



# Unlocking Environmental Sustainability in Supply Chains





# Contents

<b>Introductory Considerations</b>	<b>3</b>
<b>Factors Impacting Environmental Sustainability in Supply Chains</b>	<b>6</b>
New Energy Solutions	6
Consumer Demands	7
Change Management Challenges	8
<b>Key Challenges to Building a Sustainable Supply Chain</b>	<b>9</b>
Increased Costs	9
No Sustainability Framework	10
Operationalizing Sustainable Development	11
The Missing Pieces	12
Paradigm Shifts	13
<b>Strategies for Reducing Supply Chain Carbon Footprint</b>	<b>14</b>
End-to-End Cooperation and Coordination	14
Carbon Emissions Manager	15
Four Key Areas For Managing GHG in Supply Chains	16
<b>The Future of Environmental Sustainability and the Supply Chain</b>	<b>17</b>
Forecasting 2023	17
What the Future Holds	18

# Introductory Considerations

Social and environmental responsibility are now two sides of a very important coin for companies in the supply chain. Because supply chain operations have a direct impact on the environment, companies face both the demand and opportunity to incorporate more sustainable practices that benefit operations, customers, and climate.


Investing in environmentally sustainable supply chain operations contributes to business value drivers. It also positively impacts:

- ▶ Risk mitigation
- ▶ Efficiency
- ▶ Sustainable product creation
- ▶ Workplace culture
- ▶ Pricing power
- ▶ Market share
- ▶ Cost savings

When business leaders evaluate the cost/benefit equation of environmental sustainability, the findings are clear.







*“According to research by Deutsche Bank, which evaluated 56 academic studies, companies with high ratings for environmental, social, and governance (ESG) factors have a lower cost of debt and equity; 89% of the studies they reviewed show that companies with high ESG ratings outperform the market in the medium (three to five years) and long (five to ten years) term.”*

**Source: McKinsey reporting on a study by Deutsche Bank**

*“Companies with low-carbon-emission intensities—with carbon emissions being a key component of the Paris Agreement—have high excess returns. A portfolio of companies with a high proportion of Leadership in Energy and Environmental Design (LEED)-certified buildings also exhibits high excess returns. Such companies also contemporaneously exhibit high return on assets.”*

**Source: The Journal of Impact and ESG Investing Winter 2021**





Before deploying sustainable change management, a thorough assessment of the industry and company is crucial. Here are several considerations for a roadmap toward more environmentally sustainable supply chains.

**Scalable Sustainability Solutions.** As recommended in a [Global Environment Change](#) publication, there are three areas of focus to create scalable sustainability: 1) Improve understanding and awareness for stakeholders; 2) Motivate and incentivize new practices via policy standards; 3) Develop implementations for new practices at a socially acceptable cost.

**Internal Alignment and Governance.** Make intensive efforts to align all departments internally, and establish governance structures to enforce sustainability protocols. Effective buy-in from stakeholders, leaders, and staff is key.

**Company Roles and Responsibilities.** New ownership structures and roles must be assigned where necessary, as sustainability integration is an “all hands” situation.

**Supplier Engagement.** Suppliers and vendors— key players in the supply chain— are impacted by sustainability measures. Encourage, support, and reward suppliers in furthering new sustainability standards.

**Tracking Goals and Performance.** Establish data governance processes to track performance. [Freight audit and payment](#) (FAP) captures vital transportation logistics data that contribute to long-term sustainability KPIs. Meticulous tracking allows sound reporting of internal and external processes.

The roadmap is clear, but enabling sustainable solutions isn’t an easy task— otherwise, every business would have done it already. In reality, there are a few serious factors that impact the mission.



# Factors Impacting Environmental Sustainability in Supply Chains

Businesses around the world are converting their processes to operate in environmentally conscious ways. But when it comes to the supply chain network, sustainability efforts look different. Since the supply chain is such a complex structure of many interconnected components, all contributors have to be on the same page.

Here are three major factors that impact the supply chain's environmental sustainability.

## New Energy Solutions

There are realistic solutions to making energy consumption more sustainable in the supply chain. Recent findings reveal the following.

