Supply Chain Transparency

Free, Open-Source Solutions Á La Carte

The Elisabeth Haub School of Law Environmental Law and Policy Hack 2022 Submission

Table of Contents

Our Team

Kelsey Overby '23 EMBA is the Vice President of Impact at Second Horizon Capital, leading the development and evaluation of its social and environmental impact strategies. Kelsey is also an MBA candidate at Yale School of Management and has a BA from University of Washington.

Prior to joining Second Horizon Capital in 2021, Kelsey served at NationSwell, a social impact company. In her role as Senior Director of Partnerships, she developed and operationalized impact partnerships with corporate responsibility teams, foundations, and not-for-profits, including AARP, Bill & Melinda Gates Foundation, BlackRock, Heinz Endowments, Salesforce, PwC, and State Farm, among others. Previously, she designed and implemented engagement strategies, initiatives, and campaigns for companies in the retail, consumer packaged goods, and financial services sectors.

Kelsey serves as an Honorary Advisor and is a former board member for The Resolution Project, a global social entrepreneurship organization that has helped over 600 undergraduates start almost 400 socially responsible ventures in over 80 countries and 20 U.S. states. She also served as President of the New York City professional chapter of Net Impact.

Gabriella Mickel '24 JD/MEM is a joint degree student currently completing a Masters of Environmental Management with a focus on Business and the Environment at the Yale School of the Environment. Gabriella is the Lead Teaching Fellow for Sustainable Finance Policy and Regulation. After selling a successful business and helping design and fundraise for a legal technology solution that helps low-income tenants address habitability issues, she is looking to pursue new projects in the realm of non-profit entrepreneurship.

Margaret Cyr-Ohngemach ‘24 JD/MEM is a dual degree student pursuing an advanced certificate in environmental law at Elisabeth Haub School of Law and Yale School of the Environment. Margaret is a teaching fellow for Sustainable Finance Policy and Regulation, and works as a research assistant at the Yale Center for Environmental Law and Policy. She is interested in applying systems change thinking to help facilitate a just transition, and mechanisms to increase investment in renewables, ecosystem services and conservation.

Brooke Mercaldi ‘24 JD/MEM is a joint degree student at the Elisabeth Haub School of Law at Pace University and the Yale School of the Environment. She is currently completing a Master of Environmental Management with a focus on Environmental Policy Analysis. Brooke is a Research Assistant at the Yale Center for Environmental Law and Policy and the Yale Initiative on Sustainable Finance. She hopes to use her environmental science and advocacy background to enhance and protect the human-environment relationship through environmental law.

Acknowledgements

Our team would like to formally thank Robert J. Klee, J.D., MEM, Ph.D. for his invaluable assistance as our team coach. Additionally, we thank the corporate supply chain leaders who shared their invaluable perspectives and experiences; the in-house and large firm attorneys who ensured we headed in practical and legally sound directions; Josh Hopkins, Secondee from Clyde & Co to The Chancery Lane Project, for his time and advice; Andrew Vogt, Ph.D. candidate at Yale specializing in economics and market design, for talking us through the economic feasibility of various ideas; and Melissa Portala, Environmental Activist, for her input.

Executive Summary

Our team created this private environmental governance proposal to address the need for transparency in the context of supply chain decarbonization. Transparency, for our purposes, is needed in two different, but related realms. First, we identified a need for transparency along supply chains. Second, we identified a need for transparency in the mechanisms used to improve and motivate transparency along supply chains. Our solution is a web-based platform that hosts open-source, free solutions to help the full spectrum of stakeholders improve transparency along supply chains. To demonstrate our solution, we created a draft platform, https://sites.google.com/view/supplychainsolution/, and four example solutions for three key stakeholders – supply chain managers, shareholders, and employees. Our example solutions include a due diligence questionnaire, a contract provision, a shareholder proposal, and a list of sample interview questions for prospective new employees and employees interviewing for promotions. All four solutions are designed to improve or motivate supply chain transparency.

Our Process

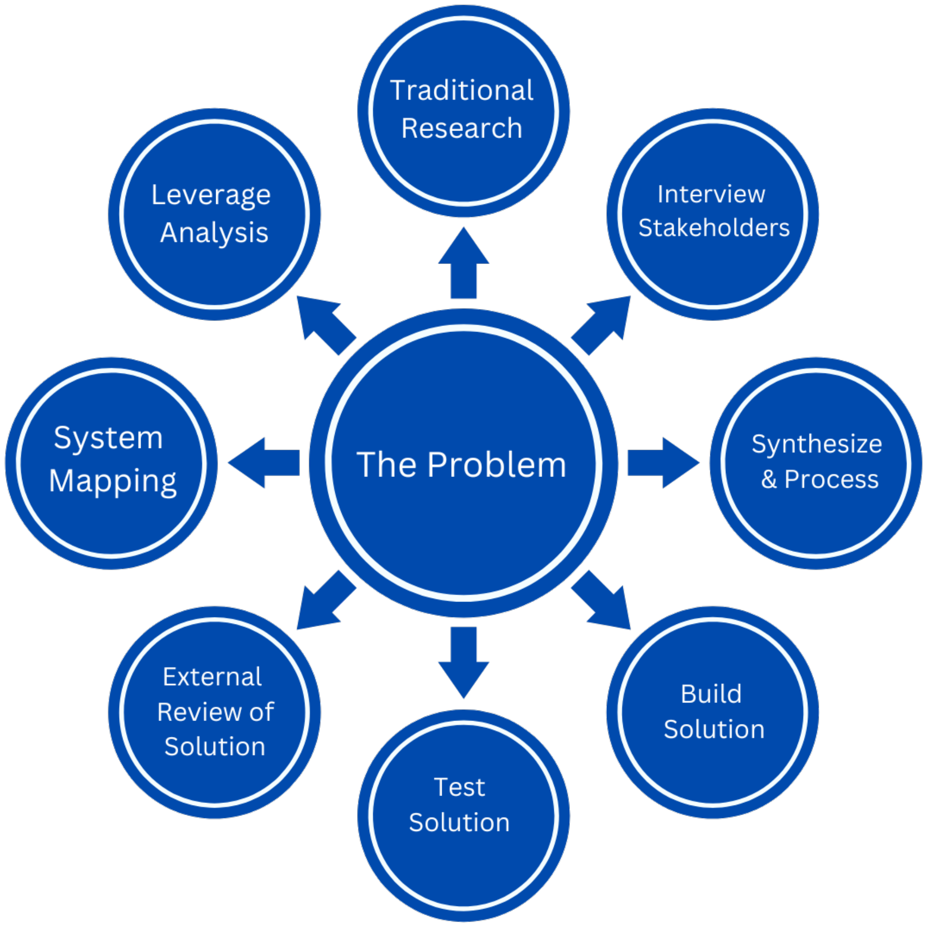


Figure 1: Our policy development process.

