greenly

The Green Paper on Decarbonization

Energy transition as a lever for technological acceleration

Edito

Ten years after the Paris Agreement, decarbonization has changed in kind. It is no longer merely a political ambition or a reporting exercise; it is becoming an operational infrastructure, embedded at the core of how companies function.

In a world of fragmented regulations, rising requirements, and increasingly complex value chains, one conclusion is hard to escape: the transition will not be linear, nor will it be driven by governments alone. It will hinge on companies' ability to generate, structure, and use carbon data that is reliable, comparable, and actionable.

This shift is fundamentally technological. Much like financial accounting before it, carbon accounting is being industrialized. The rise of platforms, artificial intelligence, and data infrastructures is turning what was once a compliance burden into a strategic control system - and, ultimately, a source of competitive advantage.

This white paper offers a perspective on that transformation. Not as a succession of rules and obligations, but as the emergence of a new economic language - one in which carbon becomes measurable, comparable, and embedded in market decisions.
More importantly, it reflects a deeper shift: the move from commitment to execution. The decade ahead will be defined not by pledges, but by measurable emissions reductions. Delivering on that requires a step change in data precision - moving from aggregated footprints to product-level insights, from self-reported estimates to verifiable metrics. As platforms grow more granular and integrated, carbon data is becoming real-time and decision-ready, enabling companies to allocate capital, redesign supply chains, and act with discipline.

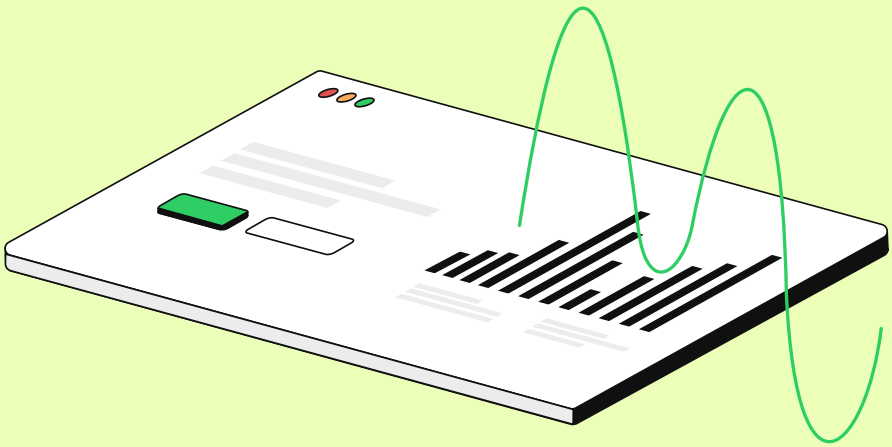
In the end, the transition will not be determined by the ambitions companies declare, but by the tools they deploy - and the precision with which they act.

Alexis Normand

Chief Executive Officer, Greenly

Summary

Ten Years After Paris: From Policy to Industry Standard



The Paris Agreement: Inconsistent Progress

Ten years after the signing of the Paris Agreement, it is time to take stock. The goal is not only to realign our trajectory toward carbon neutrality by 2050 and limit warming to 4°C, but also to build a new operating model that protects climate action from political upheavals.

The ESG backlash is real, though nuanced. The United States is the clearest example, with the Trump administration suspending the SEC's climate disclosure rules, prohibiting federal pension funds from considering ESG criteria, and withdrawing from the Paris Agreement. However, this American shift no longer dictates the global pace.

The European Union is staying the course with a target to reduce net emissions by 90% by 2040. Once enshrined into European Law, this ambition will create irreversible legal obligations for Member States and automatically tighten industrial quotas.

Meanwhile, China is accelerating its own transition to solidify its leadership in green technologies. 2026 marks the start of China's 15th Five-Year Plan (2026-2030), a pivotal period intended to move beyond growth control toward a measurable reduction in coal consumption.

Current geopolitical instability teaches a major lesson: a transition relying solely on government initiatives is too vulnerable to political changes. It must be supported by robust private and civic action. This white paper demonstrates how the private sector can serve as an anchor of stability for decarbonization by moving beyond short-term politics, integrating physical risk into financial reporting, and transforming regulations into competitive advantages.

Politics and business move at different speeds. Mark Carney highlighted this gap in his famous 2015 speech at Lloyd's of London on the "Tragedy of the Horizons". He warned that the worst impacts of climate change would only be felt long after the current generation of politicians, markets, and regulators have moved on. By the time the climate becomes a visible threat to financial stability, it will already be too late to act.

To overcome the pressure of short-term election cycles, business leaders must prioritize long-term investment strategies that span decades. Transforming a factory or a supply chain requires a commitment to long-term planning that aligns capital with the future.

To solve this problem, Carney pointed to a simple management truth: "what is measured can be managed." This is where the private sector comes in: by producing the reliable data and clear planning that governments often struggle to provide, businesses can help markets allocate capital efficiently before the risks become a reality.

Companies no longer face a choice between growth and the climate; instead, they must secure their assets by addressing double materiality. Under the new IFRS S2 (ISSB) standards, climate risks must now be reported with the same accounting rigor as financial statements. This means moving beyond simply tracking carbon footprints to using forward-looking scenario analysis. This rigorous modeling tests how cash flow and enterprise value hold up against different climate futures - whether a managed transition, a disordered one, or a "hot world" scenario. By integrating these variables, companies can turn physical uncertainty into a clear adaptation strategy, protecting their interests far better than they could through basic regulatory compliance.

This white paper calls for a major push to create shared, comprehensive databases. To secure the future, it is no longer enough to measure internal performance. We must build a common data infrastructure that clears up the confusion around Scope 3 emissions and maps physical risks with precise industrial detail. The goal is to shift from estimates to actual, shared data across entire value chains. This is essential if financial markets are to accurately price climate risk and fund resilience.

The Six Myths of the Paris Agreement

Before looking ahead, we need a candid reality check on what the Paris Agreement has actually achieved.

First myth: The transition is already underway.

In reality, fossil fuel emissions rose 0.8% in 2024 to a record 37.4 billion tons. Coal and gas use are still climbing, and global electricity demand has surged by 4.3%. This is being fueled by a perfect storm: rising demand for air conditioning, the shift to electric vehicles, and the massive energy needs of AI-driven data centers.

Second myth: The transition will be painless.

The idea that we can simply swap fossils for clean energy without economic friction is wishful thinking. There will be clear winners - regions and industries that pivot early to hydrogen and low-carbon materials - and clear losers, particularly extractive industries and coal-dependent economies.

Third myth: The Agreement has failed.

This is a matter of perspective. Before 2015, the world was on a path toward warming of 4°C to 5°C. Today, current projections have been lowered to between 2.5°C and 2.8°C. While the 1.5°C target is likely out of reach, the shift in direction is significant. Without the massive growth in solar, wind, and nuclear power over the last five years, emissions would have grown three times faster. In fact, these technologies already prevent 2.6 billion tons of CO_2 annually - roughly 7% of total global emissions. The Agreement didn't spark the transition on its own, but it has prevented uncontrolled climate runaway.

Fourth myth: The Agreement is not binding.

This misunderstands its nature. It is not a punitive treaty, but an institutional framework. Transparency now acts as the sanction: through national inventories, regularly revised NDCs, and a common methodological framework. This is supported by a financial and regulatory ecosystem - including the CSRD, the European Taxonomy, and Science Based Targets - which mandate corporate reporting. The Agreement has transformed carbon accounting into a universal language.

Fifth myth: The Agreement only weakens Europe.

It is the opposite, provided the continent holds firm to its ambition. The European Union is the only power to have translated the principles of the Agreement into a complete system: the carbon market (ETS), non-financial transparency, and above all, the Carbon Border Adjustment Mechanism (CBAM). With a European carbon price around €80 per ton, the CBAM levels the playing field. As it expands to manufactured products, it will become the first green trade policy in the world. The Agreement has not marginalized Europe; it has granted it unprecedented regulatory leverage.

Sixth myth: All is lost.

Believing the battle is over is a mistake. The climate is a reactive system, not a binary "win or lose" scenario. As the IPCC emphasizes, every tenth of a degree matters, as it reduces human and economic losses exponentially. Between +1.5°C and +2°C, the number of people exposed to extreme flooding increases by 20%; at +3°C, that number doubles, and at +4°C, it becomes unmanageable. The gap between +2°C and +4°C is the difference between a difficult world and a dangerous one. Similarly, between 3% and 14% of species face a very high risk of extinction at +1.5°C, a figure that rises to 29% at +3°C. Catastrophes do not simply add up - they amplify one another. To say "all is lost" is to give up on the disasters that can still be avoided.

Adaptation is a strategy for survival, not a admission of failure. Moving beyond technical fixes like early-warning systems and resilient infrastructure, adaptation is now a core financial requirement for any company aligned with IFRS standards. Forethought is the only real defense against the double materiality of climate risk. This includes physical risk, which directly threatens operations through asset damage or supply chain breaks, and transition risk, stemming from the cost of new regulations, shifting technologies, and market volatility. To ignore these regulatory and physical vulnerabilities is to distort growth projections and overstate how resilient a business model actually is.

Carbon Data Infrastructure as a Market Utility

Decarbonization is moving in an unexpected direction: it is being driven less by political agreements and more by operational necessity. While legal frameworks remain fragmented and vulnerable to election cycles, a quieter, more resilient engine has taken over: software infrastructure.

To solve what former Bank of England Governor Mark Carney called the "Tragedy of the Horizon" - the fatal mismatch between short-term financial cycles and long-term climate risks - we don't need another treaty. We need the technical capacity to turn climate uncertainty into manageable data. Where policy stalls, code moves forward. When a system becomes widespread, it naturally imposes a common language and a standard of proof. This is Standardization by default. 'Code is law' - the idea that software shapes behaviour as powerfully as legislation - isn't an ideology here; it's a network effect that gives markets the comparability they need to meet IFRS standards.

This shift will play out differently across the globe, but it is accelerated everywhere by a simple logic: the need to standardize MRV (Measurement, Reporting, Verification) and link carbon data to the bottom line.

In Europe,

the momentum is structural. Regulation has moved beyond just encouraging transparency to actively organizing it. Even when the political mood changes, the core architecture - CSRD reporting, audit requirements, and the CBAM - remains. Europe is acting as a "systemic regulator", creating a common carbon language for global value chains and driving down the cost of compliance.

In the United States,

the move is market-driven. While federal policy may retreat due to the ESG backlash, the market doesn’t wait for political consensus to adopt a standard. The shift is being forced by access to capital. State-level mandates (like California’s SB-253), pressure from institutional investors, and the need to secure supply chains are creating their own set of rules. The American paradox is clear: market execution is compensating for federal instability as software standardizes the data.

In Asia,

the shift is industrial. The region has massive execution capacity but a patchwork of regulations. The tipping point will come when global value chains - and the multinational firms that lead them - demand audit-ready carbon data to maintain access to Western markets. Here, software will act as the universal translator between local rules and global standards.

What unifies these regions is an economic law that outlasts political cycles: once carbon is measurable and comparable, it becomes part of the market. It enters RFPs, credit risk models, and asset valuations. Transparency becomes a tool for capital allocation: better data leads to better comparability, accurate risk pricing, and investment directed toward real performance.

PART I

Building a Global Standard for Carbon Accounting

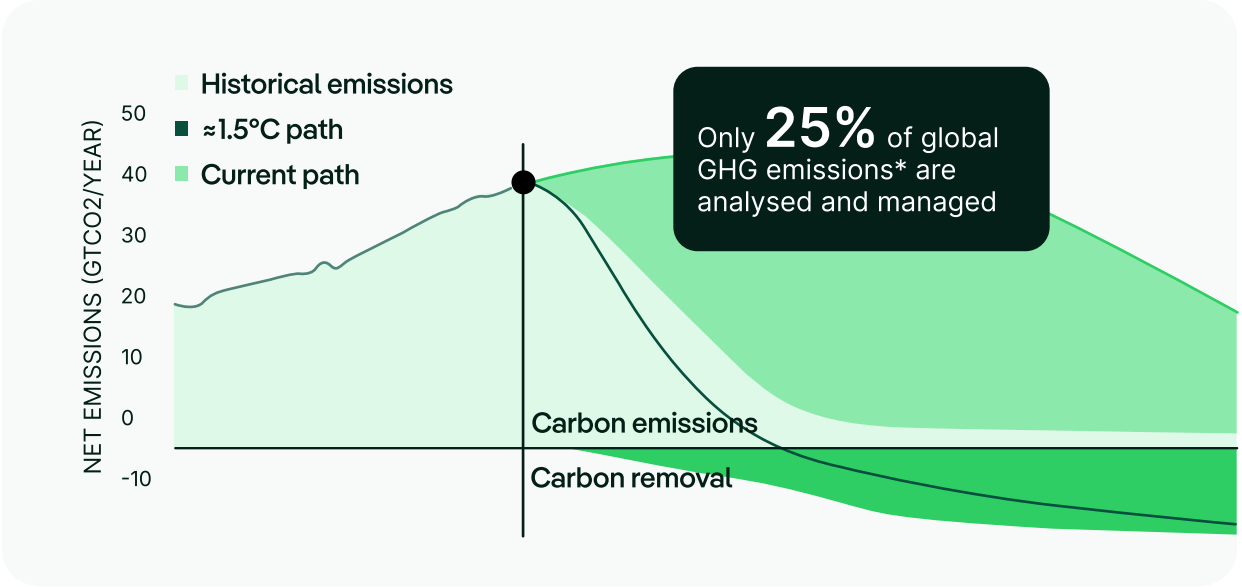
01

The Myth of the ESG Backlash

While 2025 was filled with talk of an ESG backlash in the United States, a closer analysis reveals the opposite: the quiet success of Europe's regulatory "soft power" and its ripple effect on other geographies. The Green Deal was more than just a European initiative; it served as the global framework for new regulations, directly influencing legislators from Sacramento to Beijing.

However, this regulatory expansion now faces sharp critique from its opponents: the idea that climate mandates inevitably curb economic competitiveness. The major challenge for proponents of the energy transition in 2026 is no longer to convince the world of the ecological urgency, but to prove the economic viability of the model. The goal is to transform the standard from a burden into an asset of sovereignty and industrial power. Paradoxically, China seems to be solving this equation more effectively than Western democracies by making climate action a new pillar of its global influence.

A review of the key regulatory developments is essential.



