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Center for Sustainable Logistics and Supply Chains

CLIMATE CENTER
by Kühne Foundation

United Nations Decade of Sustainable Transport
2026–2035



2026 Global Sustainable Logistics Survey (GSLS)

Summary report (English)

Why tracking decarbonization in logistics over a decade matters

Logistics moves every physical product that is made, traded, or consumed, accounts for around 11% of global CO_2 emissions, and still runs largely on fossil fuels. Because of its extensive network of assets and infrastructure, it is also highly exposed to disruptions from climate change. Clearly, logistics must cut its own emissions while preparing for climate impacts.

The 2026 Global Sustainable Logistics Survey (2026 GSLS) asks logistics professionals how they see the sector's situation. A total of 1,085 respondents from 64 countries took part, working for logistics service providers as well as the retailers and manufacturers that buy logistics services. The 2026 GSLS covers three topics. First, do logistics professionals agree on which sustainability solutions work, and why is progress on them so slow? Second, which skills does scaling these solutions require, and where are skills missing? Third, as extreme weather disrupts supply chains, is logistics doing enough to adapt?

A strong call to action to both policymakers and managers.

The 2026 GSLS report offers 10 recommendations for policymakers and 12 for managers for scaling sustainability solutions and accelerating the decarbonization of logistics. Not every measure will fit every context or deliver the same benefit for the same effort. There are also regional variations, as Asia, South America, and Europe start from different positions in infrastructure, geography, regulation, skills, and climate risk. Similarly, industries and transport modes will move at different speeds.

Yet the direction is clear and shared across regions and among providers and users of logistics. There are good reasons to expect accelerating progress in the coming years, as low-carbon technologies, such as the electrification of land transport and alternative fuels, become more affordable and the investment option that lowers emissions is increasingly also the one that lowers costs. But not every part of the system is moving at the same speed: charging networks, intermodal terminals, and rail capacity are growing more slowly than carbon-efficient vehicles and fuels, making the cost and complexity of infrastructure significant potential bottlenecks in the coming decade.

Overcoming this inertia requires action on both sides: policymakers must remove the barriers that hold back effective solutions by speeding up permitting and approval procedures, and managers must invest proactively, ahead of legislation.

The 2026 GSLS is designed to track the logistics sector's progress over the course of the UN's Decade of Sustainable Transport (2026–2035). As the first survey in an annual series, it establishes a baseline. Future surveys will show whether professionals' perceptions, capabilities, and practices change in three areas that match the Decade's strategic priorities: more efficient and connected logistics, the shift to low- and zero-carbon transport, and the use of technology and innovation.

This is the summary report in English. The 2026 GSLS Full Report includes detailed information about the survey, the sample, the results, and the methodology. On our website you will also be able to explore the response data using our interactive tool. The data will be made available in early 2027 for non-commercial purposes.

Recommendations for policymakers

Scaling sustainability solutions

1 **Develop a context-specific enabling policy framework for sustainable logistics**
Frameworks should focus on solutions that are rated effective but rarely adopted, such as low-carbon fuels, electrification, and intermodal transport.

2 **Raise standards for widely adopted and effective operational and supply-chain solutions**
Data-sharing rules and stricter green public procurement might help companies get more out of solutions that already work.

3 **Harmonize regulations to enhance multimodality and cross-border freight while developing relevant infrastructure**
Governments should set modal-shift targets for freight transport and invest in intermodal terminals, ports, and multimodal corridors.

4 **Establish multi-stakeholder partnerships for peer exchange, joint action and resource pooling**
Shared platforms allow partners to develop sector roadmaps and pool resources for pilot projects and shared infrastructure.

5 **Provide incentives for regional cooperation and technology transfer**
Governments should fund technical assistance programs and build bilateral partnerships for knowledge exchange.

Building skills

6 **Prioritize the scarce technical skills**
Publicly funded education and certification programs should focus on emissions reporting, sustainable transport technology, and digital tools.

7 **Design programs at subregional resolution**
The largest technical skills gaps are found in lower-income regions, so capacity building should start there.

Adapting to climate risks

8 **Give logistics and transport a visible place in national adaptation strategies**
The sector is underrepresented in national adaptation plans, and more visibility improves its chances of appearing in budgets.

