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# The reaction requisite

How the logistics sector can help chemical businesses tackle greenhouse gas emissions



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# Executive summary

The chemical industry faces mounting pressure to cut its greenhouse gas (GHG) emissions. In this report, we examine an element of this work that is especially challenging but could lead to meaningful change: scope 3 emissions.

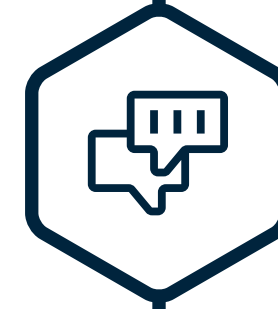
We interviewed industry experts and carried out a survey of 500 chemical businesses worldwide to find out more. This is what we learned:



Although scope 3 emissions account for, on average, 63% of chemical businesses' overall GHG output, most companies have not yet started to tackle them.



Logistics, transportation and storage are major contributors to scope 3, according to a majority of chemical businesses. These emissions are also more controllable than others that are scope 3, which makes them attractive element to target first.



Increased industry collaboration could help to reduce logistics-related emissions, but progress is slow. For instance, just 20% of chemical companies are working with industry peers to optimise loads.



Even fewer – 14% – share relevant data. Third parties such as logistics services providers (LSPs) could help here to support trust and overcome competition concerns.



New technologies, including artificial intelligence, will help to bring down GHG emissions. Data is a critical input for these technologies, but data quality will need to be more consistent to maximise their impact.



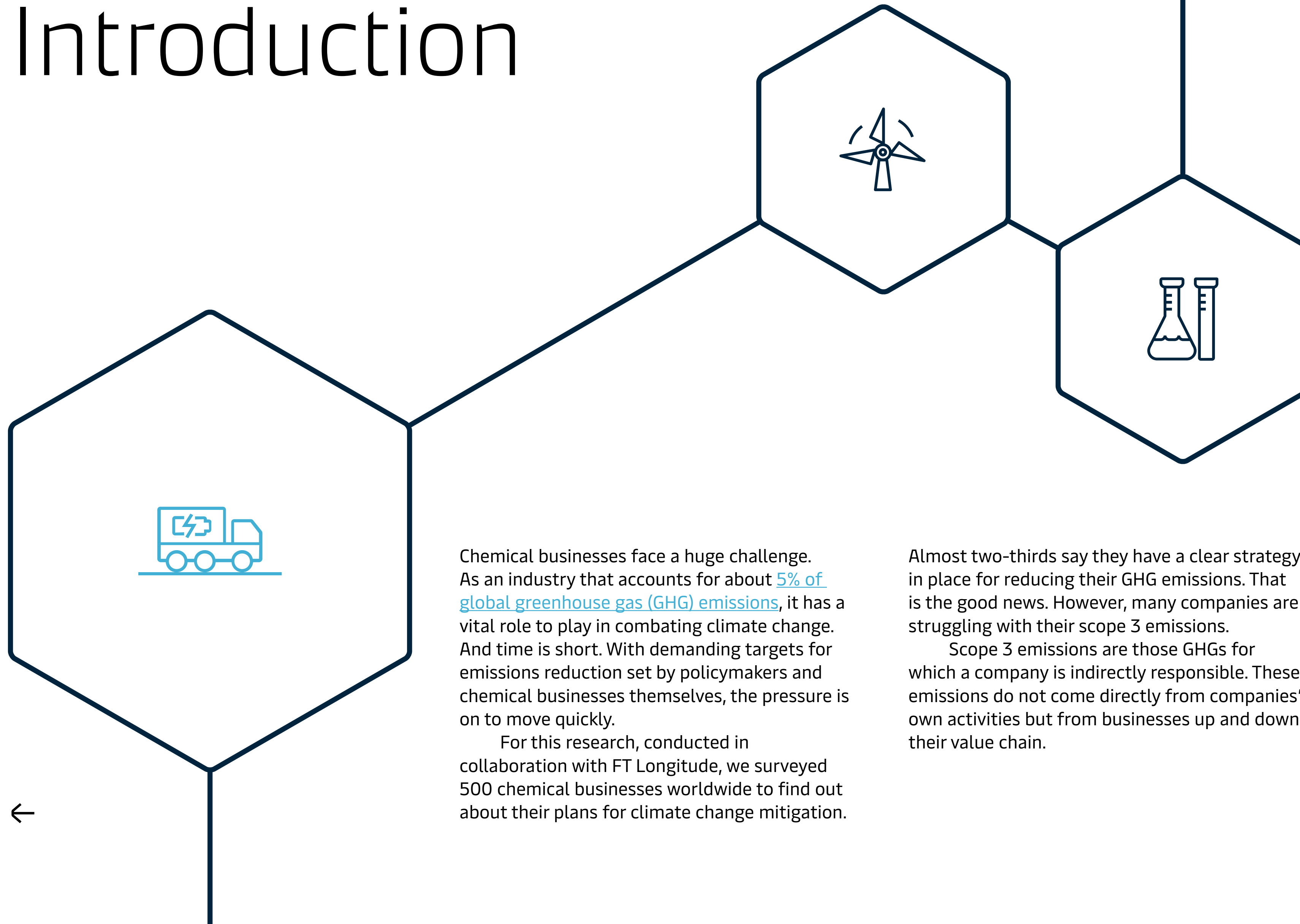
Reducing emissions can go hand in hand with reducing costs – for instance, through route optimisation or by sharing storage facilities. As LSPs move to lower-emission options, they will increasingly contribute to bringing down costs.



To date, only 33% of chemical companies consider the environmental impact of logistics and transportation when they make purchasing decisions. Empowering the procurement function with targets that relate to the procurement of greener options will help.



# Introduction



Chemical businesses face a huge challenge. As an industry that accounts for about [5% of global greenhouse gas \(GHG\) emissions](#), it has a vital role to play in combating climate change. And time is short. With demanding targets for emissions reduction set by policymakers and chemical businesses themselves, the pressure is on to move quickly.

For this research, conducted in collaboration with FT Longitude, we surveyed 500 chemical businesses worldwide to find out about their plans for climate change mitigation.

Almost two-thirds say they have a clear strategy in place for reducing their GHG emissions. That is the good news. However, many companies are struggling with their scope 3 emissions.

Scope 3 emissions are those GHGs for which a company is indirectly responsible. These emissions do not come directly from companies' own activities but from businesses up and down their value chain.

Our survey shows that scope 3 emissions account for almost two-thirds of chemical businesses' overall GHG output. These are findings echoed by the European Chemical Industry Council, whose research has suggested that scope 3 may account for about [70% of the sector's total emissions](#).

A clear majority of businesses in our survey consider logistics, transportation and storage to be major contributors to those emissions. So it makes sense to prioritise work in these areas and focus on logistics, given its impact on scope 3.

We think the chemical sector can work with its logistics services providers (LSPs) to have a positive impact on climate change. We also believe that increased collaboration between chemical companies on logistics will produce a multiplier effect that generates even greater benefits.

This report discusses how chemical businesses can reduce scope 3 emissions, particularly in the context of logistics. We examine how companies will work – individually and together – to accelerate progress in emissions reduction. We also consider the obstacles to overcome and the broad range of benefits for those chemical businesses that take the lead.



# About this research

This report documents a survey carried out with the help of FT Longitude. We surveyed senior decision makers at 500 chemical companies worldwide: 40% were based in Europe, 30% in the Americas and 30% in the Asia-Pacific region (including the UAE, Saudi Arabia and India).

The companies surveyed operate in the petrochemical and polymers, base chemical, agrochemical, lubricants, coatings, paints and inks, and flavours and fragrances subsectors. They include publicly listed and privately owned businesses with annual revenues ranging from US\$1 billion to more than US\$50 billion. We also conducted five in-depth interviews with industry experts. The research took place during the first quarter of 2024.



Part 1:

# The collaboration conundrum



“ When companies really start caring about scope 3, logistics will be the first thing they look at. ”



**Steve Smith**  
European Equities Fund Manager  
Invesco

Scope 3 emissions account for the biggest share of chemical companies' GHG footprints, but most businesses focus on scope 1 and 2. Our research shows that not even a third of chemical businesses have started to address scope 3 (see Figure 1). One likely reason for this is that these are emissions beyond their immediate and direct control – generated by their value chain partners rather than businesses themselves.

But by working more closely on emissions reduction with these value chain partners, the industry can start to make significant progress. Collaboration with the logistics sector will be particularly important. In our research, 57% of chemical companies describe logistics, transportation and storage activity as major contributors to their scope 3 output (see Figure 2).

It is also an area where chemical businesses are in a position to take action, says Steve Smith, a European equities fund manager at Invesco, a global asset management company with an increasing range of sustainability-focused funds.

“Logistics, upstream and downstream, is the most controllable element of scope 3,” says Smith. “When companies really start caring about scope 3, logistics will be the first thing they look at.”

