendant impact on brand reputation and potential legal action," says Simon Ellis, financial regulatory defence director at law firm Freeths.

The liability doesn't disappear because the people doing the checks have. "As a business, if you import a product it may not have been tested as it came into the country," says Emile Naus, former head of logistics strategy at Marks & Spencer and now a partner at tech consultancy BearingPoint. "You have to put checks in place."

For businesses, the threat is a significant one, reputationally, legally and in terms of the bottom line. And the problem isn't limited to Europe. It's increasingly difficult to vouch for the safety of any items coming into the UK from abroad, particularly given that the interconnected nature of the global supply chain system means that goods which don't emanate from Europe may well pass through it on their way to the UK.

Doing something about it is therefore necessary. Setting up parallel, independent checks of the supply chain, including accounting for and tracking the movement of goods that come into your business, is increasingly important. Ellis advises that importers should "pay particular attention to the integrity of their supply chains to ensure that supplies originate from trusted sources which have a reliable history of compliance". That requires due diligence checks throughout the entire supply chain – "as commercial sensitivities permit".

According to Elliott, that is already happening on an informal basis in the food industry, through a casual intelligence network. Food items are among the items most likely to see some element of mislabelling – either deliberately or accidentally – so the sector as a whole is already highly attuned to the risks involved. Businesses look out for one another.

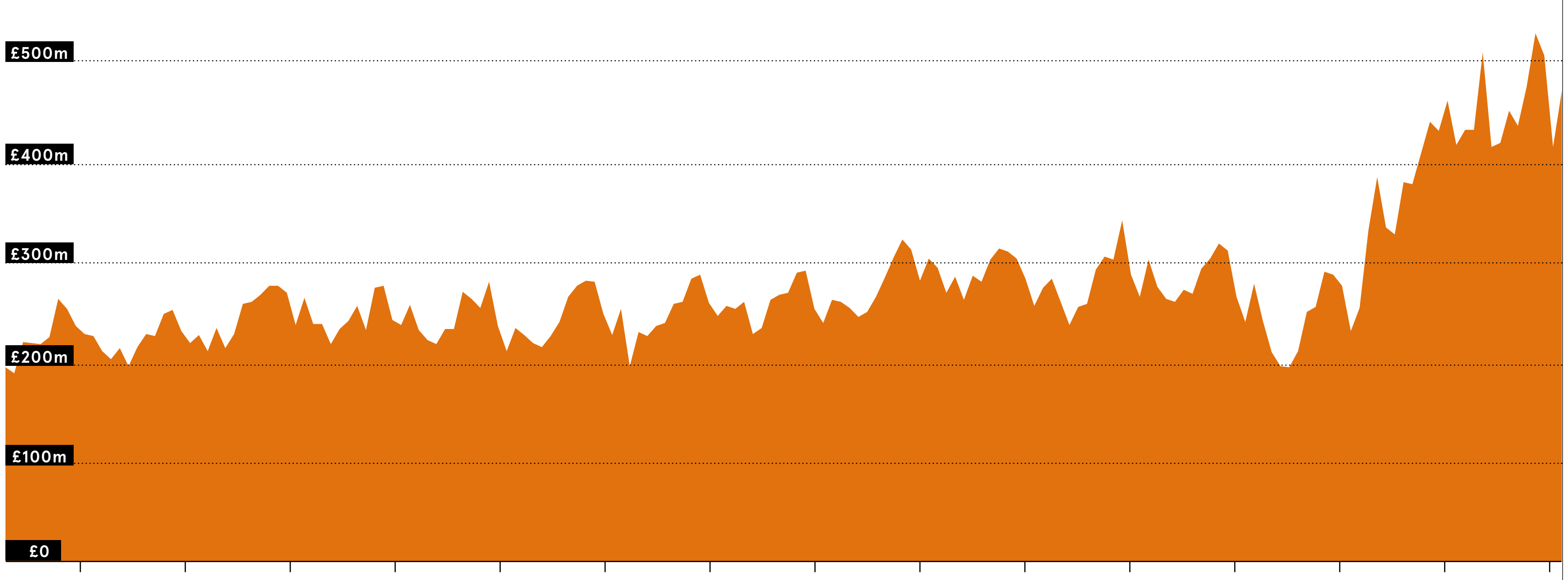
"The big retailers, like food manufacturers and some of the food service companies, already cooperate and collaborate to an unbelievable degree," says Elliott. A similar level of collaboration would be useful to try and instigate into other areas to ensure the integrity of items entering the UK.

Ellis adds: "It would be sensible to carry out a review of existing due diligence, with a particular emphasis on the credibility of recent market entrants, the viability of pricing by suppliers and their warehousing and logistic operations."

BUSINESSES ARE SPENDING MORE ON CUSTOMS SINCE BREXIT

HMRC customs duty tax receipts, reported monthly, from 2008 to 2022

HMRC, 2023



Thurston recognises that adding extra steps – and cost – to your supply chain processes is something no company wants to do amid high inflation and dropping consumer confidence. But it's necessary. "Look at the companies supplying those goods. Make sure they have due diligence in place and are doing their own checks to make sure that those goods are going to meet the requirements," he advises. "Make sure that there isn't a drop in standards."

It can, of course, be difficult to try to track back goods that you sell or handle through the entirety of the supply chain. Subcontracting and outsourcing mean that the companies you've entered into a contract with may not be the ones carrying out the service of shipping or supplying you with the items. But a root-and-branch investigation is vital to ensure you're fully aware of all the risks involved – and can head them off as and when issues arise. "If something goes wrong and has your name on it, you're still going to get blamed for it, whether that's fair or not," says Naus.

The past few years haven't helped matters. With workforces going remote, what might have been on-the-spot, in-person checks are now either not being carried out or are being moved online, where there's less visibility over the entire set of processes involved. "You need to make sure that this is an important part of your auditing process," Thurston says. "It's not something you just say, 'Well, we'll deal with that.'" And it's not solely about the companies moving your goods into the country: it's the people making them, too. "It's not just about importing, it's the manufacturing process as well," he says. "If you've got those controls in place, they will get that finished product to meet the required standard."

Doing something, rather than nothing, is now essential because the issue isn't going anywhere – and there's seemingly little appetite within government to make a substantive change, warns Elliott. "It is a bit of a time bomb because somebody will do something that is horrendous and will jeopardise the health – if not the lives – of some people," he says.

Commercial feature

Packaging trust for turbulent times

With the pressure on brands and supply chain partners to innovate around complex issues such as sustainable packaging, decision-makers need data they can trust

Strategic decision-making in supply chain management is not easy. The job gets even harder when it concerns interrelated issues such as sustainability, climate risk and the circular economy, each of which brings its own target-setting and regulatory baggage.

The pressure to adapt, especially in the fast-moving and complex worlds of ecommerce and omnichannel retail, can be intense, says Arco Berkenbosch, vice-president of innovation and development at Smurfit Kappa, Europe's leading corrugated packaging company.

"Coming out of Covid and into the war in Ukraine and then the energy crisis, it is painfully clear that agility is a vital ingredient that needs to be baked into the end-to-end supply chain, as part of any recipe for future success. Innovation is in high and urgent demand right now," he says.

However, customers do not want any old innovation, at any cost. What they need is sustainable innovation that builds trust and credibility over time.

"Brands and their products are coming under scrutiny on sustainability on two fronts at once: business and consumer," adds Berkenbosch. "NGOs and investors are checking up on corporate promises, while customers and shoppers are looking behind the logos to eco and ethical claims."

Being immediately accessible and visible to all parties, packaging is often the first product feature made to sit the sustainability test. So, what might determine a pass – or fail?

Responding to regulatory drivers

One of the biggest drivers of innovation in Europe is the regulatory framework, in particular the European Green Deal and dedicated legislation on packaging and packaging waste.

On average, each European citizen generates almost 180kg of packaging waste per year. So, the headline objective of a new EU-wide set of rules, proposed in late November 2022, is that each member state should cut packaging waste per capita by 15% by 2040, compared to 2018. Without action, total packaging waste is forecast to increase by 19% by 2030.

Many of the measures aim to make packaging fully recyclable by 2030. By that date, the proposals would also shrink greenhouse gas emissions from packaging by over a third.

In terms of the combined circular economy and climate agendas, this tightening of the legislative net both sets a global precedent and starts the clock ticking on compliance. It also carries major implications for the customers of a manufacturer such as Smurfit Kappa.

When the demand impetus from corporate net-zero targets and landfill reduction goals are added in, the business case rapidly becomes a business imperative.

Choice without compromise

In response, Smurfit Kappa has made transformative progress on packaging innovation to help align its value chain around a shared ambition to deliver better outcomes. Working towards at least net-zero-emissions by 2050, the company has achieved a 41.3% reduction in CO_2 emissions since 2005. Crucially, its target of hitting 55% by 2030 will be third-party validated by the science-based targets initiative.

On responsible sourcing, Smurfit Kappa can also evidence that 93.45% of its packaging solutions were sold to customers with chain-of-custody accreditation in 2021.

These multiple benefits delivered against key specification criteria are not only good for the planet, but also good for business, explains Berkenbosch.

"Packaging starts with the material; our paper and corrugated board is renewable, recycled and recyclable at scale. It is also biodegradable, should any accidentally end up in the natural environment," he says. "On top of all this, it is probably the most designable option, being both affordable and adaptable to customer needs and increasing complexity."

> **Packaging starts with the material; our paper and corrugated board is renewable, recycled and recyclable at scale. It is also biodegradable, should any accidentally end up in the natural environment**

There are clear win-win scenarios to be shared between supplier and customer, too. Fit-for-purpose packaging is not only more sustainable in and of itself, but also optimises the supply chain sustainability of the product it protects. It can improve the delivery efficiency and life expectancy of fresh produce, for example, therefore reducing food waste.

With almost limitless options available for customisation, however, complications can arise when choices are made that might ultimately compromise sustainability. There could be coatings and finishes applied to materials to make them water-resistant, or enhance the thermal insulation properties, for example. Design tweaks might change the weight of the packaging, the amount of air contained within it, or space between the units on a pallet.

Each of these individual factors can start to influence and impact the sustainability score for a product, either knowingly, or unknowingly. This complex matrix of choices starts to raise questions about how any business can hope to understand all the potential impacts involved. The answer is in the data.

Building on data transparency

Smurfit Kappa uses a combination of digital tools, data and analytics to help its customers manage their supply chain sustainability and deliver a superior consumer experience. In total, the group can access insights drawn from more than 100,000 supply chains in order to develop optimised and fit-for-purpose paper-based packaging solutions. Analysis shared across a range of metrics can help the customer save money, manage risk, boost circularity and cut waste, as well as shrink the carbon footprint of the entire value chain.

In addition to benchmarking, Smurfit Kappa can also facilitate knowledge transfer across supply chains from different market segments. This means that a confectionary brand could learn packaging lessons from product lines as diverse as detergent and pet food.

Given the pressure on packaging to innovate, Smurfit Kappa has also made a significant investment into its new Design2Market Factory, to help de-risk responsiveness, at speed. A game changer for companies in a race to release products on ecommerce platforms such as Amazon, this unique facility provides rapid prototyping for pilot production, industry-leading performance analysis and field-lab facilities under one roof.

In all of this, though, trust is ultimately built on transparency, concludes Berkenbosch.

"As businesses evolve to become more sustainable, they must take their stakeholders with them – that is suppliers and customers up and down the value chain. To do this, first they need reliable insights to make informed decisions. Then, to communicate with clarity and credibility, they need the data to back them up. This is where transparency matters," he says.

Mandel Ngan via Getty Images

GEOPOLITICS

What friendshoring means for global supply chains

The Biden administration's latest geopolitical strategy is to prioritise trading with 'trusted allies'. But in a highly complex and interconnected world, would such a move even work?

James Gordon

Free trade has never looked so sickly. Geopolitical tensions, including the US-China trade war and Russia's invasion of Ukraine, have infected global trade relations. Coupled with the lingering disruption of Brexit and Covid-19, these rows threaten to severely disrupt global supply chains.

The cure? Well, recognising that trade and geopolitics are inextricably linked, the Biden administration has created a new policy to treat the supply chain risk. The diktat, which it has named friendshoring, involves only trading with trusted allies.

But the strategy raises several concerns. For a start, how does the US propose to differentiate a 'friendly country' from an 'unfriendly' one? In addition to its traditional allies, the Biden administration has identified Brazil, India, South Korea, Japan, Indonesia, Vietnam and Malaysia as being trustworthy nations.

But there are grey areas. Hungary, for example, is part of the EU, which is regarded as a friendly trading bloc in the US administration's eyes. Yet US think-tank Freedom House only classes Hungary as being "partly free", given Viktor Orbán and his government's frequent attacks on democracy, the rule of law, press freedoms and LGBTQ+ rights. What does it mean, then, for the US to indirectly call Hungary a 'trusted ally', then?

Even if the US can fine-tune who it considers a trusted ally, and if its companies embrace the concept of friendshoring, can the emerging industrial powerhouses on the US list prove to be a viable substitute for Chinese manufacturing bases?

Jose Arturo Garza-Reyes is professor of operations management at the University of Derby. He thinks that the aforementioned countries "are rapidly becoming part of the top 15 most competitive nations for labour-intensive commodity products". In the short to medium term, he believes that "supply chain agreements formed with China can be replaced with agreements with these countries".

But in the long term he worries that friendshoring could create a world divided between free-market democracies and authoritarian regimes. Garza-Reyes is particularly concerned that friendshoring could take the world back to similar trading characteristics last seen during the Cold War, creating 'trade blocs' where some countries are aligned to autocratic states such as China and Russia, and others to Western nations.

"This could exacerbate the already high friction between these blocs," he says, "making the friendshoring policy a dangerous one. From an operational point of view, this would limit the partnerships and relationships that companies can develop, preventing them from being able to procure the best products, services and raw materials at the lowest cost. Once again, from an operational perspective, this makes friendshoring an undesired, but currently politically necessary policy."

If a policy of friendshoring divides the world into separate trading blocs, it is unclear what economic impact it would have. One estimate from the World Trade Organization suggests that GDP could take a hit of up to 5%.

> **The friendshoring policy is a dangerous one. From an operational point of view, it would limit the partnerships and relationships that companies can develop**

Emily Benson is a senior fellow at the Center for Strategic & International Studies (CSIS) and agrees that this is a risk. But she says that the policy of friendshoring "does not necessarily preclude deeper market access for non-aligned nations".

She explains: "The US government is not saying that it will not allow goods into North America. Rather, what it is affirmatively trying to do is build more partnerships with countries that have critical inputs for US supply chains."

But perhaps the most important question of all is that with China deemed an unfriendly nation by the new policy, will global corporations like Apple, which are heavily reliant on China for manufacturing, up and leave? According to Bloomberg Intelligence, around 98% of iPhones are made in China, and it would take about eight years to move just 10% of Apple's production capacity out of China.

So how can the US administration persuade companies with large Chinese manufacturing bases to relocate to 'friendlier' climes? Options include offering subsidies or tax breaks to set up in countries which are considered trusted allies, placing tariffs on goods manufactured in China (as it did in the recent US/China trade war), or simply stopping US companies from buying from or selling to unfriendly nations.

Benson, who co-authored a recent report called *The Limits of "Friend-Shoring"*, comments that: "It's much more nuanced than that and highly sector-specific. Some industries such as the defence sector, which demand total transparency and visibility across their entire supply chain, will openly embrace friendshoring. But other sectors, though, will find it more difficult to uncouple themselves from their Chinese manufacturing bases."

But will tariffs succeed in encouraging companies to shift to friendlier nations? Dr Heather Skipworth doesn't think so. Skipworth, an associate professor in supply chain management at the Cranfield School of Management, points to a study she co-wrote two years ago which featured an interviewee from the automotive industry. This interviewee told Skipworth that "tariffs on steel and aluminium would need to be significantly higher than 25% to justify switching from a brake motor supplier in northern China to a domestic US supplier".

Skipworth adds: "In the end, our research revealed that it wasn't necessarily tariffs that persuaded companies to move their supply chains away from China. Instead, we identified three factors – institutional pressures (which includes tariffs), supply chain mobility, and the perceived severity of the potential disruption risk – as the keys to supply chain design. In my view, these characteristics could prove to be the main determinants of whether the friendshoring policy is followed."

But for Garza-Reyes tax breaks and subsidies may indeed have a role to play to "facilitate and support the reconfiguration of supply chains in the short and possibly medium term". That said, he adds that the opportunity cost will be "an increased cost in the operation of the supply chains and the products, services and raw materials they procure".

