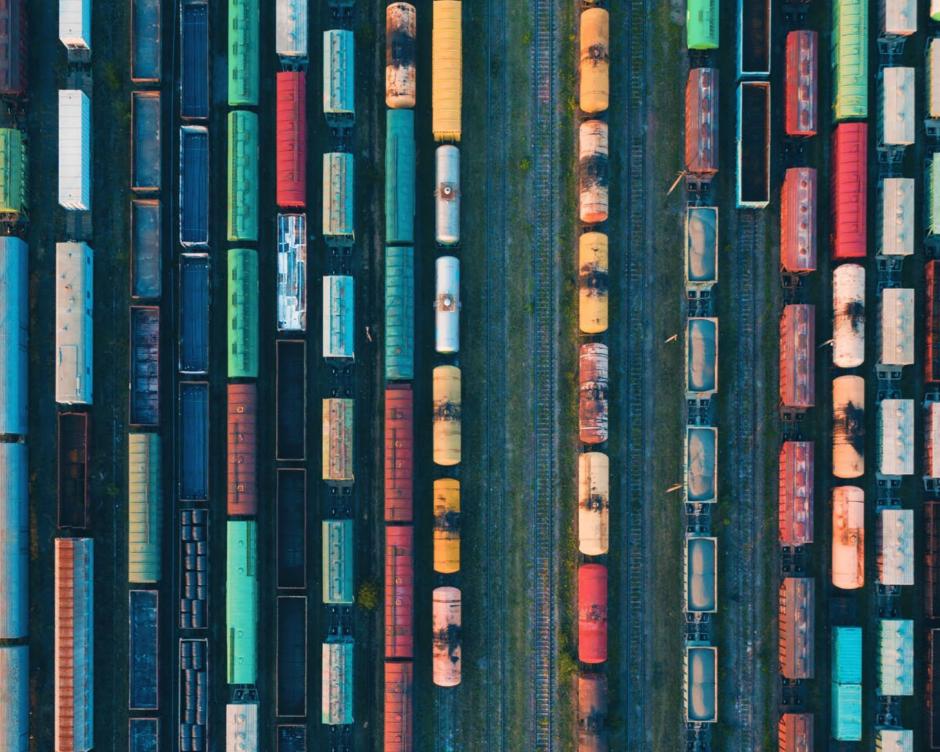


Ù Panatton**f**

European Logistics & Supply Chain Sustainability Report 2023



Analytiqa

All figures and data relating to the European Logistics & Supply Chain Sustainability Report have been researched by Analytiqa.

Analytiqa is a market analysis company providing reports, bespoke research and strategic advisory for multinational clients across all sectors and industry verticals of the global supply chain.

Analytiqa delivers high quality, commercially relevant research to assist clients to grow and profit in challenging and competitive markets.

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Introduction

Building upon the success of our inaugural report in 2022, HFW and Panattoni, in conjunction with Analytiqa, are delighted to publish the second European Logistics and Supply Chain Sustainability Report, assessing Environmental, Social, and Governance (ESG) strategies and activity across Europe, focusing on logistics and supply chain operations.

In 2023, European supply chains have been impacted by a developing set of challenges. Having emerged from the pandemic-related disruption of 2020-2022, they are yet to return to what might be considered 'normal'. While international freight rates have moved back towards their pre-pandemic levels, geopolitical disruption and rising energy and fuel costs have contributed to high levels of inflation, leading to pressure on both businesses and consumer markets. This, in turn has driven an uncertain, and somewhat fragile, economic outlook. By mid-2023, lower natural gas prices were making their way to consumers, though at varying speeds across the EU. Combined with fewer supply constraints, improved business confidence and a strong labour market, there is cause for cautious optimism.

Throughout this, supply chains maintain their resilience, adapting to and overcoming the challenges they face. Major trends continue to drive behavioural change and performance improvements, not least eCommerce, widespread skills shortages and the role of technology and digitalisation. At the same time, the role of sustainability as a driving force for strategic, operational and commercial change remains at the top of the corporate agenda.

Across Europe, senior decision makers have once again expressed their views and insights to facilitate this important industry research. Respondents included CEOs, Managing Directors and senior management of some of the largest logistics service providers and buyers of logistics services. We are grateful to all those that took the time to contribute their views.

The resulting report examines key ESG metrics and indicators for businesses operating within the logistics and supply chain sector. Developing the unique insight published in last year's report, the majority of our 2023 research seeks to update the views and opinions expressed in 2022, as we start to build trends and analyse shifts in behaviour. We have also introduced several new research elements this year to focus on specific subjects of interest and we include two case studies, from Danfoss and Zeus, providing examples of 'real-world' ESG initiatives across supply chains. We have segmented the findings into four broad sections: current dynamics; expectations for the future; legal and contractual perspectives and developments in warehousing and transport.

Our research does not measure companies' performance in achieving ESG credentials. From a strategic perspective, across both operational and commercial outlooks, we aim to identify and understand attitudes to, challenges of, and future expectations for sustainability investments, objectives and activity. Importantly, it provides insights from the perspective of both logistics service provider and buyer of logistics services giving us a 360-degree view of sentiment.

Whilst business challenges and headwinds remain in the months ahead, recent global headlines, including climate change events, ensure that consumers and businesses will continue to demand higher standards of sustainability from their product manufacturers, retailers and in turn their service providers.

We trust you will enjoy reading this second edition of the European Logistics and Supply Chain Sustainability Report.



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About us





We have over 600 lawyers working across the Americas, Europe, the Middle East, Asia and Australia. We take a progressive approach to our roles in commercial business – thinking creatively and pragmatically to support our clients.

Whether we are solving complex issues within the construction, aviation or shipping industries, or providing advice across insurance, commodities and energy we are specialist lawyers here to add value to our clients. We think about the commercial solution first, and then underpin our advice with a solid foundation of legal expertise.

Our clients, across every sector – Aviation, Commodities, Construction, Energy & Resources, Insurance and Shipping - are impacted by our climate-challenged environment, driven by tough net zero ambitions and related issues.

The path to achieving fully sustainable business solutions will involve a combination of technical and financial innovation, revised regulatory frameworks and a continuous commitment of the industry participants to deliver on what is now being demanded. This is creating both challenges and opportunities for our clients as they seek to navigate their way through an ever-evolving and multi-tiered regulatory landscape.

We continue to support our clients, to adapt and comply with the sustainability challenges being thrown up by international, regional and national regulatory bodies which seek to regulate and limit GHG emissions and waste, the use and availability of alternative fuels and the efficiency and effectiveness of transit orientated performance. HFW further supports clients working on developing new projects and products designed to drive and gain commercial opportunity from this evolving legal and technological landscape.

We have a proven track record of working with our multi-sector clients, understanding their business, and guiding them through their transition to sustainable business models.

^{¹} PANATTON⁷

Panattoni is the world's largest privately owned industrial real estate developer with 53 offices across North America, India, and Europe, where it has been present since 2005. Panattoni is also one of the topranking consistent deployers of institutional and private wealth capital directly in deal opportunities in the European industrial and logistics investment market, investing around EUR 7.0 billion a year on average.

So far, the company has delivered 20.6 million sqm of modern industrial space in many European countries, including: Great Britain, Germany, Poland, Czech Republic, Slovakia, Hungary, Austria, the Netherlands, Italy, Spain, Portugal, France, Sweden and Denmark.

Within the Panattoni structure, a special department is devoted to build-to-suit projects specifically designed to fulfil the requirements of individual tenants. Such key clients include Amazon, DB Schenker, DHL, FedEx, DPD, XPO, Coca-Cola, Weber, Whirlpool, Bosch, Volkswagen, H&M, Danfoss, Carrefour, TJX, as well as Hermes Fulfilment, a part of the Otto group.

Panattoni is committed to sustainable construction and a closed-loop economy, effectively reducing resource consumption and CO2 emissions on the road to climate neutrality. For several years, we have been developing its "Go Earthwise with Panattoni" sustainable development concept, being a clear industry leader in environmentally certified space.





- In Europe, Panattoni is approaching 12.6 million sqm of certified space.
- We conduct numerous activities that minimise our business's negative effects and go beyond the minimum required by law. We work for local communities by expanding the road infrastructure in the cities we operate, supporting access to education or supporting art and culture.
- Our decisions consider three areas: the environment, society and corporate governance, each is important to us and our business partners. International guidelines and regulations applicable around the world concerning ESG investment have helped us in selecting the appropriate Sustainable Development Goals (SDG's) and EU objectives and compliance with taxonomy.
- Our goal is to make a positive long-term impact. One of the many ways in which we plan to do this, is by committing to be net zero carbon in all of our new developments by 2025.

Measuring ESG Sentiment

The insights recorded in our report take a dual perspective across the sector, with responses collected from those operating as logistics service providers (third party logistics providers or 3PLs) and also buyers, or potential buyers, of these services (manufacturers and retailers).

The research was conducted across Europe. Responses from 15 countries were received, an increase from 12 last year, including Belgium, Croatia, Czech Republic, Denmark, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Spain, Sweden, Switzerland and the UK.

Conducted across May and June, there were a total of 101 respondents to our 2023 research from two groups, of which 47% were from 3PLs and 53% manufacturers and retailers (28% manufacturers and 25% retailers).

On the logistics service providers side, respondents were derived from operators of all sizes. The world's biggest companies, active across multiple countries, service sectors and industry verticals, took part in the research, alongside 'local heroes' or country specialists operating in either road transport, contract logistics, freight forwarding and/or the courier, express and eFulfilment sectors.

The manufacturing respondents were represented by companies from the automotive, fast moving consumer goods (FMCG), food and drink, industrial (engineering, chemicals etc), packaging, pharmaceuticals and healthcare sectors, whilst retailer participants included a mix of 'bricks and mortar' companies, together with omnichannel and online operators.

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This report was once again supported by senior decision makers. 30% of respondents were classified as either CEOs, Managing Directors, CFOs or Finance Directors, while 32% of respondents were senior professionals in Sustainability roles. The remaining respondents included people at Director level in senior supply chain, logistics, operational and commercial roles.

Our research collected hundreds of data points, from respondents. Each of these data points have their own interesting stories to tell, but limitations on space mean that we cannot cover them all. An Executive Summary selects just seven metrics analysed in the report, the key headlines, whilst a further four sections identify important trends across 20 or so topics that formed the basis of our research. At the end of this report, an appendix provides comprehensive coverage of the complete data set identified during the research process.

We welcome your feedback, both on the data and its presentation in this report.

1. Sector of research respondents

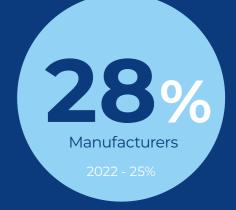


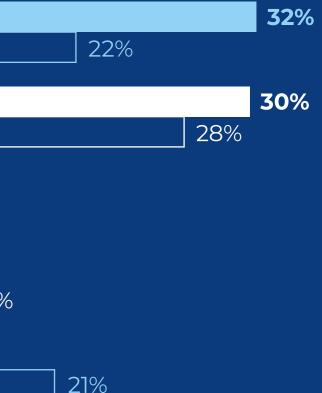
2. Job titles of research respondents

Sustainability 2023		
Sustainability 2022		
CEO/MD/CFO/FD 2023		
CEO/MD/CFO/FD 2022		
Logistics/Supply Chain Director 2023	129	%
Logistics/Supply Chain Director 2022		14%
Operations Director 2023		14%
Operations Director 2022		15%
Commercial Director/Other 2023	129	%
Commercial Director/Other 2022		









Executive Summary

The second year of our research both reinforces important findings highlighted in our inaugural report in 2022, whilst shining a light on new areas of ESG research for the supply chain.

Climate change remains a central focus driving the ESG 'agenda', ensuring that ESG is no longer considered a 'nice to have'. For supply chains, and their service providers, of all shapes and sizes, it is a business necessity. Companies cannot hide behind widespread operational or market challenges either, as a reason for non-conformity or delays. The need to improve and enhance a company's ESG efforts does not diminish in periods of economic challenges.

