STATE OF
SUPPLY CHAIN SUSTAINABILITY
2025

ISSUE NO.06

ROLE OF REGULATIONS

SCOPE 3 EMISSIONS

TRANSPORTATION

Sustainability Still Matters

Sustainable Supply Chain Lab

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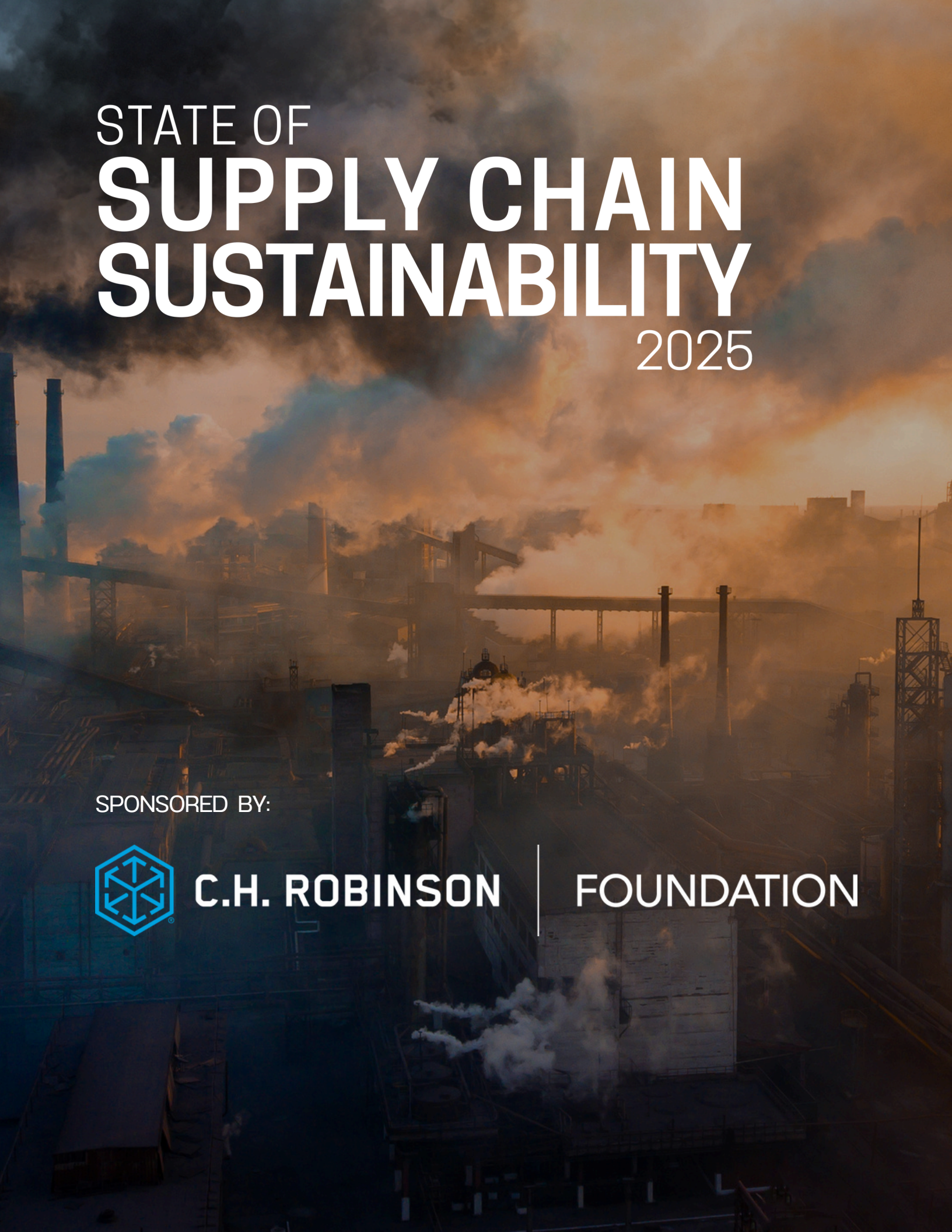

STATE OF SUPPLY CHAIN SUSTAINABILITY 2025

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EXECUTIVE SUMMARY

Sustainability still matters; despite regulatory volatility, geopolitical shifts, and economic uncertainty, it remains a core driver of business success and a defining element of modern supply chains.

The 2025 State of Supply Chain Sustainability report produced by the MIT Sustainable Supply Chain Lab and the Council of Supply Chain Management Professionals, provides an in-depth view of how organizations are turning commitments into action, where progress is strongest, and what barriers remain.

This year's study draws on responses from 1,200 professionals in 97 countries, spanning supply chain, procurement, operations, logistics, and sustainability roles.

The breadth of this data enables us to capture both global perspectives and regional nuances, offering a comprehensive view of how supply chain sustainability is evolving.

This year marks the sixth annual report, and the study explores three major themes:

Role of Regulations

How government regulations influence companies' sustainable commitments, and how these effects vary across regions

Managing Scope 3: From Measurement to Mitigation

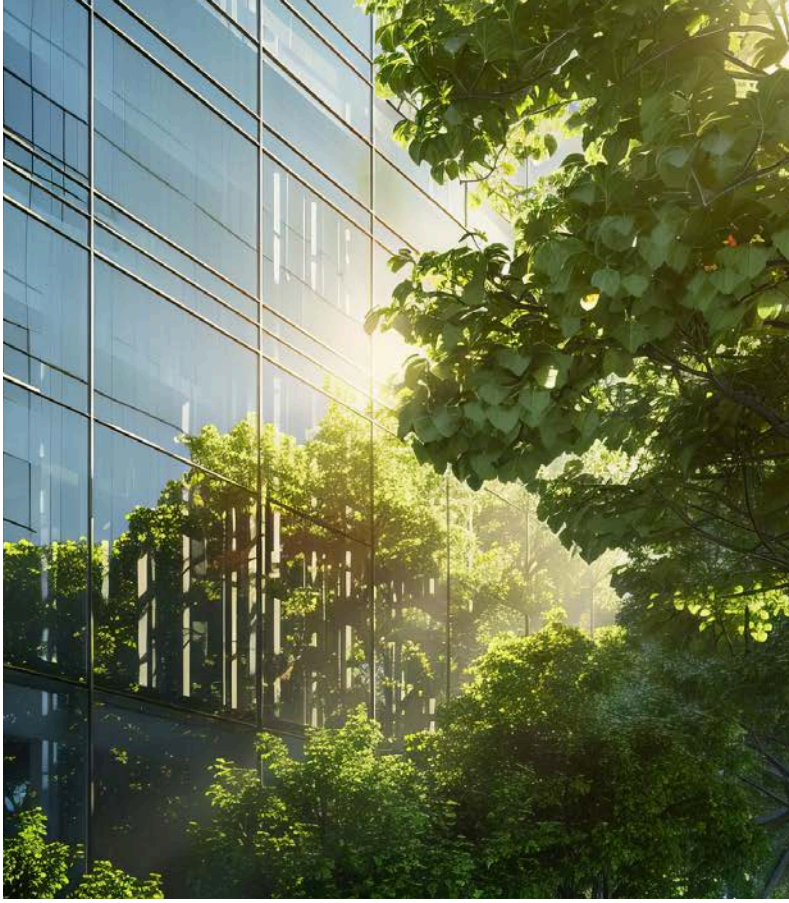
The tools, methods, and challenges companies face in measuring and reducing supply chain emissions, which typically account for more than 75% of corporate carbon footprints

Freight Transportation

A dedicated section on freight transportation, one of the largest contributors to Scope 3 emissions, assessing technology expectations, adoption hurdles, and strategic priorities across biofuels, battery-electric systems, and hydrogen-based solutions.

"This report is indispensable for anyone in supply chain. Businesses, investors, and consumers are demanding higher social and environmental sustainability standards–and supply chains are at the center of delivering on them. The 2025 State of Supply Chain Sustainability Report highlights where progress is being made, where challenges remain, and what strategies will drive the next wave of impact. CSCMP and MIT are proud to present the sixth edition of this essential resource to help you benchmark and accelerate your sustainability journey."

Mark Baxa, President and CEO of CSCMP



Several insights stand out in the 2025 findings. First, despite regulatory shifts, overall corporate commitment to sustainability remains resilient. While 15% of companies report reduced commitments, 12% have increased theirs, and 73% report no change, showing that most organizations are holding steady with their sustainability goals. However, only a minority succeed in translating this conviction into daily operations that deliver measurable results, leaving a persistent gap between strategy and execution. This year's findings make it clear that publicly stated sustainability goals can be a powerful catalyst—companies that set them are 74% more likely to invest in high-impact initiatives and embed sustainability into day-to-day decision-making.

Second, Scope 3 emissions remain both the biggest challenge and the greatest opportunity. Progress has been made in tracking direct emissions, but supplier engagement, methodological clarity, and financing mechanisms remain critical bottlenecks. Where companies do succeed, they leverage digital traceability, standardized accounting, and industry collaborations to move the needle.

Finally, freight transportation underscores both the urgency and the complexity of decarbonization. Companies are exploring alternatives to petroleum-based fuels, viewing biofuels as the most practical near-term option, battery-electric solutions as increasingly viable for urban and regional routes, and hydrogen as the long-term answer for heavy-duty operations. Yet adoption is slowed by infrastructure gaps, upfront investment needs, and operational trade-offs.

Together, these insights reveal that true leaders are those who move beyond intent. In 2025, the companies at the forefront of sustainability are embedding it into their core operations—through digital traceability, harmonized data, incentive-aligned procurement, and active industry collaborations—unlocking both measurable environmental impact and greater operational resilience. The State of Supply Chain Sustainability report serves as both mirror and map—reflecting where businesses stand today and outlining clear, measurable pathways to accelerate supply chain decarbonization globally.

INTRODUCTION

Sustainability has become an essential element of supply chain management, shaping how companies compete, grow, and build resilience in an uncertain world. The 2025 State of Supply Chain Sustainability Report, produced by the MIT Sustainable Supply Chain Lab, at the MIT Center for Transportation and Logistics, and the Council of Supply Chain Management Professionals, builds on six years of research to provide a clear picture of how businesses are translating commitments into action, where progress is accelerating, and which challenges continue to slow momentum.

This year's report is based on a global survey of more than 1,200 professionals from 97 countries, representing supply chain, procurement, logistics, operations, and sustainability functions across sectors. Their insights provide a uniquely comprehensive view of how sustainability practices are evolving worldwide. We structured the research around three core themes: the first is the role of regulations, followed by the measurement and management of Scope 3 emissions, and lastly, the decarbonization of freight transportation. Together, these themes capture the forces shaping supply chain sustainability today and point to where action will have the greatest impact tomorrow.

One of the defining questions in this year's research was: How businesses respond to a shifting policy landscape? In recent years, governments around the world have advanced greenhouse gas (GHG) regulations and, in some cases, rolled them back, creating uncertainty for corporations. The study reveals, however, that corporate sustainability strategies are proving more resilient than policy cycles.

Eighty percent of surveyed companies believe sustainability is important or extremely important to long-term success, with 73% reporting no change in their commitments following the U.S. withdrawal from the Paris Agreement, and 12% even increasing their efforts. Many organizations are moving forward with strategies that anticipate or exceed regulatory requirements, using the strictest applicable rules as benchmarks.

Regional differences are clear. In Europe, regulations such as the Corporate Sustainability Reporting Directive (CSRD) serve as the primary driver of action, pushing companies toward standardized disclosures, better data governance, and value chain transparency. In North America, investor expectations and boardroom priorities are more influential than government mandates. Despite these differences, both regions show optimism: more than half of all respondents report high confidence in meeting sustainability goals, with European firms slightly more confident than their North American counterparts. But one thing is clear globally: companies with public sustainability goals are far more likely to integrate sustainability into daily decision-making and to invest in high-impact initiatives. This suggests that public accountability creates internal momentum, signaling that when companies make explicit commitments, they are more likely to follow through with meaningful execution.

Scope 3 emissions, the indirect emissions from suppliers, transportation, product use, and all other parts of the value chain, remain the most difficult area of corporate climate management. It typically accounts for more than 75% of a company's total emissions[1]. Yet, reporting lags far behind Scope 1 and Scope 2. This year's findings underscore both the scale of the challenge and the growing innovations to address it. More than 40% of companies now track Scope 1 and 2, but far fewer report on Scope 3. The main barrier is supplier data: about 70% of respondents cited a lack of supplier-specific information as the biggest challenge. Methodological fragmentation and calculation complexity followed closely, cited by more than half of respondents. Resource constraints, high costs of digital tools, and data privacy concerns further complicate measurement.

Regional differences again stand out. North American businesses rely heavily on financial data and industry averages, an approach that offers broad comparability but fails to reflect supplier-specific improvements. In contrast, European businesses rely more on supplier data, reflecting deeper engagement with upstream partners. Notably, 50% of North American respondents still rely primarily on spreadsheets, compared to just 33% in Europe, where companies more frequently use Life Cycle Assessment tools and custom solutions.

When it comes to reduction, economics is a major bottleneck. More than half of companies report unclear return on investment as the top barrier to Scope 3 reduction, followed by high implementation costs and lack of influence over suppliers. This challenge is especially acute for small and medium-sized enterprises (SMEs): nearly half fear that customers will not pay more for greener products, while 43% also lack the knowledge, 40% lack the resources, or 31% lack the demand signals needed to justify investment. For SMEs, the issue is less about willingness than about feasibility.

Despite these obstacles, companies, particularly those that have publicly stated sustainability goals, are beginning to deploy effective strategies, such as industry collaborations. Initiatives like SteelZero[2] and RE100[3] illustrate how coming together and setting shared standards can accelerate supplier transition. Survey data shows strong participation in cross-sector alliances and supplier partnerships. Though notable barriers remain, such as cost, capacity, and concerns over data sharing. Importantly, companies that participate in collaborations report improved emissions data, stronger supplier alignment, access to expertise, and policy influence. These benefits suggest collaboration is not just an option but a necessity for scaling credible Scope 3 management.

One of the largest contributors to Scope 3 emissions is transportation, making it a critical focal point for supply chain decarbonization. To capture how businesses view this challenge, the 2025 study included a dedicated freight section. The survey explored perceptions of three major technology pathways: biofuels, battery-electric vehicles, and hydrogen. Biofuels emerged as the most practical near-term lever, offering almost immediate results with existing fleets and infrastructure. Battery-electric solutions are viewed as increasingly viable for urban and regional routes where charging networks are available, with expectations rising as ranges improve and costs decline. Hydrogen is widely regarded as a longer-term solution for heavy-duty, long-haul transport, contingent on the development of affordable green hydrogen, refueling infrastructure, and lower vehicle costs.

Yet optimism is tempered by clear barriers. Respondents identified infrastructure gaps, high upfront costs, and range limitations as the most pressing obstacles. Regional differences again shape the outlook: North American firms are most concerned with cost and industry resistance, while European respondents highlight regulatory support, reliability, and return on investment.

Despite these challenges, companies are prioritizing action. Operational efficiency, such as route optimization, load consolidation, and fuel management, was ranked as the most important near-term strategy, delivering cost savings alongside emissions reductions, with investment in low-emission assets coming next. The sequence reflects pragmatism: focus first on achievable, cost-effective measures, then scale transformative technologies as economics and infrastructure align.

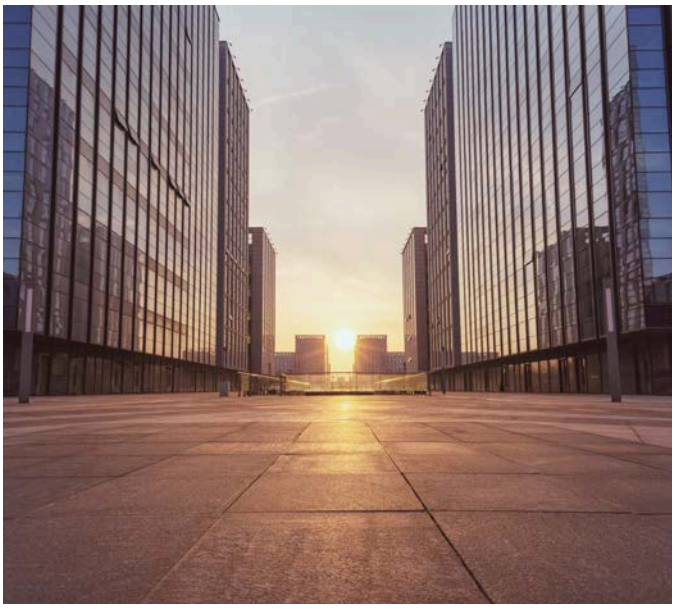
This annual report offers professionals a comprehensive overview of the aforementioned topics, aiming to assist organizations in making sustainable decisions in the current context. Our objective is to advance our discussions on sustainability efforts by incorporating research findings on supply chain sustainability and gathering insights from practitioners. The aim is to collectively shape the future of this field and together create a more sustainable future for the world.

The remainder of the report is structured as follows. The Methodology Section of our study focuses on the research approach and provides descriptive information about the data collected. The section titled The Role of Regulations examines the impact of government regulations on achieving sustainability objectives and what impact of changing regulations on organizations. In the section titled Managing Scope 3: From Measurement to Mitigation, the report examines what technologies companies are using to track and measure their emissions and the need to engage with suppliers to ensure accurate data is collected. Also covering what can be gained from industry collaborations and how that can be beneficial for the decarbonization effort. Finally, in the Transportation Sector section, we provide a thorough examination to address which technologies the industry thinks will be the most successful in the efforts to decarbonize and what hurdles they are facing in transitioning to the more sustainable options. We then present the findings and implications of this report in the Conclusions Section.