- ▶ [New Energy Outlook](#) predicts zero emissions sources will be installed at 60% capacity by 2040.
- ▶ Renewable energy was predicted to [break global records](#) in 2022 thanks to the renewable power capacity increase to 295 gigawatts.
- ▶ More than [300 companies](#) have signed the American Business Act Climate Pledge since 2015, committing to pursue carbon reductions and sustainability across global supply chains.



Supply chain leaders have more opportunities to leverage new energy solutions. The resources are available, the effort is there, and effective change is inevitable.

## Consumer Demands

Today's consumers want and demand greener alternatives. Buyers care not only about how a product is made but also about how it becomes available through the supply chain. This factor alone proves to drive policy changes and supply chain initiatives that favor green solutions.

What does the data say about consumer demands?

- ▶ 66% of shoppers today say [sustainability matters](#) to them in their purchasing decisions.
- ▶ Over [the past five years](#), internet search queries for sustainable products have increased by 71%.
- ▶ More than [65% of consumers](#) now view conscious consumption of greener products as a requirement, not merely a preference.
- ▶ Between 2021 and 2022, up to [85% of consumers](#) changed their purchasing habits to buy more sustainable sources.

Everything in the consumer experience— from ingredients to packaging to manufacturing materials— is now evaluated closely by the public. Buyers want companies to show proof of sustainable practices.





Visibility and performance are key components to a more sustainable supply chain that values company and consumer advancements toward climate responsibility. At the transportation level, [freight audit and payment technology](#) is the only way to maintain a transparent view of all metrics.

## Change Management Challenges

One of the biggest factors that impact sustainability in the supply chain is the challenges of change management. Although plenty of sustainable tools and opportunities are already available, effective integration relies on the willing involvement of all parties.

To get all internal and external players on board, leadership initiatives are paramount. How do supply chain companies encourage this? Here are a few recommendations.

1. Cast the vision of environmental sustainability for your organization. Share the mission.
2. To relieve some of the overwhelm of such a big shift, use technology that allows precise automation and data-gathering.
3. Explain the personal benefits your leadership, staff, and suppliers will experience as a result of switching to environmentally sustainable practices.
4. Map out the realistic investment of greener operations.
5. Develop a timeline and plan of action to hold your company accountable.

Take it from our [experts at Trax](#): supply chain tactics that support the big mission toward environmental sustainability are possible. Companies need the right guidance, management systems, and technological platforms to accomplish it.

# Key Challenges to Building a Sustainable Supply Chain

Sustainability in the supply chain is a need that should not be underestimated. However, management and course correction are serious challenges for many enterprises. Real money, time, and careers are on the line through this shift.

To pivot from conventional to sustainable supply chain management, it's essential to understand some of the expected challenges along the way.



## Increased Costs

Change always comes at a cost, and supply chain leaders often feel torn between the many social and economic pressures at hand. As sustainable practices grow more and more imperative, several costs cannot be ignored:

- ▶ The cost of hiring sustainability specialists.
- ▶ The cost of establishing new protocols and procedures.
- ▶ The cost of inefficient carriers or vendors.
- ▶ The cost of poor reputation caused by environmental damage.
- ▶ The cost of acquiring and tracking new supply chain metrics.
- ▶ The cost of sourcing more sustainable suppliers or vendors.
- ▶ The cost of rearranging systems and workflows to meet new goals.



Many costs are justifiable in long-term sustainability goals, as changes often cost more up-front but yield a higher return over time. For example, investing in low-emissions company vehicles is a high cost that ultimately saves significant money, energy, resources, and carbon emissions.

Consider this: what would it cost to *not* convert to a more sustainable supply chain model? Environmental risks could cost [\\$120 billion by 2026](#) if these crucial investments in change aren't made soon. Additionally, many industries are starting to [mandate environmental accountability](#), which means such change may be a requirement shortly.

## No Sustainability Framework

Sustainability across supply chains is systemic and must be addressed from the top down. Since no business operates on its own but rather relies on many internal and external systems, it can be difficult to establish a full-scope sustainability framework.

To run sustainable operations, global enterprises will require frameworks that meet new legal and climate-responsible policies. The European Union is already taking action in this respect. The EU-wide Corporate Due Diligence and Corporate Accountability bill enacts regulations around the environmental, social, and governance (or ESG) risks in the supply chain. Companies are adapting to meet these standards.

