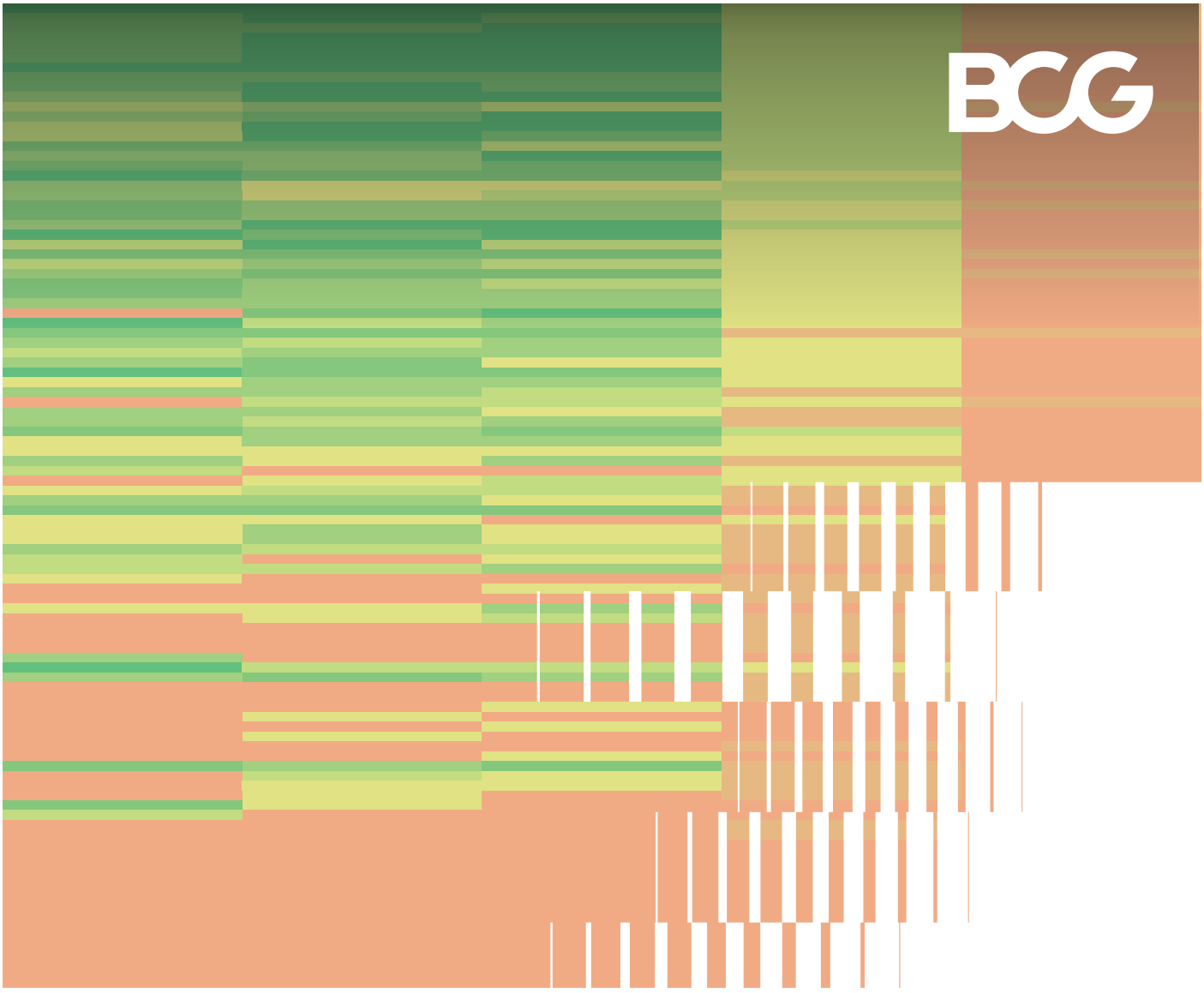

WHITE PAPER

Tapping into the Power of the BCG Decarbonization Index for Logistics Service Providers