SUSTAINABILITY STILL MATTERS – AND IN 2025, THE EVIDENCE SHOWS THAT IT MATTERS MORE THAN EVER.

METHODOLOGY

The study's broad objectives are to map the current state of corporate sustainability across sectors, with particular emphasis on Scope 3 emissions. It assesses the efforts invested in sustainability initiatives, the confidence businesses have in achieving their goals, and the integration of sustainability indicators into decision-making. In addition, the study seeks to identify the pressures, drivers, and barriers shaping progress, including SME-specific challenges, the role of industry collaborations, regulatory impacts, and customer demands. This year's study adds a special focus on the freight transportation sector, evaluating expectations for the adoption of low-emissions technologies and alternative fuels.



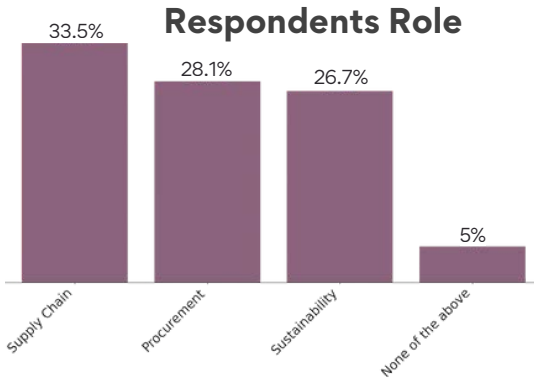
We conducted a survey in 2025 as the latest wave of our multi-year State of Supply Chain Sustainability study. The survey captured standardized quantitative data from a broad pool of professionals in supply chain, sustainability, operations, procurement, and logistics, enabling comparability with prior waves. Using purposive and snowball sampling through professional associations, the MIT Global SCALE Network[4], partner lists, events, and social media, we gathered 1,203 valid responses from 97 countries. Eligibility required current employment and familiarity with supply chain or sustainability activities. Participation was voluntary, anonymous, and limited to one response per individual. The survey, averaging 45 questions, was offered in English, Spanish, French, Simplified Chinese, and Portuguese. It included multiple-choice, open-ended, and Likert scale questions (1–5) to capture priorities, practices, perceptions, and challenges related to sustainability. In addition to capturing the respondents' business function, the extent of their involvement in sustainability initiatives, and the geographical locations of their companies, the survey questions revolved around the following three major themes:

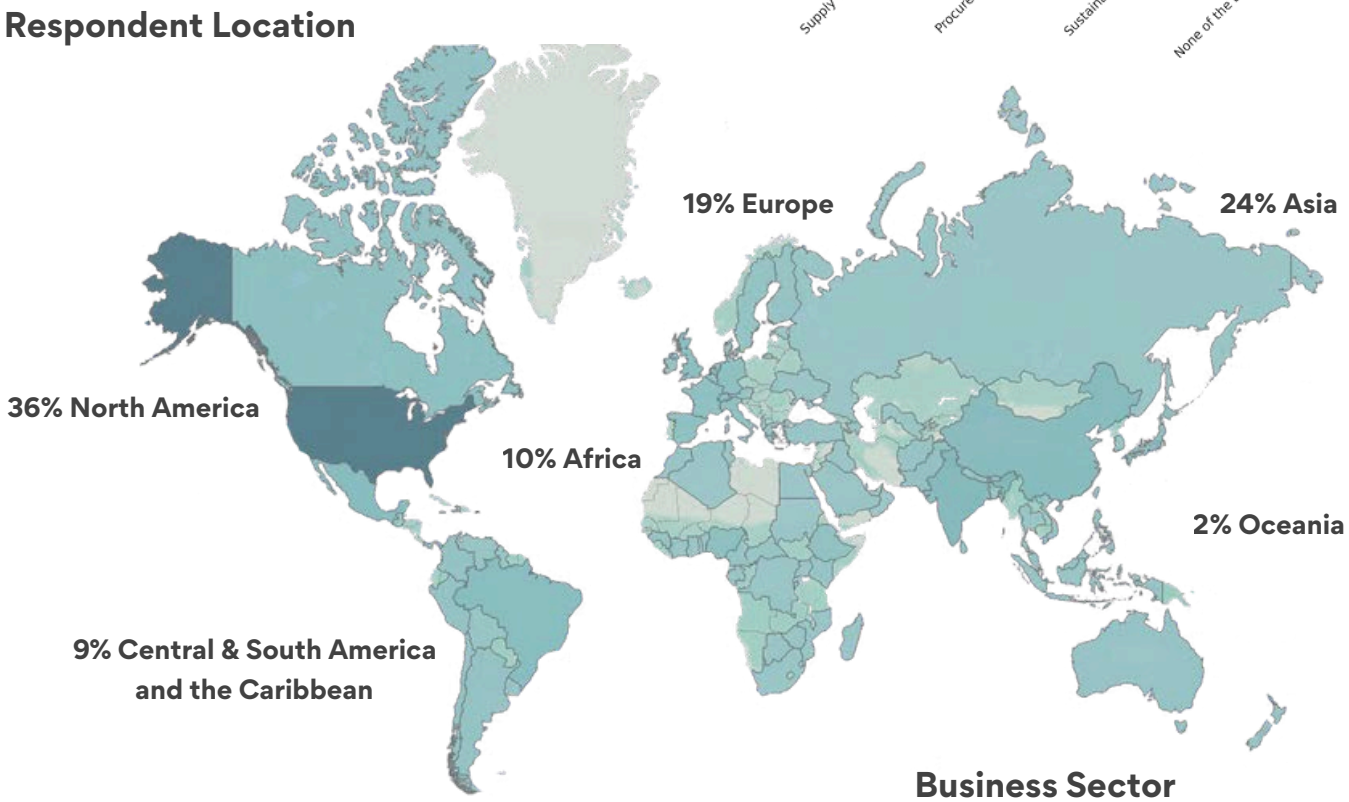
Drivers of Sustainability in Business Strategy: Perceptions, Confidence, Regulation, and Geopolitics

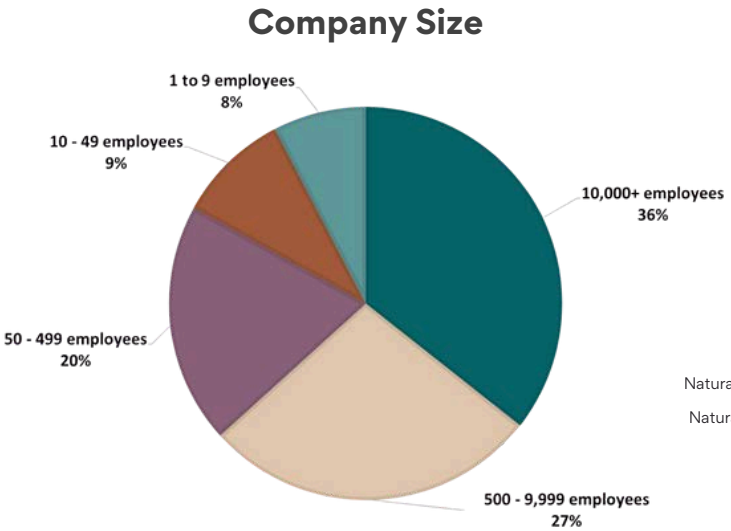
Managing Scope 3: Capabilities, Practices, and Challenges Across Supply Chains

Future of sustainable freight transportation

1,203 RESPONSES
97 COUNTRIES
5 LANGUAGES







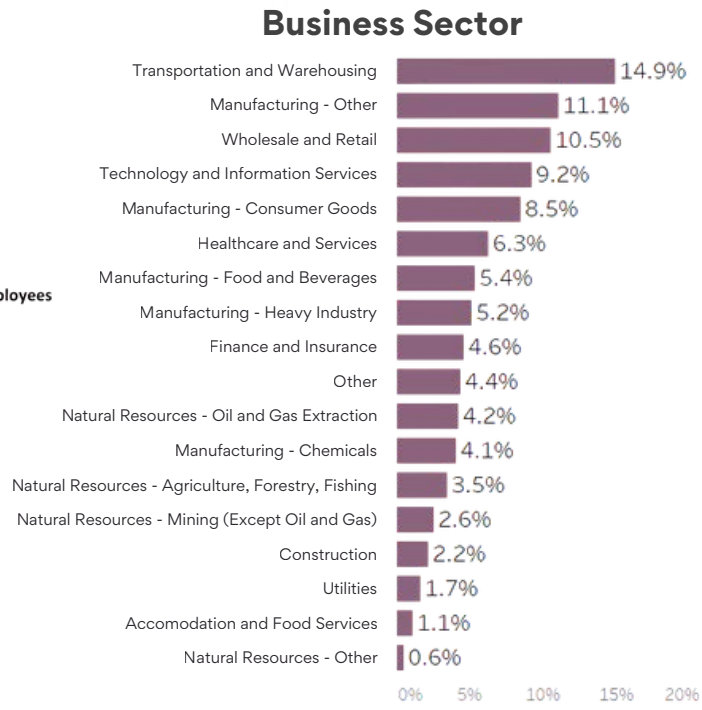


Figure 1: Demographics of the 2025 State of Supply Chain Sustainability Survey

THE ROLE OF REGULATIONS

Corporate Sustainability Commitment Persists Despite Policy Changes

Globally, over the past few years, many regulations for greenhouse gas (GHG) emissions for companies have been approved and put in place, and, in some cases, have been rolled back after being approved. Whether that is due to administration changes or to the lack of clarity on how the regulation will be enforced, it makes it hard for companies to know what is expected of them. We are interested in how these changes affect what businesses decide to do. The survey results show that sustainability remains a strategic priority for companies across both the U.S. and Europe, with 80% of the businesses surveyed believing sustainability is important or extremely important for the long-term success of their business.

Despite the U.S. withdrawal from the Paris Agreement, Figure 2 shows that over 70% of businesses report no change in their sustainability commitment, with an additional 12% of companies even increasing their efforts. Corporate sustainability strategies might operate independently of national climate policy shifts, driven by factors beyond federal political positions, or they might use the strictest regulation that needs to be met to drive their organization's goals.

In Europe, 60% of businesses responded “Yes” to facing pressure to enhance supply chain sustainability compared to 46% in North America, suggesting that the push for sustainability is more significant and widespread in the European market (see Figure 3). Further, in Europe, regulation is the primary anchor. The Corporate Sustainability Reporting Directive (CSRD), along with the European Sustainability Reporting Standards and assurance requirements, is pushing companies to standardize disclosures and improve data governance. This regulatory framework directly affects European businesses and indirectly affects non-EU multinationals through EU subsidiaries, listings, and value-chain expectations. In the United States, motivation more commonly originates with investors and boards/C-suites rather than government regulations, not to mention customers from the European market. Multinational companies are requiring their suppliers to meet CSRD standards and data collection practices.

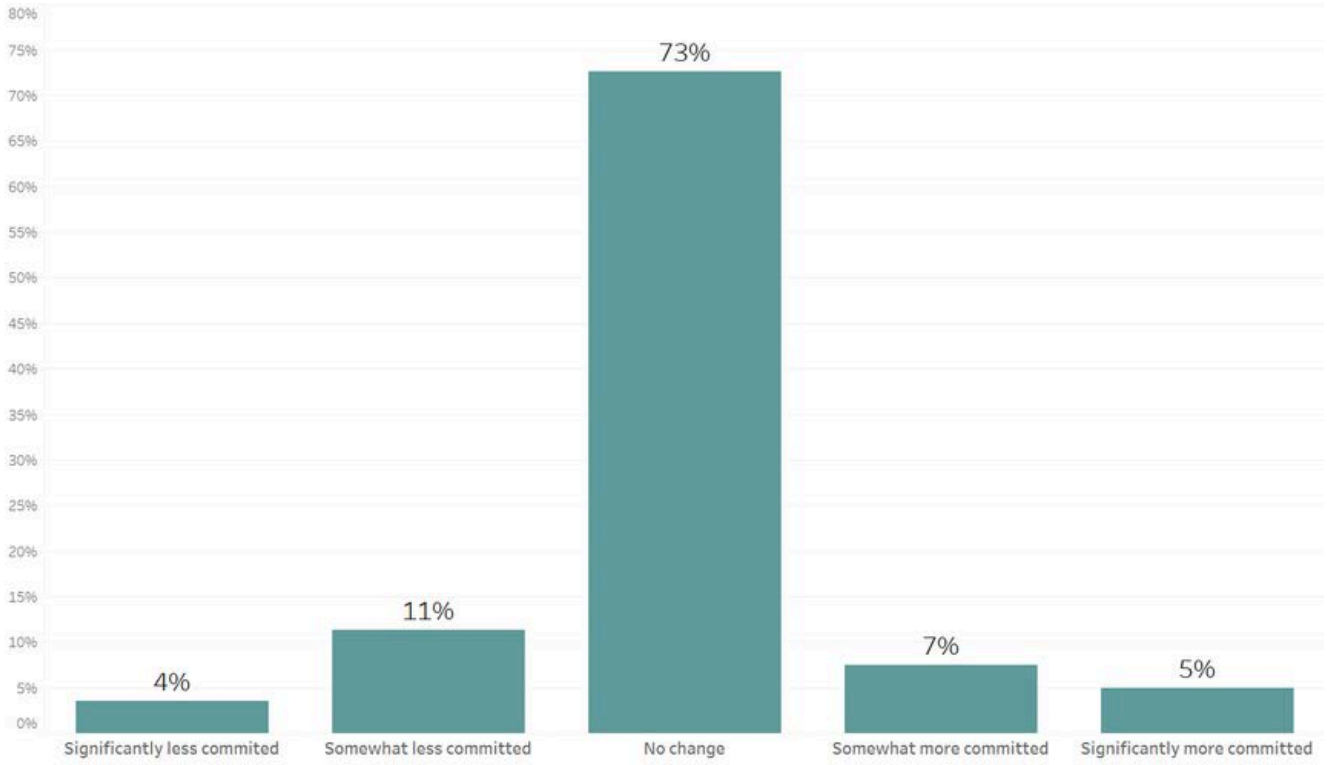


Figure 2. Corporate Sustainability Commitment Remains Stable Despite U.S. Paris Withdrawal

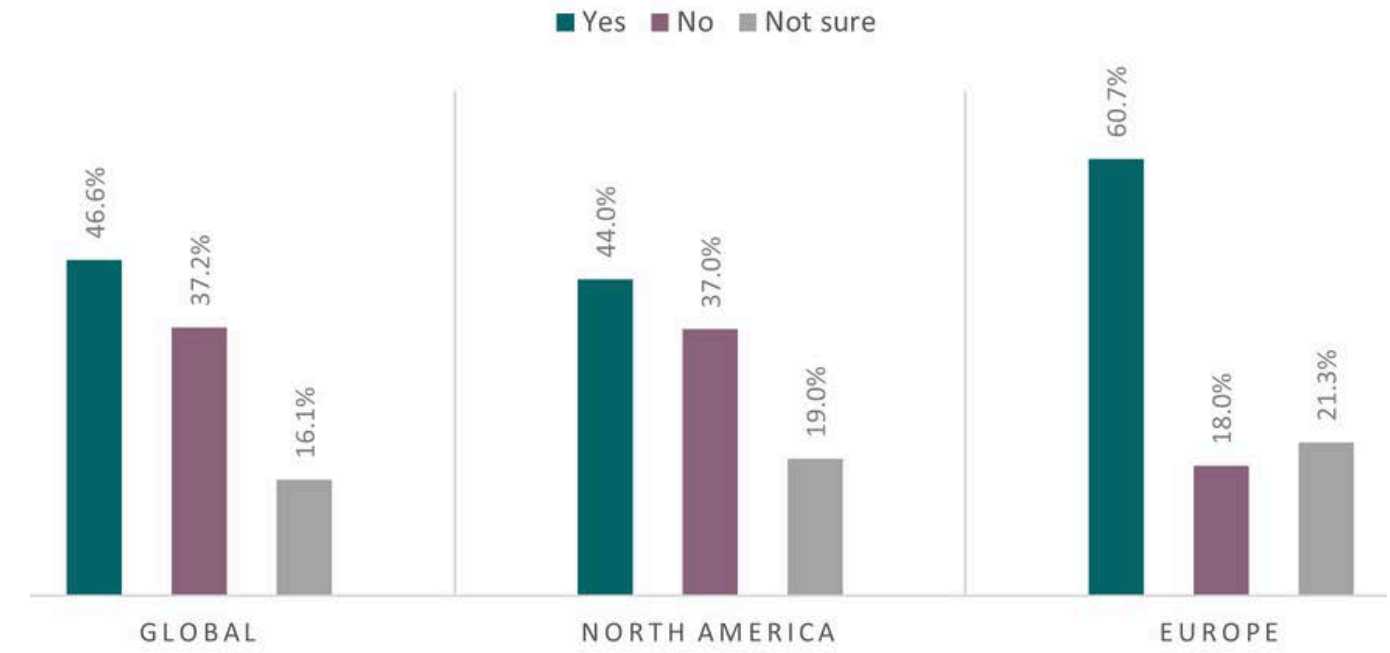


Figure 3. Regional Comparison of Companies Feeling Pressure to Make Sustainable Changes, By Region

In addition to regional differences in sustainability drivers, confidence in achieving sustainability goals varies slightly across regions. Among companies reporting high confidence levels (4 or 5 on the 5-point scale), 64.4% of European businesses and 56.7% of North American businesses indicate high confidence.