Throughout our preparation, we applied human-centered design to address the need to decarbonize supply chains. Our process (Figure 1) was not linear, or even cyclical—the process took the form of a web with interconnected steps. This process ensured we stayed focused on stakeholder needs and problems, rather than just jumping straight to solutions. The interviews were especially influential. Interviewees included, but were not limited to, a Social Impact Supply Chain Manager from Fortune 20 technology company, a Supply Chain Manager from a large online retail company, a Supply Chain Logistics Manager at a multinational consumer goods company, a small business owner, in-house and large firm attorneys, Professors, and activists. This process helped us understand the problem space, redefine the problems we chose to address, and think about the stakeholders we were designing this policy solution to help.

The Problem

Initially, our team began this process interested in supply chain decarbonization, as eight supply chains account for more than 50% of global emissions.[1] After a literature review, multiple stakeholder interviews from a variety of industries, systems mapping, and a leverage analysis, we chose to address the need for transparency in the context of supply chain decarbonization. The need to address transparency is timely, as it will help companies assess their Scope 3 emissions[2] in the face of both stakeholder and regulatory pressure, such as the SEC's proposed climate disclosure rule.[3]

Transparency, for our purposes, is needed in two different, but related realms. First, we identified a need for transparency regarding greenhouse gas (GHG) emissions along supply chains.[4] Second, we identified a need for transparency in the mechanisms used to improve and motivate GHG transparency along supply chains.

---

[1] WORLD ECON. F. & BOS. CONSULTING GRP., NET-ZERO CHALLENGE: THE SUPPLY CHAIN OPPORTUNITY 6 (2021) ("Eight supply chains account for more than 50% of global emissions. Food, construction, fashion, fast-moving consumer goods, electronics, automotive, professional services and freight account for more than half of all global greenhouse gas emissions. A significant share is indirectly controlled by only a few companies.").
[2] GREENHOUSE GAS PROTOCOL, FAQ 1 (2021).
[3] The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21334 (proposed Apr. 11, 2022) (to be codified 17 C.F.R. pt. 210, 229, 232, 239, and 24).
[4] "One common problem is that many companies still have limited transparency about these emissions in the first place – and the mechanisms for establishing greater transparency at the supplier level are still immature. This lack of transparency means the economics of decarbonization are obscured, leading to the perception that optimizing for sustainability may interfere with the goals of increasing performance or lowering costs." WORLD ECON. F. & BOS. CONSULTING GRP., *supra* note 1, at 23.

I. Transparency Along the Supply Chain Is a Significant Barrier to Decarbonizing Supply Chains.

Figure 2: Barriers to addressing upstream emissions.

Information gaps in supply chains prevent companies from decarbonizing (Figure 2). These information gaps occur for a myriad of reasons. First, supply chains often span the globe, evading consistent regulation and comprehensive data collection.[5] Second, companies with thousands of products and turnover in their supplier bases, often struggle to even map the identity of their tier n

[5] WORLD ECON. F. & BOS. CONSULTING GRP., *supra* note 1, at 24; Michael P. Vandenbergh et al., *Model Environmental Supply Chain Contracts*, *in* CONTRACTS FOR RESPONSIBLE AND SUSTAINABLE SUPPLY CHAINS: MODEL CLAUSES, LEGAL ANALYSIS, AND PRACTICAL DISCUSSION (David Snyder & Susan Maslow, eds.) (forthcoming).

suppliers.[6] Further, companies have profited from the obfuscation of emissions, and have made bold pledges without specific plans on how to effectuate their emissions reductions.[7] How can you collect sustainability and GHG emission data if you do not know who to collect that information from? One need not look farther than comments on the SEC's proposed climate disclosure rule to see that complaints about reporting Scope 3 emissions are often focused on data collection (lack of primary data, a reliance on industry average data, etc.).[8]

Third, companies looking to understand their supply chains face significant consulting and transactional fees. For example, McKinsey, a management consulting company that offers sustainability services,[9] charges clients up to $16,000 a day for its most senior partners.[10] Similarly, some of the largest law firms are charging upwards of $2,000 an hour of legal work.[11]

---

[6] N-tier suppliers are suppliers that exist beyond tier 1, contracted, suppliers and form the network, or value chain, of companies that provide the tier 1 supplier with the goods or services they need to deliver. WORLD ECON. F. & BOS. CONSULTING GRP., *supra* note 1, at 23.

[7] Ciara Nugent & Emily Barone, *The World's Top Carbon Emitters Now All Have Net Zero Pledges*, TIMES (Nov. 4, 2021), https://time.com/6113845/net-zero-climate-pledge-impact/; Karthik Balakrishnan, *Nearly 90% Of Global Emissions Are Covered by a Net Zero Mandate*, ACTUAL (Nov. 5, 2021), https://www.actualhq.com/blog/nearly-90-of-global-emissions-are-covered-by-a-net-zero-mandate-scope-3.

[8] Shannon Lloyd et al., *Trends Show Companies Are Ready for Scope 3 Reporting with US Climate Disclosure Rule*, WORLD RES. INST. (June 24, 2022), https://www.wri.org/update/trends-show-companies-are-ready-scope-3-reporting-us-climate-disclosure-rule#:~:text=Arguments%20against%20reporting%20Scope%203,actions%20of%20value%20chain%20partners.

[9] MCKINSEY SUSTAINABILITY, https://www.mckinsey.com/capabilities/sustainability/how-we-help-clients?gclid=CjwKCAjw5P2aBhAlEiwAAdY7dAhFrx7v412esLgU9bbBZiAEzbJYoSIX0GQG6ChKD1vVP7-QDn7L-BoCgk4QAvD_BwE&gclsrc=aw.ds (last visited Oct. 31, 2022).

[10] Edmund Tadros & Tom McIlroy, *Revealed: McKinsey Partners Charge $16,000 a Day (Before Discounts)*, FIN. REV. (Aug. 9, 2019), https://www.afr.com/politics/federal/revealed-mckinsey-partners-charge-16-000-a-day-before-discounts-20190808-p52f2a.