At a large scale, technology makes such interoperability possible. Leaders working toward [transportation spend management maturity](#) are equipped with transparent, clear developments in the quest toward sustainability initiatives.



*Whether your company has no sustainability framework in place or is already on its way toward optimizing one, [Trax Technologies](#) can help solve the complexities of global, sustainable TSM.*

# Operationalizing Sustainable Development

Developing and implementing sustainable management comes first. But both have to be operationalized in order to become instinctual to the inner workings of the organization.

Despite the rising demands for better practices, ecological integrity is not yet the norm throughout the supply chain. It will take time to become standard practice at the global level. Until then, there are several [strategic shifts](#) that companies can make toward operationalizing sustainable practices.

1. Practice due diligence on environmental, social, and business impact.
2. Know the supply chain and set up a business care for sustainability.
3. Include major stakeholders and suppliers.
4. Communicate the established plan to measure and manage risk.
5. Train internal and external professionals in sustainability.
6. Launch new policies, frameworks, and expectations step-by-step.
7. Monitor and evaluate progress, and adjust accordingly.

No worthwhile change can happen overnight. It's the gradual changes— the small, phase-by-phase moves— that result in long-term transformation.



# The Missing Pieces

It's vital to consider the impact these changes will have on existing infrastructures. On the other hand, a challenge that should not be overlooked is realizing what's missing.

Several missing pieces can present serious hurdles to the sustainability process.

- ▶ Missing resources
- ▶ Missing processes
- ▶ Missing expertise or specialized knowledge
- ▶ Missing technical solutions
- ▶ Missing experience of sustainability
- ▶ Missing environmental controls and organizational policies
- ▶ Missing visibility of carbon emissions

The answer to these missing pieces comes from the growing network of supply chain sustainability specialists. To position your supply chain organization for positive change, [freight audit and payment systems](#) help streamline and optimize every phase.



# Paradigm Shifts

Company culture has a huge impact on performance, adaptability, and supply chain success. One of the key challenges to overcome when becoming more sustainable is the paradigm shifts it will require.

Fortunately, the importance of sustainability in business is already a common message. Encouraging the paradigm shift in your organization isn't as difficult as it may seem. Since clients, customers, and teams value collaboration, it's likely that adaptation on this journey is already welcomed.





# Strategies for Reducing Supply Chain Carbon Footprint

Carbon emissions are a leading concern regarding the environmental impact caused by the supply chain. But in the 2022 [State of Supply Chain Sustainability](#) report by MIT, only 14% of supply chain respondents said they had a practice in place to manage carbon offsets.

There are emergent strategies in development to reduce the carbon footprint throughout the supply chain. No doubt, reducing carbon emissions is a team effort, especially when it comes to transportation and logistics.

## End-to-End Cooperation and Coordination

There's never been a more critical need for cooperation and interoperability in the global supply chain than in the current drive for sustainability. Growing expectations and regulations around ESG goals push supply chain leaders to consider coordination methods that support operations system-wide.

The future is carbon neutral; zero waste. Transportation accounts for nearly 30% of greenhouse gas emissions every year, placing much pressure on global transport and supply chain leaders to respond.


This shift must be built into the very systems on which supply chains rely. Hampton Wall, Chief Executive Officer at Trax, encourages supply chain leaders to “Embed these efforts into what you already do. Make carriers of choice that are investing in this space. Work with them to understand what type of sustainability and ESG targets they have as a 3PL or broker carrier in transportation.”

To target carbon emissions resolution between shippers, vendors, and carriers, ongoing conversations must be had. More importantly, visibility into accurate CO2 data must first be gained.

The good news is, there are reliable tools that exist specifically for supply chain leaders to allocate and track this data.

## Carbon Emissions Manager

Supply chain companies need a way to accurately benchmark and track their CO2 emissions. Access to this data is the crucial first step in making improvements to the supply chain's carbon footprint.