Alongside this, ESG is no longer framed by a perception, or the 'greenwashing' of performance. The prevalence of data to explain how organisations operate and do business increases accountability and allows for greater scrutiny. As a result, ESG reporting initiatives are now more comprehensive and sophisticated.

Collating sustainability data across complex supply chains is itself, a not inconsiderable challenge. Companies once again highlighted that obtaining data for manufacturing and procurement activities is the most challenging. Conversely, it is less challenging, or somewhat easier, to obtain data for many transport modes, including road freight, air and sea freight and, increasingly, courier, express and last mile deliveries.

An increasing share of companies now include ESG targets in their contracts as obligations for supply chain partners to meet, whilst the use of self-reporting as a form of compliance monitoring is diminishing and the use of audit rights is increasing. The consequences for failure to meet defined targets is now less likely to be a financial penalty. with more companies insisting on 'the right to terminate' contracts if these are not met.

The most important factors driving sustainability activities are the need to meet regulatory and legislative requirements and a desire to make a positive environmental impact. The most common future focus of ESG initiatives continues to be reducing carbon dioxide emissions and warehouse

energy saving projects, but commercial threats, and benefits, continue to play a vital role in driving the choice of initiatives that are undertaken, particularly amongst logistics service providers.

We see that whilst buyers of logistics services are giving greater 'weight' to sustainability when tendering contracts, a majority of 3PLs believe that they have won new business as a result of their strong ESG practices. At the same time, a small, but significant share of companies have lost business as a result of poor ESG practices.

Supply chains continue to operate under intense cost pressures, including ESG. Almost two-thirds of companies (including over three-quarters of 3PLs) are challenged by the financial cost of solutions, whilst increasingly, the complexity of ESG solutions and understanding of regulations are key challenges. A common thread of our 2023 research highlights the frequent relationship between the development of ESG initiatives and the financial burdens these place upon businesses. Two-thirds of logistics companies state that they could be encouraged to improve their sustainability, if solutions also enhanced their financial performance. 45% of respondents are willing to pay a rent premium to move operations to a 'green' building over a standard 'non-green' building, a trade-off that is increasingly understood by warehouse occupiers.

Whilst a significant share of companies are unable to quantify the benefits of their ESG activity, including in some cases, the lower operational costs of ESG solutions. companies continue to recognise that embracing ESG can make them more attractive to investors, customers, employees and end-consumers. A large share believe that ESG cultures must be embedded at the very top of their organisations, almost one-half of manufacturers and retailers believe that linking executive compensation to ESG targets would encourage improvements in the sustainability of their operations.

62%

of 3PLs have won new business as a result of their strong ESG practices, whilst 13% of all respondents have either lost or not renewed a warehouse contract because of a failure to meet ESG targets.

2/3

of 3PLs state that customer pressure encourages them to improve the sustainability of their operations. 43% of manufacturers and retailers believe that linking executive compensation to ESG targets would encourage improvements in the sustainability of their operations.

1/4

Under increasing pressure from rising costs, undertaking ESG activities to achieve financial or tax benefits has increased in importance in 2023. However, one-quarter of companies are unable to quantify the benefits, including in some cases, lower operational costs, of ESG solutions.

32%

of companies, up from 28% last year, include ESG targets as obligations for supply chain partners to meet in their contracts. Manufacturers and retailers more likely to make use of obligatory ESG targets in their contracts than 3PLs.







Acknowledging that companies can, and do. take multiple approaches to tracking contractual ESG compliance, it is clear to see that the use of selfreporting is diminishing and the use of audit rights is increasing.



Almost one-half of companies would be willing to pay a rent premium equivalent to the total operating cost savings to move operations to a 'green' building over a standard 'non-green' building. 31% of companies are willing to pay extra for environmental certifications, because they believe they add value to their business.



Access to electric vehicle charging points, preserving water resources and battery storage for onsite renewable energy generation are the areas seeing the biggest increase in sustainability focus in 2023.

Current Perspectives

62% of 3PLs have won new business as a result of their strong ESG practices, whilst one-half have enhanced and improved employee motivation.

Over **one-quarter** of companies are unable to quantify the benefits, including in some cases, lower operational costs, of ESG solutions.

It remains the case that over **20%** of companies identify a lack of support from their leadership regarding their ESG activities, an issue that is more prominent within manufacturers and retailers than 3PLs.

Under increasing pressure from **rising costs** for both groups of respondents, undertaking ESG activities to achieve financial or tax benefits has increased in importance in 2023.

32% of companies, up from **28%** last year, include ESG targets as obligations for supply chain partners to meet in their contracts. Manufacturers and retailers more likely to make use of obligatory ESG targets in their contracts than 3PL. "As a freight forwarding company it is extremely difficult to calculate a carbon footprint, however, social and governance matters (i.e. good ethics) are easier to evidence."

RESPONDENT QUOTE

To better understand the reasons behind the increasing prominence of ESG across the 'business landscape', we asked our research respondents to identify the contributory factors behind this trend. In line with our 2022 report, respondents were asked to assess 14 categories and rate their importance from one to ten, with ten being the highest level.

The most important factors driving sustainability activities are the need to meet regulatory and legislative requirements and a desire to make a positive environmental impact, the latter of which ranked highest this year. Meeting regulatory and legislative requirements is of greater importance to 3PLs than it is to manufacturers and retailers. Manufacturers and retailers continue to view ESG activity as playing a more important role when it comes to attracting and retaining employees, while for 3PLs, their ESG activity plays a vital role in meeting customer requirements, attracting new customers and achieving top-line growth.

With pressure on costs for both groups of respondents, undertaking ESG activities to achieve financial or tax benefits has increased in importance this year, particularly for manufacturers and retailers. However, initiatives such as selling energy generated via photovoltaic installations back to local power grids can be a complex process. A desire to make a positive social impact has also increased in importance as a driver of ESG activity, particularly for 3PLs, where it now ranks in their 'top 5' considerations.

To review the full category list and their ratings. please refer to the Appendix at the end of this report.

Manufacturers, retailers and logistics service providers face considerable challenges when they introduce, enhance or expand ESG activity into their operations. Almost two-thirds of companies (including over three-quarters of 3PLs) are challenged by the financial cost of solutions, whilst increasingly, the complexity of ESG solutions and understanding of regulations are key challenges.

3. Why do you undertake ESG activity?



Optimise long term capital expenditures

Logistics

Attract investors

Attract and retain employees

Make a positive

Make a positive social impact environmental impact

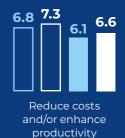
4. What challenges does your company encounter in its attempts to introduce/ enhance more sustainable solutions for your supply chain operations?

Share of respondents encountering each challenge (%)

Manufacturers and Retailers



(*) Note that this the share of respondents selecting each category, so answers will not sum to 100%





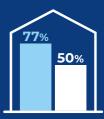
7.7 7.6 7.3 Enhance corporate reputation

7.0 7.1

Meet the UN requirements to become climate neutral by 2050



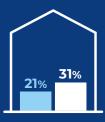




Financial cost of solutions



Other



Inability to define/ measure ROI

5. Most frequent challenges or benefits that ESG programmes directly contribute to

Share of respondents (%)

Logistics 2022 🔘 Manufacturers and Retailers 2022 🕼 Logistics 2023 🗘 Manufacturers and Retailers 2023 🗘



Lost customers due to poor ESG practices



Access to government subsidies and financial support



Avoided incurring contractual penalties with counterparties



Lack of recognition/competitive advantage (practices are reactive rather than proactive)



Improved/enhanced collaboration within the company



Enhanced/improved employee motivation



Other



Won customers due to strong ESG practices



Lost access to government subsidies and financial support due to poor ESG practices



Accrued payment of contractual penalties from counterparties



Increased media/PR profile



Loss of collaboration and transparency within the company



Contribution to The European Commission's Fit-for-55 package/UN requirements to become climate neutral by 2050



None

"There is a lack of solid frameworks. Which framework is consistent and uniform to measure CO2, in transport, globally? It does not exist!" RESPONDENT OUOTE

As sustainability, ESG and corporate social responsibility career roles have become increasingly common in the workplace, it is not surprising to see that a lack of resource (people) to implement solutions is less of a challenge for 3PLs, manufacturers and retailers this year.

It remains the case that more than one-fifth of companies identify that a lack of support from their leadership is a challenge facing their ESG activities, a challenge that continues to be more prominent within manufacturers and retailers than 3PLs.

Over one-quarter of all companies (28%, up from 23% last year) feel that they are unable to quantify the benefits, including in some cases, lower operational costs, of ESG solutions and see this as a barrier to making greater progress. Whilst fewer 3PLs believe that a lack of skills and knowledge is hindering the development of ESG solutions within their company, this remains an important issue for 41% of manufacturers and retailers.

Having identified the challenges of introducing or enhancing a company's ESG activity, we sought to gain more insight into the benefits, or challenges, that companies recognise once their ESG programmes are in place.

Broadly in line with last year's findings, 62% of 3PLs (66% in 2022) say they have won new business as a result of their strong ESG practices. As the proliferation of sustainability metrics increases, driven in some cases by tighter regulations, more knowledgeable customers are no longer 'greenwashed' by 'PR claims' and award business based on proven 'green' data evidence.

One-half (51%) of 3PLs state that their ESG activity has enhanced and improved employee motivation. An increasing share (55%, up from 48% in 2022) state that ESG programmes have directly contributed to improved, or enhanced, collaboration within their company.

Whilst 3PLs do not see contractual penalties as a challenge, it remains the case that almost one-third of manufacturers and retailers (30%) see them as a benefit, having accrued payments of contractual penalties from counterparties. Approaching one-

half of manufacturers and retailers (44%) believe that their ESG programmes have directly led them to access government subsidies and financial support, a significant increase from 33% in 2022.

Companies of differing shapes and sizes, with varied geographical and industry sector exposure, are at different stages of their ESG journey. It remains the case that it is more often smaller companies, with fewer resources available to devote to such activity, that are less likely to have ESG programmes in place.

More than 80% of companies have goals and targets in place to support employee welfare aims, while over three-quarters have measures to address environmental programmes (87% of 3PLs and 67% of manufacturers and retailers). Around two-thirds of companies have measurable goals and targets for corporate governance, financial governance and charity and social projects (67%, 65% and 68% respectively).

The introduction and use of staff wellness programmes is now widespread. 86% of our respondents indicated that they offer such schemes. Fulfilment of safe access requirements, access to showers, managing air quality, noise and natural daylight levels are among the most widespread solutions.

The ability for companies to provide features that offer staff wellness improvements can be impacted by the age of their facilities. Whilst older facilities may need a level of refurbishment and re-working to accommodate staff wellness areas, it is now considered a 'default setting' for modern logistics centres to be appropriately equipped.

Across the supply chain, where labour shortages and attracting and retaining talent are frequent challenges, staff wellness programmes play an important role. 29% of respondents state that the biggest benefit they achieve as a result of the use of staff wellness programmes is higher productivity and performance, whilst for 27%, the biggest benefit is the longer job tenure that is recorded amongst employees. 15% of respondents perceive the biggest benefit to be lower levels of absenteeism. "We are in the very early stages of ESG. Doing what we can within the limitations available inspires colleagues. The hope is that they feel proud to work for (and with) a company with high ethical morals."

RESPONDENT QUOTE

The use of technology is increasingly widespread across every operational element of supply chains, including ESG. Up marginally from last year's research, over 60% of companies are now utilising technology to help them save energy in their warehouse operations. Around one-half are incorporating it to save on transport and distribution fuel costs. 3PLs lead the way in both these instances.