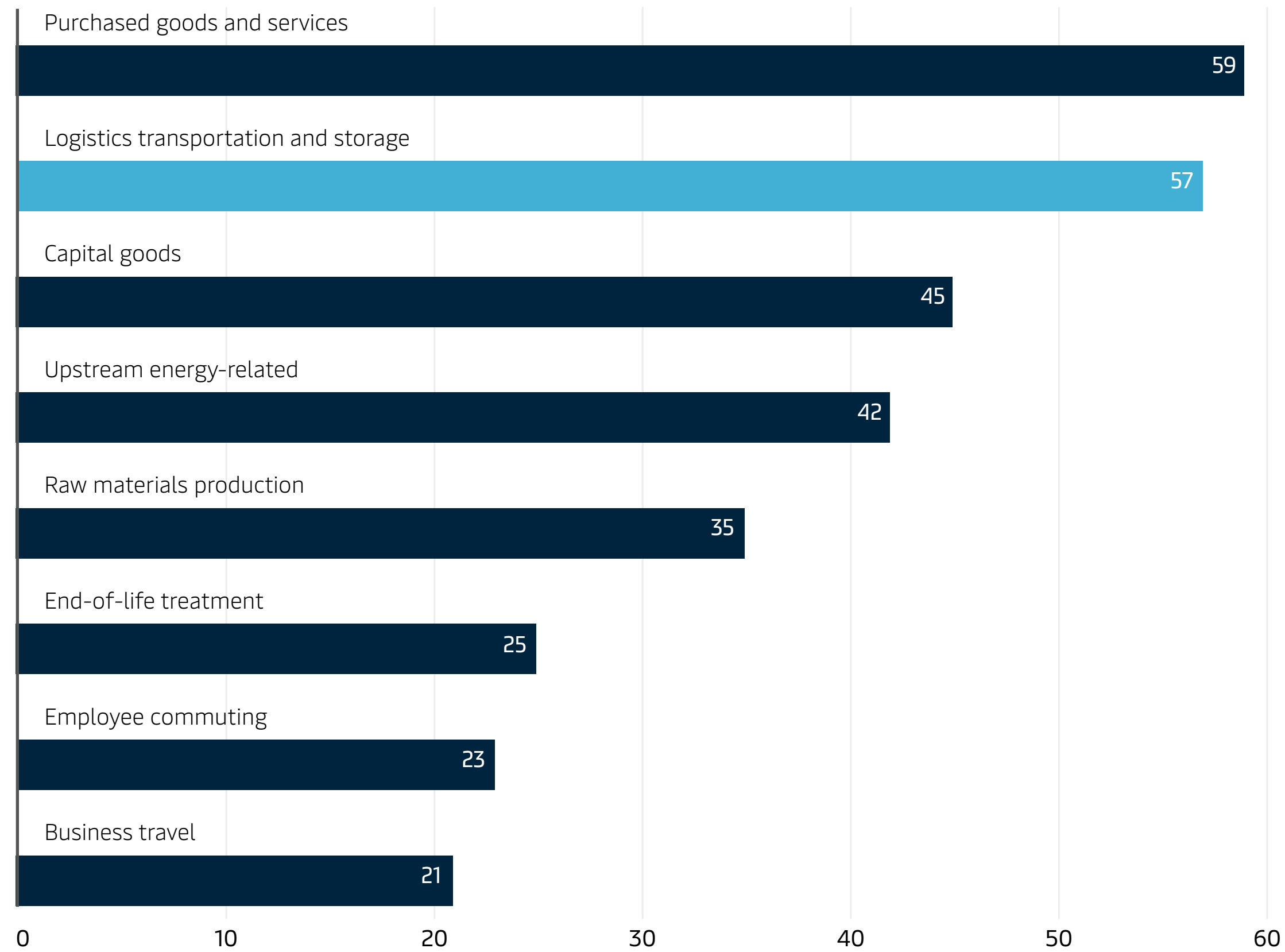
Figure 1: How chemical companies tackle GHG emissions (%)



Missing to 100%: no GHG emissions reduction plan in place, or in place but not yet implementing



Figure 2: Major contributors to the chemical industry's scope 3 emissions (%)



\*Percentage of companies considering item a major contributor

Some industry leaders have already started. At agricultural technology company Syngenta, for example, Peter Crowe, Global Head of Logistics at Syngenta Crop Protection, says there are three areas where a focus on logistics is already paying off.

“First, load consolidation is really beneficial; we’re analysing what we’re shipping to similar places at similar times so that we can optimise the number of trips we’re making,” he says. “We’re also choosing to ship more often via vessels that run on cleaner fuels that produce fewer emissions.” Indeed, the company has just [announced](#) an agreement with Maersk for a US–Europe shipping route which will reduce Syngenta’s shipping-related carbon impact by using [Maersk Eco Delivery](#).

“We’ve also implemented intermodal freight switching, replacing trucking cargo with moving by rail or short sea shipping where feasible – for example in our cross-European transportation.”

Work in these areas can have a dramatic impact. By some estimates, for example, shipping by sea produces up to [145 times fewer emissions per tonne of cargo than air transport](#). Indeed, 29% of businesses in our research say they have already started shifting to less-polluting forms of transport. As the number of vessels powered by cleaner fuels – including green methanol, e-methanol, green/blue hydrogen, e-ammonia and blue ammonia

– increases, [there is the potential to reduce sea cargo emissions even further](#).

Other areas of logistics also offer opportunities to reduce emissions. For example, the availability of warehousing with a reduced carbon footprint is [growing rapidly](#), providing chemical companies with another option for reducing scope 3 emissions. In our research, 29% of businesses are using or plan to use zero-emissions warehouses, and a further 26% are considering it.

But there is plenty of room for improvement – not least from LSPs. Right now, only 38% of chemical businesses believe their provider has the right capabilities to help them reduce scope 3 emissions. That figure needs to increase.

“History is starting to repeat itself,” says Ann Vereecke, Professor of Operations and Supply Chain Management at Vlerick Business School. “In the early 2000s, the debate about how to reduce cost through supply chain management was whether to act alone – to force it on your suppliers – or to be more collaborative. Now, we are talking about reducing emissions, and I believe that, as in the past, we will make more progress with a collaborative approach.”





### Friends across the divide

What if chemical businesses could go even further with collaboration? If companies worked together with their LSPs as well as individually, the potential for the whole sector to bring down scope 3 emissions would be even greater. Opportunities range from sharing logistics hubs to multiple companies conducting load optimisation analyses to reduce shipment numbers.

So far, companies' efforts to get such projects off the ground have been limited. Our research shows that less than 20% of chemical companies have already implemented collaboration initiatives for load optimisation (see Figure 3). An equally small number have started using LSPs with sufficient scale to improve industry coordination.

What is the reason for this lack of collaboration? Vereecke suggests it is the practical difficulties of competing businesses working together. "Is there something the chemical industry can do together? Obviously, yes," she says. "But there are two huge conditions: you need data, and you need trust. And that's where it gets difficult."

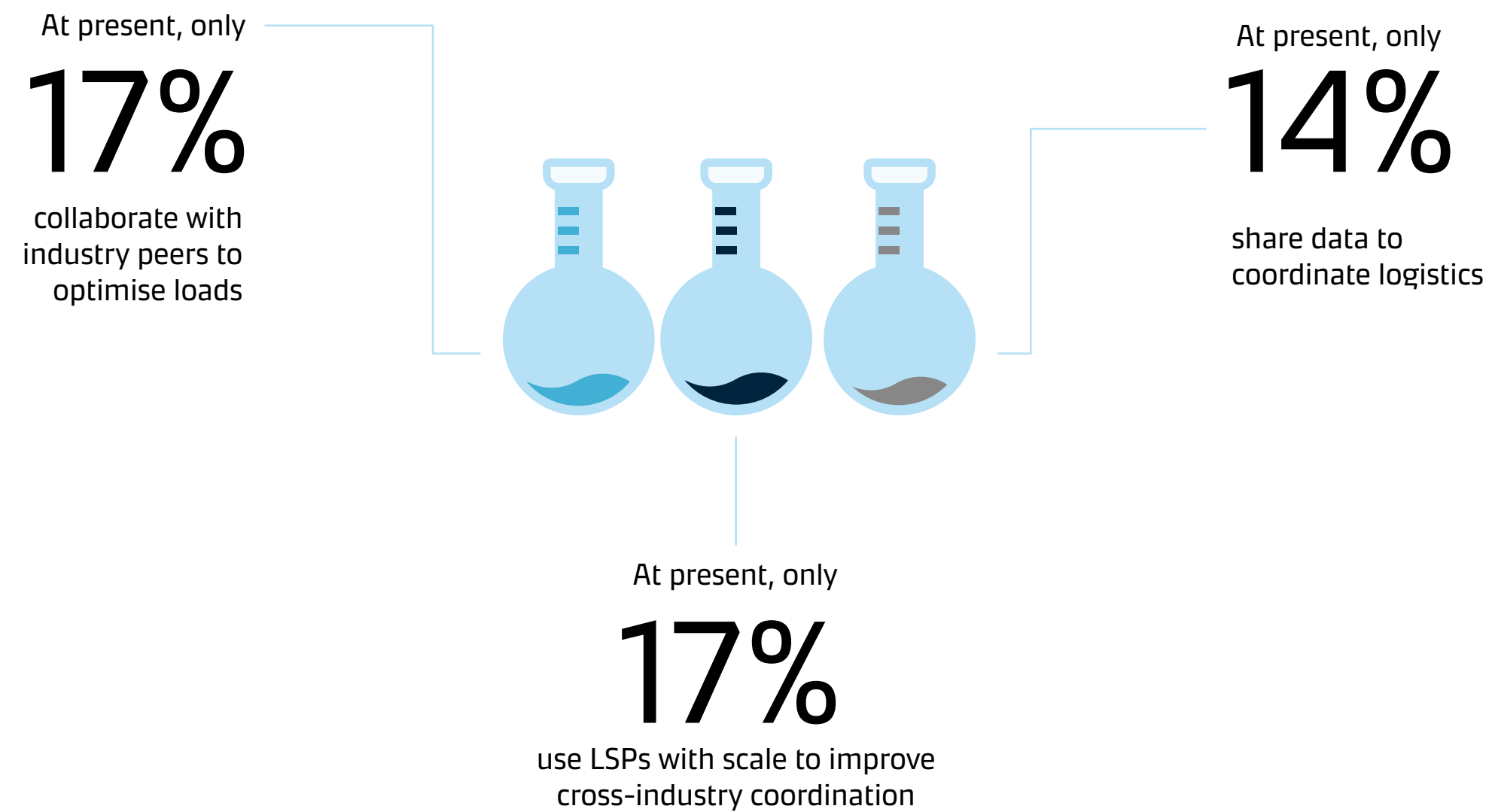
Without access to shared data, it is difficult for chemical businesses to work out how and where there is potential to collaborate on logistics. But sharing data could reveal commercially sensitive information – customer order details or sales in a particular market.

This could be one reason why, in our research, only 14% of chemical businesses have already implemented projects to increase data exchange that would enable them to coordinate logistics between shared hubs – although a further 28% are planning to move in this direction.