Overall, more than half of all surveyed businesses (56.2%) express high confidence in their ability to reach sustainability goals, with 35.86% reporting level 4 confidence and 20.34% expressing extremely high confidence, suggesting that despite implementation challenges, most companies remain optimistic about turning their sustainability commitments into measurable outcomes.

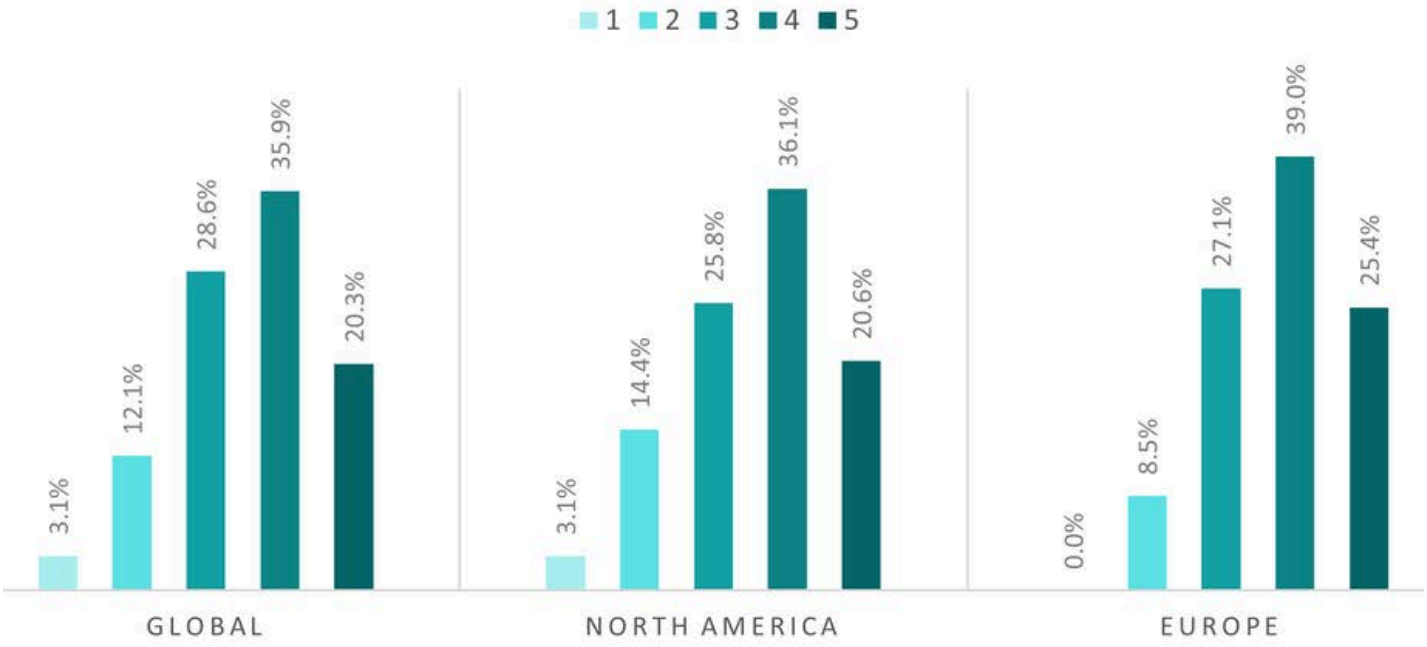


Figure 4. Confidence Levels of Companies in Reaching Their Sustainability Goals, 1 being least confident, and 5 being extremely confident, By Region

Sustainability in Decision-Making: Impact of Public Commitments and Stakeholder Pressure

In examining companies that have maintained their sustainability commitments since January 2025, we focused on how they operate in practice to assess whether their sustainability goals are embedded in day-to-day activities. Our research shows that there is a notable execution gap between strategic intent and daily practice of an organization. Only 39% of the businesses reporting unchanged or increased commitment since the Trump administration have actually integrated sustainability indicators into routine operational decision-making.

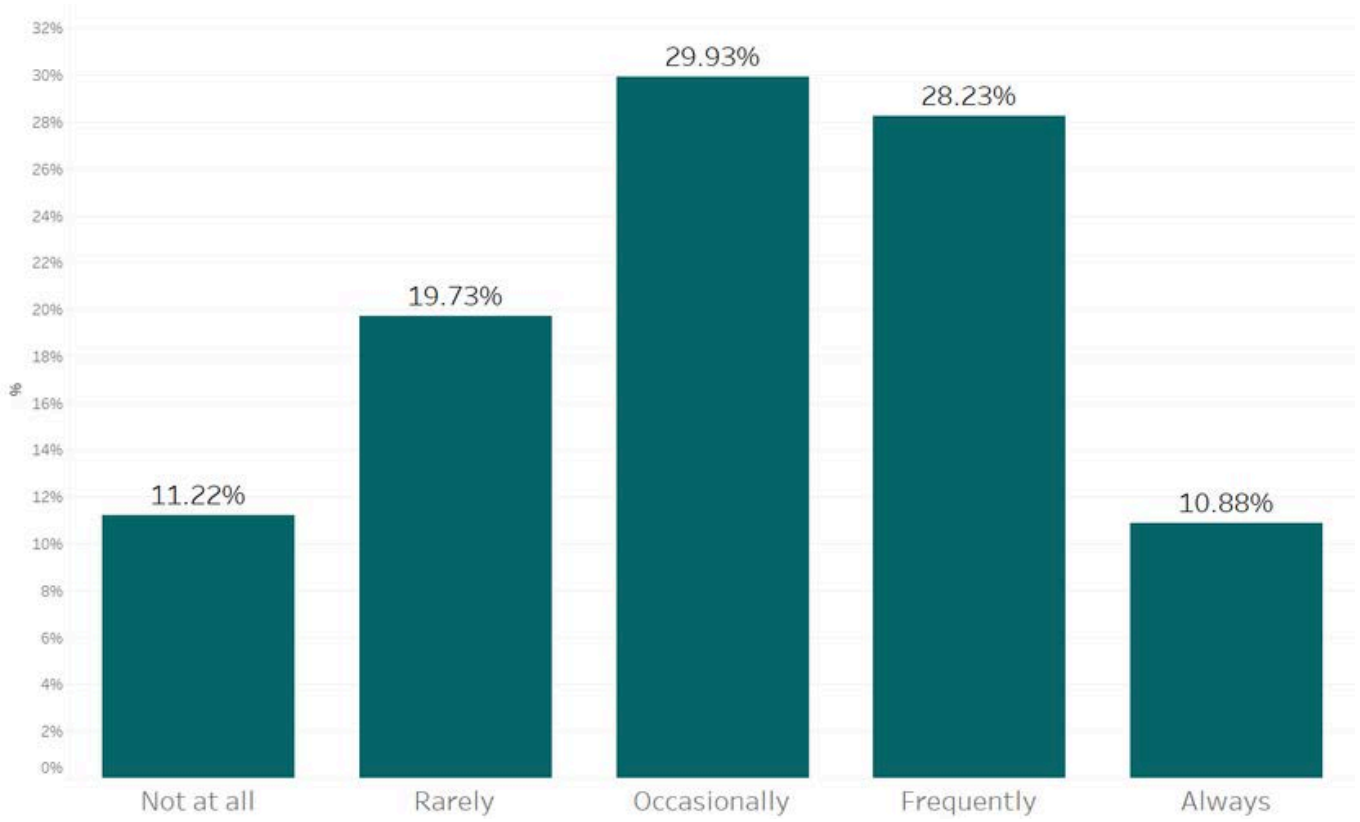


Figure 5. From Commitment to Action: Share of Businesses Integrating Sustainability in Daily Decisions

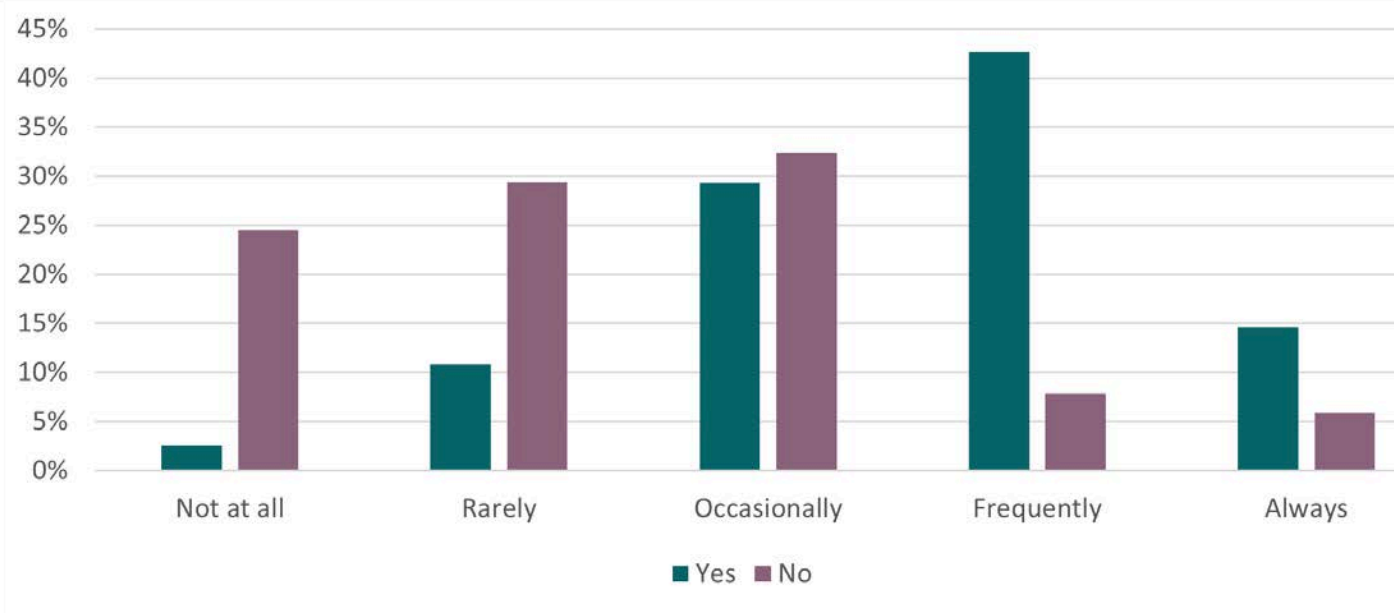


Figure 6. Businesses with Public Goals Show Higher Sustainability Integration Rates

Interestingly, businesses with publicly stated sustainability goals show significantly higher levels of daily sustainability integration compared to those without public commitments. Among companies that have made public sustainability pledges, 57.33% frequently or always incorporate sustainability decisions into their daily operations, whereas only 13.38% of businesses without public goals achieve this level of integration (see Figure 6). We also find that businesses across sectors and regions that have publicly committed to goals and face pressure from diverse stakeholders tend to invest more in high-impact sustainability initiatives, including renewable energy adoption, product innovation, waste reduction, and circular economy.

Businesses with sustainability goals are 74% more likely to invest in initiatives that effectively reduce their emissions.

This suggests that public accountability mechanisms create stronger internal pressures to embed sustainability principles into business operations. The findings highlight that external commitments and transparency are associated with a more systematic implementation of sustainability practices beyond strategic statements.

Overall, the findings show that while regulatory volatility creates uncertainty, it has not weakened corporate sustainability momentum. Companies continue to view sustainability as strategically important, often setting targets that anticipate or exceed policy requirements. Regional differences remain clear; European businesses are more directly shaped by regulation, while North American organizations lean on investor and board priorities, but in both circumstances, public commitments and stakeholder pressure drive deeper integration of sustainability into business practice. Importantly, businesses that make their goals explicit are far more likely to embed them into daily decisions and invest in high-impact initiatives, underscoring that transparency and effective execution are key enablers of meaningful progress.

57% of companies with public sustainability pledges embed sustainability into daily operations, signaling that commitments are increasingly operational, not just aspirational.

MANAGING SCOPE 3:

FROM MEASUREMENT TO MITIGATION

This section highlights how companies are addressing and managing Scope 3 emissions, starting with understanding the current state and challenges of measuring Scope 3 emissions, and dives into the tools, technologies, and data sources used to capture these emissions, highlighting differences between regions such as North America and Europe. It highlights challenges in both measurement and reduction and then explores practical decarbonization strategies, including supplier engagement and industry collaborations.

Measuring What Matters: Insights into Scope 3 Emissions Challenges and Current State

Companies are under increasing pressure to measure and report emissions, especially those with public sustainability goals or operations in the EU. Under the Greenhouse Gas Protocol, Scope 1 covers direct emissions, Scope 2 covers purchased energy, and Scope 3 covers all other indirect emissions across the value chain[5]. Scope 3 is the most difficult to measure and manage, yet it typically accounts for more than 75% of a company's total footprint.

While many companies have become proficient at reporting Scope 1 and 2, Scope 3 remains a major challenge. More than 40% of businesses track and reduce Scope 1 and 2 emissions, but less than half of those are tracking and reducing their Scope 3 emissions—especially in Categories 1 (Purchased Goods and Services), 4 (Upstream Transport), and 9 (Downstream Transport/Distribution). The complexity of global supply chains, data availability, and methodological choices all contribute to this gap, underscoring why Scope 3 is the linchpin of credible climate strategies.

Spreadsheets dominate (66%) Scope 3 measurement, underscoring both progress in coverage and the urgent need for scalable, tech-enabled solutions.

Diagram adapted from Greenhouse Gas Protocol (2024)

Tools and Technologies for Measurement

In examining how companies track their Scope 3 emissions, it is clear that spreadsheets remain the primary tool (66.1%) for measurement across a significant share of companies, regardless of size (see Figure 7).

The continued dependence on spreadsheets raises risks around data quality, auditability, and scalability. Transitioning to standardized data models and integrated systems that can connect with enterprise platforms (ERP, logistics, procurement) will be critical to reduce errors and improve supplier data integration.

This reliance indicates that the process is still in its infancy, with manual data handling and a lack of integrated systems-of-record for emissions data. Regional differences are stark: in North America, 50% of companies rely on spreadsheets, compared to just ~32% in Europe. European companies demonstrate a higher adoption of Life Cycle Assessment (LCA) tools and custom-built solutions (~36% vs. ~16% in North America) (see Figure 8).

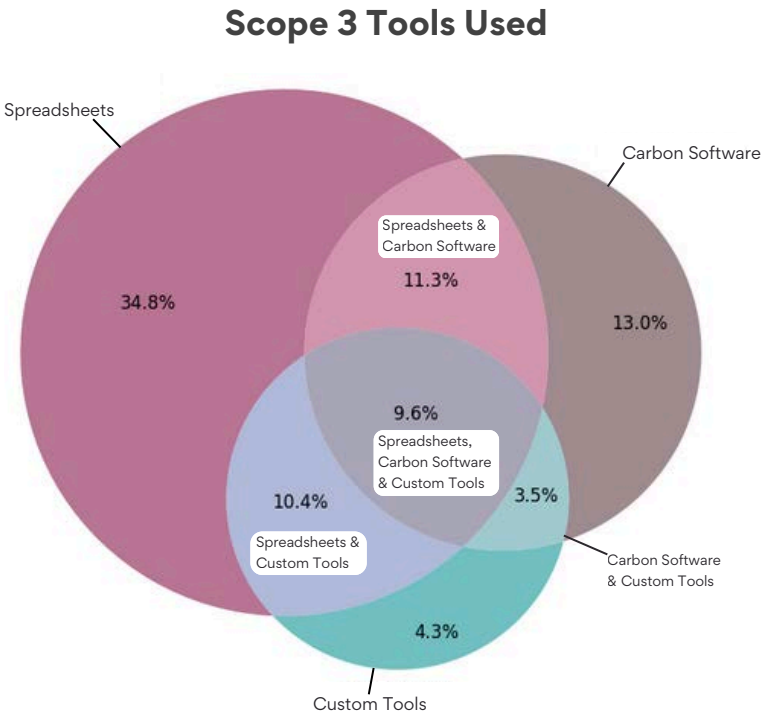


Figure 7. Tools used to measure Scope 3 emissions (multiple response)

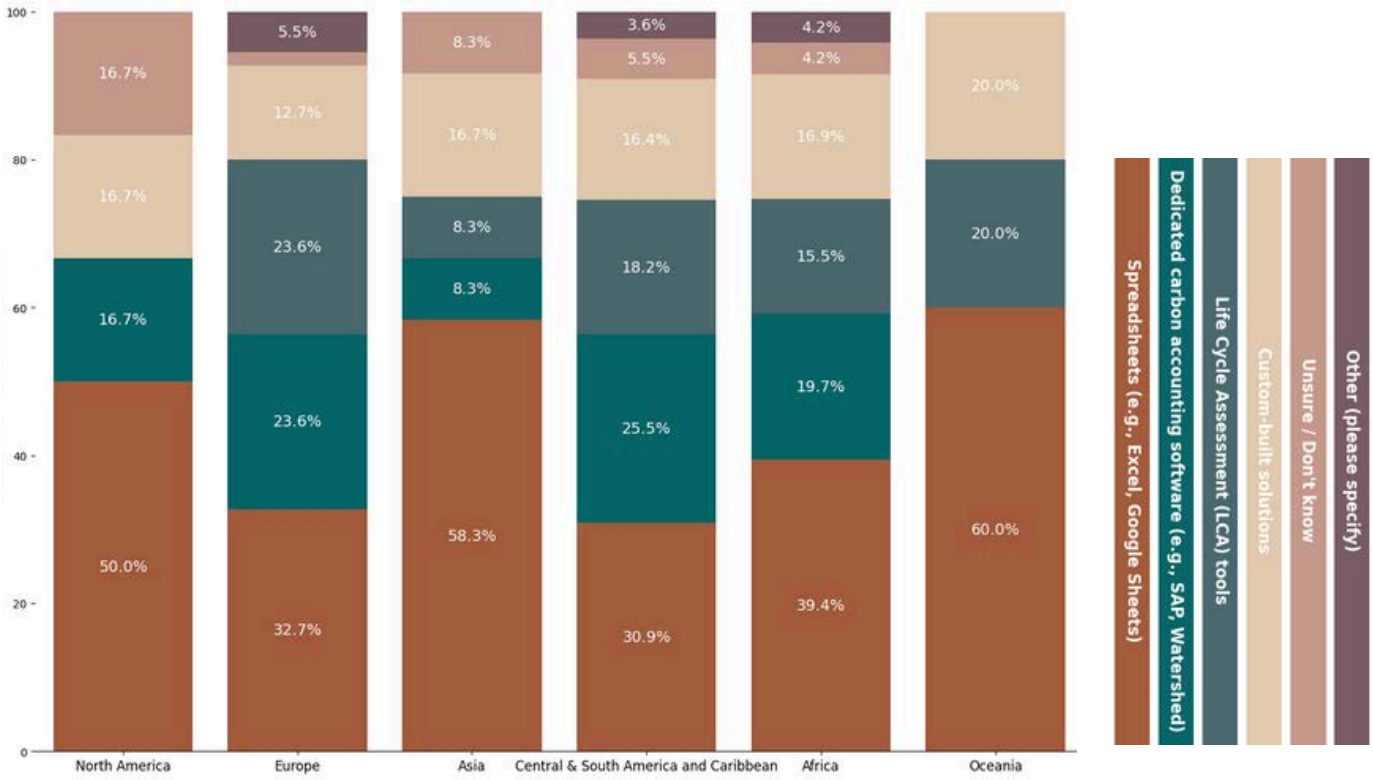


Figure 8. Regional Breakdown of Tools Used to Measure Scope 3 Emissions (multiple response)

Data Sources for Measurement (North America vs. Europe)

The survey also reveals distinct regional patterns in data sources (see Figure 9). North American companies rely most on financial data and industry averages, methods that provide broad comparability but fail to capture supplier-specific improvements. European firms, by contrast, lean more heavily on supplier data, indicating stronger engagement with upstream partners.