SECR	12,000 affected companies	CSRD/VSME	100,000 affected companies
EU Emissions Trading System	11,000 affected companies	California SB253	5,000 affected companies
SFDR / Taxonomy	5,000 affected companies	Sustainable Report	10,000 affected companies

The European Union: Streamlining and Solidifying the CSRD

Far from a sign of weakness, the Omnibus I package adopted in late 2025 represents a strategic streamlining of climate policy. At first glance, the comparison with the original CSRD goals seems sharp. The initial vision - an ambitious effort to align the economy with global environmental limits - was set to cover nearly 50,000 European companies, including those with as few as 250 employees. By raising the threshold to 1,000 employees and €450 million in turnover, the reform narrows that direct scope to roughly 6,000 firms.

But calling this a retreat is a mistake. This tightening actually delivered a major political win: genuine harmonization. The original directive had struggled to take hold, with only 16 of the 27 Member States transposing it on time. This new regulation, however, locks the standard in across the entire single market - Germany included. Plus, the leverage effect remains strong. Large corporations will still demand transparency from their suppliers, pushing the standard deep into value chains. It's proof that carbon accounting is becoming the common language of the real economy, regardless of the political weather.

employees

1,000

million euros in revenue

450

new companies

6,000

This reform is less a step back than a pragmatic adaptation to economic reality. By focusing on the players with the most significant impact, the EU is prioritizing results over paperwork. Slashing the number of ESRS data points - from roughly 1,200 to 320 essential indicators - replaces paralyzing complexity with high-quality transparency.

Under this new framework, the CSRD has become a true governance tool rather than a mere "tick-the-box" compliance exercise. It forces companies to perform a double materiality analysis, assessing how climate risks affect their business model while accounting for their own impact on the planet. By requiring transition plans aligned with the Paris Agreement and 2050 neutrality goals, the EU has made sustainability a core part of financial strategy. With mandatory audits now ensuring data reliability, non-financial information is finally facing the same level of scrutiny as financial reports.

The CSRD journey

- **5 Jan 2023** — CSRD has officially entered into force
- **1 Jan 2024** — First companies (Wave 1) started to report under CSRD
- **15 Apr 2025** — Adoption of Stop-the-Clock: obligations were delayed
- **9 Dec 2025** — Political agreement on Omnibus package to simplify CSRD requirements
- **Q1 2026** — Revised CSRD (post-Omnibus) is expected to be published

Note:

Since its adoption on 10 November 2022, the Corporate Sustainability Reporting Directive (CSRD) has undergone a number of significant changes.

The Carbon Border Adjustment Mechanism (CBAM): Plugging the Leaks

At the same time, the CBAM reached a major milestone by entering its full operational phase on January 1, 2026. To understand why this matters, you have to look at the flaw it was built to fix in the European Emissions Trading System (ETS). For years, European manufacturers paid for their emissions while foreign competitors could export carbon-intensive goods into the single market without any such costs. This imbalance led to carbon leakage - a steady migration of emissions to countries with weaker rules. The CBAM was designed to plug this gap by pricing carbon at the border, effectively exporting Europe's price signal to the rest of the world.

According to the European Commission, the mechanism covers nearly 50% of emissions in targeted sectors - steel, cement, aluminum, fertilizers, electricity, and hydrogen - and should generate over €2 billion annually by 2030. But the real test is environmental, not financial. OECD models show that without the CBAM, Europe's local decarbonization efforts could paradoxically drive up global emissions: for every ton reduced in Europe, roughly 0.19 tons would "leak" abroad. With the CBAM, the dynamic reverses. Every ton saved in Europe now leads to a net global reduction of 0.12 tons. That adds up to a 0.5% drop in global emissions - a massive win for what is, on paper, a simple trade policy.

Even with a successful launch (over 10,000 customs declarations in the first week of January 2026), the rollout required some pragmatic tweaks.

In October 2025, the EU adopted a simplification package

to cut through the red tape without weakening the policy.

The key changes include:

SME Exemptions:

Companies importing less than 50 tons of covered goods are now exempt. This move removes roughly 182,000 importers from the paperwork while still capturing 99% of the emissions originally targeted.

Streamlined Compliance:

For these smaller players, the EU simplified the rules for "authorized declarant" status, eased calculation methods, and lowered financial guarantee requirements.

Despite the successful launch, the mechanism has structural vulnerabilities that critics are quick to point out:

The Exemption Loophole:

Raising the threshold to 50 tons was intended to help SMEs, but it effectively invited split shipments. By breaking large orders into smaller batches, importers can bypass the carbon fee entirely. Additionally, verification still relies too much on self-reporting by foreign producers, leaving the system vulnerable to a lack of oversight.

The Finished Goods Blind Spot:

This is the system's biggest gap. CBAM currently hits raw materials but ignores manufactured products. As a result, a car made abroad with carbon-heavy steel can enter Europe without a carbon fee, while a car built inside the EU bears the full cost of the ETS on its materials. This doesn't actually lower pollution - it simply risks driving manufacturing offshore.

The "Green Export Rebate" Controversy:

There is significant pressure to reimburse carbon costs to European exporters to keep them competitive globally. However, this threatens to flip the polluter-pays principle on its head. If the system becomes polluter-reimbursed, it would significantly weaken the global carbon price signal.

An ambitious timeline

2005 — **EU ETS comes into force**

→ Annual caps are set
→ A carbon trading system is created in the EU

2023 — **The CBAM comes into force**

→ Products: steel, aluminium, electricity, fertilizers, chemicals, and cement
→ Generic and declarative values

2027 — **End of transition**

→ Payments starts, free allowances disappear progressively, and CBAM reporting becomes mandatory

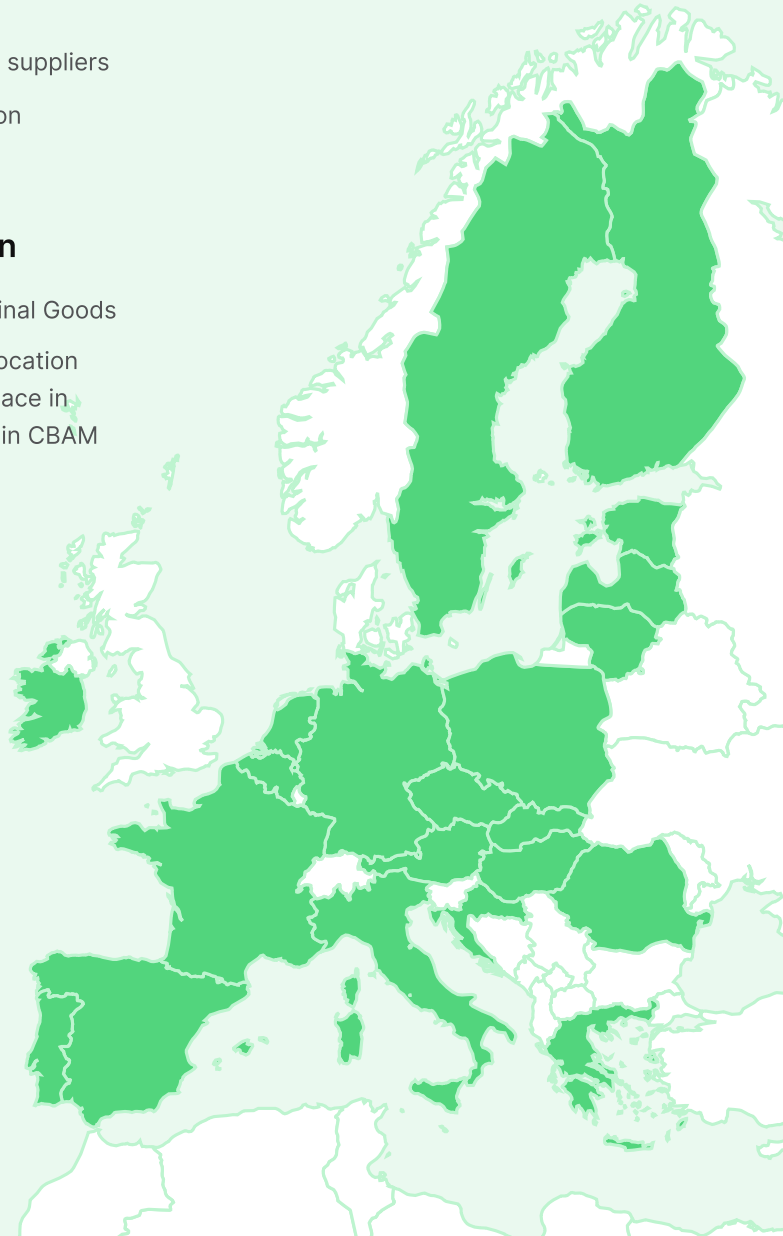
→ Importers have to engage their suppliers

→ Third party review and validation

2026-2034 — **Full implementation**

→ Products: All EU ETS Final Goods

→ Phasing-out of free allocation under the ETS will take place in parallel with the phasing-in CBAM



Note:

- Penalty: €100 per missing CBAM certificate
- Installations will require third-party verification

Acknowledging that the initial version was riddled with holes, Brussels began a major corrective pivot in late 2025 that is set to materialize throughout 2026. To stop the leakage, the Commission announced the extension of the mechanism to downstream processed products - such as washing machines, industrial radiators, and garden tools. The goal is twofold: to prevent companies from bypassing the system via finished goods and to capture an additional revenue base estimated at 20–25%.

Meanwhile, to address the outcry from European industry over a loss of export competitiveness, a temporary compensation fund is under consideration. Although controversial under WTO rules, this rebate aims to support exporters against lower-standard global competition while the market adjusts.

In this sense, 2026 isn't about the CBAM losing its teeth; it's about the policy finally growing up. It is shifting from a clunky, theoretical framework into a precision tool designed to stop companies from dodging the rules. For importers who can't - or won't - prove their real emissions, the EU is introducing punitive default rates as a deterrent. This next phase of enforcement will be built on a backbone of technology, with digital product passports and shared databases ensuring the rules actually stick.

The United States: Fragmentation of the Regulatory Framework

While federal policy remains stalled, Sacramento is moving ahead, borrowing heavily from Europe's regulatory playbook. California's SB-253 and SB-261 are the true turning points of 2026. By targeting companies with over $1 billion in revenue - including any foreign multinational doing business in the state - California is effectively setting a global standard. For these firms, decarbonization isn't just about the planet; it's about maintaining access to the world's fifth-largest economy. This shift impacts over 5,400 organizations, forcing both U.S. giants and their global subsidiaries into a new era of transparency.

California's legislative framework acts as a double constraint:

SB-253

Climate Corporate Data Accountability Act: This functions as the climate accountant. Starting in 2027, it requires annual disclosure of Scope 1, 2, and - crucially - Scope 3 emissions, all certified by an independent third party according to the GHG Protocol.

SB-261

Climate-Related Financial Risk Act: This imposes the strategic vision. It requires companies with over $500 million in revenue to publish a biennial report on their climate-related financial risks and mitigation strategies, based on TCFD recommendations.

The Scope 3 mandate is the real catalyst. Since indirect emissions typically account for 70% to 90% of a company's footprint, this requirement forces major corporations to demand precise data from their entire supply chain. This triggers a decarbonization ripple effect that stretches far beyond the borders of the Golden State.

Because of its broad reach, this framework is often called a "de facto CSRD". California's definition of doing business is so wide that a company only needs a significant sales presence in the state to trigger the obligation. To prevent compliance chaos, Sacramento introduced reciprocity rules. California will accept climate reports that already follow international (ISSB) or European (CSRD) standards. This mutual recognition is effectively creating a unified global baseline, making it impossible for companies to hide behind regional gaps in regulation.

This tension has culminated in a intense legal battle, which peaked on January 9, 2026, during oral arguments before the 9th Circuit Court of Appeals in Chamber of Commerce v. Sanchez. Opponents, led by the Chamber of Commerce and backed by giants like Exxon, invoke the First Amendment, labeling these obligations as "compelled speech".

Exxon, in a revealing paradox, does not contest the necessity of the measure itself - as it simultaneously promotes its own standards within the "Carbon Measures" coalition - but refuses to have a state-imposed metric it does not control. In response, California defends the "commercial" and "factual" nature of this data, arguing it is indispensable for investor decision-making.

While the financial risk mandates (SB-261) are currently stalled by this appeal, the rollout of the carbon inventory (SB-253) is moving ahead, with the first Scope 1 and 2 reports due in August 2026.

The Court appears to be drawing a strategic line: it seems ready to uphold Scopes 1 and 2 as factual disclosures, while questioning the constitutionality of Scope 3, which is more legally vulnerable because it relies on third-party estimates.

The stakes of this summer 2026 decision can't be understated. The future of U.S. climate reporting hinges on this case: a California victory would cement carbon transparency as a permanent market standard, creating a legal firewall against federal attempts to deregulate.

What are the California bills?

