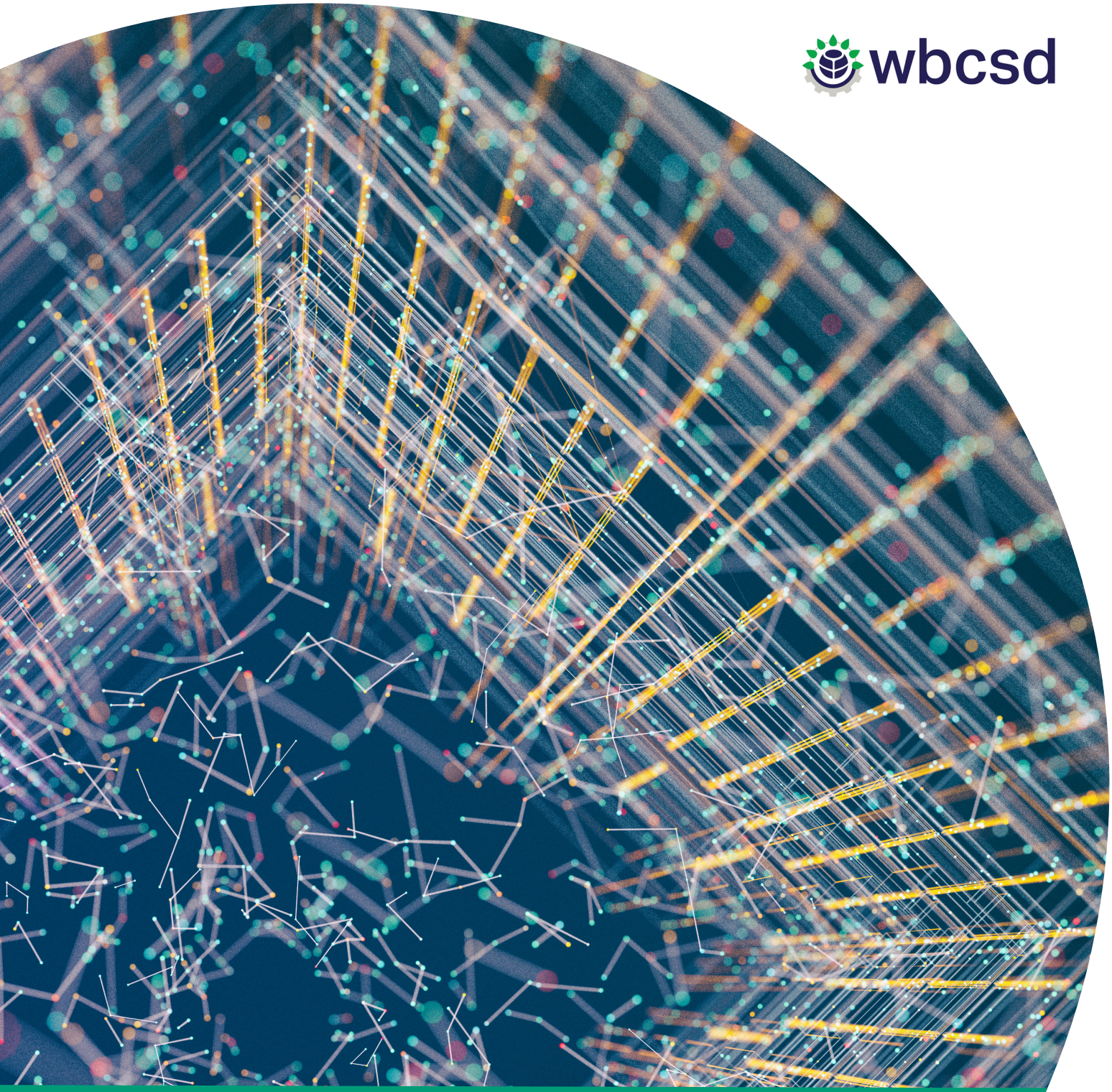


Value Chain Carbon Transparency Pathfinder

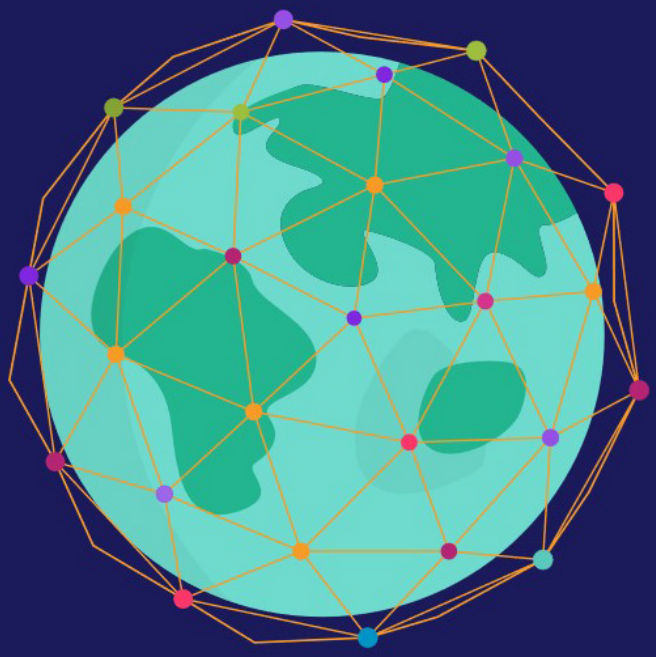
Enabling decarbonization through Scope 3 emissions transparency

Executive summary

End-to-end value chain transparency on greenhouse gas (GHG) emissions data will likely become a license to operate for organizations in the future. The Carbon Transparency Pathfinder brings together committed stakeholders from across the value chain, independent industry bodies such as the GHG Protocol and leading technology companies to develop the methodological and technical infrastructure required to create such transparency.

Through the sharing and exchange of comparable and verified product-level primary emissions data, companies will be able to improve and accelerate decarbonization efforts, playing their part in ensuring there is a real chance to meet the Paris Agreement targets.

Join the Pathfinder now to drive emissions transparency for a net zero future.



The Value Chain Carbon Transparency Pathfinder

VISION | **Accelerate decarbonization by increasing Scope 3 greenhouse gas (GHG) emissions transparency across value chains**

CHALLENGE
No reliable information base for targeted and comprehensive decarbonization

With intensifying pressure on businesses to decrease Scope 3 GHG emissions, granular tracking and abatement of such emissions across the value chain is becoming a license to operate.

Increasing consumer demand for transparency on environmental footprint

Stronger regulatory pressure to meet targets in line with Paris Agreement

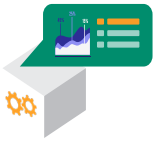
Growing investor expectations for significant Scope 3 reduction efforts

Accurately understanding, validating and tracking value chain emissions is difficult

- Lack of accurate, granular, and verified primary emissions data
