Webasto Group

Playbook Sustainability

August 2024

The United Nations (UN) defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The world’s global temperature rises at an alarming rate, resulting in devastating effects such as melting ice caps, increasing sea levels, dry areas where agriculture becomes merely impossible and many more. The global community has set the global climate target of limiting global warming to 1.5 degrees Celsius (Paris Climate Agreement 2015). As responsible players on the market, we as enterprises, are in the direct responsibility to reduce the greenhouse gas emissions, and therefore actively contribute towards the target to fight global warming.

We need to work together on economical, ecological and social aspects to contribute to a better world and initiate a lasting change. Our suppliers play a vital role in developing sustainable supply chains, thus cooperation between companies in the automotive industry are essential. Only together solutions can be found to respond to the large number of challenges. The Webasto Supplier Code of Conduct, General Terms and Conditions as well as the QW1 outlines the current expectations towards Sustainability. The environmental, social and compliance guidelines formulated therein define the basis for a business relationship and are an essential part of the risk assessment process.

We have developed this playbook to support you, our business partners, in enhancing sustainability in your operations and to implement targeted principles and practices. Initially, the focus is on the environment, in particular the path towards decarbonization. In addition to providing you with fundamental theoretical knowledge, this playbook offers guidance and essential methods and tools to help you to become a climate ambassador. Furthermore, it includes case studies derived from our own experiences and industry best practices, which vividly demonstrate how to fulfill greater responsibilities within the supply chain. Rest assured that Webasto will consistently furnish you with updates on the latest insights.

Be part of the change, join us and let’s build a more sustainable supply chain together!

Webasto Purchasing Sustainability Team

“As Webasto, we are committed to contribute to the global efforts to fight global warming. Therefore, sustainability holds a prominent position as one of the key focus areas´ in our purchasing strategy. The emissions in our value chain are a significant part of our corporate carbon footprint and thus offer the greatest reduction potential. Since the release of our first sustainability report in May 2022, we have witnessed significant advancements. I firmly believe that by working hand in hand with our partners and suppliers, we can make meaningful contributions towards a brighter and more sustainable future. Together with you, we want to shape the mobility.”

Jan-Kristof Hohenstein
Executive Vice President, Purchasing & Supplier Quality
Webasto Group

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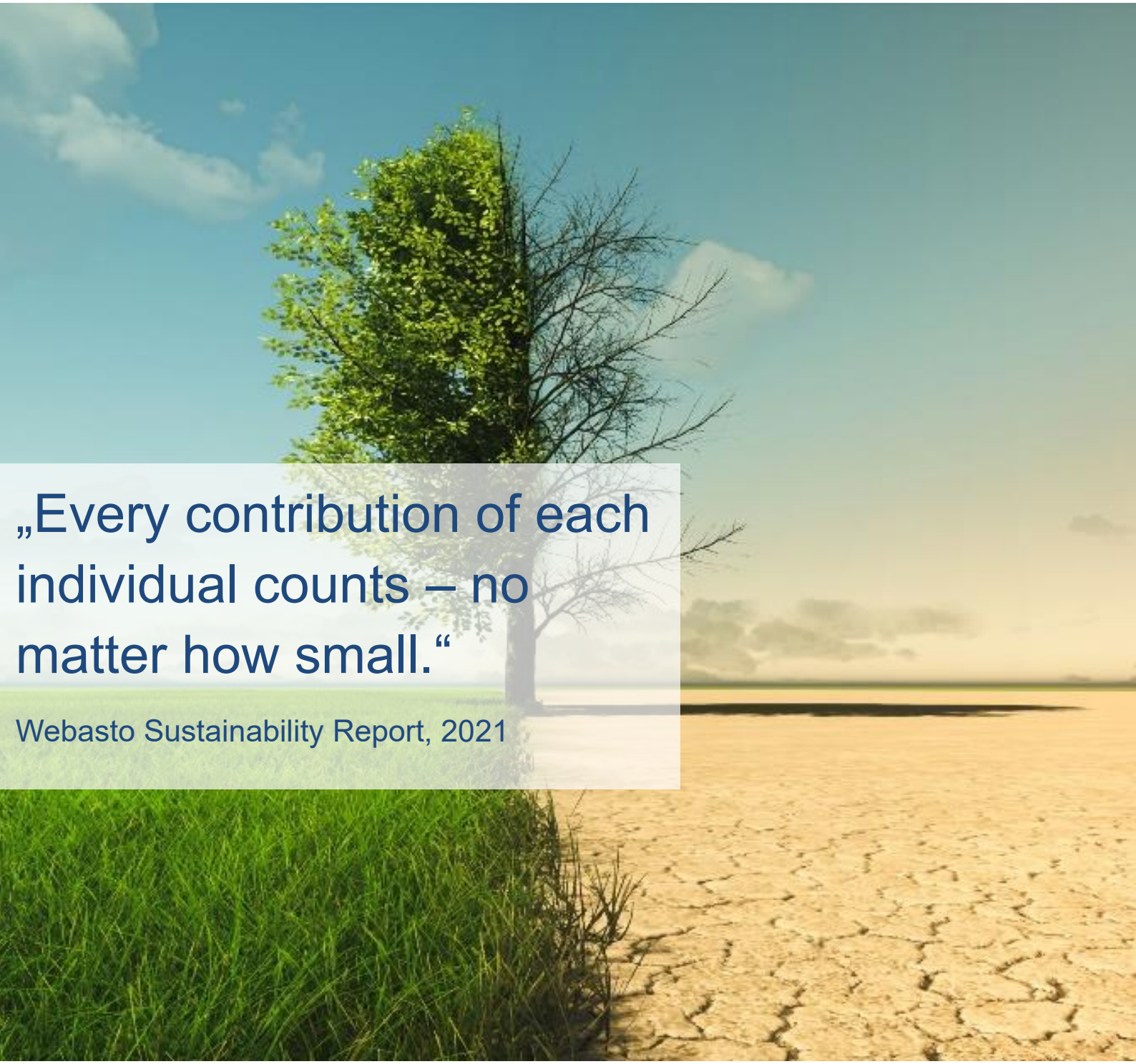


Become a Climate Ambassador

Become a Climate Ambassador

1.1 Why and why now

Initiating action involves recognizing the urgency of the climate crisis, publicly committing as a company to align with the 1.5°C and net-zero aspirations as well as allocating the necessary resources to attain climate objectives. Such endeavors necessitate climate leadership from top management. Key steps towards achieving sustainability leadership include:

- Integrate sustainability into your strategy and portfolio of products and services
- Assign responsibilities, authority and resources, e.g., establishing a dedicated climate transformation project with direct access to top leadership and the board, engage with key stakeholders including the strategy department, research and development teams, purchasing department and sales executives to ensure their active involvement in driving the climate agenda
- Assessment of your current CO_2 emissions[1], carbon risks and climate business opportunities
- Promote awareness among your employees regarding climate change, empower them to incorporate a climate perspective into all aspects of their work and encourage them to take climate action and foster innovation in their daily tasks
- Start to measure and publicly disclose your company's greenhouse gas emissions, climate action and results annually
- Establish key performance indicators (KPIs) for climate with the same importance as financial indicators
- Integrate sustainability targets across various departments such as purchasing, research and development, business development, finance and others

Why?