Starting
2026
California's climate disclosure laws come into effect

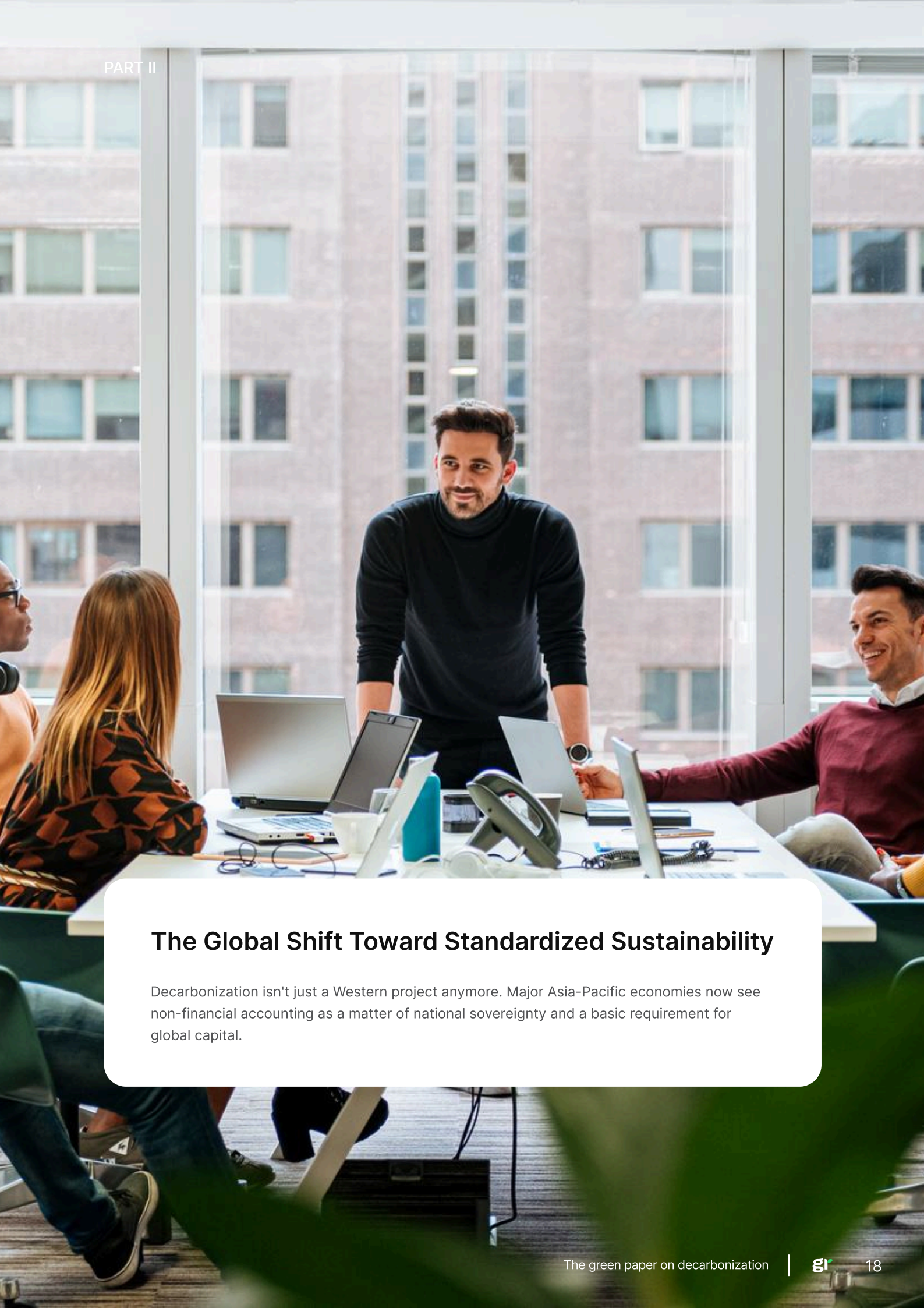
2
Major bills requiring climate reporting in California (SB 253 and SB 261)

$500M
The revenue threshold for companies subject to SB 261

Key requirements and overview

- The California bills are state laws requiring IFRS-style climate risk reporting.
- SB 253 requires companies with over $1 billion in revenue to report on their GHG emissions (Scopes 1, 2, and 3) annually, with third-party verification.
- SB 261 requires companies with over $500 million in revenue to report biannually on climate-related financial risks.
- SB 219, along with the others, is a legislative mandate to report on ISSB.

*These bills are aligned with IFRS and the GHG Protocol



The Global Shift Toward Standardized Sustainability

Decarbonization isn't just a Western project anymore. Major Asia-Pacific economies now see non-financial accounting as a matter of national sovereignty and a basic requirement for global capital.

China: Strategic Alignment:

The Chinese Ministry of Finance made a massive move with its "Corporate Sustainable Disclosure Standard No. 1 – Climate". While the text is built for structural alignment with international ISSB standards, it isn't just a copy. It adopts the four core pillars - Governance, Strategy, Risk Management, and Metrics - but bakes in national specificities. Most notably, it includes an obligation to report on impact, which effectively makes double materiality the law of the land.

This is far more than a bureaucratic exercise; it is the accounting infrastructure for China's "Dual Carbon" goals. The aim is to flush greenwashing out of the market and force massive financial flows toward low-carbon tech. The rollout, which began as voluntary, is on a fast track toward becoming mandatory, prioritizing heavy sectors like steel, energy, cement, and automotive manufacturing. This standardization is the backbone of Beijing's broader political ambition: a 7% to 10% drop in emissions from their peak by 2035 and a sixfold increase in solar and wind capacity compared to 2020. China is no longer just the world's "green factory" - it is now writing the accounting rules.

Hard Law since January 1

2025

6,000

entities covered

India: The "BRSR Core" Advantage:

In a rapidly expanding economy, the Securities and Exchange Board of India (SEBI) is turning sustainability reporting into a competitive edge. The BRSR (Business Responsibility and Sustainability Reporting) framework now mandates "reasonable assurance" - effectively a full-scale financial audit - for key "BRSR Core" indicators among the country's largest listed companies.

This is a global first for an emerging market. While many jurisdictions are still settling for "limited assurance" (a much lower bar), India is setting the standard at a strict, financial-grade level. This move has a very specific goal: to lock Indian market leaders into the global supply chains of Western corporations that now require verified, high-quality data. By enforcing this level of rigor, India is positioning itself as a pre-vetted, reliable partner in the new global trade landscape.

Australia: Where Climate Data Meets Legal Risk

Since January 1, 2025, Australia has operated under a mandatory climate reporting regime with the rollout of the AASB S1 and S2 standards, fully aligned with the IFRS. This framework stands out for its sheer scale - eventually covering over 6,000 entities, including large private companies that aren't even listed on the stock exchange - and its insistence on quantifying the actual financial impact of climate change.

Unlike more flexible regions, Australia doesn't settle for vague promises. It demands rigorous scenario analysis - specifically modeling for 1.5°C and >2°C futures - and total transparency regarding how resilient a business model actually is. While directors have been granted a temporary "safe harbor" regarding forward-looking statements and Scope 3 data during this transition, the direction is clear: in the Australian market, climate risk is now legally and fiduciarily inseparable from financial risk.

What are the ISSB IFRS S1 and S2?

Since
2024

TCFD is officially recognized as the IFRS of the ISSB

11

Disclosure questions set around 4 pillars

3

Legislative mandates in the United States have made it mandatory to report on ISSB

ISSB provides a voluntary framework for companies to disclose climate-related risks and opportunities. It focuses on governance, strategy, risk management, and metrics to help stakeholders assess climate impacts on financial performance.

The TCFD recommendations have been fully consolidated into the ISSB's IFRS S2, making the ISSB standards the new global benchmark for climate-related financial disclosures.

*If you're already aligned with TCFD, you're aligned with ISSB.

ISSB

Your Sustainability Compliance Checklist

	CSRD	GRI	CDP	TCFD ISSB	SASB	ecovadis	SFDR	Certified B Corporation
General information								
General disclosures	✓	✓	✓	✓	✓	✓	✓	✓
Environment								
Climate change	✓	✓	✓	✓	✓	✓	✓	✓
Pollution	✓	✓	✓	✗	✓	✓	✓	✗
Water and marine resources	✓	✓	✓	✗	✓	✓	✓	✗
Biodiversity and ecosystem	✓	✓	✓	✗	✓	✓	✓	✗
Resource use and circular economy	✓	✓	✓	✗	✓	✗	✓	✓
Social								
Company workforce	✓	✓	✗	✗	✓	✓	✓	✓
Value chain employees	✓	✓	✗	✗	✓	✓	✓	✓
Affected communities	✓	✓	✗	✗	✓	✗	✓	✓
Consumers and end-users	✓	✓	✗	✗	✓	✓	✓	✓
Governance								
Business conduct	✓	✓	✗	✗	✓	✓	✓	✓

Industry-Specific Standards: Decarbonizing Sector by Sector

While broad legislation sets the trajectory, sector-specific regulations are what actually dictate the pace of change. Every industry is now hitting a regulatory wall that makes the shift to low-carbon models an operational and financial necessity rather than a strategic choice. Europe continues to lead the way, effectively setting the global standard.

Energy: Where Security Meets the Transition

Energy is the catalyst. As the grid decarbonizes, it allows industry, transport, and buildings to finally ditch fossil fuels through electrification.

However, the regulatory landscape has changed. Energy is no longer just an environmental issue; it's a national security mandate. Regulators are now balancing two competing pressures: the need to keep the lights on today while forcing a total structural overhaul for tomorrow. These goals often pull in different directions, but they both ultimately require a complete redesign of the global energy map.

This push for energy independence is a complicated driver. In the short term, security concerns can slow down climate progress - nations might revive domestic coal or pivot to LNG to break risky geopolitical ties. But in the long run, this same drive for independence is the ultimate catalyst for green energy. By scaling up local renewables and efficiency, countries aren't just hitting climate targets - they're permanently ending their reliance on expensive, volatile imports.

This regulatory landscape is defined by three distinct regional dynamics:

Europe: Mandatory Planning and Speed

With the revision of the Renewable Energy Directive (RED III),the EU has legally mandated a 42.5% renewable energy target by 2030. More importantly, the directive cuts through red tape by establishing "acceleration zones" for permits, drastically shortening project timelines. Alongside this, the Net-Zero Industry Act (NZIA) is a direct push to reshore the production of solar panels, wind turbines, and batteries. Europe is using the law to force a resilient, decarbonized internal market as a counterweight to Chinese dominance.

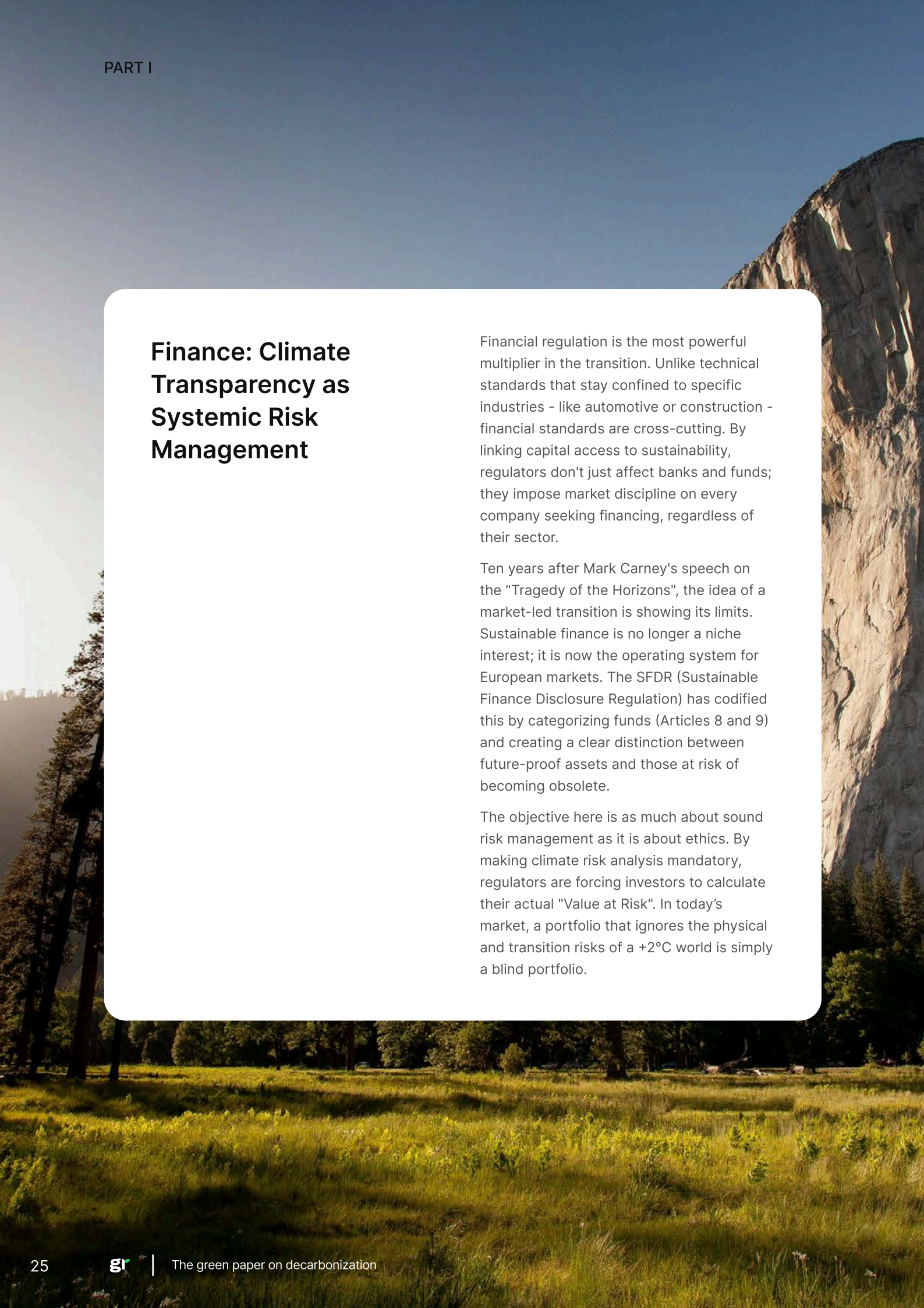
The United States: Incentives as a Safeguard:

The U.S. strategy, anchored by the Inflation Reduction Act (IRA), relies on massive tax credits to pull in private investment. Despite political shifts and a renewed federal focus on fossil fuels, the economic momentum of the IRA remains intact. The sheer cost-competitiveness of renewables - combined with the tech sector's massive demand for clean power - keeps the transition moving. In the U.S., long-term tax incentives act as a market-driven hedge against political volatility.

China: Scaling for Dominance

China continues to set the global pace by flooding the market with low-cost, low-carbon tech. Its Five-Year Plans and internal mandates prioritize rapid, large-scale electrification. By consolidating its lead in batteries, EVs, and solar, China has forced every other economic bloc to respond with either protectionism or massive industrial subsidies.

Ultimately, whether through mandates (Europe), incentives (U.S.), or industrial planning (China), global regulation is converging. It has become a race for electrification and resource security, where decarbonization is no longer a choice - it's the price of admission for future economic power.



Finance: Climate Transparency as Systemic Risk Management

Financial regulation is the most powerful multiplier in the transition. Unlike technical standards that stay confined to specific industries - like automotive or construction - financial standards are cross-cutting. By linking capital access to sustainability, regulators don't just affect banks and funds; they impose market discipline on every company seeking financing, regardless of their sector.

Ten years after Mark Carney's speech on the "Tragedy of the Horizons", the idea of a market-led transition is showing its limits. Sustainable finance is no longer a niche interest; it is now the operating system for European markets. The SFDR (Sustainable Finance Disclosure Regulation) has codified this by categorizing funds (Articles 8 and 9) and creating a clear distinction between future-proof assets and those at risk of becoming obsolete.