- No consistent methodology for the calculation and allocation of carbon emissions at a product level
- Limited exchange of emissions data in already complex, multi-tier value chains

APPROACH
A carbon exchange network based on consistent methodology and open tech infrastructure

The Value Chain Carbon Transparency Pathfinder convenes businesses from across entire industry value chains to resolve this challenge, by



Building a consistent methodology that enables generation of comparable, verified product-level primary emissions data

Developing open technology standards that allow for secure data exchange across different technology solutions

Reaching to a wide ecosystem – piloting in the Fast-Moving Consumer Goods sector and scaling to multiple industry value chains

OUTCOME
More accurate emissions tracking using primary, product-level data

Companies can move from estimating Scope 3 emissions based on industry averages to tracking real emissions based on verified primary, product-level data. This will strengthen their Scope 3 emission management and enable different new, high-value use cases.

Example case: large FMCG company in 5-10 years' time

1-2% of revenue p.a.

Avoided offsetting spend

1-3% of revenue p.a.

Top-line growth

€2-5 mn cost savings p.a.

Next-level emissions accounting and reporting

For details on calculation approach see endnotes, Page 11

Granular tracking and abatement of end-to-end GHG emissions is becoming a license to operate

It is widely recognized that current efforts to reduce GHG emissions are insufficient to ensure the 1.5°C or even the 2.0°C target of the Paris Agreement can be met by 2050.[1] Not surprisingly – given the crucial role of the business community in changing this trajectory by accelerating decarbonization – external and internal pressures are intensifying for stakeholders across the value chain.