- **Society -** High expectation from society and own employees to take responsibility as a company
- **Financial institutions -** Progressive capital market regulation: Financial institutions use climate risk scores and requests climate-related information
- **Regulations -** ESG reporting requirements, such as the CSRD and EU taxonomy, are on the rise, alongside legal obligations like the SCDDA and EU Battery Regulation
- **Customer requirements -** The majority of OEMs have established ambitious targets for themselves and subsequently transmit these requirements to their suppliers
- **Competitive advantage -** Now is the time to act before ecological behavior becomes a prerequisite

Why now?

- **Rising energy prices -** Enhanced energy efficiency directly translates into cost savings that positively affect the bottom line
- **Rising material prices -** Access to environmentally-friendly materials needs to be secured as soon as possible
- **Fulfillment of contracts -** Webasto signs contracts with the OEMs with increased requirements towards a more sustainable future e.g., share of recycled material, usage of green energy. We expect our suppliers to support us on this journey.
- **Urgency -** The clock is ticking, and every day the window of opportunity for taking action to limit global warming is getting smaller

[1] To standardize and enable comparability, the emissions of various greenhouse gases are expressed as CO_2 equivalents (CO_2e). It includes greenhouse gases besides carbon dioxide (CO_2) such as methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). In the following, the playbook uses the simplified abbreviation CO_2 instead CO_2e

1.2 Legal Requirements

The legislators see an increased need for companies to be transparent about their sustainability practices. In Europe, as part of the European Union (EU) Green Deal, a wide range of regulations became effective to reduce the impact of the climate crisis and transitioning the EU into a modern, resource-efficient, and competitive economy. The final goal is to achieve net-zero greenhouse gas emissions by 2050. A crucial part of these regulations focuses on imposing external reporting requirements for sustainability performance.

Below you will find an excerpt of significant legal requirements that have been recently implemented or are expected to come into effect. Please be aware that this list is not exhaustive, but rather serves as a possible starting point for further research, reference and guidance on a high level and is no legal advice in any form.

Corporate Sustainability Reporting Directive (CSRD) LINK

The CSRD is a proposal by the European Commission to update and expand the current non-financial reporting requirements for companies operating in the EU. The CSRD shall increase transparency and comparability of sustainability information and encourage companies to integrate sustainability considerations into their decision-making and business strategies. Along with the CSRD, the EU will provide mandatory Sustainability Reporting Standards (ESRS) to be applied by companies obliged to report under CSRD.

EU Taxonomy LINK

The Taxonomy is a classification system that defines sustainable economic activities in the EU. It shall help investors and companies to identify and communicate investments that contribute to a more sustainable economy by providing clear criteria for environmentally sustainable activities. The regulation requires certain entities to disclose information on how and to what extent they are aligning their activities with the Taxonomy. Specifically, these entities must provide information on their proportion of turnover, capital expenditure and operating expenditure associated with economic activities that are aligned with Taxonomy.

Corporate Sustainability Due Diligence (CSDDD) LINK

The CSDDD has been formally adopted by the Council of the European union on May 24, 2024, following weeks of discussion about the draft directive. Similarly to the German supply chain act, it requires certain companies to identify, prevent and address the potential impacts of their operations including the supply chains to human rights and the environment. Notably, it introduces civil liability regulations, holding companies accountable for breaches of duty of care and requiring full compensation for victims. Additionally, companies must align their business models with the 1.5-degree global warming limit of the Paris Agreement. Now, the EU member states have two years to implement it into national law. In Germany, this adjustment will likely occur through modifications to the national supply chain due diligence act.

Supply Chain Due Diligence Act (SCDDA) LINK

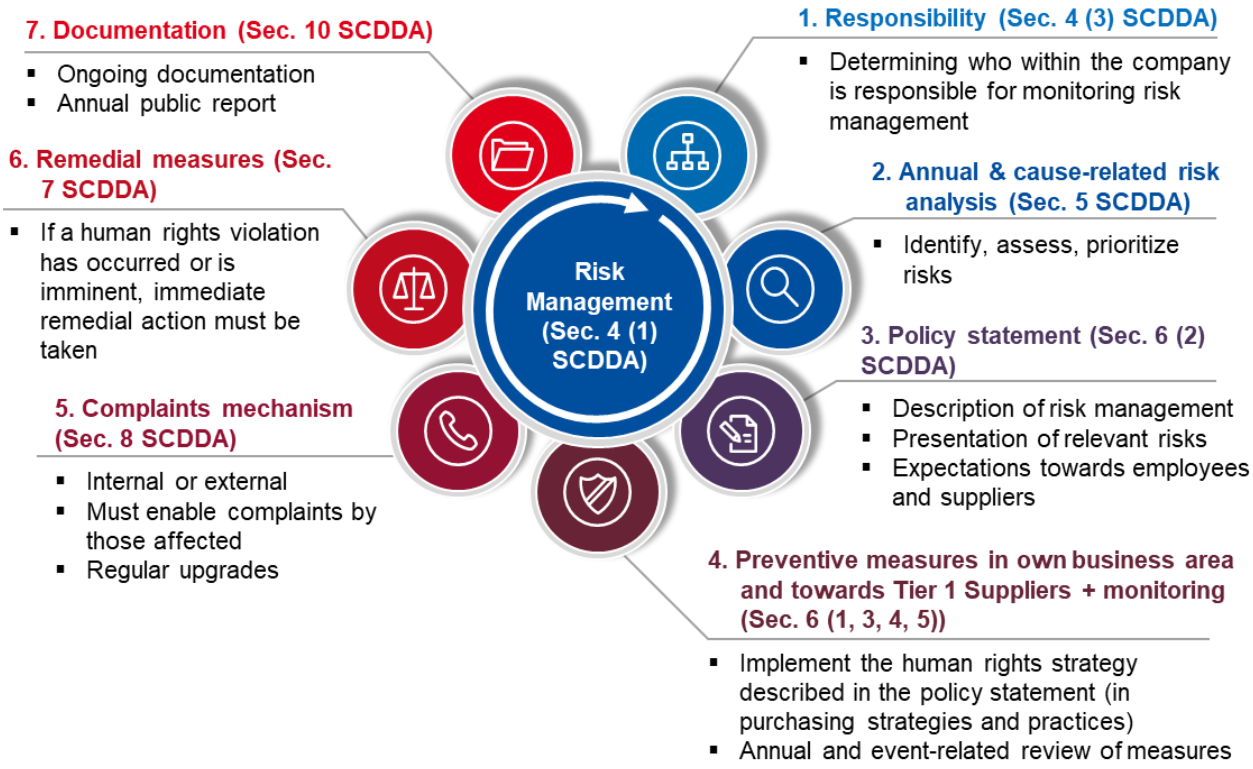
The German supply chain due diligence act was passed by the German government in 2021 (effective since 1st Jan. 2023) and deals with the protection of human rights and the environment.