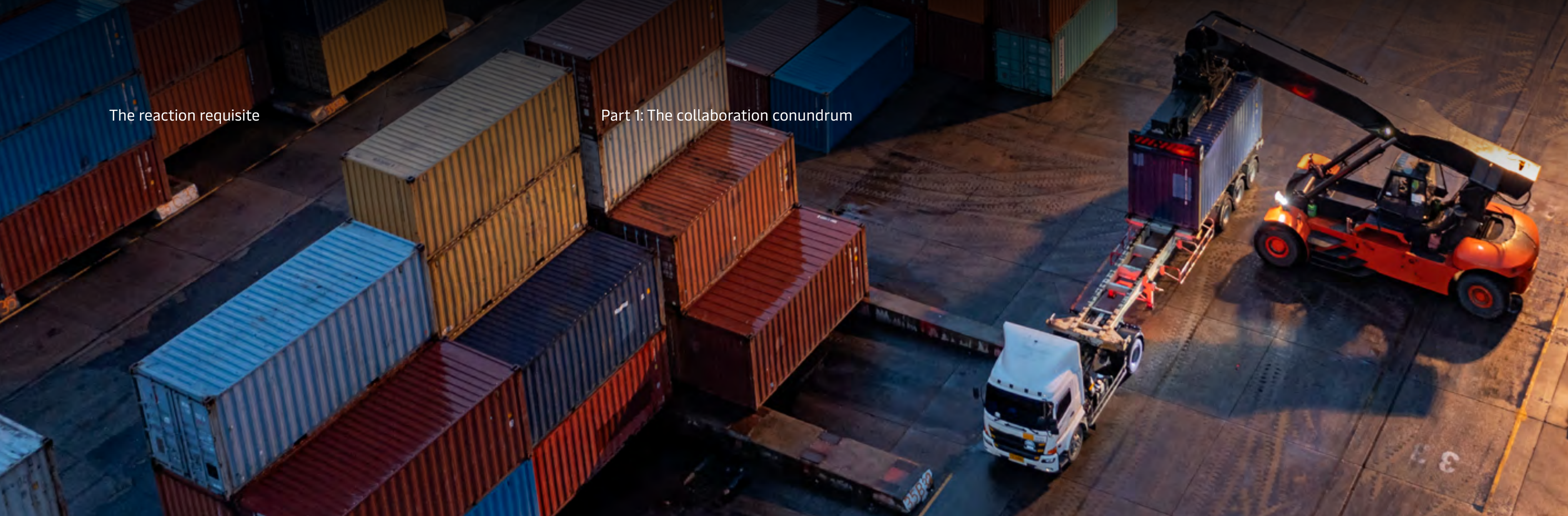
This creates a vicious cycle: chemical businesses are nervous about trusting partners

and peers with emissions data and other operational information, so industry platforms that enable data sharing lack the breadth and granularity that would make them useful. Businesses then have another reason not to share data – it makes no sense to offer up potentially sensitive material when their rivals are not doing it and when the platform's value appears to be limited.

Figure 3: Slow progress on cross-industry collaboration



Further work is needed here. New technologies might help: privately managed blockchains could support secure data sharing to increase business confidence. Data warehouses using tools such as multi-party computation, where businesses can analyse information without accessing it, are another possibility.



### Third parties as honest brokers

Third parties, such as LSPs, might play a valuable role in encouraging trust. Independent of chemical businesses, they can operate as honest brokers – instigators and organisers of emissions-reducing collaboration – without the businesses having to share data directly with each other.

“In the digital era [when] data is abundant, it’s really all about security and privacy,” says Syngenta’s Peter Crowe. “It’s important to consider who would be best positioned to govern and responsibly handle that data.” The logistics sector is one option.

Chemical businesses need to be realistic, argues Vipul Patel, Head of Commercial and Supply Chain at agrichemical company PI

Industries. “It’s a myth,” he says of the idea that chemical companies are not well informed about their competitors’ commercial relationships. “The knowledge of who may be procuring specific products and from which sources is widely acknowledged, albeit with some degree of uncertainty.”

In any case, Patel points out that suppliers throughout the value chain are facing growing demands from stakeholders to disclose more data – because without it, other parties in the chain cannot account properly for their scope 3 emissions. “The data has to be available to the stakeholders,” he says. “And absolute authenticity is imperative.”

The opportunity is to build models that work for all parties as they seek to reduce emissions. And there are already examples of industry collaborations generating mutual benefits.

In India, for example, the Indian Chemical Council launched the [Nicer Globe initiative](#) to create fundamental changes in the way chemical goods are transported. The project focuses on building safer and more sustainable processes and practices, with participating chemical companies sharing the details of more than 200,000 trips undertaken each year. A technology-based process for tracking the performance of the ecosystem provides insights and helps set benchmarks without compromising commercially sensitive data.

Many chemical companies would welcome more of these alliances, says Patel: “Logistics providers offering multi-modal solutions and value-added services will find widespread interest and acceptance.”

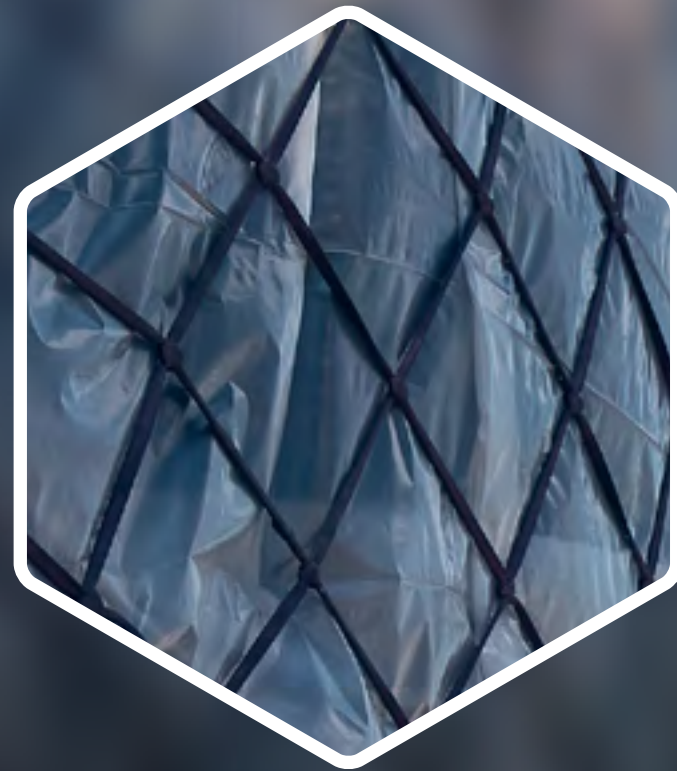
## Part 1: Takeaways

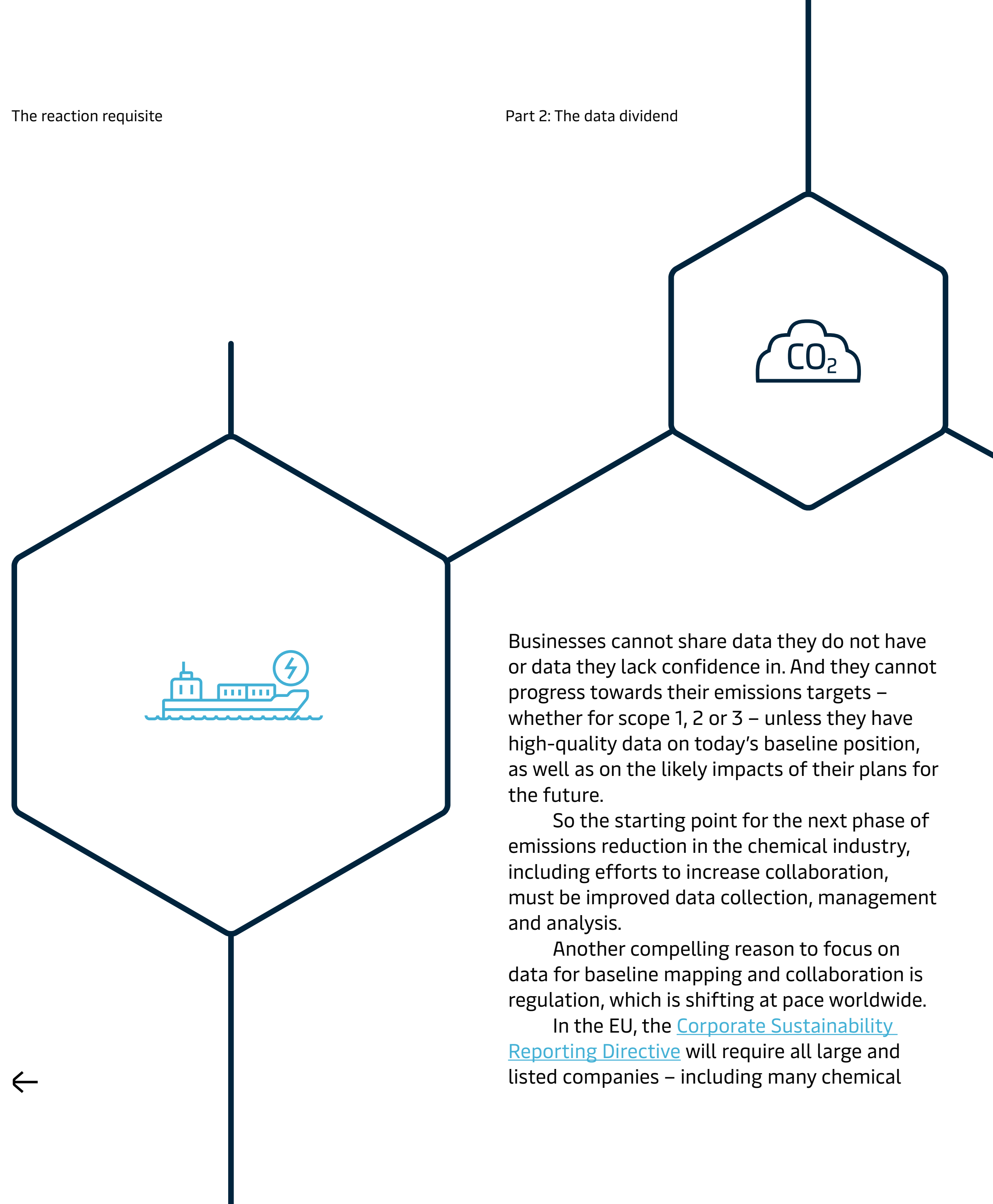
- **Most chemical companies have not started tackling their scope 3 emissions**, even though these account for the biggest share of chemical companies’ GHG footprint.
- **Collaboration across the value chain** is an important way to make more rapid progress on scope 3, and work with the logistics sector will be particularly crucial.
- **Load consolidation, new forms of transport and green warehousing** are three significant opportunities to bring down emissions related to logistics.
- **Industry collaboration could augment these gains**, but chemical companies are currently struggling to work with one another.
- **Third parties such as LSPs may be able to bridge the trust gap** and resolve these challenges.