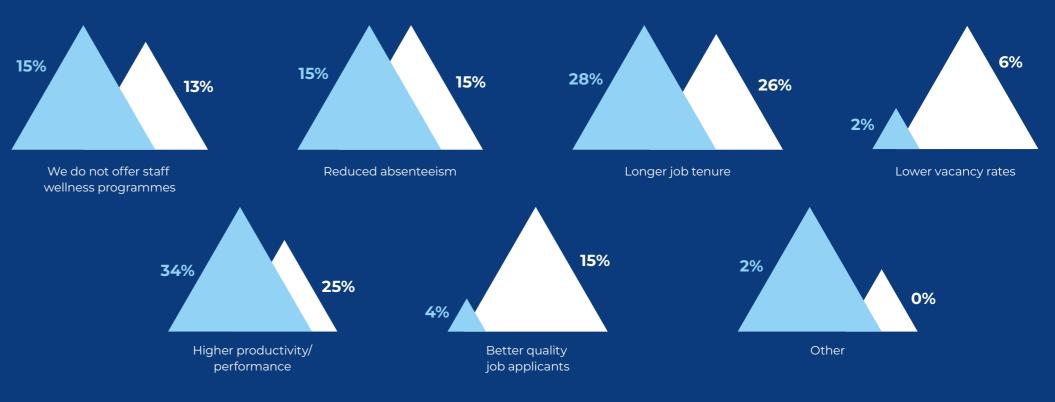
3PLs are also more likely to utilise technology solutions to enhance operational visibility and measure performance. increase asset utilisation, manage resources and improve collaboration opportunities, both with customers and competitors.

Manufacturers and retailers take the lead over 3PLs in their use of technology to reduce packaging use, lower water use, gain access to subsidies, grants and other finance and avoid fines, penalties and enforcement action. Our research this year also highlights that using technology to enhance operational visibility and measure performance, and raise asset utilisation, is increasingly important.

6. Recognising benefits of staff wellness programmes

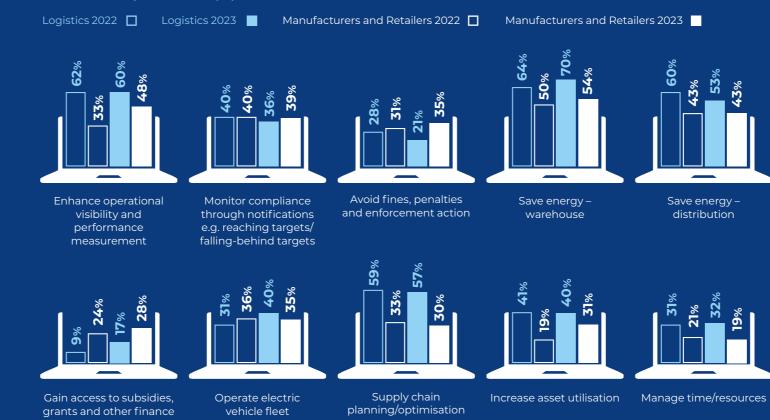
Share of respondents selecting each benefit/challenge (%)

Logistics 🔺 Manufacturers and Retailers 人



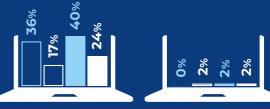
7. Using technology to achieve ESG targets

Share of respondents (%)





Lower packaging use



Improve collaboration opportunities (with customers and/ or competitors)



Other

Looking ahead

Cost and financial considerations remain an important theme in ESG. Two-thirds of logistics companies could be encouraged to improve their sustainability if solutions also enhanced their financial performance Over **two-thirds** of 3PLs state that customer pressure encourages them to improve the sustainability of their operations, contrasting to one-half of manufacturers and retailers that share this view. Pressure and demands from shareholders or investors are more relevant to manufacturers and retailers than 3PLs. 43% of manufacturers and retailers believe that linking executive compensation to ESG targets would encourage improvements in the sustainability of their operations

Access to electric vehicle charging points, preserving water resources and battery storage for onsite renewable energy generation are the areas seeing the **biggest increase** in sustainability focus Reinforcing the findings of our research last year, across the length of supply chains, from procurement, through manufacturing, logistics and retail, the area where companies, and especially 3PLs, would like to see the biggest improvements in sustainability activity is road transport, both domestical and international. A lower focus by respondents on courier and express, and last mile, deliveries, reflects the advances that many service providers in this sector have made in both their sustainability initiatives and their reporting of data to customers.

Our research highlights perceived room for improvement with procurement processes in their support of ESG targets, particularly amongst 3PLs, while manufacturers and retailers identify the manufacturing process as an area of activity that could better contribute to ESG goals.

Rating fifth overall, but joint highest amongst manufacturers and retailers, the warehousing and storage of products is seen as an area of operations where companies would like to see improvements in sustainability activity.

When asked which factors would encourage their company to improve the future sustainability of its supply chain operations, the availability of financial incentives (grants, subsidies) rated highest for both audience groups, in line with last year's findings.

Cost and financial considerations remain important themes in ESG. Two-thirds of logistics companies could be encouraged to improve their sustainability if solutions also enhanced their financial performance. A similar share of logistics companies, and up significantly from last year, also suggest that lower costs of implementation of ESG solutions would improve their company's sustainability efforts.

Cost considerations are a significantly more important consideration for 3PLs than manufacturers and retailers, given the 'low-margin' performance of many companies across the sector, particularly in road transport.

Over two-thirds of 3PLs state that customer pressure encourages them to improve the sustainability of their operations, contrasting to one-half of manufacturers and retailers that share this view. Pressure and demands from shareholders or investors are more relevant to manufacturers and retailers than 3PLs.

With a view to encouraging greater support from company leadership, we see that 43% of manufacturers and retailers (45% last year) and 23% of 3PLs (31% last year) believe that linking executive compensation to ESG targets would encourage their company to improve the sustainability of their operations.

8. Where in supply chains should the biggest improvements in sustainability activity be made?

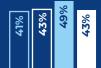
Share of respondents nominating each category... (%)



Logistics 2022 Manufacturers and Retailers 2022 Manufacturers and Retailers 2023

storage

Sea freight







Procurement of Manufacturing of goods/materials goods/materials













Road transport international

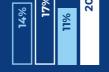




Intermodal

freight

Courier/Express/B2C last mile transport



Rail freight

Retail of goods/ materials

"Cost considerations are a significantly more important consideration for 3PLs than manufacturers and retailers."

Greater clarity of ESG investment options and a greater understanding of the choice of future fuels were both rated by around onethird of respondents as factors that would encourage their companies to improve the sustainability of their supply chain operations.

To measure future gains and improvement in sustainability, companies must first understand their impact on the environment. Respondents were asked to identify, from a list of 15 key performance indicators (KPIs) the measurements that their company are using.

Across nine of the 15 KPIs, 3PLs are more likely to be measuring their impact than manufacturers and retailers, specifically around carbon footprints, emissions and energy use. As we noted in last year's report, we would expect to see more 3PLs using sustainability metrics across these activities as they are amongst those likely to be outsourced by manufacturers and retailers to logistics providers. Manufacturers and retailers are more likely than 3PLs to be tracking packaging and product recycling rates, the use of renewable materials and single-use plastics and their water footprint.

70% of respondents (85% of 3PLs and 56% of manufacturers and retailers) measure their carbon footprint. 79% of 3PLs and 48% of manufacturers and retailers track and measure their energy consumption and fuel efficiency for transport and distribution operations. 3PLs are also more likely than manufacturers and retailers (66% v 50%) to track and measure energy consumption in their warehouse operations.

Our research highlighted a significant decrease, from 44% last year down to 37%, in the share of respondents tracking supply chain miles. This will be an interesting data point to track in future editions of this report. Cost conscious supply chain planners will always look to remove unnecessary supply chain miles, but the shortening of supply chains to increase resilience (near-shoring) and the increasing use of lower emission fuels, such as sustainable aviation fuels (SAF) or green methanol for ocean shipping, may mean that the length of supply chains now provides less of a relevant measure of environmental friendliness than it did previously.

9. Which factors would encourage your company to improve the sustainability of your supply chain operations?

Share of respondents (%)

Logistics 2022 O Logistics 2023 Manufacturers and Retailers 2022 O Manufacturers and Retailers 2023

79% **70%** 57% **54%**

Financial incentives (grants, subsidies)

72% 68% 33% 50% Pressure/demand from customers

59% **36%** 43% **48%** Pressure/demand from shareholders or investors

31% **23%** 45% **43%**

Linking executive compensation to ESG targets

55% **66%** 50% **33%**

Availability of solutions that also enhance financial performance

28% **19%** 36% **37%**

Improved understanding environmental regulations

41% **34%** 36% **35%**

Greater clarity of ESG investment options (e.g. choice of future fuels)

N/A **32%** N/A **31%**

Greater understanding of the choice of future fuels

48% **64%** 33% **33%**



Lower cost of implementation









Around one-in-ten of our respondents stated that as part of their ESG journey, they are yet to formally measure any of our 15 KPIs, though one-half of this group suggest they are planning to define KPIs for their business in the next 12 months.

Measuring a company's environmental footprint can be an incredibly complex task, sourcing data across manufacturing processes (which are likely to be in different countries), transport and distribution (which itself may be across different modes), warehousing and storage through to retail and final mile logistics. Complexity is increased where multiple logistics partners may be used and where 3PLs may further sub-contract all or part of their activities.

Building on our findings last year, respondents were once again asked to rate the difficulties they face in obtaining the data needed to analyse sustainability measures in their supply chains.

Across 11 potential elements of supply chain activity, companies once again highlighted that obtaining sustainability data for manufacturing and procurement activities are the most challenging, whilst also noting greater difficulties in acquiring data for the retail elements of supply chains.

Conversely, it is less challenging, or somewhat easier, to obtain data for many transport modes, including road freight, air and sea freight and, increasingly, courier and express and last mile deliveries. Notably, logistics providers state that they have fewer challenges than manufacturers and retailers in obtaining data for intermodal freight.

Supply chain challenges have stubbornly persisted since the publication of our report last year, though perhaps more recently with a slightly different emphasis. Whilst operations have adapted somewhat to the geo-political upheaval seen in early 2022, particularly as a result of the war in Ukraine, uncertainty remains. Disruption and inflated rates in global freight markets have eased, as expected, through a combination of increasing capacity and lower transport volumes as a result of higher inventory levels that had been accumulated. As these factors are expected to 'normalise', persistent inflationary and labour resource pressures remain, driving a more uncertain economic outlook, which in turn makes forecasting levels of future demand more difficult.

Despite these challenges, supply chains will continue to enhance and improve their sustainability credentials, but which are the key focus areas for environmental initiatives?

Around three-quarters of companies say that reducing carbon dioxide (CO2) emissions in the next five years is a key focus area for their environmental initiatives, particularly amongst 3PLs who are likely to be more directly involved in the transport and distribution of goods.

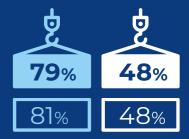
10 & 11. Most commonly used KPI metrics for sustainability

Share of respondents with each KPI (%)

sustainable index



define those in the next 12 months



Energy consumption/fuel efficiency for transport/distribution

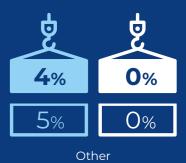


Product recycling rate

define those in the next 12 months



Sustainability awareness training penetration



12/13. Which are the key focus areas for your company's environmental initiatives?

Share of respondents with each 'focus area'... (%)



76





Reducing carbon dioxide (CO2) emissions in the next five years



Electric vehicle charging points



Introducing/expanding number of alternative energy vehicles



Preserving water resources (rainwater harvesting systems, water filters)





Utilising technology to drive environmental objectives



Recycling initiatives





Staff initiatives (car sharing, bicycle shelters, panoramic windows, outdoor gyms etc)

%	44
2%	4

Optimising fuel use of existing fleet





Battery storage (for onsite renewable energy generation)

80% 80%



Warehouse energy saving solutions (solar panels, lighting sensors, led lighting, heat exchangers next to refrigerating appliances)





Positive environmental impact (landscaping trees, lawns, biodiversity etc)





Employee sustainability training initiatives



Procurement initiatives



Extending and measuring environmental initiatives to suppliers/sub-contractors

This is followed by two-thirds of companies that suggest warehouse energy saving solutions (such as solar panels, lighting sensors, LED lighting, heat exchangers next to refrigerating appliances etc) will be a key focus.

Our research this year highlights an increasing focus from companies on the provision of employee sustainability training initiatives and access to electric vehicle charging points, particularly amongst manufacturers and retailers.