The objective here is as much about sound risk management as it is about ethics. By making climate risk analysis mandatory, regulators are forcing investors to calculate their actual "Value at Risk". In today's market, a portfolio that ignores the physical and transition risks of a +2°C world is simply a blind portfolio.

However, the first iteration of this framework had clear vulnerabilities. The "Article 8" and "Article 9" labels - initially intended for transparency - were increasingly used for marketing, which raised significant greenwashing concerns. In response, the European Commission launched a comprehensive overhaul in 2026: SFDR 2.0. This new regime replaces the ambiguous "Article" system with a more defined, three-tier classification:

Sustainable Products:

Reserved for funds invested in companies directly contributing to climate objectives.

Transition Products:

A crucial new category designed to support heavy industries that have committed to a verified decarbonization pathway (while strictly prohibiting fossil fuel expansion).

ESG Basics:

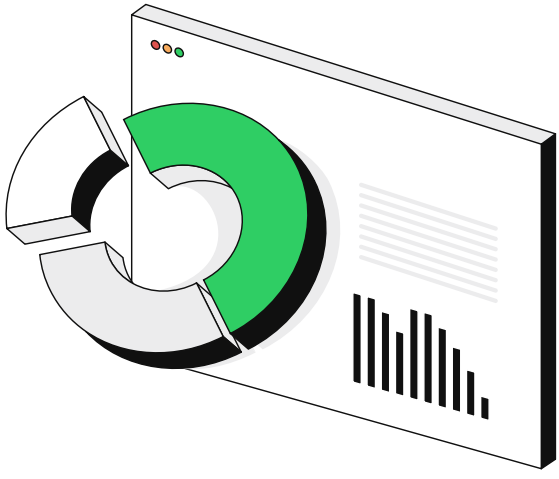
For funds meeting baseline criteria without making specific impact claims.

The "Transition" category is the real innovation of 2026. It marks a move toward pragmatism, acknowledging that simply divesting from carbon-heavy sectors won't transform the economy. Instead of just asking for transparency, regulators are now demanding strategic accountability.

Under the Capital Requirements Directive (CRD VI) - effective as of January 11, 2026 - EU banks are now required to publish detailed, firm-wide transition plans.

These have moved beyond high-level mission statements; they must now show a measurable path forward that is hard-wired into the bank's internal governance and core reporting.

But finance cannot do everything. Capital is a force multiplier, not a substitute for public policy. For capital to truly drive the transition, regulators are now moving to standardize the financial framework by aligning risk management with climate reality:



01

Pricing Climate Risk into Capital Strategy:

Climate risk is moving to the center of financial oversight. Since December 2025, the Bank of England (BoE) has required banks and insurers to bake climate risk directly into their business strategies and risk thresholds, making boards explicitly accountable for these exposures. At the same time, in January 2026, the European Supervisory Authorities (ESAs) issued unified guidelines for ESG stress tests. These tests set the baseline for how environmental risks must be factored into financial models across the entire EU.

02

Moving Toward Audit-Ready Data:

Digital auditability has become the norm. By December 2026, the EBA's Pillar 3 reporting rules will expand to cover roughly 2,000 European banks. These institutions are now required to provide verified, audit-ready data on the six environmental goals defined by the EU Taxonomy. The goal is to make climate risk an inseparable part of capital planning through forward-looking scenario analysis.

03

The Widening Regulatory Gap:

Cutting off the supply of capital only goes so far; if the underlying demand for fossil fuels stays high, the problem just shifts. A major split is now opening between global markets. While Europe and Canada (via OSFI guidelines) have moved toward mandatory transition plans, U.S. federal regulators (Fed, FDIC, OCC) pivoted in late 2025, pulling back their climate risk principles to return to traditional frameworks.

This split highlights a critical risk: finance can only "deliver Net Zero" if it's backed by a consistent industrial policy. Without global alignment, we risk creating regulatory blind spots that could undermine the entire transition.

The year 2026 is defined by a sharp regulatory disconnect. While the EU's Omnibus initiative succeeded in cutting red tape for corporations, it created an unintended "data desert" for the financial sector.

The numbers are stark: a 92% reduction in the number of companies required to file structured CSRD reports, and the removal of 61% of mandatory data points (ESRS). This has left banks with a brutal mismatch between the rigorous analysis they are required to perform and the actual public data available to them.

This information deficit is more than a technical hurdle; it creates strategic vulnerabilities. Because they can no longer rely on official reports from SMEs, banks are being forced to build their own proactive data strategies to avoid mispricing risk. Essentially, the burden of ensuring transparency has shifted from the corporations to the lenders. For banks, mastering non-financial data is no longer just a compliance task - it is now a core pillar of operational resilience.

Real Estate & Construction: Mitigating the Risk of Stranded Assets

In Europe, the building sector is the single largest energy consumer (40%) and accounts for half of all gas consumption. As a result, regulation is no longer just a compliance issue - it is the primary driver of asset value. The revised Energy Performance of Buildings Directive (EPBD), with its transposition deadline of May 29, 2026, is set to be a major catalyst for market transformation.

Europe is far from alone in its regulatory push; a patchwork of national and local rules is now tightening the screws on the building sector.

- **In France**, the RE2020 sets carbon caps for new builds based on lifecycle analysis, while the Décret Tertiaire forces massive energy cuts for existing properties (-40% by 2030; -60% by 2050).
- **In the U.S.**, local laws are hitting the bottom line directly. New York's Local Law 97 and Washington State's Clean Buildings Performance Standard impose strict emission caps backed by immediate fines.
- **In the UK**, the Future Homes Standard (Part L) is effectively ending the use of fossil-fuel heating in new residential projects.

These Building Performance Standards (BPS) represent a massive shift: regulators are moving away from design-based efficiency (how well a building should perform on paper) toward actual, measured energy use (how much power the building actually consumes).

This public pressure is amplified by private standards that act as act as "gatekeepers" for premium tenants and insurance. Certifications like BREEAM and LEED (specifically v4.1 and v5) have integrated embodied carbon and lifecycle impacts into their scoring. More critically, investors are now using CRREM (Carbon Risk Real Estate Monitor) trajectories to determine if an asset is actually aligned with the Paris Agreement.

The impact on balance sheets is immediate. Any building that falls behind these curves risks becoming a stranded asset. These properties face the harsh reality of market devaluations: they are harder to lease, nearly impossible to sell without a massive price cut, and increasingly difficult to refinance. Major players like CBRE and JLL now systematically factor this "Brown Discount" into their valuations for underperforming assets.

However, these financial pressures are running up against a hard reality: the sector simply moves slowly. With only about 1% of buildings being renovated or replaced each year, the industry cannot keep pace with the climate emergency. The massive upfront costs (CapEx) required for deep retrofits remain the biggest hurdle for property owners.

Paradoxically, it is the fear of losing asset value - rather than the policy itself - that is now the main driver of action. Finance has turned what used to be a technical "green" goal into an urgent survival issue for investors.

The Automotive Industry: Navigating the Industrial Shift

The European car industry is the biggest test for the Green Deal. The goal here isn't just political - it's about setting a clear performance target. By 2035, every new car sold in Europe has to be zero-emission at the tailpipe. This sends a loud, irreversible signal to the market: the era of the gas engine is winding down.

However, in 2026, the European car industry is hitting a rough patch, leading to growing calls to delay or push back the 2035 deadline.

But blaming the rules is a flawed diagnosis.

Major European brands aren't just being squeezed by regulation and Chinese competition - they are also paying the price for their own post-pandemic 'premium' strategy.

By focusing almost entirely on high-margin SUVs and ignoring more affordable models, these companies protected their short-term profits but left the door wide open for Chinese competitors to dominate the budget electric market.

Backing down now would be a massive strategic error.

For one, it's a bad deal for the driver. Artificially keeping gas or hybrid engines on the market is a poor financial move for consumers because the total cost of owning an electric vehicle is already catching up and will be even better by 2030. Meanwhile, gas prices will only climb as the new carbon market (ETS 2) kicks in. Even e-fuels, often brought up as an alternative, will likely remain a luxury niche - costing about 20% more to run than an electric car by 2035.

For the industry itself, a U-turn would jeopardize the billions already poured into battery gigafactories and charging networks across Europe. It would essentially hand the lead to China, which has already gone all-in on electric. The real way to speed things up isn't a regulatory pause, but rather a focus on company cars. Business fleets make up 6 out of every 10 new cars sold in Europe. If we move these fleets to electric now, we create a steady supply of affordable, three-year-old used EVs for regular families. Without this pipeline, electric cars will stay a luxury and the transition will leave most people behind.

Ultimately, Europe isn't acting in a vacuum. From California's strict mandates to China's massive domestic shift, the world is moving on. The 2035 debate isn't just about a climate deadline; it's a test of industrial survival. Europe has to decide: does it want to be a passenger in the death of the gas engine, or the leader of what comes next?

Private Standards: The Domino Effect of Decarbonization

While the law sets the macroeconomic framework, it is the contractual dynamics between leading firms and suppliers that drive real transformation. In In 2026, the most powerful driver of decarbonization is no longer regulation - it is the commercial logic now embedded in carbon metrics.

The mechanism is relentless: large multinational corporations, subject to strict reporting obligations (such as the CSRD in Europe or SB-253 in California) and pressure from their own investors, cannot realistically achieve their neutrality targets without decarbonizing their value chain (Scope 3). They are therefore compelled to cascade this requirement down through their thousands of suppliers.

This transfer of responsibility is transforming the very nature of voluntary standards. Frameworks like the SBTi or the CDP, originally designed as badges of leadership for climate leaders, are becoming de facto industrial standards. For a supplier SME or mid-cap, presenting an auditable carbon footprint and a reduction trajectory is no longer a CSR option, but a **"license to operate".** Without this carbon compliance, they simply risk exclusion from the procurement processes of major groups. Thus, private standards, through the sheer power of purchasing decisions, succeed where public regulation sometimes struggles to penetrate: they impose carbon accounting on the real economy, one link at a time.

SBTi: The Global Benchmark and the Scope 3 Challenge

The SBTi (Science Based Targets initiative) has become the gold standard for climate credibility. With over 11,000 companies signed on, they've effectively rewritten the rules of the market: if a business doesn't have SBTi-validated targets, it's increasingly being shut out of the supply chains of the world's biggest corporations.

This creates a powerful network effect. For a major corporation to maintain its own climate credentials, it must prove that a significant portion of its suppliers are also setting science-based goals. This creates a self-reinforcing loop that pushes the standard deeper into the global supply chain every year.

However, 2026 represents a turning point. Recognizing the immense difficulty of cutting emissions across complex supply chains (Scope 3), the SBTi is shifting its focus from setting targets to driving actual results. This has sparked a significant debate over the role of carbon offsets. Some stakeholders, including the Bezos Earth Fund, argue that allowing high-quality carbon credits could serve as a necessary safety valve. The intent is to keep companies engaged in the process without compromising scientific rigor. For the average supplier, the takeaway is clear: you can reduce your footprint or you can pay to offset it, but ignoring the issue is no longer an option.

CDP: Transparency Meets Geopolitics

While the SBTi sets the direction, the CDP (formerly the Carbon Disclosure Project) remains the primary benchmark for how companies actually perform. However, 2026 is becoming a stress test for the global transparency system. Faced with open hostility from the Trump administration toward ESG metrics, the CDP is undergoing a major strategic shift. Its recent restructuring, aimed at using technology to cut down on paperwork, is a direct response to complaints about reporting complexity: the goal is to protect the core data by making the process much simpler.

The stakes are high as a global divide opens up. The 2026 CDP Corporate Health Check reveals a striking divergence: while Japan (where 22% of firms have achieved top-tier leader status) and Europe are staying the course, the U.S. is falling behind at just 5%, isolated by federal policy signals. Yet the economic reality is outweighing political trends: the data shows that these environmental leaders are cutting their emissions four times faster than their lower-ranked peers. More importantly for investors, these climate leaders are consistently outperforming the rest of the market on the stock exchange.

Market sanctions therefore remain very real. A refusal to respond (resulting in an "F" grade) is no longer seen simply as a lack of transparency; it is now viewed as a clear warning sign for investors. It suggests a company is unprepared for the $1.47 trillion in physical risks - such as floods or heatwaves - that the platform has identified. For the 700 financial institutions that rely on this data, the CDP has become the standard language used to assess corporate resilience.

However, the CDP is facing significant pressure. It is currently navigating a difficult landscape as some American clients scale back their involvement to align with the Trump administration's priorities. This makes 2026 a defining moment: it will reveal whether a global transparency standard can remain viable through market demand alone, even when the world's largest economy withdraws its political support.

GHG Protocol & ISO: The New Rules of Carbon Accounting

The standards for measuring emissions are becoming much more rigorous. The Greenhouse Gas Protocol, the global benchmark for carbon accounting, is tightening its criteria - particularly regarding Scope 2 (purchased electricity).

The industry is moving away from the traditional use of Renewable Energy Certificates (RECs), which allowed companies to claim green status simply by buying credits. Instead, the protocol is shifting toward 24/7 hourly and geographical matching. This requires companies to prove their energy is carbon-free at the exact time and place it is consumed. This change poses a major challenge to the neutrality claims of Tech giants, whose energy-heavy data centers run around the clock.

At the same time, technical certifications are becoming essential for doing business. ISO 14001 standards and EPDs (Environmental Product Declarations) are no longer optional; they are now prerequisites for winning public contracts and bidding on sustainable construction projects. For suppliers, these are the new keys to entering the market.

PART II

From Climate Reporting to Effective Emission Reduction

02

Tracking and Reducing Emissions: Scaling via Tech

The role of the CSR Director is expanding as the regulatory burden grows, but a more significant shift is happening behind the scenes: the Chief Financial Officer (CFO) is becoming a central player in climate strategy. With the European CSRD, California's reporting laws, and the tightening link between climate targets and bank loans, decarbonization is no longer just about compliance - it is a matter of financial performance.

Because carbon footprints now directly impact the cost of capital and investor interest, they must be as rigorous and auditable as financial balance sheets. This has moved climate strategy out of a silo and placed it at the heart of corporate finance.