9 **Scale and target adaptation financing**
Funding should go first to areas with the highest vulnerability, such as road freight in South America and Africa.

10 **Share adaptation strategies, regulations, and experience internationally**
Respondents across regions point to similar risks, so countries can build on each other's experience.

Recommendations for managers

Scaling sustainability solutions

1 **Move ahead with capital-intensive solutions while demanding changes in policy frameworks**
Companies that move early build know-how and meet customer expectations before regulation requires it. Investments can be staged while preserving flexibility.

2 **Work with peers, customers, and suppliers through industry initiatives and buyers' alliances**
Buyers' alliances pool demand and give suppliers a basis for investment.

3 **Use an internal carbon price to guide investment decisions and prepare for external carbon pricing**
An internal carbon price makes climate impact part of the business case.

4 **Exploit operational and supply-chain solutions, inside and beyond the company**
These solutions usually pay for themselves, and their potential is far from exhausted.

5 **Make greater use of education and training**
Training is inexpensive and strengthens every other measure, because new tools and vehicles only deliver when people can use them.

Building skills

6 **Treat training as an investment, not a cost**
Scarce technical skills will become even harder to find, so companies should build them internally.

7 **Share skills across borders, a lever no labor market offers**
Companies that operate in multiple regions can transfer knowledge between their own sites.

Adapting to climate risks

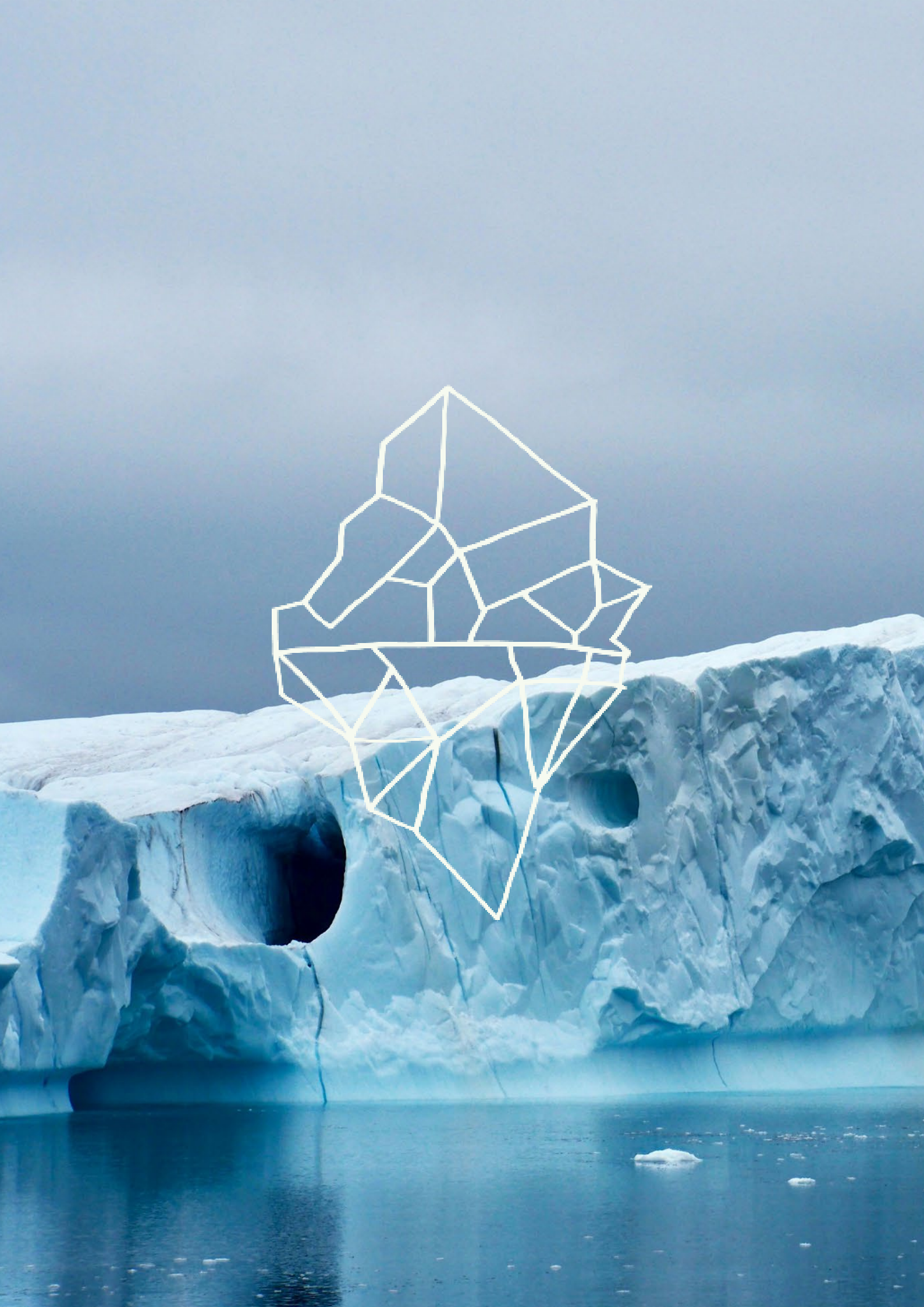
8 **Professionalize climate risk assessment and keep it live**
Scenario planning and digital monitoring keep the risk picture current throughout the year.