The most notable increases in future focus, however, were noted in the areas of preserving water resources (such as rainwater harvesting systems, water filters etc) and battery storage (for onsite renewable energy generation), a feature that is currently an expensive solution and led more by investors and developers, but one that is expected to become a standard part of warehouse build specifications within five years.

Looking to the future, our research highlights an increasingly prominent role for ESG in the commercial relationships between 3PLs and their customers, the manufacturers and retailers.

14. How much weight will sustainability carry in the award of logistics contracts in 2027? Weight given to ESG targets in RFP in 2027 (%)







20-25%

11%

Asking our respondents how much 'weight' they expect sustainability to carry in their contract awards in three years' time, over one-half (54%) forecast a weighting of more than 15% for sustainability. This compares to 39% of respondents that are allocating the same weighting for current contract awards.

Interestingly we note some 'catching up' being undertaken by 3PLs in this regard. In the current climate, it is manufacturers and retailers that are awarding ESG with a higher weighting in contract awards, but by 2027, 3PLs are expected to more closely align.

More detailed analysis of the current weightings given to ESG in contract awards is provided in the next chapter.



Focus on Legal and Contractual

41% of companies already include minimum ESG prequalification criteria in their tenders. **43%** of respondents do not currently include them, but will do in the future.

32% of companies, up from
28% last year, include ESG targets as obligations for supply chain partners to meet in their contracts.
Manufacturers and retailers more likely to make use of obligatory ESG targets in their contracts than 3PLs.

Whilst acknowledging that companies can, and do, take **multiple approaches** to tracking contractual ESG compliance, it is clear that the use of self-reporting is diminishing and the use of audit rights is increasing.

13% of companies have either lost or not renewed a warehouse contract because of a failure to meet ESG targets.

15. Using ESG targets as part of the RFP process

Share of responses (%)

Logistics 2022 O Logistics 2023 O Manufacturers and Retailers 2022 O Manufacturers and Retailers 2023 O

Yes



No



On 5 January 2023, the EU Corporate Sustainability Reporting Directive (CSRD) entered into force. This new directive modernises and strengthens the rules concerning the social and environmental information that companies have to report. A broader set of large companies, as well as listed SMEs, will now be required to report on sustainability – approximately 50,000 companies in total. The CSRD requires Scope 3 reporting, which includes the collection of sustainability information across a company's value chain or supply chain. The first companies will have to apply the new rules for the first time in the 2024 financial year, for reports published in 2025.

Against this backdrop of increasing legislation and regulation, and with ESG reporting requirements likely to become increasingly more stringent, a unique focus of this report is to understand how the commercial dynamics and relationships between 3PLs and their customers, the manufacturers and retailers, impacts ESG activity. To do this, we assess the role that ESG criteria plays across the early stages of customer - service provider engagement, through a request for proposal (RFP) or request for quote (RFQ), up to the signing of contracts to undertake services and the performance of the services and reasons for contract termination or non renewal.

Almost three-quarters of companies (72%, up from 69% last year) use ESG targets as part of their RFP process when tendering for new business. 69% of 3PLs use ESG targets when tendering for business, as they may do when sub-contracting services, but as we also saw last year, a higher proportion (74%) of manufacturers and retailers incorporate them.

The 'weighting' or level of importance the two groups attach to these targets in the contract award continues to vary considerably between the audience groups, with manufacturers and retailers much more likely to assign ESG targets greater importance than 3PLs.

29% of respondents give sustainability a 'weighting' of 10-15% in the contract award, while a further 22% allocate it a weighting of 15-20% and 24% weight it at between 5-10%.

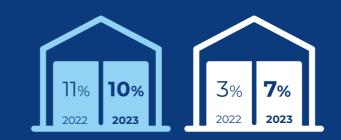
Analysis by respondent type illustrates that in contract awards, 33% of 3PLs will 'weight' sustainability at up to 10%, as opposed to 24% of manufacturers and retailers. At the upper-end of the weighting scales, 27% of 3PLs will award a weighting of more than 15% to ESG, whilst almost one-half (48%) of manufacturers and retailers will apply the same weighting.

New to our research this year, we asked respondents if they apply minimum ESG pre-qualification criteria in their tenders. 41% of companies (39% of 3PLs and 43% of manufacturers and retailers) stated that they already include them.

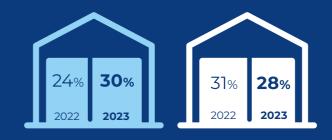
16/17. If ESG targets are a part of your company's RFP process when tendering for new business, how much weight does sustainability carry in the contract award?

Share of responses (%)

Logistics 🚊 Manufacturers and Retailers 🏫



0-5%







20-25%



5-10%



15-20%



25%+

18. Do you include minimum ESG pre-qualification criteria in tenders?

Share of responses (%)

Logistics 📕 🛛 Manufacturers and Retailers 📕





Yes, we already include them



We do not include them now and it is unlikely we will do



We do not include them now but will do in the future



We do not include them now and we never will

This is a data point that we might have expected to be higher, and it is one to watch in future editions of our research.

43% of respondents observed that they do not include minimum ESG pre-qualification criteria in their tenders now. but will do in the future. Once again, the split between audience groups was quite similar, with 41% of 3PLs and 44% of manufacturers and retailers making this observation.

This leaves 16% of our respondents. 15% noted that they do not currently include minimum ESG prequalification criteria in their tenders and stated that it is unlikely that they will do, whilst just 1% believe they never will include them.

Having selected a preferred supply chain partner via their tender process, how do companies then treat the achievement of ESG targets in contracts?

Almost one-third of companies (32%, up from 28% last year) include ESG targets as obligations for supply chain partners to meet in their contracts. 41% include them as aspirations (down from 43%), whilst the remaining 27% do not include them at all.

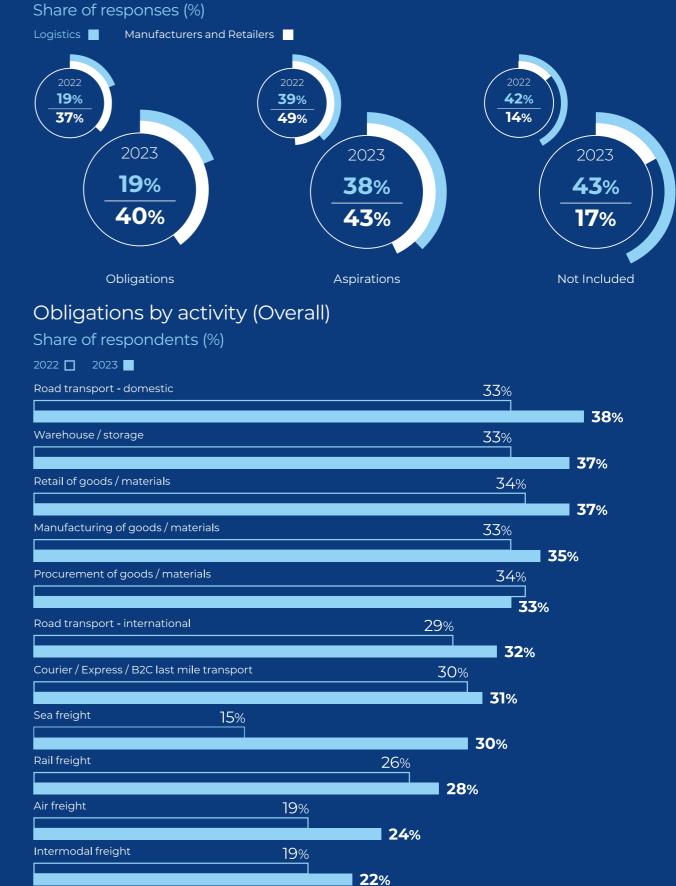
Confirming and aligning with our initial research last year, there is a clear difference in approach between manufacturers and retailers and 3PLs. It is the more traditional 'buyers' of logistics services that are more likely to make use of ESG targets in their contracts. Overall, 40% of manufacturers and retailers include ESG targets as obligations, up from 37% last year. This contrasts with 19% of 3PLs (a figure unchanged from last year).

A further 43% of manufacturers and retailers include them as aspirations, compared to 38% of 3PLs, and 17% of manufacturers and retailers do not include them at all, contrasting sharply to the 43% of 3PLs which take this approach.

Respondents acknowledged that a consistent approach to the use of ESG targets in contracts is not always appropriate, as they will vary their use, depending on customer relationships and circumstances.

The use of ESG targets as obligations in contract awards will be reflective of a company's own targets and goals, and that of their own customers. One respondent noted that most customers are looking for confirmation that their service providers take ESG measures seriously, including a commitment to net zero and other reduction measurements. Another noted that obligations on suppliers to outline their targets and measurement processes, that can be audited, will help them, in turn, to demonstrate the ongoing reduction of the environmental impact of their business.

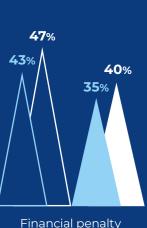
19/20. Are ESG targets included in contracts as obligations or aspirations for logistics service providers to meet/fulfil?

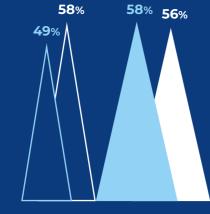


21. The consequences of not meeting obligatory ESG targets

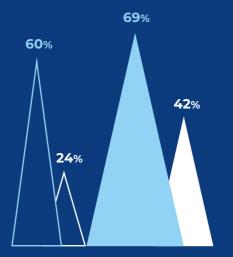
Share of respondents using each 'consequence' (%)

Logistics 2022 Δ Manufacturers and Retailers 2022 Δ Logistics 2023 Manufacturers and Retailers 2023 💧





Right to terminate



Exclusion from future tenders

Across 11 elements of supply chain activity, we have once again identified whether ESG targets are included as obligations or aspirations for supply chain partners to meet and fulfil, also tracking the difference in approach between manufacturers and retailers, and 3PLs.

Between 30% and 40% of companies include ESG targets as obligations for their supply chain partners, across a number of the 11 categories, including domestic road transport (38%), warehousing (37%), retail (37%), manufacturing (35%), procurement (33%), international road transport (32%), courier/ express/B2C last mile transport (31%) and sea freight (30%). The largest moves from 'aspirations' to obligations' in contract negotiations were seen in air, road and sea freight.

Across nearly all supply chain categories, with the exception of domestic road transport, manufacturers and retailers are especially more demanding of their supply chain partners than 3PLs.

Refer to the Appendix at the end of this report for a comprehensive breakdown of the analysis behind each element of supply chain activity.

For a second year, our research also identifies how compliance with ESG contractual requirements is managed. Whilst acknowledging that companies

can, and do, take multiple approaches to tracking compliance, from the use of self-reporting to audit rights and independent verification, it is clear to see that this year, the use of self-reporting as a form of compliance monitoring is diminishing and the use of audit rights is increasing, as wider availability of environmental performance data, and specialist environmental 'products' offered by 3PLs, means that sustainability 'claims' have to be evidenced by data.

55% of respondents (down from 69% last year) use 'self-reporting' to track contractual compliance with ESG targets, whilst 64% use audit rights, up from 51% one year ago. Audit rights are more commonly used by manufacturers and retailers (71%) than 3PLs (55%). Overall, 30% of companies use independent verification (21% of 3PLs and 35% of manufacturers and retailers).

Following the inclusion of obligatory ESG targets in contracts, and their monitoring, we have identified the consequences in place for failure to meet defined targets. In the second year of our analysis, we observe a move away from the use of financial penalties.

More than half of respondents (57%, up from 53% last year) insist on 'the right to terminate' relationships if ESG targets are not met. 58% of 3PLs and 56% of manufacturers and retailers take this approach with some, or all, of their supply chain partners.

38% of companies, down from 45% last year (including 35% of 3PLs and 40% of manufacturers and retailers) apply financial penalties and 53%, up from 41% last year, have excluded supply chain partners from future tenders. This latter approach continues to be favoured much more by 3PLs, 69% of whom have taken this course of action as opposed to 42% of manufacturers and retailers.

As an addition to this year's research, we concluded our insight on the commercial aspects to ESG

22. Have you ever lost a contract from a customer/ not renewed a contract with a service provider or customer because of a failure to meet ESG targets?