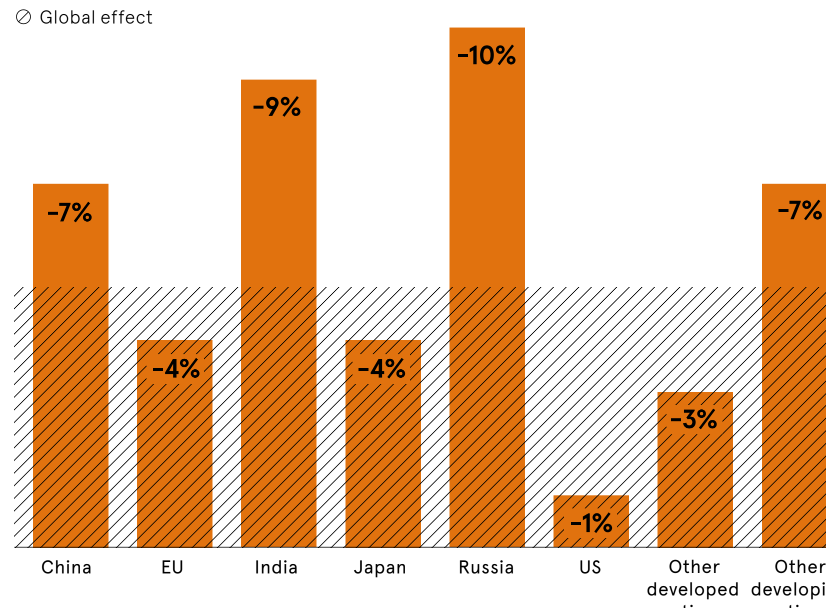
In the long term, Garza-Reyes and Benson expect companies which have invested heavily in China to see the bigger picture and move their supply chains elsewhere.

As Garza-Reyes puts it: "I believe that most companies will still voluntarily follow this option as they know that doing business... with companies from unfriendly nations increases the risk of serious disruptions in their supply chains and their operations." Benson agrees, adding that over time the cost of labour in China will become more expensive. "It may become more difficult for foreign companies to operate there due to a combination of higher labour costs and a more difficult political environment," she says. "It is therefore incumbent upon companies to determine which locations are competitive in terms of lower production costs and other efficiency gains, such as IP protections and overall ease of doing business."

Such a shift would by no means signal the end of the global supply chain economy, but it underlines the increasingly important role that state-led commercial alliances and regional partnerships will play in future trade discussions.

DIVIDING THE WORLD INTO TRADE BLOCS THROUGH FRIENDSHORING WOULD SERIOUSLY HURT GDP

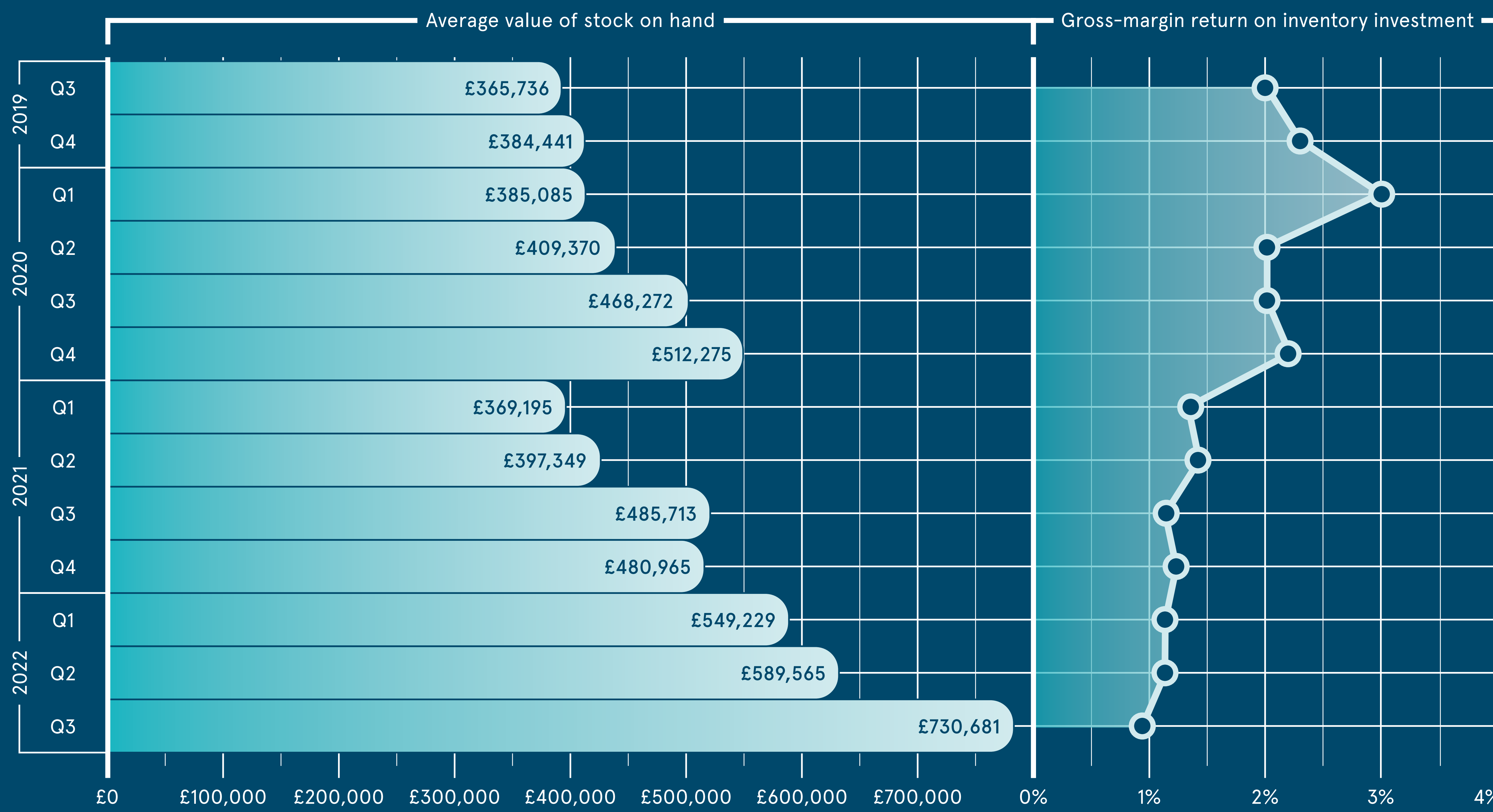
Long-term GDP effect of decoupling scenario in the global economy, percentage deviation from baseline projections



World Trade Organization, 2022

BRITISH MANUFACTURERS HAVE GENERALLY HELD MORE STOCK, BUT MADE LESS PROFIT ON IT, SINCE THE COVID CRISIS

Average stock holdings of small and medium-sized manufacturers in the UK versus their average gross-margin returns on inventory investment – a profitability metric that accounts for unsold stock – from Q3 2019 to Q3 2022

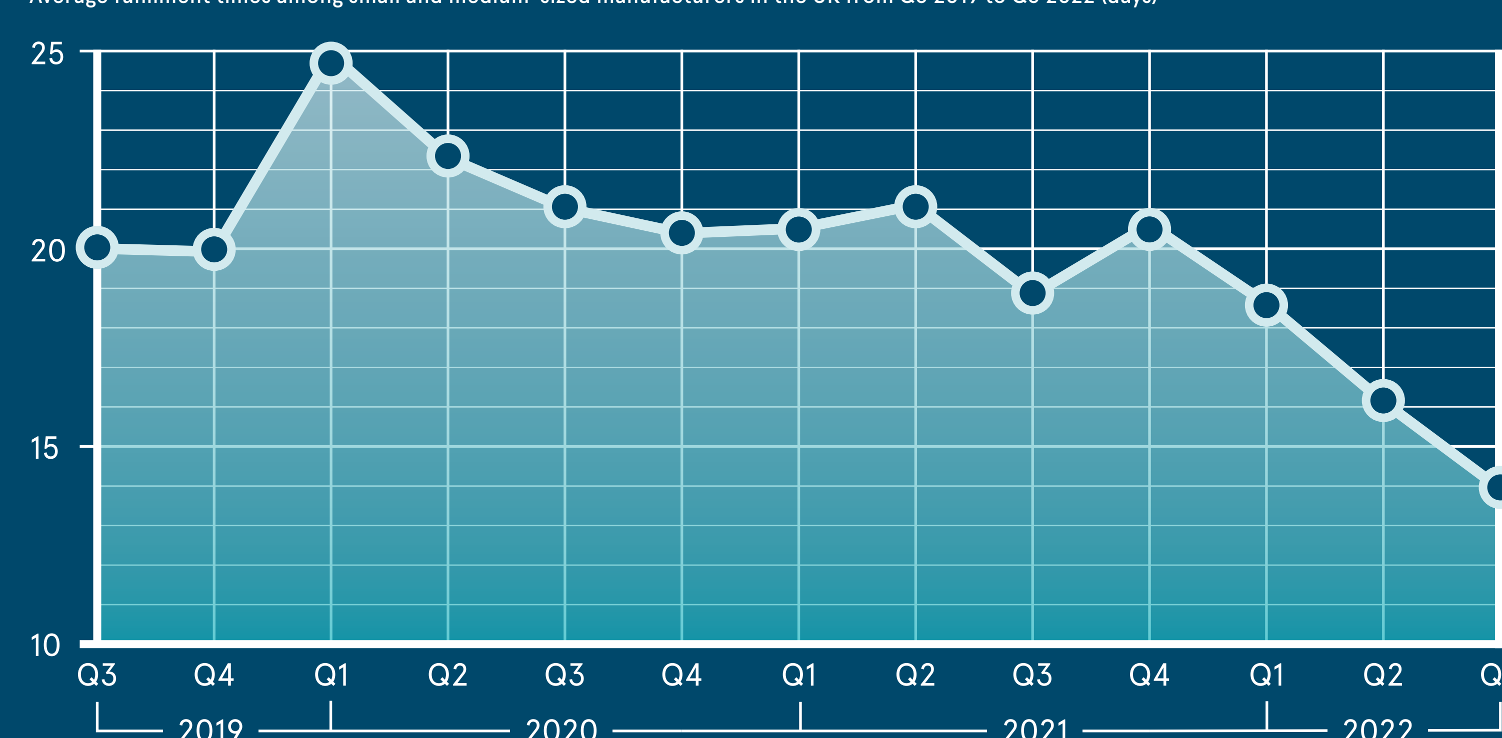


THE GREAT STOCK PILE-UP

Guarding against the unexpected has been the name of the game for UK procurement professionals since the Covid crisis. Firms are holding bigger inventories to mitigate the risk of further supply chain disruption, but that has its downsides, of course. Liquidity is key when times are tough, for instance, and all that extra stock isn't good for cash flow. It's a delicate balance to strike

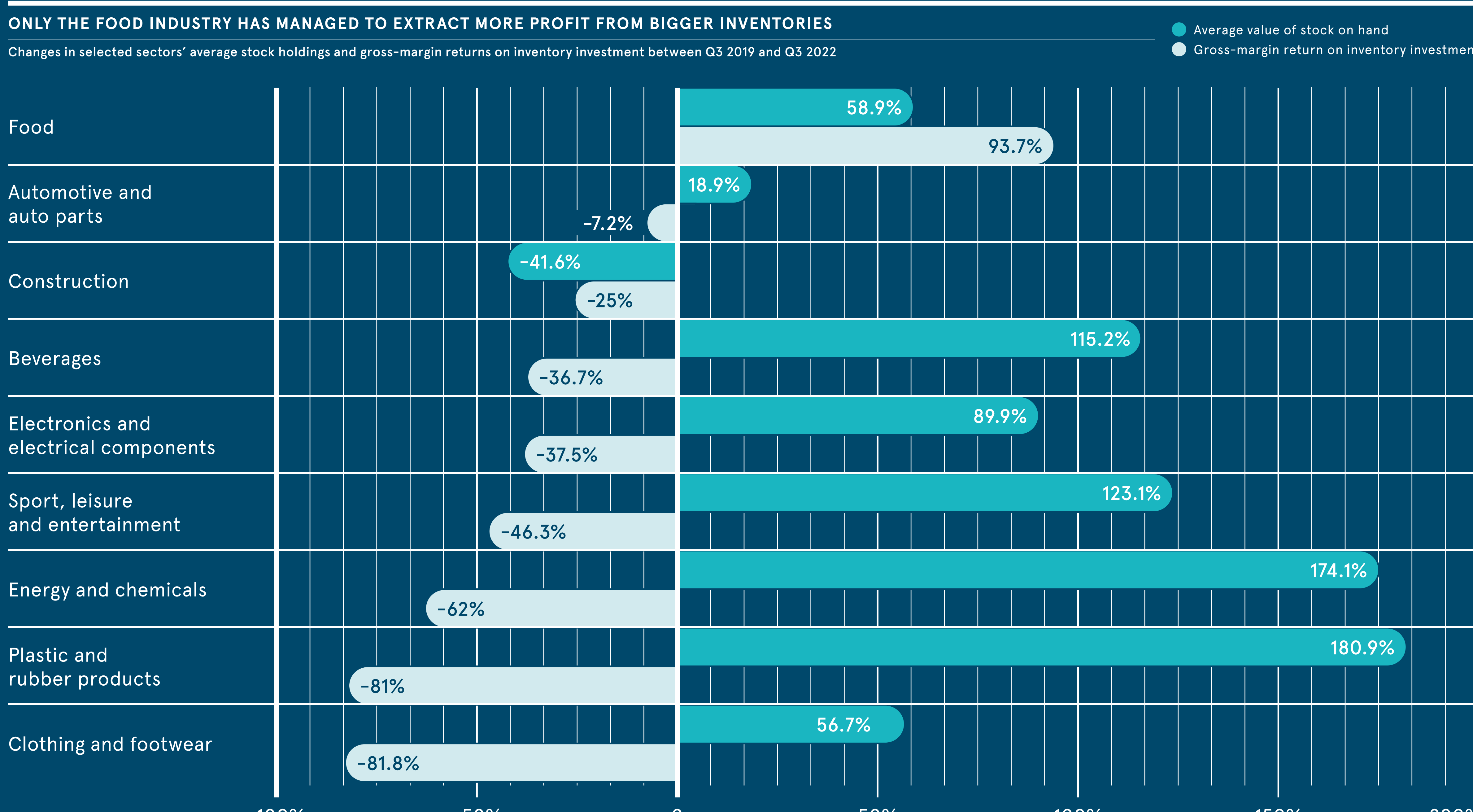
BIGGER INVENTORIES HAVE IMPROVED FULFILMENT TIMES, DESPITE WIDESPREAD SUPPLY CHAIN DISRUPTION

Average fulfilment times among small and medium-sized manufacturers in the UK from Q3 2019 to Q3 2022 (days)



ONLY THE FOOD INDUSTRY HAS MANAGED TO EXTRACT MORE PROFIT FROM BIGGER INVENTORIES

Changes in selected sectors' average stock holdings and gross-margin returns on inventory investment between Q3 2019 and Q3 2022



Unleashed, 2022

SEMICONDUCTORS

Why subsidies won't solve the UK's chip shortages

Semiconductor industry bosses are calling on the UK government for financial support, partly in response to recent supply chain issues. But broad subsidies may not be the best strategy

Rich McEachran

First the pandemic slowed global trade and exposed the West's over-reliance on China and Taiwan for its chips. Now semiconductor supply chains are at risk again – this time from rising tensions between Washington and Beijing.

The trade war between the two superpowers has underlined the need for countries to boost domestic semiconductor manufacturing if they want to secure chip supplies.

Last summer, the US signed into law the CHIPS and Science Act. The act establishes the Creating Helpful Incentives to Produce Semiconductors (CHIPS) fund, which provides $52bn (£48bn) to help American companies to develop and produce chips stateside. Meanwhile, the European Union is looking to reduce member states' dependence on imports with its European Chips Act, which the bloc hopes will double its global semiconductor market share from 10% to 20% by 2030.

Demand for cars and electronics has been cooling amid high inflation – leading, if anything, to a temporary oversupply of chips – but a handful of chipmakers, including Samsung, have pointed to a second-half recovery. Unfortunately, as countries vie for chip dominance and offer huge subsidies to incentivise domestic production, the UK is at risk of being left behind some of the faster-moving territories.

Unlike the US and EU, which have already committed to splashing billions, the UK's semiconductor industry is being held back by a lack of direction. At the time of writing, the UK government hasn't yet published its long-awaited semiconductor strategy.

On 3 February, MPs on the Business, Energy and Industrial Strategy (BEIS) committee called the delay "an act of national self-harm". Just a few days later BEIS, which had been holding an inquiry into the UK's semiconductor industry for several months, was broken up as part of Rishi Sunak's cabinet reshuffle.