Part 2

# The data dividend





Businesses cannot share data they do not have or data they lack confidence in. And they cannot progress towards their emissions targets – whether for scope 1, 2 or 3 – unless they have high-quality data on today’s baseline position, as well as on the likely impacts of their plans for the future.

So the starting point for the next phase of emissions reduction in the chemical industry, including efforts to increase collaboration, must be improved data collection, management and analysis.

Another compelling reason to focus on data for baseline mapping and collaboration is regulation, which is shifting at pace worldwide.

In the EU, the [Corporate Sustainability Reporting Directive](#) will require all large and listed companies – including many chemical

businesses – to report on their climate impacts, including their scope 3 emissions. In the US, [proposals from the Securities and Exchange Commission](#) will subject all publicly listed companies to similar rules. Many other territories are introducing versions of these regimes.

There is wide variation in the level of progress chemical companies have made on data collection and quality. More than half (52%) of the chemical companies in our research are pleased with their access to reliable data on emissions. A smaller but still significant percentage (29%) are worried they are being left behind because they are not confident in their data.



**“If you ask the biggest chemical players whether they have a perfect overview of all their emissions, they will tell you that they still have a gap of 20%-30%.”**



**Frederick Ronse**  
Founder  
Ovinto

Some in the industry believe there is a danger of complacency here. “As a whole, emissions data is still in its infancy,” warns Invesco’s Steve Smith. “I’ve got no doubt that in 10 years’ time, the quality of data will be completely different.”

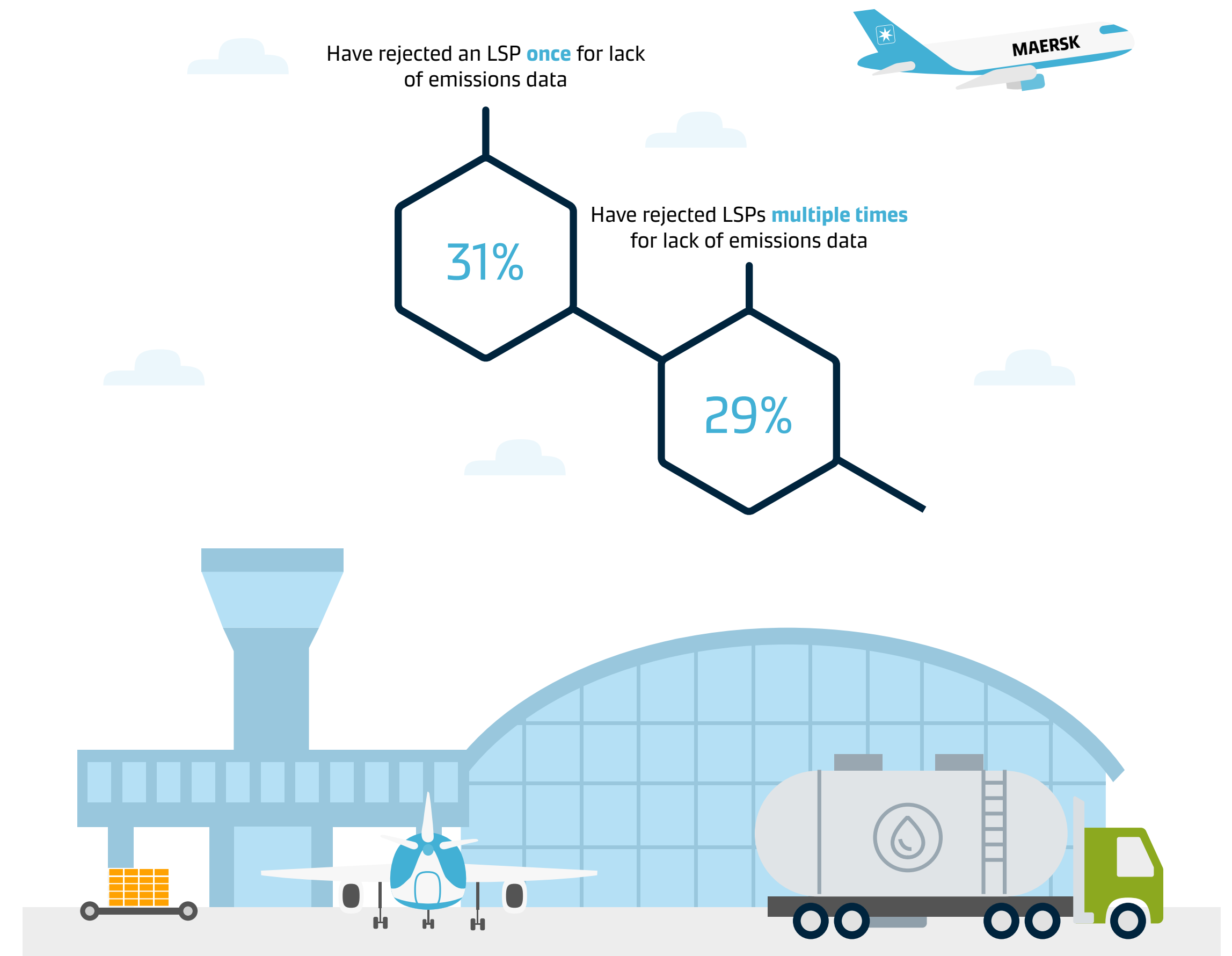
Frederick Ronse, the founder of rail and intermodal transport specialist Ovinto, is even more blunt: “If you ask the biggest chemical players whether they have a perfect overview of all their emissions, they will tell you that they still have a gap of 20%-30%.”

Ronse singles out logistics data as an area of weakness. “They don’t even know how many litres of diesel they consume,” he says. “They know how many orders they have, but those large chemical companies don’t know how many trips were connected to a single order.”

Such scepticism may partly reflect the relatively relaxed pace at which many companies appear to be addressing these challenges. In our research, only 17% of chemical businesses say they are already implementing measures to improve their capabilities to track and measure emissions. By contrast, 25% say they are not currently thinking about undertaking such work, even though some of them acknowledge the potential of having more powerful data.

Chemical businesses need to close these information gaps more quickly in order to comply with the regulatory standards that are coming into effect. This work will also underpin future emissions reduction efforts, enabling more productive relationships with suppliers and partners, and even competitors, as the industry becomes more collaborative.

Figure 4: There is pressure on LSPs to share emissions data



# Tackling emissions with the help of AI

Chemical businesses with high-quality data will have an edge in exploiting emerging technologies such as artificial intelligence (AI). According to a [2023 survey](#) of business decision makers by the *Financial Times*, logistics is the industry that is most likely to be affected by AI.

Chemical companies are beginning to explore the potential of AI in their climate mitigation programmes. "AI and machine learning will help us to do more predictive analyses, and we expect this to help drive strategies that will help take global logistics to the next level," says Syngenta's Peter Crowe.

Industry collaboration in digital innovation is already happening. For example, Maersk and Syngenta Crop Protection have worked together to create an emissions dashboard that acts as a platform for GHG emissions reporting and data analytics.

## Creating a digital twin

One example, says PI Industries' Head of Commercial and Supply Chain Vipul Patel, is in supply chain management: "Using AI, we can build a digital twin of our supply chain to identify the current bottlenecks, and how and where improvements will help us." Those improvements could include reduced emissions.

Another possibility for AI, says Patel, is route optimisation: "For example, AI can help us to analyse real-time data on traffic, weather, road conditions, understanding which route will be helpful in reducing emissions and when it makes sense to use, say, 40-foot containers rather than 20-foot containers or to use the rail transport system."

AI can also help in analysing historical data and market trends to improve demand forecasting accuracy. This helps companies

to optimise inventory levels and reduce emissions associated with overstocking and emergency shipments.

Our research provides clear evidence that some chemical businesses are beginning to recognise AI's potential for emissions reduction. Among chemical companies in our survey that are already using AI, the most popular use case is to increase energy efficiency: 28% have already started this.

Take-up has been significantly slower in other areas: 12% use AI for route optimisation, 12% for last-mile delivery optimisation and 8% for predictive emission calculations (see Figure 5).

It is positive to note that most of the companies in our research recognise the strong potential of AI tools to help them reduce scope 3 emissions within the next three to five years.