[11] Roy Strom, *Big Law Rates Topping $2,000 Leave Value 'In Eye of Beholder,'* BLOOMBERG L. (June 9, 2022), https://news.bloomberglaw.com/business-and-practice/big-law-rates-topping-2-000-leave-value-in-eye-of-beholder.

Thus, there is (1) a need for transparency along supply chains, and (2) a need for free, open-source, transparent solutions to improve transparency along supply chains.

II. Without Free, Open-Source, Transparent Solutions, the Decarbonization of Supply Chains Will Be Inefficient.

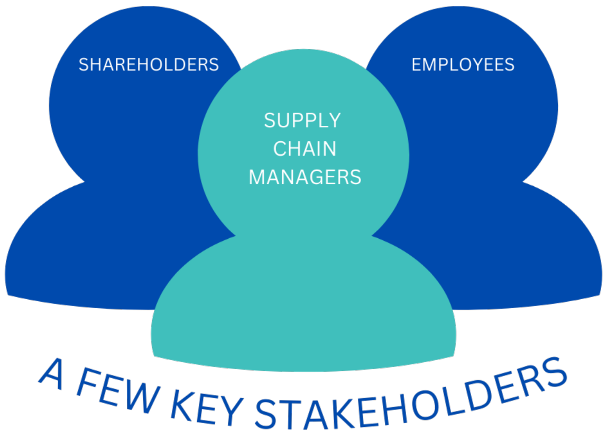


Figure 3: Three key stakeholders.

Supply chain managers, shareholders, and employees all hold power that could support supply chain decarbonization. However, all three of these key stakeholders (Figure 3) face the same problem. They all lack access to open-source, transparent solutions for decarbonizing supply chains.

A. There is a lack of publicly available solutions for supply chain managers.

Tools and strategies used by companies to decarbonize supply chains are frequently guarded as proprietary information, and (unsurprisingly) our team had to promise anonymity to even speak to company employees. One great example of transparency issues in this context came from a conversation we had with a supply chain logistics manager at a multinational consumer goods company. In our stakeholder interview, the manager described a procurement policy and system that required subcontractors to be enrolled in the EPA SmartWay Program[12] and gave

[12] *SmartWay*, EPA, https://www.epa.gov/smartway (last visited Oct. 31, 22).

preferential treatment to subcontractors with sustainability goals.[13] This system incentivized subcontractors to improve their sustainability metrics, and helped the company decrease emissions associated with the transportation of their goods. However, the details of this policy and system are considered proprietary and are not publicly available. Thus, other companies looking to deploy a similar program could not benefit from the lessons learned by this company. Without open-source, transparent solutions, a broad swath of companies are not able to access the lessons learned through trial and error from market leaders.[14]

Even worse still, tools used by companies to decarbonize supply chains are often paywalled, or guarded by consulting or law firms. For example, Westlaw has a few resources available via Practical Law, like a template briefing for in-house counsel on ESG Issues in US Supply Chains.[15] However, an annual subscription to Westlaw is around $3,324.00 for just one attorney.[16] Similarly, consulting and law firms have developed and tested solutions; however, to access their information, businesses must pay the large cost associated with consultants and law firms. Transactional costs related to transparency along and decarbonizing supply chains should be lowered or eliminated.

While some new projects provide grounds for hope on this issue, like the American Transposition Team of the Chancery Lane Project[17] and the ELI Model Environmental Supply

---

[13] For example, they would contract with a sub-contractor who used alternative fuels more than one that did not. They would also pay them more.
[14] This issue came up in every interview we did, regardless of company size. However, we expect this issue is even more pronounced for smaller companies that cannot afford to hire consulting firms for sustainability advice, to retain big law firms for help with implementation, or to build an in-house sustainability department.
[15] *ESG Issues in US Supply Chains: Business Briefing*, PRACTICAL LAW PRACTICE NOTE (2022).
[16] Bob Ambrogi, *Price Wars in Legal Research Mean Deals for Small Firms; I Compare Costs*, LAWSITES (May 23, 2019), https://www.lawnext.com/2019/05/price-wars-in-legal-research-mean-deals-for-small-firms-i-compare-costs.html.
[17] THE CHANCERY LANE PROJECT, https://chancerylaneproject.org/ (last visited Oct. 31, 22).

Chain Contract Clearinghouse,[18] neither fully address the issues we have identified. First, neither are, nor will be, capable of taking public feedback or building community. Second, neither include resources that work externally to motivate companies to want to address these issues (like shareholder proposals). The American Transposition Team of the Chancery Lane Project is solely focused on contract provisions for the foreseeable future, as is the ELI Working Group. To expedite supply chain related emission reductions, tools for the full spectrum of stakeholders should be publicly available, open to comment, and free. The Chancery Lane Project and ELI working group are supply-chain manager (and legal counsel) focused, and therefore miss an opportunity for broader impact on supply chain transparency and GHG reductions through leverage of shareholders and employees. This is not to say our policy solution would work against these great projects. In fact, both of these projects could be incorporated into this platform. One of our first steps, if we won, would be to further explore opportunities for collaboration with these groups. We had fruitful conversations with representatives from both projects during this process.

B. There is also a lack of publicly available solutions for stakeholders outside of management.

Outside of management, many shareholders and other stakeholders are not aware of the options that exist to pressure companies to consider sustainability. From shareholder proposals to worker-driven protests,[19] if companies do not feel the pressure to change, they will maintain the status quo. For example, a few years ago, one online retailer we spoke with was not thinking about

---

[18] *Private Environmental Governance*, ELI, https://www.eli.org/private-environmental-governance/private-environmental-governance (last visited Oct. 31, 22). There are also websites such as As You Sow that are squarely focused on shareholder resolutions and only provide previously used resolutions. AS YOU SOW, https://www.asyousow.org/ (last visited Oct. 31, 22).
[19] *See, e.g.,* Ahiza Garcia, *Amazon Workers Walk Out to Protest Climate Change Inaction*, CNN (Sept. 20, 2019), https://www.cnn.com/2019/09/20/tech/amazon-climate-strike-global-tech/index.html.

sustainability, but after facing growing consumer pressure, now has a robust sustainability plan, and has even become a B-corp.[20] Companies that traditionally had not anticipated needing a sustainability team are implementing first steps, like modifying Supplier Codes of Conduct to include sustainability considerations. Few, if any, open-source resources exist for external stakeholders looking to influence corporations to decarbonize their supply chains. Our platform could fill that gap.