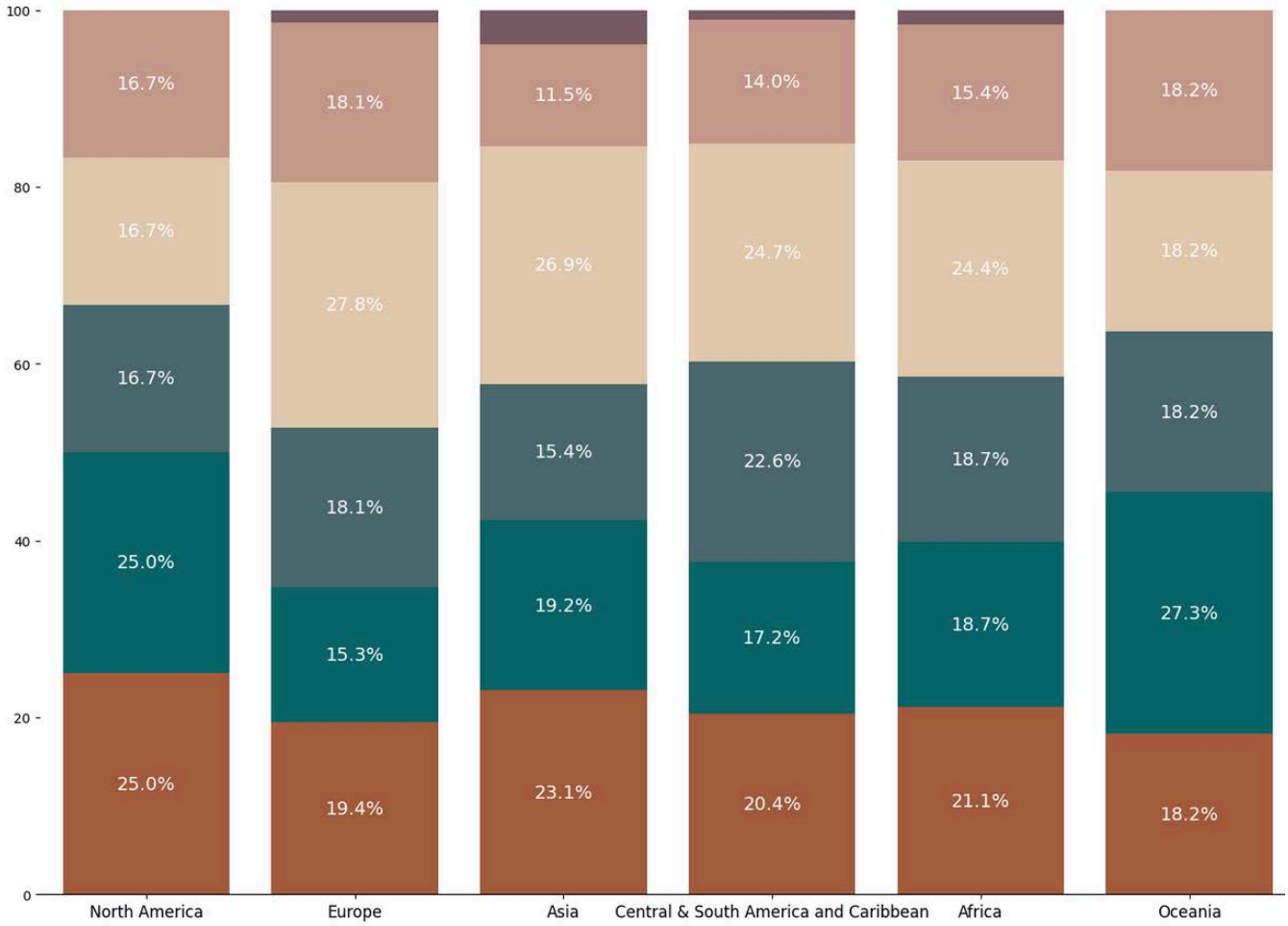
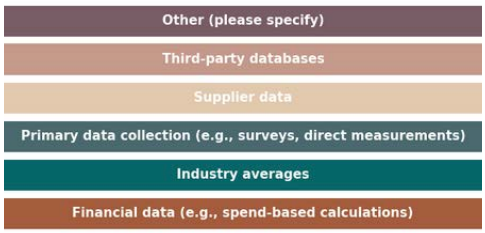


Figure 9. Data Sources for Scope 3 Measurement (multiple response)

This matters because financial and industry-average methods that North America is relying on provide broad comparability but are insufficient for accurately estimating emissions and risk overlooking real emission reductions at the supplier level. One of the main challenges with financial-based, industry-average methods is that they prioritize cost over actual emissions, which disincentivizes investments in sustainability.



For example, if a company purchases a more sustainable product at a higher cost, its reported emissions may actually rise, even though its true environmental impact decreases[6]. Companies that integrate supplier data are better positioned to capture progress, target interventions, and manage risks across their value chains.

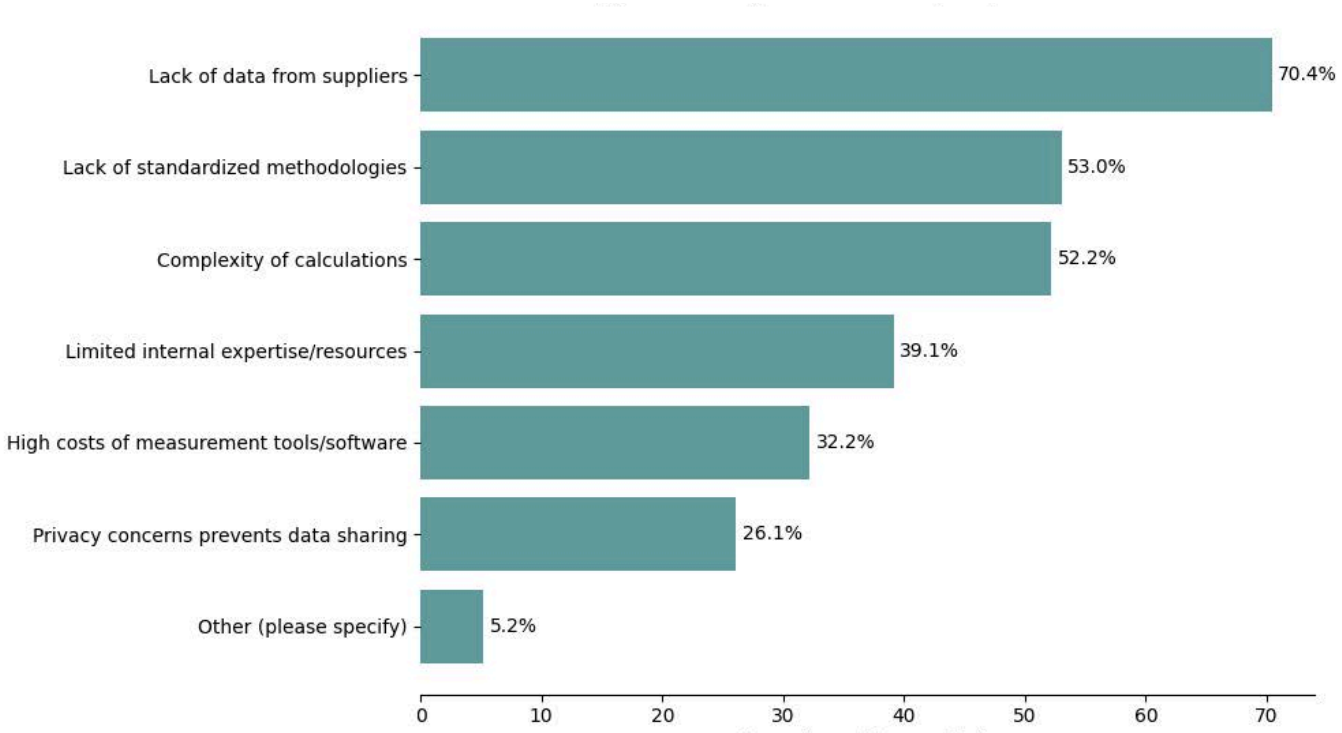


Figure 10. Top Challenges in Measuring Scope 3 Emissions (multiple response)

Challenges in measuring Scope 3 emissions

The single biggest obstacle to Scope 3 measurement is supplier data availability, or lack thereof, reported by about 70% of respondents (see Figure 10). Without access to activity-level or product-specific data, even motivated businesses struggle to calculate accurate emissions. Two methodological challenges follow closely: the first is the lack of standardized methodologies (~53%), and the second is the inherent complexity of calculations (~52%). This highlights how fragmented the guidance is and complicates the accounting process. Limited internal expertise (~39%), high software/tool costs (~32%), and data privacy concerns (~26%) further compound the problem, all of which are capability barriers.

Regional differences (see Figure 11) reflect varying needs. While supplier data is the largest category for all regions, European companies report more challenges with methodology complexity and tool costs, while North American businesses highlight resource gaps and data-sharing concerns. Supplier data gaps and a lack of standardized methods remain major issues in both regions. These results highlight that achieving credible Scope 3 measurement requires more than business-level commitment. A clear need for industry-wide collaboration on emissions accounting standardization, better digital tools, and stronger supplier engagement to make Scope 3 accounting credible and scalable.

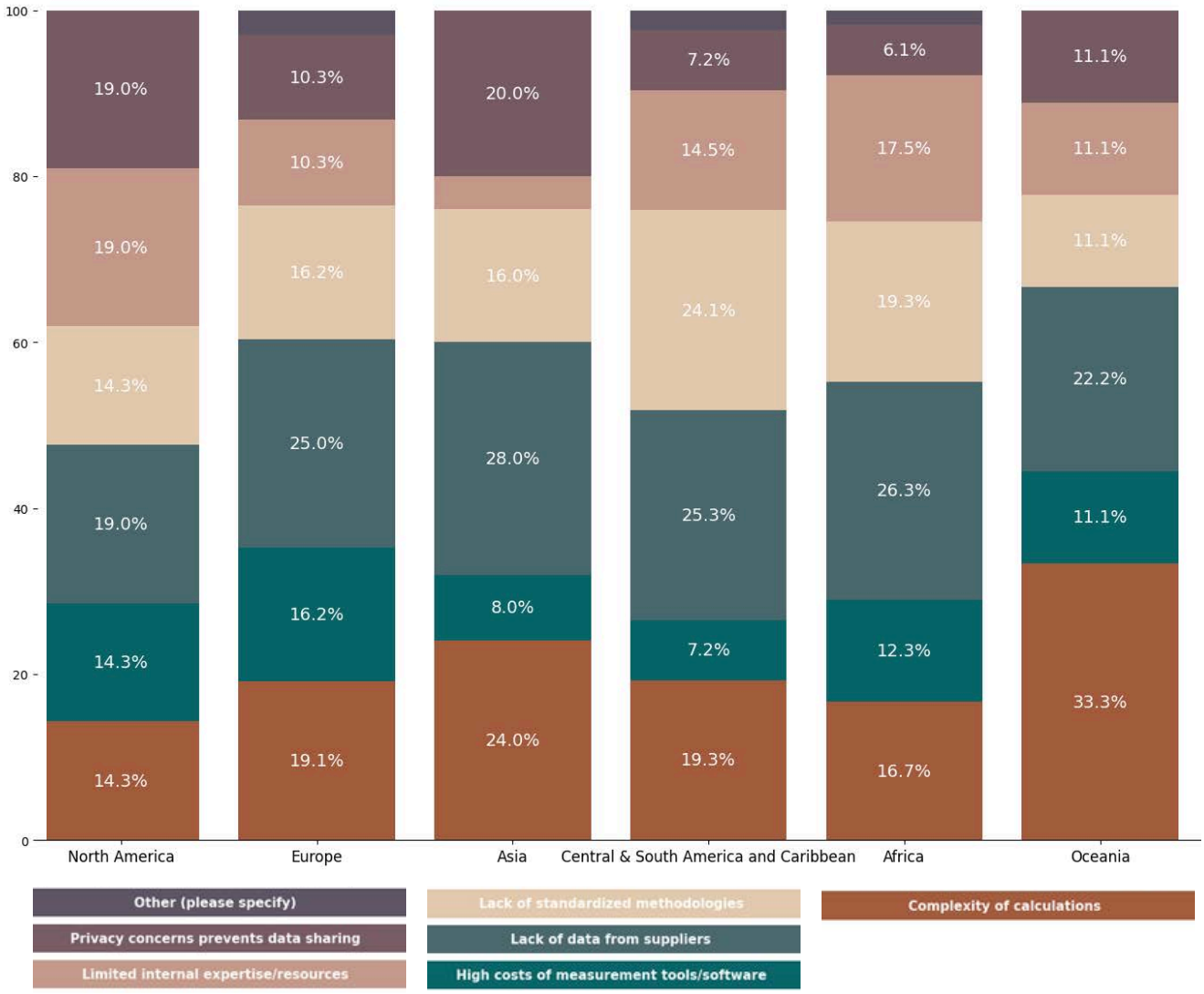


Figure 11. Regional Differences in Challenges Measuring Scope 3 Emissions (multiple response)

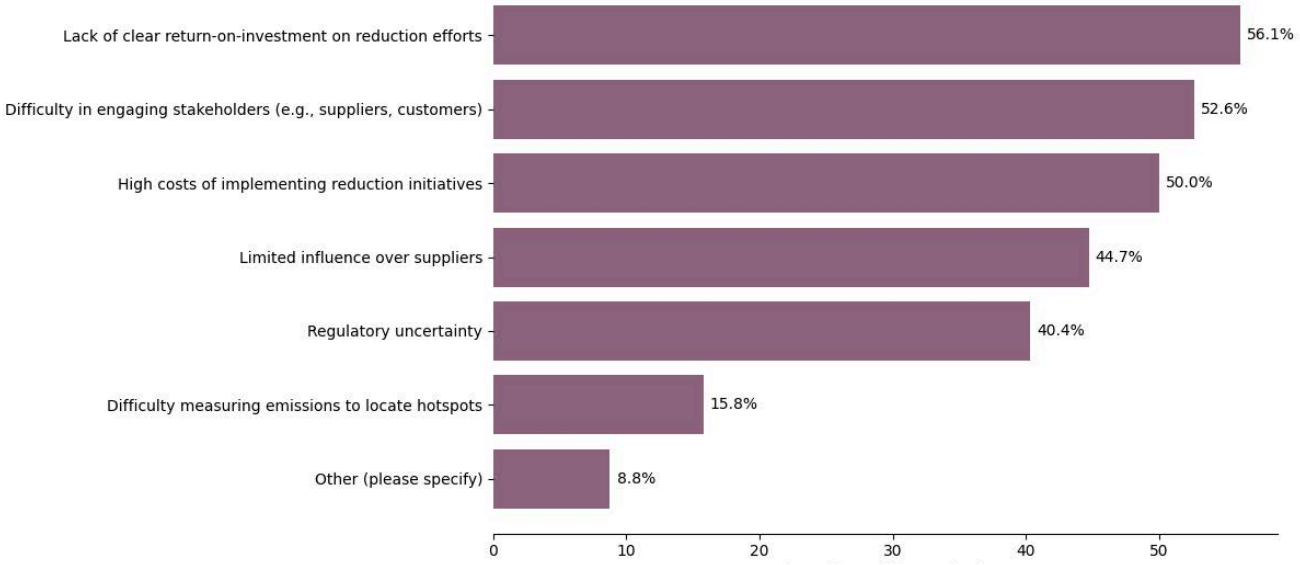


Figure 12. Biggest Challenges in Reducing Scope 3 Emissions (multiple response)

Challenges in Reducing Scope 3 Emissions

Measuring Scope 3 is only the first step—reducing it is often challenging. The biggest hurdle is the lack of a clear business case: 56% of respondents cited unclear ROI from reduction efforts (see Figure 12). The challenge of including stakeholders whose activities significantly impact Scope 3 outcomes, such as suppliers, customers, and logistics partners, comes in second (~52%). Followed closely by high implementation costs (50%) and little influence on suppliers (~44%): businesses face costs and accountability but often feel like they lack the power to significantly affect upstream change. Planning risk is increased by regulatory uncertainty (~40%), which discourages investment in long-term interventions. Only approximately ~15% of businesses cite difficulty in identifying emissions hotspots, suggesting that most know where their emissions are concentrated but struggle to rally partners and justify the necessary investments. Across the different regions, they are reporting similar challenges.