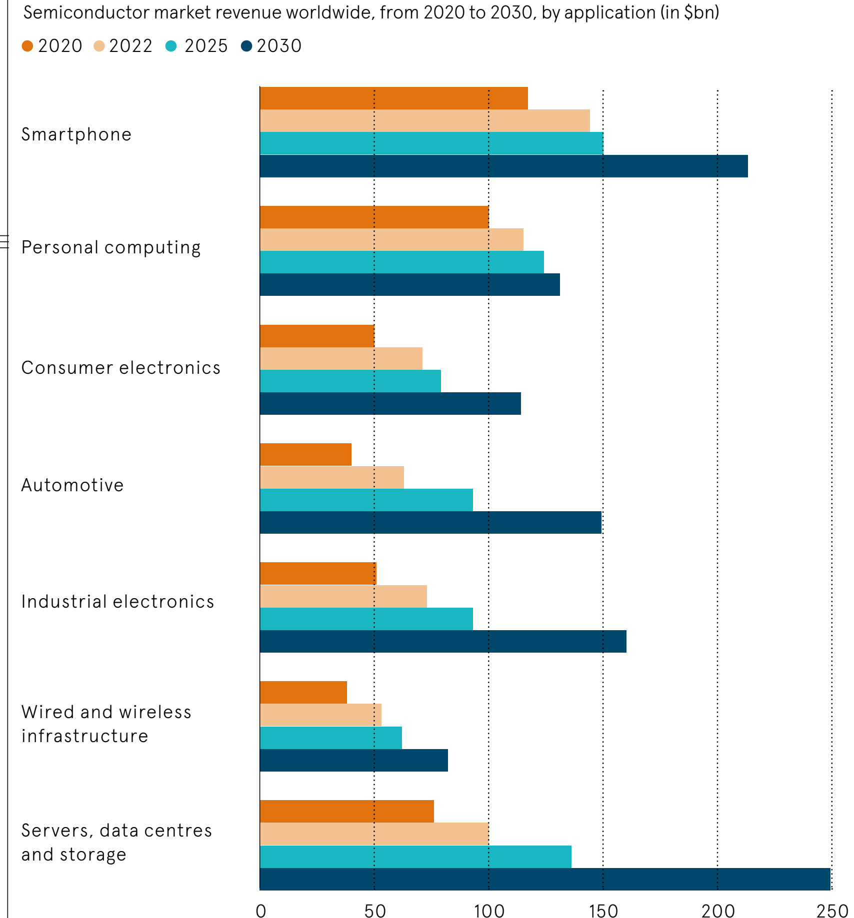
Semiconductors will now be overseen by the newly created Department for Science, Innovation and Technology. The concern is that the reshuffle could delay the strategy's publication further. Industry bosses are becoming increasingly frustrated.

Bloomberg via Getty Images

This plant in Newport is already manufacturing semiconductors

DEMAND FOR PERSONAL ELECTRONICS IS FORECAST TO DRIVE THE SEMICONDUCTOR MARKET FOR DECADES TO COME

Semiconductor market revenue worldwide, from 2020 to 2030, by application (in $bn)



ASML, 2023

"It's imperative that the government releases its semiconductor strategy soon, and that the strategy is backed by meaningful investment," says Scott White, CEO of Cambridge-based Pragmatic Semiconductor.

"This doesn't necessarily need to be at the same absolute level as, say, the US and EU chip acts. But it should be proportionate to the scale of the UK's economy. And it needs to provide support for capital expenditure in order to retain and grow domestic manufacturing."

The UK semiconductor industry is only a fraction the size of that in the US and countries in Asia. More than 90% of the world's advanced chips are procured from one company alone: Taiwan Semiconductor Manufacturing Company (TSMC). As a result, the global and complex nature of the semiconductor supply chain means that it is probably unrealistic that the UK could achieve chip autonomy.

Mark Lippett is CEO of XMOS, a Bristol-based semiconductor company focused on the internet of things. He thinks the idea that an entire country or continent can become self-sufficient for the entire semiconductor value chain is a real challenge. "The UK won't be able to develop a full supply chain to fulfil its semiconductor needs. That is beyond the scope of even the US or Europe," he says.

Instead of splurging on subsidies to try to compete with other countries, perhaps the UK would do well to focus on providing targeted investment. That might enable the UK to assert itself as a leader in technologies that others want to procure. Lippett points to interest in the Dutch firm ASML, which supplies the top chipmakers, including TSMC, with critical components and technology. It is an example of how small countries can have a big impact on the semiconductor supply chain through specialisation, says Lippett.

> **The longer we take to start investing, the bigger the gap we will have to bridge between where we are and where we want to be**

White agrees about the need for the UK to specialise. He wants to see the government direct any financial support towards developing and nurturing manufacturers of advanced semiconductors. As he puts it, traditional silicon chip manufacturing would require billions. Even then, that level of investment would be unlikely to lead to global success. On the other hand, investing tens of millions in a particular type of chip, or components needed by the likes of TSMC, would go a long way.

Failing to capitalise on this opportunity could be damaging too. "Domestic semiconductor companies will either lose revenue to foreign competitors or potentially be forced to move abroad to survive," warns Rohit Gupta, UK managing director at digital solutions leader Cognizant, which works with manufacturers to streamline their supply chains.

Relocating British operations overseas, to where production can be subsidised and operations are cheaper, won't necessarily translate into higher costs for UK customers, but they could face longer lead times as a result. It would also make chips more susceptible to the type of supply chain bottlenecks that the UK semiconductor industry is keen to avoid in the first place.

This failure to invest in chip research and development could also lead to a brain drain and a loss of the talent that the UK's semiconductor industry desperately needs. If the UK's chip scene stagnates, then the talent is far more likely to look elsewhere for roles that are better paid and which offer more opportunities for career progression. Inevitably, semiconductor manufacturers that are currently based in the UK could go where the talent is.

"All of this would weaken the UK's position in the global semiconductor ecosystem," says Lippett. "The longer we take to start investing, the bigger the gap we will have to bridge between where we are and where we want to be," he cautions.

Even with the right investment in place, the UK won't be able to fix all the broken parts of the global supply chain. But it has to start somewhere – and as soon as possible.

Commercial feature

Putting consumers at the heart of the supply chain

As consumer habits change, supply chains need to adapt to reflect the surge in online shopping

The way we shop has changed, with people increasingly looking to the convenience of buying online rather than making a trip to the shopping centre or high street. And with this shift has come a parallel move towards direct-to-consumer (DTC) selling, a model which cuts out intermediaries and calls for a more consumer-centric supply chain.

"Traditionally, the supply chain ended at the retail store – that was where people went to shop," explains Will Lovatt, general manager at fulfilment solution specialist Deposco Europe. "But in a consumer-centric world, that has changed, with shoppers now able to order through their chosen device and at a time that suits them."

Of course, if retailers, manufacturers and third-party logistics (3PL) companies want to service consumers via these DTC channels, the underlying fulfilment technology must be able to handle unfamiliar workflows and volumes, as well as coping with a range of technical complexities. "Modern fulfilment technology has to be able to accept orders from all of these channels, all of the time, and have a real-time view of inventory across the whole supply chain network," says Lovatt.

Deposco has therefore developed a purpose-built, web-based platform to support global businesses operating their own fulfilment centres, as well as a growing number of 3PLs who take Deposco's solutions and offer them as a service to their end customers. The software helps firms to intelligently route their orders, giving a real-time view of the inventory across the whole business. This can help the company to optimise orders and bring products together efficiently from different locations.

Many ecommerce systems have grown as their customers have grown, says Lovatt, but this can be restrictive and often means they lack the IT architecture needed to support a truly global enterprise.

And while other traditional legacy solutions may offer a similar level of order and warehouse management as Deposco, he says, they can't react as quickly and help customers take advantage of the rapidly changing retail landscape.

> **Retail and ecommerce are fast-moving and fast-changing. We need to offer a service that is agile enough for companies to react and take advantage of new channels**

"Retail and ecommerce are fast-moving and fast-changing," continues Lovatt, "and we need to offer a service that is agile enough for companies to react and take advantage of new channels. Who, for instance, would have predicted a few years ago that from a sales perspective, TikTok would have become the biggest social media ecommerce gateway?

"This is one of the reasons we do a lot of work with 3PLs, because when they pick up a new customer, they need to start servicing them as soon as possible, and that's our specialism."

Lovatt also has an eye on boosting warehouse productivity. Traditionally, fulfilment processes were set up for bulk delivery to retail stores, and wholesalers didn't have the scale or flexibility to allow single items to be selected. Deposco offers a solution to this, with multiple strategies able to react to different warehouse scenarios.

"There's plenty of anecdotal evidence about people walking 20km a day around a warehouse in order to fulfil orders. That may be good for their fitness, but it's not good for company productivity," says Lovatt.

Some systems only allow for a single picker at a time to fulfil an order, but if that involves hundreds of different items, that's not efficient, he says. Deposco can introduce zonal strategies, with individuals looking after certain areas of the warehouse, and software that will help to pick and sort across multiple users, with the final order being consolidated into one customer-specific packed order.

Deposco can also help clients meet their sustainability targets. "A well-managed supply chain means less waste and a smaller carbon footprint," says Lovatt. It's also possible to achieve reduced overstocks, fewer emergency orders and fewer products going out of date.

"We also understand the dimensions of products, so we can pack intelligently into an appropriate sized package, which means vehicles aren't carrying fresh air," he adds. "Helping companies to make these small incremental changes can really add up."

For more information visit deposco.com

DEPOSCO

The mining sector in the Democratic Republic of Congo is poorly regulated

PUBLIC RELATIONS

Tread carefully: the art of ESG disclosure

What's the best way for communications teams to manage reputational issues in the supply chain?

Laurie Clarke

When Boohoo was accused of modern slavery in 2020 because of the working conditions in one of its suppliers' factories in Leicester, its share price fell by 18%, retailers dropped the brand and it was facing a possible US import ban. The case was an object lesson in the importance of supply chain due diligence – and handling the communications around it effectively.

Boohoo is far from the only high-profile UK firm to have been caught up in scandal affecting a supplier. Dyson is facing compensation claims alleging that working conditions in a Malaysian factory were unsafe and exploitative. Tesco, meanwhile, is dealing with a class-action lawsuit brought by workers at a Thai factory that made garments for its F&F brand until 2020.

Companies have long been aware that the blowback from ESG-related failures in supply chains can eviscerate reputations, incur fines, trigger lawsuits and, in the most severe cases, end operations entirely. As consumers become more ethically conscious and regulatory bodies strengthen their rules, the stakes are rising. How, then, should companies communicate their ESG due diligence and if the worst-case scenario arises where an ESG-related failure is discovered in the supply chain, how should they respond?

"Transparency and honesty are crucial," says Helen Ellis, head of consulting at Team Lewis, a marketing and communications agency. "It's important to own a mistake. Ultimately, it comes down to trust and honesty; it's about trying to very quickly say, 'Yes, this has failed'. Then it's about communicating and explaining what you're going to do differently going forward."

Alex Harrison, co-head of projects and energy transition at law firm Akin Gump, agrees. "It's not the crime. It's the cover-up. At its heart, ESG is about integrity. A company that discovers a supply chain issue should look to be as open and honest as it can be about the problem."

But Harrison counsels against rushing out a statement, beyond acknowledging the problem and a willingness to respond to it appropriately. "A company may not have all the facts, or its suspicions may be disputed or unfounded… the company may not be free to disclose all the information available to it for legal or regulatory reasons." Instead, a balanced account of what a company does or does not know (and is able to share), may be the best approach; what is paramount is not burying one's head in the sand.

Perhaps more important than acknowledging and communicating about the incident itself is the action that companies take afterwards – and how that is communicated. The widely publicised 2013 Rana Plaza disaster in Bangladesh, where an eight-storey commercial building housing five garment factories collapsed, was a major turning point for not just one company, but for the whole fashion retail industry.

Companies banded together to create associations coordinating their efforts to address the problems highlighted by the incident. Some of the measures taken included overhauling supplier auditing practices, including broadening the scope of what was included in an audit to cover, for example, the safety of factory infrastructure and workers' rights. Companies also started to invest more in their suppliers, transforming a purely transactional relationship into a more collaborative one.

Talking publicly about the steps you're taking to improve can be a good response in the weeks, months and even years following an ESG scandal in your supply chain. After all, the questions won't stop once you've made a commitment to improve: companies will face scrutiny on whether they have followed through.

Take the Boohoo example. "Boohoo quickly sought to rebuild consumers' trust," says Ryan McSharry, UK head of crisis and litigation at international PR firm Infinite Global. "It launched a QC-led investigation of its supply chain, hired an independent factory auditor and announced the creation of its own 'model factory' that would demonstrate best practice in terms of workers' rights."

A 2022 report highlighted progress in Boohoo's work on its supply chain in terms of sustainability and ethical compliance. But two years on from the scandal breaking, activists and shareholders are still criticising the company for alleged low wages, and the lack of repayment of historically underpaid wages.

Some brands try to get ahead of supply chain-related accusations through complete transparency. But clumsy messaging can result in accusations of hypocrisy. When the self-billed ethical brand Tony's Chocolonely publicised 1,701 incidents of child labour in its supply chain, it said that this openness was supportive of its aims of discovering and eradicating child labour and slavery in its business. Instead, the revelation led to criticism, such as from Ayn Riggs, founder of Slave Free Chocolate, who said that Tony's was "pitching virtue to consumers" while engaging in bad practices.

> Transparency and honesty are crucial. It's important to own a mistake

But transparency can only go so far. Mercedes-Benz has published information about its sourcing of cobalt – the element used in electric vehicle (EV) batteries – which is mined in the Democratic Republic of Congo (DRC) under conditions which often violate human rights guidelines. The company has claimed to be committed to the goal of only using "certified" mining sites that have undergone auditing but in practice it is incredibly difficult to avoid this problem when buying cobalt from the DRC.

Tesla is now focused on the production of batteries which are cobalt-free. This new pivot could help reduce the cost of EVs.

Building regulatory pressure means that beyond the PR risks, firms do need to think carefully about the legality of their business practices. "The risks for corporates are increasing substantially in this area," explains Richard Reichman, a partner at law firm BCL.

While the regulatory requirements around this are fairly soft in the UK now, they are hardening, says Reichman. The Modern Slavery Act and the Environment Act are both being strengthened regarding supply chains. Other jurisdictions are going even further. France has introduced a Corporate Duty of Vigilance Law that requires companies to identify and prevent harm to human rights and the environment in their business practices. Now the EU looks set to follow suit in strengthening its rules, says Reichman.

"It's crucial to implement and review due diligence procedures to respond to the increasing risk," he advises. Get the comms right too, and there's an opportunity for brands to stay on the right side of that threat. ●

THE WEST'S RELIANCE ON CONGOLESE COBALT IS BECOMING A REPUTATIONAL HEADACHE

Top countries for cobalt mining in 2022, in metric tons

B 10,000 Indonesia	C 8,900 Russia	D 5,900 Australia
E 3,900 Canada	F 3,800 Cuba	G 3,800 Philippines
H 3,000 Madagascar	I 3,000 Papua New Guinea	
J 2,700 Turkey	K 2,300 Morocco	
L 2,200 China	M 800 US	

US Geological Survey, 2023

Commercial feature

The hidden opportunity in recovering VAT

Businesses suffering due to rising costs and supply chain issues are often too busy to spend time clawing back VAT refunds from international transactions. But getting back these funds does not need to be costly or time-consuming

For any firm with a sales presence in multiple territories, keeping on top of receipts and invoices can be a near constant task. Software giant Citrix, which operates in APAC, EMEA and Japan, among other jurisdictions, employs a designated accounts payable department, as well as the latest travel and expenses monitoring assistance. However, in a fast-moving business, manually selecting and chasing VAT refunds across international transactions became increasingly difficult, says Judith D'Aguilar, global VAT director at the company.

"We had a whole accounts payable department looking at manual expenses, choosing the invoices they thought were reclaimable and processing the expenses in a very manual way," she says. "We had complaints because it took a long time for payments to be made to employees, who had to go back and get receipts where there were none. Sometimes AP staff didn't know how to categorise expenses; that manual process is prone to errors and delays."

With these friction points, Citrix suspected that VAT refunds were slipping through the cracks. The company onboarded VAT IT to simplify processes and optimise recovery, only paying the firm a fee if funds were recovered.

In the first year, VAT IT recovered $900,000 (£750,000) for Citrix. "We can now say we are maximising our reclaim for all these entities. We can also see what is being incurred from an expense perspective, as well as what is recovered and what is in the pipeline."

VAT IT specialises in identifying and reclaiming tax refund opportunities for international businesses using a mix of human and technological expertise. Operating like a VAT bounty hunter, the firm, which has 23 years of experience, only charges if it manages to recover money.

VAT IT has pulled back as much as £10m in a single year for a client. Yet the number of international businesses, both large and small, leaving cash on the table is growing in a rapidly changing global climate, says Marc Sevitz, managing director for global operations and enterprise at VAT IT.

"Citrix is a great example. As a successful global software business, it has sales teams moving between countries who stay in hotels and have travel expenditure that we recover VAT on," he says.

"Smaller businesses are also missing important returns. If a firm gets back £200,000, that can make or break the business. In staffing costs, that £200,000 could mean five or six decent hires. How many sales or manufacturing staff is that, that could then help grow the business? That's a whole evolution it might have left behind."

International businesses have faced significant upheaval in recent years due to the pandemic, Brexit and the war in Ukraine. This has often forced them to switch supply chains and be exposed to new territories and jurisdictions. This means many firms are not aware of the refunds they are leaving unclaimed, says Sevitz.

"Brexit laws were such that it made it harder to recover VAT. The previous EU process was more digital, now the post-Brexit UK is much more manual. Saying to a business they have to do more paperwork forces extra time and extra mistakes. We see that in the money we reclaim for businesses," he adds.