Our Solution

Our solution is a web-based platform that hosts open-source, free solutions to help the full spectrum of stakeholders improve transparency along supply chains. While we have created specific private environmental governance interventions (specifically, a due diligence questionnaire, a model supply contract provision, a shareholder proposal, and an interview question list), we believe the true innovation in our solution lies in the improvement-centered amplification of such interventions, and the narrowed focus on transparency in context of supply chains. Just as enforcing existing laws is often a traditional environmental legal solution, amplifying and improving, via open-source accessibility, existing private environmental governance tools should become a traditional private environmental governance solution. Information as regulation cannot exist in its best form without information about the tools that facilitate informational regulation.

I. The Web-Based Platform

Our platform would be a central location for companies, shareholders, and other stakeholders to find tools to move companies (and theoretically markets) toward more transparent,

[20] BCORPORATION, https://www.bcorporation.net/en-us/certification (last visited Oct. 31, 22).

decarbonized, and sustainable supply chain practices. To demonstrate our idea, we've built a draft platform (Appendix E), https://sites.google.com/view/supplychainsolution/, and four example solutions for three key stakeholders: supply chain managers, shareholders, and employees. Our example solutions include a due diligence questionnaire, a contract provision, a shareholder proposal, and a list of sample questions for prospective new employees and employees interviewing for promotions to ask interviewers. All four are designed to improve or motivate supply chain transparency.

A. Due Diligence Questionnaires

Companies and investors use Due Diligence Questionnaires (DDQs) in a variety of contexts, from selecting suppliers to understanding potential investments, and these lists of questions inform important decisions. In the context of supply chain transparency, companies often distribute DDQs to potential new suppliers. Organizations can then use this information to (1) select suppliers best positioned to report on supply chain emissions, and (2) set requirements that the vendor must uphold in order to meet the standards of the business relationship. Suppliers would be incentivized to improve their reporting abilities to stay competitive, while the selecting company would have better information about their value chain.[21] We developed a sample DDQ that would improve supply chain transparency. The sample DDQ can be found in Appendix A.

B. Green Contractual Provisions[22]

Sustainable contractual clauses in international supply chain agreements can help overcome a regulatory gap in global sustainability while protecting companies against social,

[21] Wenju Niu, *Decarbonizing Investment in a Supply Chain with Information Asymmetry Under Innovation Uncertainty*, ANNALS OPERATIONS RSRCH. (2022) (for a discussion on information mismatch).

[22] Sustainability Contractual Clauses are provisions in business contracts that cover social and environmental issues which are not directly connected to the subject matter of the specific

economic and legal risks in connection to unethical behavior of their suppliers.[23] Following the pending SEC climate disclosure rule,[24] accurate GHG emissions accounting is increasingly important in both public and private companies.[25] While the current draft has limited Scope 3 emissions to materiality, more stringent international frameworks and net zero pledges underscore the inevitability of Scope 3 emissions accounting. Those that disclose, and reduce the quickest, are more likely to adapt to the changing environment of emissions disclosures and accompanying public perceptions. Afterall, a firm's value is deeply rooted in its reputation.[26] Current arguments against Scope 3 emissions reporting pertain to data collection (like lack of primary data, potential double counting), accounting challenges, and the *inability to control the actions of value chain partners*.[27] Large and multinational corporations with public net zero or climate change commitments can increase the odds of meeting their goals by incentivizing their partners to decarbonize along with them.

Two of the largest obstacles to meaningful GHG disclosure in supply chains that our team observed were:

1. Data is often incomplete and not comparable between companies.

---

contract. This means that they do not specify the physical quality of the delivered goods, but rather prescribe how the parties should generally behave when conducting business. Katerina Peterkova Mitkidis, *Sustainability Clauses in International Supply Chain Contracts: Regulation, Enforcibility and Effects of Ethical Requirements*, NORDIC J. COM. L., 2014.

[23] *Id.*

[24] The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 Fed. Reg. 21334 (proposed Apr. 11, 2022) (to be codified 17 C.F.R. pt. 210, 229, 232, 239, and 24).

[25] Press Release, SEC, SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors (Mar. 21, 2022), https://www.sec.gov/news/press-release/2022-46.

[26] Witold Henisz et al., *Five Ways That ESG Creates Value*, MCKINSEY Q., Nov. 2019; *see* DANIEL DIERMEIER, REPUTATION RULES: STRATEGIES FOR BUILDING YOUR COMPANY'S MOST VALUABLE ASSET (2011).

[27] Shannon Lloyd et al., *supra* note 8.

Many companies have begun implementing sustainable business practices up and down their supply chain. But the internal metrics a company uses are not publicly available for sector-wide comparisons, and often aren't subject to any uniform standards. For example, the way the companies we interviewed defined Scope 3 emissions varied widely. One definition did not even come close to definitions of Scope 3 emissions in academic literature.[28]

2. Companies are not implementing their decarbonization and net zero promises.

The lack of binding mechanisms to hold companies to their decarbonization targets is clearly an impediment to progress and to meeting net zero. As such, the inevitability of Scope 3 disclosure positions market leaders to benefit from increasing transparency and implementing sustainable practices quickly. Those in the position to implement these mutually beneficial changes will reap the benefits of reductions in upstream and downstream emissions in a lowered Scope 3 emissions score.

To address these issues, companies can employ contract provisions to improve transparency along their supply chain quickly and accurately: by disclosing data freely along the supply chain, and by moving vendors to engage with meaningful transparency through various price points to incentivize sustainable practices. Whether companies require disclosures along their supply chain, or build in added financial incentives for further decarbonization efforts like

[28] "[E]missions that occur from sources owned or controlled by other entities in Company x's value chain" compared to the GHG emissions protocol definition of " Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions." GREENHOUSE GAS PROTOCOL, *supra* note 2.

increased payment at unit cost if delivered using a zero or reduced carbon solution, there are a panoply of options available to them.[29] We drafted three sample contractual provisions: a basic transparency provision, a green fuel requirement provision, and a single-use plastic provision. These provisions can be found in Appendix B.

To safeguard the enforceability of these provisions, they should be cross referenced throughout the contract, or in a code of conduct for instance.[30] Non-compliance with green contractual provisions should result in a remedy rather than contract termination, and most comprehensive provisions would include monitoring, relational enforcement, and external audits.[31] Supply chain contracting, while inherently a legal mechanism, serves the normative function of social norm fixing by calling attention to specific norms while giving the flexibility to meet goals and modify performance over time.[32]

i. The Basic Transparency Provision

All companies should implement a fundamental provision that mandates transparency. Having accurate data from each party will decrease reporting burdens, and facilitate the ease of compiling Scope 3 emissions data, enabling all parties to gauge where they fall in terms of meeting climate goals. There is an added financial bonus of getting this information at a reduced cost through contract incentives rather than paying in-house sustainability accounting staff or consulting fees.