9 **Make the cost of non-adaptation visible in financial planning**
Companies should estimate what heat, storms, and water scarcity would cost them and compare those losses with the cost of adapting.

10 **Wire climate risk assessment into capital allocation**
Investment decisions should be tested against scenarios that include a carbon price.

11 **Build resilience into the replacement cycle**
Assets are long-lived, so specify every renewal or upgrade for the climate conditions expected over its lifetime.

12 **Develop contingency plans for severe climate-related disruptions**
Plans should prepare alternative routes, carriers, and terminals and define in advance who decides what.



Findings

Feasibility decides: who scales sustainability solutions, and where?

We asked logistics professionals to rate 21 sustainability solutions across four groups. Not all solutions considered effective are also globally adopted. As Figure 1 shows, operations and supply-chain solutions are both widely adopted and effective. The largest gap between effectiveness and adoption is in low-carbon technologies. Market and governance solutions are seen as the least effective. In the 2026 GSLS Full Report we provide more detailed information about individual solutions. There, we find, for example, that vehicle efficiency and digital coordination are adopted more widely than other low-carbon technologies. Modal shift and reverse and circular logistics also show large gaps, but they need public infrastructure investment or system-level change.

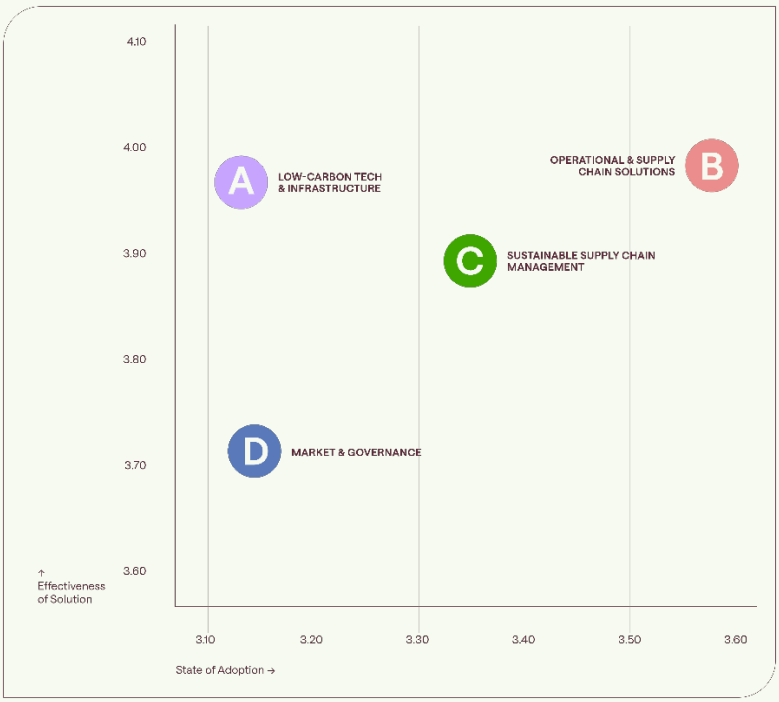


Figure 1

The gap between adoption and effectiveness of sustainability solutions. *Note*: The axes are truncated and show a magnified section of the original 1-5 Likert Scale to emphasize differences between the four solution categories.