Consumers are increasingly demanding sustainable products and information on the environmental impact of their purchases, especially with regard to CO_2 emissions. Products marked with sustainability claims on the packaging accounted for 55% of growth in the US consumer packaged goods market between 2015 and 2019, even though they only represented a 16% share of this market in 2019.[2] Business customers are likewise increasingly driven by such concerns and for example include sustainability criteria in their sourcing standards to address these.

Regulators are setting policy agendas aligned with the targets of the Paris Agreement, introducing legislation, such as the European Green Deal, and targeted measures, such as the EU Product Environmental Footprint. Countries and regions - most recently China and the EU – are also making net zero commitments that will require significant shifts in governmental strategies, for example in relation to energy, to be attainable.[3]

Shareholders and investors are using their financial muscle to force internal changes, adjusting capital allocation and returns to account for climate risk. In his 2021 letter to CEOs, BlackRock CEO Larry Fink warned that "companies that are not quickly preparing themselves [with a well-articulated long-term strategy, and a clear plan to address the transition to net zero] will see their businesses and valuations suffer, as stakeholders lose confidence that those companies can adapt their business models to the dramatic changes that are coming."[4]

Recognizing the need for change and equally understanding the opportunities of a transition to net zero, major businesses are stepping up to the challenge. By the end of 2020, more than 1,000 large corporations had signed up for the Science Based Targets initiative, and many more have made other voluntary public commitments to large-scale decarbonization.[5]

As these companies advance along the decarbonization journey, all will, however, face a common challenge: accurately understanding the Scope 3 emissions that occur along their value chain and typically constitute the lion's share of their emissions.[6]

Today's carbon accounting methods do not enable accurate and consistent calculation, tracking or validation of emissions, making targeted decarbonization action almost impossible

Companies attempting to tackle their emissions face three significant hurdles in identifying feasible and cost-effective options to reduce emissions:

No consistent methodology for calculating and allocating carbon emissions at the product level

Standards and protocols for carbon accounting and reporting, including Scope 3 emissions, enjoy wide adoption (e.g., ISO standards, GHG protocols and sector guidelines like the Product Category Rules). At the same time, they either leave significant room for interpretation or require considerable data collection and calculation efforts. Diverging reporting standards and guidelines (and therefore the lack of a consistent set of rules to calculate and report product impact) impedes the comparability of the results for both businesses and the final consumer.

Lack of accurate, granular, and verified primary data

Accurate upstream and downstream primary data that is specific to the underlying processes is in short supply.

Companies therefore typically use averages (e.g., carbon emissions of 1.8 tons/ton of steel[7]) or data proxies and secondary emissions data from databases such as ecoinvent. To put this into perspective, in the world of financial accounting this would be the equivalent of companies using only average industry costs and revenues to prepare their annual US GAAP financial statements.

On the other hand, having access to accurate and comparable emissions data equips stakeholders across the value chain to make informed decisions about the most effective steps towards decarbonization and to encourage suppliers to get on board with those efforts. Information is power.

Existing emissions data disclosure platforms like CDP provide an important start in creating emissions transparency, but accuracy and consistency issues remain.

Reporting standards vary across self-reporting companies, and it is common to base disclosures on secondary rather than primary data.

Complex value chains that only support limited exchange of emissions data across organizations

The intrinsic complexity of today's value chains further hinders any attempt to resolve the issues of the status quo. Tracking carbon emissions and adequately allocating the impact of emissions mitigation to those actors involved up to tier-n levels requires many suppliers to collect and share data. Even for simple value chains, this is not easy and requires close collaboration. Companies involved in multiple sector value chains face an almost insurmountable task.

Figure 1: Pathfinder approach

A group of around 20 major stakeholders from across the Fast-Moving Consumer Goods (FMCG) value chain has joined forces in the Value Chain Carbon Transparency Pathfinder project to address this

In addition, any exchange of emissions data requires significant trust – among stakeholders and in any technological system used – as well as a standard for verifying the data is correct.

Acknowledging the fact that decarbonization success depends heavily on close collaboration across the value chain, approximately 20 members of the World Business Council for Sustainable Development (WBCSD) have come together to tackle this topic. This group seeks to build a solution for product-specific carbon accounting and data exchange along tier-n value chains.