---

[29] Marketing opportunities and the ability to leverage climate and ESG data to an entity's benefit can be utilized at the negotiations and contract formulation stage.
[30] Mitkidis, *supra* note 22.
[31] *Id.*
[32] *See* Michael P. Vandenbergh & Patricia Moore, *Governance by Contract: The Growth of Environmental Supply Chain Contracting*, 12 MICH. J. ENV'T & ADMIN. L. (forthcoming).

Transparency is only the first step, this provision could be developed to provide added incentives for GHG reductions in the value chain, like additional embedded financial benefits for decarbonizing, which benefit the company by resulting in a reduced GHG emissions rating. Ultimately, we would want to provide a menu of contractual provisions that allows companies to move beyond basic disclosure of GHG emissions. In addition to including basic recitals of values and shared net zero goals, these contractual provisions have the capability to quickly move actors towards greener practices.

ii. The Green Fuel Provision

Beyond basic transparency provisions, companies have the power to motivate vendors and manufacturers towards greener pastures. Whether this be done through company coalitions, or on an individual level, companies are capable of encouraging sustainable behaviors that are mutually beneficial up and down the supply chain. An example of one such provision, a green fuel requirement provision, stipulates specific fuel and energy sources that are green fuel improvements that result in a lower Carbon Footprint on average per [unit of measurement (size/ profit)].

iii. The Single-Use Plastic Provision

Single-use plastic, as the current investment strategy of the oil industry, is increasingly hard to avoid.[33] But those in the position to make financial decisions that funnel money to sustainable practices, like funding circularity and CO2 reductions from abstaining from the use of single-use plastics, should begin to position themselves as leaders and change-markers. We developed a sample contractual provision to require supply chain transparency, along with a green fuel requirement and single-use plastics provision, which can be found in Appendix B.

[33] Beth Gardiner, *The Plastics Pipeline: A Surge of New Production Is on the Way*, YALE ENV'T 360 (Dec. 19, 2019), https://e360.yale.edu/features/the-plastics-pipeline-a-surge-of-new-production-is-on-the-way.

C. Shareholder Resolutions

A Deloitte report, based on a global climate survey of 750 executives worldwide, identified two forces as key drivers of environmental sustainability action: (1) the shifting regulatory and political environment, and (2) increasing shareholder and employee activism.[34] Shareholder resolutions are a primary tool for shareholder activists. Shareholder resolutions can escalate the dialogue directly to the Board, with the other shareholders as an audience, when companies are unresponsive. Additionally, resolutions can inform other shareholders, via the annual proxy statement and shareholder meeting, of important issues. Further, resolutions are visible to the public, via the annual proxy statement, and can spark significant press, which can lead management to engage. To motivate progress, shareholder resolutions do not even have to win the vote. For example, Carl Icahn bought only 200 shares, a tiny stake, of McDonald's to start a proxy fight over the treatment of pregnant pigs. While he lost the fight, he won the cause significant press.[35]

In the 2022 proxy season, in addition to diversity proposals, shareholder resolutions focused on climate change and the environment made up the bulk of successful proxy votes.[36] However, few shareholder resolutions focused specifically on supply chains. A narrowed focus on supply chain transparency would help generate reports and motivate other corporate actions that improve supply chain transparency. We developed a sample shareholder resolution that would

---

[34] DELOITTE, 2021 CLIMATE CHECK: BUSINESS' VIEWS ON ENVIRONMENTAL SUSTAINABILITY 4 (2021).

[35] Amelia Lucas, *Carl Icahn Loses Proxy Fight with McDonald's Over Animal Welfare*, CNBC (May 26, 2022), https://www.cnbc.com/2022/05/26/carl-icahn-loses-proxy-fight-with-mcdonalds-over-animal-welfare.html.

[36] Ellen Meyers, *Investors Rally Behind Climate, Diversity Proposals as Proxy Season Ebbs*, ROLL CALL (July 21, 2022), https://rollcall.com/2022/07/21/investors-rally-behind-climate-diversity-proposals-as-proxy-season-ebbs/.

motivate corporate action on supply chain transparency. The sample resolution can be found in Appendix C. In developing this sample, we looked at the 2022 proxy statements of over 30 corporations to understand how to optimize the language of the proposal for success. Additionally, we researched relevant law and guidance,[37] paying particular close attention to Rule 14a-8, to ensure compliance.

D. Interviewee Questions to Prospective Employer

Employee activism is another key driver of corporate environmental sustainability action,[38] and employee activism is predicted to increase. In a 2019 survey, over 80% of companies predicted a rise in workforce activism.[39] Famously, the Amazon worker walkouts have driven Amazon to take more substantial actions on sustainability.[40] Employees hold power that could support supply chain decarbonization. However, employees do not have to go as far as protests to help motivate action.

For example, prospective employees and existing employees being interviewed for a promotion could ask the interviewer a short series of supply chain transparency questions to bring attention to the issue. A 2017 survey of over a thousand companies and job seekers, found that 64 percent of job seekers say that a poor experience during the interview process would make them less likely to purchase goods and services from the potential employer, and 91 percent of employers agree that a person's experience as an interviewee can impact consumer-purchasing

[37] *See e.g.,* INTERFAITH CENTER ON CORPORATE RESPONSIBILITY, HOW TO FILE A SHAREHOLDER RESOLUTION (2022).
[38] DELOITTE, *supra* note 34, at 4.
[39] Megan Reitz & John Higgins, *Leading in an Age of Employee Activism*, 63 MITSLOAN MGMT. REV., Winter 2022 at 1.
[40] *See, e.g.*, Garcia, *supra* note 19.

decisions.[41] Thus, we developed a short list of sample interview questions related to supply chain transparency. The list can be found in Appendix D.

II. Responses to potential concerns regarding an open-source supply chain transparency platform.

Three potential critiques of our proposal: antitrust concerns, reluctance of companies to participate in an "open-source" platform, and conflicts between our three key stakeholders, which are our three targeted users. All three critiques are addressed below.

A. Antitrust concerns can be mitigated with vigilance and a focus on increasing customer options.

Antitrust laws regulate businesses to prevent unjustified monopolies and promote competition. In engaging potential partners, we considered and preempted these concerns in our model. For example, supply chain contracting practices can trigger antitrust concerns.[42] However, by staying vigilant and maintaining a focus on increasing customer options, this will likely not be an issue for businesses that choose to participate. Our proposal seeks to ensure open-source, free solutions to the public and all entities, rather than to just a select few.[43]

B. Companies may be more open to sharing information on an open-source platform if our platform is linked to an established third party consortium.