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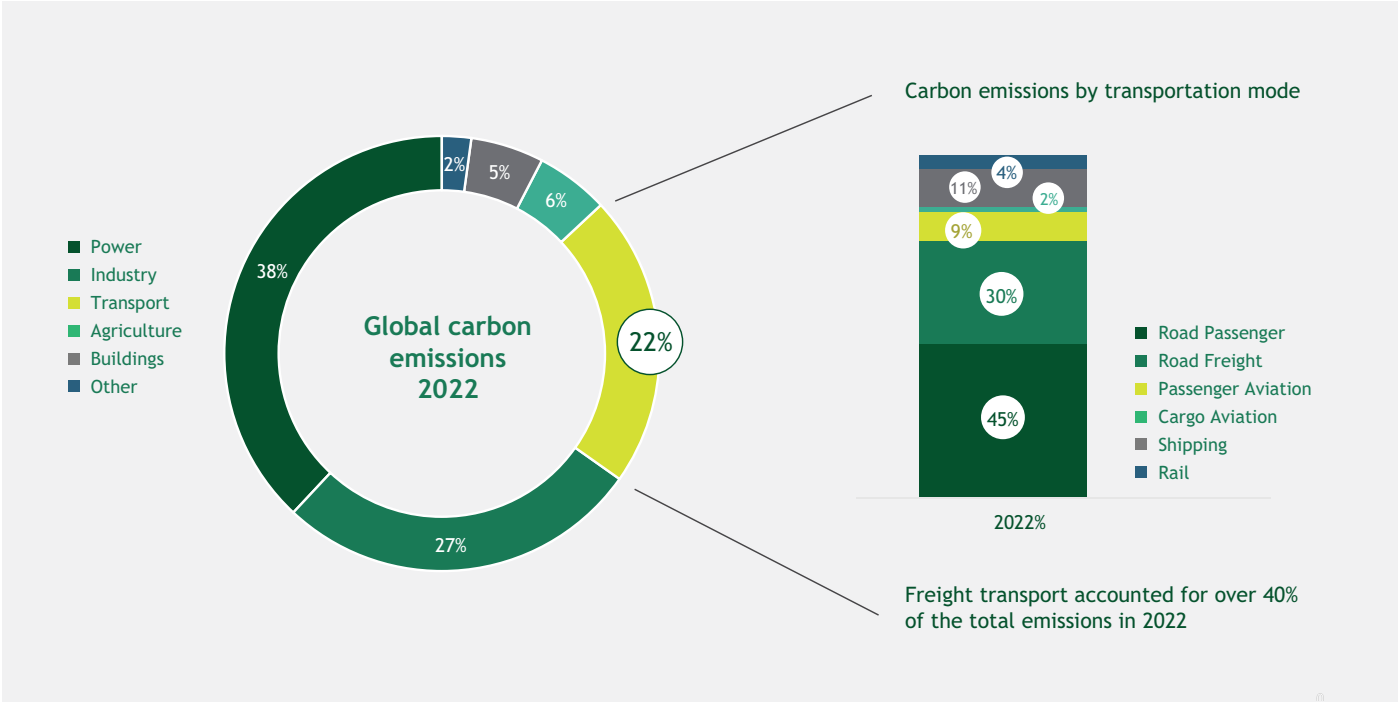
Author team: Dennis Mikulla, Peter Jameson, Markus Weidmann, Peter Ullrich, Daniel Zepter, Anna Saltykova-Morozova, Sina Weinland, Tobias Kalweit, Amber Broekmans, Maximilian Leichtle, and Carlo Alberto Castelli

It's time logistics service providers came to grips with the reality of their progress towards a net zero future. As the world tries to limit global warming to 1.5° C by 2050, and below 2° C in the long run, businesses must take action to reduce carbon emissions by 45% by 2030 and achieve net zero by 2050. These imperatives are particularly critical for the transportation and logistics industry, which currently contributes up to 22% of global greenhouse gas emissions (**Exhibit 1**).

Exhibit 1 - Logistics companies must take the lead in decarbonization because transportation accounts for over 20% of annual carbon emissions



Source: IEA (2023), Nature Reviews *Earth & Environment* (2023)

Logistics service providers—the link between cargo owners and transportation carriers—can play a critical role in the road to net zero and catalyze the reduction of carbon footprints in this value chain. They can create and aggregate the demand for green logistics services, decarbonize operations, and help carrier networks transition by, for instance, making clean fuel commitments.

But logistics companies face numerous challenges in making that possible in strategizing, executing, and reporting. Moreover, efforts to reduce carbon emissions can sometimes conflict with overall emission reduction goals, as certain strategies—like optimizing for sustainability—may result in longer transportation distances, inadvertently increasing emissions.