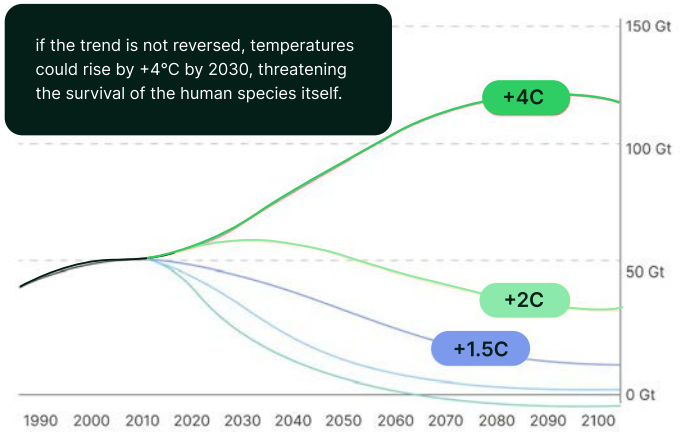
As the CFO's oversight expands into non-financial data, the tools used to track it must also evolve. We are seeing a major integration between carbon accounting software and financial ERP systems (like SAP or Oracle). The goal is no longer just checking a box at the lowest cost, but using a strong climate trajectory as a competitive advantage.

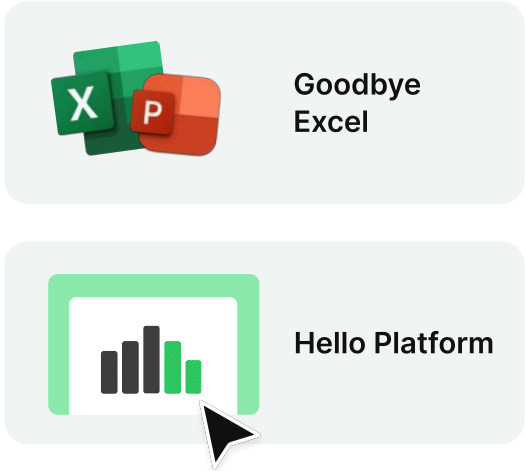
This requires a fundamental shift: moving away from manual, reactive data collection toward a systematic, data-driven strategy. To grow a business while credibly cutting emissions, companies can no longer rely on guesswork; they need total mastery over their granular climate data.

Carbon accounting has undergone a major shift: what started as a regulatory burden has evolved into a key driver of competitiveness. Beyond simply meeting public standards like the CSRD, mastering your carbon data is now a primary way to win new business. Having a superior carbon score has become a decisive advantage when bidding for major contracts, often carrying as much weight as price or quality.

For smaller firms and mid-caps, this is no longer just about protecting their reputation. It is about securing their place in the supply chain. Major global corporations are increasingly making carbon transparency a non-negotiable requirement; if a supplier cannot provide the data, they are often sidelined before the negotiations even begin.

In this new landscape, where sustainability directly impacts revenue, the old model of relying on one-off projects from outside consultants is no longer enough. Companies are instead building their own internal capabilities through technology and AI. By using these tools, they can turn carbon management into a continuous, automated process that directly supports their growth and sales strategy.





The Opportunity Cost of Climate Inaction

Regulatory shifts like the CSRD in Europe and SB-253 in California have triggered an irreversible chain reaction. For major corporations, the vast majority of their emissions come from their supply chain (Scope 3), which puts their suppliers - SMEs and mid-caps - directly on the front line. Climate risk is no longer just a "green" issue; it has moved into the core of every business function.

Sales: Winning and Keeping Business

Being able to provide precise carbon data is now a requirement for growth. A Harvard Business Review study shows that **65% of consumers** say they want to buy from purpose-driven brands (juillet 2019). For B2B companies, the stakes are even higher: meeting these data demands is the only way to protect market share. Failing to provide this information doesn't just look bad - it leads to immediate exclusion from major contracts and potential financial penalties.

Finance: Protecting the Bottom Line

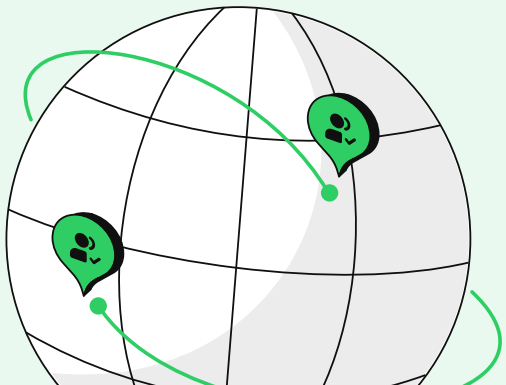
Climate risk is now a permanent fixture on the P&L and a deciding factor in access to capital. Investors are voting with their feet: 49% are prepared to divest from companies with poor ESG performance, according to PwC. Beyond investor pressure, companies are also facing an insurance shock. As climate-related claims multiply, premiums are skyrocketing - doubling or even quadrupling for some organizations, and jumping 88% in U.S. commercial real estate. With rates projected to rise by up to 200% by 2050, investing in resilience isn't just a discretionary expense - it's a strategic hedge against surging insurance costs, offering a potential 10-to-1 return on investment.

Compliance and Legal

The New Border Controll: Regulation has gone global, acting as a massive barrier to entry in key markets. New rules like the Carbon Border Adjustment Mechanism (CBAM) and the EU Deforestation Regulation (EUDR) have turned environmental data into a "regulatory gateway" for sectors like metals, energy, and cement. The cost of failing to comply is now prohibitive: sanctions for EUDR violations can reach 4% of a company's annual turnover. Carbon traceability is no longer a choice; it is a "license to trade" within the European single market.

HR and Communication

The Battle for Talent: A company's climate performance now directly impacts its reputation and its ability to hire. The Edelman Trust Barometer highlights that 71% of consumers lose trust in brands that prioritize profit over people and the planet. For employees - especially Millennials - environmental credibility is a top priority. Without a credible climate strategy, companies face a serious "brain drain" as top talent migrates to more responsible competitors.



Breaking Down Data Silos: Moving Beyond Consulting

As companies look to scale their climate efforts, they are running into the limits of the traditional "Tech-enabled Consulting" model. While this approach was useful for getting started, it relies too heavily on outside experts. This creates a black box dependency that prevents companies from building their own internal expertise.

Several major obstacles are now making this old model obsolete:

Supply Chain Transparency:

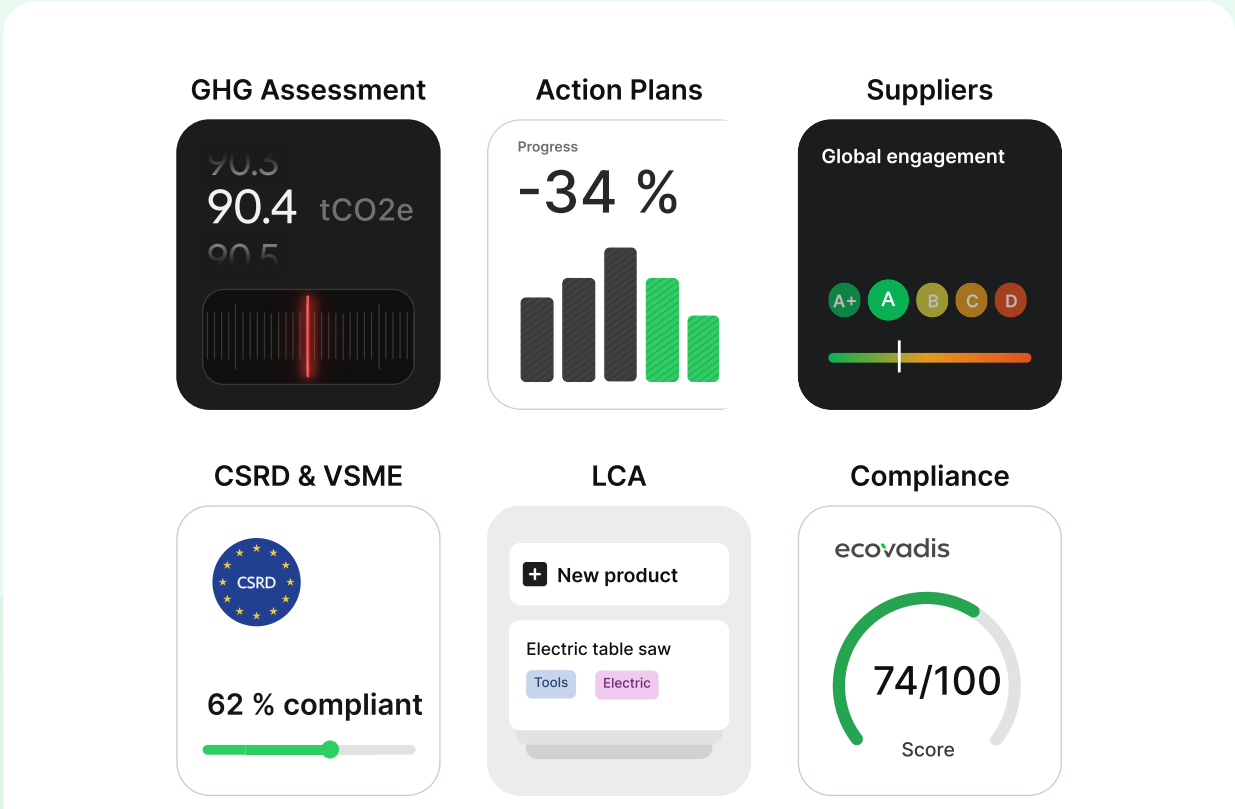
Traditional approaches often rely on spend-based data - essentially guessing a supplier's carbon footprint based on how much money was spent with them. This doesn't reflect a supplier's actual efforts to decarbonize, making it impossible to see the real progress being made in the value chain.

Data Siloing:

Carbon data, Life Cycle Assessments (LCA), and ESG reporting often sit in completely different systems. This lack of integration prevents a clear, unified view of a company's performance, making it nearly impossible to make informed, data-driven decisions.

Lack of Agility:

When you rely on a third party to update your data or emission factors, you end up with a strategy that is permanently out of date. This creates a level of inertia that the modern market simply won't tolerate. Companies need real-time responsiveness, not a report that is six months old the moment it's finished.



Old World

Top-enabled Consulting

Tech-enabled Consulting

Dependency on third party

Lack of supply chain visibility

Static emission factors

No ESG framework interoperability

No upskilling

Disjointed systems (GHG, LCA & ESG)

New World

AI-Powered, Expert-Led Climate Solution

Collaborative platform

Continuous tracking

SBTi

Data integrations

Employee training

LCA Calculators

Emissions Factor updates

Supplier engagement

CSRD & ESG

Decarbonization modeling

Automated workflows

Green IT

AI contextualization

Dedicated Expert support

The future of carbon management is defined by a new approach: solutions driven by AI but guided by human expertise. This isn't about replacing specialists; it's about using technology to remove the manual bottlenecks that slow down progress.

By moving to an AI-powered, expert-led model, companies can:

Contextualize with AI:

Automatically adapt carbon models to fit the specific needs and operational realities of each industry, rather than using one-size-fits-all templates.

Streamline Collaboration:

Turn data collection from a once-a-year headache into a continuous, automated process that easily connects employees and suppliers.

Automate Workflows:

Eliminate hours of manual data entry, freeing up the sustainability team to focus on high-value tasks like strategic analysis and supplier engagement.

This hybrid model combines the scientific rigor of Life Cycle Assessments (LCA) and SBTi targets with the speed and agility required by the modern market. It gives leaders the tools to turn carbon reporting from a regulatory "must-do" into a powerful lever for long-term, sustainable performance.

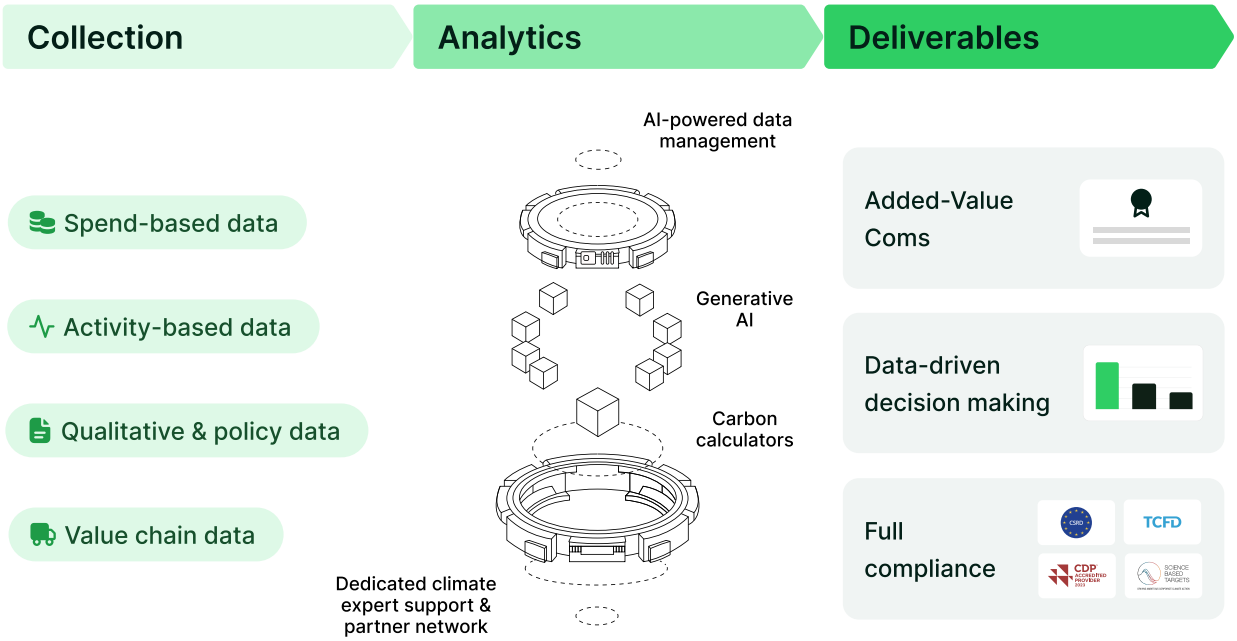
AI: Accelerating the Transition and Sharpening the Competitive Edge