56% of firms cite unclear ROI as a barrier, highlighting the persistent tension between motivation and financial justification.

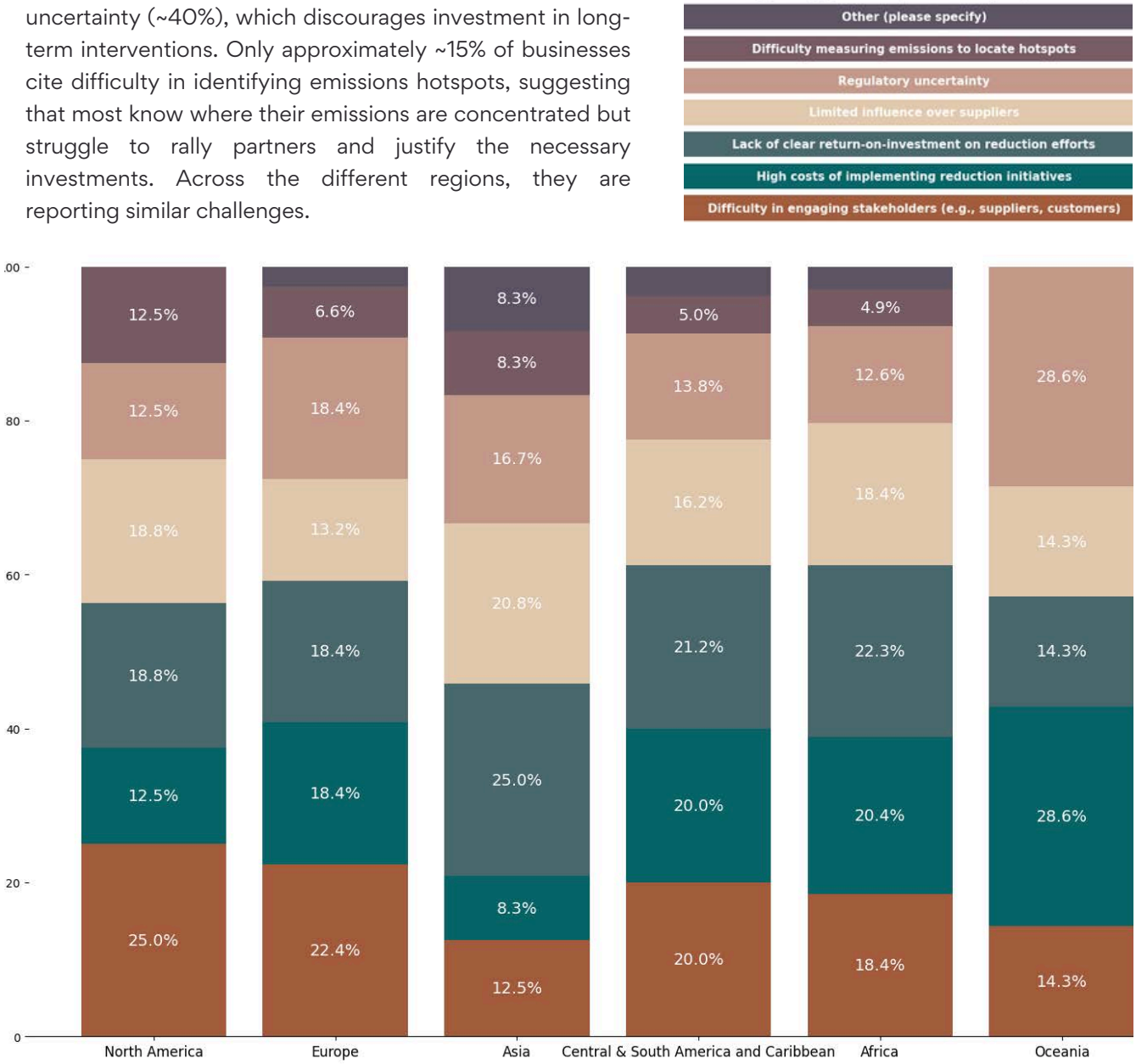


Figure 13. Regional Differences in Challenges Reducing Scope 3 Emissions (multiple response)

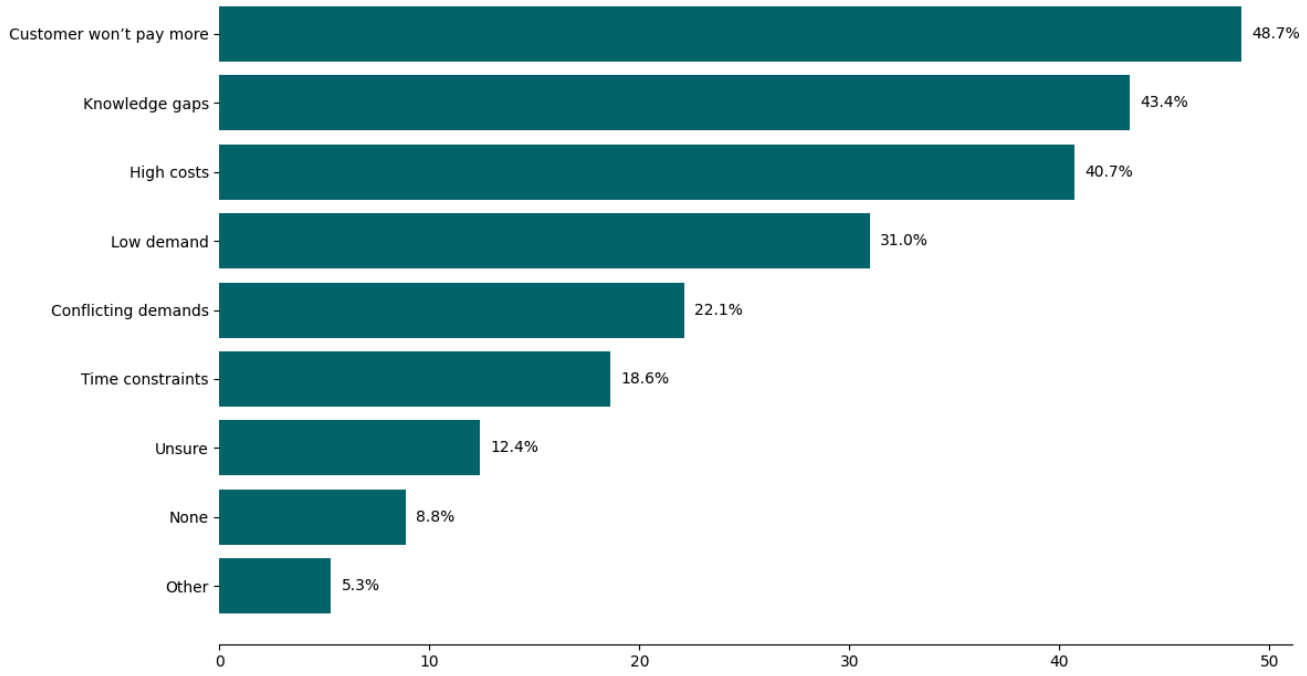


Figure 14. Barriers to Reducing Emissions Among SMEs (multiple response)

Although most companies claim to have identified their emissions "hotspots," turning that knowledge into action remains constrained by economic and governance challenges. Small and medium-sized enterprises (SMEs) face distinct challenges in advancing sustainability. Nearly half (~49%) anticipate that their major corporate customers will be unwilling to pay a premium for more sustainable products, making it difficult to justify the additional expense. Knowledge gaps (~43%) are another major hurdle, as many SMEs remain uncertain about what steps to take, which standards to follow, or how to measure benefits. A weak business case is further undermined by high costs (~40%) and low demand (~31%); investments appear risky when customers are not asking for, or willing to co-fund, greener options. Mid-tier hurdles such as conflicting demands (~22%) and time constraints (~19%) reflect the limited bandwidth of small teams juggling multiple priorities. At the same time, a notable share of SMEs reports no barriers (~9%) or are unsure (~12%), suggesting a lack of awareness about how emissions regulations may affect their business. For many, the challenge is less about intent and more about feasibility, economic constraints, information gaps, and limited capacity make it difficult to allocate scarce resources to decarbonization without clear guidance or price premiums. Ultimately, without large corporations supporting decarbonization or incentivizing their SME suppliers to cut emissions, meaningful Scope 3 reductions will remain a distant goal.

Decarbonization Levers to Reduce Scope 3: Supplier Engagement

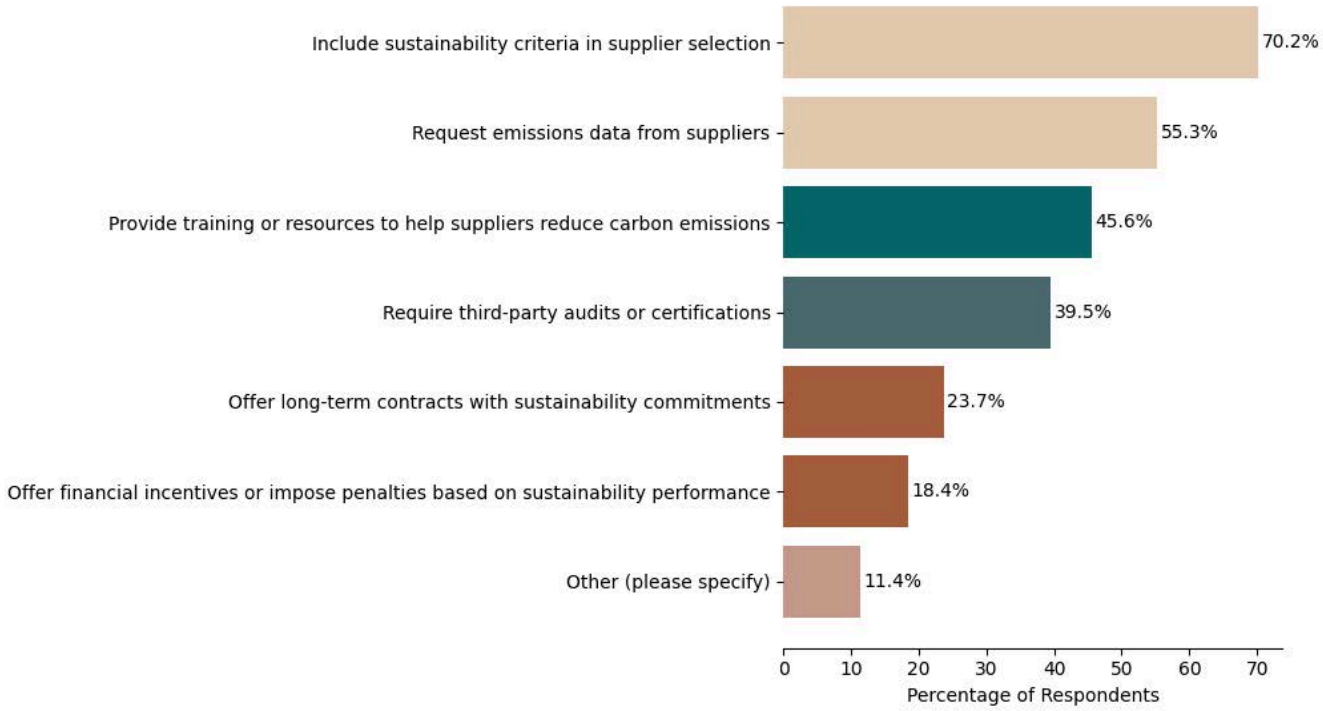


Figure 15. Ways Companies Engage with Suppliers to Reduce Scope 3 Emissions (multiple response)

Engaging suppliers is a critical lever for reducing Scope 3 emissions, and companies employ a mix of approaches that generally fall into four categories:

Commercial Mechanisms: long-term contracts with sustainability commitments; financial incentives or penalties tied to performance

Sustainable Sourcing: including sustainability criteria in supplier selection; requesting emissions data

Capability-Building: providing training or resources to help suppliers cut emissions

Verification & Compliance: requiring third-party audits or certifications

Foundational procurement levers are the most common, which includes sustainability in supplier selection (~70%) and requesting emissions data from suppliers (~55%), as you can see in Figure 15. The commercial mechanisms lever is relatively underutilized (~42%), which is powerful for locking in change but is used by a smaller share of businesses, whereas the capability-building and assurance levers are used moderately. Regional differences are notable (see Figure 16). North American organizations spread their efforts across selection criteria, data requests, and training, while European companies lean more on audits, certifications, and supplier capacity building. Commercial mechanisms like financial incentives or long-term contracts remain underused in both regions, despite their potential to drive lasting change.

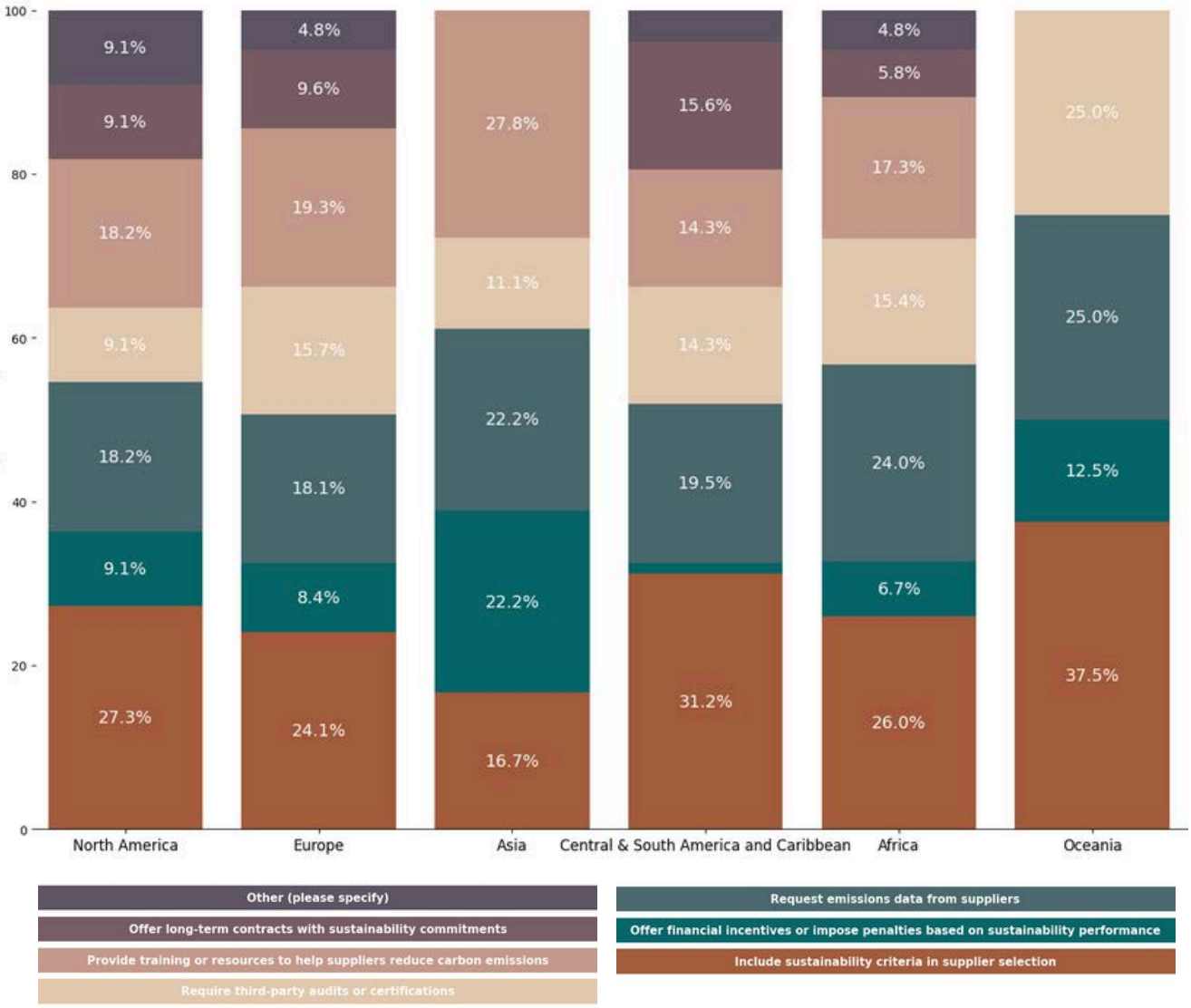


Figure 16. Regional Breakdown of Ways Companies Engage with Suppliers to Reduce Scope 3 Emissions (multiple response)

Industry Collaborations

Collaboration across industries is emerging as a powerful way to decarbonize, with companies working together to source sustainable inputs and create uniform standards. Industry partnerships help to progress Scope 3 decarbonization by relieving suppliers of the stress of handling numerous, conflicting requests. SteelZero[2], for instance, encourages steelmakers to invest in cleaner production by uniting purchasers such as Maersk and Volvo Cars to pledge to use 50% low-emission steel by 2030 and 100% net-zero steel by 2050. Similar to this, RE100[3] brings together hundreds of businesses to source all of their electricity from renewable sources, generating a sizable and steady demand that aids in the development of new clean power and the decarbonization of suppliers. As a result, by pooling demand, standardizing practices, and exchanging non-proprietary knowledge, industry partnerships strengthen Scope 3 decarbonization initiatives. Figure 17 shows the variety of collaborations that businesses engage in. The most prevalent are sustainability coalitions (48.8%), followed by joint supplier programs (31.2%). A significant number of respondents are unclear or uninvolved, indicating inadequate awareness and participation.

