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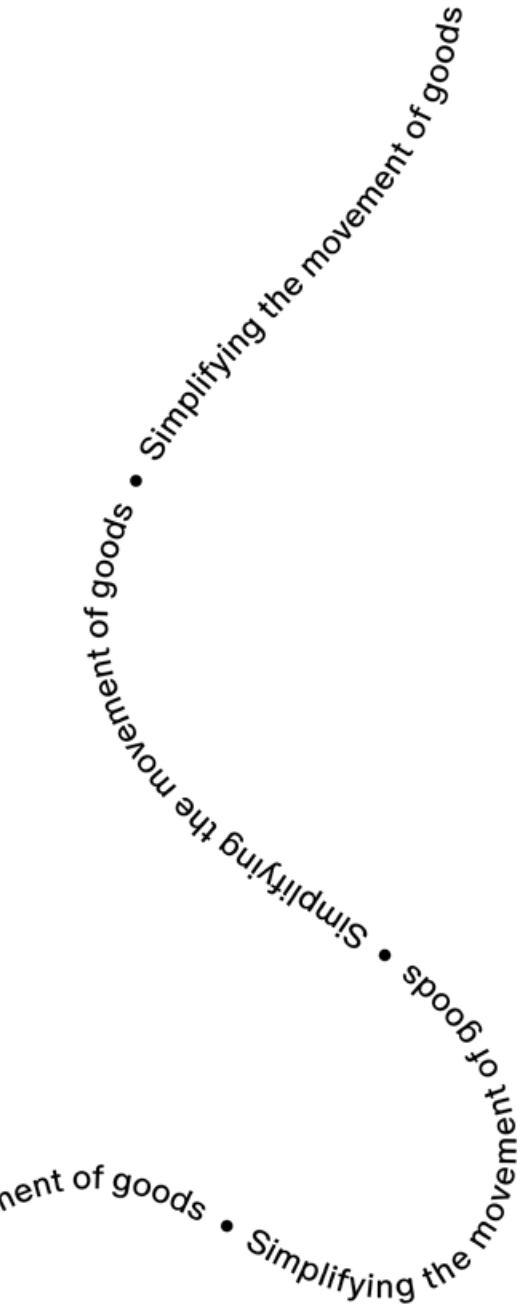
EY Building a better working world

The Playbook for Decarbonised Logistics

Making logistics leaner and greener

Foreword

How to win the game of sustainable logistics, together



As we step further into the 21st century, rapid cross-sector carbon emissions reduction is fundamental to our society's sustainable development. The transportation sector is one of the largest global polluters and almost all companies use transports in their operations – making this a joint responsibility to increase our sustainability efforts to mitigate climate change. So, what can be done to make sustainable transports a prioritized and actionable topic across sectors?

Logivity have been conducting research into the leading thoughts in the logistics and transportation industry regarding sustainability. Logivity commissioned EY to conduct research, perform interviews and prepare the report. Through qualitative interviews with transportation buyers across sectors as well as through research, our ambition is to capture challenges, trends, strategies, and success cases of sustainable logistics in a single study to build knowledge around how to successfully decarbonize logistics and transportation.

We've interviewed logistics managers, sustainability managers and global experts from companies such as Ericsson, Volvo, SKF, SSAB, Assa Abloy, Kongsberg Automotive, Hempel, EY, Stadium, Lindex, Industrilås, Bevego and others.

We hope this playbook serves as an inspiration and motivation for the industry in general and the transportation buyers in particular in a rapidly evolving and complex business environment. It is designed to provide learnings, insights and tactics helping companies to move to a more sustainable future.

Alexander Berg, Head of Sales, Logivity
Jessica Öhrblad, CEO, Logivity
Madeleine Sundström, COO, Logivity

Why is decarbonised transportation important to save our planet?

Climate change has been recognized as one of the most significant challenges of the 21st century. To mitigate the devastating effects of increasing temperatures, rising sea levels, and extreme weather patterns, the international Paris Climate Agreement was signed, setting a critical milestone: to keep global temperature increase below 2 degrees Celsius, and ideally no higher than 1.5 degrees.

Additionally, The European Union, has set an ambitious yet critically needed goal to reduce greenhouse gas emissions by at least 55% before 2030. This target forms part of a broader vision to transition the European Union to a climate-neutral society by 2050.

The transportation sector annually contributes a quarter of global greenhouse gas emissions and is therefore one of the most important sectors to decarbonise to achieve this vision.

Jessica Öhrblad, CEO, Logivity

Key insights

Sustainable transformation for the whole industry

1

Stringent environmental regulations are pushing the transportation industry to adapt, emphasizing compliance with Scope 3 emissions reporting and adopting sustainable practices.

Data and advanced technology enabling hyper-optimisations

2

The integration of advanced technologies, such as sensor-based tracking, telematics, RFID (Radio Frequency Identification), and digital twins, is enhancing logistics visibility,enabling shippers to make data-driven decisions.

Operational efficiency reduces end-to-end CO2 emissions

3

Once obtained, data can be used by carriers to eliminate shipper's pain points, including resilience and efficiency of transport, including near-shoring to cut both improve reliability and reduce carbon footprint.

Electrification follows optimisations and co-investment

4

The shift toward electrifying fleets is gaining momentum, but still has a long way to go, with shippers advocating for improved charging infrastructure and exploring collaborative approaches to co-invest in electric vehicles and other sustainable solutions.

Collaborative partnerships are key to green transition

5

Collaborative efforts among shippers, carriers, and industry stakeholders are crucial for achieving decarbonisation goals, allowing companies to share resources, co-invest in infrastructure, and drive sustainability through collective action.

Chapter 1

Sustainable transformation for the whole industry

Rules and regulations are driving transformation in the supply chain

As the urgent need to combat climate change intensifies, the transport sector is feeling increased regulatory pressure to decarbonize. Governments and regulatory bodies worldwide are setting strict sustainability goals, enforcing emissions standards, and even imposing penalties in the bid to reduce the carbon footprint of the transport industry. Environmental regulations are increasingly being leveraged as an instrument to accelerate the transition towards a low-carbon transport sector. In many geographies, emission performance standards are being tightened, and incentives for electrification are being introduced.

In essence, the regulatory landscape is becoming a significant driver of change in the goods transport industry. Adapting to these demands is no longer a matter of choice, but a business necessity – one that presents both challenges and opportunities for innovation and growth in the sector.

The introduction of new regulations related to greenwashing, supply chain practices, due diligence,

and CSR (Corporate Social Responsibility) reporting, addressing companies' carbon footprint may indirectly impact transportation. These regulations may lead to transformations in the supply chain, with companies aiming to limit their negative environmental impacts. To make supply chains more sustainable in the future, looking beyond regulatory impacts, companies may reevaluate and restructure their supply chains. While the effect of the regulatory landscape is still uncertain, companies might make changes aimed to reduce negative environmental impacts as part of their broader strategic planning.

Renato van Nijnatten is the Head of Supply Chain Consulting for EY in the Netherlands.

Mounting pressure on the industry to increase momentum in the transition

Stringent reporting standards put businesses under increasing regulatory and public scrutiny surrounding their environmental impact. Non-compliance or inaccurate representations could lead to penalties, reputational damage and potential loss of stakeholder trust.