It particularly focusses on The prevention of child labor and forced labor in all its forms

- The assurance of fair payment of employees
- The observation of workplace health and safety including working hours
- The prevention of employee discrimination

- Effects of activities to local and Indigenous communities at company locations
- The prevention of emissions into air, water and soil from operations
- The handling of persistent organic pollutants (Stockholm Convention)
- The use of mercury in production processes (Minamata Convention)
- The export of hazardous waste (Basel Convention)

The regulation is applicable for all companies with either headquarters or branches employing at least 1000 employees. The graphic below illustrates the obligations resulting from SCDDA, while further details are provided on the subsequent pages.



Responsibility

According to SCDDA, it is mandatory to assign the responsibility for the risk management system within the company in a way that ensures independency from management influence. The management shall be informed about the progress of this work at least once a year.

The responsibility can be assigned to a human rights officer, or it can be divided among several individuals who are involved in the comprehensive process of supply chain risk management; such as individuals from purchasing, human resources, health safety environmental, sustainability and legal departments.

Regular Annual & Cause-related risk analysis (Risk Analysis)

The risk analysis is probably the most important part of the SCDDA. If applicable for a company, it is required to assess its business operations and supply chains to identify risks according to the definitions outlined in SCDDA. This includes conducting a systematic risk assessment, starting with the evaluation of country and industry risks. Subsequently, individual suppliers associated with these risks can be assessed to identify “high-risk” suppliers. While manual research is a viable approach, there are also systematic tools/software available in the market that can support with this part of the assessment.

Declaration of basic principles for the protection of human rights in business (Declaration)

The Declaration serves as a guideline that outlines how a company complies with its responsibility to respect human rights in its supply chains and internal operations. It declares specific expectations, instructions, and requirements for employees, suppliers, and other business partners. The Declaration includes a commitment to fundamental human rights and is in line with internationally recognized standards, for example the International Charter of Human Rights and the ILO core labor standards. It states the mandatory standards applicable to key human rights risks and is endorsed by the company's top management. Furthermore, the Declaration is disclosed and communicated to all employees, suppliers, and business partners.

Preventive and remedial measures

Upon analyzing the results of the Risk Analysis, it is essential to initiate proactive measures to limit the identified risks. If risks have already materialized, immediate actions must be taken to halt violations and mitigate any adverse impacts. All measures must be customized to the specific circumstances, including the risk level, supplier involved, country of operation, and the number of individuals affected. In general, a wide range of measures might be effective, such as:

- Requesting the implementation of policies at suppliers, train the employees of suppliers and verify on their effectiveness via surveys or audits
- Requesting certain certificates (e.g., ISO 45001)
- Working with NGOs to reduce negative impacts to the local communities

While there is no strict requirement to ensure the success of measures at suppliers, it is advisable for a company to consider all available options to use one’s own influence. Within the company's own business activities in Germany, identified risks and violations should be promptly addressed and halted through appropriate and effective measures.

Whistleblower system

Companies are required to establish a whistleblower system that allows internal and external individuals who have been affected by - or are aware of - human rights or environmental violations committed by the company or its suppliers to raise their concerns and inform the company about the misbehavior. For example, this can be implemented as an online system on the company's official website or other publicly accessible platforms, as well as through telephone hotlines. It shall ensure that the complaints can be submitted by the whistleblower in the easiest way possible, enabling all those affected to contact the company. In certain regions, it may be beneficial to collaborate with local NGOs or other interest groups to amplify the voices of local communities.

Passing on of regulations in the supply chain

In accordance with SCDDA, it is mandatory to enter into contractual agreements with our suppliers that ensure that also the suppliers are bound by the regulations of SCDDA. To fulfill this requirement, we drafted the Supplier Code of Conduct (SCoC), which has been implemented into the contracts with our existing suppliers since January 2022. It is also a mandatory agreement for all new suppliers.

We expect you to not only comply with the regulations of SCDDA, but also to address the requirements along your own supply chain. This includes understanding and addressing human rights risks within your own business and supply chain and to take appropriate actions to minimize them.

Guidance from the government authorities

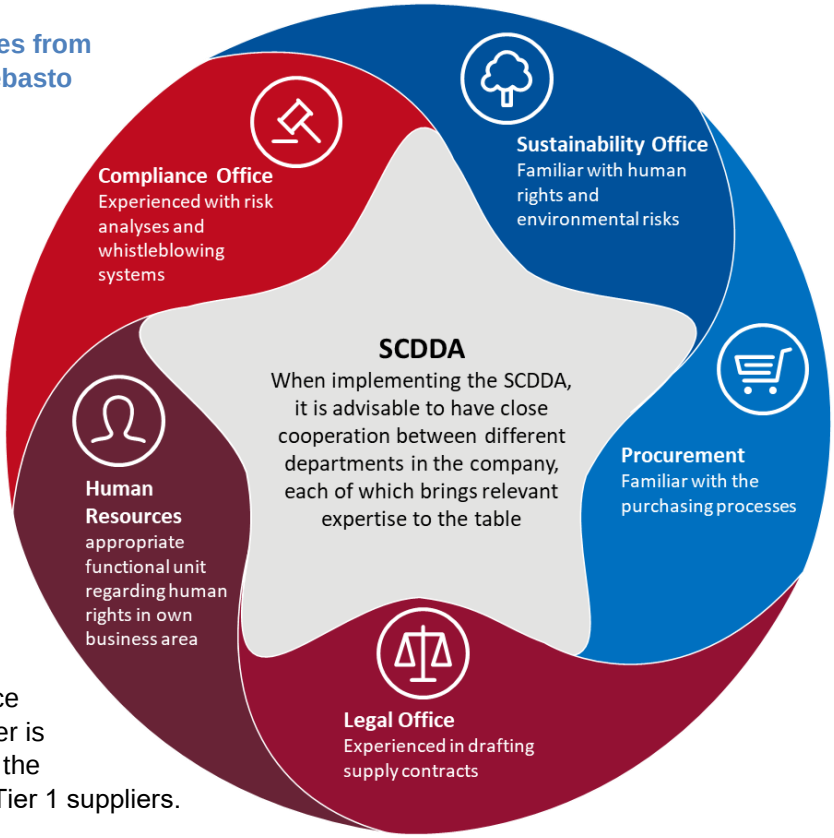
Suppliers, where SCDDA is already directly applicable due to the number of employees, may have progressed further with their preparations and may not need additional guidance. However, those who need to comply starting from January 1, 2024, may find the online guidelines, in respect to the implementation of SCDDA and provided by the German Federal Office of Economics and Export Control (BAFA), helpful.