The ultimate aim is to create an emissions transparency ecosystem that covers many different interconnected sectors while maintaining confidentiality for all actors involved. To this end, the group includes major actors from all parts of the FMCG value chain – among them packaging, chemicals and petrochemicals companies, as well as experienced technology providers.

Collaboration and agreement will be critical to easing the exchange of comparable, granular, and verified primary emissions data across organizations. As the convener of the GHG Protocol and with its member base of more than 200 leading businesses striving to move towards net zero by 2050, WBCSD provides the ideal platform for this effort.

The Pathfinder seeks to build a network of networks for carbon data exchange by defining and establishing:

- The methodology for consistent collection, calculation, and allocation of primary emissions data by value chain actors
- The open-access technological infrastructure for confidential and verified data exchange along tier-n value chains.

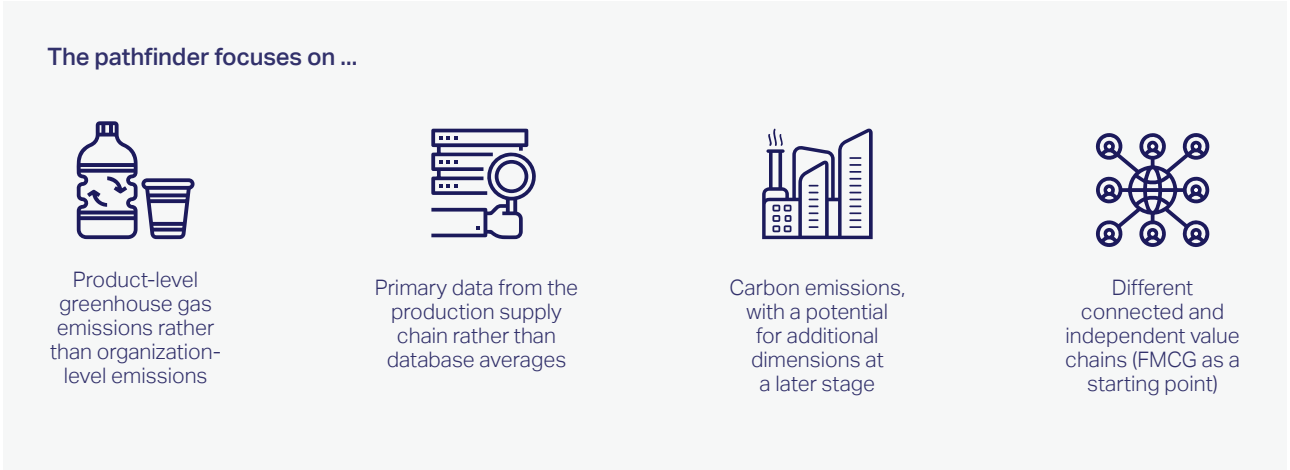
The Pathfinder methodology builds on existing standards and will sharpen them, where needed, to increase consistency and incorporate industry- and material-specific nuances.

Priorities include:

- Developing a systematic approach for the consistent application of calculation and allocation rules
- Agreeing on data input and output elements, formats, and granularity
- Integrating central emissions data sources (including user guidance) to supplement primary data, where necessary.

The Pathfinder will also make supporting technology infrastructure available. This will include leveraging proven industry technology protocols and data-sharing policies to ensure interoperability with existing company- or industry-level solutions. Pathfinder participants will work closely with experienced technology providers to build user interfaces that enable interaction with the data exchange network.

Figure 2: Cornerstones of the Pathfinder



The Pathfinder solution will enable companies to advance from estimating Scope 3 emissions based on industry averages to generating a more accurate understanding of emissions using primary data. This will strengthen internal decision-making and enable new, high-value use cases

The ability of the Pathfinder solution to account for carbon emissions along tier-n value chains will create data inputs that improve business-decision-making. In particular, the infrastructure will increase access to primary carbon emissions data at the product level for network actors who have received permission from their suppliers, i.e., the data providers. This can enable the creation of validated footprints for a large number of products across various value chains, considerably facilitating, e.g. the process and precision of life-cycle analyses (LCAs). In the long run, such an infrastructure can also serve as a basis for more accurate accounting of emission mitigation activities across the entire value chain.