The Corporate Sustainability Reporting Directive (CSRD), proposed by the European Commission, aims to standardize sustainability reporting and extend it to all large companies and all publicly listed small and medium-sized enterprises (SMEs) in the EU. It requires large companies and listed companies (except listed micro-enterprises) to disclose information about social and environmental risks they face and the impact of their activities on people and the environment.

The CSRD focuses on the obligation of companies to report their emissions, divided into three scopes.

Scope 1 comprises of direct emissions from sources owned or controlled by the reporting company (e.g., emissions from company-owned vehicles or facilities).

Scope 2 refers to indirect emissions associated with purchased electricity, heat, or steam used by the company.

Scope 3 captures indirect emissions from activities outside the company's direct control, such as supply chain emissions, business travel, and product use.

The introduction of Scope 3 emissions, to be reported starting 2026 in particular presents an additional layer of complexity and pressure for the transportation and logistics industry. For transportation providers, this means a rising demand for accelerated transportation decarbonisation coming from buyers looking to reduce emissions throughout their value chain.

Together, these measures put pressure on the goods transport industry to enhance their environmental data management, compliance, and overall sustainability efforts.

Industrilås have recently embarked on their sustainability reporting journey

We have recently started to measure our emissions and there will be an increased focus on this going forward. The largest challenge is related to obtaining reliable data, from well to tank, to have all data necessary to make efficiency improvements from a sustainability and cost perspective. As of now, we can obtain this data from our carriers if asked for, but there is no continuous reporting processes in place. Our ambition is to continue to build on the work we have carried out throughout this year with defining our base line for emissions to further define targets and strategies for lowering our emissions.

In addition, there is a rapid change with incoming directives such as CSDDD for example, where we will be included, either directly or indirect. This will affect the way we work and processes that are established in the organization and this require a proper change management process as well.

Martin Samuelsson and Frida Johansson, Industrilås

“That is the biggest challenge, having a reliable data from all of you carriers, in order for us to have all information at hand in decision making processes to improve ourselves.”

Joint efforts to reduce emissions will create mutual benefits across the value chain

As a result of upcoming requirement to report on Scope 3 indirect emissions, companies must improve their capabilities in data gathering, emissions calculations and overall carbon management to ensure accurate reporting of these complex emissions sources. Different strategies for incentivizing suppliers will likely materialize, including both financial and non-financial measures and as well as stricter procurement policies and tender processes, focusing on both suppliers' sustainability efforts and data availability.

Scope 3 reporting also mean that companies may be positioned as will have a dual position – being both the supplier and the customer and will have to work together with their business partners to report and reduce emissions. It is therefore vital to accurately track and report emissions. In this interconnected system, the sustainability actions of all parties across the supply chain will work together, internally and externally including warehousing, logistics, manufacturing and customer offering, leading to a collective reduction of environmental impact.

74%

of transportation buyers factor in ESG targets as part of their tendering process

56%

of EU shippers maintain the "right to terminate" relationship if LSPs (Logistic Service Provider) fail to meet ESG targets

Read more about compliance in the end of the playbook to learn about taxes, rules and regulations.

Leveraging the procurement process to reduce emissions with carriers

In Hempel, we want to engage with our suppliers to encourage development and collaboration on sustainability. The Hempel Procurement Sustainability Screening evaluates the environmental sustainability maturity and practices of our suppliers, including our logistics partners. It is closely linked to Hempel's ambitious target to reduce Scope 3 emissions with 50% by 2030. We run it internally in Procurement, as it is important for us to gain a deeper understanding of what sustainability is for each category and to have an in-depth dialogue with each supplier. Sustainability is our common journey, and the dialogue sessions are valuable opportunities to share and learn.

The screening questionnaire enables a meaningful comparison between suppliers, and it gives us the opportunity to understand their operations and reduction possibilities. It also allows us to make informed decisions about continuing with existing suppliers or switching to more sustainable alternatives. The scoring from the questionnaire, which is revisited every two years, also helps Hempel set targets and benchmarks for supplier selection and to identify areas of risk. In summary, Hempel's sustainability screening program helps to comprehend their suppliers' processes better and facilitating effective communication. The questionnaire as used in commercial process, such as tenders.

Including CO2 targets in contracting terms

We at Bulten are considering longer-term contracts with transport providers as a strategy to increase sustainability. We understand that incorporating sustainability targets into our contracts requires these agreements to be long-term.

Simon Lee, VP Material Planning & Logistics, Bulten

This means we are not just focusing on cost reduction targets but also on ways to reduce our carbon footprint as part of the contract. We are also considering changes in service, such as longer lead times and delivery times, to reduce the carbon footprint of the goods we receive. However, this is something that needs to be balanced from the perspective of the customer as well.

“Longer-term contracts provide transport providers with the security needed to invest in sustainability. We are also looking to include CO2 reporting clauses and CO2 reduction targets in our new contracts.”

Tracking, measuring and reporting CO2

In terms of tracking and measuring CO2 emissions from transportation, we at Ericsson have implemented an automated system that runs monthly checks on our progress. We focus on an efficiency factor rather than total emissions because we need to isolate it from volumes to understand our own efforts and identify areas for improvement. This data is reported at the highest level in our organization on a monthly basis.

Neal Parikh, Head of Sustainability, Group Supply, Ericsson

“We have implemented an automated system that runs monthly checks on our progress. We focus on an efficiency factor rather than total emissions to identify areas for improvements.”

Internally, we focus on improving our core processes and data quality while increasing transparency about our operations. By leveraging data, we aim to enhance our sustainability efforts in transportation. We are continuously digitizing our internal operations to better understand and manage the flow of goods. This operational efficiency allows us to plan more effectively and manage transports more efficiently.

Denis Giron, Volvo Group

“The problem is that we are spending too much time to calculate and not enough time to decarbonise.”

Challenges related to sustainability and data

We challenge our shippers when it comes to driving sustainability initiative and getting the right data. Having the right data at hand can be a game changer for driving sustainable decision making and having strategic discussions with carriers. If we know how much emissions each shipment generates, we can start comparing and thinking about solutions. We can not make decisions until this kind of data is available.

Just like we want to know where we bleed money in the supply chain, I want to know where we are bleeding emissions – as of now there is no combined data that can show us this.

Victor Stridh, Head of Logistics at Stadium

“In a dream world we would have a digital system where you could see the emissions for a certain shipment from terminal to store to be able to compare against other shipments for the same distance to draw conclusion on why there might be a discrepancy and take appropriate action. “

Methodologies for calculation of CO2 emissions

We are in the process to set our scope 3 targets in line with SBTi and will define our emission reduction targets for outgoing transports this year. Transports is a larger part of our scope 3 emissions, but when looking at the totality our main emissions are in the production and transports account for a very small part compared to that.

We have been working with different methodologies for calculation our CO2 emissions, and most recently we are building a way to calculate emissions and track them in a more continuously manner. This to be able to work towards making decisions also based on carbon emissions and in the long-term also to include it in operations and decision making at that level.