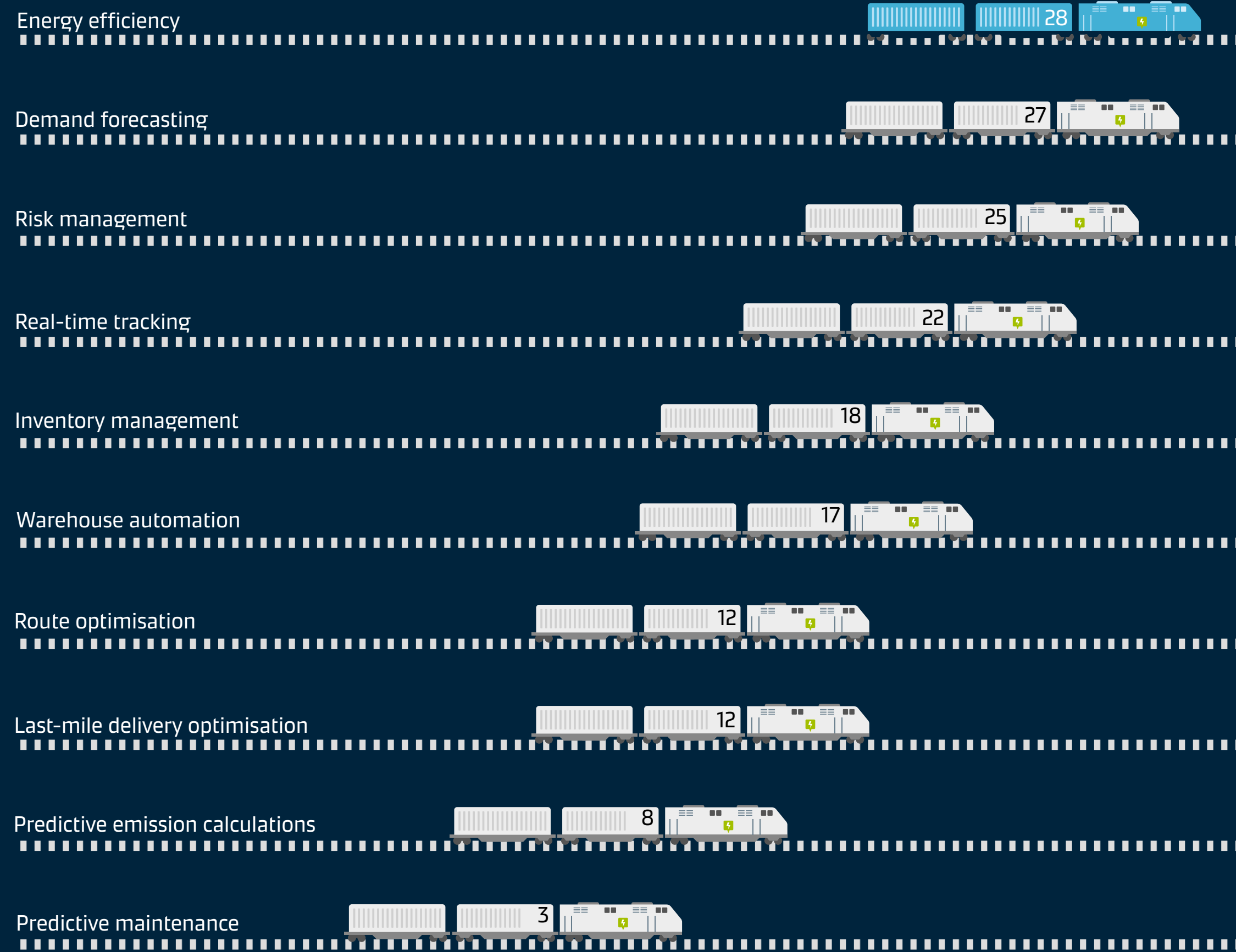
*"Using AI, we can build a digital twin of our supply chain to identify the current bottlenecks, and how and where improvements will help us."*



**Vipul Patel**  
Head of Commercial and Supply Chain  
PI Industries



Figure 5: How chemical companies use AI in logistics today (%)



In combination with tools such as sensors and trackers, which are already widely used in logistics, AI can have a significant impact on the supply chain, says Vlerick Business School’s Ann Vereecke. “We will be able to use AI to get even better visibility in the supply chain – to sense and see where our goods are and where our trucks are and to combine this with analysis of unstructured data, such as the weather in a certain region, and how this might disrupt the supply chain.”

Three to five years is a realistic timeframe. Companies will need to develop the right AI tools and improve their collection of reliable, high-quality, granular data to provide a foundation for all AI applications.

“First, you need to gather the data,” cautions Ovinto’s Frederick Ronse. “The moment you have it, you need to clean and validate it before you can interrogate it. And only once you have all that in place are you in a position to apply machine learning or other forms of AI.”





### Logistics service providers must step up

Part of the challenge will be to demand more from partners throughout the value chain – to drive up data quality and consistency across the entire sector.

Chemical businesses are entitled to expect more. After all, their scope 3 emissions from suppliers such as LSPs are to a large part these companies' scope 1 emissions. That data should be available and accessible.

Our research suggests that chemical businesses are becoming tougher: 60% have rejected an LSP because it lacked reliable emissions data, and 29% have done this multiple times.

Mapping scope 3 emissions in the chemical sector is not straightforward because of the complexity of its value chain. Upstream emissions associated with the extraction and production of raw materials are significant. Downstream producers of intermediate and final products may also have to be considered. From a logistics perspective, transport and storage may generate emissions at upstream and downstream value chain links.

This is a problem that is recognised by external bodies such as the Science Based Targets initiative (SBTi), which works with private sector organisations to set emissions targets. In a [study](#) produced in 2023, the SBTi warned: "The chemical sector has one of the most complex and diverse value chains of all sectors in the global economy."

Our research shows that chemical businesses attribute significant levels of emissions to upstream and downstream logistics. The companies in our survey believe, on average, that emissions from upstream logistics, transportation and storage activities account for about 23% of their total scope 3 emissions. Similar downstream activities account for a further 15% of the scope 3 emissions on average.

This complexity means that securing more accurate GHG emissions data will require significant effort; more urgency is needed to collect supply chain data – including from supply chain partners. There are good reasons to do this: chemical businesses with truly granular data on the carbon footprint of their entire product portfolios will be in a far stronger position to work with customers to develop credible decarbonisation strategies.

## Part 2: Takeaways

- **Better data collection, management and analysis** will support the next phase of emissions reduction in the chemical industry.
- **Chemical companies' progress on improving data quality varies.** Closing this information gap is crucial.
- **LSPs need to provide better-quality data** to their customers, including the chemical sector.
- **New technologies, including AI, can help the chemical sector to tackle its GHG emissions.** And data is a critical input for these technologies.





Part 3

Doing well by  
doing good:  
value drivers for change



“ Think about emissions as a liability. At some point, there will be a cost. ”



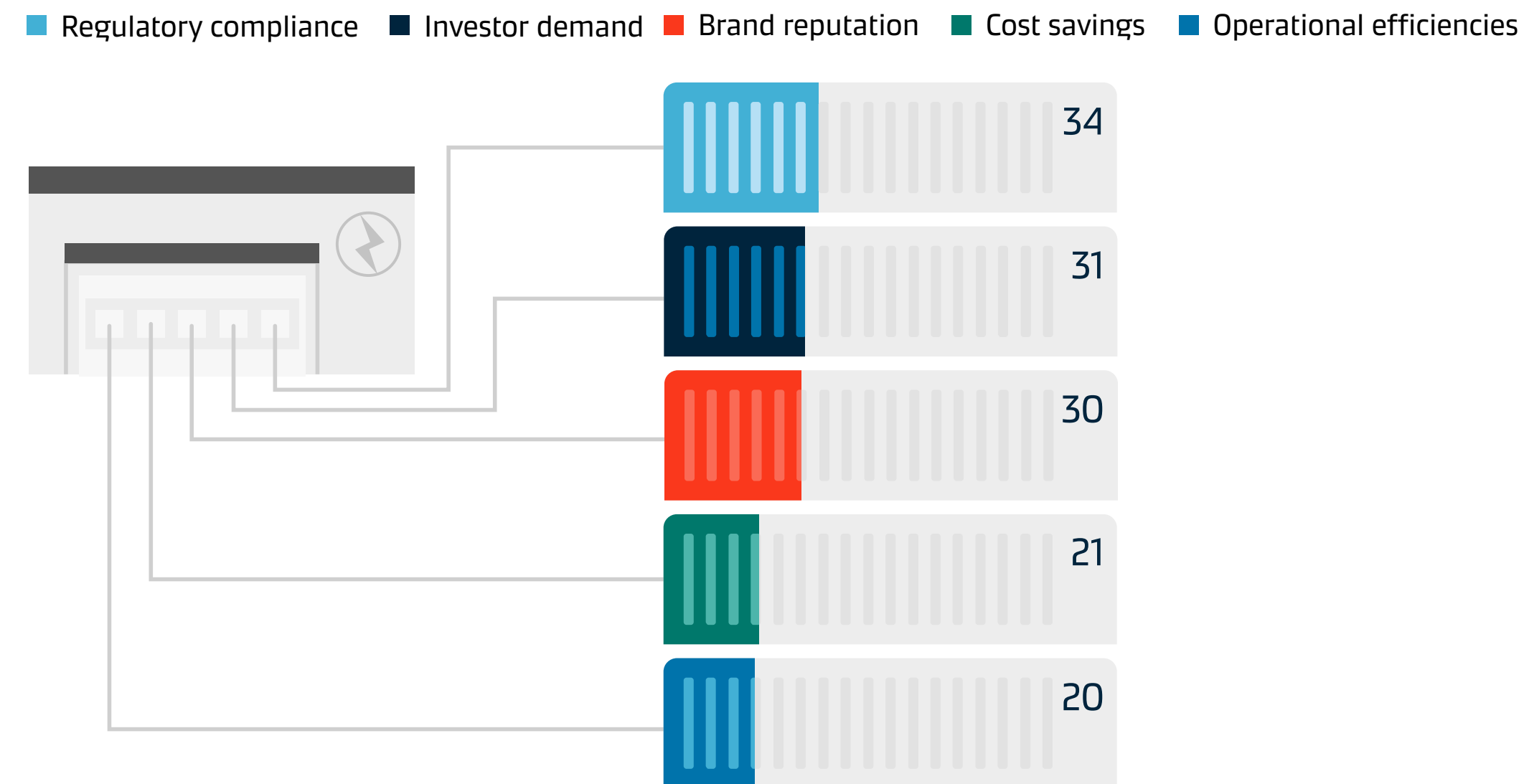
**Steve Smith**  
European Equities Fund Manager  
Invesco

The business case for emissions reduction – including embracing the collaboration needed for meaningful scope 3 impacts – is increasingly compelling.

Our research reveals that there are several reasons why chemical business are trying to reduce their emissions – in addition to tackling climate change (see Figure 6). In some cases, there is a desire to protect the organisation: regulatory compliance is a reason for one-third of businesses, and almost as many are concerned about brand reputation.

Other reasons more closely affect bottom-line performance, and many businesses see a financial opportunity in emissions reduction: the potential to achieve cost savings is an incentive to change for more than one-fifth of businesses, and the same proportion wants to realise operational efficiencies.

Figure 6: Why chemical companies are taking action on emissions (%)



### The impact on the bottom line

The chemical sector is looking for affordable change. “Any additional costs in the value chain will ultimately be shared by the company and the end customer,” says PI Industries’ Vipul Patel. “It’s vital for all stakeholders, including logistics services providers, to see the merits and long-term sustainability of the business and the viability of the product for the end customer.”