Share of respondents losing/terminating contracts... (%)

Logistics 🔳 Manufacturers and Retailers 🛄



Procurement of goods/materials



Warehouse/storage



Intermodal freight



Road transport - domestic

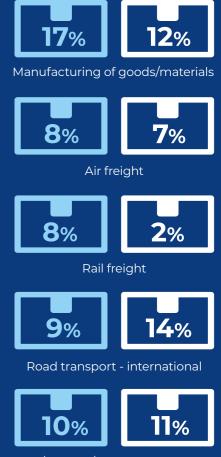


Sea freight



Retail of goods/materials

- by asking our respondents if they have ever lost a contract from a customer or had not renewed a contract with a service provider or customer because of a failure to meet ESG targets.
- 13% of companies have either lost or not renewed a warehouse contract because of a failure to meet ESG targets. The loss of contracts is most likely to have occurred within procurement or manufacturing processes (each with 14%), and least likely to have occurred in air freight, rail freight or retail.



Courier/Express/B2C last mile transport



Focus on Warehousing and Transport

Set against the inflationary environment across Europe in 2022 and 2023, rising costs, for both transport and warehouse operations, are viewed by **58%** and **50%** of respondents as the most important of energy and fuel challenges

Almost **one-half** of companies would be willing to pay a rent premium equivalent to the total operating cost savings to move operations to a 'green' building from a standard 'non-green' building

31% of companies are willing to pay extra for environmental certifications, because they believe that they add value to their business, while a further **53%** would consider paying extra charges for environmental certifications, depending on their size

Companies looking to achieve **decarbonisation** of their road fleet operations are continuing to demand **greater clarity** on future fuel choices, the associated technologies and their costs

23. The most important challenges or threats experienced regarding energy and fuel

Share of respondents encountering each challenge (%)

Logistics 🗘 Manufacturers and Retailers 🗘



Rising costs of energy/fuel for transport/distribution



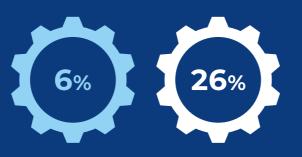
Uncertainty on future fuel strategies for transport/distribution



Availability of energy to support increasingly automated warehouse operations



Rising costs of energy for warehouse operations



Lack of knowledge regarding warehouse energy saving initiatives



Lack of investment in vehicle refuelling/charging infrastructure



Other

"Supply chain operations are traditionally characterised by cost pressures and relatively small margins, so it is perhaps unsurprising to see that in the inflationary environment of 2023, the rising costs of transport operations is viewed as one of the most important challenges regarding energy and fuel, by 58% respondents."

Accentuated by the geo-political events in Ukraine, that began in early 2022, businesses have faced a number of threats and challenges regarding energy and fuel over the last 18 months. In the context of the sustainability of supply chains, our research sought to understand the most important of these.

Supply chain operations are traditionally characterised by cost pressures and relatively small margins, so it is perhaps unsurprising to see that in the inflationary environment of 2023, the rising costs of transport operations is viewed as one of the most important challenges regarding energy and fuel, by 58% respondents. 50% of respondents see rising costs of warehouse operations as one of the most important challenges experienced by their business regarding energy and fuel. This is more pronounced amongst 3PLs, where 72% and 64% of our 3PL respondents view the rising costs of energy and fuel for transport and for warehousing as the most important threats, while manufacturers have greater levels of concern regarding the costs of energy used in their factories.

Ranking in third place is future uncertainty regarding fuel strategies for transport and distribution, selected by 49% of respondents. Particularly relevant for road transport, the lack of clarity regarding fuel choices is seen as the single most important challenge or threat to their business, related to fuel and energy, by manufacturers and retailers. In preparation for the future of alternative energy choices, a lack of investment in vehicle refuelling and charging infrastructure is rated as the fourth most important challenge, by 42% of respondents.

Set against this backdrop of rising costs, not least in fuel and energy, we asked respondents if they would be willing to increase their costs in order to have environmental certifications for logistics/ supply chain operations and assets. Overall, just under one-third (31%) of respondents stated that they would be willing to pay extra for environmental certifications, because they believe that they add value to their business (20% of 3PLs and 33% of manufacturers and retailers) while a further 53% stated that they would consider paying extra charges, but it depends on the size of the cost increase (65% of 3PLs and 50% of manufacturers and retailers).

16% of respondents, around one-in-six, suggest that they would not be willing to pay extra for environmental certifications. 10%, including a higher share of 3PLs this year, stated that this was the case because they do not add value to their business, backed by a perception that such certifications add value for property investors, but not the occupiers of warehouse facilities.

Regarding the popularity of environmental certifications, our 2023 research identifies that 31% of respondents (34% of 3PLs and 29% of manufacturers and retailers) do not obtain reporting certifications across their business, whether they are related to ESG, supply chain operations or other parts of their business. This is in line with the 33% of respondents that answered similarly last year.

Of those that do obtain reporting certifications, 20% of respondents suggest that they are CDP accredited. 18% of respondents meet some or all of the metrics across Global Reporting Initiative (GRI) Standards.

Up from 27% last year, 31% of respondents (46% of 3PLs and 19% of manufacturers and retailers) have obtained BREEAM (Building Research Establishment Environmental Assessment Method) reporting certifications, a figure that is likely to reflect the age profiles of logistics facilities operated by them. 16% have achieved LEED (Leadership in Energy and Environmental Design) certification (20% of 3PLs and 13% of manufacturers and retailers). Completing our investigation into the relationship between financial costs and sustainability, for the first time this year, we asked respondents if they would be willing to pay a rent premium to move operations to a 'green' building over a standard 'non-green' building.

This is a development that is increasingly understood by warehouse occupiers. Almost half of companies (45%) would be willing to pay a rent premium equivalent to the total operating cost savings to move operations to a 'green' building from a standard 'non-green' building. This was the case for 51% of 3PLs and 40% of manufacturers and retailers.

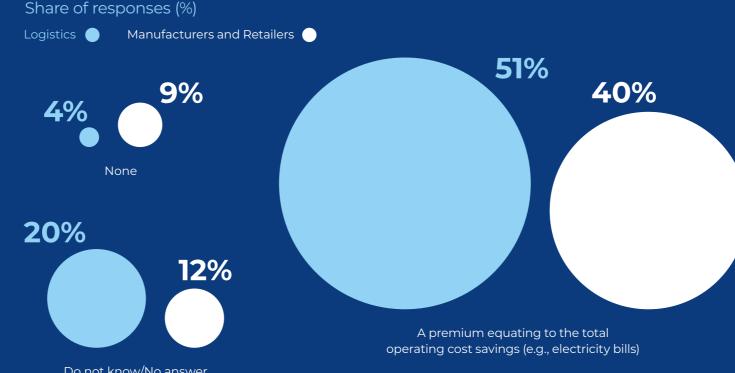
While 26% of respondents suggested that they would be willing to pay a premium equating to less than the total operating cost savings, 6% would pay a premium over the total operating cost savings.

Having confirmed our 2022 findings that obtaining environmental certifications is somewhat dependent upon the financial cost of doing so, we asked occupiers of distribution centres to rate on, a sliding scale, various ESG related features in terms of their importance to their operations.

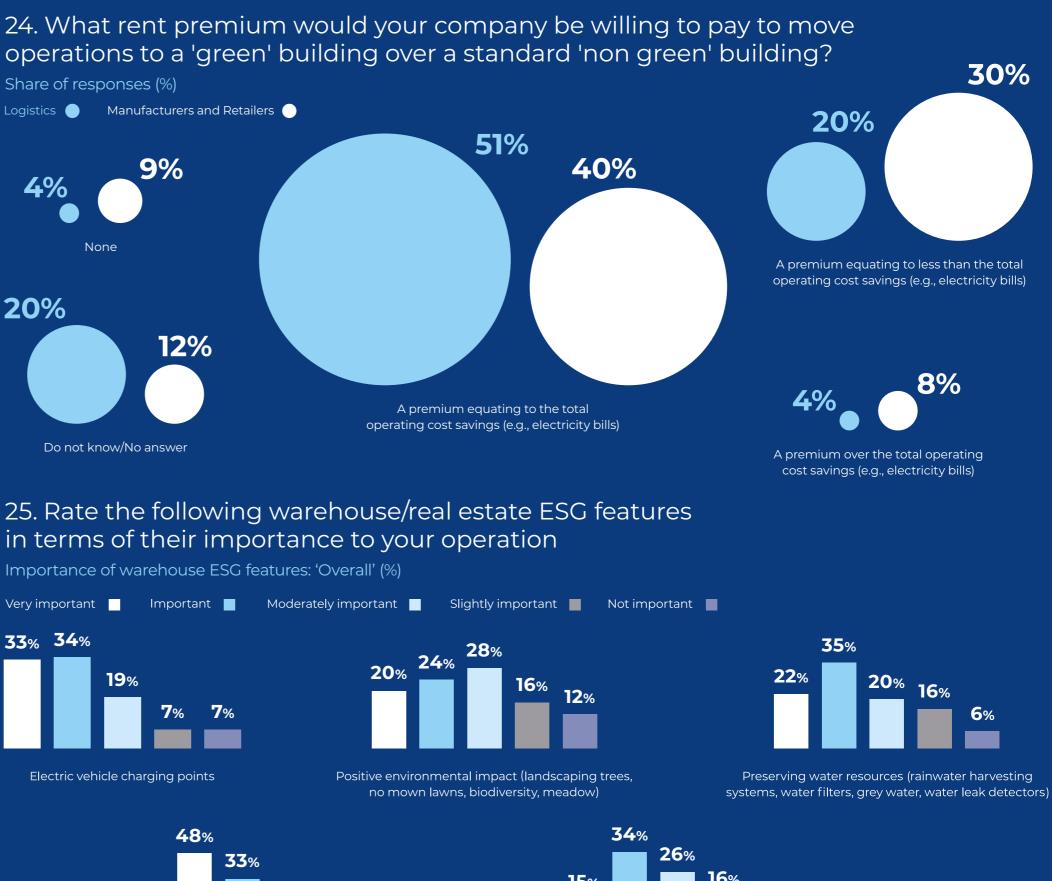
Given the context of our previous insight into fuel and energy threats, it is unsurprising to see that for the second year, energy saving solutions (such as solar panels, lighting sensors, LED lighting, heat exchangers next to refrigerating appliances, heat pumps etc) are rated as by far the most important ESG feature to a company's warehouse operations.

Some way back, in second, though moving up from a lower rating last year, is the provision of electric vehicle charging points, with many new warehouse specifications now incorporating these as 'standard'. This is followed by preserving water resources. In fourth, 49% of respondents, up from 45% last year, suggest that the inclusion of staff initiatives (such as car sharing, bicycle shelters, panoramic windows, outdoor gyms, parcel lockers, vending machines, ATM (cash machines); is either 'Very Important' or 'Important' to their business.

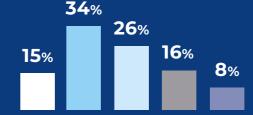
Having already noted that the road transport 'stage' of supply chain operations, both domestical and international, is where companies would like to see the biggest improvements in sustainability activity, and with continued uncertainty surrounding fuel choices prior to making significant investments in the coming years to fulfil these requests, companies are once again demanding greater clarity from both industry and at a government level. This demand continues to be by far the most important factor for companies looking to achieve decarbonisation of their road fleet operations.