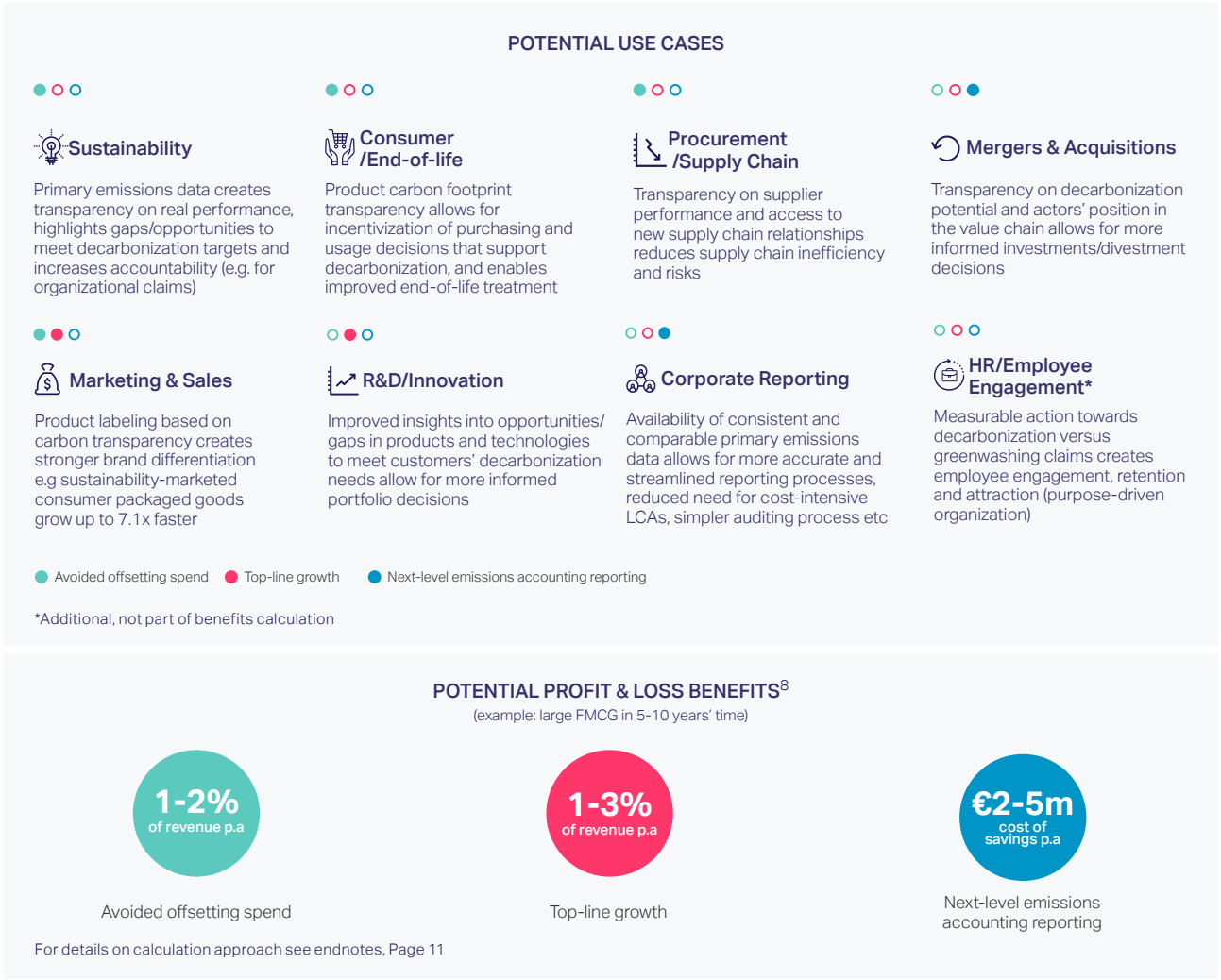
Therefore, the reduction of any actor's Scope 1 emissions could be reflected in all respective upstream and downstream actors' Scope 3 emissions. Beyond this, companies can use more accurate carbon accounting data to drive specific use cases that contribute towards achieving decarbonization goals as well as generating additional value.

Examples include at-shelf consumer emission information, better sourcing decision-making, more targeted supplier decarbonization, informed investment and divestment activities and carbon offset management based on de-averaged, primary emission data (Figure 3).