Johan Dahlberg, Director Supply chain – Europe, SSAB

As of now, the management of sustainability data is rather manual and require manual work for calculations, but here we see that digitalization and tools can support this. This is also evident for optimization efforts such as route optimization and co-loading/consolidation.

“We are building a way to calculate emissions to be able to work towards making decisions also based on carbon emissions.”

Takeaways from Chapter 1: What should you do on your journey to sustainable logistics?

1. **Systematically track and report your emissions:** Identify sources of your direct and indirect emissions and set up systems to track and report them on an ongoing basis aiming for a transactional level of tracking.

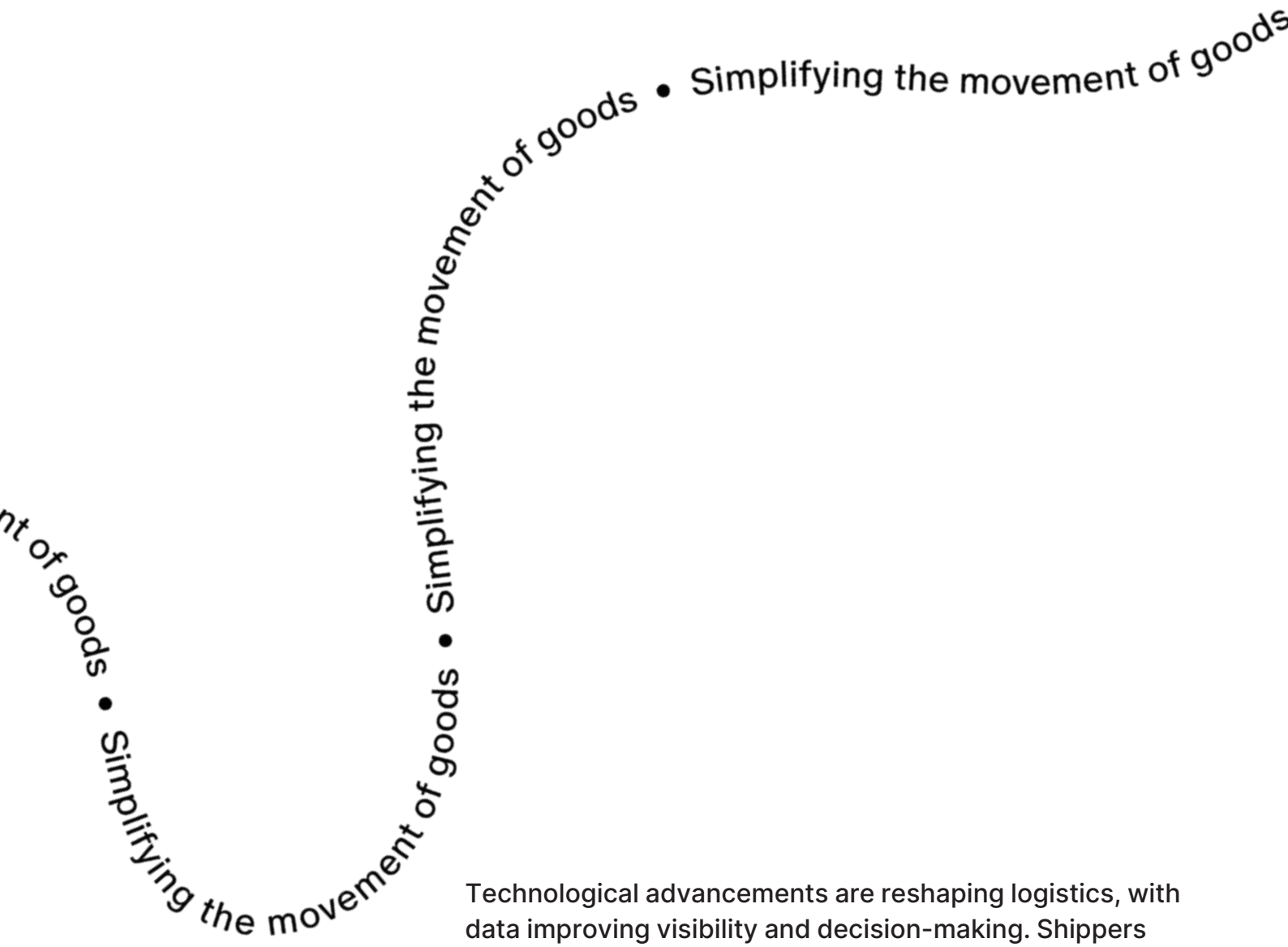
2. **Prepare to measure indirect emissions:** Map where emissions are being created by others and plan how to gather the required data.

3. **Enhance Supplier Evaluation and Collaboration:** Integrate sustainability criteria into supplier assessments and collaborate with partners on emission reduction efforts.

4. **Incorporate Sustainability in Contracts:** Include sustainability goals and CO2 reduction targets in contracts with transport providers to encourage long-term environmental commitments.

Chapter 2

Data and advanced technology enabling hyper-optimisations



Technological advancements are reshaping logistics, with data improving visibility and decision-making. Shippers are increasingly investing in technology connecting data from warehouse management (WMS), transportation management systems (TMS), and enterprise resource planning (ERP). This end-to-end integration offers a comprehensive view of the supply chain, helping shippers to track freight, optimize routes, and reduce costs.

67%

of EU shippers see end-to-end freight visibility as pain point

Despite these advancements, end-to-end freight visibility remains one of the most significant challenges for shippers, particularly in the EU. Including the complexity of setting up digital integrations with numerous external stakeholders, including transporters, subcarriers, and other logistics actors.

44%

of shippers are unsatisfied with the level of shipment visibility offered by their LSPs

To address this pain point, shippers prioritize solutions like RFID, digital twins, and blockchain to improve transparency and predictability. These technologies facilitate real-time tracking and better load and route optimization, CO2 emissions calculations, and streamlined document handling, ultimately leading to hyper-optimized logistics.

Data as an enabler for improvements and consolidations

Shippers need to have the right data to follow up and understand current shipment patterns. Therefore, we are pushing for supplier data of emissions per shipment to find improvements and take sustainable decisions. There is too much manual work going into this process today, although large carriers are reporting according to industry requirements, the data is not granular enough.

We need partnerships to share data between carriers and suppliers to optimise and for example consolidate to send larger volumes going to the same place. Digitalization can help with real time-visibility to see where there is capacity and how this existing capacity can be utilized by us or to co-load in partnership with others.

"As shippers, we need to have systems in place for end to end visualizations and access to data for analysis of shipping patterns and possible consolidations in partnerships together."

Filip Lagerstedt, Global Category Manager
Transportation, Kongsberg Automotive

Investing in Data systems for Better Decision making

With warehouse consolidation comes the need for robust data systems. Lindex is prioritizing data quality to enable more informed decision-making. This focus on data will support efficient transport planning and allow the company to better manage its logistics once the consolidation is complete.

“We’re investing in data systems to ensure we have access to the information we need. This will facilitate our ability to make efficient transport decisions and optimize our operations.”