25. Rate the following warehouse/real estate ESG features in terms of their importance to your operation



Warehouse energy saving solutions (solar panels, lighting sensors, led lighting, heat exchangers next to refrigerating appliances, heat pumps)



Staff initiatives (car sharing, bicycle shelters, panoramic windows, outdoor gyms, parcel lockers, vending machines, ATM (cash machines))

41



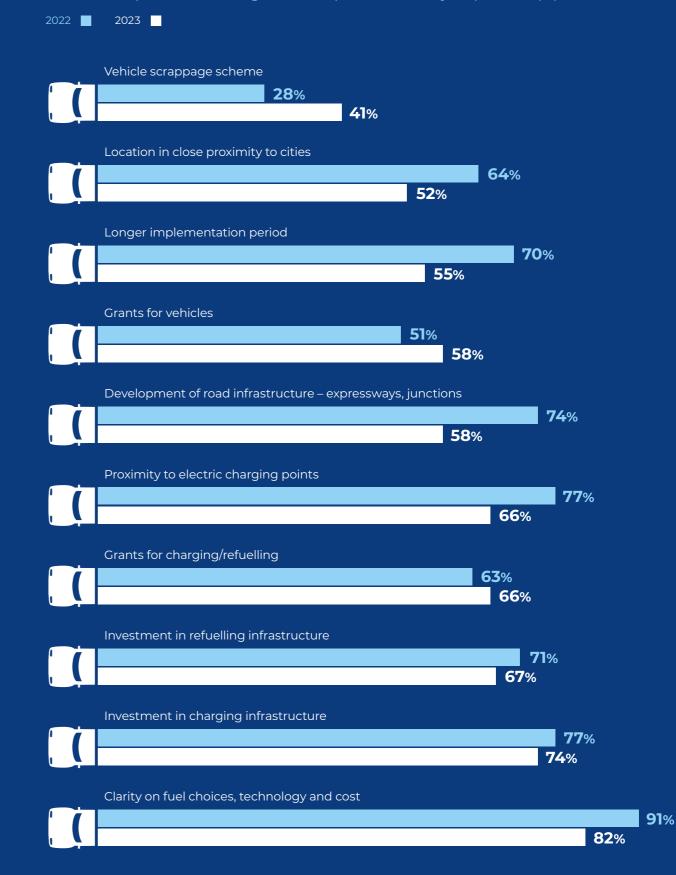
In second spot, in a rating of factors to assist companies to achieve decarbonisation of their transport operations, are calls for greater investment in charging infrastructure, followed by investment in refuelling infrastructure.

The proximity to electric charging points is rated as either 'Very Important' or 'Important' by 65% of respondents, down from 77% last year, as companies increasingly consider investment in their own charging infrastructure.

Facilitating a longer implementation period, to allow companies to achieve decarbonisation of their road fleet operations before they are obliged to by legislation, is seen as a vitally important factor by 55% of companies, though this share of respondents is down from 70% last year, with more supply chain professionals acknowledging that sustainability initiatives continue to gain pace and momentum, and cannot be postponed. Acknowledging the current cost-conscious market environment, our research also saw the share of respondents rating the provision of vehicle scrappage schemes to help them achieve their decarbonisation targets, as either 'Very Important' or 'Important', rising from 28% last year, to 41% in 2023.

26. Regarding your road fleet operations, how important are the following factors to assist you to achieve decarbonisation targets?

Share of respondents rating either important or very important (%)



Industry Insight: Danfoss

ESG paves the way for a new dialogue with our customers

We stand at a crucial moment for our world. The planet is seeing its highest recorded concentration of CO2 in two million years. Immediate change and a bold step up of ambition is the only way to slash emissions and ignite the green transition.

At the heart of this is technology and people. Danfoss' biggest contribution to the green transition and global climate goals is our own solutions that increase machine productivity, reduce emissions, lower energy consumption, and enable electrification.

We want our ESG (Environmental, Social, Governance) ambition to support our customers' decarbonisation goals and become their preferred partner for decarbonisation.

ESG is in demand and paves the way for a new dialogue with our customers. They want to decarbonise their supply chains. We are in the same boat! Reducing emissions by improving circularity in product design and lowering energy consumption with the help of our solutions is a journey we take together with our customers.

For us, ESG is about making a difference in 3 key areas:

- Decarbonisation,
- Circularity,
- Diversity, Equity & Inclusion

For years, Danfoss has systematically worked to reduce and recycle energy in our factories and offices around the world. We have successfully optimised processes, heating, and ventilation systems, and used excess heat to minimise the energy needed to heat our buildings.

As part of the science-based targets, Danfoss is required to reduce absolute scope 1 and 2 GHG emissions by at least 46.2% by 2030 from a 2019 base year. Danfoss is going beyond this requirement and has committed to becoming carbon neutral in scopes 1 and 2 by 2030. Danfoss will reduce absolute scope 3 GHG emissions by 15% in the same time frame. As an energy-efficiency solution provider, walking the talk by decarbonising our operations, energy sources, and manufacturing processes is a priority. This way we contribute to climate action and at the same time reduce operation costs. The payback time in most cases is less than three years.

The first Danfoss carbon-neutral factory building was established in 2021 in Grodzisk Mazowiecki, Poland. The building has 13,000 m² and is filled with 45 production lines dedicated to commercial and industrial refrigeration solutions.

Carbon neutrality was achieved thanks to the combination of three components - energy efficiency, the use of excess heat and sourcing of green energy. Danfoss calls this approach 3R (Reduce, Reuse and Re-source) and applies it in all factories worldwide as a part of the company's global decarbonisation path. Only by taking all three of these steps into account and following the principle of Energy Efficiency First are we able to achieve optimum results.

First step: REDUCE

"Reduce" simply means using less energy to perform the same action by decreasing energy waste.

Efficient solutions applied in the Grodzisk factory allowed a significant reduction of energy use thanks to:

- Proper insulation of external and internal walls as well as roofs
- Designing highly energy-efficient heating and cooling installations that allow room temperature control and hydronic balancing
- Installing LED lighting together with a system that ensures integration with motion detectors and adjustment of light intensity
- Using BMS to manage energy
- and using shut-off solenoid valves for tap water installations to eliminate water losses.

Second step: REUSE

The next step is to reuse the energy that is already being produced. In Grodzisk reuse of excess heat is the foundation of the heating



installation. The heat is recovered from production processes, the production hall in the process of ventilation, chillers, and compressors producing compressed air for production processes.

Third step: RE:SOURCE

After utilising the full potential of energy-efficient solutions and heat recovery Danfoss calculated the final energy demand of the building and covered it with 100% green energy. This step is called RE:SOURCE: replacing energy from fossil fuels with energy from renewable sources. In Grodzisk green electric energy is purchased with a certificate confirming that it comes from a 100% RES.

Walk the decarbonisation path with Danfoss

Factories are the beating heart of the industry sector - that account for 39% of all global energy-related carbon emissions.

The challenge for factories all over the world is to meet growing demands for production while curbing emissions.

Danfoss is in a unique position as a provider of green solutions for industry and is eager to

share its experiences in a newly opened visitors centre in Grodzisk. It is a perfect opportunity for industry companies to walk the Decarbonisation Path together with Danfoss to discover your own journey towards carbon neutrality.

We manufacture equipment that reduces the use of energy. Smart cooling and heating systems use less energy to improve the indoor climate and make it possible to reuse excess heat.

"It's really simple. The greenest energy is the energy you do not use in the first place. That's also the philosophy behind any use of energy in this building. We are extremely proud of the result."



ADAM JĘDRZEJCZAK President of Fastern Furg

President of Eastern Europe Region, Danfoss



Industry Insight: Zeus

Low-Carbon Multimodal Pilot Results

In late 2022, Zeus developed and piloted a unique fully-managed, green multimodal transport solution designed to provide significant carbon emissions savings.

Using a combination of HVO100 fuelled HGVs, electric freight rail and ferries, our solution provided fast and fully tracked deliveries. Carbon emissions were tracked and reported using calculations according to the industry-standard Global Logistics Emissions Council (GLEC) Framework.

The pilot was run for a major FMCG manufacturer, who wishes to remain anonymous as the results informed other transport decisions.

Details of the Multimodal Pilot:

- Ran and monitored initially for 8 weeks • (then continued)
- 240 tracked long distance, cross-Europe deliveries (full truck load deliveries)
- Average route distance was 500-650 kilometres •
- Ran from Crailsheim, Germany, to multiple • locations across Europe
- Zeus delivered routes on the client's desired . minimum OTIF (On-Time In Full) metric of 95%+
- The Results: Major carbon reductions achieved
- During this 8 week period, we measured a net reduction of 84% in 'well to wheel' CO2 equivalent emissions: 293,296 kilograms (293 tonnes). That would equal a significant reduction of 1.9 million kilograms for these routes over a year.
- The carbon reduction of 293,296 kilograms equals the carbon stored by 4,850 deciduous trees kept alive for ten years (data based on the EPA equivalency calculator)

- For routes where multimodal was not feasible. these were run with HVO fuelled heavy goods vehicles (HGVs) only
- All deliveries were tracked through our freight management system (with live tracking of HGVs via our Zeus Driver app)
- Emissions were calculated using the GLEC Framework, with modelled data for European rail and HVO fuel, and compared to default data for a benchmark Euro 6 diesel-fuelled 44 tonne HGV.

Note: HVO fuel is certified to emit up to 90% less carbon dioxide equivalent emissions than diesel while also reducing other tailpipe emissions including nitrogen oxides, particulate matter and carbon monoxide. (This is based on both published academic and industry reports, and corroborated by test data provided by suppliers Neste and MAES whose fuel was used for the trial.) For this pilot we used a conservative 70% saving assumption, to account for truck variables such as terrain, driver behaviour, and traffic delays.



JAI KANWAR Co-Founder & Managing Director

CLEMENTE THEOTOKIS Co-Founder & Managing Director



ZEUS

"Using a combination of HVO100 fuelled HGVs, electric freight rail and ferries, our solution provided fast and fully tracked deliveries. Carbon emissions were tracked and reported using calculations according to the industry-standard Global Logistics Emissions Council (GLEC) Framework."



Index of Charts

Where table percentage data does not sum to 100%, this represents the share of respondents selecting each category.

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Appendix

The following section provides access to the full data set of questions and responses recorded as part of the second European Logistics and Supply Chain Sustainability Report.

Measuring ESG Sentiment

Sector of research respondents

Sector	Overall
Logistics	47%
Manufacturers	28%
Retailers	25%
Total	100%

Job titles of research respondents

Job titles	Overall
Sustainability	32%
CEO/MD/CFO/FD	30%
Logistics/Supply Chain Director	12%
Operations Director	14%
Commercial Director/Other	12%
Total	100%

Current Perspectives

Why do you undertake ESG activity? Rate the importance of the following factors that drive ESG activity in your business.

(Score each factor 1=not at all important – 10 = very important)	Overall	Logistics	Manufacturers and Retailers
Meet regulatory/legislative requirements	7.9	8.3	7.5
Keep up with competitors	6.3	6.9	5.8
Meet informal expectations/requirements of customers/suppliers/ service providers'	7.1	7.9	6.4
Meet contractual requirements of customers/suppliers/service providers	6.9	7.8	6.2
Attract new customers/achieve top-line growth	7.2	7.7	6.7
Reduce costs and/or enhance productivity	6.4	6.1	6.6
Achieve financial/tax benefits/credits	5.0	4.9	5.2
Optimise long term capital expenditures	5.9	5.5	6.2
Attract investors	4.8	4.4	5.2
Attract and retain employees	7.2	7.0	7.4
Make a positive social impact	7.9	8.0	7.8
Make a positive environmental impact	8.3	8.4	8.2
Enhance corporate reputation	7.7	7.7	7.6
Meet the UN requirements to become climate neutral by 2050	7.1	7.0	7.1

What challenges does your company encounter in its attempts to introduce/enhance more sustainable solutions for your supply chain operations? (select all that apply)

Share of respondents encountering each challenge (%)	Overall	Logistics	Manufacturers and Retailers
Complexity of solutions	56%	77%	39%
Impact on performance of solutions	33%	30%	35%
Lack of resource (people) to implement	36%	43%	30%
Lack of skills/knowledge	40%	38%	41%
Lack of support from leadership	22%	11%	31%
Lack of technology improving sustainable operations	25%	36%	15%
Financial cost of solutions	62%	77%	50%
Inability to define/measure ROI	27%	21%	31%
Unable to quantify/measure benefits of solutions	28%	28%	28%
Do not achieve benefits	16%	2%	28%
Lack of regulations/not understanding regulations	22%	21%	22%
Understanding of reporting standards and regulations/complexity	29%	30%	28%
Aligning ESG with growth targets	23%	21%	24%
None	3%	2%	4%
Other	8%	11%	6%