Valorizing these opportunities can benefit different users within companies and generate tangible profit and loss benefits for all actors in the value chain.

Taking the example of a large FMCG company on a five to ten year horizon (depending on legislative developments, this timeline could be shorter), there is an opportunity for (i) avoided offsetting spend of 1 to 2% of revenue per annum, (ii) top-line growth of 1 to 3% of revenue per annum, and (iii) cost savings of €2 to 5 million per annum based on more accurate and efficient emissions accounting and reporting. (Figure 3)

Figure 3: Example of value opportunities



For details on calculation approach see endnotes, Page 11

To achieve the ultimate aim of creating a large-scale carbon transparency ecosystem, the Pathfinder seeks to engage with additional members and new industries. We invite all companies, initiatives, alliances and sector stakeholders wrestling with similar challenges to join us and tackle this systemic challenge together

We believe that establishing global standards, methods, and technologies for tier-n value chain accounting of greenhouse gases is hard and requires interconnected stakeholders agreeing on the same vision and plan – much like the task of tackling climate change. Based on this belief, the Pathfinder will adhere to the following principles:

INCLUSIVITY	**Any organization aligned with the Pathfinder cornerstones and willing to contribute** is welcome to join. The Pathfinder is shaped jointly by all members, who provide **expertise, resources, data and active participation** in dedicated working groups.
EQUALITY	The Pathfinder will **reflect the different ambitions** of its members. No single member on its own will be able to direct the initiative down a particular path.
CONFIDENTIALITY	**Information and data exchanged** within the context of the Pathfinder will only be **used as agreed between WBCSD and Pathfinder members**. No company will collect and use data with direct value chain partners or competitors.
OPENNESS	Methodological and technological solutions will be designed to allow for **interconnectivity, interoperability and integration.**
SCALABILITY	The Pathfinder will create a **network of networks** compatible **across sectors and supply chains,** serving multiple business needs.
REACH	**Synergies with other initiatives** focused on similar topics will be **leveraged** as much as possible.

We encourage diverse stakeholders who embrace these principles to join the Pathfinder

Companies across the FMCG value chain
If you are an FMCG company, a supplier or sub-supplier or a customer, please reach out to explore whether the Pathfinder solution can support your decarbonization goals. Teaming with companies across the value chain may unlock significant value for your operations and offer new options for sourcing and sales. You are welcome to join us now or later, as the platform and its reach mature.

Industry standard-setting bodies and initiatives
If you represent an industry-specific or CEO-led standard-setting body or initiative that shares our vision, please reach out so we can compare notes and work together to build a consistent methodological framework. All stakeholders, and the planet, will benefit from globally applicable standards, methods and solutions for carbon accounting. One company's customer is another company's supplier. We believe that working together across initiatives is key to having joint and individual positive impact.

Industry stakeholders facing similar challenges
If you are in an industry other than FMCG but face similar challenges in improving tier-n emission accounting, please reach out, as we want to expand into additional industries, building on Pathfinder methods and systems while accommodating industry-specific circumstances. We will help rally other leaders in your industry to form an ecosystem that addresses the issues together.

Technology providers
If you are a provider of technologies relevant to carbon accounting or supply chain tracking, start-up or incumbent, please reach out to discuss how we can make technologies compatible and able to speak to each other. Our vision is a network of networks for emission data exchange that enables diverse stakeholders to participate in an open, interoperable environment using a variety of technology solutions.

We have an aspirational timeline for the Pathfinder, with the objective of showcasing a carbon-tracking solution during COP26 to further step-up radiation and momentum

Given the urgency surrounding decarbonization, we have set an ambitious agenda for 2021. We will drive the methodological and technological components to create a first solution demonstrating how emissions transparency can work in practice. We will use this solution to engage a broader audience to become part of the conversation at COP 26. In addition, throughout the year, we will expand our effort to additional industries to kick-start the creation of an integrated, transparent ecosystem.

BE PART OF OUR VISION AND JOIN US ON THIS JOURNEY!