The good news is that the cost case for focusing on emissions reduction is strong, according to Vlerick Business School’s Ann Vereecke. For many businesses, reducing GHG emissions will also lower costs.

“If you make better use of your equipment, whether it is your truck or your ship or something else, you are utilising your assets better, and better asset utilisation means you need fewer assets – it means there’s a better return on assets,” says Vereecke. “It plays on the use of materials, the use of water, the use of energy, but it also plays in terms of better use of assets and, therefore, fewer assets, and both have a financial impact. Less cost is more profit; fewer assets is more return on assets.”

Invesco’s Steve Smith puts this slightly differently: “Think about emissions as a liability,” he says. “At some point, there will be a cost – whether it’s a regulatory fine, whether it’s a lack of pricing power because consumers don’t love the product anymore, or whether it’s [an]

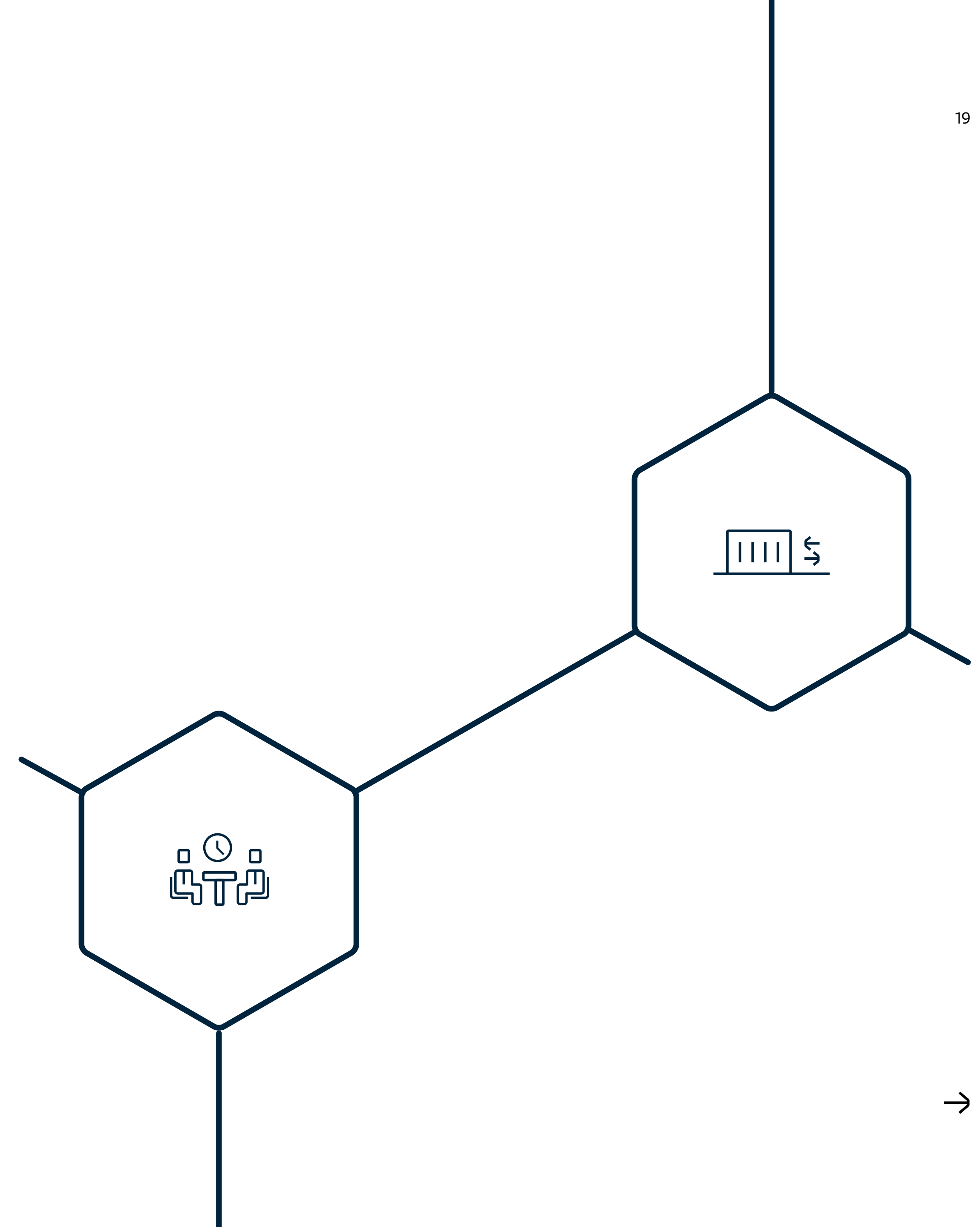
investment to reduce emissions through opex or capex.”

There are some initiatives, such as increasing energy efficiency, moving to greener energy sources – including renewables – and reducing variable costs, where chemical businesses can simultaneously strive for emissions reduction and cost-cutting. Circular economy models could offer savings by reducing waste and lowering the cost of raw materials. Companies could also increase their use of certain sustainable materials.

Chemical companies should not overlook the wider financial opportunities. If they have a track record of emissions reduction, for instance, they may be able to access green finance – potentially with lower borrowing costs. A smaller carbon footprint might provide a competitive advantage, driving revenue.

Collaboration might augment these gains. For example, working with customers on GHG goals makes sense. Chemical businesses with granular data on the carbon footprint of their entire product portfolios can partner with their customers to develop credible decarbonisation strategies, generating cost savings in the process.

Management consulting firm McKinsey has found that some chemical companies are achieving [emissions reductions of up to 10% and cost savings of up to 15%](#) as a direct result.



**Decreased costs via scope 3**

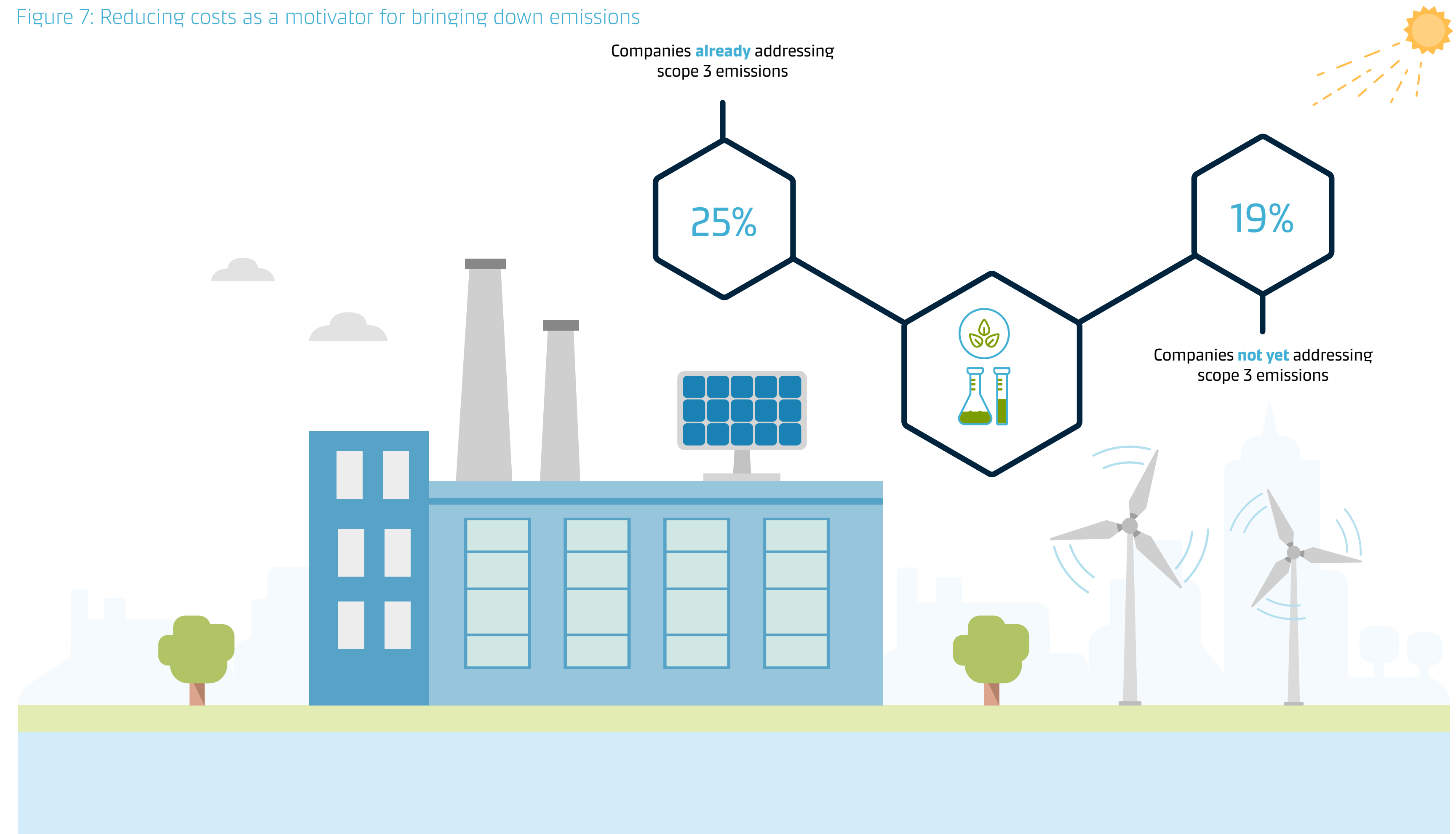
Leading chemical companies recognise this business case. Our research shows that chemical businesses that are already addressing their scope 3 output are more likely to be conscious of the cost savings opportunity linked to a smaller GHG footprint. One-quarter of these businesses say that reduced costs are a motivator for bringing down emissions, compared with 19% of businesses that are not yet addressing scope 3 (see Figure 7).

Again, costs and emissions reductions are often explicitly linked. Syngenta, for example, developed an internal approval tool to calculate the financial benefits of changes such as switching from air to sea freight. Later, it added an emissions reduction calculator to the tool. “It gives the business a more holistic view to assess the true cost of each shipment,” says Syngenta’s Peter Crowe.