The BCG Logistics Decarbonization Index, the first of its kind for the industry, compresses decarbonization data into a single, easily understandable scoring system that creates transparency, facilitates comparability and benchmarking, and serves as a base for effective decision-making.

The Drivers of Decarbonization in Logistics

Logistics service providers increasingly understand the need to accelerate decarbonization. Beyond the moral responsibility, three factors are driving this change.

First, the business case for decarbonization has become stronger. Many customers are setting aggressive transport- and warehousing-related decarbonization targets for themselves and are willing to pay a premium for green logistics services, despite uneven regulatory pressure across regions. Over time, these companies' logistics decarbonization objectives become a necessary condition for doing business with them. Nike, for instance, has set the goal of reducing its Scope 1 and Scope 2 emissions by 65%, and Scope 3 emissions from outsourced transportation by 30%, by 2030. To accomplish this, the company has developed a supply chain sustainability index to evaluate potential suppliers. Additionally, logistics companies with higher sustainability scores generate up to 10 percentage points more total shareholder returns than those with lower scores, according to a recent BCG study.

Second, sustainability regulations and reporting standards are becoming stricter across the globe. For example, the EU has enacted the Corporate Sustainability Reporting Directive (CSRD), while Australia has recently introduced mandatory environmental, social, and governance (ESG) reporting to be effective from 2025. Singapore will also implement new climate-related disclosure requirements starting next year.

Similarly, global transport industry associations have set stiff targets for their members. The International Maritime Organization (IMO) plans to achieve net zero by or around 2050, with intermediate carbon intensity reduction goals of at least 40% by 2030 and 70% by 2040. The IMO is aiming for a 5% to 10% uptake of zero or near-zero GHG emission technologies, fuels, or energy sources in international shipping by 2030. Similarly, the International Air Transport Association (IATA) recently published a resolution on the industry's commitment to reach net zero carbon emissions by 2050, which expects the switch to sustainable aviation fuel to contribute over 50% of emissions reductions.

Third, the decarbonization drive has led to numerous innovations and novel collaborations, with the potential for even more innovation on the horizon. For example, in April 2024, CMA CGM, the French shipping and logistics giant, teamed up with Sweden's Volvo and France's Renault to create a new generation of electric vehicles. Called Flexis SAS, the venture will combine the three companies' expertise to build a new electric light commercial vehicle platform that will have the capability to monitor users' delivery activity and performance, reducing 30% of the cost of usage for logistics players.

Similarly, several cargo owners, such as Amazon, are collaborating in the Zero Emission Maritime Buyers Alliance, a cross-industry coalition. It focuses on accelerating the transition to zero-emission maritime shipping through the collective purchase of clean shipping solutions. Its Cargo Owners for Zero Emission Vessels platform is designed to help corporate customers in the shipping industry to work collaboratively to accelerate the transition to zero-emission maritime shipping.

The Building Blocks of the Decarbonization Index

To enable logistics service providers to track their decarbonization performance and benchmark themselves against peers, we constructed the BCG Logistics Decarbonization Index. It has five dimensions, each weighed differently**.** We assigned greater weights to those dimensions that are more closely related to executing logistics activities in a green way. Each parameter has around five sub-elements, so, for a sample of 100 companies over a two-year timespan, the Index captured over 5,000 data points.

The five parameters the Index covers are an evaluation of:

1 **TARGETS.** A company's emissions reduction goals listed by timeline, scope, and their alignment with the parameters laid down by the Science Based Targets Initiative (SBTi), with net zero by 2050 being the goal.

2 **STRATEGY AND GOVERNANCE.** The establishment of a company's decarbonization strategy as well as governance mechanisms such as board and executive level sustainability committees and organization-wide verticals.

3 **REPORTING.** The extent to which a company makes public disclosures of decarbonization efforts and the consistency of that data.

4 **ENABLEMENT.** The share of green products and services in the company's portfolio as well as its strategic decarbonization partnerships and its clean fuel and energy procurement processes.

5 **EXECUTION.** The company's switch to the use of green products and services measured by metrics such as the share of sustainable fuel in its operations, the number of e-trucks in its fleet, the clean energy used in warehouses.

Using this methodology, we indexed the 100 largest companies in the logistics business worldwide, ranked by their gross revenues. The Index was built from the bottom up through desk research, the screening of companies' publicly available sustainability data, and data from largest aggregators of sustainability-related disclosures. Our findings were validated by a broad range of experts.