Case Study – Assigning responsibilities from Supply Chain Due Diligence Act at Webasto

Instead of designating one human rights officer, Webasto has chosen to allocate responsibilities among the various departments involved in the implementation of SCDDA. As a result, a committee has been established that includes experts from all different affected departments.

Within Webasto´s own area of business, the fulfillment of the obligations according to SCDDA obliges to Legal & Compliance, Human Resources, Health Safety Environment and Corporate Strategy (for Sustainability) department.

With support from the Legal & Compliance department, Purchasing as one risk owner is most suitable to ensure the fulfilments of the SCDDA obligations vis-à-vis Webasto's Tier 1 suppliers.



1.3 Customer Requirements

Since 2022, major players in the automotive industry have established ambitious sustainability targets and passing them on in the supply chain. Some of them are mandatory to participate in the quoting process and are directly linked to development projects. The following are a few illustrations of such requirements:

- Creation of transparency over the environmental footprint of our products and operations
  - Product carbon footprint and Life Cycle Assessment (LCA) based on international norms (e.g., ISO 14040, ISO 14044)
  - Corporate carbon footprint based on the Greenhouse Gas Protocol for different categories “scopes”: Scope 1, Scope 2 and Scope 3
  - Disclosure of sustainability information in sustainability rating portals e.g., CDP, EcoVadis and NQC, as well as self-assessment-questionnaires (SAQ)
- Options to reduce the environmental burden of materials in the products
  - Shares of secondary materials (“recycled content”) in the products e.g., enhance secondary material quote to 50%
  - Confirmation of specific carbon thresholds in the materials used e.g., 2.2 kg CO_2e/kg steel, 9 kg CO_2e/kg primary aluminum; 4 kg CO_2e/kg secondary aluminum
  - Confirmation of the origin of raw materials used in products through certificates such as the Initiative for Responsible Mining Assurance (IRMA)
  - Source conflict minerals responsibly e.g., tantalum, tin, tungsten, gold, lithium, copper, mica and cobalt
- Options to improve the product design to optimize the use of resources, minimize pollution, and develop products that consider environmental impact and show potential to re-use, repair and recycling (i.e., circular economy aspects)
- Options to reduce the environmental burden within operations
  - Use of renewable energy e.g., 100% green electricity in own production and supply chain, installation of meters
  - Enhance energy efficiency of operation processes

1.4 Step-by-step approach

This guide outlines a comprehensive approach to a company's Corporate Carbon Footprint (CCF) roadmap, which includes five key steps that must be addressed. This approach should be integrated into the company's iterative planning cycle, beginning with measuring and analyzing the current situation (Step 1), followed by setting a strategy and targets (Step 2), establishing plans (Step 3), implementing those plans (Step 4), and finally measuring and disclosing the results (Step 5). It is important for companies to understand that addressing only certain aspects of this approach will not be sufficient to align with the 1.5°C target and may be perceived as greenwashing by the public.

When developing the roadmap, it is crucial to distinguish between different terminology. The initial step typically focuses on achieving climate neutrality[2]. Moving towards climate neutrality entails addressing both non-fluorinated and fluorinated greenhouse gases beyond CO_2, such as CH_4, N_2O, HFC, PFC, SF_6, and NF_3. However, striving for climate neutrality as a company encompasses not only these gases but also all other substances that have adverse effects on the environment and human health.

In Chapter 2, the strategy and target setting of Webasto are introduced. It is essential to secure management support to integrate sustainability into the company's strategy and goals, as this is key to a successful transition. Within the purchasing department, dedicated individuals are working on sustainability resulting in the establishment of a specific strategy and roadmap for the supply chain. The guide provides information on establishing a baseline and calculating the Corporate Carbon Footprint, offers insights into potential measures and where to begin when developing a transformation roadmap. Moreover, concrete case studies within Webasto and the automotive industry offer more detailed information on implementation possibilities. Webasto reports on its progress annually as part of its sustainability report. Currently, Webasto is using an ESG data management tool, which enhances reporting and provides better long-term control and monitoring capabilities.

The 1.5°C Business Playbook

The Exponential Roadmap Initiative brings innovators, disruptors and transformers together as they take action to stay in line with the 1.5°C target. This initiative is an accredited partner of the United Nations. The Guideline for Climate Action describes how to act on the 4 climate pillars:

1. Reduce your own emissions
2. Reduce your value chain emissions
3. Integrate climate into your strategy
4. Accelerate climate action in society

LINK

[2] Climate neutrality refers to achieving net zero greenhouse gas emissions by balancing those emissions so they are equal (or less than) the emissions that get removed through the planet's natural absorption (UNFCC 2021)

Sustainability @ Webasto

2. Sustainability @ Webasto

2.1 Strategy & Roadmap

In 2021 we created new structures at Webasto to permanently anchor sustainability in our corporate strategy and the organization. Our sustainability program ensures that sustainability is being embedded in our policies, management structure, operations and, ultimately, our products. Our company purpose is to “make individual mobility more enjoyable and sustainable by advancing technology and people”.

To determine the focus areas for sustainability management, we focused on the topics that hold significant relevance to our external and internal stakeholders. In June 2021, Webasto developed the key areas for action based on a materiality analysis. This involved interviewing our most important stakeholders – customers, banks, associations, suppliers and owners –about their expectations. Additionally, we conducted an internal survey involving approximately 50 managers and employees from various departments, divisions, and regions to gather insights. Based on the outcomes of the materiality analysis, we have identified the following focus areas that form the basis of our future sustainability report:

Sustainability Report Webasto

In line with our vision “Our Inspiration Drives the World of Mobility”, we are shaping the climate-neutral mobility of the future. You will find our entire understanding of sustainability in our report.

LINK

- **Climate & Environment:** Reduction of energy consumptions and emissions, environmental certifications, use of raw materials, water and waste management
- **Customer & Products:** Innovative product solutions in the field of e-mobility, Circular economy, product safety & compliance
- **Purchasing & Supply Chain:** Collaboration with our suppliers for reduction of supply chain emissions, local purchasing, compliance with laws
- **Employees & Workplace:** Attractive workplace, training and education, diversity and equal opportunities, non-discrimination, Occupational health & safety
- **Society & Engagement:** Community engagement, Webasto Foundation

To ensure comprehensive carbon accounting, the group wide Corporate Carbon Footprint (CCF) is calculated on a yearly base since 2021 and covers the entire Webasto group with all production and service locations world-wide using the Operational Control Approach. We calculate the absolute CO_2e emissions of the Webasto Group following the Greenhouse Gas Protocol standard.