Companies guarding sustainability tools as proprietary information is a partial motivator for the creation of this solution. This hesitancy to share tools will likely impact our ability to

---

[41] *See, e.g.*, CAREERARC, FUTURE OF RECRUITING 2 (2020).
[42] Michael P. Vandenbergh et al., *supra* note 5.
[43] Additionally, consumer welfare in antitrust has been described as the maximum benefit "consistent with sustainable competition." Consumer welfare, arguably, could include transparency and decarbonization benefits. *See* Herbert J. Hovenkamp, *Antitrust: What Counts as Consumer Welfare?*, 2194 FACULTY SCHOLARSHIP PENN LAW 3 (2020).

convince companies to participate. However, a partnership with a reputable climate non-profit or industry-funded consortium would help member companies overcome the reluctance to contribute to the open-sourced platform. For example, the Carbon Disclosure Project (CDP) has a private membership group that provides resources for supply chain transparency. They do not appear to have legal solutions (like contract provisions) available to their members. CDP's resources lean more towards scoring frameworks and data tools. With the proper funding and resources brought to the table, CDP, or an organization like CDP, may be willing to integrate our free, open-source platform with legal-oriented solutions. A partner organization could also build out an oversight entity that would edit, moderate, and streamline contributions, ensuring quality and creating value for member companies. Partnering or integrating with an established organization is step one in our post-competition plan.[44]

C. Breadth of platform participants

Our proposal, as currently designed, is a comprehensive platform for three key stakeholders—managers, shareholders, and employees. Clearly, there may be tension between those groups. For example, company managers may not want to participate in a platform that supports shareholder actions or fuels employee activism. However, our team plans to continue to apply user-centered design to address the need for transparency in the context of supply chain decarbonization. Thus, if this issue arises, we will respond.[45] It is also possible that this issue may not arise. Other organizations exist that provide tools for users that they also critically analyze. CDP grades companies on their efforts, while offering supply chain solutions.[46] The

[44] *See infra* Conclusion and Next Steps.
[45] One idea would be to split the platform into two separate platforms, applying the same technology.
[46] *The A List 2021*, CDP, https://www.cdp.net/en/companies/companies-scores#82ff960886b5169e1dec45586e0d2225 (last visited Oct. 31, 22).

transparency may even benefit all users because they will know what to expect, and may even find opportunities to work synergistically.

Conclusion and Next Steps

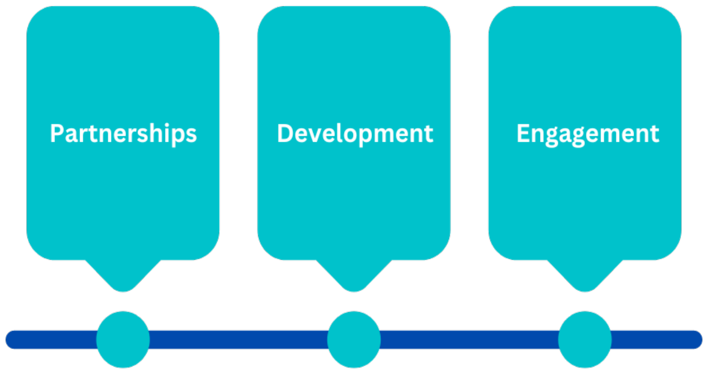


Figure 4: Our first three post-competition steps.

In summary, supply chain decarbonization is critical to creating a net-zero economy and society. Currently, the GHG emissions from most corporate supply chains are opaque, as are the tools used to increase the transparency of GHG emissions in supply chains. We have proposed creating an open source, multi-stakeholder web-based platform for increasing supply-chain decarbonization transparency. Sharing tools and resources among a broad community of managers, shareholders, and employees committed to supply chain decarbonization will help facilitate a fast and efficient transition to net-zero.

Our team plans to take three key, next steps (Figure 4): (1) build partnerships, or fully integrate, with organizations that share a similar mission, (2) further develop the platform, and (3) host a stakeholder engagement event to find initial users. Our team plans to host a pitch event to demonstrate to possible partner organizations the capabilities of our proposal. We would also further develop the platform, adding more functionality and embedding resources. Additionally, we would host a stakeholder engagement event with the Yale Center for Business and the Environment to source corporate adopters and popularize the use of this green transparency solution.

We acknowledge that $2,000, while substantial, would not be enough to fully execute our plan. Thus, we have secured a conditional pledge from the Yale Center for Business and the Environment to match any funds awarded from participation in this Policy Hack. With $4,000, we believe we could execute our three key, next steps, which would put us on track to identify a long-term monetization strategy to maintain and grow the platform.[47]

[47] One idea is to sell ad space to businesses in relevant fields, such as firms that specialize in climate risk analysis or corporate sustainability.

APPENDIX A – EXAMPLE DUE DILIGENCE QUESTIONNAIRE

**Adapted from Invest-Europe's ESG DDQ: available here and The Chancery Lane Project's Climate DDQ: available here.*

**Note: This DDQ is a model that aims to balance the need for comprehensive understanding of suppliers' practices and the burden of completion that may deter such suppliers. Businesses that execute this DDQ should adapt the introductory information and questions to best fit their needs.*

Green Supply Chain Due Diligence Questionnaire

Introduction

[Company name] is dedicated to environmental responsibility and aims to work with suppliers with similar sustainability commitments.

Guidance

The purpose of this Due Diligence Questionnaire (DDQ) is to help our company obtain a better understanding of your business and potential avenues for [engagement] [procurement].

This DDQ contains a list of ESG questions that will help us learn about your business's values and practices. We will use your responses to conduct due diligence evaluation. This DDQ is an initial request for information and we may ask for additional information.

We greatly appreciate you taking the time to answer these questions to help us improve supply chain transparency. Please contact [e-mail or phone number] with any problems or questions regarding this questionnaire.

Legal note: Completion of this DDQ does not create a binding legal relationship.

Section 1 – General Information

Name, e-mail address, and phone number of representative who completed this DDQ:	**Name:** **E-mail:** **Phone:**
Business name	

Primary location(s) of operation	
Business operations (e.g., manufacturing, storage, transportation)	

<u>Section 2 – General Environmental Policies</u>

Do you have a designated sustainability coordinator? If so, please provide their name and contact information.	**Name:** **E-mail:** **Phone:**
What are your company's environmental policies?	
Does your company have environmental goals and guidelines that are provided to your employees?	
How frequently are your policies reviewed and updated?	
Please describe any legal or regulatory breaches your company committed within the last three years.	