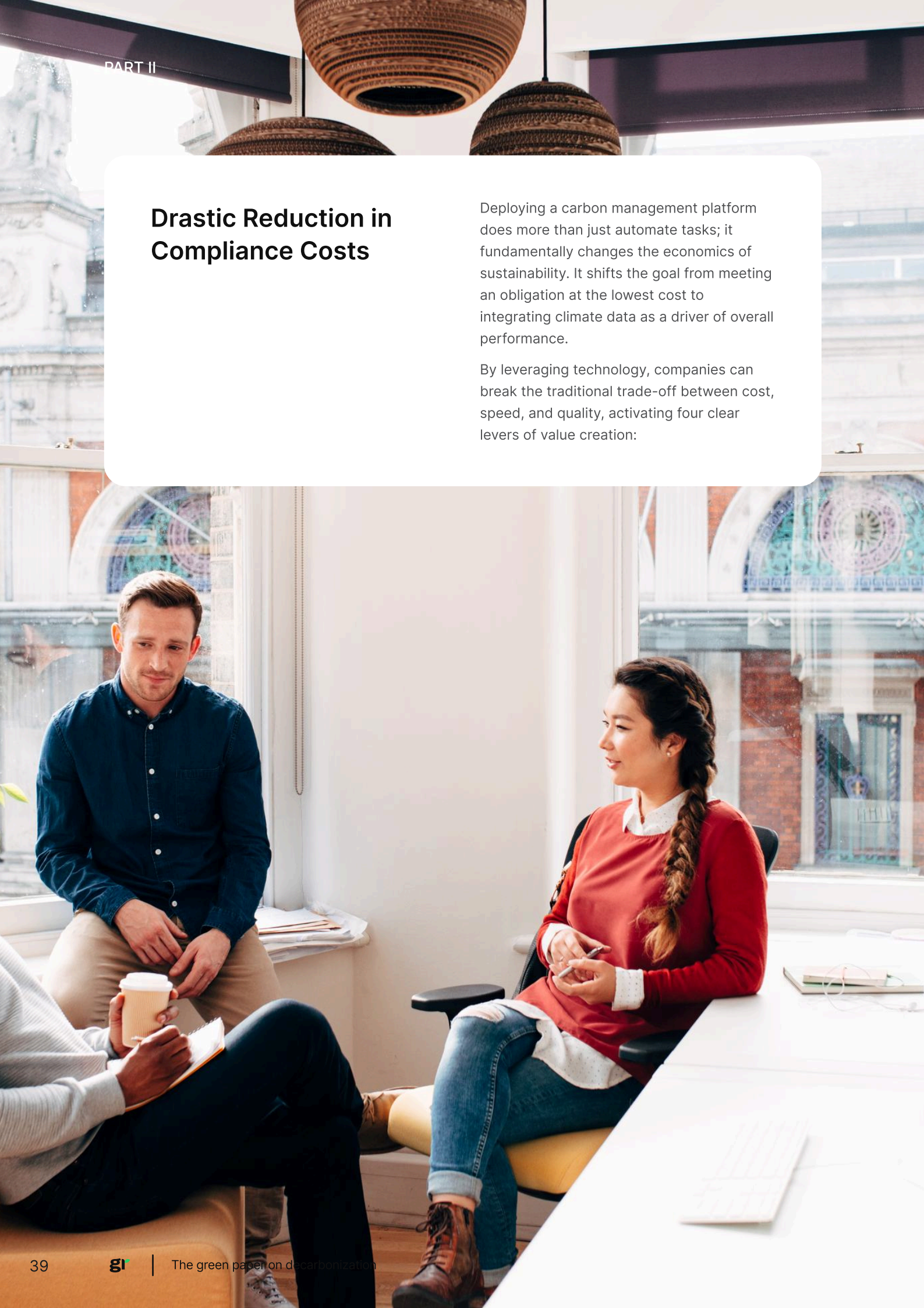
The drive to stay competitive in a low-carbon economy is forcing a shift toward SaaS platforms powered by Artificial Intelligence. This isn't just a minor upgrade; it represents a fundamental change in operations by automating the most labor-intensive and expensive parts of carbon accounting. While human teams struggle to process thousands of lines of data manually, AI excels - collecting, cleaning, and matching emission factors in a fraction of the time.

This turns a slow administrative burden into a real-time engine for business decisions.

However, this shift creates a clear contradiction: the energy footprint of the AI itself. While AI is an essential tool for optimizing power grids and building management, the electricity required to train and run these models is significant.

The credibility of this entire approach depends on greening the digital infrastructure. The math only works if large-scale data centers are powered by carbon-free energy - like nuclear or renewables - and if the emissions saved by AI across the economy far outweigh its own power consumption. This is the goal of Sustainable AI: leveraging high-performance computing to drive a more resource-efficient world.





Drastic Reduction in Compliance Costs

Deploying a carbon management platform does more than just automate tasks; it fundamentally changes the economics of sustainability. It shifts the goal from meeting an obligation at the lowest cost to integrating climate data as a driver of overall performance.

By leveraging technology, companies can break the traditional trade-off between cost, speed, and quality, activating four clear levers of value creation:

Direct Cost Savings:

By automating the collection and processing of ESG data, AI can free up the equivalent of one full-time employee (1 FTE) for every 500 staff members. This creates immediate structural savings and can cut external consulting fees by half.

Revenue Growth:

Climate transparency has become a competitive advantage. Companies with robust carbon data and certifications (like SBTi or EcoVadis) see their contract win rates increase by 30%, as they become the preferred partners for major corporations with strict supply chain requirements.

30%

increase in success rate

Operational Efficiency:

Real-time monitoring of energy, waste, and logistics identifies direct savings on utility bills. It transforms doing less into doing better, turning resource efficiency into bottom-line profitability.

Risk Management and Compliance:

With regulations like the CBAM and EUDR becoming more complex, a dedicated platform acts as a regulatory shield. It secures the supply chain against climate-related disruptions and protects the company from the reputational and financial risks of non-compliance.

AI as a Climate Copilot

AI does not replace human expertise; it "augments" it. By acting as a **Climate Copilot**, AI allows Procurement, Finance, and CSR teams to focus on strategy rather than data entry.

Core Capabilities:

Processing Unstructured Data:

Analyzing thousands of invoices and expense lines to map precise emission factors instantly.

Anomaly Detection:

Acting as an automated pre-audit to catch data inconsistencies before they become a liability.

Strategic Planning:

Providing benchmarked recommendations - such as material substitution or logistics shifts - based on industry standards.

As climate requirements go global, manual data collection has become economically unsustainable. AI-powered platforms are the only way to scale, offering a 52% reduction in costs and an 80% improvement in processing time (Greenly analysis).

This isn't just about saving time; it's about reallocating human talent to where it matters most:

Data Collection (-65% time):

From Data Entry to Supplier Engagement (-65% time):

Automated APIs replace tedious manual entry. This allows teams to stop chasing spreadsheets and start working directly with key suppliers to reduce emissions.

Analysis (-80% time):

From Observation to Decision

By eliminating manual Excel processing, AI shifts the focus from compiling data to interpreting it - identifying the high-ROI reduction levers that actually move the needle.

Reporting (-80% time):

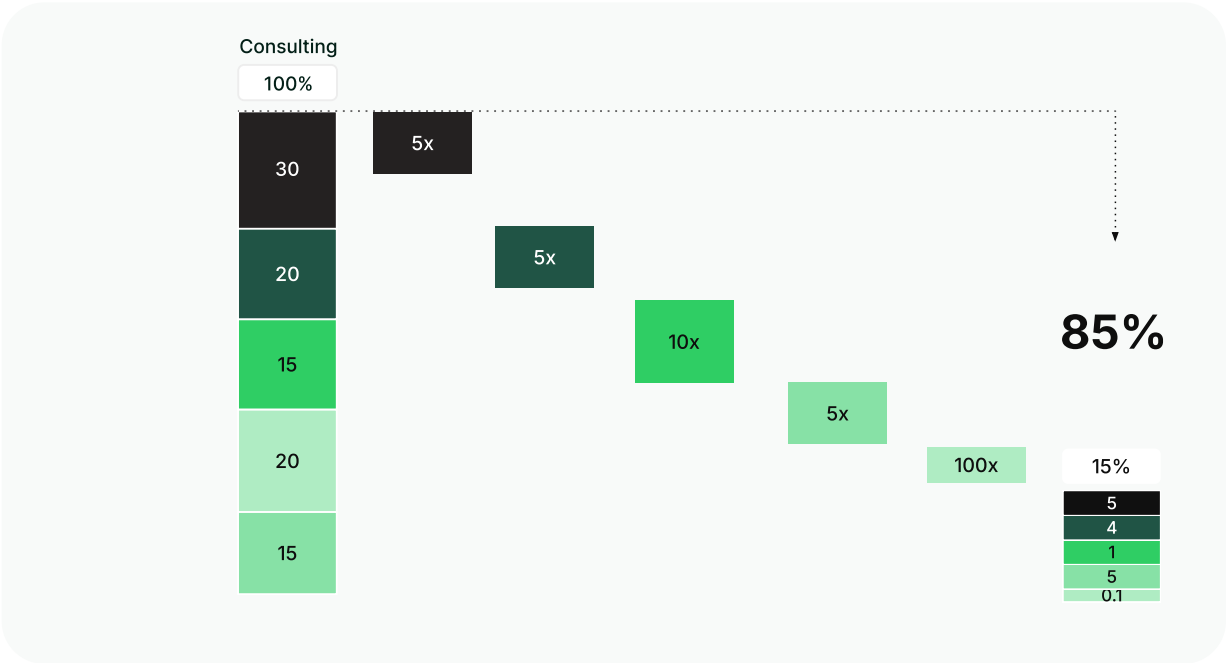
From Reporting Burden to Sales Asset

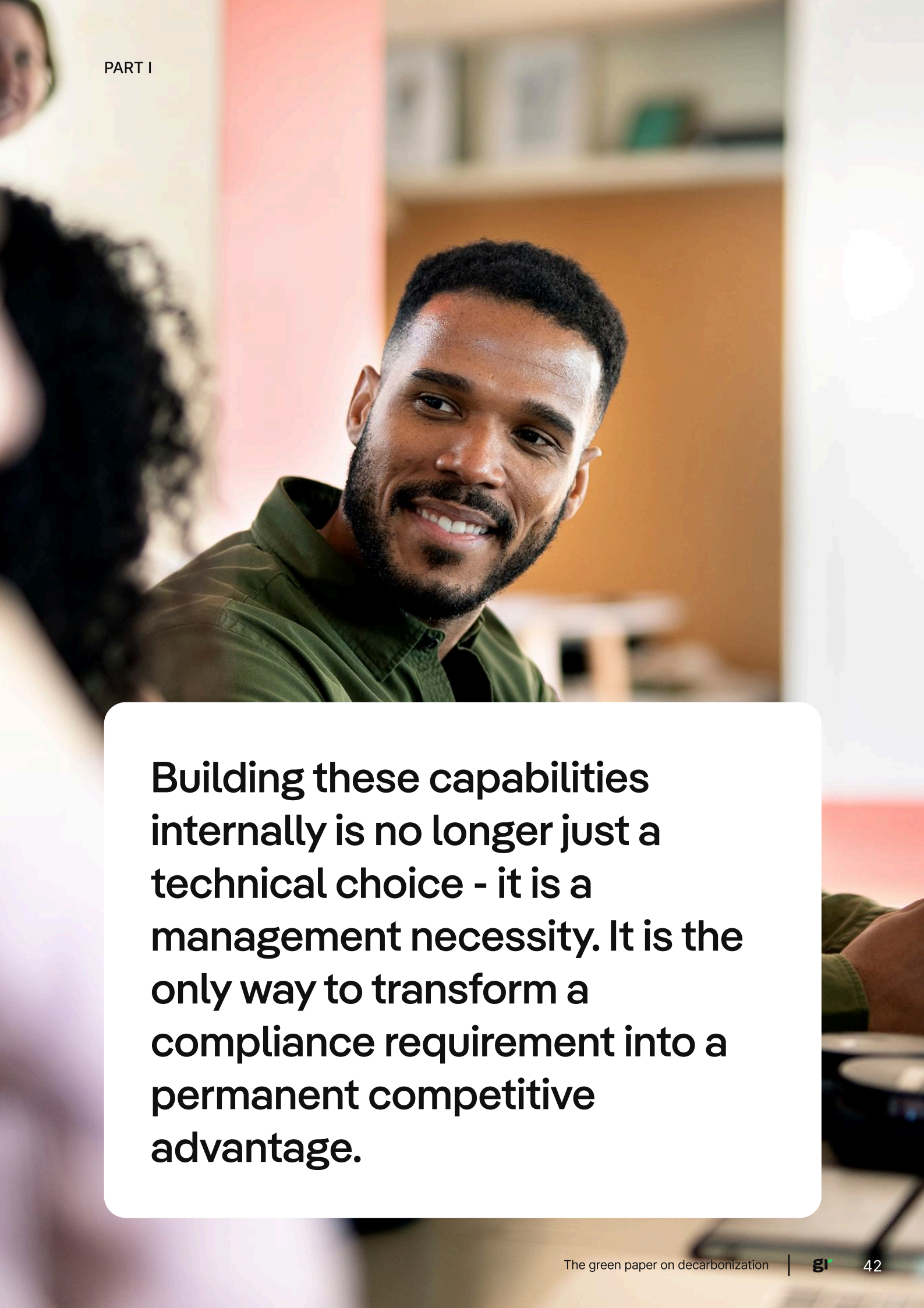
Instant, compliant reporting (CSRD, CDP) turns a regulatory chore into a ready-to-use tool for winning new contracts.

Action Plan (-80% time):

From Theory to Execution

Instead of spending months on theoretical scenarios, decision-makers get automated, quantified roadmaps for real-time project execution.





Building these capabilities internally is no longer just a technical choice - it is a management necessity. It is the only way to transform a compliance requirement into a permanent competitive advantage.