Each company was scored on a scale from 0 (no action) to 100 (maximum effort taken to comply with the net-zero path). To capture the initial year-on-year dynamics, we calculated companies' index scores for 2022 and 2023, and plan to continue doing so every year in the future.

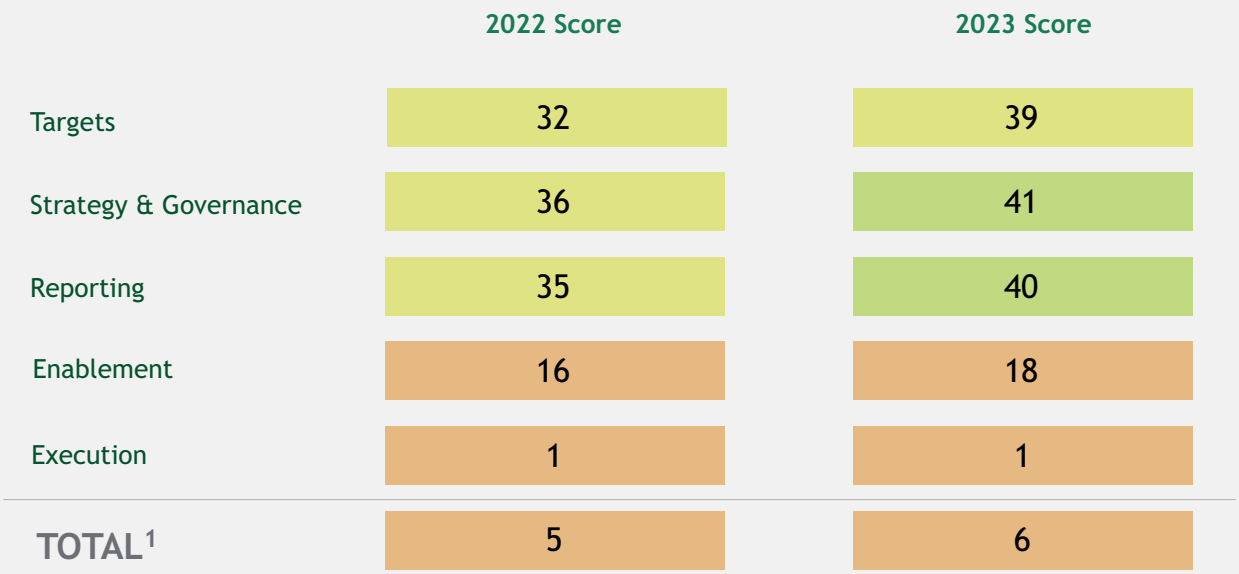
Each of the Index's building blocks comprises several elements. For instance, to score a company on target setting, we considered whether the goals were short-term or long-term oriented; whether they were absolute or relative, SBTi-aligned or not, and whether they covered all three emission scopes. In terms of strategy and governance, the scoring focus was on how detailed the roadmap was and whether decarbonization had been included in the corporate strategy, among other factors. The scores also considered the attention that different functions, as well as the board, paid to environmental issues. Reporting had several sub-parameters, ranging from topicality and occurrence to detail level and the extent of qualitative and quantitative data used. Finally, while the enablement score considered the present and future levels of green product availability in a company's portfolio, execution covered the actual use of green products and the quantity of emissions reductions.

The methodology we build the Index on allows us to capture companies' progress on adopting decarbonization measures. The focus of the Index lies entirely on a company's actions to reduce emissions rather than offsetting them. It is neither a measure of companies' emissions nor does it consider changes in efficiency via, say, loading or routing optimization.

Indexing the Logistics Service Providers' Progress

A first-cut analysis of the BCG Logistics Decarbonization Index over the last two years suggests that decarbonization in the logistics industry is still at a nascent stage. However, an initial positive shift was observed, with the Index score rising from 5 in 2022 to 6 (out of a maximum of 100 points) in 2023 (**Exhibit 2**). The performance span was wide, highlighting a significant gap between companies at different stages of progress. In 2023, for instance, the eight frontrunners were well ahead of the 49 followers, who, in turn, were far ahead of 43 laggards.

Exhibit 2 - The Logistics Decarbonization Index shows that companies made progress in 2023 over 2022 in setting targets, creating strategy, and reporting out, but not execution



1. The total scores are the sums of weighted sub-scores

Source: BCG analysis

Logistics companies' performance on the first steps—such as target setting, strategizing, and reporting—showed the biggest increase in scores over the year. The evolving regulatory landscape in several countries is clearly compelling businesses to improve the quality of sustainability reporting.