Please confirm that your company is in compliance with all local, state and federal environmental laws and regulations, including license and permitting requirements.	

Section 3 – Environmental Sustainability Practices

What potential sustainability concerns (not climate-related) are associated with your business operations? (E.g., waste streams, disposal practices, chemical hazards, etc.)	
What climate-related impacts are associated with your business operations, particularly related to Scope 3 emissions? (E.g., emissions related to manufacturing, transportation, etc.)	
What sustainability initiatives has your company implemented? Please describe all related to your everyday business operations, including impacts along your supply chain.	
Please describe your progress and successes in implementing those sustainability initiatives.	
What sustainability initiatives do you plan to implement in the future?	

Please describe any barriers to your company implementing sustainability practices.	
Please describe your company's monitoring and reporting mechanisms for sustainability issues and performance.	
Does your company conduct supply chain due diligence evaluations? Please describe.	

APPENDIX B – EXAMPLE GREEN CONTRACTUAL PROVISIONS

Adapted from The Chancery Lane Project's Climate Clauses, available here:
Basic Provision: Transparency

1. Party A shall conduct and disclose to Party B a full value chain audit pertaining to:
    a. Climate-related risks and their actual or likely material impacts on the registrant's business, strategy, and outlook;
    b. The registrant's governance of climate-related risks and relevant risk management processes;
    c. The party's greenhouse gas ("GHG") emissions, which, for accelerated and large accelerated filers and with respect to certain emissions, would be subject to assurance;
    d. Certain climate-related financial statement metrics and related disclosures in a note to its audited financial statements; and
    e. Information about climate & sustainability-related targets and goals, and transition plan, if any.[48]
2. The accepted disclosure formats are based on broadly accepted disclosure frameworks, such as the Task Force on Climate-Related Financial Disclosures and the Greenhouse Gas Protocol.[49]
3. Party B shall offer an embedded pricing mechanism of the value of [$x.x/unit] discount contingent upon the full value chain audit disclosure to Party B;
4. The embedded pricing mechanism referred to in clause 3 will take effect on the date by which Party B receives the full value chain audit described in Clause 1.

[48] SEC, FACT SHEET (2022), https://www.sec.gov/files/33-11042-fact-sheet.pdf.
[49] *Id.*

Green Fuel Requirement Provision

1. Party A has [x days] from the [Effective Date] to notify Party B that it can deliver on the terms of the Green Fuel Requirement;
2. Party A shall achieve a green fuel improvement within [x months] of the [Effective Date] of this agreement:
    a. The green fuel improvement shall have a lower Carbon Footprint on average per [unit of measurement (size/ profit)] supported by written evidence;
    b. The green fuel improvement must be used to deliver [goods/services];
    c. The green fuel improvement may involve investments in company infrastructure and should result in an overall reduction of Greenhouse Gas Emissions;
3. Party B must acknowledge and verify in writing that Party A has made a green fuel improvement and has met the Green Fuel Requirement.

Single-Use Plastic Provision

1. Party A shall identify and assess the volume and type of Single-Use plastics used throughout the entire value chain/in the provision of services or supplies over the course of [time span] which will hereinafter be referred to as Commencement Volume;
2. Parties will reasonably agree in writing to the Commencement Volume;
3. Party A will make reasonable efforts to reduce single-use plastic measured by [Commencement Volume/time span] by [●]% within one calendar year;
4. Party A will furnish a single-use plastics measurement report per calendar year detailing their progress in single-use plastic reduction as measured by the metrics set forth in Clause 3:

a. Upon a successful reduction of single-use plastic use measured as a [●]% within one calendar year, Party B will employ a $x.x/unit discount;

b. Failure to reduce single-use plastic use by [●]% within one calendar year will be deemed a Service Failure, and a Service Payment Deduction, calculated by the difference in volume reduction achieved and reduction target, will be paid to Party B within 21 days of Service Failure.[50]

5. [six (6) calendar months] after the single-use plastics measurement report (and [annually] thereafter) the Service Provider shall arrange a service review meeting (the Service Review Meeting). The Service Provider and the Employer shall in each Service Review Meeting, review:

   (a) the Reduction Target; and

   (b) the additional costs incurred by the Service Provider in achieving or exceeding the Reduction Target, and make adjustments to the Reduction Target and/ or the Service Payment(s) made under this Agreement as appropriate.

[50] Service Payment Deduction = (Maximum At Risk Amount * 0.1) * Multiplier where: The difference between volume reduction achieved and the Reduction Target are Less than or equal to [0.2]% with a multiplier of 1; Less than or equal to [0.4]% but more than [0.2]% with a multiplier of 2; Less than or equal to [0.6]% but more than [0.4]% with a multiplier of 4; Less than or equal to [0.8]% but more than [0.6]% with a multiplier of 8; More than [0.8]% with a multiplier of 10.

APPENDIX C – EXAMPLE SUPPLY CHAIN TRANSPARENCY SHAREHOLDER PROPOSAL

WHEREAS: The latest Intergovernmental Panel on Climate Change (IPCC) publication warns that the window for limiting global warming to 1.5 degrees to avoid the most catastrophic impacts of climate change is quickly narrowing. Immediate, drastic emissions reduction is required of all market sectors and industries.[51]

To accurately report on and reduce Scope 3 emissions, the Company must understand emissions along its supply chains. The Company is [particularly] vulnerable to climate risk in its extended supply chain and distribution network. [Insert relevant information about risk. For example, the 2021 10-K states that climate change may . . . .]

Despite these risks, the Company fails to provide critical information to investors including Scope 3 supply chain emissions data that signal to investors that the company is preparing to mitigate climate risk and protect long-term share value. Shareholders expect the Company to improve supply chain disclosures and climate accountability measures to protect its long-term value.

By disclosing its plan for supply chain emission transparency, the Company can provide investors with assurance that management is reducing its climate contribution and addressing the growing risks associated with climate change, benefitting both the Company and shareholders.

BE IT RESOLVED: Shareholders request the Board issue a report, at reasonable expense and excluding confidential information, disclosing how the Company intends to obtain the requisite information for understanding and reducing its enterprise-wide supply chain greenhouse gas emissions in alignment with the Paris Agreement's 1.5 degree goal requiring net zero emissions by 2050.