Regional differences again appear: European firms report slightly higher involvement in coalitions and joint supplier programs (42.3%) compared to North American firms (35.7%).

In North America, firms rely more on cross-sector alliances (21.4%), and a similar share (21.4%) report not participating in any initiatives. (see Figure 18).

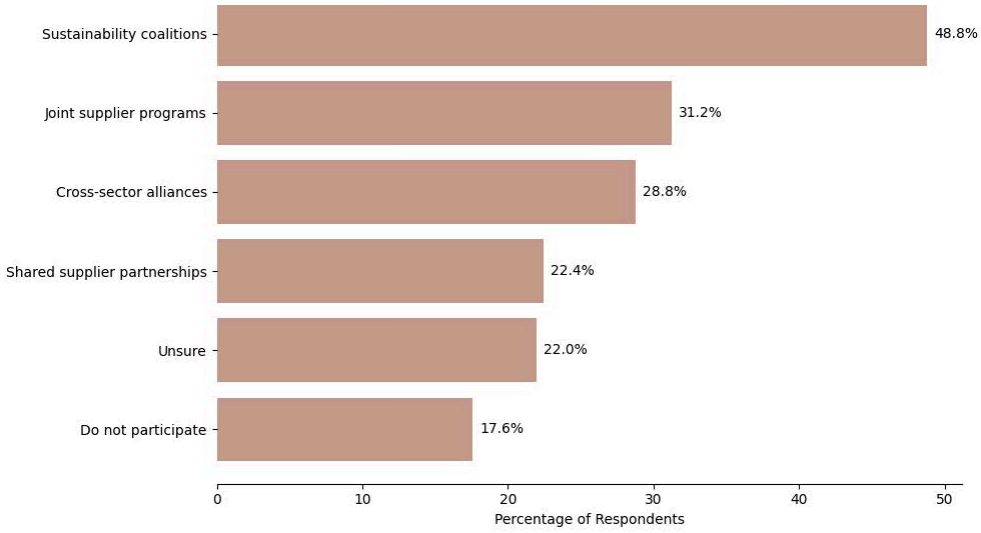


Figure 17. Participation in Industry Collaborations (multiple response)

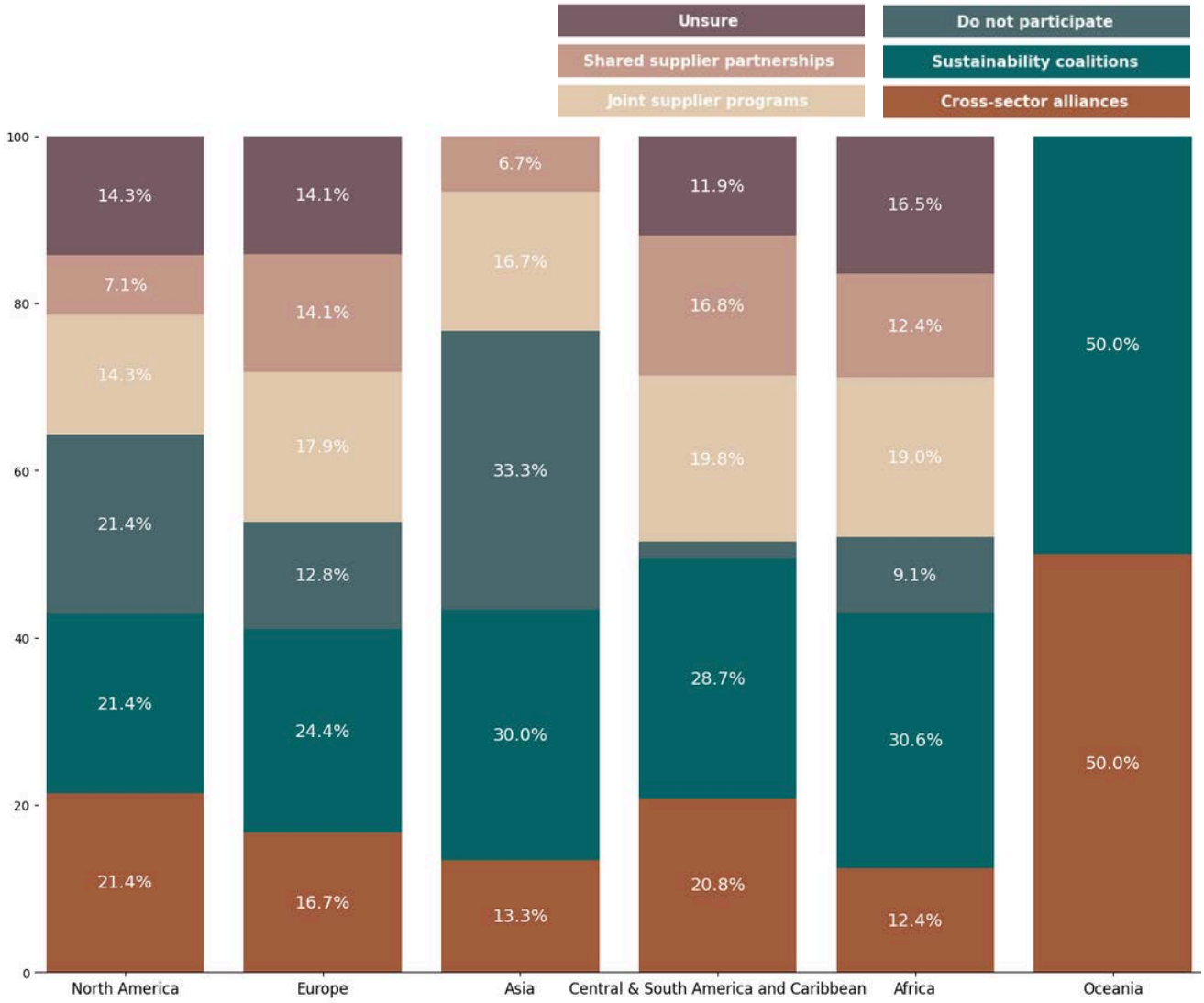


Figure 18. Regional Breakdown in Participation in Industry Collaborations (multiple response)

Industry collaboration pays off.

80% of participants report gains in emissions data quality, supplier alignment, shared expertise, cost efficiencies, and policy influence.

When organizations collaborate, they unlock multiple advantages that strengthen both execution and economics. As illustrated in Figure 19, out of the companies that do participate in industry collaborations, the most commonly reported benefits include stronger supplier engagement, better alignment on sustainability goals, and enhanced access to emissions data and reporting frameworks, together cited by nearly four out of five respondents (87%). In addition, many organizations highlight gains from shared resources and expertise, as well as direct cost savings achieved through joint sustainability investments (64.2%). Nearly half of the companies also report improved regulatory compliance and greater influence on policy (46.3%).

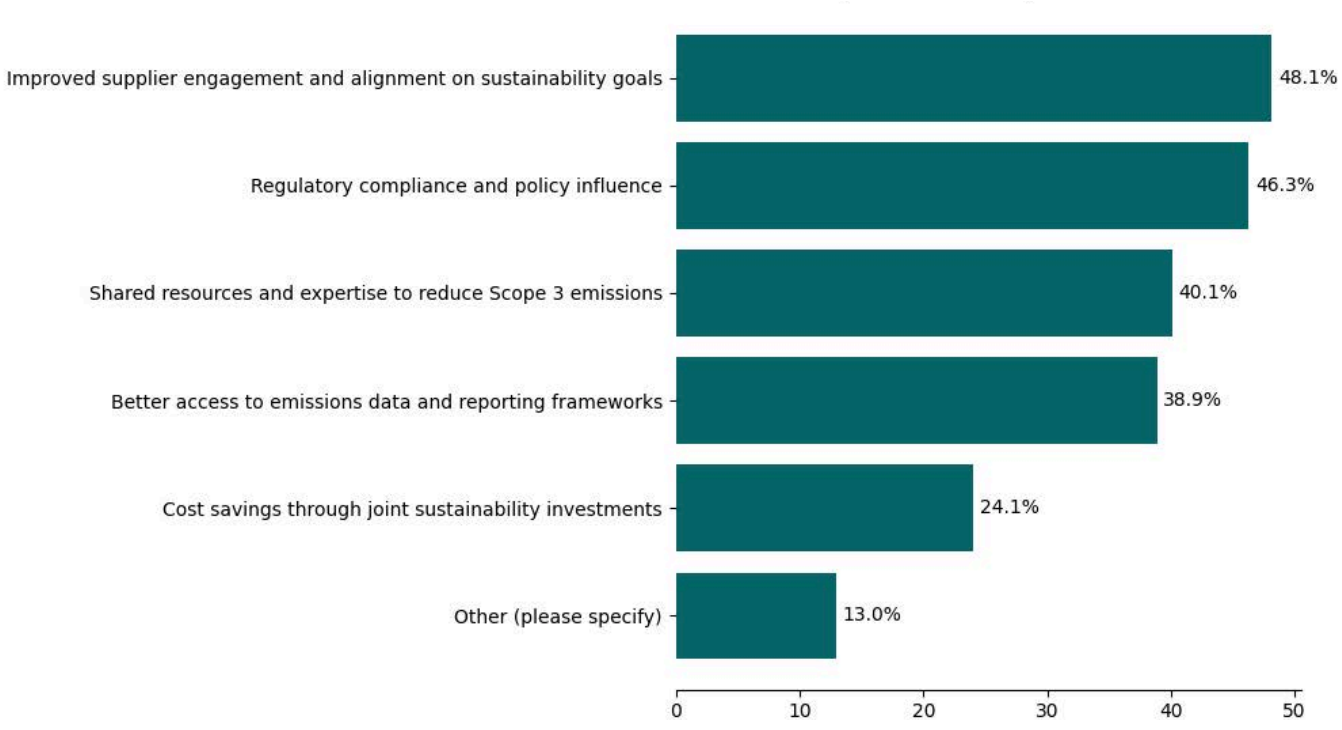


Figure 19. Benefits Gained From Participating in Industry Collaborations (multiple response)

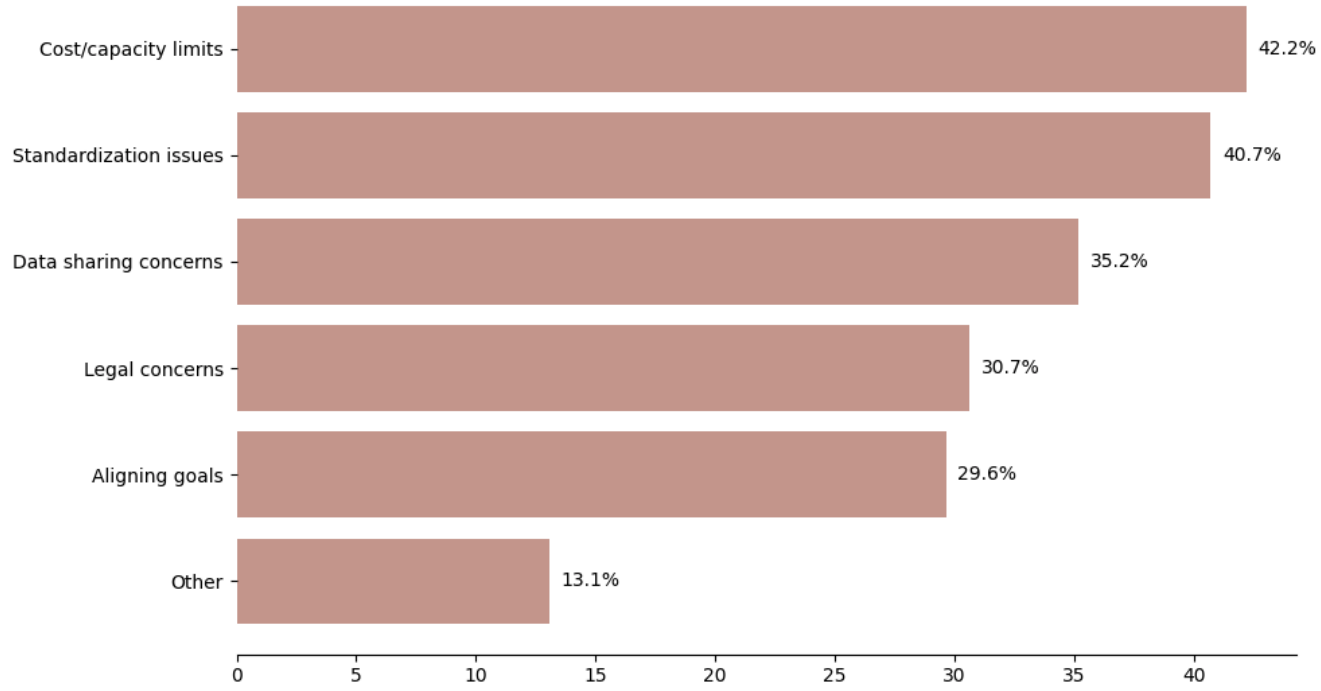
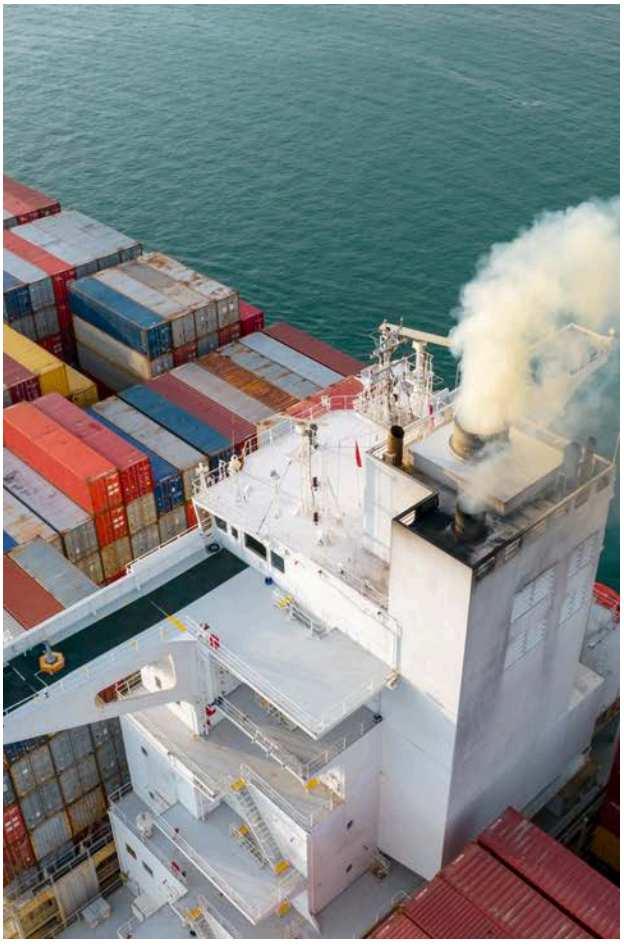


Figure 20. Challenges That Limit Industry Collaborations (multiple response)



Therefore, the benefits of collaboration are clear: improved emissions data, better supplier alignment, shared expertise, cost savings, and policy influence. However, there can be several barriers constraining deeper or broader collaboration that should be noted. Organizations face a mix of practical and coordination hurdles when collaborating. The top barriers include cost and resource constraints, standardization issues, data-sharing concerns, and differences in priorities (see Figures 20 and 21).