Which of the following challenges or benefits has your company's ESG programme directly contributed to? (select all that apply)

Lost customers due to poor ESG practices14%4%22%Won customers due to strong ESC practices49%62%37%Access to government subsidies and financial support37%28%44%Lost access to government subsidies and financial4%2%6%Avoided incurring contractual penalties with counterparties16%9%22%Accrued payment of contractual penalties from counterparties16%0%30%Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company2%55%30%Loss of collaboration and transparency within the company12%4%19%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Share of respondents selecting each benefit/challenge (%)	Overall	Logistics	Manufacturers and Retailers
Access to government subsidies and financial support37%28%44%Lost access to government subsidies and financial support due to poor ESC practices4%2%6%Avoided incurring contractual penalties with counterparties16%9%22%Accrued payment of contractual penalties from counterparties16%0%30%Lack of recognition/competitive advantage (practices are reactive rather than proactive)21%13%28%Increased media/PR profile37%43%31%Loss of collaboration and transparency within the company42%55%30%Loss of collaboration to The European Commission's Fit-for-55 package/18%9%26%	Lost customers due to poor ESG practices	14%	4%	22%
Lost access to government subsidies and financial support due to poor ESC practices4%2%6%Avoided incurring contractual penalties with counterparties16%9%22%Accrued payment of contractual penalties from counterparties16%0%30%Lack of recognition/competitive advantage (practices are reactive rather than proactive)21%13%28%Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Won customers due to strong ESG practices	49%	62%	37%
support due to poor ESC practicesAvoided incurring contractual penalties with counterparties16%9%22%Accrued payment of contractual penalties from counterparties16%0%30%Lack of recognition/competitive advantage (practices are reactive rather than proactive)21%13%28%Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Access to government subsidies and financial support	37%	28%	44%
Accrued payment of contractual penalties from counterparties16%0%30%Lack of recognition/competitive advantage (practices are reactive rather than proactive)21%13%28%Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%		4%	2%	6%
Lack of recognition/competitive advantage (practices are reactive rather than proactive)21%13%28%Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Avoided incurring contractual penalties with counterparties	16%	9%	22%
(practices are reactive rather than proactive)Increased media/PR profile37%43%31%Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Accrued payment of contractual penalties from counterparties	16%	0%	30%
Improved/enhanced collaboration within the company42%55%30%Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%		21%	13%	28%
Loss of collaboration and transparency within the company12%4%19%Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Increased media/PR profile	37%	43%	31%
Enhanced/improved employee motivation40%51%30%Contribution to The European Commission's Fit-for-55 package/18%9%26%	Improved/enhanced collaboration within the company	42%	55%	30%
Contribution to The European Commission's Fit-for-55 package/ 18% 9% 26%	Loss of collaboration and transparency within the company	12%	4%	19%
	Enhanced/improved employee motivation	40%	51%	30%
		18%	9%	26%
None 11% 17% 6%	None	11%	17%	6%
Other 5% 9% 2%	Other	5%	9%	2%

Do you have an ESG programme in place with measurable goals and targets for the following parts of your business? (Answer yes, no or n/a for each category)

Sha	are of respondents answering 'Yes'.
En	vironmental
Cor	rporate governance
Fin	ance/financial activity
Cor	mmunity/charitable/social projects
Em	nployee welfare/staff wellness

Overall	Logistics	Manufacturers and Retailers
76%	87%	67%
67%	69%	65%
65%	57%	72%
68%	62%	72%
82%	84%	80%

What is the most important benefit that your company achieves from the provision of wellness programmes? (select one)

Share of respondents selecting each benefit (%)	Overall	Logistics	Manufacturers and Retailers
We do not offer staff wellness programmes	14%	15%	13%
Reduced absenteeism	15%	15%	15%
Longer job tenure	27%	28%	26%
Lower vacancy rates	4%	2%	6%
Higher productivity/performance	29%	34%	25%
Better quality job applicants	10%	4%	15%
Other	1%	2%	0%

Which of the following wellbeing improvements does your company offer to staff? (select all that apply)

Share of respondents providing that offer each improvement (%)	Overall	Logistics	Manufacturers and Retailers
Fulfilment of daylight and external view requirements	32%	22%	41%
Measuring indoor air quality	30%	18%	41%
Mechanical ventilation to minimise the concentration and recirculation of pollutants	36%	31%	41%
Thermal comfort analysis in office areas	30%	27%	33%
Acoustics conditions in office areas	35%	27%	43%
Fulfilment of safe access requirements	44%	58%	33%
Access to showers	44%	42%	46%
Access to breastfeeding zones	27%	24%	30%
Access to gyms	29%	29%	30%
Biophilic design	7%	0%	13%
Other (please specify):	8%	16%	2%

What are the most important solutions in your supply chain to contribute towards ESG targets/goals? (select all that apply)

Share of respondents using technology to (%)	Overall	Logistics	Manufacturers and Retailers
Enhance operational visibility and performance measurement	53%	60%	48%
Monitor compliance through notifications e.g. reaching targets/falling-behind targets	38%	36%	39%
Avoid fines, penalties and enforcement action	29%	21%	35%
Save energy – warehouse	61%	70%	54%
Save energy – distribution	48%	53%	43%
Lower water use	28%	21%	33%
Lower packaging use	37%	34%	39%
Gain access to subsidies, grants and other finance	23%	17%	28%
Operate electric vehicle fleet	38%	40%	35%
Supply chain planning/optimisation	43%	57%	30%
Increase asset utilisation	36%	40%	31%
Manage time/resources	25%	32%	19%
Improve collaboration opportunities (with customers and/or competitors)	32%	40%	24%
Other	2%	2%	2%

Looking ahead

Where in supply chains would you like to see the biggest improvements in sustainability activity by companies/service providers? (select all that apply)

Share of respondents nominating each category (%)	Overall	Logistics	Manufacturers and Retailers
Procurement of goods/materials	45%	49%	43%
Manufacturing of goods/materials	40%	36%	44%
Warehouse/storage	39%	33%	44%
Air freight	36%	40%	33%
Intermodal freight	32%	24%	31%
Rail freight	28%	22%	33%
Road transport - domestic	47%	64%	33%
Road transport - international	47%	53%	43%
Sea freight	26%	27%	26%
Courier/Express/B2C last mile transport	26%	33%	20%
Retail of goods/materials	16%	11%	20%

Which factors would encourage your company to improve the sustainability of your supply chain operations? (select all that apply)

Share of respondents selecting each factor (%)	Overall	Logistics	Manufacturers and Retailers
Financial incentives (grants, subsidies)	61%	70%	54%
Pressure/demand from customers	58%	68%	50%
Pressure/demand from shareholders or investors	43%	36%	48%
Linking executive compensation to ESG targets	34%	23%	43%
Availability of solutions that also enhance financial performance	49%	66%	33%
Improved understanding environmental regulations	29%	19%	37%
Greater clarity of ESG investment options (e.g. choice of future fuels)	35%	34%	35%
Greater understanding of the choice of future fuels	32%	32%	31%
Lower cost of implementation	48%	64%	33%
None	1%	2%	0%

Which of the following defined and formalised sustainability KPI measurements does your company have in place? (select all that apply)

Share of respondents with each KPI (%)	Overall	Logistics	Manufacturers and Retailers
Carbon footprint	70%	85%	56%
Supply chain miles	37%	36%	37%
Emissions (to air, sea, land)	51%	57%	46%
Energy consumption/fuel efficiency for warehouses	57%	66%	50%
Energy consumption/fuel efficiency for transport/distribution	62%	79%	48%
Water footprint	30%	28%	31%
Use of renewable materials	34%	28%	39%
Packaging recycling rate	39%	36%	41%
Product recycling rate	21%	11%	30%
Use of single-use plastics	28%	19%	35%
Proportion of recyclable waste/non-recyclable waste	30%	34%	26%
Waste reduction rate	35%	36%	33%
Sustainability awareness training penetration	27%	30%	24%
Supplier environmental sustainable index	18%	15%	20%
None, but we are planning to define those in the next 12 months	5%	6%	4%
None and we are not planning to define those in the next 12 months	6%	6%	6%
Other	2%	4%	0%

How difficult/easy is it to obtain, from your own network and that of logistics service providers/subcontractors the data needed to measure sustainability measures in your supply chain? (Score each 1=significant challenges – 5 = not at all difficult)

Average score (lower = more challenging to get data)	Overall	Logistics	Manufacturers and Retailers
Procurement of goods/materials	2.1	2.1	2.3
Manufacturing of goods/materials	2.1	2.0	2.2
Warehouse/storage	3.1	3.3	2.5
Air freight	3.1	3.1	3.0
Intermodal freight	2.9	3.1	2.0
Rail freight	2.8	3.0	2.4
Road transport - domestic	3.5	3.5	3.4
Road transport - international	3.2	3.2	3.0
Sea freight	3.1	3.2	2.8
Courier/Express/B2C last mile transport	3.1	3.1	3.2
Retail of goods/materials	2.3	2.1	3.0
Average	2.8	2.9	2.7

Which are the key focus areas for your company's environmental initiatives? (select all that apply)

Share of respondents with each 'focus area' (%)	Overall	Logistics	Manufacturers and Retailers
Reducing carbon dioxide (CO2) emissions in the next five years	72%	83%	63%
Optimising fuel use of existing fleet	56%	72%	43%
Electric vehicle charging points	52%	61%	44%
Battery storage (for onsite renewable energy generation)	27%	26%	28%
Introducing/expanding number of alternative energy vehicles	43%	50%	37%
Warehouse energy saving solutions (solar panels, lighting sensors, led lighting, heat exchangers next to refrigerating appliances)	64%	80%	50%
Preserving water resources (rainwater harvesting systems, water filters)	31%	30%	31%
Positive environmental impact (landscaping trees, lawns, biodiversity etc)	27%	26%	28%
Staff initiatives (car sharing, bicycle shelters, panoramic windows, outdoor gyms etc)	36%	43%	30%
Employee sustainability training initiatives	49%	59%	41%
Recycling initiatives	47%	63%	33%
Procurement initiatives	29%	35%	24%
Utilising technology to drive environmental objectives	29%	41%	19%
Extending and measuring environmental initiatives to suppliers/sub-contractors	43%	46%	41%

In three years' time, how much 'weight' do you expect sustainability to carry in the contract award? (select one)

Weight given to ESG targets in RFP in 2027	Overall	Logistics	Manufacturers and Retailers
O%	2%	2%	2%
0-5%	3%	2%	4%
5-10%	11%	18%	4%
10-15%	30%	22%	37%
15-20%	28%	29%	28%
20-25%	13%	11%	15%
>25%	13%	16%	11%
Sub-total	100%	100%	100%

Focus on Legal and Contractual

Are ESG targets a part of your company's RFP process when tendering for new business? (select one)

Is ESG a part of RFP?	Overall	Logistics	Manufacturers and Retailers
Yes	72%	69%	74%
No	28%	31%	26%
Sub-total	100%	100%	100%

If ESG targets are a part of your company's RFP process when tendering for new business, how much of weight does sustainability carry in the contract award? (select one)

Weight given to ESG targets in RFP	Overall	Logistics	Manufacturers and Retailers
0-5%	8%	10%	7%
5-10%	24%	33%	17%
10-15%	29%	30%	28%
15-20%	22%	17%	26%
20-25%	12%	7%	15%
>25%	5%	3%	7%
Sub-total	100%	100%	100%

Do you include minimum ESG pre-qualification criteria in tenders? (select one)

Minimum ESG pre-qualification criteria in tenders	Overall	Logistics	Manufacturers and Retailers
Yes, we already include them	41%	39%	43%
We do not include them now but will do in the future	43%	41%	44%
We do not include them now and it is unlikely we will do	15%	17%	13%
We do not include them now and we never will	1%	2%	0%
Sub-total	100%	100%	100%

Are ESG targets included in contracts as obligations or aspirations for logistics service providers to meet/fulfil? (Answer Obligations, Aspirations or Not Included for each category)