Solutions that are widely adopted differ from the rest in only one aspect: feasibility. Solutions companies can implement on their own are both effective and widely adopted. They tend to require little up-front investment and save money while also cutting emissions. By contrast, solutions requiring significant investment (e.g., in infrastructure) and those

depending on public policy support are rated just as effective but adopted far more slowly, possibly because they are beyond any one company's control.

In the Full Report, we also describe how adoption varies sharply by region. Asian respondents see nearly all solutions as more widely adopted than respondents elsewhere. South Americans see operational measures as widely adopted but low-carbon fueling and charging, rail, and intermodal decarbonization as the least adopted. Europeans rate adoption of many solutions lower than other regions do.

Interestingly, we find little disagreement between supply and demand. The supply and demand sides agree on the four most widely adopted solutions (digital coordination, route optimization, supply-chain optimization, and operational efficiency) and the four least adopted (low-carbon fueling and charging infrastructure, low-carbon fuels, carbon pricing, and rail and intermodal decarbonization). The least adopted are still rated highly effective and backed by stakeholder expectations. Only their feasibility scores are markedly lower.

Four barriers may explain this: high capital needs and dependence on public investment; policies not yet in place; geography, such as rail in South America compared with Central Asia; and the need to redesign supply chains.

Relevant but scarce: the key skills required to scale sustainability solutions

We also asked our respondents to rate 21 skills in three groups: technical and domain-specific, analytical and strategic, and soft skills. As Figure 2 shows, logistics professionals consider nearly all skills important; however, their scarcity differs more sharply.

Technical and domain-specific skills appear in short supply: 35.0% of respondents name emissions calculation and reporting among the five skills in shortest supply, followed by sustainable transport and technology knowledge (31.8%) and digital tools for sustainability (25.4%). Soft skills such as cross-functional collaboration (16.4%) are named less often.

1	**TECHNICAL AND DOMAIN-SPECIFIC SKILLS**	
1	Emissions Calculation & Reporting	1.1
2	Sustainable Transport & Technology Knowledge	1.2
3	Logistics Systems & Process Integration	1.3
4	Regulatory & Market Knowledge	1.4
5	Financial & Commercial Acumen	1.5
6	Health, Safety, and Environmental Compliance	1.6
7	Digital Tools for Sustainability	1.7
2	**ANALYTIC AND STRATEGIC SKILLS**	
1	Strategic Planning & Scenario Thinking	2.1
2	Systems Thinking & Holistic Understanding	2.2
3	Data Interpretation & Decision Support	2.3
4	Innovation & Solution Design	2.4
5	Market & Customer Insight	2.5
6	Operationalization of Sustainability	2.6
7	Data Analysis & Modelling	2.7
3	**SOFT SKILLS**	
1	Change Leadership & Culture Building	3.1
2	Communication & Advocacy	3.2
3	Cross-functional Collaboration	3.3
4	Training & Capacity Building	3.4
5	Boardroom & Executive Engagement	3.5
6	Openness & Adaptability	3.6
7	Supplier Engagement	3.7