Lockdown also forced people to work from home and while businesses have invested in new technology, many have cut costs in the subsequent economic downturn, says Sevitz. "Often one of the first things to go is finance teams. Businesses say they are going to do VAT internally and remotely across departments, yet none of whom are working in one office. That's where mistakes get made."

> The number of international businesses, both large and small, leaving cash on the table is growing rapidly

VAT refunds can be uncovered in the most unusual of places. For instance, pharmaceutical companies often find themselves using millions of test tubes each one produced in two different territories: the glass vials in one jurisdiction and plastic tops in another. A single fashion item may have buttons, cotton or zips produced in multiple places. This can mean VAT costs incurred at different points have to be claimed back.

Few firms are more vulnerable to this than a soft drink firm that sells 500 million bottles and cans across 28 countries. Before the firm partnered with VAT IT in 2018, not only did it need to claw back money from across varying territories and products, it also needed to marry up any VAT analysis with an expense management process that was complicated and dependent on inflexible technology.

The international firm was able to simultaneously sync its existing technology with VAT IT's 'VAT Cloud', a cloud-based platform that has real-time reporting capabilities.

"VAT Cloud easily extracts expense data from Chrome River and automates, centralises and enhances the company's VAT recovery and compliance," says a spokesperson from the company. "Refunds go straight back into the business, boosting cash flow for future investment. It is easy to standardise and centralise VAT compliance when we originally thought it was a heavily localised function. Best of all is that VAT Cloud is easily accessible to our global VAT teams."

The VAT Cloud client interactive portal allows businesses to have a continuous up to date view of their VAT claims process, what refunds are successful, and what is happening with each invoice and expense. This visibility gives critical insight into funding.

Alongside this technology, VAT IT has a strong human element, says Sevitz. "We are not just paper peddlers, we do not just take a firm's invoices and give them to a VAT authority, we understand the process from end-to-end and know what to ask for. We have a team of 50 legal experts who work solely on understanding whether complex transactions have a VAT recovery opportunity and if there are queries from the tax office we answer those as well."

Whether a business currently puts all its invoices and expenses in a drawer or a box, or uses an up-to-date digital expense management system, VAT IT can seamlessly collect them and immediately get to work, bringing value back into the business.

As D'Aguilar at Citrix says: "VAT IT has led us right. It has recovered for us and we've never had an audit because the firm reclaimed something it shouldn't have. The company understands the rules, we trust them; it's a win-win."

CORRUPTION

With friends like these...

The conflict in Ukraine is increasing the risk of supply chain corruption. It's up to British businesses to make sure their processes are robust enough to fend it off

Jon Axworthy

When Russian missiles and airstrikes began falling on Ukraine on the morning of 24 February 2022, it triggered a devastating and destabilising domino effect that would first affect people's lives and eventually the global economy.

More than a year on, those economic effects are still felt acutely by UK businesses with ties to Ukraine. Sanctions and supply chain disruptions have forced industries from construction to motor manufacturing to scramble to find new suppliers, and a report by Moody's Analytics at the start of this year warned that the Russia-Ukraine military conflict now poses the "greatest risk" to global supply chains.

All that disruption allows another threat to flourish too – corruption. So says Chara de Lacey, who is acting head of business integrity at independent anti-corruption organisation Transparency International UK. "Conflict is a breeding ground for corruption, with political instability, increased pressure on resources and weakened oversight bodies creating a big opportunity for crimes such as bribery and embezzlement."

That's bound to be a concern for British businesses with supply chain connections in the area. "The invasion of Ukraine and the conflict create challenges for UK firms sourcing from affected regions," de Lacey continues. "Supply chain disruption and the shortage of key regional commodities is a risk for corruption, as businesses may try to justify paying bribes to access resources."

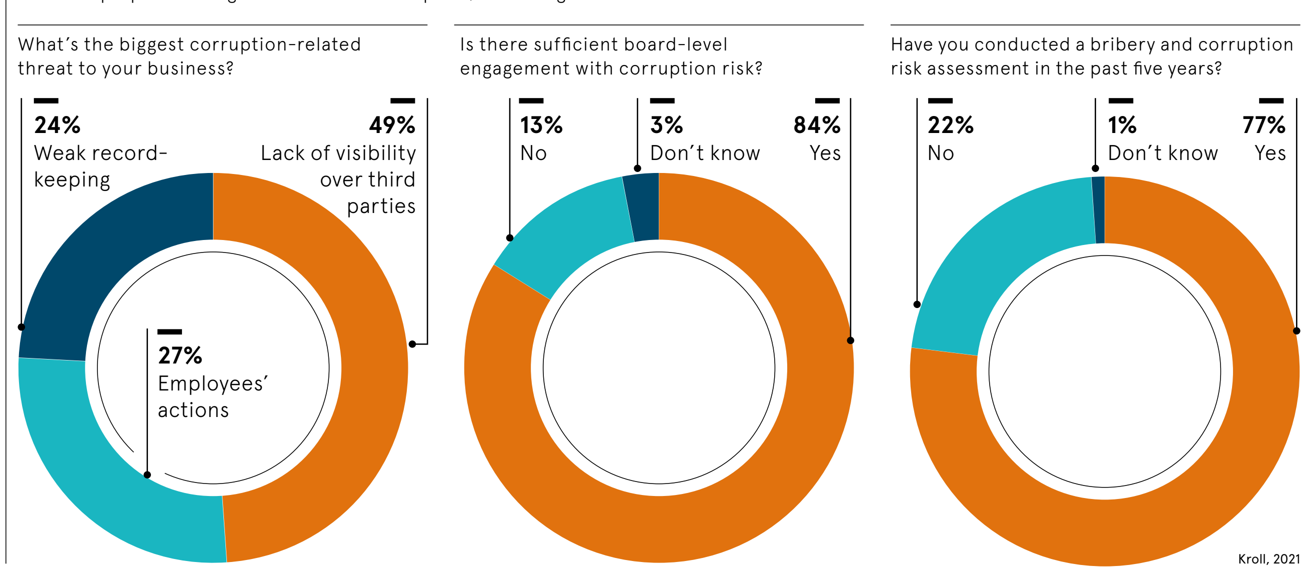
A report by corporate intelligence group Kroll suggests that most C-suites are acutely aware of the threat that corruption poses to company integrity. As many as 49% of UK executives think the lack of third-party visibility is the primary driver of an increased risk of bribery, corruption and opportunism.

In practice, this illegality can take many forms, from contractors relying on kickbacks to government officials or state-owned enterprises to grease the wheels on the movement of goods, to a supplier submitting a false invoice. "The Ukraine crisis has added huge pressure to achieving business continuity," says Arun Chauhan, founder and director of Tenet, a law firm specialising in fraud and compliance. "Some may be tempted to bend the rules."

> **Do you as a business know for certain that your purchasers will not use any means necessary to find a supplier?**

C-SUITE EXECS ARE CONFIDENT IN THEIR FIRMS' ABILITY TO HOLD OUT AGAINST CORRUPTION

Business preparations against the risk of corruption, according to C-suite members in the UK

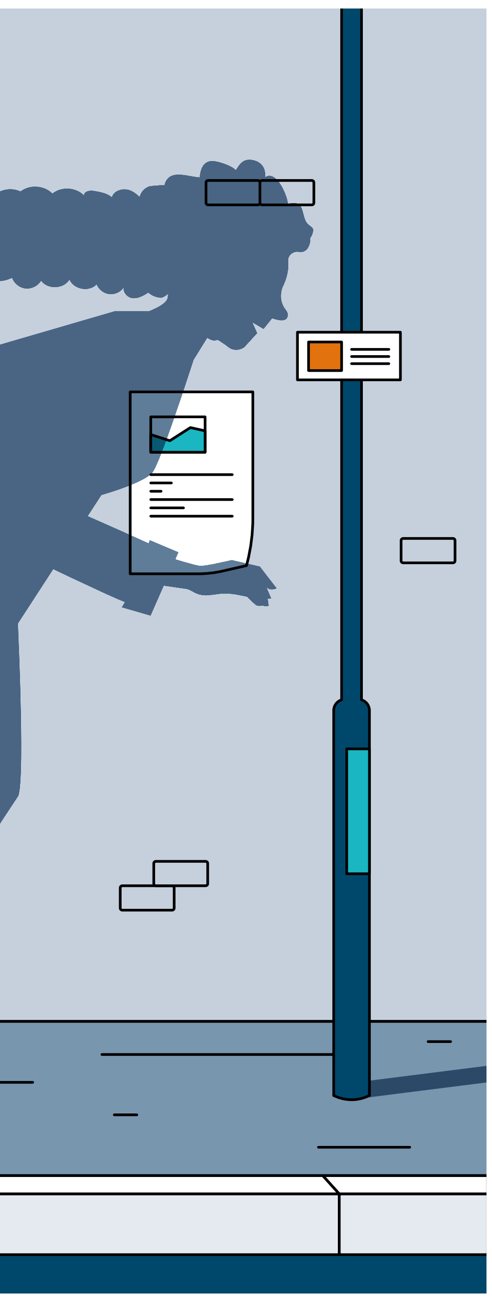


Kroll, 2021

What's more, these problems could be taking root right in front of you. As Chauhan points out: "Do you as a business know for certain that your purchasers won't use any means necessary to find a supplier or to persuade a supplier to supply them?" The trend towards remote working after the Covid crisis has made these unwanted behaviours harder to uncover.

The repercussions for a business caught operating outside the law can be serious. "Bribery is a criminal offence under the Bribery Act 2010," continues Chauhan. "Commercial organisations can receive an unlimited fine and suffer other significant adverse consequences, including exclusion from tendering for public contracts and reputational damage if they are found to have failed to put in place adequate procedures designed to prevent bribery.

"There is also a risk of imprisonment and further fines to senior management and individuals if they are found to be directly responsible for an offence."



But what can British businesses do to fend off this risk? Legal experts maintain that one of the surest and simplest ways for businesses to ensure integrity from the outset is to focus on carefully drafted contracts and to encourage greater collaboration between their procurement, legal and compliance departments.

"It's in these early encounters with potential third parties that you have the most power to mitigate risk, when they are still in competition with one another," explains Penny Ward, a trade and commerce partner at international law firm Baker McKenzie.

For instance, businesses might be able to take advantage of that competitive leverage to identify key risk areas in that third-party relationship and then tailor their procurement documents – particularly their request for proposals – to address those risks. After all, at that early stage of the bidding process, most suppliers will realise that non-compliance will probably cost them the tender, making them more likely to agree to terms that will limit the possibility for corrupt activities further down the line. This should also help to fast-track contract negotiations, which can be useful when you're trying to be as agile as possible in the search for new partners.

> "It comes down to the ethics of individual leaders and managers

Similarly, including a right-to-audit clause guarantees third-party transparency, data disclosure and regular reporting in future. In some cases, it may even enable procurement staff to make unannounced site visits to warehouses and offices.

Of course, not all suppliers are new. Even with established relationships, it's quite possible that previously sound working practices can fall prey to illegalities, as suppliers feel the pressure to deliver.

One way to safeguard the existing supply chain and root out wrongdoing is to have it exhaustively mapped. Unfortunately, this process is far from a simple undertaking, as it requires total visibility of everyone in the chain. Whether you're a smaller operation with a shallow supply chain or a global corporation with a deep pool made up of thousands of suppliers, there needs to be a thorough understanding of every single player.

While experienced personnel and risk management teams can set about identifying and reporting on transactions or processes which look shady, the number and complexity of the deals taking place in modern supply chains may mean that technological solutions will be preferable. For instance, tools deploying machine learning to trawl for signs of suspicious behaviour may be a fairly efficient safeguard, backed up by automated verification of credentials and processes, and risk indicators to flag up potential issues.

Fraud detection models can also be embedded in platforms that monitor procurement, where they can further integrate with software that monitors the whole supply chain and centralises everything from contracts and purchase orders to expense reports and the all-important invoices. The sophisticated pattern recognition element of AI can then be brought to bear on this massive amount of data, shining a light on suspect behaviours and actions that clearly need some oversight from procurement and legal departments.

Rolling out these kinds of tools will clearly require investment, but the rewards can be significant in terms of identifying value-eroding behaviours. Whether that's underfilling trucks; delivering parts and passing them off as compliant when they are in fact not; or simply materials going missing from a shop floor, there are numerous ways that disreputable vendors can exploit the strain that many supply chains are currently under.

Crucially, it's possible to scale up or down the technological solutions according to the size of the business, so that the initial investment is in keeping with the budget available. While custom models, which usually require eye-watering investments, can be 'trained' with a corporation's own data, consortium models use data from multiple comparable companies so that smaller institutions can share the model, hosted in the cloud, at a significant saving.

But AI can't exist and operate independently. There is always a significant human element to map supply chains because many suppliers will be resistant to the process. Interventions from personnel will always be required to keep mapping going down the chain. That might be to establish ground truths by way of physical visits under previously agreed audit clauses. Or simply ensuring that suppliers buy into what you're trying to achieve.

To ensure total visibility, then, suppliers need to comply fully. And it is vital they understand a business's commitment to the task of rooting out corruption and willingly share the data needed.

Ultimately, the companies that are best at mitigating risk are those that vet thoroughly. But that becomes increasingly difficult when the pressure is on to keep the supply chain moving and outmanoeuvre the logistical fallout from the war.

Here, though, the boardroom sets the tone. "Rigorous due diligence is essential to ensure responsible UK companies are not connected or contributing to corruption through their business relationships," warns de Lacey. "These checks will always be more effective when the UK companies carrying them out are genuinely committed to stopping corruption, rather than viewing this merely as a box-ticking exercise to satisfy legal requirements."

For John Glen, an economist at the Chartered Institute of Procurement and Supply, the current focus on supply chains is a golden opportunity to tackle corruption. "Supply chain and procurement are now front and centre of CEO thinking, and their voice in the boardroom has increased exponentially," he says.

"In terms of tackling corruption, organisations must decide where and how they want to do business. It comes down to the ethics of individual leaders and managers, and organisations must attract leaders who have personal ethics that abhor corruption. At an organisational level, the business must then support the difficult corporate decisions that bake anti-corruption measures into an organisation."

As the conflict in Ukraine rolls into its second year, the stakes couldn't be higher when it comes to conducting business without reproach. It's a timely reminder that now, more than ever, UK businesses need to be mindful of the companies they keep. ●

INSIGHT

'Left unchecked, modern slavery could easily flourish'

The lack of government focus makes it all the more important for companies to step up and prevent slavery in their own supply chains, says **Malcolm Harrison**, CEO of the Chartered Institute of Procurement & Supply

Organisations around the world are grappling with a constant flow of disruptions. This extended period of instability – or 'permacrisis' – presents particular challenges for procurement and supply chain professionals, especially when it comes on top of rising costs.

But while political and business leaders can get distracted fighting one fire after another, we must not allow ourselves to be blind to other long-term issues which may be accumulating. For instance, if left unchecked, unethical behaviours such as fraud, corruption and modern slavery could easily flourish during such a period of prolonged disruption.

To take just the last of those issues, the anti-slavery charity Unseen estimates that there are more than 50 million people worldwide trapped within labour violations or being subjected to restricted movement. That includes more than 100,000 in the UK alone. As consumers and business leaders, we too often fail to stop and think about the circumstances of the people who supply the goods and services we consume.

In 2015, the Modern Slavery Act was introduced in the UK. It both created the post of the independent anti-slavery commissioner and requires organisations with a turnover of £36m or more to publish an annual statement about what they are doing to address modern-day slavery, including uncovering any slavery in their supply chains. At the time, the act was hailed as a groundbreaking piece of legislation but, roll forward to today, and we have to ask where that level of focus has gone.

Take the appointment of the anti-slavery commissioner. The post has been vacant since April 2022, when Dame Sara Thornton moved on. After several failed attempts to recruit, the post is now on hold. The role of the commissioner is crucial when it comes to challenging organisations and holding them to account for their failings. It is also vital in scrutinising new modern slavery legislation, something the government has promised this year.

Ahead of that legislation, the government is currently reviewing the criteria for what constitutes a victim of trafficking, without the input of an independent commissioner. It is possible that the government will seek to increase the burden of proof around trafficking, instead of accepting a simple suspicion that someone is a victim of slavery.

This is not the time to add layers of complexity, disadvantaging those seeking help. Organisations will be looking for support and guidance on how to tackle this issue – from government, but also from other sources.

After the Modern Slavery Act was passed, for example, the government launched the Modern Slavery Statement Registry – a publicly accessible database to which companies could upload their modern slavery statements in the name of transparency. This is not compulsory but organisations are "strongly urged" to do so.