The Greenhouse Gas Protocol standard classifies emissions into Scopes which consist of direct emissions from combustion within the company facilities and vehicles (Scope 1) and indirect emissions from purchased energy (Scope 2). At Webasto we also calculate the Scope 3 Upstream emissions which encompass the indirect greenhouse gas emissions from our supply chain related to purchased or acquired goods (tangible products) and services (intangible products) generated cradle to gate but also transportation, business travel and employee commuting. The 2021 emissions inventory sets the base year emissions for the Webasto Climate targets; further details can be found in the sustainability report.

Webasto has set ambitious climate targets to reduce emissions to a minimum in line with the Science Base Targets initiative: Reducing Scope 1 & 2 emissions by 50% by 2030 compared to the 2021 base year and accomplish net-zero emissions by 2045. As part of the corporate decarbonization roadmap key levers for reduction were identified such as switching to renewable energy sources and enhancing energy efficiency and re-thinking energy intensive processes were identified as impactful. We have understood that all stakeholders must be involved in the climate protection activities and emission reduction along the supply chain. Hence, we have also set a Scope 3 Upstream target to reduce emissions by 25% by 2030 on the 2021 base year emissions inventory.
Our main focus is emission reduction. While we are optimizing our emission inventory boundaries we have also accomplished steps towards climate protection. In 2022 the green electricity consumption for the Webasto group has increased by 35% compared to 2021 either through own generation or by purchasing green electricity.

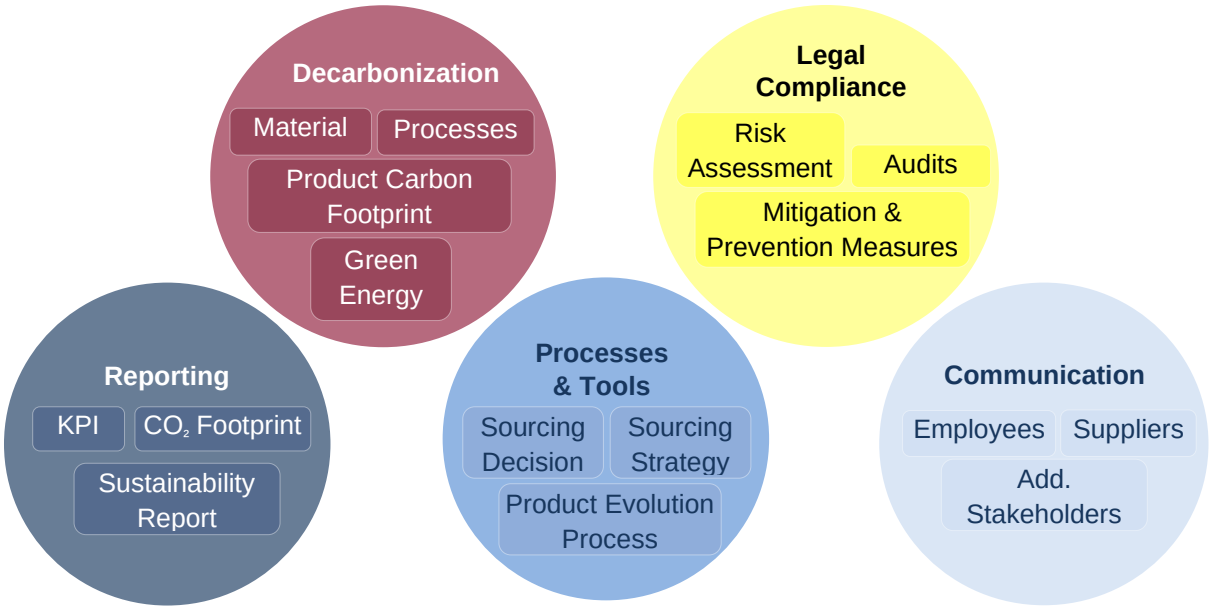
SBTi (Science Based Target initiative)

is an initiative by CDP, WWF, UN Global Compact and World Resources Institute. It provides a mechanism for validation of climate targets against a set of “science-based” criteria. By the capital markets it is recognized as standard for ambitious decarbonization strategies.

LINK

2.2 Purchasing Roadmap

In order to contribute to the global climate objective, everyone must include sustainability in every days doing and decision making. This transformation has motivated us to incorporate sustainability into our Webasto Purchasing vision: **'To be one of the leading companies in terms of sustainable procurement in our peer group of automotive suppliers.'** To bring this vision to life, we are concentrating on the two fields of actions: The adherence to regulations and the decarbonization in our supply chain. To achieve these goals, we will need to adapt existing processes to meet the new requirements and, where feasible, implement new IT tools. Communication within the Webasto purchasing organization and with our supply base is vital. We will provide regular updates on our progress via our sustainability report and key performance indicators.



Achieving a significant reduction in the carbon footprint of our purchased goods and services is a challenging and ongoing endeavor that requires collaboration with our suppliers and partners. In our joint efforts to improve the carbon footprint, we have accomplished the following major targets in 2023:

- Sustainability Training for Purchasing Employees
- Execute supply chain transparency studies for high-emission material
- Sustainability Guideline within the Product Evolution Process
- Incorporate sustainability objectives into the category strategies
- Integration of sustainability criteria into sourcing decisions
- Conduct a supplier capabilities assessment
- Supplier Sustainability Webcast with ~ 800 suppliers worldwide

Sustainable procurement webinars

Sustainable procurement can be challenging, Many free off charge available webinars and knowledge exchange groups can give insights on the decarbonization journey within the supply chain, e.g. Scope 3 Peer Group or other providers.

LINK

The focus within the year 2024 is on the following activities:

- Increase data quality for Corporate Carbon Footprint
- Integration of Sustainability in Supplier Scorecard
- Concept development for the availability of Product Carbon Footprint in the supply chain
- Overview of purchasing decarbonization measures evaluated by reduction potential and costs
- Sustainability recognition for well-performing suppliers, achieving major improvements

Environment

3. Environment

Earth Overshoot Day is the point in time when the global demand for natural resources and services exceeds the Earth's capacity to regenerate them within that same year. This deficit is sustained by depleting ecological resources and accumulating waste, particularly carbon dioxide in the atmosphere. With no alternative planet available, ensuring environmental sustainability becomes the paramount responsibility of our generation. From 2011 to 2020, the decade experienced record-breaking warmth, with the global average temperature in 2019 surpassing pre-industrial levels by 1.1°C. Exceeding a temperature rise of 1.5°C compared to pre-industrial levels leads to significant adverse effects on the environment, human health, and overall well-being.

There is increasing evidence that human behavior harms the environment resulting in more frequent occurrences of heatwaves, wildfires, droughts, floods, severe thunderstorms and a decline in biodiversity. Many plant and animal species, already struggling due to habitat loss and pollution, face an even greater risk of going extinct. Consequently, as our essential ecosystem declines, services like clean water and fresh air will also diminish. This is resulting in significant damage, effecting the lives of millions of people. As climate change continues, these catastrophic events are projected to happen more frequently in the future.