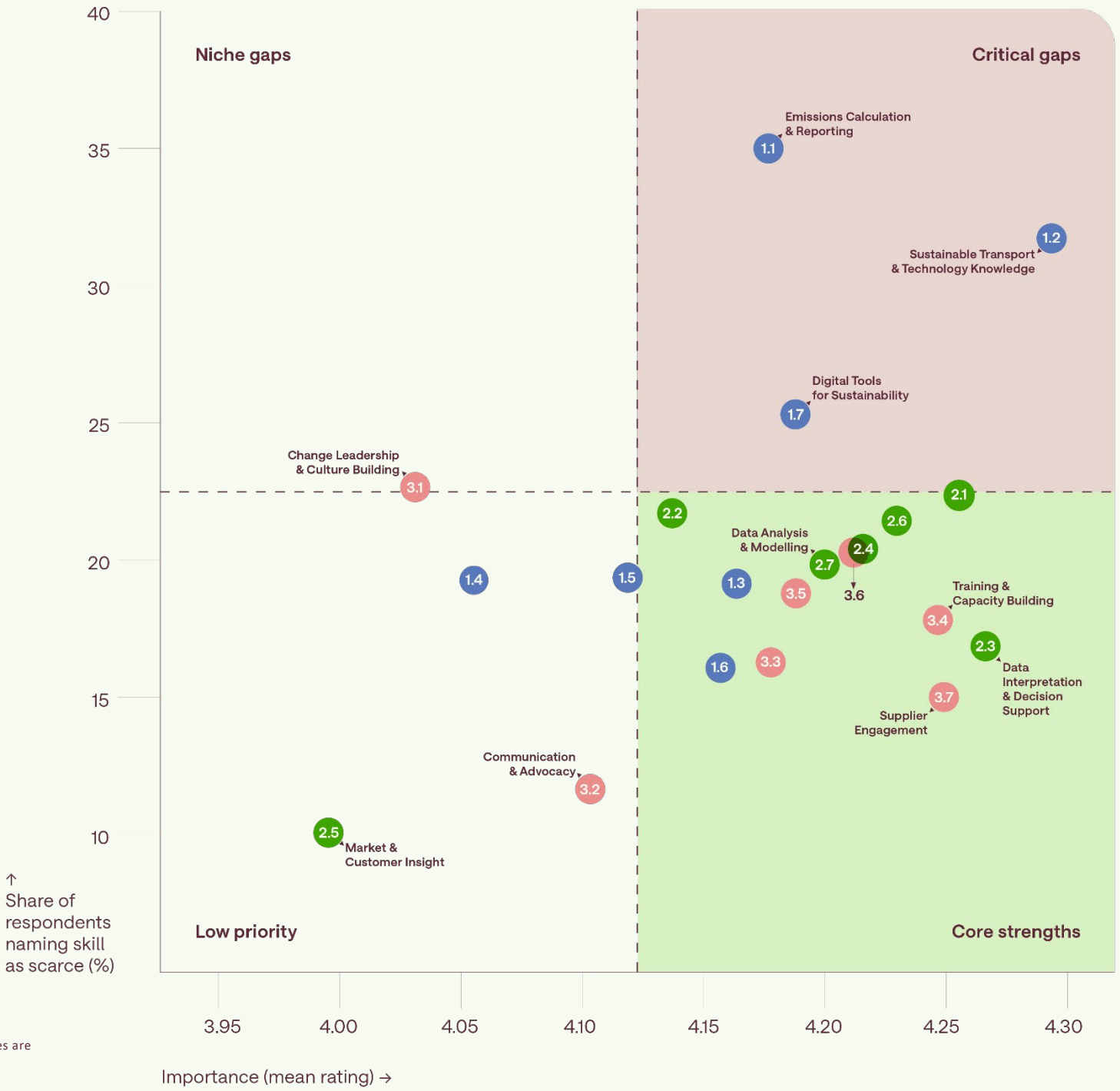


Figure 2

The most important technical skills are also the hardest to find. *Note*: The axes are truncated and show a magnified section of the original 1-5 Likert Scale to emphasize differences between skills.

As with solutions, skills are unevenly distributed across continents and regions. Differences within continents are at least as large as those between them. For emissions calculation and reporting, 23% to 25% of respondents in Western, Southern, and Northern Europe report a shortage, against 39% to 61% in Latin America, Sub-Saharan Africa, and three Asian subregions. Systems thinking is scarce in Western Europe (43%) but not elsewhere (19% on average), and boardroom and executive engagement is scarce in Northern and Western Europe (35% to 38%) but not in Asia and Africa (5% to 11%).

In the report, we argue that regulation and maturity shape regional skill gaps. Mandatory reporting creates both demand for skills and a market to supply them, while limited technical education narrows the pipeline elsewhere. Skills may also follow a sequence: regions short of systems thinking may be further along, having largely solved measurement. Soft skills may still influence whether solutions are implemented.

Adapting logistics to climate risks

Finally, we asked logistics professionals how concerned they are about climate-related risks, how resilient they judge current logistics systems to be, which risks they consider most pressing, which measures they consider effective, and which transport modes are most exposed.