Maria Frieberg, Transportation & Customs manager, Lindex

Real time shipment visibility for optimisation

Telematics supported by AI is considered to be the most advanced option for real-time shipment visibility, including leveraging data from IoT (internet of things) devices at various points of the supply chain, as well as identifying and predicting pain points along the routes. Nevertheless, due to implementation costs and complexities associated with diverse fleets and legacy systems, many carriers use checkpoint-based tracking as the second-best option, rather than using sensor-based technology, to deliver real-time updates on freight location, even if there is still room for improvement in maintaining visibility over a complex, multimodal freight ecosystem using this method.

Shippers and manufacturers depend on real-time truck data and accurate ETAs (Estimated time of arrival) to manage inventory efficiently and optimize transport routes. The lack of real-time visibility can cause disruptions, making it crucial for the industry to embrace advanced tracking technologies to stay ahead.

84%

of shippers see Real-time shipment alerts and status updates as critical to be able to:

1. Manage supply chain disruptions to avoid losses due to cancelled orders, lost sales, or production losses

2. Address customer expectations of receiving timely updates and order notifications

3. Ensure compliance with various government regulations around emissions, road safety and worker rights

4. Achieve cost efficiencies with accurate inventory and process planning

Data-Driven Decision-Making and Fostering Desired Customer Behavior

When facing the challenge of making informed decisions, data is critical. To make sound choices and encourage the desired customer behavior, you need information presented in a consistent manner. Ultimately, it's the customer who drives demand; their needs and preferences set off a chain of events.

If there's uncertainty or a lack of trust, disruptions can occur. Consider our collective experience during the COVID-19 pandemic and its impact on supply chains and inventories. Take yoga pants, for example. During lockdowns, demand for sweatpants and yoga pants soared, while other items, like toilet paper, experienced similar surges. Although this example is from Sweden, it reflects a broader trend.

Kristina Axelsson, Assa Abloy, Director of Logistics – Entrance Systems

Customers may act unpredictably if trust in the supply chain is compromised. If they sense instability or hear rumors about disruptions, they might place extra orders or demand shorter lead times. This behavior can lead to buffer stockpiling, increased CO2 emissions, and unnecessary stress on logistics systems.

However, if there's trust and stability in the supply chain, customers are less likely to overreact. They won't feel the need to create buffer stocks or demand expedited delivery, thus reducing unnecessary environmental impact.

Additionally, our products require installation, which involves close collaboration with an installation team, the customer, and the construction site. Proper coordination ensures that everything aligns smoothly during installation, further enhancing the customer experience.

"That's why having consistent data and tools to ensure transparency and traceability is essential. It allows for better decision-making and fosters open communication with customers, building trust along the way."

Working in Parallel to Achieve Decarbonisation

Denis emphasizes that efforts to improve efficiency and reduce demand for transport shouldn't be sequential but rather need to work in parallel. This involves leveraging advanced technologies like AI and advanced analytics to identify where efficiencies can be achieved to support decarbonisation.

Denis Giron, Volvo Group

"We need AI, we need advanced analytics, and we need data to understand where we can bring efficiency to support decarbonisation."

Enhancing efficiency and embracing collaboration with data as enabler

We aren't just looking outward; internally, we're refining our core processes, improving data quality, and boosting transparency about our operations. By leveraging data, we aim to improve sustainability in transportation, recognizing that efficient transport can significantly reduce carbon emissions.

In our continuous journey toward sustainability, we are digitizing our internal processes to gain a clearer understanding of the flow of goods. This digital transformation enhances operational efficiency, enabling better planning and more effective management of transport activities. The result is a more streamlined approach that not only saves resources but also contributes to our environmental goals.

Despite these strides, the industry faces challenges when it comes to sharing data. Competitive pressures and cybersecurity concerns make it difficult to establish open data networks. However, we are committed to overcoming these hurdles, exploring ways to create a trust network or similar mechanisms to enable safe and secure data sharing. This commitment underscores our broader vision for sustainability and our determination to collaborate with others in the industry.

Neal Parikh, Head of Sustainability, Group Supply, Ericsson

Emerging technologies shippers are investing in or plan to invest in the next years:

79%
Advanced Predictive Analytics

Predictive analytics combined with supply chain control tower enable improved visibility and decision making for physical logistics. Companies use data, statistical algorithms with AI and Machine Learning (ML) techniques to identify likelihood of future outcomes and use it for resource, network, and distribution planning.

65%
Supply Chain Control Tower

Integrated usage of RFID and Industrial IOT (Internet of Things) allow shippers to generate rich data and automation processes. It includes linking of devices and sensors to enhance automation and real-time monitoring, with rich data from sensors improving the overall freight handling and logistics process.

54%
RFID & other advanced sensors

Shippers are investing in Radio Frequency Identification (RFID) and other advanced sensors to improve supply chain visibility and tracking, allowing for real-time monitoring of goods throughout the logistics process. These technologies not only increase operational efficiency and reduce errors but also enhance security, enabling shippers to provide more accurate delivery estimates and improved customer experiences.

45%
Blockchain

Shippers are embracing blockchain for its ability to offer secure, tamper-proof tracking of goods, boosting transparency and traceability in the supply chain. This leads to streamlined operations, reduced fraud, and increased trust among stakeholders.

44%
Supply Chain Digital Twins

Supply chain digital twins are virtual models that replicate real-world logistics and supply chain processes, providing a comprehensive view of operations. By using these digital representations, companies can simulate different scenarios, predict disruptions, and optimize workflows, leading to improved efficiency, reduced costs, and enhanced decision-making.

The digitization opportunities shippers see as prioritized:

Carrier selection and booking	Enables shippers to quickly find and book the most suitable carriers, reducing downtime and optimizing costs.
Shipment/delivery notification	Allows for real-time tracking and alerts, ensuring timely communication and improved customer satisfaction.
Freight audit and payment	Streamlines the auditing process and ensures accurate payments, reducing errors and saving time.
Document generation and distribution	Automates document processes, facilitating compliance, and improving efficiency in handling shipping paperwork.
CO2 emissions calculations	Helps shippers measure and reduce their carbon footprint, promoting sustainability and regulatory compliance.
Load optimization	Maximizes the use of space within shipping containers or vehicles, reducing costs and environmental impact.
Route optimization	Identifies the most efficient shipping routes, minimizing transit time and fuel consumption while lowering costs.

Takeaways from Chapter 2: Where do you start to utilise data and advanced technology?

1. **Starting with digital data integrations:** Prioritize integrating data systems to ensure seamless communication, end-to-end supply chain and transportation tracking for visibility, efficiency and data driven decision making.

2. **Ensure Continuous Freight Visibility:** Start by establishing a basic system for tracking and monitoring your shipments. This foundational step is crucial for understanding where your freight is.

3. **Invest in Sensor-Based Tracking:** Once you have basic visibility, upgrade to sensor-based tracking and telematics systems for more accurate real-time updates and to reduce reliance on outdated checkpoint-based methods.

4. **Enhance Communication with Carriers:** Throughout this process, ensure clear communication with carriers to maintain consistent information exchange and address any issues promptly.

Chapter 3

Operational efficiency reduces end-to-end CO2 emissions

In addition to utilising technologies and data for sustainability reporting and addressing the pain-points around transparency, they are also the enablers for optimising efficiency.