Decarbonizing the Supply Chain: Moving from Strategy to Action

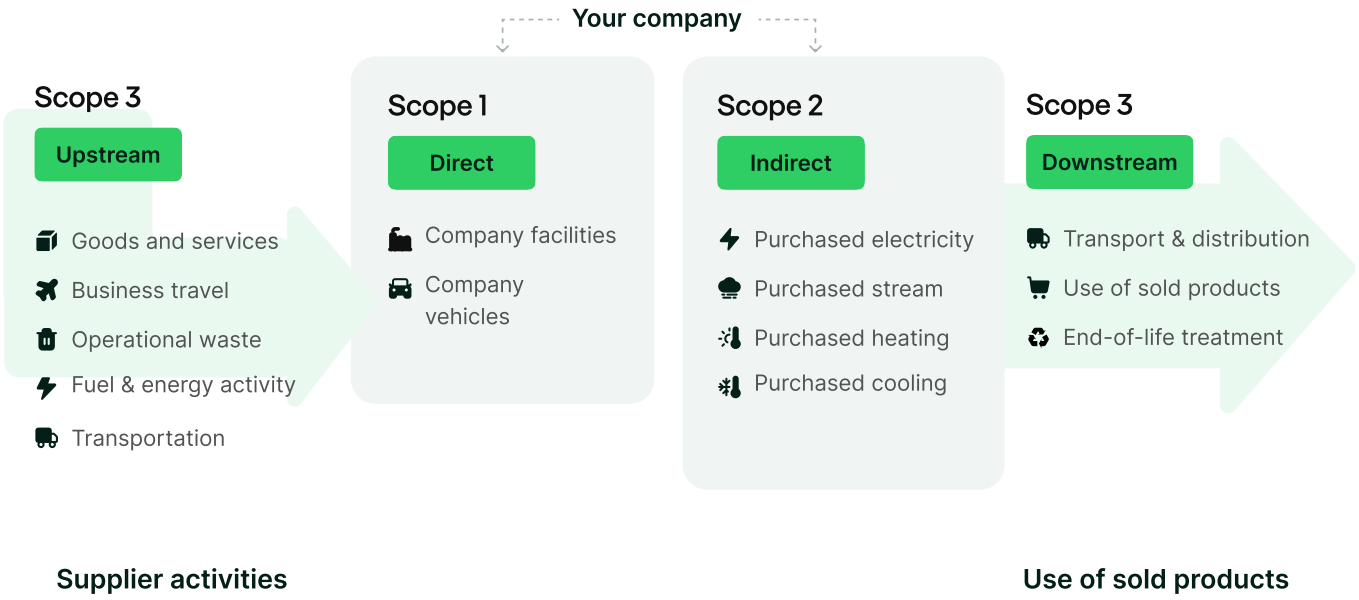
We are seeing a major shift toward data granularity in the climate economy. The focus is moving away from basic corporate compliance - where a supplier simply publishes an annual report - to product-level performance, where suppliers must provide a specific carbon footprint for every item delivered.

Driven by the Carbon Border Adjustment Mechanism (CBAM), the Digital Product Passport (DPP), and strict new rules in the automotive, textile, and construction sectors, carbon data must now be tracked at the SKU (Stock Keeping Unit) level.

In this new landscape, Life Cycle Assessment (LCA) has become the essential foundation of any decarbonization strategy. Historically, LCA was a slow, manual process - a niche project performed by specialists that was impossible to scale across thousands of products. The challenge now is to move LCA from a one-off technical task to an automated, enterprise-wide process.

Sustainable Procurement: From Manual Chasing to Day 1 Carbon Insights

The traditional approach to supplier engagement has a structural flaw: it relies on manual data collection, which creates a massive burden for suppliers. This leads to low response rates and a collection of fragmented, static data. By the time this information reaches the procurement team, it is often too outdated or inconsistent to be used for actual decision-making.



Newer platforms are reversing the traditional approach by integrating ESG data directly into procurement systems. Instead of sending suppliers a blank form and asking them to start from scratch (Tell us your footprint), the system uses AI to do the heavy lifting first. It presents them with a pre-filled profile based on existing data (Here is what we've found - is this accurate?).

1

Day 1 Data & Auto-fill:

By leveraging shared databases and AI, the platform pre-populates supplier carbon profiles from the start. The supplier only needs to review or refine the data, which drastically reduces the effort required to get involved.

2

Proactive Compliance:

The system goes beyond just measuring carbon; it scans the supply chain to automatically flag suppliers exposed to regulatory risks like CBAM, EUDR, or the "EU Battery Regulation". This turns risk management into a predictive tool rather than a reactive one.

3

Decarbonization Simulation:

Buyers can now run what-if scenarios before making a purchase. They can instantly see the carbon impact of switching suppliers or relocating production, allowing them to weigh environmental costs alongside price and lead time during the actual negotiation.

Powered by AI

Scaling LCA: Product Data as the New Currency

Since Scope 3 emissions are essentially the footprint of your products, Life Cycle Assessment (LCA) is the only way to measure impact accurately. In the past, an LCA was a slow, manual process - fine for a one-off pilot, but impossible to manage across thousands of products. The real breakthrough now is moving away from these isolated studies and making carbon data a standard part of how a company operates.

The solution is to connect Bill of Materials (BOM) and ERP systems directly to emission databases. This allows companies to move from a few manual reports to thousands of automated assessments. The platform does the heavy lifting: it takes raw data and turns it into LCAs that meet global standards like ISO or EPD automatically.

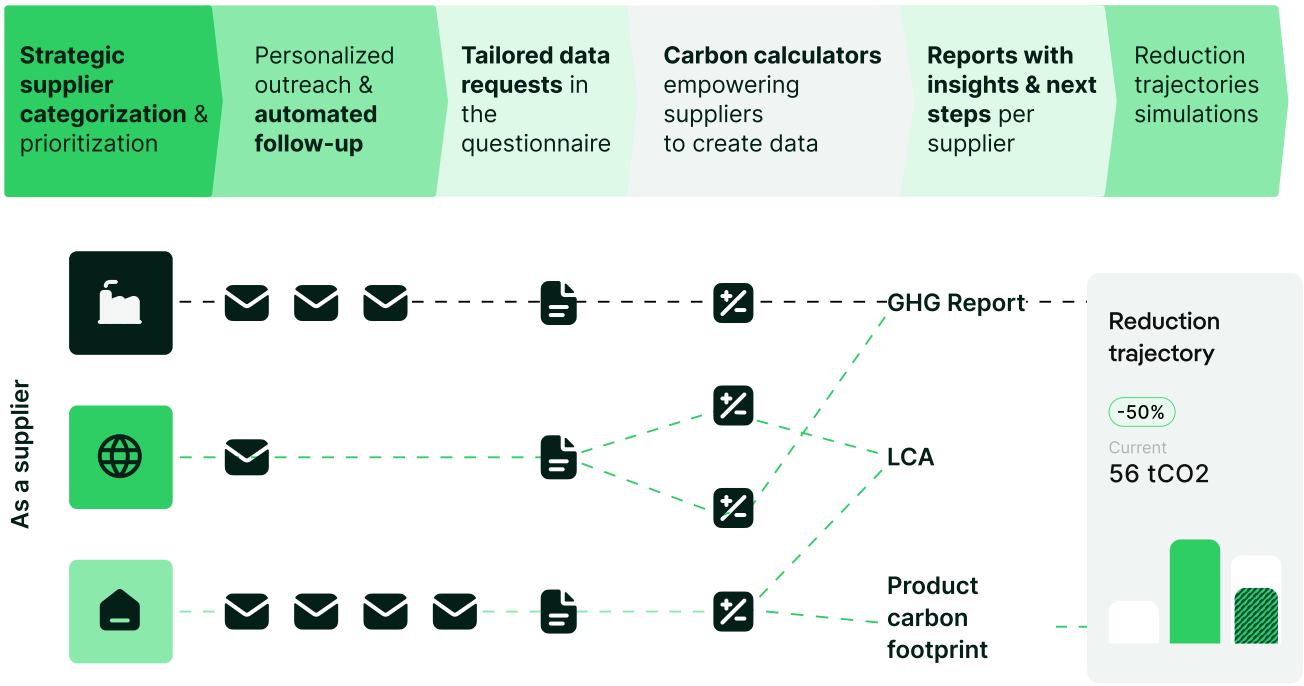
From Manual Research to Industry Templates:

Automation allows for instant LCAs using pre-set templates for sectors like Retail, Tech, or Construction. What used to take months now takes minutes. This finally makes carbon data useful for the people making day-to-day decisions, like buyers and designers, instead of just sustainability specialists.

Designing for Carbon and Cost:

When carbon data is built into the design phase, engineers and finance teams can stay in sync. Impact is no longer just measured after a product is made; it's tested while you're building it: "If we swap this material, how does it change the price - and our footprint?"

Zero friction, High Value: Greenly's guided supplier experience



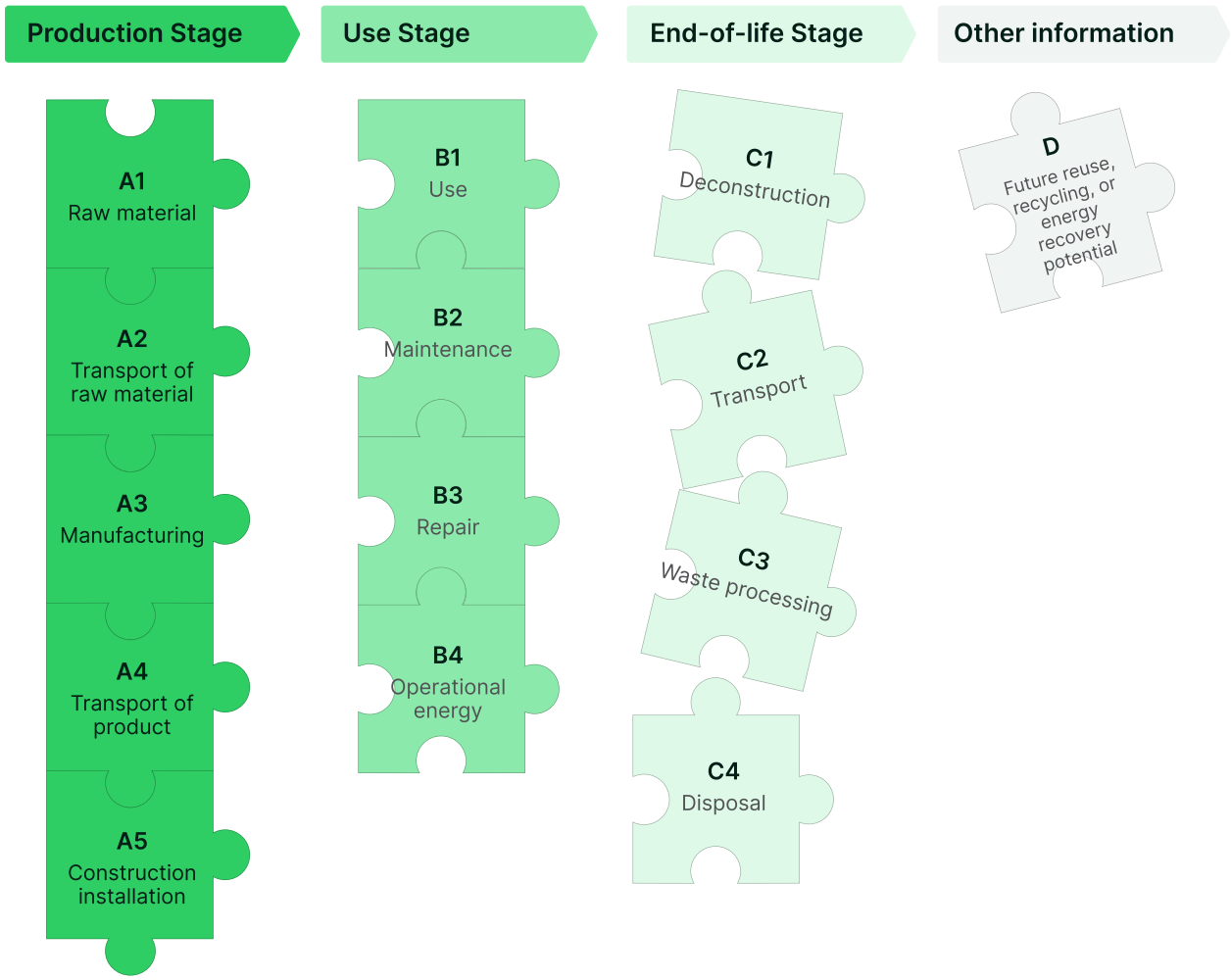
To make these automated assessments truly useful, the industry is moving toward Product Category Rules (PCR). These are standardized "playbooks" developed by industry bodies and regulators to ensure everyone is measuring carbon the same way.

Without these rules, comparing two products is almost impossible because every company might use different assumptions. PCRs provide the necessary framework to scale, setting strict calculation standards for each product type.

This ensures that when a buyer looks at two competing suppliers, they are seeing a level playing field.

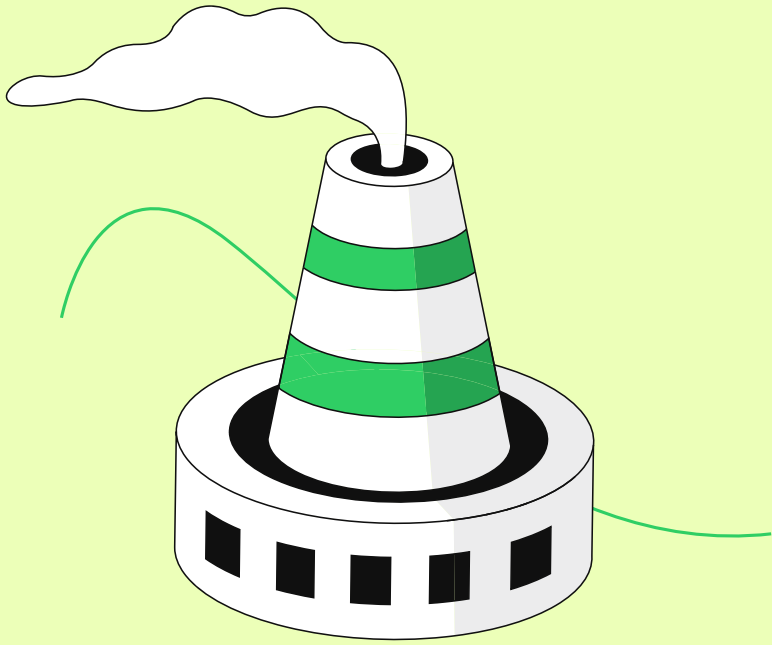
This combination of technological maturity and standardized rules marks a decisive milestone: true comparability between products. This is the real engine of decarbonization, as it allows buyers to make decisions based on verified environmental performance rather than marketing promises.

Beyond individual transactions, we are seeing the birth of a global carbon data infrastructure. By linking these standards with digital platforms, we create a common language that allows environmental data to flow seamlessly across the value chain - from producer to consumer. What began as a technical requirement has evolved into a fully integrated system that connects every actor in the supply chain.