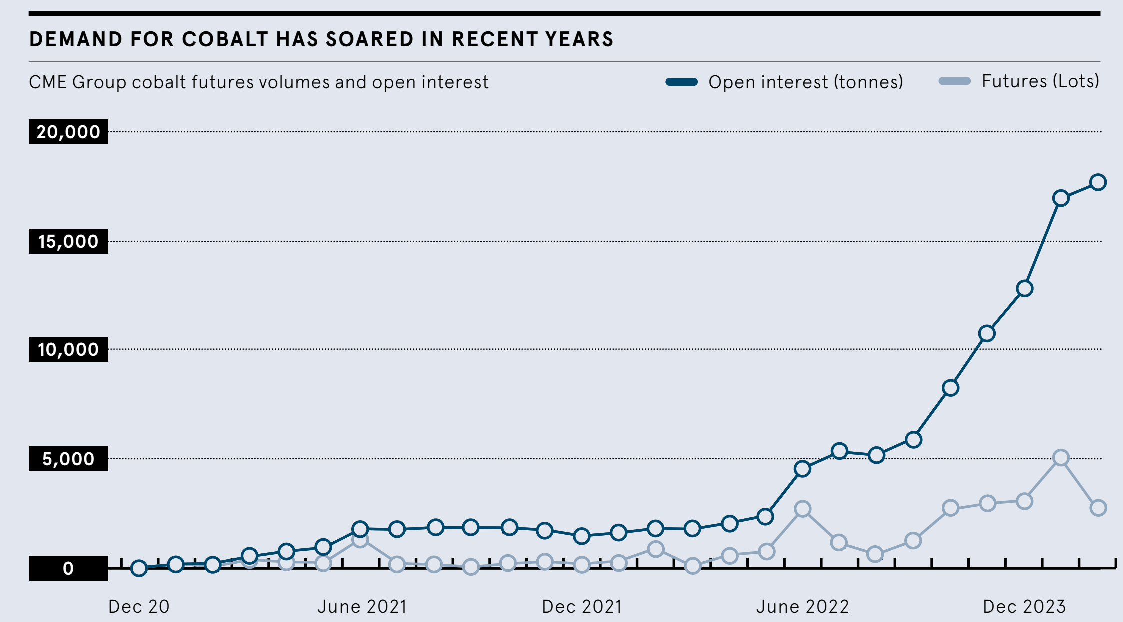
A quick scan of the statements on the registry shows that not enough companies bother. What's more, the last report from the anti-slavery commissioner shows that many existing statements fail to meet the most basic requirements.

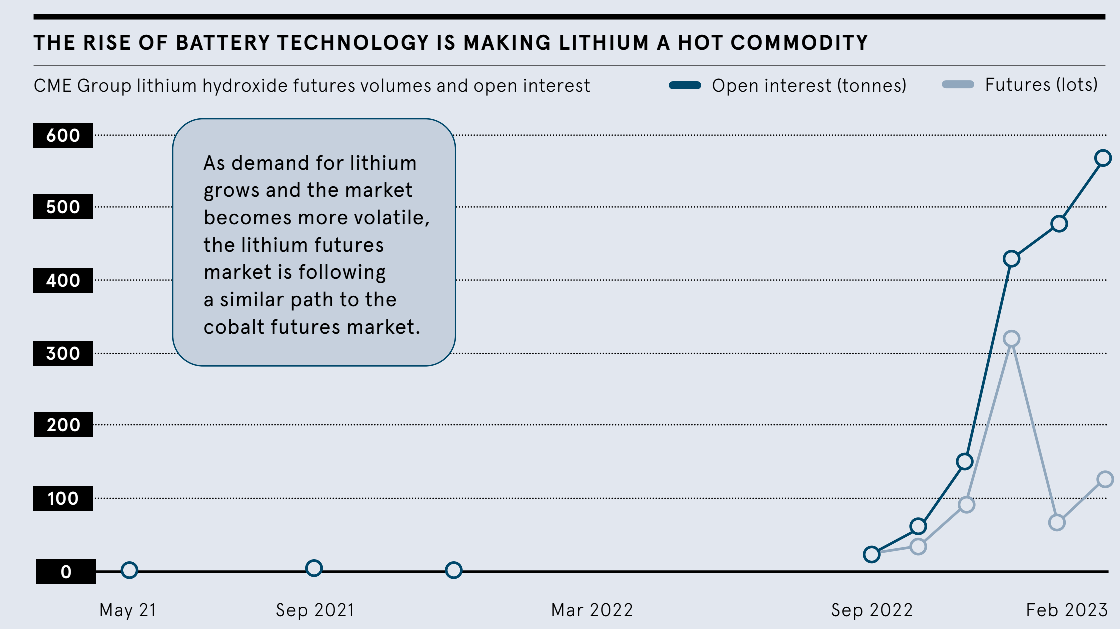
Let's hope that the new legislation will force those who continue to sit on their hands to act. The Queen's Speech last year indicated that submitting statements to the registry is likely to become mandatory in 2023. However, it is unclear whether penalties for non-compliance will be enforced.

One amendment to the original act, for instance, has proposed that the penalty for 'a company officer' – a CEO or a board chair – could be a sentence of up to two years in prison, or else the company might face a fine of 4% of global turnover, or a maximum of £20m. Punitive fines may well be the only way to get the laggards to take this seriously.

Just as the Competition and Markets Authority is taking action against corporate greenwashing and misleading environmental claims, 'social washing' needs to be looked at too. Supply chains can be incredibly complicated, spanning multiple countries and continents. In these complex networks, there is always the potential for trafficking. Finding victims of modern slavery may not be easy, but that is no excuse for us not to pull every lever to try. ●

Malcolm Harrison
CEO, the Chartered Institute of Procurement & Supply





CME 2023, Fastmarkets 2023

CPOs diversify their risk management toolkit

More businesses are turning to price reporting agencies such as Fastmarkets for protection against adverse price movements and to identify new opportunities

Supply chains have suffered unprecedented disruption in recent years. Brexit, the Covid-19 pandemic, the war in Ukraine and a succession of adverse weather events have caused extreme volatility in the price and availability of commodities and products, including those with little history of scarcity or delay.

Although the intense period of disruption has ended, long-term uncertainty persists due to changes to supply chains. Secular super-trends such as the energy transition are also fundamentally altering the nature of many markets, which means there will be no return to the pre-Covid approach to procurement.

This disruption has pushed supply chain management to the top of the business agenda and put a spotlight on the role of chief procurement officers (CPOs). Senior executives are increasingly aware of the need to prioritise investment in and support for procurement in order to protect supply chains and ensure business continuity. The aim is insulating the business from volatility as much as possible, mitigating the impact of rising costs and fulfilling delivery schedules.

> "Commodity risk management strategies can help to generate a more stable cash flow. That, in turn, can breed greater investor confidence

"CPOs have experienced a huge amount of uncertainty over recent years," says David Becker, director of the risk solutions practice at cross-commodity price reporting agency Fastmarkets. "Markets have become unpredictable. Prices have whipsawed and input prices have risen well beyond what can be passed on to customers. There has been a growing shift in the methodology needed to do business in the current market environment."

Fastmarkets has seen how markets in commodities and energy that were relatively stable or slow-moving in the past have become more volatile and now require active management. Peter Hannah, senior price development manager at Fastmarkets, says the markets for the materials used in batteries exemplify the changes that have taken place.

"For example, lithium prices could once be negotiated between a buyer and seller and fixed for up to a year," says Hannah. "Everyone had more certainty. Now procurement teams have to manage market-orientated pricing mechanisms, which have become necessary to match up supply with demand."

This is all being driven by secular trends. The global energy balance is shifting away from fossil fuels, toward renewable energy and electrification. Demand for clean energy means that commodities such as lithium, copper and sustainable aviation fuel have a big role to play in the energy transition. The growth of the electric vehicle sector in particular has increased the size and global significance of the market, as well as its volatility. The price gyrations of recent years have required a more dynamic contracting approach, and most supply agreements have evolved to reference spot indices.

"But with that you're much more exposed to the volatility of the market," says Hannah. "Fortunately, with this challenge also comes a more effective solution. Exchanges have launched futures contracts for battery materials such as lithium and cobalt, which cash-settle on the basis of the Fastmarkets indices for those products. These financial instruments allow market participants the option to independently lock in future prices, hedging as much or as little exposure as required.

"We see this becoming the norm in many of our markets as they develop," he continues. "Risk management in less mature markets tends to be more geared around counterparty relationships and sharing the risk burden. Then, as markets mature and become trickier to navigate, the toolkit for doing so often becomes more sophisticated accordingly. This has already played out across bulk materials such as iron ore, and is well under way in battery materials, forest products and biofuel feedstocks."

Fastmarkets provides access to price data that shows the market-reflective value of each battery material, together with short- and long-term forecasts that give supply/demand balances and help businesses navigate market volatility. For instance, Fastmarket's Battery Cost Index gives in-depth insights into the cost of lithium-ion cell components, and a suite of risk management tools helps reduce exposure to price volatility.

The risk management toolkit has recently become much more sophisticated, according to Becker and Hannah. By deploying appropriate risk management tools, including derivatives, CPOs can hedge exposure to future price volatility and protect profit margins. This increases the certainty of cost budgeting and cash flows; improves procurement, planning and inventory requirements; and mitigates counterparty risk. Evidence of effective risk management also helps to secure financing for new projects or developments.

Price reporting agencies such as Fastmarkets can be valuable sources of pricing data, forecasts and market analyses, giving businesses a strategic advantage in complex, volatile and often opaque markets. Commodity markets served by Fastmarkets are critical to the transition to a low-carbon economy, including new-generation energy, agriculture, forest products, metals and mining. Access to up-to-the-minute market information, together with market intelligence, helps companies manage their supply chains, while also promoting healthier commodity markets.

"It is positive for CPOs to have access to market information, including spot prices and forecasts," says Hannah. "But there can always be black swan events or things that you don't see coming. So, the key thing for CPOs is to have risk management strategies in place."

Fundamentally, Fastmarkets' products help businesses understand risks. These may certainly include price risks, but they also likely incorporate counterparty, geopolitical, technological and ESG risks too, to name but a few. Understanding these risks at a granular level is the key to addressing them.

And the insights don't stop there. Fastmarkets' products and services can also provide CPOs with risk management pointers, particularly regarding strategies to diversify their sourcing, make their contract structuring more flexible, and use derivative instruments where available.

Becker explains that when carried out effectively, commodity risk management strategies can help to generate a more stable cash flow. That, in turn, can breed greater investor confidence. The value of the business could even increase since investors will enjoy more consistent returns. And effective risk management can also encourage banks to lend more money to grow the business.

These practices used to be the domain of large organisations with substantial resources. But this is changing, given the increased complexity of markets and the development of innovative, effective tools. "It is now possible for smaller organisations to leverage the market information and insight to their advantage," says Becker. "In many ways, this is even more important for them given the concentrated nature of their business."

For more information please visit fastmarkets.com

Fastmarkets

CYBERSECURITY

Protect the pack

A full-scale hack against your supply chain software could easily spread the contagion far and wide. Businesses need to get serious about preparing for the worst – and not just hope for the best

Chris Stokel-Walker

It's no longer a case of *if* your business will be hit with an attack, but *when*. And supply chain teams are particularly vulnerable.

Gartner predicts that by 2025, 45% of organisations worldwide will have experienced an attack against their supply chain software – a threefold jump from 2021.

The inevitability of such attacks means that businesses should be looking to prioritise heading off this kind of costly disruption – before it occurs.

The alternative is not appealing. For instance, more than 18,000 businesses and organisations were compromised by the 2020 SolarWinds hack. The damage was done via an IT management and monitoring tool in common use by firms worldwide.

The SolarWinds attack is only one example of a software-based supply chain incident where the hacking of a key piece of software used by many organisations can have a ripple effect through supply chains. The 2014 attacks by the Dragonfly group of cyber attackers took several energy companies offline, although it's believed that the initial targets were the pharmaceutical industry's supply chain.

Recent research by AAG estimates that there were around 1.3 million ransomware attacks a day worldwide in the first half of 2022. "Ransomware is a booming industry that no one is rooting for," says Joey Stanford, vice-president of privacy and security at Platform.sh.

With cyber attacks proving more prevalent, how do you head off the risk to your supply chain? What can be done to safeguard the software your teams use day in, day out?

Prevention is far better than cure as the starting point to defend your business against hacking attempts.

Teaching supply chain teams how to identify potential cybersecurity risks and avoid falling victim to them is a significant and important part of the process. If hackers can't access valuable information, they can't wreak havoc with it.

An important first step is to highlight the risks that people need to be aware of and how to best respond. Regular training in cybersecurity is likely to be top of your list.

Beyond that, there are plenty of other things to do. Spring-clean your supply chain management platforms to ensure that everything you need is there – but things that you don't need, are not. The good news is that there is a fairly simple process to identify risks within a tech stack.

> It all depends on what access suppliers have to your systems

"Inventory it," advises Tim Mackey, head of software supply chain risk strategy at Synopsys Software Integrity Group. "If development teams and operations teams had a comprehensive inventory of all software in the business – regardless of whether it's custom code, contracted code, commercial code, a cloud service, or open source downloaded from the internet –then they can start to have the robust security discussions that are so vital."

That's important because the elements of supply chain software that you integrated into your system long ago and then forgot about are bound to be some of the more vulnerable points of your infrastructure.

Anna Chung is principal researcher at Unit 42, the Palo Alto Networks threat intelligence consultancy which advises Europol. She agrees that visibility over every bit of software in supply chain systems is crucial.

"Improving cybersecurity is the prime solution – but even this is undermined unless you do some hard work to understand where and how software is used in your organisation," she says. "Without that, you won't be able to embed security into how you use the software."

Chung adds that it is extremely important to know who developed the software you're using plus how its in-built security measures have been formulated. That traceability is vital knowledge if something goes wrong, so you can quickly bring the supply chain back online while identifying and quarantining the affected area.

In general, single points of failure can be particularly problematic for something as crucial as supply chain software. For that reason, it's often useful to rely on multiple vendors and providers to build in redundancy to your supply chain system – although it's essential in that case to properly document who those are and why they are vital, to avoid the risk of ghosts in the machine. Spreading the risk in this way is one option to reduce the chance of a single breach ballooning into a terminal problem for your supply chain. But committing to developing trusting relationships with suppliers can also be useful.

"It all depends on what access suppliers have to your systems, what data you share with them, and what are they installing on your network," says Michael Smith, field chief technology officer of Neustar Security Services. "Threat actors are looking to access core data inside your systems and networks, ultimately to find a loophole which grants them access to other suppliers' and partners' networks and systems. That's when it can become catastrophic."

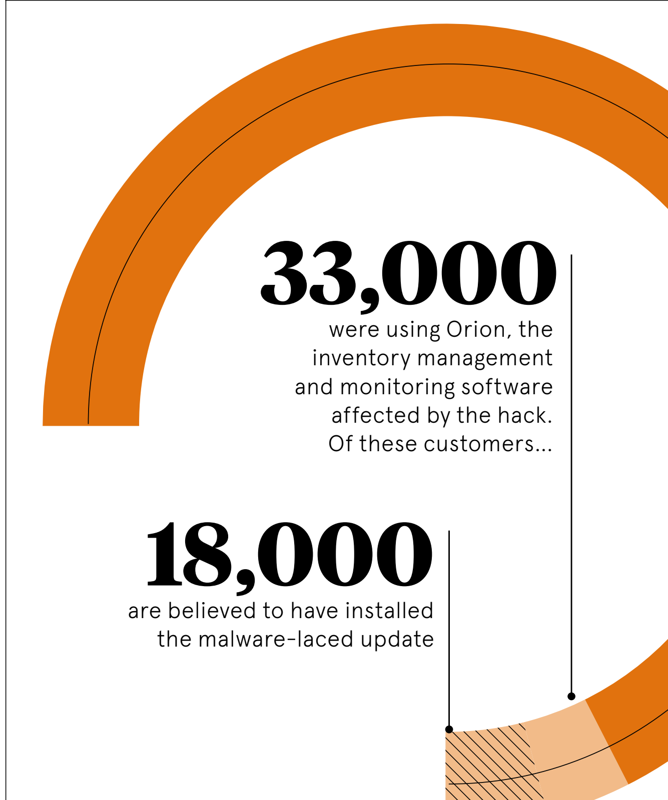
As a result, procurement teams can't afford to be shy about demanding a high level of security from their suppliers and keeping them honest. "Suppliers' or partners' negligence can pose a huge risk to your company, especially if they're not vetted appropriately," says Smith. "Businesses must be able to trust that what they are provided with will not create new vulnerabilities in their environment."

That might include inserting into your contracts the minimum level of providers' security standards that would work for the business. Use regular reporting to check how well those requirements are being met.

For something as critical as the supply chain, there's no margin of error for getting security wrong. Not maintaining safeguards around your supply chain software – for even a moment – can be catastrophic not just to your business, but to the end users and clients who rely on you to deliver items on time.

It's better to be safe than sorry – and to overcompensate for the risk of something going wrong – than to hope that nothing will and then be caught on the hoof when the worst happens.

OF SOLARWINDS' 300,000 CUSTOMERS...



SolarWinds, 2020

MACHINE LEARNING

The strongest link in the supply chain?

Wide-ranging data platforms are becoming more important to supply chain managers and procurement teams. Could machine learning help to fine-tune their decision-making?

Adrian Bridgwater

In this era of infection, invasion and inflation, many of the products and services we have become accustomed to are proving rather tricky to get one's hands on, from fresh produce to vital computer chips. That means everyone suddenly has a heightened awareness of supply chains – including what happens when they falter, splinter or break.