The logistics sector is exploring multiple opportunities. For example, transport providers that move to greener fuels and lower-cost modes will be able to offer chemical industry customers scope 3 emission reductions and lower prices. Warehousing operators running low- or zero-emission facilities may also be able to offer the best of both worlds.

This is a virtuous circle: LSPs are under pressure to reduce emissions directly as they pursue their GHG reduction goals and indirectly as they address customers’ growing

Figure 7: Reducing costs as a motivator for bringing down emissions



interest in scope 3 emissions. As they respond, they will, over time, benefit from the same cost savings and efficiency gains as chemical businesses. Then, they can pass some of this on to customers and reinvest some in further improvements.

“It is a win-win situation,” says Ovinto’s Frederick Ronse. “The chemical company’s emissions go down, and the trucking provider, say, has more money to green its fleet.”

Even relatively small improvements pay off. The cost savings and emissions reductions that could come from load optimisation and intelligent planning and scheduling strengthen the case for greater collaboration across the chemical sector value chain. The more that businesses can work with partners and competitors to shrink their carbon footprints, the greater the financial benefits.

Other parts of the value chain that are generating significant scope 3 emissions will be able to produce similar benefits as they come under pressure to improve sustainability. Energy providers, raw materials producers and capital goods suppliers all have opportunities to pass on cost savings to the chemical sector as these solutions scale up.

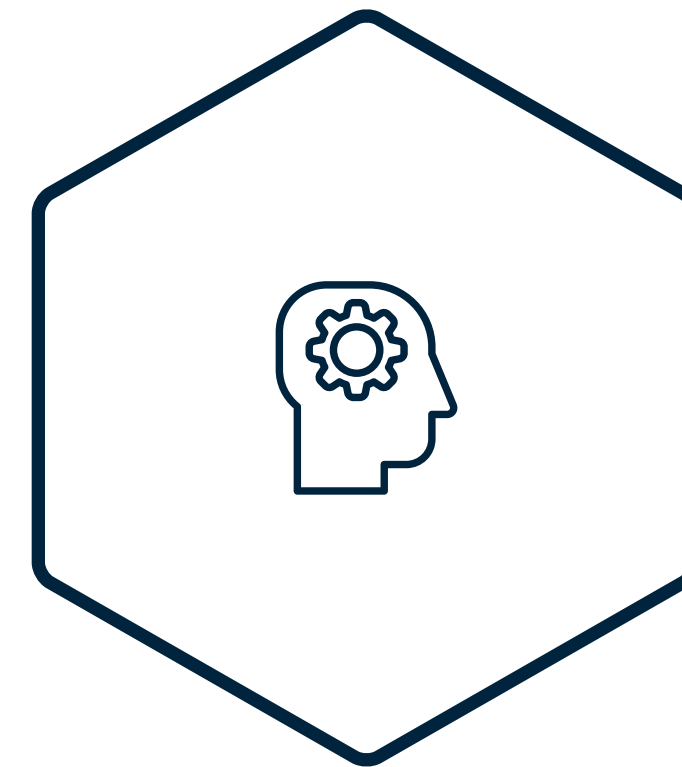
### The power of consumers, employees and investors

Over time, the case for the chemical industry to reduce emissions will only grow. For example, our research suggests that only 9% of businesses see benefits for employee recruitment and retention (see Figure 6), but this is certain to increase in a world where people increasingly want to work for organisations with a sustainability focus. In a [study](#) published in 2023, Deloitte found that more than half of Generation Z and millennial workers investigate an organisation’s environmental impact and policies before accepting a job.

Similarly, a growing number of consumers want to buy from responsible businesses. According to [McKinsey research](#), two-thirds of consumers consider sustainability aspects when purchasing. Chemical businesses may be less affected by these trends in the short term because they typically do not sell directly to the consumer market, but this demand will filter through to them.

In fact, 19% of the chemical companies in our research say that consumer demand is already a factor in their organisations’ decisions to reduce emissions, even if only 13% say that customer demand is a reason to act.

Finally, another stakeholder worth considering is investors: 31% of chemical



businesses in our research say that investor demand is a driver for change. One of those investors, Invesco’s Steve Smith, points to an opportunity for the sector to become more investible.

“We are trying to find businesses that are changing,” he says. “Some of these businesses might be cheaply priced today but will see their valuations rise if they are successful in the transition we expect them to undergo.”



## Part 3: Takeaways

- **Change must be affordable** – but in many instances, lower emissions can result in reduced costs.
- **LSPs moving to greener options** will also, as scale increases, help to drive down costs.
- **Separately, chemical companies must respond to the demands of stakeholders** – regulators, investors, employees and customers – who are all demanding positive change.





Part 4

# Why procurement must step up



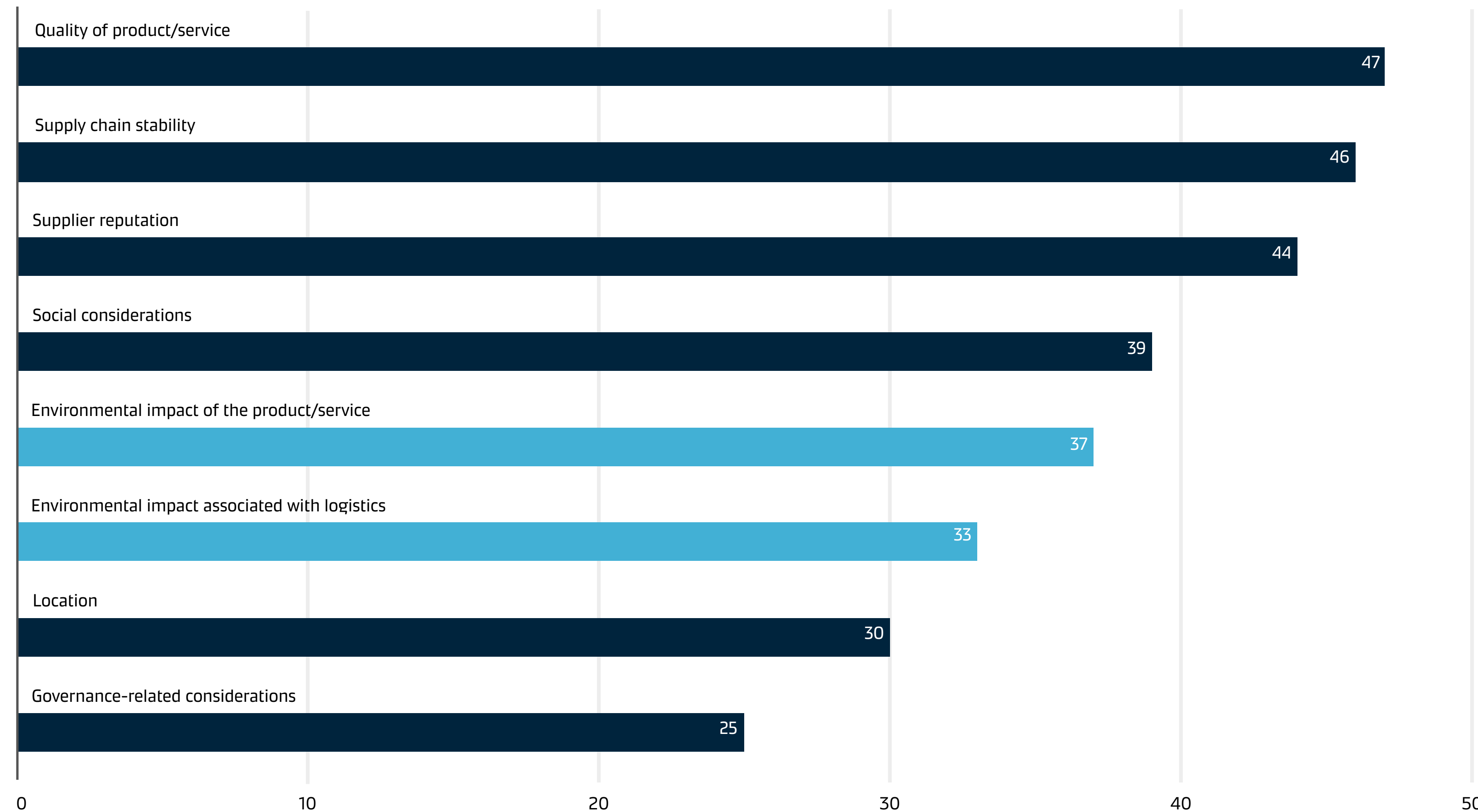
Chemical businesses cannot reduce their scope 3 emissions without working more closely with their suppliers. By definition, supply chain emissions require action in the supply chain, but too few chemical businesses are confronting this reality.

In our research, just 37% of businesses say that the environmental impact of a product or service is a key consideration for their procurement function (see Figure 8). Only 33% consider the environmental impact of logistics and transportation.

This means that many chemical businesses are missing an opportunity. If a business does not routinely include environmental criteria in its procurement processes, it risks disappointing results on scope 3 emission reductions. Progress then becomes a matter of luck rather than judgement.

“You are powerful,” says Ovinto’s Frederick Ronse to large chemical businesses. “If you tell your trucking company that it won’t drive for you unless it can give you the emissions data you need, it will give you that data, but you have a choice – are you actually just going for the cheapest?”

Figure 8: What chemical businesses consider when they buy a product or service\* (%)



\*excluding cost, speed and regulatory compliance



Some of the industry now recognises this. About one-third of the chemical companies in our survey reject the idea that they prioritise considerations such as price, speed and quality over GHG emissions when they make procurement decisions.

Businesses already leading on emissions reduction are much more likely to empower the procurement team. Among the chemical businesses in our research with more advanced emissions reduction plans, 47% say they consider logistics-related environmental concerns during their procurement processes, compared with only 33% of the others.

The rest of the industry needs to follow this lead. In logistics specifically, procurement teams should take a tougher stance, interrogating potential providers more robustly about their environmental behaviours and performance. They should not be afraid to take their business elsewhere if they do not get satisfactory answers.

Some businesses are already doing this. As we have seen, 60% of the chemical companies in our research have rejected an LSP at least once because it could not supply reliable emissions data on its products and services (see Figure 4).