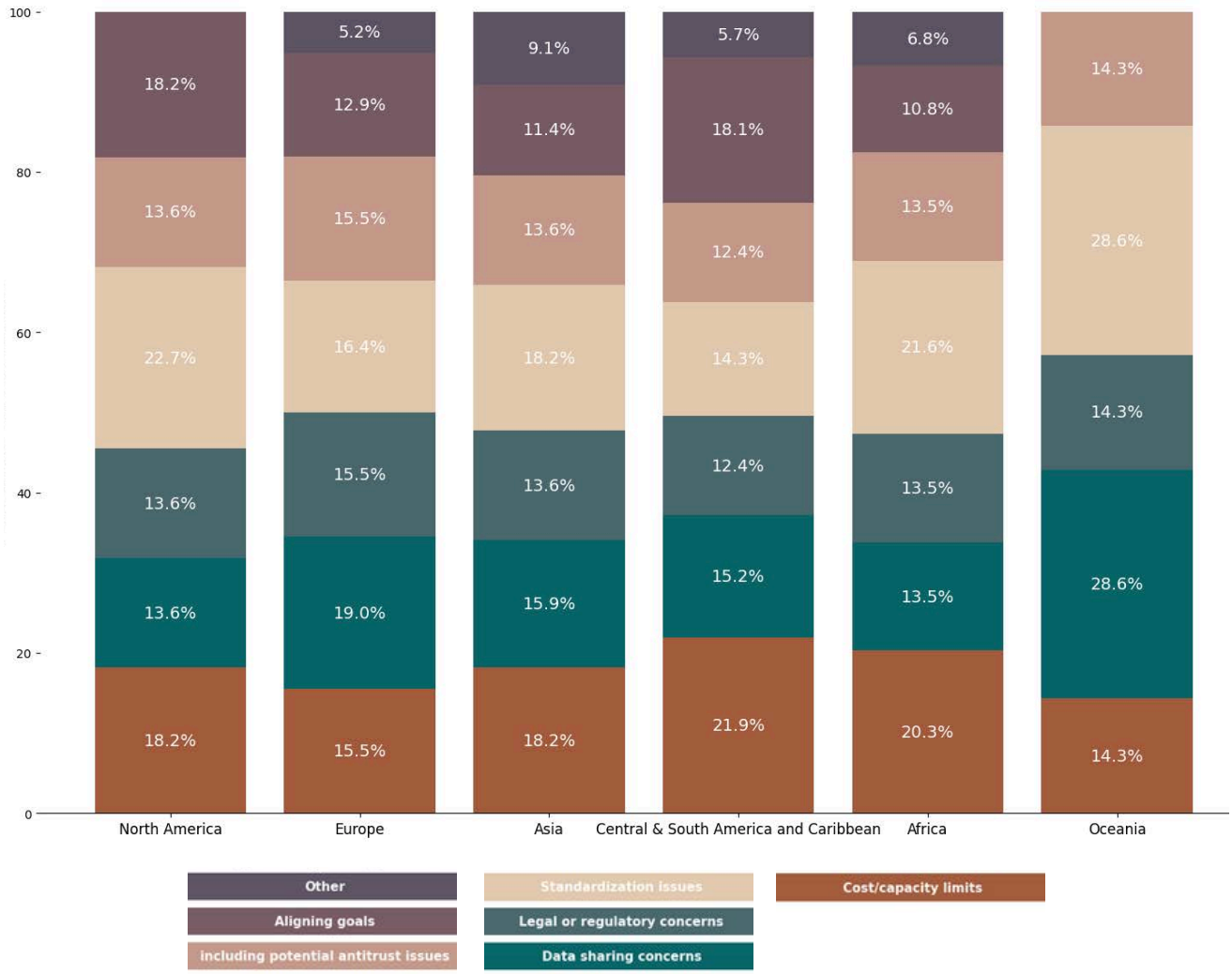
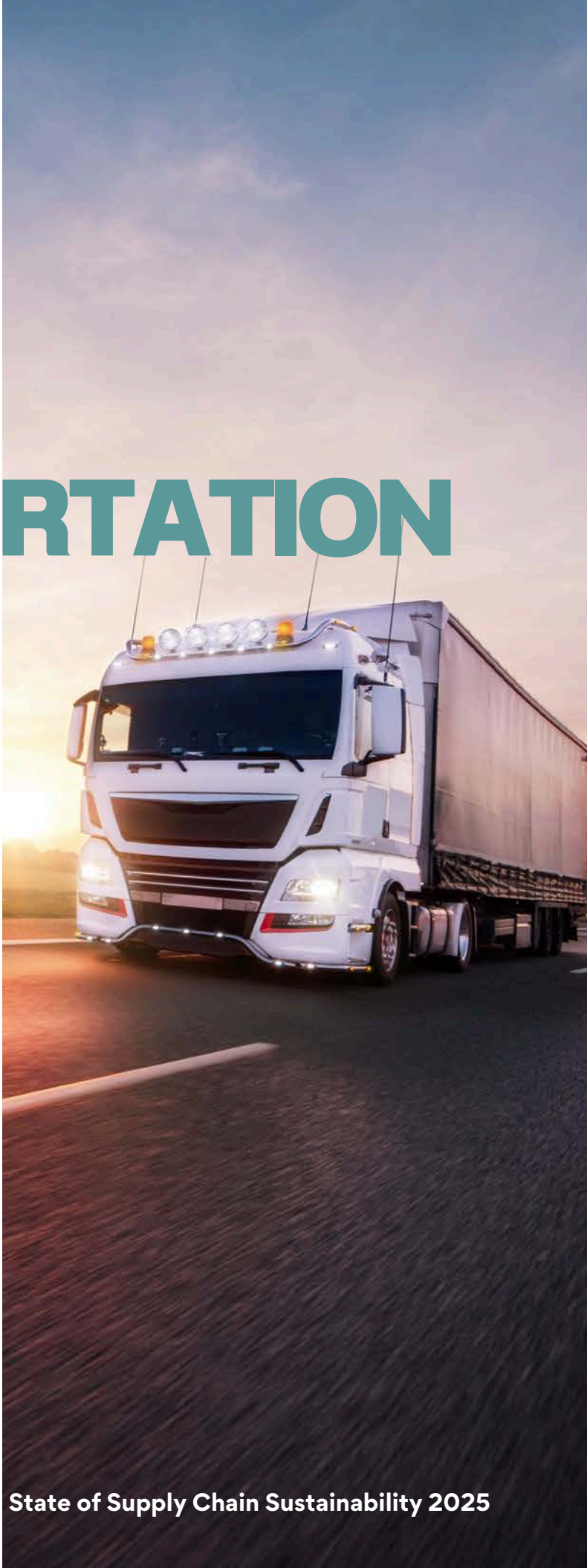


Figure 21. Regional Difference in Challenges That Limit Industry Collaborations (multiple response)

Scope 3 remains the most material yet most difficult part of corporate emissions management. Companies are advancing in measurement, but supplier data gaps, methodological complexity, and limited resources continue to slow progress. While procurement levers and industry collaborations are beginning to drive engagement, lasting reductions will require clearer standards, stronger supplier partnerships, and collective action to turn measurement into meaningful decarbonization. Within Scope 3 reporting, transportation consistently emerges as one of the largest contributors to emissions, often representing the biggest categories for many companies. Because freight movement is both essential to global supply chains and a major driver of carbon intensity, understanding technology pathways, adoption barriers, and strategic priorities in this sector is critical. For this reason, this year's report includes a dedicated transportation section to assess how organizations are approaching decarbonization of this high-impact area.

TRANSPORTATION SECTOR



Insights from the Freight Transportation Sector and Pathways to Decarbonize

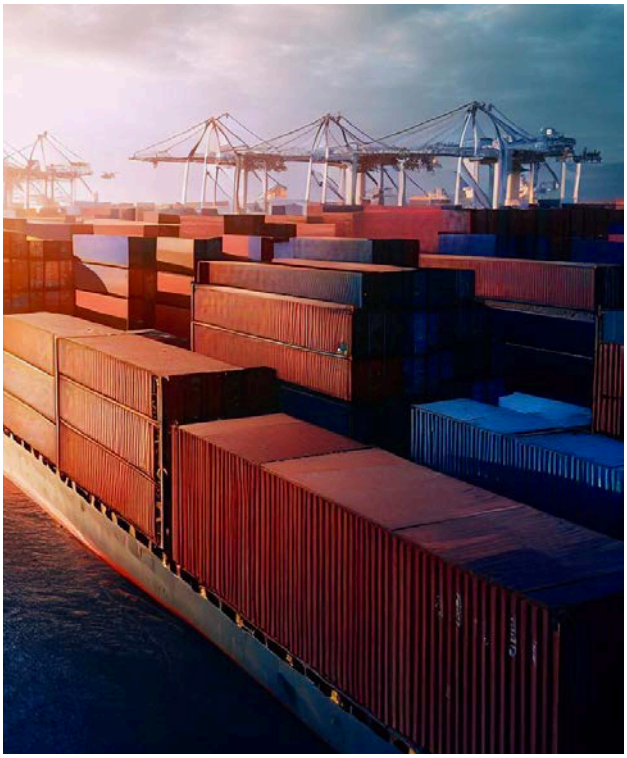
This year, the State of Supply Chain Sustainability study included a dedicated freight transportation module to gauge technology outlook, adoption hurdles, and strategic priorities in the sector. Freight transportation is often the largest component of Scope 3 emissions because of the reliance on long-distance trucking, extensive distribution networks, and energy-intensive logistics operations, especially in the United States. The sheer volume of goods moved across vast geographies, combined with limited visibility into carrier-level data, makes transportation a dominant category in Scope 3 reporting. The survey assessed the perceived emissions-reduction impact of key technologies in both the short term (1–3 years) and long term (4–10 years), specifically focusing on biofuels, battery-electric, and hydrogen. It also asked respondents to rank their decarbonization approaches by importance. Since freight is a major source of Scope 3 emissions, tracking technology expectations, adoption barriers, and strategy priorities shows where decarbonization is actually feasible in the next 1–10 years.

These insights, in turn, guide investment, policy, and supplier programs toward the highest-impact levers and help remove the specific constraints slowing the scale of these technologies.

To explore how businesses view the freight decarbonization pathway, our survey asked respondents to assess the expected emissions-reduction impact of biofuels, battery-electric, and hydrogen solutions in the short term (1–3 years) and long term (4–10 years). Across the three options, biofuels are viewed as the most immediately- useful lever for freight decarbonization, with many respondents already seeing moderate-to-high short-term impact and confidence rising further over the long term as supply and standards mature. While this is the easiest transition for an older fleet to start using, it makes sense that it has the highest short-term impact.

Hydrogen emerges as a long-term bet, particularly for heavy, long-haul transport, with expected impact building over the next 4–10 years.

Battery-electric solutions are typically perceived as high impact where duty cycles fit, urban and regional routes with depot or corridor charging, so expectations are strong in the near term and improve as vehicle ranges, charging networks, and total cost of ownership advance. Hydrogen, by contrast, is seen as a longer-term play geared to heavy, long-haul, and high-utilization segments where fast refueling and high energy density matter; its perceived impact grows mainly over the 4–10-year window, contingent on affordable green hydrogen, refueling build-out, and vehicle cost declines. In sum, biofuels offer a broad near-term impact, batteries deliver strong near-term results on suitable routes, and hydrogen holds longer-term promise for heavy-duty cycles.



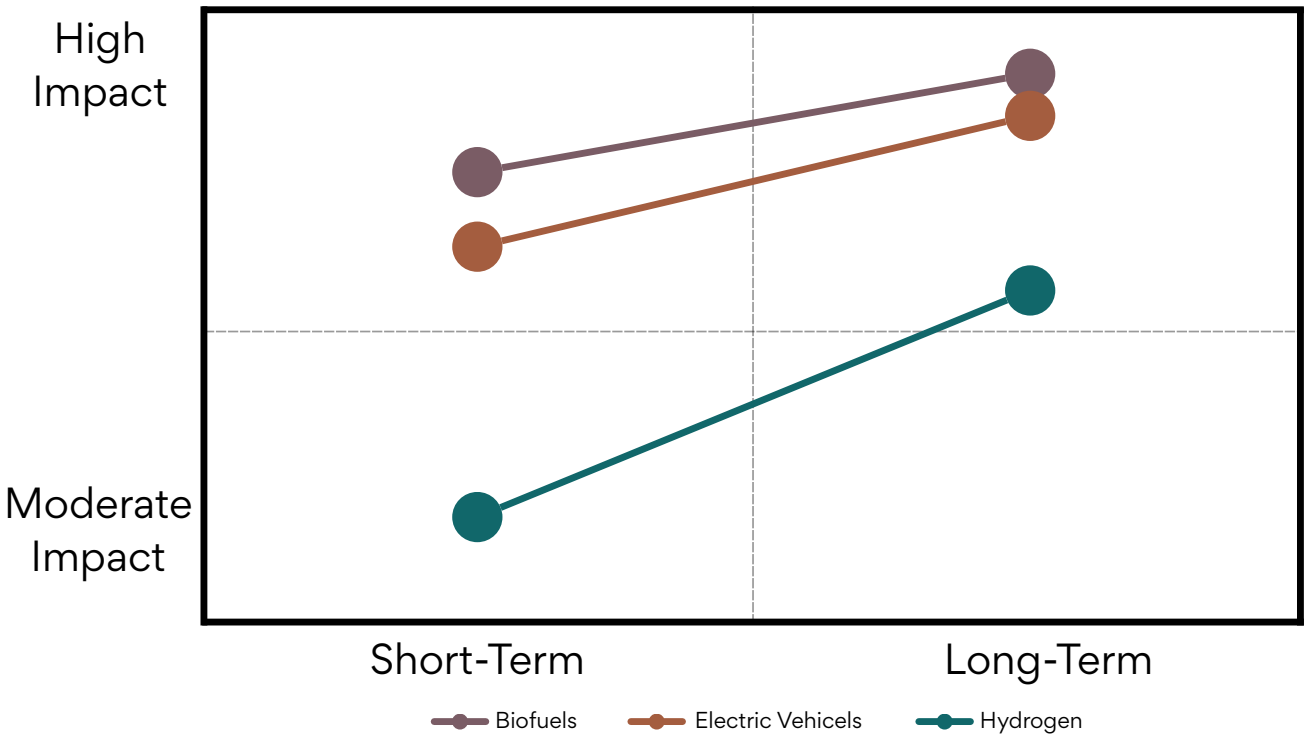
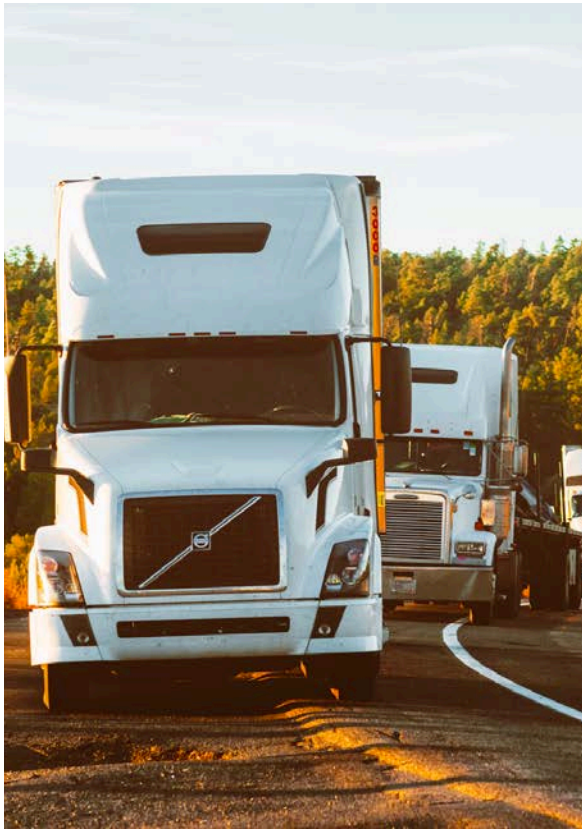


Figure 22: The Significance of Biofuels, Electric Vehicles, and Hydrogen In Reducing Emissions in the Short-Term (1-3 years) and Long-Term (4-10 years)

Key Enablers and Barriers for Scaling Sustainable Freight Solutions

Having identified the technologies perceived to offer the greatest emissions-reduction potential, our survey next examined the barriers companies face in implementing them. Respondents highlight infrastructure and economics as the main challenges to scaling cleaner freight, with limited charging and refueling networks at the top of the list, followed by high upfront costs and range or operational limitations that complicate real-world duty cycles. Policy gaps and uncertain incentives create additional friction, while concerns about technology readiness, reliability, return on investment, and some cultural resistance reduce investment interest. The path forward depends on building the infrastructure, lowering vehicle and fuel costs, and strengthening policy support.



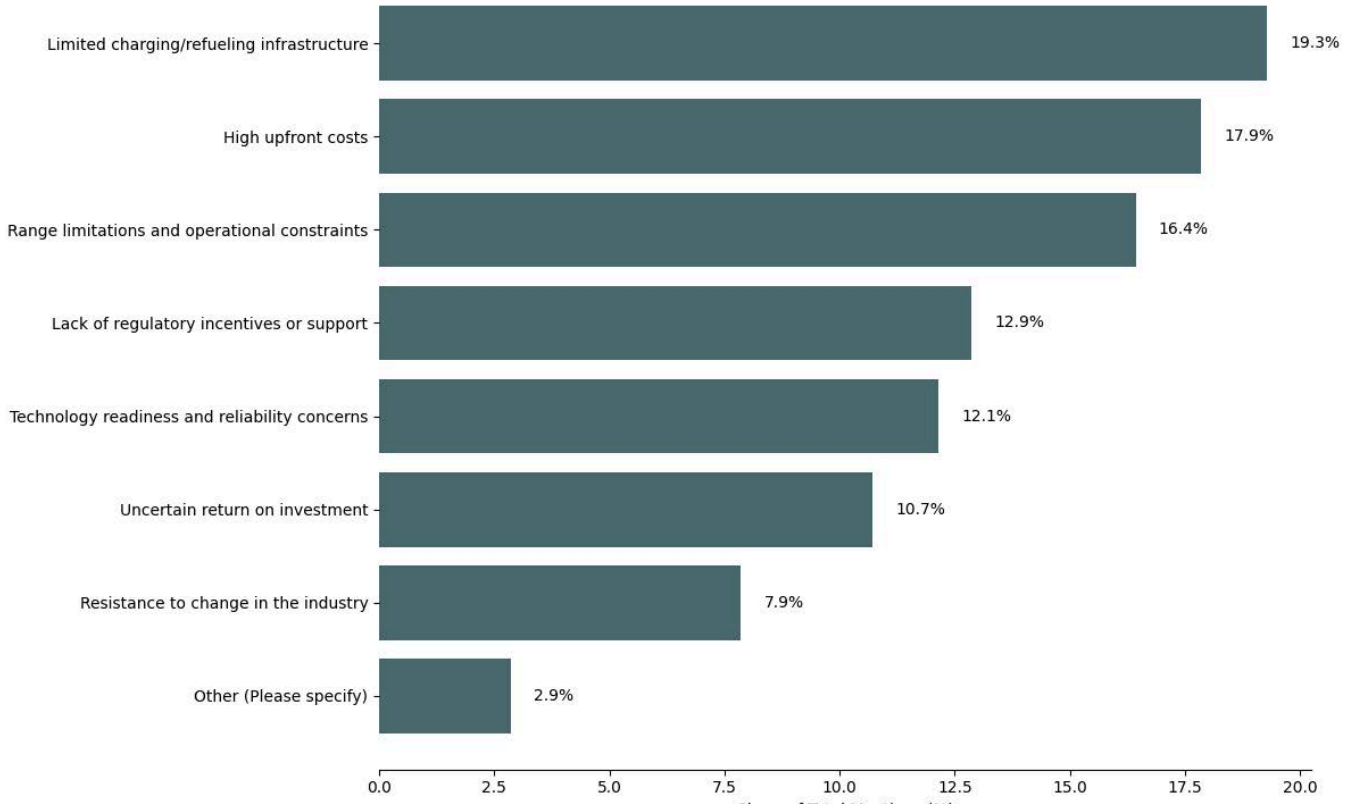


Figure 23. Hurdles in the Adoption of Lower-Emission Technologies in the Freight Transportation Sector (multiple response)

Policy uncertainty and technology doubts slow adoption, with gaps in incentives, reliability concerns, and cultural resistance holding back investment.