Webasto's strategy includes the protection of the environment, which involves ensuring a responsible supply chain. Effective principles and practices in these areas can only be implemented when our suppliers are actively engaged.

CDP (Carbon Disclosure Project)

CDP offers a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. Chances and risks for the improvement of emission performance are identified. The CDP Supply Chain Program covers the CO_2 Reporting within the supply chain, the scoring shows the performance of a company.

LINK

Earth Overshoot Day 2024, Forecast[3]

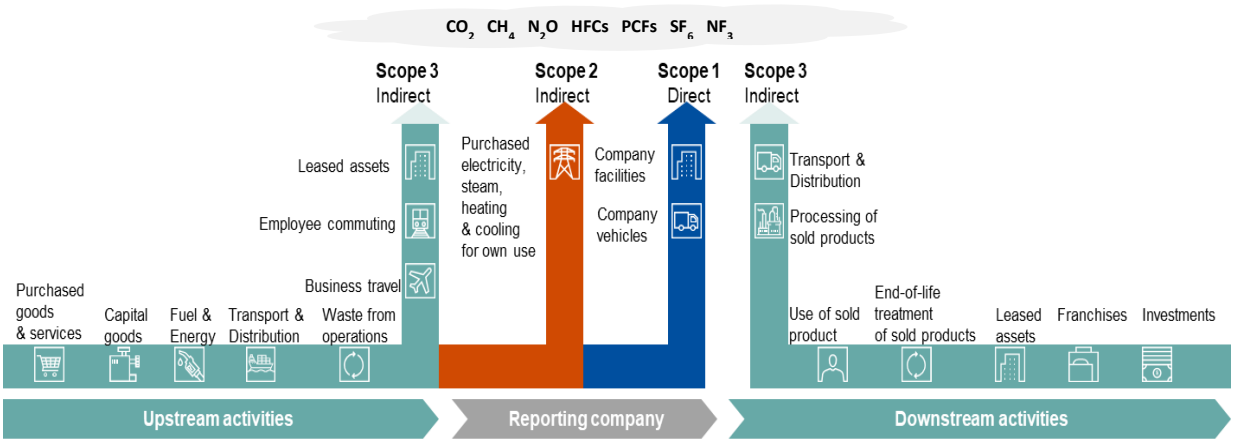
[3] Source: https://overshoot.footprintnetwork.org/newsroom/country-overshoot-days/

3.1 Energy and Emissions

To reduce emissions, companies must be able to determine the Corporate Carbon Footprint of their activities. The calculation describes the total amount of emissions that are directly or indirectly caused by a company's activities throughout a reporting, encompassing the complete value chain. The Greenhouse Gas (GHG) Protocol categorizes CO_2 emissions into the following three scopes:

- **Scope 1** – Direct emissions resulting from the combustion of fossil energy sources e.g., gas burned in boilers, gasoline for cars and trucks
- **Scope 2** – Indirect Emissions resulting from the generation of purchased electricity, steam, heating or cooling which is generated by burning fossil energy sources elsewhere
- **Scope 3** – All indirect emissions that occur in the value chain of the reporting company both upstream e.g., production of purchased goods and services, transportation of purchased products, business travel and downstream e.g., transportation of the product to the customer, use of the product, recycling of the product at the end of the life cycle

We recommend the conduction of a hotspot analysis to find out where most emissions occur or arise. As described above, emissions are not solely generated in production facilities, but also in the upstream and downstream supply chain. Within the automotive industry, Scope 3 emissions typically constitute the largest portion of total emissions.



The GHG Protocol differentiates four approaches which can be applied for the calculation:

- **Spend-based method:** Determining the amount of money spent on each sector of goods and services and applying secondary emission factors based on "Environmentally Extended Input-Output" (EEIO) models (in kg CO_2e/ €).
- **Average data method:** Estimates emissions for goods and services by collecting data on the mass (e.g., kilograms or pounds), or other relevant units of goods or services purchased and multiplying by the relevant emission factors (average emissions per unit of good or service).
- **Hybrid approaches combining different data sources:** Uses a combination of supplier-specific activity data (where available) and secondary data to fill the gaps
- **Supplier specific ("Primary"):** Emission data from suppliers, inventory data from goods or services of the suppliers (Product Carbon Footprint)

Greenhouse Gas Protocol

The protocol provides global frameworks to measure and manage greenhouse emissions from private and public sector operations, value chains and mitigation efforts. On the website you will find guidance and trainings on how to apply the standards effectively.

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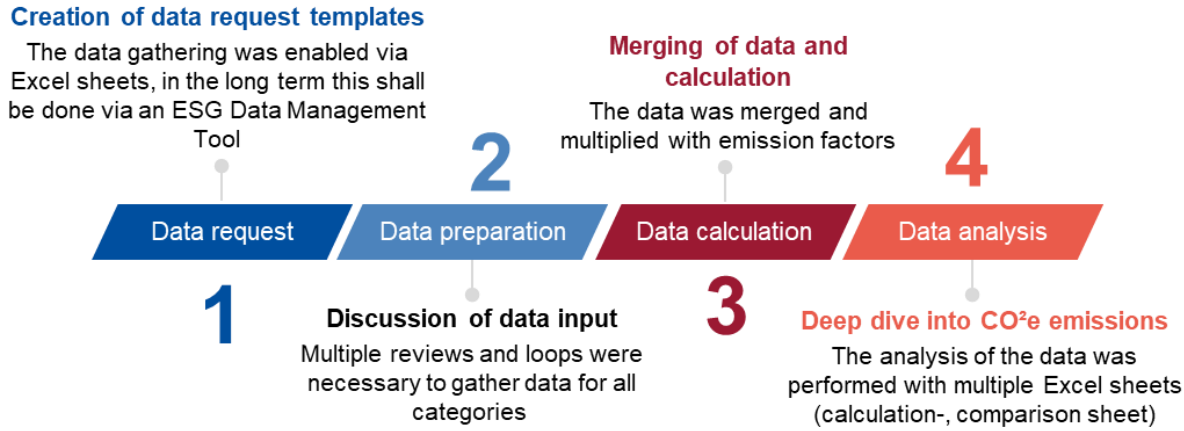
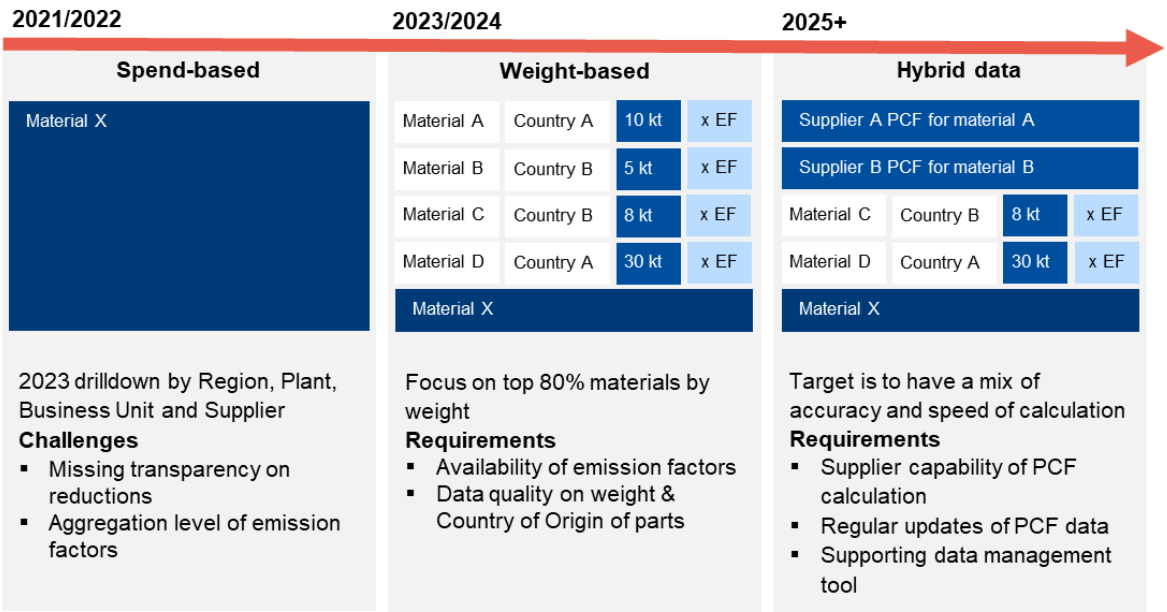
Case Study - Calculation of Scope 3.1 Purchased goods & services