So, what's going wrong? Why can't existing supply chain processes enable procurement teams to get products to us in the way they used to?

Well, beyond the added pressures of shortages, rising costs, Brexit and Covid, many of the problems here appear to come down to questions of scale and complexity. Procurement teams' techniques are generally robust and capable at their core, but that might not be enough in today's hyper-connected world, with its digital business landscape and its international freight movement topographies.

Supply chain managers have, after all, been making core sourcing decisions for years. They have even started using some of the newer breed of predictive tools designed to inform and guide their decision-making. Generally speaking, that all works pretty well.

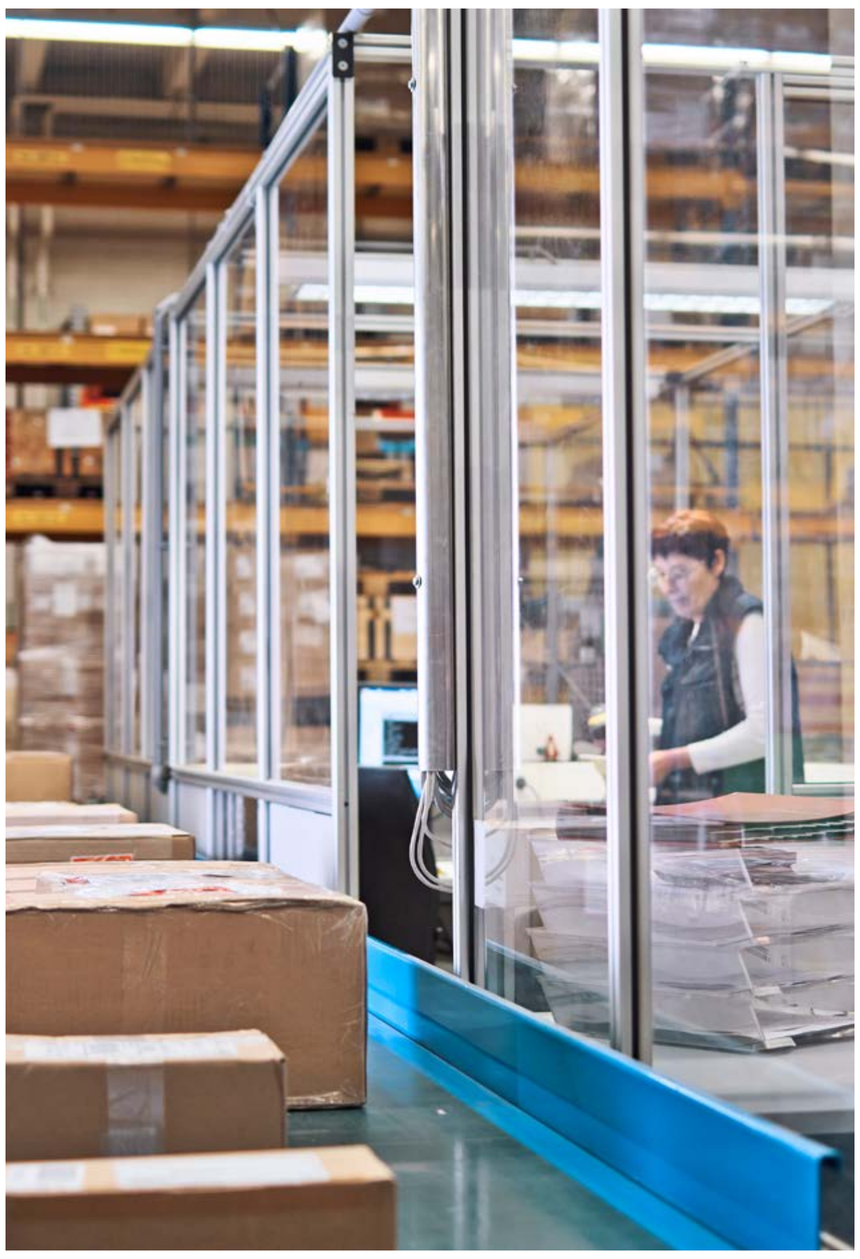
What they may not be so good at, though, is understanding the cascading knock-on consequences that flow from each of their decisions. As some companies are now finding, a new, smarter employee may be needed to help teams fill in those gaps.

Of course, plenty of tools already exist to help procurement teams forecast demand and inventory levels. But machine learning (ML) may now be poised to take these technologies to the next level. For instance, if it can ingest enough data related to past operations, ML-driven supply chain software can theoretically offer granular insights into the likely effect of the smallest changes in markets, production schedules, consumer demand and the wider status quo.

It's something to which Alessandro Chimera, director of digitalisation strategy at enterprise data company Tibco, can attest. He has seen at first-hand how the use of AI and ML can accelerate supply chain decision-making at many levels and help businesses dodge key crunch points.

"Modern supply chain management is now a multidisciplinary function," he says. "It's now a coalesced union of demand planning, customer and market data analytics, real-time data processing and third-party data integration."

That creates an opening for an all-encompassing tech solution. "Where organisations have adopted a data platform approach with enough breadth to shoulder these technologies and then applied ML to each tier of data in their operational fabric, that opens the door to Industry 4.0 and the world of AI-based decision-making," he explains.



> **AI and ML can accelerate supply chain decision-making at different levels – and that can help businesses to dodge key crunch points**

One Tibco customer, Hemlock Semiconductor, embraced ML-driven supply chain management to oversee certain aspects of its warehousing, logistics planning, inventory management and core manufacturing. Today, Hemlock uses bespoke data visualisations to examine granular aspects of its manufacturing processes. And with real-time alerts informing live operation management, the company has found it can reduce its costs and avoid snarl-ups in the manufacturing process.

"We're connecting data in ways we never could before, which helps us better manage maintenance and plan improvements," says Kevin Britton, programme manager at Hemlock Semiconductor. "We're able to confirm where we're doing things most efficiently and track our performance, which is a key enabler of being able to improve. And this data-driven approach extends to our continuous improvement process itself."

So, how can companies go about achieving this? The first step surely has to be compiling end-to-end data on the supply chain, from the initial supplier or the business's own factory through to the end customer.

"The challenge here is to bring enough data together to create that big-picture view of real-time situations and then be able to analyse the data to identify risks and potential hiccups in the supply chain," says Greg Sloyer, manufacturing industry principal at cloud-based data platform Snowflake.

To make that happen, manufacturers will need to be open to sharing their supply chain data externally with partners, ideally in a secure and compliant way, Sloyer suggests. Doing so enriches data sets, he argues, as it offers an end-to-end view of the supply chain and keeps everyone informed about what's going on.

"Once this end-to-end view has been established, analytical technologies such as AI and ML can provide insights in the form of alerts, forecasts and business intelligence recommendations," Sloyer explains. "Insights such as these give businesses the luxury of agility, the ability to proactively spot a problem or predict an outcome and act on these insights quickly, based on an understanding of the real-time situation."

So, the advice for manufacturers centres on the fact that while ML-powered supply chain management is possible, it will likely rely upon platform upgrades. Businesses less heavily engaged in manufacturing, on the other hand, are likely to encounter a slightly different obstacle.

That's according to Bob de Caux, who is vice-president of automation at enterprise cloud company IFS. He explains that while ML has indeed been employed effectively across practices such as inventory forecasting and supplier relationship management, those use cases typically require lots of well-curated historical data.

That need not be a problem if companies commit to building and maintaining those data sets. "The opportunities are now there to use ML in more of a real-time decision-making capacity, feeding into dynamic areas of the supply chain such as workforce planning and route optimisation," de Caux continues. "We know that ML can potentially help to interpret many different structured or even unstructured data sources in near real time, such as weather data, social media data and news feeds. It can then predict the likely effect of these factors on existing logistics plans and automatically make the necessary adjustments. This is the kind of pre-emptive planning that can be critical in the face of, say, an extreme weather event."

The possibility is out there, then. As the data universe of organisations sharing their supply chain information grows – and gradually dovetails with our ability to filter that information through ML systems – it should become easier for businesses to avoid supply chain disruption. They may even be able to capture some efficiencies along the way.

Logically, this should also be a clear opportunity to do better for the planet, as well. Whether we'll all still be able to buy Moroccan tomatoes in January, however, is another question altogether.

SUPPLY CHAIN LEADERS ARE FEELING POSITIVE ABOUT THE LATEST TECHNOLOGICAL DEVELOPMENTS

Expected impact of new technologies, survey of supply chain leaders worldwide

	Will disrupt the industry and create competitive advantage	Could create competitive advantage	Will support ongoing improvements	Little to no impact
Robotics and automation	17%	39%	32%	12%
Predictive and prescriptive analytics	11%	41%	36%	12%
Sensors and automatic identification	12%	38%	39%	11%
Autonomous vehicles and drones	13%	37%	31%	19%
AI	13%	36%	36%	15%
Inventory and network optimisation tools	9%	38%	43%	10%
Wearable and mobile technology	8%	34%	42%	16%
Cloud computing	8%	31%	45%	16%
Blockchain	9%	27%	41%	23%
3D printing	6%	23%	39%	32%

MHI, Deloitte, 2022

Commercial feature

HOW BRITISH MANUFACTURERS ARE BUILDING SUPPLY CHAIN RESILIENCE

Survey of UK manufacturers, commissioned by Make UK in partnership with Infor

93% of manufacturers agree that supply chains will remain under pressure in 2023 and 2024

1.5% of UK manufacturers have reported no supply chain challenges in the past 12 months

60% of large companies and 43% of SMEs have diversified their supply chain

15% of SMEs have explored supply chain monitoring, with almost four in 10 taking no steps in this regard

IS FOCUS DRIFTING?

Changes in supply chain resilience investments over the past 12 months, survey of UK manufacturers

11% to 2% The decline in the share of companies planning moderate investment in their supply chain resilience

11% to 4% The decline in the share of companies planning significant investment in their supply chain resilience

Make UK, 2023

Supply chain resilience in the era of the permacrisis

The volatility and instability that have affected supply chains worldwide will continue, so businesses need to focus on resilience and invest in the right technology

Supply chains have largely recovered from the shock of the Covid-19 pandemic, but events such as conflict in Ukraine, relations with China and EU-UK trading relationship uncertainties affect efficiency. This permacrisis environment means supply chain management must change, facilitated by technological investment.

No Weak Links: Building Supply Chain Resilience, a report by Make UK in partnership with Infor, found that 93% of manufacturers agree that supply chains will remain under pressure in 2023 and 2024.

Andrew Kinder, senior vice-president of industry strategy at Infor, believes that it is "better to prioritise resilience over efficiency". Traditional principles of leanness and just-in-time inventory management need to be reconsidered, with resilience defined as "the capacity to respond to change".

Balancing resilience and efficiency with supply chain visibility

Investing in inventory and capacity is a buffer against uncertainty, but this becomes expensive, so building resilience is important. Kinder cites supply chain visibility as the "number one foundation" for building supply chain resilience, followed by intelligence, automation, and a digitally connected ecosystem. The Make UK report found that only 1.5% of UK manufacturers reported no supply chain challenges in the past 12 months.

"There's no cure for volatility – it's here to stay – but we can detect it or anticipate it faster than ever before. But to do that businesses need supply chain visibility," Kinder says.

However, he says that "visibility is still somewhat limited in UK manufacturing", with the majority still operating on a traditional 'one-up-one-down' basis, where operators can only identify from whom they have been supplied with an item and to whom their products have been supplied. This limited view only covers part of the supply chain, which is generally more complex. Investing in technology to improve visibility means businesses can better identify or anticipate problems, evaluate and recommend alternatives, and automate responses.

Digital solutions to aid human intervention

Kinder cites AI and machine learning as two key supply chain technologies: "The role of AI and machine learning is to bring that wider perspective of intelligence across all data. Once they have that information, they can automate decisions, or a business can decide whether the technology automates or just recommends."

Kinder describes this as the "pivotal stage" for operators, with different levels of human intervention favoured across companies. Supply chain visibility technology helps decision-makers monitor supply chains, determine solutions and mitigate against disruption, with Kinder adding that solutions should enable instant communication up and down the supply chain, preferably in multiple tiers, to ensure rapid responses.

While the Make UK report found that 60% of large companies and 43% of SMEs have diversified their supply chain, there is still a low take-up of supply chain monitoring solutions. Just 15% of SMEs have explored this, while almost 40% have taken no steps at all.

One company that is ahead of the curve is Kuehne+Nagel, which has used cloud-based visibility technology for its global logistics services since 2013. With supply chains that cross borders, Kuehne+Nagel digitally monitors, measures and reviews domestic and international shipping modes, as well as inbound and outbound flows.

The positive business outcomes from supply chain transparency at Kuehne+Nagel include increased new customer wins by more than 50%, a threefold increase in transaction volumes, better managed lead times and improved product velocity.

Data is another area that can benefit business, but only if it is used well.

"Data has been described as the 'new oil' but, like oil, it is only any good if it is refined," says Kinder. "Data needs to be as complete as possible, so if you think about supply chain decisions in the systems of your business, customers, suppliers, transport providers and finance institutions, that's the data you want to make holistic decisions."

Kinder says businesses need to analyse data so they are not "looking at noise, but at meaningful data that will guide decisions. AI and machine learning can separate the meaningful data and the correlations from the noise."

> **Supply chain visibility technology helps decision-makers monitor supply chains, determine solutions and mitigate against disruption**

Making the business case for technology investment

Barriers to investing in AI and machine learning include incomplete data and a lack of skills or confidence with the technology, even if relevant data is available.

For supply chain managers making a business case for investment, Kinder suggests that showing use cases can reassure decision-makers about the value of the technology, demonstrate that it is not daunting to operate and overcome scepticism, particularly about sharing information externally.

"Businesses need data from outside their enterprise – that means somebody has to be prepared to give it up and you have to be prepared to do the same thing for the good of the supply chain," Kinder explains. He says businesses do not need to share intellectual property or commercially sensitive information to effectively use data.

"There is still some nervousness about data-sharing and a little bit of scepticism about AI and machine learning, yet most of us use this technology every day, such as recommendations from Amazon and Netflix," Kinder continues.

He encourages supply chain managers to focus on KPIs when presenting a business case, such as quote times and turnaround times on deliveries: "We look at examples from existing data to see how improvements can be made that would positively impact KPIs and the resilience of the supply chain – it's a business case, not an emotional case.

"It's about technology choices versus more capital investment, or versus hiring more people, or holding higher amounts of inventory, so a business case for investing in AI and machine learning technology is absolutely required."

In addition, government can encourage investment in technology to help the UK become more competitive globally and boost resilience, according to Kinder: "We recommend investment breaks for advanced supply chain technologies – for UK manufacturers there is a productivity gap, so we're running slightly behind our nearest competitors."

Resilience as a long-term investment

When companies can spot the shortfalls that prevent optimum resilience, the business case for technological investment becomes clearer. However, the Make UK report found that, as 2022 drew to a close, the share of companies planning intermediate investment in supply chain resilience fell from 11% to 2%, while the share of those planning advanced level investment dropped from 11% to 4%.

Kinder says that a resilience checklist helps businesses examine how well supply chains can cope with disruption. The checklist should cover evaluating alternatives to regular suppliers, if intelligence evaluates and models different scenarios, and whether there is a process workflow or system of intelligent alerts to detect changes.

Key checklist questions include: Do you know your intelligence and automation rating? How many of your suppliers use automation? Do you have a digital connection with your supply base that goes directly into your ERP system? Do you have a truly collaborative environment where you can see supplies in real time?

When shortfalls are spotted, Kinder says this helps create a solid business case for technology that will build resilient supply chains and help UK companies become more competitive on the global stage.

For more information visit infor.com

BREXIT

Windsor change: the future for trusted traders

Under the new-look Northern Ireland protocol, the so-called trusted trader scheme will be revamped and expanded. How will these reforms affect GB firms sending goods across the Irish Sea?

Daniel Thomas

Dan Kitwood via Getty Images

In February, after years of wrangling, the UK and the EU finally agreed to overhaul the Northern Ireland protocol, the part of the Brexit deal that sets Northern Ireland's trade rules. As a result, the system that certifies and manages so-called trusted traders is set to undergo significant changes.

Under the new framework announced in Windsor by Rishi Sunak and the European Commission's president, Ursula von der Leyen, the trusted trader scheme will be revamped and expanded. The hope is that this will reduce the amount of friction that firms in Great Britain encounter when moving goods across the Irish Sea for sale in Northern Ireland.

Business groups are cautiously optimistic that the Windsor framework will lead to a lighter-touch system, which they feel is sorely needed. Administrative barriers have made it difficult to get fresh food and other products into Northern Ireland from Great Britain in recent years, prompting some retailers to temporarily withdraw items from the market.

The new rules aim to remedy the problem by splitting goods entering Northern Irish ports into green and red lanes. British products staying in Northern Ireland will use the green lane, meaning that they will incur less paperwork and no routine physical checks. Products due to travel on to the Republic of Ireland will use the red lane and be subject to the same checks found at any border to the single market.