Shippers aiming to optimize operational efficiency in end-to-end transportation focus on a combination of factors. Service reliability is key, ensuring timely deliveries and customer satisfaction. Nearshoring helps reduce transportation distances, cutting costs and carbon emissions. Sourcing evaluation balances cost with supply chain resilience, allowing for more efficient transport routes.

While supplier sourcing evaluation balances cost with supply chain resilience, it's equally important to drive efficiency within the existing network. This involves optimizing transport routes, improving load management, and enhancing coordination among different modes of transport.

Pricing plays a crucial role, requiring a competitive approach without sacrificing quality. Global end-to-end solutions provide a seamless transportation experience by integrating

various stages of the supply chain. Real-time decision-making enables shippers to respond swiftly to changing conditions, ensuring smooth operations.

By focusing on these trends, shippers can build a transportation network that is efficient and reliable – from both a cost and environmental perspective.

39% of EU shippers see dwell time and detention costs as a pain point.

60% of shippers says service reliability is the most important criteria when choosing carriers.

Nearshoring trends influencing transportation and logistics networks

The move toward nearshoring is transforming transportation and logistics networks, with companies bringing production and sourcing closer to home markets. This shift leads to shorter transportation routes, cutting costs and reducing carbon emissions while enhancing supply chain resilience.

Consequently, logistics networks are evolving to be more flexible and agile, ready to adapt to changing demands and potential disruptions.

A Well-Defined Transport Network

SKF operates globally with a robust transport network that has been optimized over time. According to Jonas, one of the keys to their strategy is managing both inbound and outbound logistics in the same network. This encompasses a mix of finished products, components, and raw materials, allowing SKF to achieve high fill rates while balancing cost and lead time.

"We aim to optimize our transports using the resources at our disposal. For example, we might have a shipment from Gothenburg to Brazil. This shipment will move on several transport production legs, where we focus on optimizing each production leg instead of each shipment."

Jonas Dahlqvist, Sustainability Manager Logistics, SKF

Reducing Transport Emissions

SKF's sustainability strategy is rooted in three key pillars: reducing global transport work, optimizing transports, and decarbonizing transport operations. The primary focus is on the first two pillars, with efforts aimed at reducing and optimizing existing transport to minimize emissions. SKF is also exploring alternative sustainable transport services where it makes sense and is feasible.

"Our strategy revolves around reducing and optimizing our transports to lower emissions. If there's an opportunity to incorporate more sustainable transport services, we consider it. However, our immediate focus is primary on our operations and ensuring they are as efficient and eco-friendly as possible."

Consolidating Warehouses for Greater Flexibility

Lindex is currently focused on consolidating its warehouse operations. With two separate warehouses today, the company will merge them into a single facility to streamline logistics and supply all channels from one location. This consolidation is expected to improve transport flexibility and operational efficiency, allowing Lindex to move goods more easily between channels.

"By consolidating our warehouses, we'll gain greater flexibility and efficiency in our transport operations. This will also allow us to view our logistics from a holistic perspective, leading to more efficient decision-making."

Maria Frieberg, Transportation & Customs manager, Lindex

Technology and Efficiency as Key Drivers in parallell

To decarbonize transports, Denis suggests focusing on both reducing the intensity factor in the transportation system and increasing operational efficiency. He acknowledges that technology is crucial, but it should be complemented by questioning the necessity of certain transports. The combination of increasing efficiency and reducing the demand for transports will be the next challenge.

Denis Giron, Volvo Group

“We need to remind everyone that if we are serious about decarbonisation and sustainability, efficiency will be our guiding light.”

A Shift Toward Alternative Fuels and Multi-Modality

To remove emissions from the transportation system, Denis suggests moving away from diesel and exploring alternative fuel types and multi-modality. This shift is expected to bring significant potential for change, particularly by 2030. However, beyond 2030, he predicts that the primary enabler will be operational efficiency, questioning every transport and ensuring it is as efficient as possible.

Improving Supply Chain Resilience to Minimize Air Transport

One of the key steps Assa Abloy have taken to positively impact CO2 emissions is increasing supply chain resilience to avoid air transport. Air transport often occurs due to delays, shortfalls, or sudden increases in demand, leading to a need for quick fixes in the supply chain. To address this, the team has implemented a system to consolidate goods in China, allowing for more frequent, smaller deliveries that minimize the need for air transport.

Kristina Axelsson, Director of Logistics – Entrance Systems, ASSA Abloy

“We’ve set up a system where we consolidate goods in China. Instead of having one container per month, we now mix goods from different suppliers to create smaller, more frequent deliveries. This has reduced our CO2 impact and decreased the risk of air shipping.”

Consolidating and Optimizing for Greater Efficiency

Kristina mentions that they are in the early stages of optimizing their logistics by consolidating goods. Her division could be seen as three separate companies, with volumes that haven't been mixed across them. The plan is to combine these volumes and create a shuttle network with hubs in Europe, enabling daily departures from key regions like the Nordics, Western Europe, Southern Europe, and Eastern Europe.

"We're at the beginning of our journey to optimize and consolidate our goods. By bringing these volumes together, we can create a shuttle network with hubs in Europe, leading to a more efficient and sustainable logistics structure."

Takeaways from Chapter 3: How can you achieve operational efficiency?

1. **Optimise individual route segments:** Focus on optimising and then integrating individual transport legs as the means to improve the entire route, not vice versa.

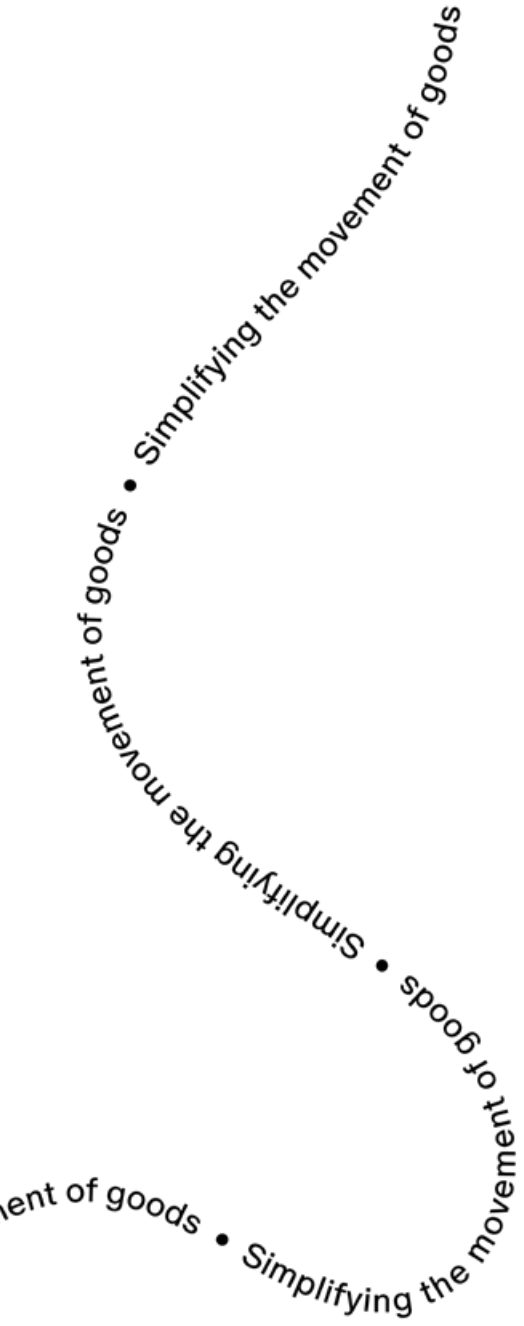
2. **Integrate Various Stages of the Supply Chain:** Coordinate and link the different optimised parts such as suppliers, manufacturers, warehouses, and retailers, so they work as a unified system

3. **Support Real-Time Decision-Making :** Integrating the supply chain allows for the use of real-time data and analytics, enabling quick and informed decisions to address any issues or optimize routes and processes.