The data gathering, preparing and calculating process at Webasto can be clustered into four steps:



Webasto is in the initial stages of developing and integrating its carbon accounting system. The company has recently completed its third emission inventory following the GHG Protocol in 2024. The calculation for Scope 3.1 Purchased goods &services is based on the weight-based approach for Aluminum, Steel and Glass spend-based approach and spend based for all other materias. For individual materials we already have been able to calculate with the Product Carbon Footprint (PCF). A more detailed description on the PCF is given in the next chapter.

There is a limitation with spend-based emission factors, as they are influenced by inflation and currency exchange rates. To address this, Webasto plans to transition to more accurate weight-based and primary based calculation in the coming years. Ultimately, the goal is to adopt a hybrid calculation with mostly primary emission data received from suppliers. Below you find a simplified graphic, for individual materials deviations can be possible.

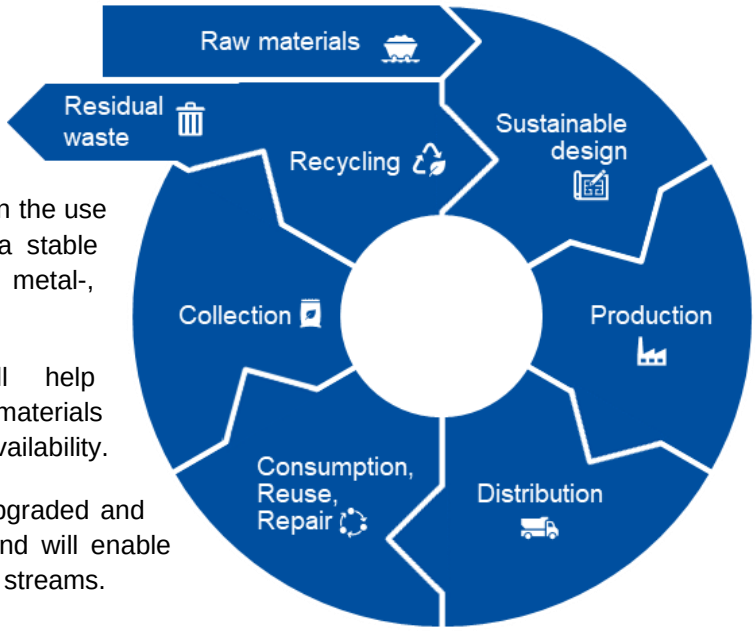


3.2 Circular Economy

A circular economy describes an economic system that is based on […] reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers) […[and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations."[4]

This approach represents a departure from the traditional linear economic model, which follows a take-make-consume-throw-away pattern. The linear model relies on abundant quantities of inexpensive materials and energy. To fully realize the potential of the circular economy, significant reconfigurations are required within the highly complex automotive value chain.

What are the benefits of circular economy?



- Creating more efficient and sustainable products from the start helps to reduce energy- and resource consumption.
- Reusing and recycling not only slows down the use of natural resources, but also provides a stable supply of materials (e.g., paper-, plastic-, metal-, glass recycling…).
- Well-established material cycles will help businesses to source cost-competitive materials with short transportation routes and high availability.
- A shift to products that can be reused, upgraded and repaired reduces the amount of waste, and will enable businesses to generate additional revenue streams.
- The circular economy offers the advantage of reducing greenhouse gas emissions.

Case Study Disposal & recycling of automotive glass

Recycling companies purchase scrap materials and broken glass from various sources, such as workshops, and engage in the recycling process before selling the resulting products to glass manufacturers and other businesses. Within the industry, 10 to 25% cullet is used for production of new float glass already today. Although a higher percentage of cullet utilization is technically feasible, practical barriers may arise due to the availability of high-quality glass scrap and economic considerations. Up to 25% less energy is needed compared to the production with 100% primary raw material. However, additional transports for the recycled material needs to be considered in the overall calculation of the environmental benefits. It can be recognized that the demand for recycled glass is rapidly increasing, yet there is insufficient material available on the market. Achieving a circular economy poses a broad challenge that surpasses the scope of individual companies. Effective collaboration among value chain partners is crucial to comprehending one's own impact and identifying opportunities for improvement. Webasto, for instance, visited a glass recycling plant to gain comprehensive insights into the glass recycling process. This exchange with recycling experts proved highly valuable in enhancing our understanding of how to further enhance the recyclability of our glass products. We acquired knowledge about the effects of printing, tinting, coating and lamination foils on the glass recycling process.

4

Products and processes need to be designed with a focus on reducing the consumption of primary materials. Reusing materials is also of importance, an example of reusing materials is through remanufacturing, where used components undergo industrial processing to restore them to high original quality. Reuse has a significant impact on reducing the demand for raw materials and affects resource usage such as water. Repairing components instead of replacing them is an effective approach that conserves resources and extends their lifespan. If reduction or reuse is not feasible, recycling and recyclability play a vital role in the circular economy, as secondary raw materials can be utilized for new purposes. The goal is not only to save CO_2 emissions but also to use resources efficiently. Modern technologies enable us to achieve this objective, ensuring that parts do not end up in landfills. Below you will find guiding questions to help determine the initial steps when embarking on the Circular Economy journey:

Reduce

- ❑ Is the relevant staff aware of sustainability?
- ❑ Were clear reduction targets within the entire production and procurement process defined?
- ❑ Have waste reduction programs been developed?
- ❑ Does recycling already play a significant role in the development process (design for recycling)?
- ❑ Are there already established reporting procedures?