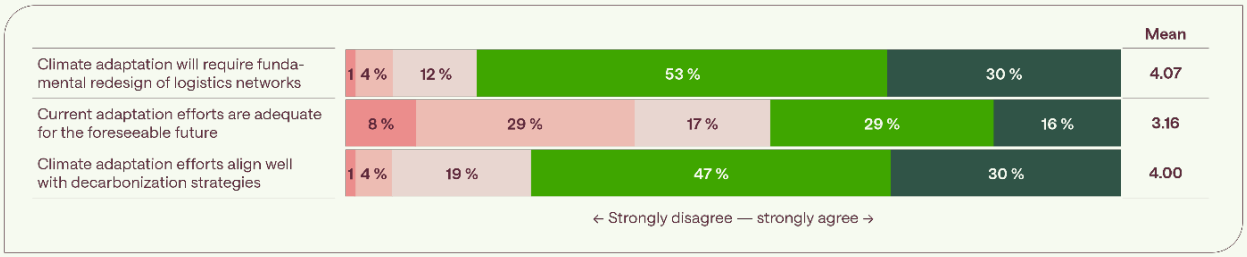


Figure 3

Most expect adaptation to reshape logistics, fewer than half call current efforts adequate. *Note*: Respondents rated their agreement with each statement on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The mean for each statement appears on the right of each bar.

Figure 3 shows that 83% believe adaptation will require a fundamental redesign of logistics systems, but only 45% consider current efforts adequate for the foreseeable future. This view holds broadly across continents, subregions, and transport modes, with European respondents the most skeptical. Encouragingly, 77% see adaptation as aligned with

decarbonization strategies, so investment in one appears to complement the other.

We then asked respondents to rate seven climate hazards (e.g., storms and hurricanes, water scarcity, extreme heat) and a set of adaptation measures (e.g., relocation, climate-proofing infrastructure, revising insurance models). Extreme heat emerges as the dominant climate-related risk for logistics. After extreme heat, storms and hurricanes are seen as the most pressing hazards, followed by water scarcity. Heat is rated particularly pressing in Europe, North America, and South America; water scarcity in Latin America and the Caribbean; and storms in Eastern Asia. Road freight, sea freight, and inland waterways are rated the most vulnerable modes. Inland waterway vulnerability is rated highest in South America, well above the range reported for Europe, North America, and Oceania. Sea-level rise is seen as a higher risk for sea freight, rail freight, and ports.

Our findings also show that effective climate adaptation measures are not risk-specific. Three approaches are rated most promising for addressing climate-related risks: investing in climate-proofing infrastructure, running climate risk assessments and scenario planning, and using data and digital tools for climate risk monitoring. These leading measures work against all hazards rather than individual ones. Hence, adaptation investment appears to build general resilience rather than hazard-specific protection.

Clear direction and cooperation: what it will take to scale sustainable logistics

The 2026 Global Sustainable Logistics Survey outlines a clear direction, though with different paths. Shippers and logistics service providers largely agree on which sustainability solutions work and why. Adoption is most closely tied to feasibility, which is constrained by the business case, infrastructure, regulation, technology maturity, and internal capabilities. Solutions that are capital-intensive, depend on coordination among multiple stakeholders or on public policy, are geographically limited, or require rethinking supply-chain models are seen as far less feasible than measures companies can implement on their own. Even those in-house measures remain far from fully implemented, leaving managers considerable room to act.

Three issues stand out. Infrastructure for low-carbon fueling and charging, rail, and intermodal transport is growing more slowly than the vehicles and fuels that depend on it, and is a likely bottleneck over the coming decade. Skills shortages threaten progress across the board, particularly in technical and domain-specific skills, and they vary sharply by region. Meanwhile, fewer than half of respondents consider current adaptation efforts adequate, even as climate impacts intensify.

Despite these gaps, there are reasons to expect faster uptake. Low-carbon technologies are becoming cheaper as production grows, fossil-fuel price volatility is increasing transition risk for companies without fleet transition plans, and the most widely adopted solutions are those that reduce

both costs and emissions, a trend that carbon pricing is likely to strengthen.