Progress was evident in terms of enablement, with an increase in the penetration of green products and the number of alliances being struck. Many logistics companies are exploring decarbonization options without making large financial commitments. Execution saw little or no improvement, partly due to the capital-intensive nature of decarbonization measures.

Logistics companies with good execution scores perform well on the first three dimensions, but the converse isn't true. Companies effectively pursuing decarbonization do so based on concrete plans and strategies, whereas making commitments doesn't ensure that actions will be taken.

For illustrative purposes, anonymized overall rankings for 2022 and 2023 are displayed as heat maps in **Exhibits 3 and 4**, with each line representing the scores of one company across the dimensions. Looking ahead, the Index is likely to rise in 2024 as logistics companies and customers continue making more commitments in response to tightening regulatory pressures and disclosure standards.

Exhibit 3 - The logistics decarbonization heatmap shows where companies have made progress and where they have not in 2022

Note: The heatmap shows logistics companies' scores on each of the Index's building blocks (the columns). The greener a company, the higher it has scored on that dimension.

The 100 logistics companies in our sample are shown by rank, from the highest to the lowest.

Exhibit 4 - Companies index scores improved in 2023, although execution scores still remain low

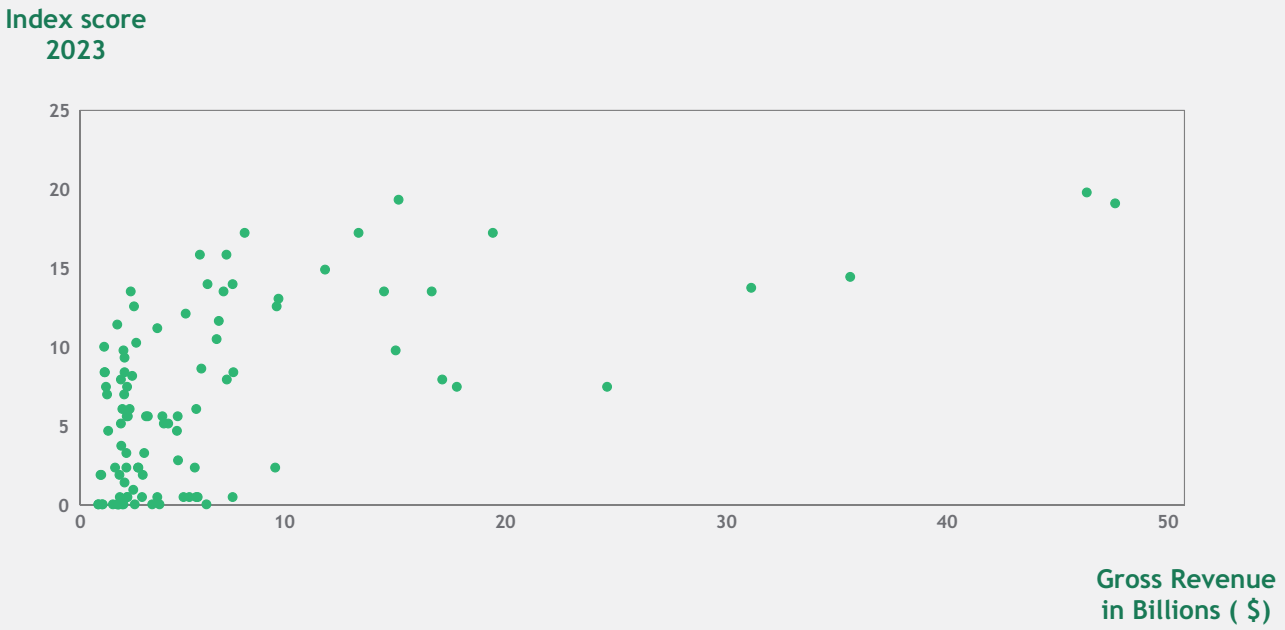
Main Findings from the Index

A deeper analysis of the Index result reveals three main correlations (for more detailed insights, please see the sidebar).

Company Size. Larger logistics companies have been doing better on decarbonization, but size is no guarantee of action. While the frontrunners in the BCG Decarbonization Index are big players with global presences, some of the largest actors rank in the middle of the pack (Exhibit 5).