To be able to use green lanes, a business will first need to register as a trusted trader. Although that facility already exists, it's set to be overhauled under the new UK internal market scheme. According to the EU, this should "dramatically simplify" (but not eradicate) procedures controlling the movement of products into Northern Ireland.

For example, traders transporting food using the green lane will need to complete one certificate for each lorry movement rather than several certificates for each load. Visual inspections of the seals on trailers will be reduced from 100% of incoming HGVs today to 5% by 2025, while physical checks on green-lane shipments will no longer be routine. These will be performed only when the authorities suspect foul play.

The current system of sending parcels is also set to be reformed, which will surely come as a relief for ecommerce firms.

Under the original protocol, all parcels sent by companies in Great Britain to consumers in Northern Ireland required a customs declaration (although that part of the agreement never kicked in owing to a "grace period"). This requirement has been removed for trusted traders, but some conditions will still apply to logistics companies.

Supermarket chains and other large businesses that are members of the trusted trader scheme will be automatically moved on to the new system.

William Bain, head of trade policy at the British Chambers of Commerce, is cautious in his assessment of the Windsor framework, but says that it "appears to be a positive step towards smoother trade flows across the Irish Sea".

But businesses will have to wait a while yet before they see improvements on the ground. Although the new rules governing the movement of freight are set to apply from September, others will take several years to bed in.

Moreover, the UK and the EU still need to rubber-stamp the legislation in the coming months. Bain notes that only after the legislation is signed will businesses obtain "detailed guidance" on the changes to the trusted trader scheme from HMRC and the Department for Environment, Food and Rural Affairs.

One change is that a wider range of entities will qualify for trusted trader status. At present, only UK firms with a fixed place of business in Northern Ireland are eligible to apply. Although the criteria by which applicants will be assessed will be eased, there have already been calls for more detail on what this means in practice.

Roger Pollen, head of the Federation of Small Businesses in Northern Ireland, stresses that the "trusted" element of the scheme "needs to mean something. It has to offer a significant difference in administrative burden for those that gain trust compared with those that don't, so we look forward to learning what the concept of trust will actually deliver."

Pollen recounts a recent discussion he had with one company, which pointed out that, while "the much-vaunted new system will require 21 data points – down from 80 – only six have been specified so far. Until the firm knows the nature of the other 15, it's reserving judgement on the exact benefits offered by the new arrangement."

A requirement that all green-lane goods for sale in Northern Ireland must be labelled "not for EU" by July 2025 is causing consternation. In January, Archie Norman, the chairman of M&S – which has about 20 stores in Northern Ireland – wrote an open letter about it to the Foreign Office. In it, he complained that such labelling "would require specific production runs and segregated stock for about 7% to 9% of our volume, incurring costs of packaging changes on every production run (particularly challenging for small suppliers)".

UK authorities will monitor the trusted trader scheme, although EU officials will have access to key customs data and can request checks if they deem it necessary.

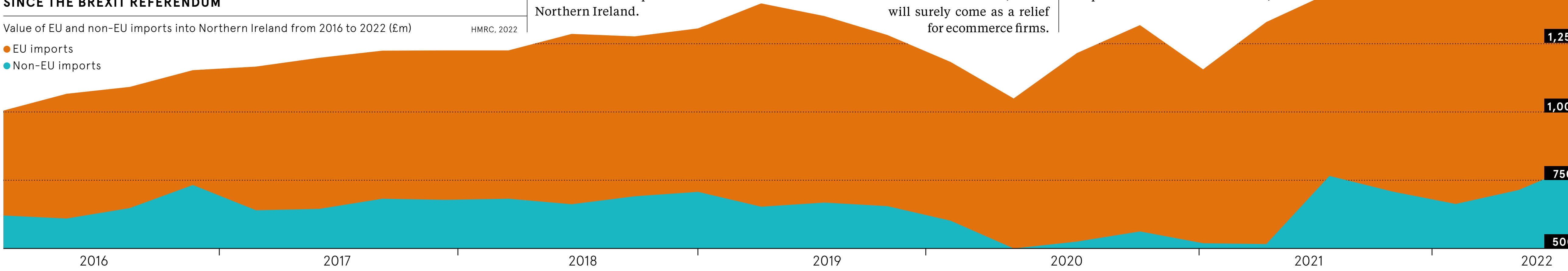
It's also notable that the scheme can be suspended in the event of a breakdown of trust. The EU could do so if the UK failed to grant it access to the relevant customs systems and databases, for instance, or didn't live up to the commitments it undertook when establishing the scheme. The UK, on the other hand, could suspend it if customs facilities for trusted traders were no longer in place in the EU.

In such a situation, the movement of goods would be subject to the same requirements for goods at risk of entering the EU, emphasising the importance of getting this right. But the mood on all sides, for now at least, is generally positive.

IMPORTS INTO NORTHERN IRELAND HAVE REMAINED RELATIVELY STEADY SINCE THE BREXIT REFERENDUM

Value of EU and non-EU imports into Northern Ireland from 2016 to 2022 (£m)

HMRC, 2022



Commercial feature

How big data builds more resilient supply chains

From reducing food and labour shortages to combating forced and child labour, transparency is the key to resilient and sustainable supply chains

If you've been to a supermarket recently, you will probably have encountered empty shelves, sky-high prices, or even rationing. These shortages come hot on the heels of an energy crisis, which was preceded by widespread electronics and automotive shortages. Consumers have endured outages like these since the beginning of the pandemic, leaving many to ponder if things will ever return to "normal".

The source of these issues lies within the supply chain. Supply chains are key to doing business in a globalised world, yet managing them effectively has become increasingly challenging. The pandemic and the war in Ukraine have disrupted trade routes and caused commodities shortages, driving up costs for businesses. Protectionism has created new trade barriers, while extreme weather has devastated harvests worldwide.

Moreover, human rights and environmental violations remain hidden deep within supplier networks, and regulatory bodies are taking notice. Big companies in the EU, for example, will soon be expected to ensure that not only they, but also their third-party suppliers, meet the highest standards in areas such as health and safety, sustainability and the protection of human rights.

Companies need full oversight of their supply chains to anticipate and mitigate risks, which isn't easy. It means gathering detailed information on their partners and the wider market. Billions of data points will be needed to paint a full picture. They must also make sense of this data and turn those insights into action.

Multi-tier visibility

While this may be difficult, it's possible with the right technology, says supply chain intelligence firm Everstream Analytics. For the last decade, the company has helped global businesses such Google, Schneider Electric, Unilever and Campbell's to navigate these challenges and build more agile, resilient and sustainable supply chains.

The company uses big data, artificial intelligence and human analysis to inform supply chain decision-making and offer predictive insights on potential risks to businesses. These could range from extreme weather events and political crises to the availability of raw materials and supply chain bottlenecks.

> We give our clients real-time visibility of their entire value chain, so they see the risks and opportunities ahead

"We give our clients real-time visibility of their entire value chain, so they see the risks and opportunities ahead," says Julie Gerdeman, chief executive officer of Everstream Analytics.

"We surface climate and commodity risks, or human rights violations such as forced labour buried deep in supply chain sub-tiers. The aim is to help companies reduce risk, improve environmental, social and governance (ESG) performance and achieve compliance in an increasingly complex landscape of supply chain regulations."

One example of how these laws can affect business is the US Uyghur Forced Labor Protection Act (UFLPA). Likewise, new supply chain laws in Germany, Switzerland and France are turning up the pressure on European companies. The EU's Supply Chain Law, due to be ratified this year, will go a step further. It will require the largest companies operating in the bloc to identify and enforce due diligence obligations throughout their entire value chains with respect to human rights and environmental standards.

Key areas covered include forced and child labour, worker exploitation and environmental violations such as not meeting the Paris Agreement's climate change goals. The legislation will affect both EU companies and non-EU ones that operate inside the bloc, meaning that many large UK businesses will be affected. Companies that breach the rules are also likely to face hefty fines proportionate to their global turnover.

"As details about the proposed law emerge, one thing is clear: compliance with these regulations requires dynamic mapping, assessments and ongoing monitoring of the entire value chain," says Gerdeman.

How Everstream works

While this tougher stance from regulators poses challenges, in truth compliance has long been an issue for firms. Companies can suffer severe reputational damage if their third-party vendors or contractors are fined for corruption or bribery, or identified as using modern slavery. And consumers and investors will increasingly cut ties with brands that turn a blind eye.

Everstream's platform is designed to help supply chain professionals avoid these pitfalls across planning, procurement and logistics. Its platform creates an AI-powered digital twin of a company's global supply chain, enabling firms to map and visualise their suppliers in prioritised tiers.

Everstream then applies proprietary intelligence to produce proactive, predictive risk insights and assessments, which are delivered through its own platform or existing platforms such as an ERP, TMS, SRM or supply chain planning solutions.

"At our core, we're a big data company," says Gerdeman. "We pull millions of proprietary and open data streams covering every aspect of today's complex supply chains – from imports and exports to bills of lading, bills of materials, shipping and media – with a line of sight on every corner of the world, on the ground, in the air and over the water."

For example, Everstream helped the global medical device maker Becton Dickinson achieve oversight of its entire supply chain as it worked to ensure the smooth flow of its exports. The mapping was done with 90% accuracy, many times higher than the firm had achieved with its own solution.

In another example, Everstream helped a global food manufacturer expose serious risks within its supply chain. During the process, Everstream identified potential shortages of key ingredients, alerted the company, then helped it find alternative suppliers within its own supply chain. The manufacturer had no idea the solution was so close at hand.

Supply chain oversight can be time-consuming, but Everstream automates the process, taking the pressure off companies. Its real-time risk insights track incidents across the most relevant risk categories, including weather, geography, socio-political, labour laws, workforce, production, transportation and ESG risks.

The firm also offers its clients access to a global team of intelligence solutions analysts, applied meteorologists and data scientists, who can contextualise and enhance the relevancy of data to reduce noise and generate meaningful insights.

"Our platform is enriched with real-world, in-the-moment intelligence from a proprietary network of partners. They can uncover shipment- and container-level insights on everything from port backups to weather disruptions across logistics hubs, countries and modes of transportation," says Gerdeman.

"While everyone may know that an airport has been forced to close, our network can tell us that cargo is still moving, and that's crucial intelligence for our clients. The network makes our data and insights smarter."

In an uncertain world, supply chain oversight provides a competitive edge. Unforeseen events or regulatory breaches can be hugely damaging to businesses that operate around the world. Yet by harnessing the power of big data, firms can fully understand the risks and take action to protect themselves.

For more information please visit everstream.ai

everstream ANALYTICS

Sipa US / Alamy Stock Photo

CONFLICT

Ukraine – why firms are doubling down in the danger zone

Most businesses, given the choice, would run a mile from armed conflict. But some multinational companies see the war as a chance to strengthen their supply chains, aiding reconstruction and reconciliation

Clara Murray

Dozens of global companies suspended their operations in Russia after its invasion of Ukraine, but some firms are supporting the latter in another way: by expanding their operations in the war-torn country.

Since the invasion on 24 February 2022, these companies have deepened their supply chain connections in the eastern European nation. Take Kingspan Group, for instance. In June, the Irish construction materials firm announced that it was planning to build a €200m (£176m) construction technology campus in the Lviv region over five years.

In some ways, the move was a no-brainer. Kingspan has operated in Ukraine since 2005, "so we know our way around there", says Mike Stenson, the group's head of innovation. The country is a good strategic location for the firm when it comes to accessing new markets, while the reconstruction effort – the cost of which has been estimated at more than £600bn – is likely to fuel huge demand for Kingspan's offerings.

Even so, many companies would be hesitant to invest and increase their exposure before the outcome of the war is more certain. Apart from the continuing security risks, corporate activity in war zones can be controversial, perhaps bringing to mind the greasing of palms in corrupt regimes.

But a growing field of research (known as business for peace) suggests that, if run responsibly, free enterprise can be a force for good in war-torn territories.

Business for peace asks some big questions – for example, how can companies help to promote peace? What are their responsibilities when using a supply chain that touches conflict-ridden states? Wouldn't it be easier to leave such countries behind altogether?

Christopher Williams is professor in strategy and international business at the University of York. He says: "We hear about scandals involving certain companies around the world, but the average person doesn't think about the role businesses can play in helping to bring about lasting peace in challenging environments. We're talking not about encouraging combatants to lay down their arms straight away, but about helping to implement and sustain the conditions for peace."

Williams cites Heineken's investments in social projects in conflict zones around the world as a good example of this. In Ethiopia, the Dutch brewing giant paid for clean water and sanitation and sourced barley from local suppliers, while in Myanmar it made roads safer. Both efforts helped to create a "zone of responsibility" around its breweries in each country, Williams says.

Other examples include the business-led #SoyCapaz peace campaign in Colombia; the Consultative Business Movement that aided democracy in South Africa; and Northern Irish businesses choosing to hire ex-combatants after the Troubles.

Even normal activities such as creating jobs and boosting local economies can have powerful effects, Williams stresses. For instance, some companies have made efforts to hire demobilised rebels.

"Many of these places can easily flip back into violence," he says. "So you don't want these often young, uneducated male combatants to be left for too long without a job."

Of course, multinational corporations are not social enterprises. For many, the equation is simple: a more peaceful society generates better profits. But promoting peace comes with risks.

"It's a strategic minefield for companies. If they get it wrong, they can be accused of all kinds of bad behaviour in terms of 'peace-washing' or public relations exercises," Williams says. In the worst-case scenario, corporations and their workers could inflame tensions between combatants or become targets themselves, he adds.

Elon Musk's satellite company, Starlink, illustrates how fine that line can be. It was widely praised for providing communications services to Ukrainian forces, but later faced a backlash after preventing the military from using its tech to control drones.

Companies seeking to maintain supply links with Ukraine will face tough choices even after the war ends. For a start, random outbreaks of violence are likely to continue long after any peace deal is signed.

Then there are ongoing tensions. Williams outlines a hypothetical postwar scenario in which a multinational firm opens a factory in the separatist Donbas region of eastern Ukraine. People who'd fought on opposing sides could end up becoming colleagues.

"While they may have been neighbours before, they're clearly going to have bad feelings towards each other," he says. "So how do you choose businesses to work with? It presents all kinds of implications."

It might sound ghoulish to be thinking about business opportunities while people are still being killed and maimed in large numbers. But Ukraine is actively courting foreign firms as it gears up to emerge from the war with a future-proofed economy. In September 2022, for instance, it started a campaign to attract inward investment.

"Ukraine is ready and open for business," declares Sergiy Tsivkach, executive director at government agency UkraineInvest. "We do not ask for donations; we ask for opportunities to do business with our partners throughout the world. That would be probably the strongest support for our people."

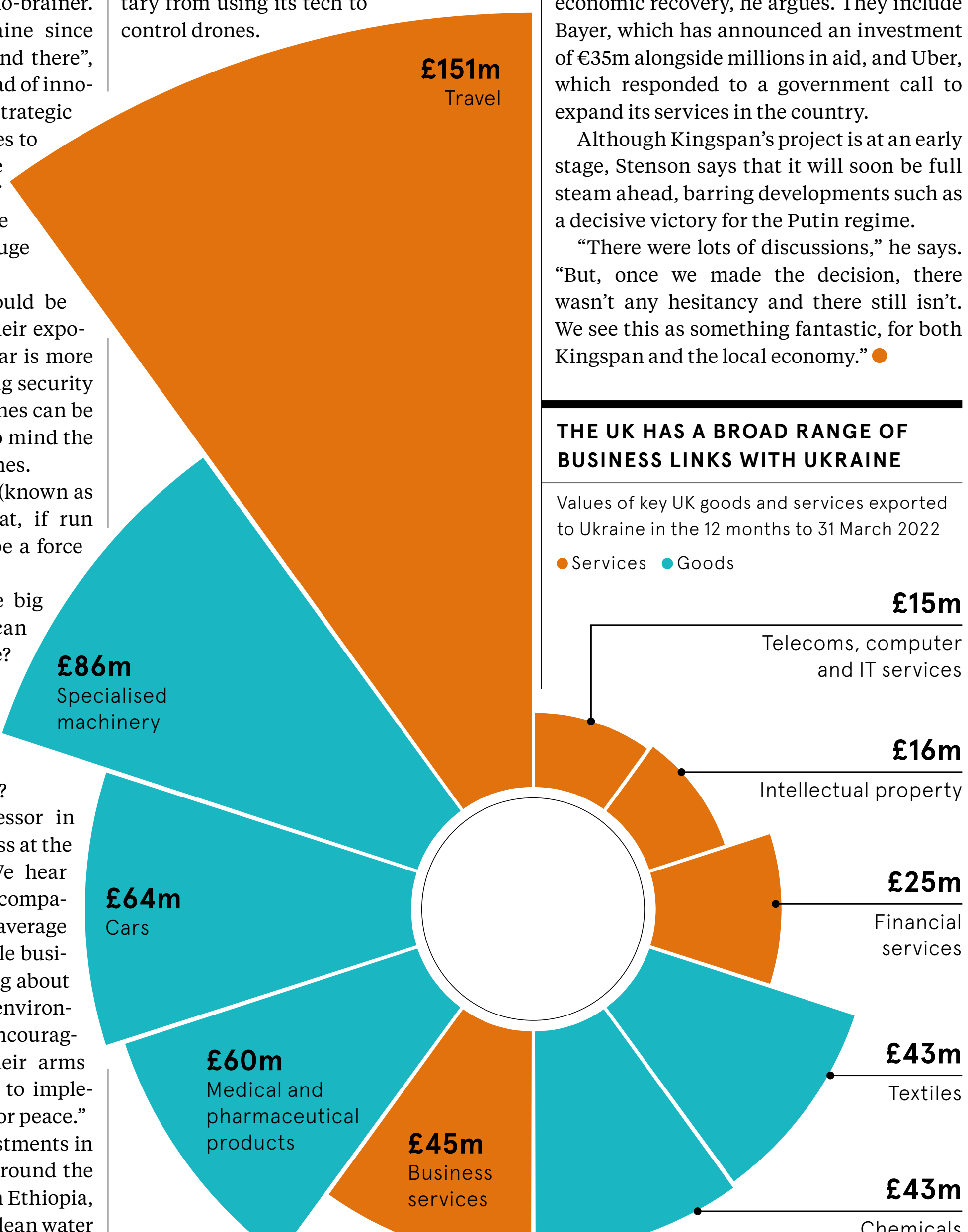
Tsivkach reports that UkraineInvest has already supported $1.5bn (£1.25bn) of investment, with $2.3bn more in the pipeline. Companies that invest now will be in pole position to take advantage of that hoped-for economic recovery, he argues. They include Bayer, which has announced an investment of €35m alongside millions in aid, and Uber, which responded to a government call to expand its services in the country.