4. **CO2-Based Decision-Making :** Aim to include CO2 emissions in the optimisation and in the decision-making factors, linked to cost and lead time for a comprehensive perspective on sustainability. Integrate CO2 emission tracking in the whole organisation as KPI.

Chapter 4

Electrification follows optimisations and co-investment



Shippers are increasingly focusing on the green transition in transportation, with an emphasis on electrification and efficient fleet utilization. To offset the higher costs of investing in battery electric vehicles (BEVs), carriers are exploring ways to enhance fleet efficiency and optimize vehicle utilization. This involves innovative strategies to maximize the use of each vehicle, thereby balancing the higher capital costs associated with BEV adoption.

This includes leveraging data-driven insights to enhance the co-utilization of trucks, thereby improving efficiency and reducing operational costs. Collaborative approaches to vehicle utilization can further help shippers achieve these goals.

Furthermore, robust infrastructure is essential to facilitate the green transition. Shippers are advocating for the expansion of charging stations including at warehouse locations and along key routes, as well as options for related infrastructure such as battery swapping to ensure that electric fleets can operate effectively across various routes and regions.

These trends underscore the need for strategic investment and data-driven solutions to promote a sustainable transportation ecosystem.

62%

of carriers say they are renewing their vehicle parc to shift towards zero-emission

Although only 14% say they are already using alternative powertrains (electric, hybrid, LNG)

47%

of fleet owners say they are using Telematics solutions to monitor/reduce fuel consumption

By analysing Telematics data, fleets can optimize their operations leading to reduced fuel usage and consequently lower environmental impact.

Share of electric trucks is expected to rise on the back of favourable regulations, growing shipper's preference for alternate fuel trucks associated with advances in technology leading to improved price to efficiency ratios, battery capacity increases to cover longer distances, and faster charging times.

Shippers and carriers are electrifying fleets in collaboration with EV manufacturers

Adoption of electric and zero-emission trucks in Europe is accelerating to a large extent driven by supportive legislation (CO_2 based tolls, EU Green Directives) and incentives for zero-emission vehicles.

The approach to electrification of transport flows is often not only to exchange a vehicle to another, but there are certain aspects to consider. Examples of this is charging facilities, leadtimes and securing a high truck utilization to remain cost efficient. In this aspects there are many partnerships created and collaboration between different transport buyers, haulers and electric truck manufacturer.

Denis Giron, Volvo Group

Compensating electrification cost with utilisation

I think we thought technology should come first as this gives us a way to reduce our emissions fast and that the next step should be efficiency. But if you transition your whole fleet into electric vehicles you would still have emissions, so to reach net zero it is all about efficiency.

“You need to compensate the higher cost for electric vehicles through using the trucks the most optimal way. If we are to be using electric trucks we need to understand the flows through comprehensive data and analytics to be able to utilize it in the best way.”

Co-financing and co-investing in the electrification

Since we don´t have any own transports, we don´t make any direct investments in technology or fuel ourselves. However, by choosing who we work with we can influence the transport industry. By making decisions based on delivery times, the service provided and sustainability we can position ourselves in the market and drive the sustainable development. One example could be that we enable deliveries to our stores during night time so the truck can be used for other deliveries that really need the dayshift the rest of the time.

”We might need to think different to increase efficiency of the truck and enable the transition to electric vehicles also from a cost perspective.“

Victor Stridh, Head of Logistics, Stadium

Carriers can’t take the investment themselves – shippers need to support by co-financing, accepting higher fees and longer contracts. Otherwise, the carriers won’t feel secure to make the investment, they need coverage for the full period until the investment has been paid off.

”All carriers need to start making investments in sustainable vehicles, but that also mean that we as shippers have to be ready to pay for it.”

Aiming for Fossil-Free Transports

Lindex has ambitious sustainability goals. The company's immediate focus is on achieving fossil-free transports from the port to the warehouse, with long-term plans to explore sustainable distribution methods. This transition will align with broader targets imposed on carriers from various stakeholders, not just Lindex.

"We're aiming to transition to fossil-free transports. While we've focused on inbound logistics, our next step is to ensure fossil-free transport from the port to the warehouse, and eventually across our distribution network."

Maria Frieberg, Transportation & Customs manager, Lindex

The transition to fossil free transports by 2030

Our goal is to have fossil free transports by 2030 and we have been looking at more sustainable transport alternatives, since 2022 we have started to include all sustainable alternatives available in small scale, such as HVO, biofuel and electric transports. As of now, we have reached 43 % fossil free transports, which has been taken back slightly compared to last year's 57%, due to the lower requirements from the government of Sweden of including biofuel in diesel. We want to phase the transition to 2030.

We strive to continue to add a number of sustainable vehicles per year and currently see that bio-fuel is a feasible option for our carriers to invest in. Adding electric vehicles is the biggest challenge, but we currently have three vehicles in our system as of now. For the latest electric vehicle addition, we have also invested in our own charger. We believe in having charging infrastructure at the site and own the fuel ourselves.

One option could be that the real estate owner invest in charging infrastructure as a part of value addition – and early on we had expectations around this. A challenge could be the total capacity available.

Fredrik Leyon, Supply Chain Manager, Bevego

Takeaways from Chapter 4: What can you do to achieve a green transition?

1. **Invest in Fleet Optimization:** Implement strategies to maximize vehicle utilization and efficiency, such as route optimization and load consolidation. Review requirements and internal processes to balance efficient usage of the transport system.

2. **Strategize BEV Investment:** Evaluate the cost-benefit of investing in battery electric vehicles (BEVs) and explore financing options to mitigate initial expenses. Invest in longer contracts to enable stability and possibility for the investment.

3. **Harness Data for Insights :** Leverage data analytics to identify opportunities for co-utilization of trucks and optimize operational performance.

4. **Advocate for Infrastructure Development:** Advocate for the expansion of charging infrastructure and supportive policies to enable the widespread adoption of electric vehicles and facilitate the green transition in transportation. Initiate close collaborations to find relevant charging solutions – both from investment and operational efficiency perspective.

Chapter 5

Collaborative partnerships are key to green transition

stics leaner and greener • Making logistics leaner and greener

Shipper-carrier partnership dynamics have changed in Europe due to lost capacity and freight delays. This highlights need for collaborative communication between shipper and carrier networks to achieve respective goals.