In general, large companies face more pressure from boards and stakeholders, especially customers, which forces them to do more. Because of their greater financial means, they are also able to plan and realize more climate-related initiatives.

Exhibit 5 - A scatter plot correlating revenues and index scores shows that larger logistics companies score higher on decarbonization, but some smaller companies also stand out



Geography. European companies are at the forefront of climate action, compared to their peers from other regions. All six frontrunners in 2022 were Europe-based companies as were six of the eight frontrunners in 2023. North American companies only made it to the middle ranks—at best. Asian players ranked behind the North American ones, although there were some exceptions, with two Asian giants at the top in 2023.

These region-specific trends are driven by the fact that logistics providers' decarbonization agendas are a function of the context in which they operate, just like for many other industries. Not only are their actions heavily influenced by local laws, but also smaller companies prefer to do business only with local logistics providers.

Transportation Mode. Progress on decarbonization differs significantly by transportation mode. Both air and ocean transport are the least decarbonized; even the frontrunners have decarbonized only between 2% and 3% of freight volumes. Abatement costs that have to be passed on to customers are particularly high in the transportation sector, which is considered hard-to-abate. In contrast, decarbonization progress is more advanced in warehousing operations.

Sidebar Sectoral Decarbonization Trends and Implications

Five revealing trends in the logistics industry in the spotlight:

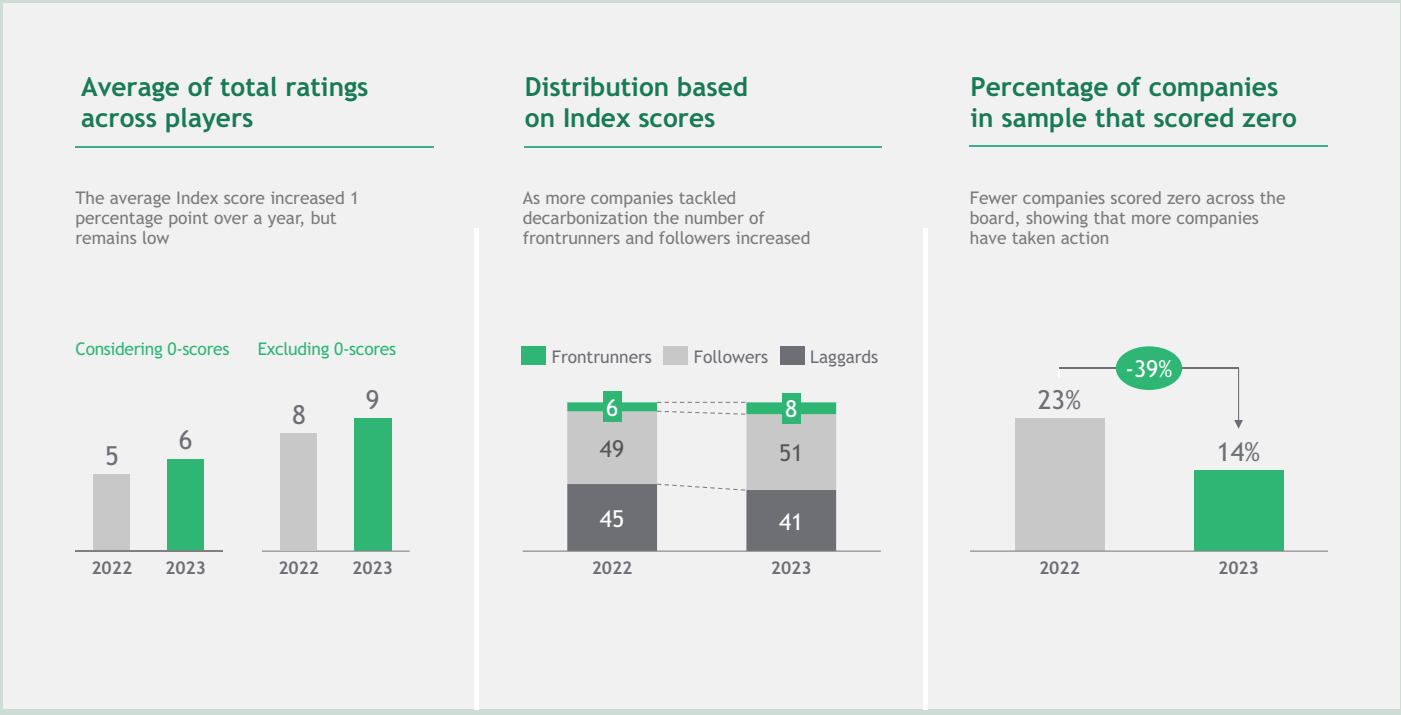
Targets. Of the 100 companies we studied, as many as 37 didn't communicate any decarbonization targets in 2023. Moreover, only 45 companies set targets for all three scopes of emissions, with Scope 3 emissions, in particular, a low-priority target. The silver lining is that in 2023, about one-fifth of the sample revisited their targets and increased their commitments to lower emissions.