SUPPORTING STATEMENT: Proponents suggest, at Board and Company discretion, that the Company create:

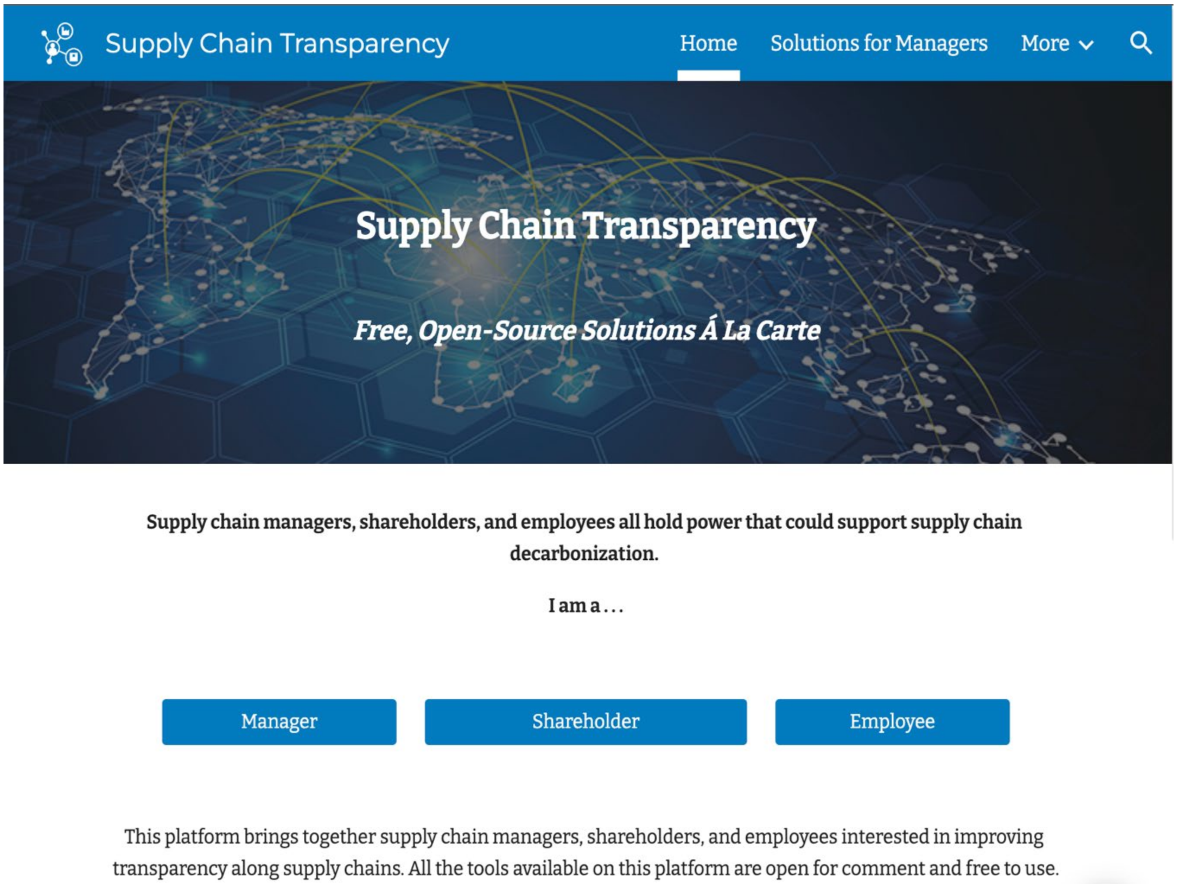
- A timeline for improving supply chain emission transparency and setting supply chain emissions reduction goals;
- A plan to aquire the relevant data, specifically outlining the tools that will be used to do so; and,
- An annual report on prograss towards meeting these goals.

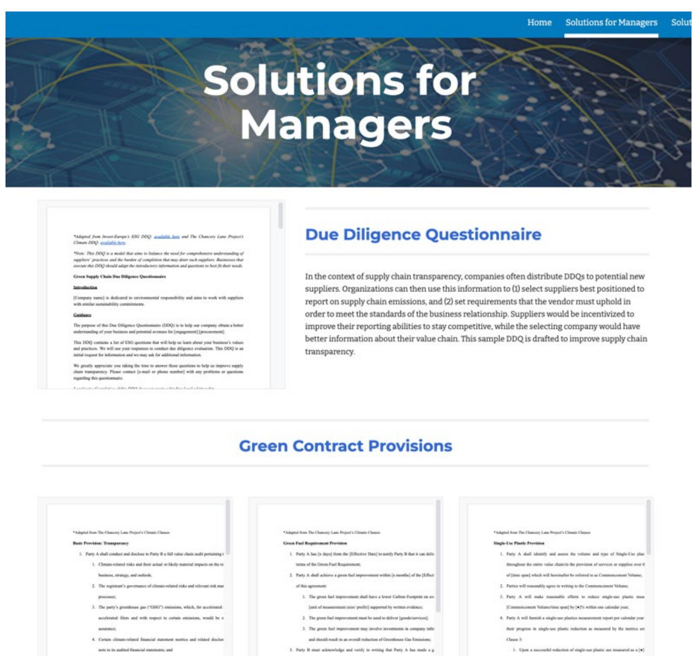
[51] IPCC, CLIMATE CHANGE 2022 MITIGATION OF CLIMATE CHANGE (2022).

APPENDIX D – EXAMPLE INTERVIEWEE QUESTION LIST

- Does this company have a plan to reach net zero by a certain date?
    - If not, why not?
    - If so, how does [the company] track supply chain-related emissions?
    - Has [the company] considered using [relevant solutions from our web-based platform]?
    - How does [insert role you are interviewing for] and its respective department fit into that plan?
- Are the impacts of climate change affecting operations and this company's value chain?
    - If so, how?
    - If not, do you think they will?
- Does your company support laws requiring increased transparency regarding supply chain emissions?

APPENDIX D – SCREENSHOTS OF DRAFT PLATFORM





Certification

We hereby certify that the brief for the Yale School of the Environment and Yale School of Management Environmental Policy Hack Team Brief is the product of the undersigned. We further certify that the undersigned have read the Competition Rules and that this brief complies with these Rules.

Date October 31, 2022

Team Member ______________________
Gabriella Mickel '24 JD/MEM

Team Member ______________________
Margaret Cyr-Ohngemach '24 JD/MEM

Team Member ______________________
Brooke Mercaldi '24 JD/MEM

Team Member ______________________
Kelsey Overby '23 EMBA