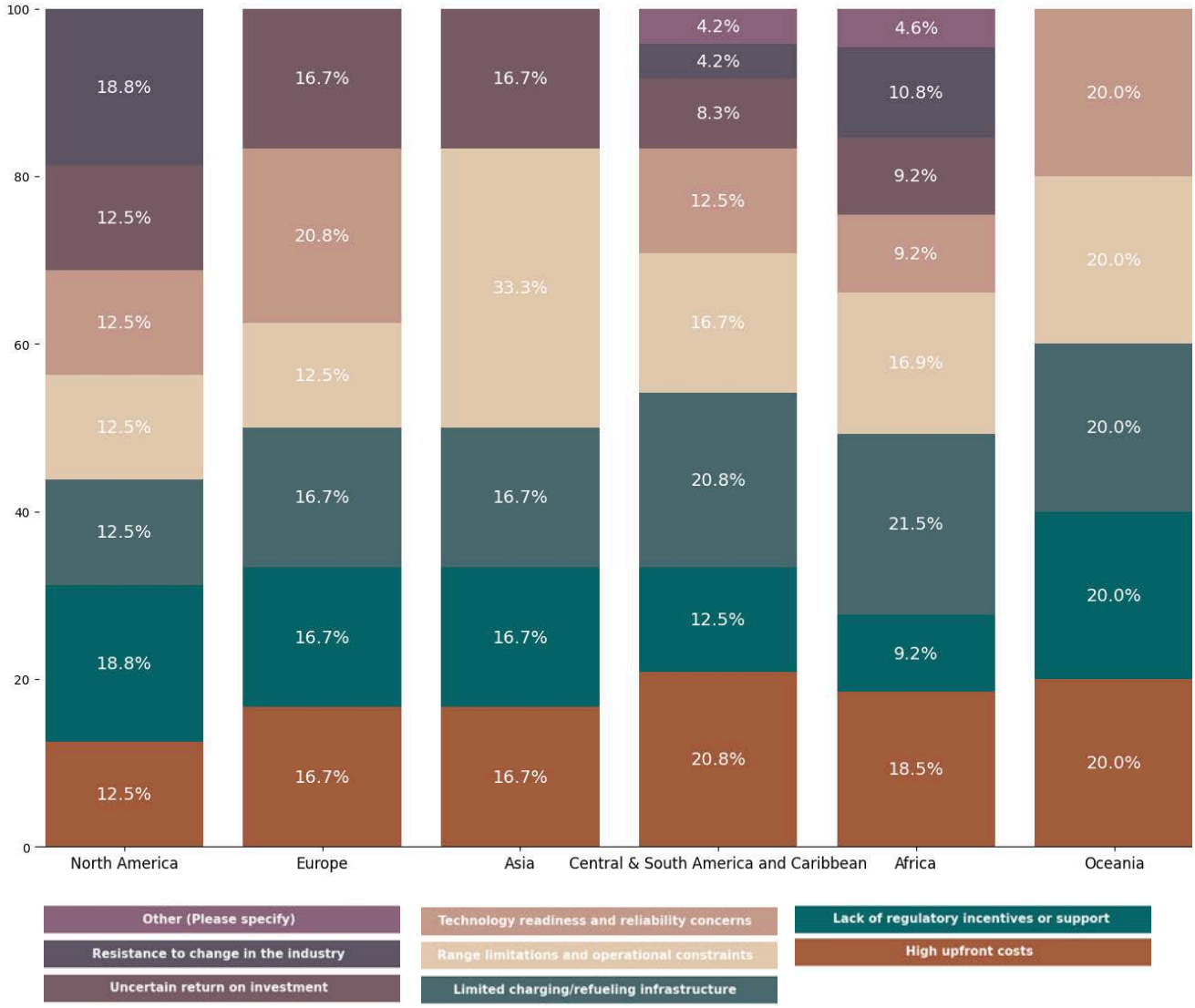


Figure 24. Regional Hurdles in the Adoption of Lower-Emission Technologies in the Freight Transportation Sector (multiple response)

As shown in Figure 24, regional comparisons reveal that North American respondents cite lack of regulatory incentives (18.8%) and industry resistance to change (18.8%) as primary barriers. Interestingly, in Europe, no one listed resistance to change as a barrier, which indicates that changes in the transportation industry are anticipated and accepted as necessary in the near future.

In Europe, respondents place roughly equal weight on high upfront costs, lack of regulatory support, technology readiness and reliability issues, and uncertain return on investment—reflecting a broader set of concerns that extend beyond infrastructure. This indicates that while financial and cultural factors are dominant in North America, European stakeholders face a more diverse set of obstacles. The differences showcase the need for different strategies to increase adoption: tackling costs and industry mindset in North America and supporting technology readiness, reliability, regulatory incentives, and investment certainty in Europe.

Prioritizing Strategies for Freight Decarbonization

Businesses adopt a tiered approach to cutting freight emissions, prioritizing quick, low-barrier actions before considering longer-term or market-based strategies. Figure 25 illustrates how respondents rank four strategies, operational efficiency, investment in low-emission assets, carbon offsets, and emissions trading—in terms of their importance for lowering freight transportation emissions, with 1 being the most important, and 4 being the lowest. Operational efficiency (such as route optimization, load consolidation, and fuel management) is most often ranked as the top strategy, highlighting its immediate cost savings and ease of implementation. Investing in low-emission assets (for example, electric or alternative-fuel vehicles) usually comes in second, indicating selective but increasing capital investment. Carbon offsets and emissions trading tend to be ranked lower, suggesting they are secondary measures rather than primary drivers for freight decarbonization.

When evaluated together, the findings from this year's freight transportation section highlight both the urgency and complexity of decarbonizing a sector that remains central to Scope 3 emissions. Companies see biofuels as the most practical near-term lever, with battery-electric solutions gaining traction where operational fit allows, and hydrogen positioned as a longer-horizon bet for heavy-duty applications. Yet technology optimism is tempered by persistent barriers, such as the costs, infrastructure gaps, policy uncertainty, and industry inertia. The strategies companies prioritize today tend to be operational efficiency and selective low-emission asset investments, which shows a pragmatic sequencing of action, where immediate, low-barrier measures build the foundation for scaling transformative technologies. For business leaders, policymakers, and investors, the path forward will depend on aligning incentives, infrastructure, and capital to accelerate adoption, while recognizing that decarbonization progress will emerge unevenly across markets and modes.

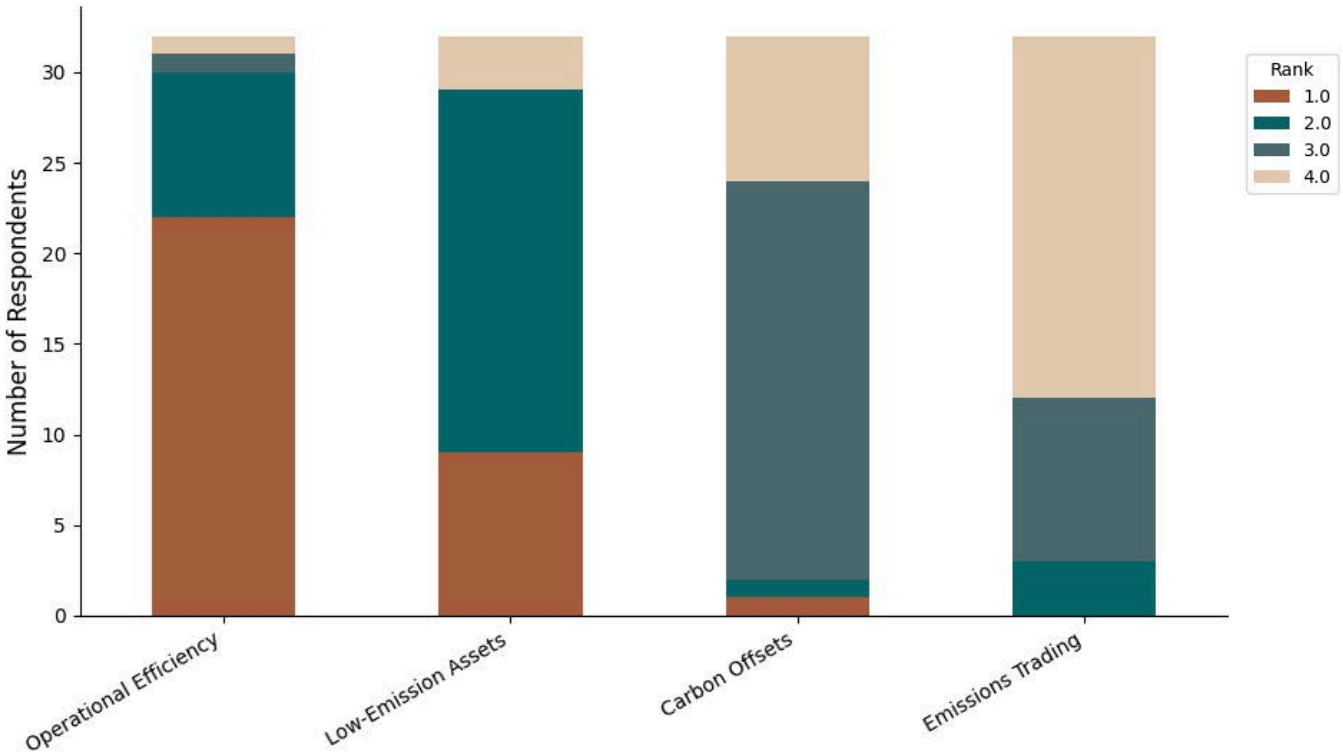


Figure 25. Strategies Ranked by Importance for Reducing Emissions in Freight Transportation, with 1 being the most important and 4 the least important.

CONCLUSION & NEXT STEPS

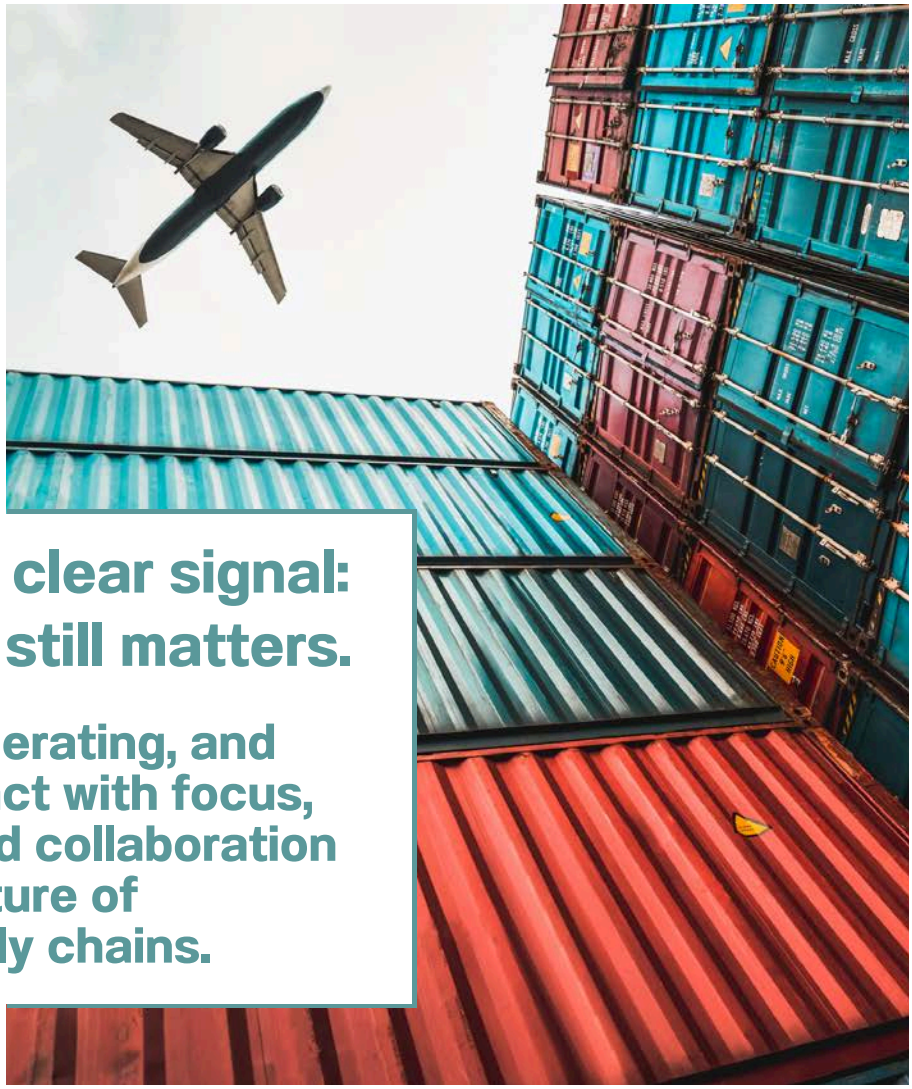
The 2025 State of Supply Chain Sustainability report confirms what many leaders already sense: sustainability is no longer peripheral to supply chain strategy, it is central to competitiveness, resilience, and long-term growth. Based on a global survey of 1200+ companies across sectors, three implications emerged. Despite regulatory uncertainty, economic pressures, and operational challenges, companies remain committed to advancing sustainability, often driven as much by investors, boards, and customers as by government policy. Importantly, businesses that make their sustainability goals explicit are far more likely to embed them into daily decisions and invest in high-impact initiatives, underscoring that transparency and effective execution are key enablers of meaningful progress.

Scope 3 emissions remain the defining challenge. The single biggest obstacle to Scope 3 measurement is supplier data availability, or lack thereof. Supply chains are complex, and tracking the emissions requires data-intensive work and is heavily dependent on supplier collaboration, yet this also represents the greatest opportunity for impact. Without access to activity-level or product-specific data, even motivated businesses struggle to calculate accurate emissions. Companies are beginning to move beyond spreadsheets toward more sophisticated tools, closer supplier engagement, and industry collaborations that align standards and create shared momentum. Industry collaborations via research consortia are a key piece for coping with this challenge in a more unified way, ensuring that different entities in the supply chain (i.e. upstream and downstream) start working together, making it not only possible to measure and track Scope 3 emissions, but shaping the future with actions that lay the groundwork for credible, scalable, and impactful Scope 3 emissions management.

Transportation, one of the largest Scope 3 categories, illustrates both the barriers and opportunities ahead. Companies are prioritizing operational efficiency today while investing selectively in low-emission technologies. Biofuels provide near-term impact, battery-electric is gaining traction where operationally feasible, and hydrogen holds promise for the longer term. The diversity of approaches underscores a pragmatic sequencing of action: solve what can be solved now, while preparing for the breakthroughs of tomorrow.

Above all, this year's findings are optimistic. More than half of businesses report high confidence in meeting their sustainability goals, and those with public commitments and transparent reporting are the most likely to embed sustainability into daily decision-making. Industry collaborations are expanding, digital solutions are maturing, and leaders are increasingly aligning sustainability with value creation.

The path forward will not be uniform across regions or industries, but the path forward is clear. Sustainability is now embedded in business strategy, supply chain management, and investment decisions. By continuing to strengthen supplier partnerships, adopt innovative tools, and collaborate across sectors, companies can not only meet their climate commitments but also unlock new sources of efficiency, resilience, and growth.



2025 sends a clear signal: Sustainability still matters.

Progress is accelerating, and companies that act with focus, transparency, and collaboration will define the future of sustainable supply chains.

APPENDICES

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This project is made possible by the generous efforts of a group of dedicated contributors and collaborators.

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CORRECTIONS

Version 2- Oct 16th, 2025: Updated the key for Figure 24.

Version 3- Oct 28th, 2025: Updated pages 21 and 22 to correct the text on tools and technologies for measurement of Scope 3 emissions to align with Figure 7. Updated colors on page 28.

Version 4- Nov 13th, 2025: Updated pages 12 Methodology typo

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