Although Kingspan's project is at an early stage, Stenson says that it will soon be full steam ahead, barring developments such as a decisive victory for the Putin regime.

"There were lots of discussions," he says. "But, once we made the decision, there wasn't any hesitancy and there still isn't. We see this as something fantastic, for both Kingspan and the local economy."

THE UK HAS A BROAD RANGE OF BUSINESS LINKS WITH UKRAINE

Values of key UK goods and services exported to Ukraine in the 12 months to 31 March 2022



Office for National Statistics, 2022

Commercial feature

Weathering the supply chain storm

In the current climate, it's essential that procurement and finance professionals do all they can to identify and mitigate supply chain risks, staying in control while improving agility, resilience and ensuring best value

In today's volatile political and economic climate, it is vital that procurement and finance teams take steps to reduce risk, bring spending under control and ensure their supply chain stays resilient. The following tips will help manage the uncertainty:

1 Understand the risks

An obvious place to start is by assessing the risks your business faces from its supply chain. It is common for many service-based businesses to have a long-tail of suppliers, with spend heavily spread across a high number of companies. Understanding of the suppliers and any risks can be difficult without automation, such as supplier relationship management (SRM), and with the current economic landscape, organisations need to pay greater attention to the financial health of key suppliers.

Other threats come from ESG issues. Organisations cannot afford to become embroiled in a scandal around the use of child labour, irresponsible environmental strategies or dubious business practices. The Bribery Act of 2010 and Modern Slavery Act 2015 – as well as the introduction of GDPR in 2018 – mean businesses can face significant fines for wrongdoing in their wider supply chains, as well as huge damage to their brands and reputations for failing to follow best practice.

In the current climate, it's a good idea to undertake a supplier review and identify the key suppliers that present the most risk. Alongside this, promote the supplier standards that are expected as a minimum when dealing with your organisation. Automating areas such as SRM can help here, giving suppliers the ability to play a more active role through self-servicing.

2 Make use of local sourcing

For some businesses, bringing operations back to the UK may make sense, particularly if suppliers – or trade routes – are in volatile parts of the world. One current trend is 'friendshoring', where supply is switched to countries that are on good terms with the UK, reducing the risk of being caught with relationships in areas where the political environment may rapidly change. It is also worth considering the introduction of contingent suppliers more locally in key categories, to manage any potential risk of exposure.

Organisations need to take a total-cost-of-ownership and value-for-money approach to awarding contracts, rather than simply looking at the headline price. This means factoring transportation, maintenance, storage and disposal costs into any decision, alongside environmental and carbon considerations, where appropriate. In a primary or contingent sense, having suppliers closer to home means there's greater potential to audit activities and clear benefits from reduced transportation costs.

3 Tackle indirect spend

One area that businesses often overlook is that of the inefficiencies and costs associated with indirect spend, as many focus their attention instead on key suppliers and high-value contracts. Yet many organisations invest significant amounts in relatively low-value spend across hundreds of suppliers. Spend in areas such as office supplies, travel, company vehicles or IT equipment may all fall into this category.

Tackling indirect spend – by selecting a consolidated number of preferred suppliers and bringing this spend on to a marketplace that can guide buyers to these contracts – can lead to significantly lower costs as a result of economies of scale and free up time for both procurement and finance teams. It also offers the opportunity to better vet suppliers from a risk perspective, reducing the chances of becoming caught up in an ESG scandal or other reputational issue.

Offering internal customers a guided buying experience will also lead to reductions in maverick spend. This is where individuals bypass a structured purchase order process to buy goods. Lancaster University, for instance, makes use of a marketplace provided by Proactis, which connects employees to suppliers' websites and catalogues. The system means buyers can purchase from approved suppliers at agreed rates and has significantly eliminated reduced buying.

> **"One area that businesses often overlook is that of the inefficiencies and costs associated with indirect spend, as many focus their attention instead on key suppliers and high-value contracts**

4 Make use of technology and data

Technology is the key to ensuring that businesses can remain in control of their supply chain. An effective SRM system allows organisations to assess the various risks associated with suppliers and monitor this on an ongoing basis, giving them the ability to appraise performance and proactively identify any potential changes that may expose them to risk.

Proactis's SRM solution, for instance, allows businesses to define corporate standards or benchmarks – including ESG credentials and financial health – against which suppliers can be measured. It also ensures periodic reviews of suppliers or contracts are built in.

The University of Sussex implemented Proactis's source-to-contract solution, moving away from a largely manual process around supplier management. The system means it now has access to far greater intelligence to help with supplier selection and ongoing risk management.

"The ability to build in further questions around things like modern slavery and data protection, and to be able to tweak that ourselves as our list of requirements grew, was really important to make sure we stay current," says Ian McKee, assistant director of finance at the university.

Automating processes can also help reduce supplier risks by removing cumbersome processes that could stop them being paid on time. This has the added advantage of improving efficiency within accounts payable teams and reducing the potential for errors as a result of manual processes.

5 Mitigate the potential impact of supply chain disruption

It is vital businesses take steps to minimise disruption, whether from strikes, material or parts shortages, supplier viability, or ESG concerns.

Taking steps to assess and monitor risks means organisations will be less likely to be caught out, but identifying high-risk suppliers can allow decisions to be made about whether to move providers, potentially considering an alternative closer to home.

Staying on top of the financial health of suppliers will allow procurement teams to put in place measures to help suppliers that may be struggling. This could include paying them earlier in exchange for discounts to enable greater robustness within the supply chain, especially when small and medium-size suppliers are involved.

The potential damage – financial, operational and reputational – that could come from a supply chain incident that affects an organisation's ability to trade means managing risk needs to be put at the heart of a procurement team's supplier management strategy. Planning for this now means your business will be able to respond effectively and ensure it is able to continue operating, whatever is thrown at it.

To find out more about how Proactis's supplier relationship management software could help you build and maintain a stronger supplier base, visit proactis.com

proactis

MARKETING

The greener the chain, the bigger the win

Sustainable supply chain choices can be a point of differentiation that help businesses attract and retain customers. How can procurement chiefs get involved in grasping this opportunity?

Amy Nguyen

Over the past couple of years, supply chains have been more of a necessary evil than a valuable part of the business. Indeed, at their worst, they have been a source of significant headaches for businesses, from the sudden stoppages of the Covid lockdowns to the many components and materials shortages experienced in their wake – and even various logistics nightmares, such as the Suez Canal blockage.

Unfortunately, the same would seem to apply to sustainability too. Here, supply chains have made themselves something of a nuisance when it comes to added requirements around environmental accounting (for the likes of scope-three emissions), social due diligence (for modern slavery or human rights abuses) and organisational transparency (for sanctions compliance, for instance). It's all an extra burden on the shoulders of operations professionals.

But beyond these particular pressures, some switched-on supply chain executives are realising that their everyday decisions can be an asset. They're finding that not only do responsible sourcing choices help to create long-term operational resilience but, crucially, they can also be a valuable point of differentiation, helping businesses to attract and retain customers.

For one thing, the costs of failing to get your supply chain's green credentials working in your favour are clear. As many as 76% of consumers say they would discontinue relations with companies that treat employees, communities and the environment poorly, according to PwC. And research from the Massachusetts Institute of Technology shows that consumers are willing to pay up to 10% more for products with greater supply chain transparency. It's all evidence of consumers aligning their spending with their values where ESG is concerned.

The faster that businesses recognise this – and appreciate the fact that a greener supply chain can serve as a customer acquisition tool – the faster their teams can start adopting these practices. And some are already doing so. One survey by EY found that eight out of 10 supply chain executives actively considered natural resources use, decarbonisation and ethical sourcing last year. Among those, 32% had already experienced an increase in customer loyalty. A further 44% expect to see a financial return from this focus on sustainability within the next three years.

Global food giant Danone is one example of a business where the bottom line and sustainable supply chain management already go hand in hand. As responsible sourcing director Gemma Brierley explains: "We have a responsibility to respond to the shifts in our customers' priorities as they call for more sustainable products. With better transparency and management practices, we can anticipate risk hotspots and potential disruptions, and meet the increasing demands for supply chain due diligence."

Yet despite the rise of climate consciousness among consumers, procurement professionals haven't traditionally been trained to consider how their supply chain decisions affect customer engagement and loyalty. So, what would it take to reconfigure their skills to address these new demands?

Updated training programmes and a change in the dynamics between internal teams – to work more closely with the likes of marketing, sales and product teams – would be a good place to start, but might be easier said than done. Amid inflation, ongoing geopolitical turmoil, climate change worries and Brexit-related challenges, many supply chain managers are having to focus on traditional skills in vendor and project management, market dynamics and logistics to meet key targets.

But, as PwC operations transformations partner Barry Middleton explains, there is an important skills crossover here. "Managers must adopt a familiar risk-based approach when it comes to sustainability, and then continue to upskill," he says.

That extra sustainability training is rapidly becoming an essential investment. A survey from supply chain platform Avetta found that 'a lack of in-house understanding of the importance of ESG issues within the supply chain' is now the greatest barrier to incorporating sustainable practices, followed by a 'lack of suppliers' understanding of ESG issues'.

It may help to begin by focusing on a few specific aspects of supply chain sustainability. Torsten Lichtenau, a sustainability specialist at management consultancy Bain & Company, thinks that managers in this more "ESG-conscious era" should prioritise the skills required to address emissions and climate change concerns – specifically, understanding how to optimise quality, price and carbon footprints in their procurement decisions. Not only is this a more manageable task than tackling everything environmental, but it should also produce some concise and tangible results which can then be used by the marketing team.

The training for supply chain professionals doesn't end there, though. Lichtenau adds that these environmental capabilities must be in addition to an awareness of social and governance issues, particularly those related to corruption, working conditions and human rights abuses.

Danone has done several things to help its supply chain managers navigate this dizzying mix of requirements, according to Brierley. "We developed in-house online training programmes and integrated them into our sourcing academy," she says. "And we have partnered with platforms such as Sedex and EcoVadis to provide training for our buyers."

All this training may end up giving procurement professionals a new perspective on their role, suggests Martin Roberts, director of digital learning programmes at the Cambridge Institute for Sustainability Leadership. "Integrating environmental and social value creation across functions where previously the focus was on financial value alone requires a shift in mindset and an innovative approach to finance, investment and marketing strategies," he says.

That change of outlook could bring supply chain managers into contact with some new collaborators. Lichtenau explains that sustainable supply chains can be a real point of differentiation for product and marketing teams to make the most of, assuming they have the right information to work with.

"It requires the supply chain to work with the finance and sustainability functions to put the tracking and reporting in place to assert the sustainability credentials," he says. "They should then work with sales and marketing to embed the sustainability features into the value propositions and ultimately the sales motion."

For this process to work, though, supply chain managers can't view sustainability as a tick-box exercise, or think of it as secondary to simply keeping the show on the road. That kind of attitude will impress no one. As Roberts points out: "Measuring and reporting against ESG metrics may be a first step but on its own it won't transform a company into one that has a resilient supply chain or is seen by its customers and investors as managing environmental and social risks."

Only a genuinely proactive approach to supply chain sustainability can deliver that kind of transformation.

INCREASED CUSTOMER LOYALTY IS A LEADING BENEFIT OF A MORE SUSTAINABLE SUPPLY CHAIN

Effects of efforts to improve sustainability in the supply chain, as reported by executives worldwide

	Have already seen	Expect to see in the short term	Expect to see in the longer term	Do not expect to see
Improved employee quality of life	37%	40%	21%	2%
Increased customer loyalty	32%	44%	24%	
Decreased employee turnover	31%	31%	37%	1%
Enhanced efficiency and productivity	31%	51%	18%	
Increased revenue	24%	46%	29%	1%
Higher profits	23%	39%	36%	2%
Better management of operational risks	20%	55%	25%	
Safeguarding the brand	14%	47%	38%	1%
Increased share price	12%	32%	54%	2%

EY, 2022

Commercial feature

How the cloud can transform post-disruption supply chains

Supply chain disruptions are set to ease this year as conditions stabilise and organisations find their footing. Some will be taking advantage of this opportunity to optimise through the cloud

The health of global supply chains never strays too far from the centre of corporate consciousness. But, for 2023, the prognosis is refreshingly positive.

Unlike the other usual suspects - skills and labour shortages, inflation, regulatory change, geopolitical instability or natural disasters, to name a few - the World Economic Forum's recent Chief Economists Outlook finds only about one in four economists expect supply chain disruption to materially impact business activities this year.

What's more, 77% expect organisations to work on optimising their supply chains in response to prevailing economic headwinds.

Although costs remain high, inflation has dipped from 8.8% in 2022 to 6.5% this year. Businesses face a window of opportunity to restructure while the waters are calm so they can position themselves to respond effectively when the next wave of supply chain shocks hits.

Since the start of the decade, organisations have become acclimated to volatility, and many have developed new, decentralised architectures that provide the flexibility to combat pandemic, war and climate-related disruptions.

Undoubtedly, cloud technology is a critical part of the equation for increased resilience. During the pandemic, companies that invested in cloud-based ERP technology tended to outperform competitors. And three years on, those that forgo future-proofing tech may struggle to keep pace when disruption returns.

"Technology enables you to monitor performance more precisely so you can identify challenges and opportunities sooner," says Andy Coussins, head of international at Epicor. "More robust data analytics equip you with insights that will make your business more agile and resilient."

23%

of economists expect supply chain disruption to significantly impact business activities this year

The World Economic Forum, 2023

If longevity is the name of the game, developing an overreliance on in-house servers, storage, and networking to run applications is a risky play.

Most companies with on-premises systems don't have the high-security data centres protected by top-of-the-line digital defences that today's cloud data centres do. Combine unmatched security with built-in redundancies and failsafe procedures, and it's easy to understand why cloud deployments have become so compelling from an infrastructure perspective.

"Security and business continuity go hand-in-hand," says Coussins. "Decision-makers want agile systems that can safeguard their data and guarantee data availability around the clock."

While supply chain disruptions are not anticipated to exert considerable pressure on organisations this year, moderate inflation is likely to endure, and businesses will benefit from predictable, managed costs. Lower overheads, reduced IT expenses, and straightforward monthly subscriptions are powerful incentives to embrace cloud computing. On-premises deployments require an expensive upfront investment into servers and hardware, which will eventually need to be replaced.

The collaboration of a strong cloud-based ERP partner is invaluable for businesses making the shift. Epicor takes a migration approach based on its experience moving hundreds of customers to the cloud to minimise risks, excess costs and wasted time. It engineers solutions to meet specific industry needs and helps companies to adapt and thrive in a mobile world to compete on equal terms with new, cloud-native competitors.

It is also critical to ensure an ERP can provide the necessary tools, automation, and processes to ensure a smooth transition to the cloud. Low- or no-code configurations can prove transformative to business as usual and in the face of disruptions.

According to Coussins, companies should discuss the benefits of cloud technology internally to reassure employees and stakeholders. "Communicating comprehensive information about the security of the cloud environment is a key driver of comfort. Comprehensive product demos are vital. People can truly get comfortable with understanding how a new cloud ERP solution can alleviate pressure on current pain points." he says. "Thorough user training resources and materials can make their decision to migrate to the cloud more comfortable and put employees' minds at ease."

Disruptions may have started to cool off, but investing in resilient supply chain infrastructure remains ever as important for business continuity, perhaps even more so as the dust settles and complacency creeps in.

For more information please visit epicor.com/supply-chain

EPICOR