CLOSING

From Measurement to Industrial Transformation



The last decade was about defining the rules and getting companies to pay attention. The next decade will be about results.

The groundwork for carbon reporting is now a permanent part of the global economy. Regulations like CSRD and CBAM have turned carbon into a financial metric that companies can no longer ignore. On the technical side, the move toward automated platforms and standardized LCAs means the "data problem" is effectively solved. We now have the tools to track emissions across a supply chain with a level of detail that was impossible five years ago.

However, tracking emissions isn't the same as reducing them.

To hit 2050 targets, businesses have to move past the paperwork and start re-engineering their core assets.

Reporting is just the starting point - it's the map, not the destination. Having precise Scope 3 data is only useful if it leads to a fundamental change in how a company operates.

The latest IEA and IPCC reports make the scale of this challenge clear. We reached a record 37 Gt of CO_2 emissions in 2022; at this rate, we are heading toward 2.4°C of warming. The IEA is no longer calling for marginal tweaks, but for a total structural overhaul by 2030.

To halve global emissions by 2030, three mature industrial levers must provide over 80% of the reductions:

- **Tripling global renewable capacity** to 11,000 GW.
- **Doubling the rate of energy efficiency** improvements.
- **Reducing methane emissions** from the energy sector by 75%.

This transformation is massive and hits every sector. In transport, electric vehicles must capture 60% of global sales by 2030. In buildings, emissions must fall by 61% through efficiency and heat pumps. Heavy industry must reduce emissions by 30% to 40% per ton of cement or steel produced.

This isn't just a conceptual goal; it's an infrastructural one. To support this shift, we must deploy 2 million kilometers of power grids every year by 2030 and secure the entire supply chain for critical metals.

This industrial metamorphosis requires an unprecedented $4.5 trillion in annual investment by the early 2030s. But you cannot finance what you cannot measure. Rigorous, auditable carbon accounting is the cornerstone of this financial architecture. It allows capital to flow toward high-performing projects, de-risks long-term investments, and ensures that value creation is sustainable. Without a robust data infrastructure - one capable of tracking Scope 3 and certifying LCAs - these massive investments remain speculative at best.

Ultimately, managing carbon is becoming a baseline requirement for doing business. The companies that lead in 2026 will be the ones that have mastered their data; the survivors of 2050 will be those who used that data to completely rebuild their industrial footprint. The transition is not a temporary phase - it is the new definition of economic performance.

To halve global emissions by 2030:

achieve the target of

60%

of global sales of electric vehicles

2M

of kilometers of networks per year to support demand

investments in clean energy must rise to

4,500

billion dollars per year

Appendix

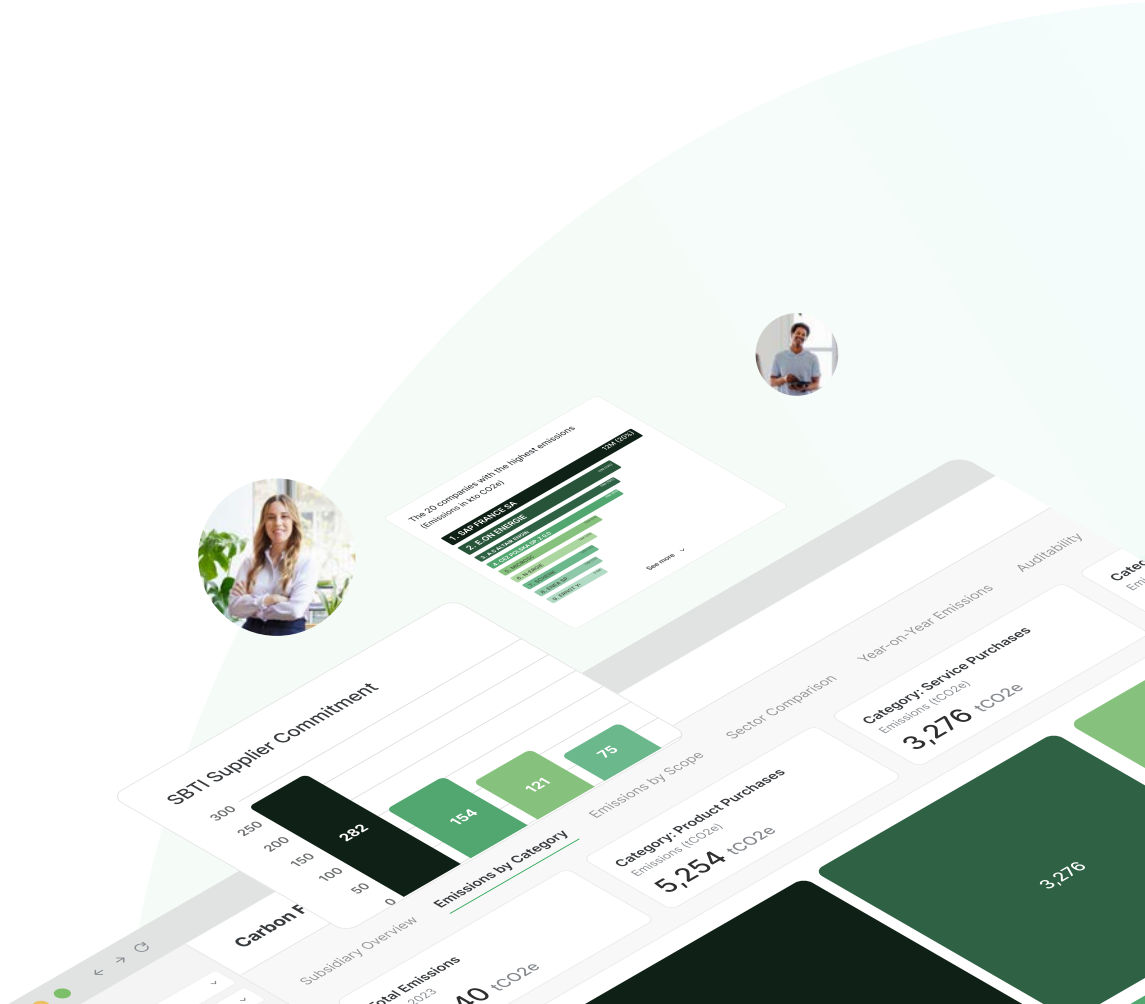
greenly

The #1 carbon management solution for businesses

Greenly was founded with a simple mission: to make carbon accounting simple, accurate, and intuitive for every business. Today, Greenly is a leading solution, recognized in the industry for carbon accounting and sustainability management, and trusted by over 3,500 companies worldwide. Our platform is the highest-rated in its category, with a satisfaction score of 4.8/5 on G2, Trustpilot, and Capterra.

We combine an unparalleled technology platform, powered by AI, with the deep expertise of over 60 in-house climate experts to deliver unparalleled service. Our comprehensive suite provides 360-degree coverage for every climate need, including GHG management and decarbonisation, life cycle assessment (LCA), and ESG reporting.

At Greenly, we are not just building a compliance tool; we are creating a new category of carbon intelligence to transform historical data into a management system for the future. We are committed to democratizing climate intelligence and making sustainability accessible, so that every organization can contribute to building the Net Zero economy.



About Greenly

Greenly: The Number 1 Climate Platform in Europe

3,500
Clients worldwide

200+
Employees

€75M
Funding raised with EIP, XAnge, Fidelity, Move, BGV, HSBC

20+
Countries: USA, Canada, UK, France, Italy, etc.

400M
Tons of CO2 under management

9 / 10
Customer satisfaction score

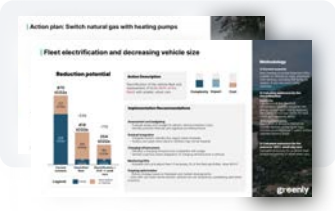
Services	SIA	DEKRA	VALAMAR	vidaXL	
Tech	ESKER	cornerstone	UBISOFT	Contentsquare	dott
Retail	BIC	General Mills	KFC	FNAC DARTY	FRUIT OF THE LOOM
Manufacturing	FORVIA	APTIV	PILATUS	PerkinElmer	HUTCHINSON
	DAMEN	BOSCH	illumina	VEOLIA	SONY

Audit-Ready Report

Turnkey deliverables, automatically generated

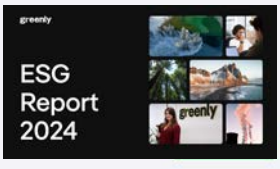
GHG Report

Exportable at group and entity level



Transition Plan Report

Exportable at group and entity level



ESG Report

Included with our ESG platform

LCA Reports

Compliant with the various standards

Robust & Reliable Analyses for Informed Decision-Making

Beyond Standard Emission Factor Databases

- Reference EF/LCA Databases
- Supplier-Specific EFs
- Expense-Based EFs Adapted to Inflation and Location
- Supplier EF Retrieval
- Custom EFs

Strategic Analytics & Quality Control

- 200+ Built-In Quality Checks
- Multi-Entity Consolidation Options
- Dynamic Dashboards
- Industry Benchmarking

Expert-Led Support And Decision Tools

- Detailed Year-On-Year Analysis
- Support for Your Results & Audits
- Methodological Justification (Reduction Actions, Developments, Etc.)
- Actionable Reduction Planning

Built on a foundation aligned with best-in-class Standards & Methodologies

Empowering your Climate Expertise with Exceptional Support

8.5+
out of 10

50 %
of queries

17
minutes

Average customer satisfaction score

- Regular follow-ups
- Patience & professionalism

Answered by Ecopilot

- Relevance of responses
- Continuously improving algorithm

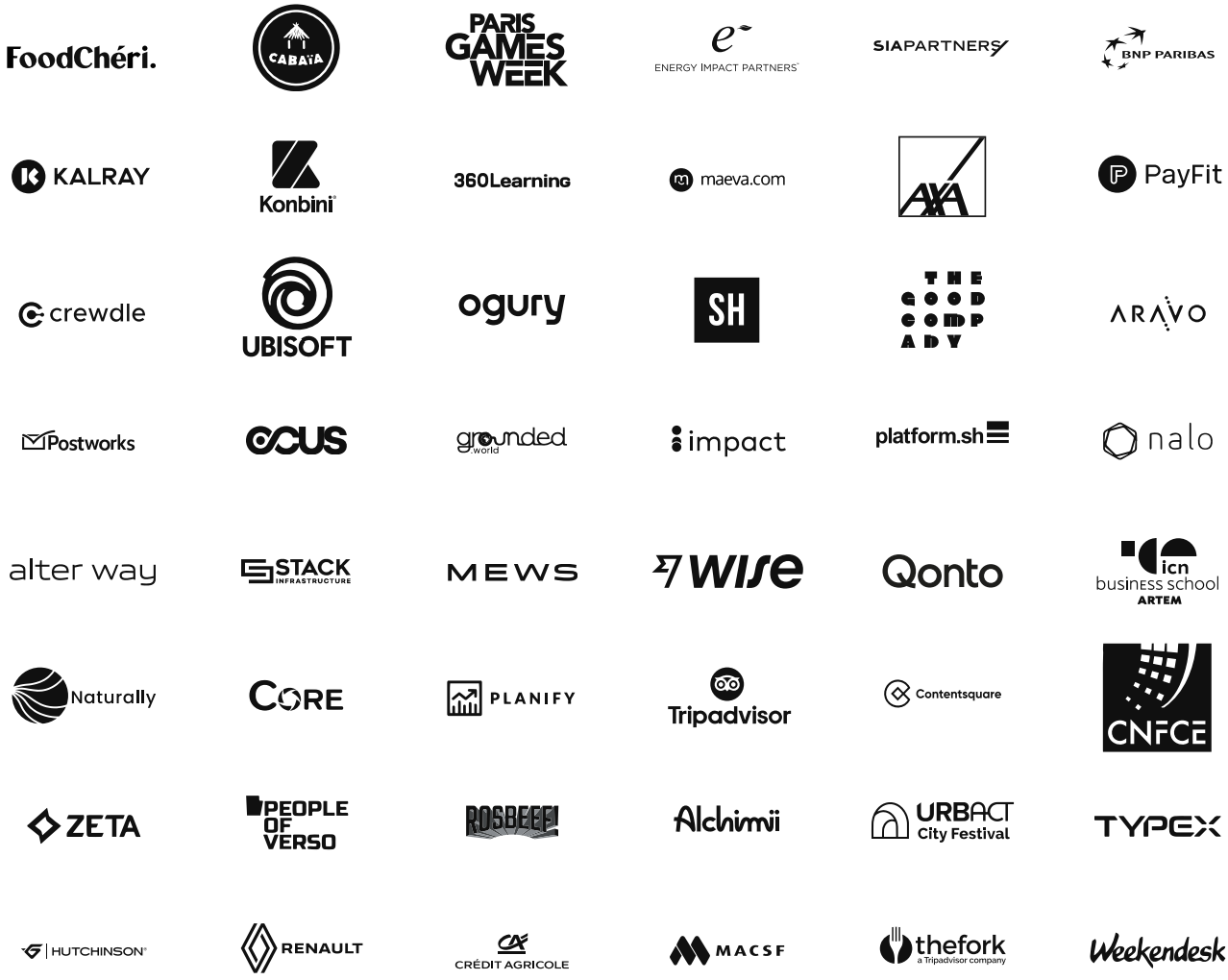
Average time to respond to complex queries

- Team availability
- Clarity & thoroughness of answers

Management team

Founded by **Alexis Normand** (CEO), **Matthieu Vegreville** (CTO) and **Arnaud Delubac** (CMO), Greenly combines strategy, deep tech and market execution to scale climate action through software. Alexis, a graduate of HEC Paris and Sciences Po, previously worked at Booz & Company, Saint-Gobain and Withings, and co-founded a Techstars-backed startup before launching Greenly. Matthieu, an École Polytechnique and Télécom Paris graduate based in New York, leads the platform's carbon accounting and data infrastructure. Arnaud, trained at INSEEC, ESSEC and CentraleSupélec, brings a background in public communication from the French Prime Minister's office and was named Forbes France 30 Under 30. The leadership team complemented by Laetitia Carle, COO and Managing Director, a former Morgan Stanley investment banker and ex-Entrepreneur First, who structured Greenly's operations during its rapid scale-up and drives execution across markets.

+3500 clients have already entrusted Greenly with managing their carbon footprint



To learn more and speak to our experts

Website: www.greenly.earth
Contact: contact@greenly.earth


greenly