> **Takeaway:** Not setting targets leads to poor performance. When a company's initiatives aren't tied to concrete goals, it's hard to attain them.

Strategy. Compared to 41 in 2022, 33 companies scored zero in 2023 on strategy. The absence of strategy resulted in no, or extremely poor, performance across the other dimensions, such as reporting and execution. By contrast, nearly 70% of the companies that embedded sustainability in their operating models in 2023 included decarbonization in their strategies and set up governance bodies as well. These companies progressed the most in terms of enablement and execution (Exhibit 6).

> **Takeaway:** Having a decarbonization strategy in place and anchoring it in the operating model is a key organizational enabler.

Exhibit 6 – The Logistics Decarbonization Index shows progress in just a year, with fewer laggards and even fewer companies with zero scores in 2023 compared to 2022



Source: BCG

Reporting. As many as 40 companies didn't report progress on decarbonization initiatives in 2022 compared to just 33 in 2023. In most cases, these companies, mostly laggards, didn't communicate a decarbonization strategy either. At the other end of the spectrum, the share of companies that had regular and comprehensive decarbonization reporting practices rose from 34% in 2022 to 40% in 2023. Such companies ranked higher on the other dimensions too.

Takeaway: When there's data to report, companies do so, and the need to do so prompts action. A commitment to transparency helps companies realize environmental objectives.

Enablers. Over the last two years, there has only been a 2% increase in the number of logistics providers that went beyond carbon offsetting to offer a range of green products or made hard commitments to decarbonization. However, the supply of green products is becoming ubiquitous; almost 70% of the companies in our sample offered some green products such as intermodal transport offerings or green packaging solutions. Even so, tangible commitments to green transportation—such as partnerships, biofuel production, and electric vehicle procurement—are rising but slowly. As much as 52% of the sample made such promises in 2023 compared to just 38% in the previous year.

Takeaway: Logistics providers need to make more financial commitments if they want to switch over to green products and fuels, which is bound to take time.

Execution. Logistics companies made the least progress on execution, with 3 being the highest index score a company received in 2023 compared to 2 in 2022 (both by the same market leader). A third of the frontrunners didn't execute in 2022, which rose to almost a half in 2023.

Takeaway: Logistics companies' decarbonization initiatives demand a greater focus on execution, rather than reporting, in order to deliver results.

Steps to a Net Zero Future

Based on our analysis and experience, we have identified the following five D-s as key steps that logistics service providers can take to accelerate their progress toward a net zero future.

Determine your footprint and define ambitious targets. At the very outset, logistics companies must establish an accurate, activity-based, data-driven emissions baseline. Doing so will provide visibility over a concrete status quo on which they can base future targets.

Then, plan to attain the objectives laid down by global frameworks, such as the SBTi, to strengthen the organization's commitment. Be transparent about your plans and achievements in order to meet stakeholders' expectations.

Discern market pressures and discover business opportunities. Study market trends and evaluate customers' readiness to go green. Understanding their willingness to pay is crucial for identifying potential opportunities.

Choose where to act and when, so not to miss emerging opportunities. Target niche industries with the highest willingness to pay first.

Develop the business case. Quantify your decarbonization journey costs, both capital expenditure and operating expenses in mind.