There are several other emissions-related factors that have prompted these rejections. For example, 65% of the companies we surveyed have turned away a potential provider because they were worried about upsetting their

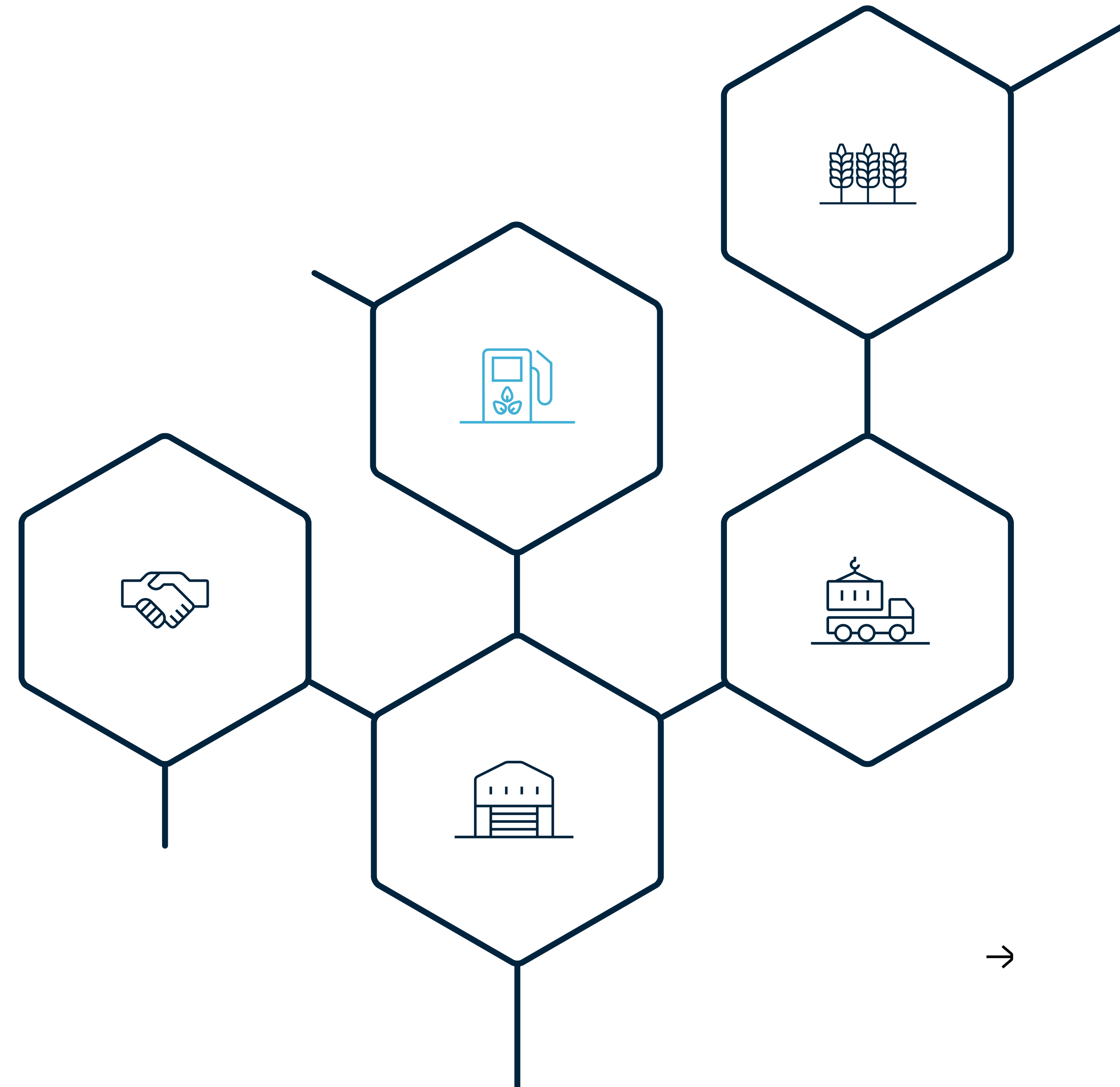
sustainability-conscious customers, and 58% have rejected a provider because they were worried about their investors' concerns. Fifty-seven per cent and 51% have rejected a potential provider amid concerns over emissions trading system-related costs and emissions-related tariffs, respectively.

These behaviours are encouraging, even if they are uncomfortable for LSPs. When procurement teams make purchasing decisions on this basis, it incentivises LSPs to work harder on sustainability – in terms of their performance, transparency and visibility.

What will it take for more procurement functions to get tougher with their logistics partners? How will they shift environmental performance up the list of criteria they consider when making buying decisions?

Vlerick Business School's Ann Vereecke believes that chemical companies need to rethink how they incentivise procurement teams. Too often, she suggests, they weight incentives heavily towards cost rather than encouraging procurement teams to play their part in driving down scope 3 emissions.

"It comes down to having the right key performance indicators (KPIs)," says Vereecke. "If you're the procurement person and you know that 10% of your bonus is related to sustainability and 30% is dependent on cost, the more ecological option may suffer – you'll make the trade-off."





### Raising the profile of procurement and logistics

When asked which members of their sustainability committee (or equivalent working group) are among those with the biggest impact, only 20% of chemical businesses include their procurement function, and 26% choose logistics. By contrast, 40% choose legal and compliance, and 34% choose finance and accounting.

Even if the procurement function is ready and willing to engage on emissions reduction issues, it may struggle to make its voice heard in discussions about sustainability. This will naturally limit its ability to have a positive influence. The logistics team, meanwhile, is well placed to help bring down scope 3 emissions. Its voice must also be heard.

These functions play a valuable role as chemical businesses step up emissions-reduction-focused collaboration with a broad range of partners and suppliers. Their greatest contribution is likely to relate to scope 3 emissions – the most significant contributor to chemical businesses' carbon footprint. So procurement and logistics must move to the centre of the sustainability conversation.

## Part 4: Takeaways

- **Many chemical companies treat environmental factors** as an afterthought in their purchasing decisions.
- **Businesses leading the way on GHG reductions** are more likely to empower their procurement teams to consider emissions.
- **To encourage change in procurement, companies need to reconsider** how teams are incentivised, with greater emphasis on sustainability KPIs.





Conclusion:  
the reaction  
requisite



Our research shows that the chemical industry is making progress in reducing its GHG emissions. A clear majority of businesses participating in our study believe they have a clear strategy to reduce their carbon footprint. Multiple initiatives to execute these strategies are already under way.

But there is an opportunity to move further and faster – to respond to the reaction requisite. In common with other studies, our research shows that scope 3 emissions account for a significant proportion of the sector’s overall GHG emissions. Yet chemical businesses say they are less likely to have started improving performance here than they are with the easier-to-tackle emissions associated with scope 1 or 2.

The sector must not allow itself to be distracted. The crises that have affected businesses in recent years – Covid-19, geopolitical tension and conflict, and rising inflation and interest rates – have all been disruptive and have focused minds on commercial realities. But climate change is as pressing as ever. Time is running out as pressure for meaningful change from policymakers, regulators, investors, customers and employees increases.

The logistics industry accounts for a large chunk of chemical companies’ scope 3 emissions, so it shares this responsibility.



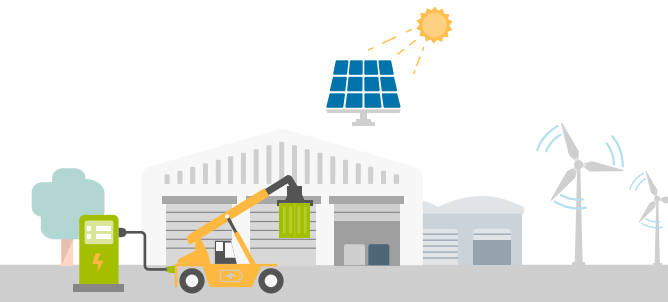
This research shows where the chemical and logistics industries can start



**Scope 3 emissions account for a disproportionately large proportion of chemical companies' carbon footprints.** It makes sense to focus on logistics to reduce these emissions, because it is a major contributor and is more controllable than other areas contributing to scope 3.



**Closer collaboration with LSPs offers significant potential to reduce scope 3 emissions.** Opportunities include load consolidation, vehicles that run on cleaner fuels, intermodal freight and zero- or low-emission warehousing.



**Alliances with industry partners, including competitors, will multiply the impact.** Initiatives such as shared logistics hubs and joint load optimisation could substantially lower individual businesses' emissions and improve the industry's aggregate performance.



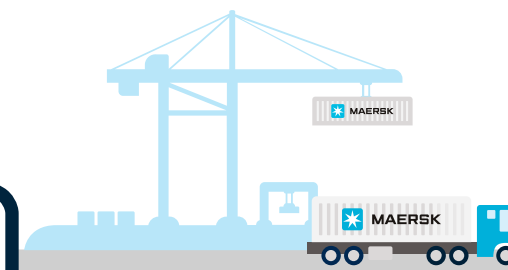
**New technologies and collaborations led by third parties allow companies to move past trust issues that could inhibit collaboration.** It is vital to pursue measures that will ease concerns about data-sharing and competitive advantage.



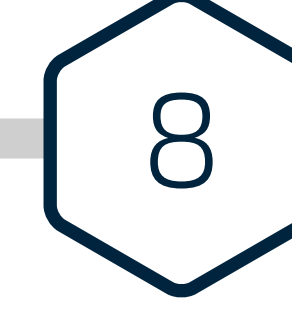
**Chemical companies need to improve data collection, management and analysis.** This will provide a baseline for measuring scope 1, 2 and 3 emissions and creating the raw inputs for technologies such as analytics and AI. Companies can then use these technologies for further emissions reductions.



**Building a broader business case for emissions reduction will help chemical businesses achieve their climate targets more quickly.** Reducing the GHG footprint, particularly scope 3, can, in many cases, also reduce costs. LSPs are well placed to support the industry here.



**Chemical businesses must hold their value chain partners accountable for environmental performance.** The procurement function should increase the importance of sustainability criteria in purchasing decisions, although this might require a rethink of how the function incentivises procurement teams.



**There should be a more influential role for procurement in organisations' sustainability strategies and governance.** If suppliers' emissions account for a large chunk of chemical businesses' carbon footprints, the function responsible for buying from those suppliers must start to have more impact.





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