63%

of EU shippers see “carrier relationship” as a pain point

Alliances are acting as key drivers in shaping EU policies for reducing CO2 emissions, promoting collaborative transportation among shippers to achieve a sustainable and efficient logistics. These alliances represent a collective effort by industry stakeholders to meet stringent environmental targets by fostering innovation, collaboration and the implementation of best practices across the logistics and transportation sectors.

Freight sharing and collaborative logistics will enable companies to share transport vehicle space in trucks, ships and trains to optimize loads, minimize trips and reduce costs and carbon emissions.

35%

of shippers switched their Logistics Service Provider due to poor service quality

Three initiatives driving collaborative transportation in EU:

ALICE

Alliance for logistics innovation through collaboration in Europe

Officially recognized as a European Technology Platform by the European Commission in July 2013. It ams to develop a comprehensive strategy for research, innovation in logistics across Europe, with a focus on transitioning towards net-zero emissions. ALICE supported the European Commission in implementation EU programs for research, such as Horizon 2020 and Horizon Europe, offering a framework for collaborative innovation. Members include Air Cargo Belgium, AISIN Europe, University of Antwerp, Volvo, IKEA and Unilever, among others

ECTA

European Clean Trucking Alliance

Coalition of European businesses and organizations committed to accelerating the decarbonisation of road freight transport across the EU. ECTA's activities encompass advocating for supportive legislation and policies at the EU level, developing clear roadmaps, and establishing targets to decarbonize transportation and logistics by 2050. ECTA's encourages collaborative transportation and exchange of information on best practices. Members include large multinational companies such as IKEA, Nestlé, Unilever and DHL, among others.

CEO Alliance for Europe

This alliance is a cross-sector "Action tank" aimed at increasing sustainability through collaboration among leading EU Companies across main industry sectors. The alliance was formed in response to the challenges posed by the COVID-19 pandemic and the European Green Deal. It represents over 10 companies with more than 1.2 million employees and generating over EUR 500 billion in annual revenue. The focus is on decarbonisation and digitalization, emphasizing the collective effort required by all EU member states.

Bevego is part of the Swedish “Transportation challenge”

One of our sustainability ambitions is to have fossil free transports by 2030 and we are part of the alliance of Swedish companies “the transportation challenge” and have promised that all our transports should have fossil free fuel by 2030, as per defined by “Fossilfritt Sverige”. We are a relatively small organization, and we always strive to find simple solutions that are fit for our organization and therefor signed up for this challenge.

“All our transports should have fossil free fuel by 2030.”

Fredrik Leyon, Supply Chain Manager, Bevego

For Bevegos own local route distribution We have a concrete plan for how to achieve this goal and deliver on our promise, where we will shift to sustainable fuels through a staggered approach until we have included all our vehicles.

For the standard network services we don´t control ourselves, but we strongly believe that there will be actors that can offer sustainable transport options by that time. If you would have asked a couple of years ago, I would have been skeptical, but now I´m confident that this is possible.

Another challenge is co-load partnerships, there might be potential and we have tried a couple of smaller project. Goods varies, large and few, and small and frequent. How to find the right match is a challenge.

“If you would have asked a couple of years ago, I would have been skeptical, but now I’m confident that this is possible.”

How Stadium leverage industry collaboration to increase sustainability

When thinking about which actions shippers can take to drive the transition, I think local collaborations is important, as we can enable carriers to make sustainable investments. In addition, there might be an opportunity to even jointly purchase transports to enable co-loads and increase the filling-rate of each transport. One enabler could be if the industry supported this by mapping inflow and outflow of different regions to find suitable matches.

We have some smaller collaborations where we have a local carrier that drive our containers between the port and our warehouse in Norrköping. For this route, we have a collaboration with the carrier and another retail partner, which also has a warehouse in Norrköping, where we together have financed the shippers purchase of two electric trucks through paying higher fees.

Victor Stridh, Head of Logistics at Stadium

“Together with other local shippers, we have financed the purchase of two electric trucks through paying higher fees.”

Collaboration to reduce Co2 emission together

We have initiated a sustainable contract with one of our customers in Romania, focusing on reducing environmental impact. This contract represents a step toward our broader sustainability goals. However, we have encountered challenges along the way. Customers desire a reduction in CO2 emissions but are hesitant to incur additional costs or experience a drop in service quality. We are working to strike a balance between these competing demands.

We are considering operational changes, such as extending lead times and delivery schedules, to reduce the carbon footprint of our shipments. These changes would require customer buy-in, creating an additional hurdle in our sustainability journey.

“We are prepared to adapt our operations to achieve our sustainability objectives.”

Simon Lee, VP Material Planning & Logistics, Bulten

In summary, we are committed to collaborating with customers and stakeholders across the supply chain to create more sustainable transportation practices. We are seeking solutions that meet customer needs while also reducing our environmental impact.

“Customers desire a reduction in CO2 emissions but are hesitant to incur additional costs or experience a drop in service quality.”

The responsibility for transportation buyers collectively

The limited availability of renewable energy sources across different transport modes is a significant hurdle in the journey towards net-zero emissions. Although logistics service providers (LSPs) offer sustainable air fuel or biofuel, these are available only in limited quantities.

As transportation buyers, we believe we have a role in influencing the market towards more sustainable options. If we continue to demand carbon-based fuels without asking for alternatives, there will be no incentive for the market to supply more sustainable options. Therefore, we see a need for a relationship between transport buyers and suppliers to push the market towards more sustainable fuel sources.

"As transportation buyers, we believe we have a role in influencing the market towards more sustainable options."

Neal Parikh, Ericsson

We have set targets for our top emission suppliers, including LSPs, to have their own net-zero targets. We see this as a joint responsibility and a critical aspect of our collaboration with carriers. Both parties need to work together to reach these targets and navigate the challenges of the net-zero journey.

“Both parties need to work together to reach these targets and navigate the challenges of the net-zero journey.”

We put requirements on the carriers in terms of efficient routing or modernization of their fleet. By improving operational efficiency in our operations and expecting them to do the same, we aim to help both our net-zero targets and theirs.

Transportation buyers collectively have a responsibility to put these requirements back on the carriers. Large companies could collectively state the same requirements they will place on LSPs to push them in the right direction. This collective action can help standardize expectations and requirements, making it easier for LSPs to adapt and align with sustainability goals.

“Large companies could collectively state the same requirements they will place on LSPs to push them in the right direction. This collective action can help standardize expectations and requirements.”

Collaborative efforts to support sustainability

Lindex is also engaging in collaborative discussions to support sustainability initiatives. The company is exploring options for charging infrastructure at the new warehouse location, considering whether Lindex, the Alingsås municipality, or another party will be responsible for providing it. Additionally, Lindex is discussing with carriers the potential for turnaround containers to improve sustainability and cost efficiency.

"We're collaborating with various stakeholders to explore charging infrastructure and other sustainability measures."

Maria Frieberg, Transportation & Customs manager, Lindex

“We prefer building relationships with a limited number of carriers. It’s a closer partnership that has helped us develop better solutions. Although it’s not as broad as strategy, it has been the most effective approach for us.”