These trends will only speed up progress if the barriers around them come down, and most of those constraints are beyond the reach of any single company or government. The coming decade therefore calls for joint action by policymakers, companies, and their partners in three areas.

Accelerate infrastructure deployment. Policymakers can speed up permitting and approvals, set modal-shift targets, and invest in intermodal terminals, ports, and multimodal corridors. Shippers and logistics service providers can give that investment a business case by pooling demand, for example through buyers' alliances, and by committing early to low-carbon fleets and fuels.

Close the skills gap. Companies, education providers, and governments should build the scarce technical skills together, through publicly funded training and certification, in-house programs, and knowledge sharing between sites and across borders. Efforts should start where the gaps are largest.

Make logistics part of climate adaptation plans. Governments must give logistics a visible place in national adaptation plans and direct financing to the most vulnerable areas. Companies can strengthen the case by putting a figure on the cost of not adapting, and countries can learn from each other, since respondents across regions face similar risks.

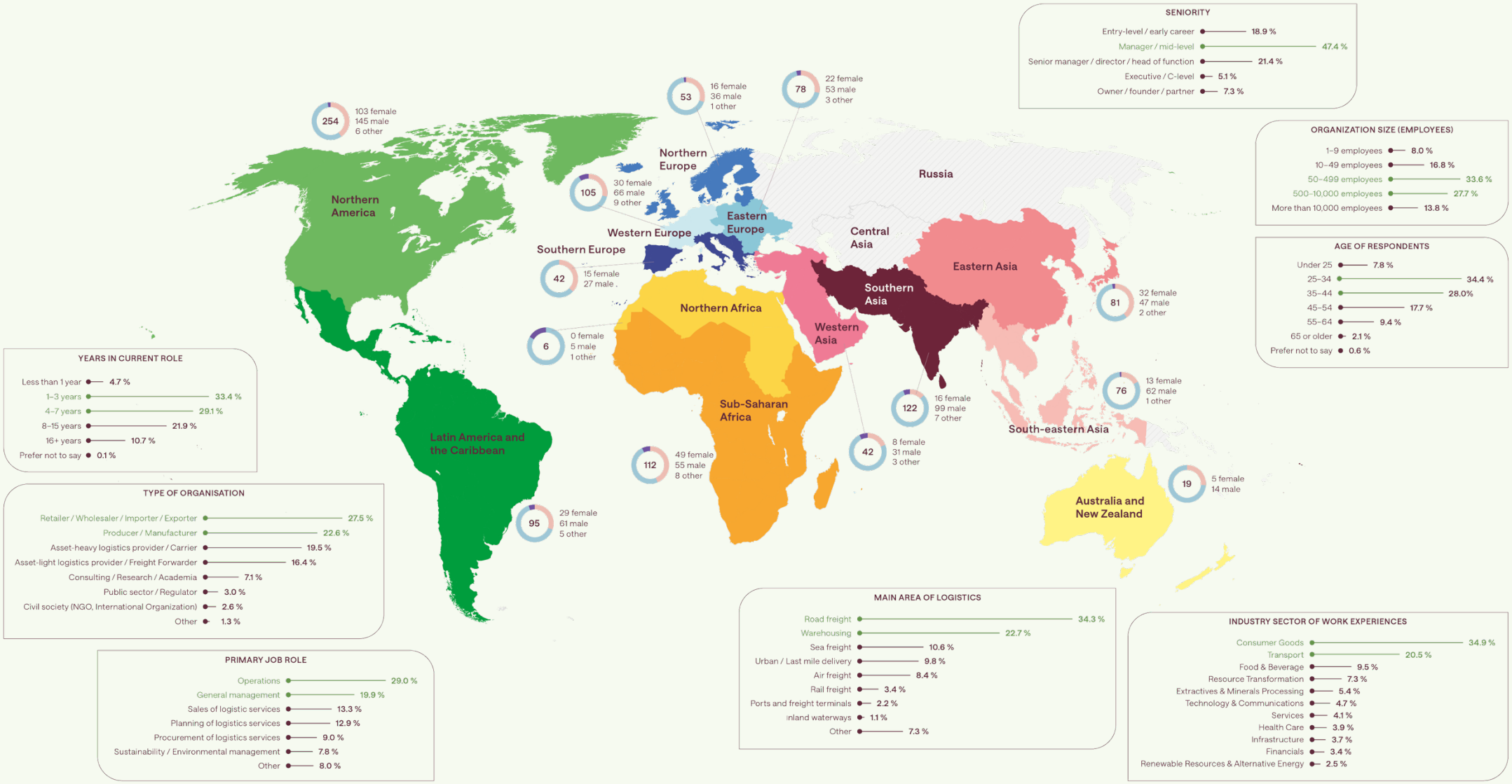
While regions, industries, and transport modes will progress at different speeds, there is a common direction. The survey will be repeated over the UN Decade of Sustainable Transport (2026–2035) to track progress.