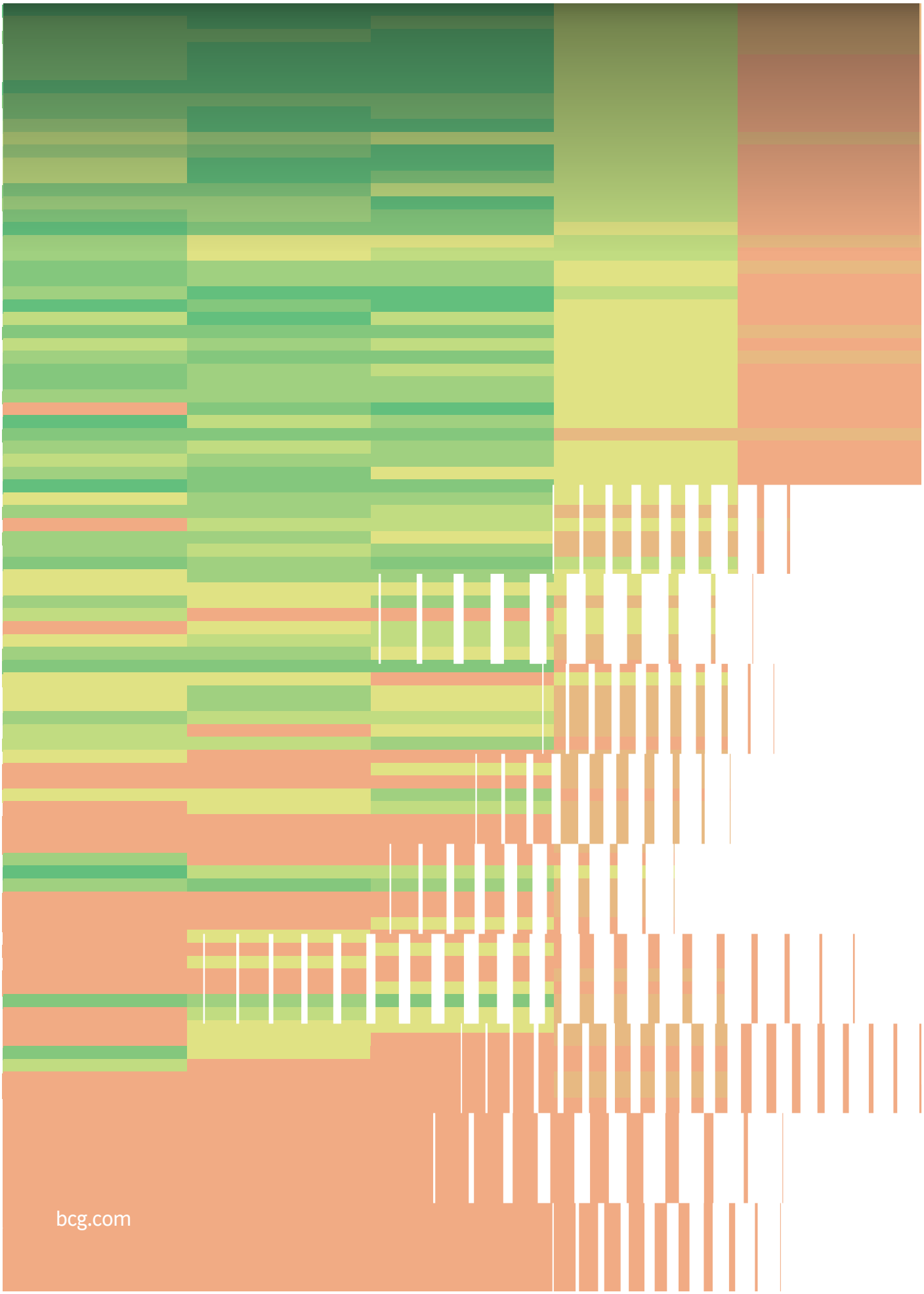
Estimate when the company will be able to recoup its investments and simulate the impact on the company's profit projections. Identify the digital solutions that can help to provide value-creating services for customers.

Differentiate your green products with distinctive marketing. Join forces with other companies to develop and supply green solutions. Look for opportunities in transportation mode shifts as well as backward integration.

Design a detailed transition plan. Create a roadmap to execute a net zero transformation that will ensure compliance with global climate targets. It must balance the competing needs for urgency, financial resources, and results.

As the the Index shows, the logistics industry must continue to drive decarbonization if it is to meet the intensifying demands of the market. But the effort is not just about complying with evolving standards; done smartly, it can create immense business opportunities as well.

Every step to reduce emissions makes a difference, so companies should begin developing their plan around the five D-s now. In doing so, companies have to address key questions like: Where to start decarbonizing? What are the quick wins? How do you reposition yourself in the sustainability value chain to maximize opportunities for your company, customers, and partners? The future must be greener, but the current rankings show the long road that still lies ahead of the global logistics industry.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