*“This tool gives [company leaders] an advantage to not only think about how they optimize the cost of transportation on the freight audit and payment side but the sustainability impact and ROI as they’re making strategic decisions.”*

**— Hampton Wall, Chief Executive Officer at Trax**

Calculations give leaders insight into:

- ▶ Varying emissions factors
- ▶ Travel distances
- ▶ Tank-to-wheel combustion of energy
- ▶ Wheel-to-wheel distribution of fuel
- ▶ Insights into CO2 and other greenhouse gasses

With the [Carbon Emissions Manager](#) from Trax, transportation networks can accurately assess all their carbon footprint information. Global businesses need this data stack to adapt to more sustainable ESG operations.



## Four Key Areas For Managing GHG in Supply Chains

Managing greenhouse gasses (GHGs) is mission critical second to reducing the large number of resources that supply chains consume. There are four key areas in which supply chains must prioritize GHG management if they want to reverse the negative impact.

1. **Structures.** In the effort to pivot operations toward climate responsibility, even the largest global companies are now launching corporate environmental sustainability programs.
2. **Partners.** Supplier selection, ongoing partner engagement, and third-party reporting are top priorities for companies that are serious about environmental sustainability.
3. **Processes.** Across all modes and supply chain geographies, transportation spend management processes must now track and include carbon emissions.
4. **Performance.** Ongoing accountability and monitoring are not only essential to ensuring greener performance across supply chains but are also critical to successfully following the roadmap toward sustainable operations long term.

Every day, we see the need for managing and responding to these four key areas of GHG. There are few solutions that supply chain operators have access to. This is why Trax created the effective Carbon Emissions Manager.

*“The answer lies, as with many operational efficiencies initiatives, in clear access to data across your supply chain operation. How much CO2 is being emitted at any given time? What are the major causes, modes, or geographies and other contributing variables? Only by tracking this data— by embedding an enterprise-wide approach to ongoing CO2 monitoring— can we build effective strategies to manage and reduce emissions and realize greater efficiencies at the same time.”*

— **Steve Beda,**  
**Executive Vice President**  
**at Trax**

# The Future of Environmental Sustainability and the Supply Chain

Currently, the supply chain is known as a prime perpetrator of environmental impact. Minimizing and even reversing climate damage is a top priority for industry leaders.

Moving forward, companies must know exactly how they impact the supply chain, prepare for key challenges they'll need to overcome, and implement strategies to reduce their greenhouse gas emissions.

Partnering with transportation sustainability experts is the next best step.

## Forecasting 2023

ESG is evolving from a moral obligation to a business necessity in the global supply chain. It's predicted that ESG will become a main point of attention across industries during 2023.

[Forrester Research](#) predicts 2023 will be a “green market revolution” throughout global supply chains, with several upcoming changes to anticipate.

- ▶ **Decarbonization:** Carbon offsetting (carbon removed from or prevented from entering the atmosphere per ton) and carbon “insetting” (companies’ efforts to mitigate CO2 emissions).
- ▶ **Carbon reporting:** New climate standards and reporting submission requirements for organizations.
- ▶ **Automated technologies:** Machine learning tech, physical automation, and legacy systems for security and operations in the supply chain.
- ▶ **Company accountability:** Executives and consumers want to know climate-related company information.

Environmental, Social, and Governance (ESG) will be a major priority for all businesses in 2023— especially companies related to transportation. And this is only the beginning: it’s likely we’ll see more legislative movements toward climate and environmental mandates in the future.

## What the Future Holds

As we look toward the future, here’s how environmental sustainability initiatives are taking hold of the supply chain and what leaders will need to do in order to get on track.

1. Global executives agree on the importance of prioritizing the environment. This contributes not only to responsible climate action but also to the long-term success of supply chain companies.
2. Taking early initiative is the best hope for enterprises that use energy and nonrenewable resources. Have a plan, set a timeline, and create a roadmap of incremental phases and progress.
3. Paradigm shifts are an inevitable part of the change management process. Facilitate both operational and psychological components with plenty of ethical community incentives.
4. Collecting and reporting accurate data is imperative to executing a strategy for sustainability. Reporting must take place at the organization and supply chain level.



No matter where your company is on the sustainability scale, we know this isn't a task that can be accomplished in a vacuum. Even the most innovative leaders need support. There are inevitable systems and technological resources you need to operate effectively amidst newer, greener industry norms.





Get on track with your company's environmental sustainability efforts. Contact Trax Technologies to connect with global experts in transportation, logistics, and the supply chain.

**Contact**