ESG Targets and contracts

Procurement of goods/materials - ESG targets are... - Ok Procurement of goods/materials - ESG targets are... - As Procurement of goods/materials - ESG targets are... - No

ESG Targets and contracts

Manufacturing of goods/materials - ESG targets are... -Manufacturing of goods/materials - ESG targets are... -Manufacturing of goods/materials - ESG targets are... - N

ESG Targets and contracts

Warehouse/storage - ESG targets are... - Obligations Warehouse/storage - ESG targets are... - Aspirations Warehouse/storage - ESG targets are... - Not Included

	Overall	Logistics	Manufacturers and Retailers
bligations	33%	14%	48%
spirations	43%	48%	39%
lot Included	24%	38%	13%

	Overall	Logistics	Manufacturers and Retailers
Obligations	35%	11%	51%
Aspirations	33%	31%	34%
Not Included	32%	58%	15%

Overall	Logistics	Manufacturers and Retailers
37%	27%	44%
47%	51%	44%
15%	22%	12%

ESG Targets and contracts	Overall	Logistics	Manufacturers and Retailers
Air freight - ESG targets are Obligations	24%	12%	32%
Air freight - ESG targets are Aspirations	42%	38%	43%
Air freight - ESG targets are Not Included	34%	50%	25%

ESG Targets and contracts	Overall	Logistics	Manufacturers and Retailers
Intermodal freight - ESG targets are Obligations	22%	8%	31%
Intermodal freight - ESG targets are Aspirations	44%	42%	46%
Intermodal freight - ESG targets are Not Included	34%	50%	23%

ESG Targets and contracts	Overall	Logistics	Manufacturers and Retailers
Rail freight - ESG targets are Obligations	28%	12%	38%
Rail freight - ESG targets are Aspirations	39%	32%	43%
Rail freight - ESG targets are Not Included	33%	56%	19%

ESG Targets and contracts	Overall	Logistics	Manufacturers and Retailers
Road transport - domestic - ESG targets are Obligations	38%	35%	40%
Road transport - domestic - ESG targets are Aspirations	47%	47%	47%
Road transport - domestic - ESG targets are Not Included	15%	18%	13%

ESG Targets and contracts	Overall	Logistics	Manufacturers and Retailers
Road transport - international - ESG targets are Obligations	32%	24%	38%
Road transport - international - ESG targets are Aspirations	41%	44%	40%
Road transport - international - ESG targets are Not Included	27%	32%	22%

ESG Targets and contracts

Sea freight - ESG targets are Obligations
Sea freight - ESG targets are Aspirations
Sea freight - ESG targets are Not Included

ESG Targets and contracts

Courier/Express/B2C last mile transport - ESG targets ar Obligations

Courier/Express/B2C last mile transport - ESG targets ar Aspirations

Courier/Express/B2C last mile transport - ESG targets ar Included

ESG Targets and contracts

Retail of goods/materials - ESG targets are... - Obligation Retail of goods/materials - ESG targets are... - Aspiration Retail of goods/materials - ESG targets are... - Not Includ

SG	Target	s and	contracts	

Overall - Obligations

Overall - Aspirations

Overall - Not Included

If ESG targets are included as contractual aspirations or obligations for logistics service providers to meet, how is compliance with these obligations monitored? (select all that apply)

Share of respondents nominating each monitoring category (%)	Overall	Logistics	Manufacturers and Retailers
Self reporting	55%	64%	49%
Audit rights	64%	55%	71%
Independent verification	30%	21%	35%

Overall	Logistics	Manufacturers and Retailers
30%	24%	34%
41%	28%	49%
29%	48%	17%

	Overall	Logistics	Manufacturers and Retailers
are	31%	21%	38%
are	45%	39%	49%
are Not	24%	40%	13%

	Overall	Logistics	Manufacturers and Retailers
ns	37%	18%	50%
ns	30%	21%	37%
ded	33%	62%	13%

Overall	Logistics	Manufacturers and Retailers
32%	19%	40%
41%	38%	43%
27%	43%	17%

If ESG targets are included as contractual aspirations or obligations for logistics service providers to meet, please describe the consequences in place for failure to meet the targets. (select all that apply)

Share of respondents using each 'consequence' (%)	Overall	Logistics	Manufacturers and Retailers
Financial penalty	38%	35%	40%
Right to terminate	57%	58%	56%
Exclusion from future tenders	53%	69%	42%

Have you ever lost a contract from a customer/ not renewed a contract with a service provider or customer because of a failure to meet ESG targets? (select yes, no or n/a for each category)

Share of respondents losing/terminating contracts (%)	Overall		
	Yes	No	Sub-total
Procurement of goods/materials	14%	86%	100%
Manufacturing of goods/materials	14%	86%	100%
Warehouse/storage	13%	87%	100%
Air freight	7%	93%	100%
Intermodal freight	12%	88%	100%
Rail freight	4%	96%	100%
Road transport - domestic	11%	89%	100%
Road transport - international	12%	88%	100%
Sea freight	10%	90%	100%
Courier/Express/B2C last mile transport	10%	90%	100%
Retail of goods/materials	7%	93%	100%

Procurement of goods/materials Manufacturing of goods/materials Warehouse/storage Air freight Intermodal freight Rail freight Road transport - domestic Road transport - international
Manufacturing of goods/materials Warehouse/storage Air freight Intermodal freight Rail freight Road transport - domestic Road transport - international
Warehouse/storage Air freight Intermodal freight Rail freight Road transport - domestic Road transport - international
Air freight Intermodal freight Rail freight Road transport - domestic Road transport - international
Intermodal freight Rail freight Road transport - domestic Road transport - international
Rail freight Road transport - domestic Road transport - international
Road transport - domestic Road transport - international
Road transport - international
Care for inter
Sea freight
Courier/Express/B2C last mile transport
Retail of goods/materials

Share of respondents losing/terminating contracts.... (%

Procurement of goods/materials
Manufacturing of goods/materials
Warehouse/storage
Air freight
Intermodal freight
Rail freight
Road transport - domestic
Road transport - international
Sea freight
Courier/Express/B2C last mile transport
Retail of goods/materials

%)	Logistics		
	Yes	No	Sub-total
	13%	87%	100%
	17%	83%	100%
	14%	86%	100%
	8%	92%	100%
	10%	90%	100%
	8%	92%	100%
	10%	90%	100%
	9%	91%	100%
	4%	96%	100%
	10%	90%	100%
	9%	91%	100%

6)	Manufacturers and Retailers			
	Yes	No	Sub-total	
	14%	86%	100%	
	12%	88%	100%	
	12%	88%	100%	
	7%	93%	100%	
	13%	87%	100%	
	2%	98%	100%	
	13%	87%	100%	
	14%	86%	100%	
	14%	86%	100%	
	11%	89%	100%	
	5%	95%	100%	

Focus on Warehousing and Transport

What are the most important challenges or threats experienced by your business regarding energy and fuel? (select all that apply)

Share of respondents encountering each challenge (%)	Overall	Logistics	Manufacturers and Retailers
Rising costs of energy/fuel for transport/distribution	58%	72%	46%
Rising costs of energy for warehouse operations	50%	64%	39%
Uncertainty on future fuel strategies for transport/distribution	49%	45%	52%
Lack of knowledge regarding warehouse energy saving initiatives	17%	6%	26%
Availability of energy to support increasingly automated warehouse operations	26%	15%	35%
Lack of investment in vehicle refuelling/charging infrastructure	42%	55%	30%
Other	3%	6%	0%

Would you be willing to increase your costs in order to have environmental certifications for your logistics/supply chain operations and assets? (select one)

Willingness to pay for environmental certifications (%)	Overall	Logistics	Manufacturers and Retailers
Yes, because it adds value	31%	20%	33%
Yes, but it depends on the size of the increase	53%	65%	50%
No, because it does not add value	10%	11%	9%
No	6%	4%	7%
Sub-total	100%	100%	100%

What rent premium would your company be willing to pay to move operations to a 'green' building over a standard 'non green' building? (select one)

Willingness to pay rent premium (%)	Overall	Logistics	Manufacturers and Retailers
None	7%	4%	9%
A premium equating to less than the total operating cost savings (e.g., electricity bills)	26%	20%	30%
A premium equivalent to the total operating cost savings (e.g., electricity bills)	45%	51%	40%
A premium over the total operating cost savings (e.g., electricity bills)	6%	4%	8%
Do not know/No answer	16%	20%	12%
Sub-total	100%	100%	100%

Does your company achieve/obtain reporting/certifications and, if so, which ones? (select all that apply)

Share of respondents with each 'certification' (%)	Overall	Logistics	Manufacturers and Retailers
GRI	18%	15%	21%
Gresb	10%	2%	15%
EDGE	15%	0%	27%
Breeam	31%	46%	19%
Leed	16%	20%	13%
Well	13%	7%	17%
DGNB	14%	5%	21%
CDP	20%	20%	21%
CDSB	5%	5%	6%
IIRC	11%	2%	17%
SASB	15%	10%	19%
TCFD	13%	7%	17%
NFRD	9%	2%	13%
We do not obtain certifications	31%	34%	29%
Other	8%	12%	4%

Rate the following warehouse/real estate ESG features in terms of their importance to your operation: (Rate either Very important/Important/Moderately important/Slightly important/ Not important for each category)

Importance of warehouse ESG features: 'Overall'	Very important	Important	Moderately important	Slightly important	Not important
Electric vehicle charging points	33%	34%	19%	7%	7%
Warehouse energy saving solutions: solar panels, lighting sensors, led lighting, heat exchangers next to refrigerating appliances, heat pumps,	48%	33%	10%	6%	3%
Preserving water resources: rainwater harvesting systems, water filters, grey water, water leak detectors;	22%	35%	20%	16%	7%
Positive environmental impact: landscaping trees, no mown lawns, biodiversity, meadow;	20%	24%	28%	16%	12%
Staff initiatives: car sharing, bicycle shelters, panoramic windows, outdoor gyms, parcel lockers, vending machines, ATM (cash machines);	15%	34%	26%	16%	9%

Ranking Importance by Share of 'Very Important' + 'Important'	2023	2022
Warehouse energy saving solutions: solar panels, lighting sensors, led lighting, heat exchangers next to refrigerating appliances, heat pumps,	81%	92%
Electric vehicle charging points	67%	53%
Preserving water resources: rainwater harvesting systems, water filters, grey water, water leak detectors;	57%	59%
Staff initiatives: car sharing, bicycle shelters, panoramic windows, outdoor gyms, parcel lockers, vending machines, ATM (cash machines);	49%	45%
Positive environmental impact: landscaping trees, no mown lawns, biodiversity, meadow;	44%	39%

Regarding your road fleet operations, how important are the following factors to assist you to achieve decarbonisation targets? (Rate either Very important/Important/ Moderately important/Slightly important/Not important for each category)

Importance of factors to support transport decarbonisation: 'Overall'	Very important	Important	Moderately important	Slightly important	Not important
Clarity on fuel choices, technology and cost	39%	43%	10%	6%	2%
Longer implementation period	18%	37%	26%	11%	8%
Grants for vehicles	29%	29%	26%	11%	5%
Grants for charging/refuelling	25%	41%	25%	6%	3%
Vehicle scrappage scheme	18%	23%	26%	18%	15%
Investment in refuelling infrastructure	32%	36%	19%	9%	4%
Investment in charging infrastructure	44%	29%	17%	5%	5%
Location in close proximity to cities	17%	35%	24%	13%	11%
Development of road infrastructure – expressways, junctions	28%	29%	16%	15%	12%
Proximity to electric charging points	31%	34%	18%	10%	7%

Ranking Importance by Share of 'Very Important' + 'Important'	2023	2022
Clarity on fuel choices, technology and cost	82%	91%
Investment in charging infrastructure	74%	77%
Investment in refuelling infrastructure	67%	71%
Grants for charging/refuelling	66%	63%
Proximity to electric charging points	66%	77%
Development of road infrastructure – expressways, junctions	58%	74%
Grants for vehicles	58%	51%
Longer implementation period	55%	70%
Location in close proximity to cities	52%	64%
Vehicle scrappage scheme	41%	28%

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