Jonas Dahlqvist, Sustainability Manager, SKF

Collaborative Partnerships with Forwarders/Carriers

SKF has adopted a unique approach to working with carriers, forming closer partnerships with a select few. This is not part of a formal strategy, but rather a practical method that has proven successful for SKF. By fostering these relationships, SKF and its forwarders/carriers collaborate to find smarter transport solutions.

Collaboration with Carriers for Better Decision-Making

Kristina believes that by consolidating volumes, they can work with more developed carriers who can support them with data-driven insights to make better decisions not only based on cost but also on CO2 emissions. The goal is to have greater visibility and transparency in logistics, with track-and-trace solutions and a transport management system optimized for sustainability.

Kristina Axelsson, Director of Logistics – Entrance Systems, ASSA Abloy

“My dream is to start making decisions based on CO2, not just cost and lead time. Fill rate is a key tool for us, allowing us to work with carriers more effectively to achieve our sustainability goals.”

Takeaways from Chapter 5: What do the industry need to do to solve sustainable logistics and transportation, together?

1. **Strengthen Collaboration Across the Supply Chain:** Collaborative partnerships among shippers, carriers, and stakeholders are key to achieving sustainable transportation. To be able to collaborate the industry need to embrace information sharing.

2. **Investing in Sustainable Transport Infrastructure:** Shippers and carriers need to co-invest in sustainable solutions and longer contracts to support the transition to green transportation.

3. **Optimizing Freight Through Collaborative Logistics:** Freight sharing and collaborative logistics help reduce carbon emissions by optimizing transport vehicle space.

4. **Driving Sustainability Through Collective Actions and Standards:** Shippers can promote industry-wide sustainability by setting common standards and requirements for logistics service providers.

Compliance for the industry

ETS

EU Emissions Trading System

Established in 2005, the ETS is a market-based mechanism to reduce greenhouse gas emissions in the EU, expanding to the transportation sector in January 2024. It operates on a 'cap and trade' principle, setting a cap on total emissions and reducing it annually. Companies must buy allowances for CO2 emissions, increasing operating costs, which may be passed on to shippers as an emissions surcharge.

CBAM

Carbon Border Adjustment Mechanism

Launched in 2023, CBAM is the world's first carbon border tax to reduce emissions from imported goods into the EU, targeting carbon leakage. Initially focusing on high-emitting sectors, it will expand over three years, fully effective from January 2026. This tax will affect international markets and increase emissions reporting requirements.

CS3DDD

Corporate Sustainability Due Diligence Directive

This proposed directive aims to enforce sustainable corporate behavior in global value chains, requiring companies to address human rights and environmental impacts. It applies to large EU and non-EU companies with significant market activity. Compliance involves new procedures, reporting, and supply chain monitoring. The directive is still under legislative process and has not yet become law.

ECD and GCD

In March 2023, the EU proposed two directives to address misleading environmental claims. The Empowering Consumers Directive strengthens the requirements for substantiating both environmental and social claims, ensuring consumers receive accurate and transparent information. The Green Claims Directive introduces even stricter substantiation requirements specifically for environmental claims, mandating that they be backed by life cycle assessments and externally verified. Once approved by the European Parliament and the Council of the EU, these directives will significantly transform how environmental and social claims are managed and communicated within the EU.

About Logivity

At Logivity, we aim to make every transport sustainable. With our roots in the logistics industry, we understand the real-life challenges faced by shippers and carriers. Our solutions are designed to address these challenges head-on. We believe that achieving sustainability goes beyond just using clean trucks; the entire transport industry needs optimization.

We strive to eliminate half-empty containers, remove inefficiencies, and bring transparency to the industry. We see digitalization and collaboration as key drivers in this mission. By connecting transport industry players, we aim to enhance the utilization of the transport system.

Logivity provides digital services to help transport buyers improve productivity, efficiency, and achieve net-zero transportation. Our offerings include:

Compliance Monitoring	Ensuring our customers meet regulatory requirements.
Transport Optimization	Helping to reduce the transport footprint.
Carbon Footprint Reduction	Transforming transport methods to lower emissions.
Certified Compensation	Offering solutions to offset carbon footprints.

Our services are powered by blockchain technology, ensuring data integrity, certified traceability, and efficient integration. Our solutions are user-friendly and scalable, paving the way for a future where goods move without harming the planet.

Join us in transforming the transport industry for a sustainable future.

About EY

At EY, our purpose is Building a better working world. The insights and quality services we provide help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

In a world that's changing faster than ever, our purpose acts as our North Star, guiding our 400,000 people — providing the context and meaning for the work we do every day.

Through our four integrated service lines — Assurance, Consulting, Strategy and Transactions, and Tax — and our deep sector knowledge, we help our clients to capitalize on new opportunities and assess and manage risk to deliver responsible growth. Our high-performing, multidisciplinary teams help them fulfill regulatory requirements, keep investors informed and meet stakeholder needs.

We believe a better working world is one where economic growth is sustainable and inclusive. We work continuously to improve the quality of all our services, investing in our people and innovation. And we're proud to work with others – from our clients to wider stakeholders – to use our knowledge, skills and experience to help fulfill our purpose and create positive change.

Methodology & Sources

Logivity have been conducting research into the leading thoughts in the logistics and transportation industry regarding sustainability. Logivity commissioned EY to conduct research, perform interviews and prepare the report.

Primary desk research was conducted with a focus on public sector sources, especially EU regulation, using materials made publicly available through official EU online channels.

The guided interviews were conducted with stakeholders selected on the basis of their business presence in the Nordics region. Interviews were conducted using a set of open-ended pre-formulated questions including key themes identified during the primary desk research. Interviews were held individually with each stakeholder included in the playbook. Interviews were recorded, trascribed and shared with the stakeholders for validation and accuracy.

Secondary desk research was conducted with a focus on private sector sources in order to validate and provide context to information obtained during the stakeholder interviews. All used sources were made publicly available by their authors, including company annual reports and annual sustainability reports, as well as selected articles by global news outlets where relevant.

Selected sources

Public sector sources

European Commission

REGULATION (EU) 2023/956 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a carbon border adjustment mechanism

European Regional Development Fund

Connecting Europe Facility

Cohesion Fund

	Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem (Net Zero Industry Act)
	COMMISSION DELEGATED REGULATION (EU) 2023/2772 supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standard
	Eurostat
	CORDIS
	European Council
	PierNext
Alliances	ECTA
	CEO Alliance
	International Road Transport Union
	Smart Freight Centre,
	ALICE
Information outlets / other platforms	5Reuters-JLL "The state of European supply chains 2023" survey
	Reuters and Fourkites (State of the European Supply Chain Report 2022),
	Transport Intelligence (Global Freight Procurement Survey – 2023"),
	Freightwaves
	fDI Markets
	NTT Data

Private sector sources

BCI Global Oct'23 survey

Cushman & Wakefield

Annual and Sustainability reports including IKEA, Stellantis, and other

LMC-KGP xEV Scenarios Nov'23

DHL

European Logistics & Supply Chain Sustainability Report 2023 by HFW and Panattoni (features 53 shippers from diverse sectors). Survey period May'23-Jun'23

Goodyear Sustainability Reality Survey 2023