Companies already joined up to the Pathfinder

Endnotes

[1] UN Environment Programme Emissions Gap Report, https://www.unep.org/emissions-gap-report-2020

[2] NYU Stern Center for Sustainable Business, Randi Kronthal-Sacco and Tensie Whelan, Sustainable Market Share Index, Research on 2015-2020 IRI, "Purchasing Data Reveals Sustainability Drives Growth, Survives the Pandemic" https://www.stern.nyu.edu/sites/default/files/assets/documents/NYU%20Stern%2CSB%20Sustainable%20Market%20Share%20Index%202020.pdf

[3] European Commission, https://ec.europa.eu/clima/policies/strategies/2050_en; UN General Assembly, 22 September 2020, https://news.un.org/en/story/2020/09/1073052

According to the latest UNFCCC Nationally Determined Contributions synthesis report (covering 75 Parties representing 40% of the Signatories of the Paris Agreement and 30% of global emissions), NDCs made so far only amount to a reduction of 1% in total emissions by 2030 in comparison to 2010 levels. As a result, ambition will likely increase going forward. See https://unfccc.int/news/climate-commitments-not-on-track-to-meet-paris-agreement-goals-as-ndc-synthesis-report-is-published

[4] Larry Fink's letter to CEOs 2021 https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter

[5] Science Based Targets initiative, https://sciencebasedtargets.org/companies-taking-action

[6] McKinsey analysis of CDP 2018 self-reported emissions data for 50 major B2B and B2C stakeholders across different industries, including (but not limited to) oil and gas, chemicals, FMCG, retail and automotive

[7] Average for 2019, World Steel Association, https://www.worldsteel.org/steel-by-topic/sustainability/sustainability-indicators.html

[8] Figure 3 calculation basis:
Avoided offset: Scope 3 emissions intensity of 1.9kg CO2eq/EUR revenue[a]; 25% CO2 emissions reduction potential through increased supply chain transparency[a]; offsetting costs of ~30 EUR/t CO2eq in 2030[b]; top-line growth: 5-10% increase in consumer willingness to pay due to emissions transparency of sustainable product[c]; 20-30% future share of sustainable products in entire portfolio[d]; next-level reporting: ~40 FTE in sustainability teams of large FMCG[e]; assumed cost per FTE of €200,000[e]; 50% efficiency gains through large-scale primary emissions sharing[e]

a. The typical Scope 1 and 2 emissions intensity in FMCG is ~0.1 kg CO2eq/EUR. 95% of FMCG actors' carbon footprints are Scope 3 (upstream and downstream) according to self-reported CDP data from 2018 (CDP 2018). With increased supply chain transparency, up to 25% of emissions can be saved according to expert interviews

b. Based on forecasts by BNEF, Commerzbank, Energy Aspects, MOL, Nomisma, Thompson Reuters, Vertis, Virtuse and Wattsight

c. Sustainability-marketed FMCG products allow for a price premium of 39.5% versus conventionally-marketed products. Based on the assumption that up to one quarter of this premium can be realized due to GHG emissions transparency at point-of-sale

d. Unilever's 28 Sustainable Living Brands are growing 69% faster than the rest of the business and delivering 75% of the company's growth - 2.9% sales growth in annual report (Unilever press release dated 11 June 2019, https://www.unilever.com/news/press-releases/2019/unilevers-purpose-led-brands-outperform.html); 4.5% growth for sustainable products in CPG companies' portfolios expected (NYU Stern Center for Sustainable Business - see Endnote 2 for reference)

e. Based on expert interviews and industry averages

Additional source: McKinsey & Company Sustainability Practice

DISCLAIMER

This paper is released by WBCSD, which is responsible for final conclusions and recommendations. Like other WBCSD-authored papers, it incorporates contributions from WBCSD staff and experts from member companies. McKinsey & Company, the global management consulting firm, provided analytical insights and support to the Pathfinder effort.

ACKNOWLEDGEMENTS

WBCSD would like to thank all Pathfinder member companies and individuals who shared their detailed and thoughtful input in preparation of this paper.

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ABOUT WBCSD

WBCSD is a global, CEO-led company of over 200 leading businesses working together to accelerate the transition to a sustainable world. We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than $8.5 trillion and 19 million employees. Our Global Network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver impactful business solutions to the most challenging sustainability issues.

Together, we are the leading voice of business for sustainability: united by our vision of a world where more than nine billion people are all living well and within the boundaries of our planet, by 2050.

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