To learn more about our work, please visit our website and follow us on LinkedIn.



Figure 4

Who answered the 2026 GSLS? 1,085 responses from 64 countries. *Notes*: Circles - number of respondents by UN subregion and gender. Boxes - share of responses (% of total).



The 2026 respondents

We collected responses from logistics professionals from March to August 2026. Figure 4 shows that 29.6% of respondents come from Asia, 27.6% from North America, and 25.6% from Europe, with substantial numbers from nearly all UN subregions. We excluded five subregions from the analysis: Central Asia, Melanesia, Micronesia, Polynesia (no responses), and Northern Africa (too few responses). Russia, classified as part of Eastern Europe, is also excluded because no responses could be gathered there.

Of the respondents, 66.8% identify as male and 32.2% as female. On average, they are about 39 years old and have about 7 years of work experience. Most hold a mid-level (47.4%) or senior-level (21.4%) management position. They report professional experience in consumer goods (34.9%), transport (20.5%), and food and beverages (9.5%). Their main areas of logistics expertise are road freight (34.3%), warehousing (22.7%), and sea freight (10.6%).

Most work for mid-sized (33.6%) or large companies (27.7%). Employers include asset-heavy logistics service providers (19.5%), asset-light logistics service providers (16.4%), retailers (27.5%), and producers and manufacturers (22.6%). The supply side (35.9%) and the demand side (50.1%) of logistics are therefore both well represented.

The report uses descriptive statistics only, with no statistical tests or inferential tools. Regional analyses were conducted at the continental and subregional level, with the support of Advanced Impact Research GmbH. The results were interpreted, and the recommendations derived, together with the GSLS Advisory Board, SLOCAT, and several additional industry experts.

The Full Report is available in English, with summary reports available in Arabic, English, French, German, Mandarin, and Spanish.

Survey design and methodology

The GSLS covers logistics, meaning freight transport and warehousing; passenger transport is not included. The questionnaire, the survey structure, and the classification of solutions and skills were developed with the GSLS Advisory Board, whose members contributed expertise from industry, policy, and academia.

The section on sustainability solutions asks logistics professionals not only to rate the state of adoption but also to give their views on three reasons why sustainability solutions might be adopted: whether because companies consider the solution itself effective (solution effectiveness), because companies can easily implement it (solution feasibility), or because important stakeholders, such as customers and suppliers, expect companies to adopt a solution (stakeholder expectations). Respondents rated each solution on all three dimensions. This separates solutions that are effective but hard to implement from those with broad stakeholder support but limited perceived impact.

The questionnaire had 48 closed questions, mainly Likert-scale and ranking items. It was administered online in 13 languages: English, German, Spanish, French, Arabic, Bahasa Indonesia, Portuguese, Urdu, Mandarin, Hindi, Swahili, Turkish, and Vietnamese. Translations were cross-checked so that terminology for solutions and skills stayed consistent.

To reach professionals who are active in sustainability debates as well as those who are less visible, data were collected through three channels: snowball sampling based on an open call for participation, computer-assisted telephone interviews (CATI), and online data collection platforms. For every completed response, €1 was donated to the Malala Fund, a non-profit organization supporting girls' education. Control questions and filters screened out respondents without sufficient expertise in logistics.

Target numbers were set for all 17 UN subregions, balanced by population, carbon emissions, and economic and trade indicators. The 12 subregions analyzed together represent most of the world's economic output, emissions, and trade. Regional results may partly reflect different response styles.

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