Reuse

- ❑ Can old products be returned, refurbished and sold again?
- ❑ Have all options for product repair been exhausted?
- ❑ Could repair be an additional revenue stream?
- ❑ Has a donation of the products been taken into consideration?
- ❑ Is there a mechanism for repair feedback from customers?
- ❑ Is the complete life cycle considered when purchasing equipment and devices?

Recycle

- ❑ Were recycling aspects already addressed at the product design?
- ❑ Were possible upcycling opportunities determined?
- ❑ Have investments been made in recycling technologies?
- ❑ Was an audit of recyclable and not recyclable raw materials in the production carried out?
- ❑ Have short-term and long-term recycling goals been defined and agreed?

Case Study Electric Vehicle Battery Recycling

As the electric vehicle (EV) industry grows, recycling of batteries is becoming an increasingly critical aspect. EV Batteries contain various materials such as lithium, cobalt, nickel, manganese, aluminum, copper and per- and polyfluoroalkyl substances (PFAS) that can be toxic and harmful to the environment if not properly disposed. Recycling these batteries prevents hazardous materials from being released into the environment and also helps to reduce the carbon footprint of EVs. The process of recycling involves breaking them down into their constituent parts and recovering valuable metals and chemicals that can be reused in the manufacturing of new batteries. These recycled components include cobalt and in some cases nickel, which are often in short supply. In order to secure the availability of valuable materials for the future, we need to start treating our products as a potential source of these materials. To achieve this, we need to work more closely together across the entire supply chain. This means collaborating with suppliers, manufacturers, and recyclers to design products that can be more easily reused and recycled, developing efficient and sustainable recycling processes, and ensuring that the materials we recover are of high quality and suitable for reuse. Webasto is strongly addressing these challenges and aims to establish suitable processes for circularity and recycling. By examining the recyclability of our batteries and closely exchanging with experts on the circular economy, we can identify where we can give our contribution to a closed loop.

4 Decarbonization

4.1 Reduction measures

The emission profiles vary significantly across industries. In the automotive sector, Scope 1 and 2 typically contribute only a small portion to the overall carbon footprint, while the majority is attributed to Scope 3. At Webasto, we are currently undertaking a comprehensive examination of every supply chain and manufacturing process associated with our products. Our aim is to identify suitable strategies and solutions for reducing emissions. We anticipate the active participation of our suppliers and partners in our sustainability roadmap, implementing corresponding measures within their own operations and supply chains.

Outlined below is a brief overview of potential measures and actions to decrease your Corporate Carbon Footprint. Particularly, initiatives related to energy are crucial for initiating the decarbonization journey. However, it's important to note that the most effective measures will vary depending on the specific characteristics of each industry and product, requiring careful individual analysis.

Energy Saving

- Increased energy efficiency of machines and manufacturing processes, e.g., upgrading machine, updating software, switching to alternative energy
- Use materials with lower energy intensity e.g., bio-based plastics

Conserving Energy

- Re-using energy in energy intensive production steps e.g., reuse heat in production which needs high temperatures: closed production system, re-utilization
- Conserving heat / cold by properly insulating buildings or sections of buildings, e.g., clean-rooms, laboratories, warehouses

Transforming / Generating Power

- Partially or fully replacing gas- / oil heating by utilizing solar- / geothermal energy
- Replacing oil- / gas heaters with heat pumps in buildings
- Producing own electricity through solar panels, wind turbines, changing from gas to biogas

Logistics

- Optimized routing
- Selection of alternatives with low CO^2 emissions, e.g., train instead of truck
- Setting-up appropriate supply chain for returning products / materials

Material usage

- Reduction of scrap rate
- CO_2 optimized usage of material e.g., PHC with renewable fibers
- Use less material per product e.g., light weight design

Secondary material

- Increase usage of secondary material e.g., secondary aluminum
- Ensuring availability of secondary material within the market
- Evaluation of business cases primary vs. secondary material

Recycling

- Integration in technical decisions and design of products
- Enable disassembly, reduce complexity e.g., monomaterials
- Creation of closed cycles, circular economy: Designing a product which can easily be recycled at the end of the lifetime.

Case Study - Material Usage

Webasto is currently exploring the incorporation of sustainable materials, such as recyclates or bio-based plastic raw materials, in various products. A significant initiative involved investigating the use of recyclate-based glass fiber reinforced Polypropylene (PP-GF30/40) for structural frame parts, specifically crossmembers. The primary challenge was to identify a material that met all technical requirements, including mechanical properties, low emissions, and good processability. In close collaboration with raw material manufacturers and one of our customers, different materials were carefully selected. Through a sample run using an existing serial mold, the processing performance and reproducibility of the chosen material were verified, and test samples were produced. The validation and analytical testing of these samples demonstrated that all requirements were successfully met by one of the materials, which contained approximately 30% recyclate content. Based on these results, the material was internally approved for use in frame parts for specific new projects. The adoption of this material led to a reduction in the CO_2 footprint of the final product by approximately 20%.

As shown in the illustration below, there are different possibilities to use Green Energy within the own operations, combinations are possible:

Short-term	Mid-term	Long-term
Energy Attribute Certificate (EAC)[4] ▪ "birth certificate" of the source ▪ Issued by a central governmental agency ▪ Can be purchased on the market to turn a consumed portion of electricity green ▪ Direct connection of the user of green energy (company) and the parts produced	**Power Purchase Agreements (PPA)** ▪ Direct contracts with electricity providers for the supply of green electricity ▪ The electricity provider must certify on an annual base that green electricity is purchased	**Own Power generation** ▪ It must be ensured that the electricity is consumed directly on site ▪ Most likely also a guarantee of origin will be issued, which can then be submitted as evidence

Energy Attribute Certificates offer the most expeditious means of guaranteeing the utilization of renewable energy. In Germany, other parts of Europe and North America, there are governmental systems for EACs: Herkunftsnachweise (HKNs) and Association of Issuing Bodies (AIB). In North America – Canada and the United States – they're called Renewable Energy Certificates (RECs) and Green-e standard. The Green-e standard certifies renewable energy that must be generated from new facilities (younger than 15 years) that meet strict environmental quality standards, marketed with complete transparency and accuracy. For Latin America, Africa, Asia as well as China it is referred to as International Renewable Certificates (I-RECs) and International REC Standard. In countries where no system is established yet, IRECs can be used. In the long term, companies shall aim for Power Purchase Agreements and own power generation. It is recommended to require verification from suppliers, starting with energy intense processes. Between customer and suppliers' green energy contracts can be established to ensure use of green energy for own products.

Case Study – Photovoltaic system and geothermal energy in Schierling

The Webasto battery manufacturing plant in Schierling is powered by the company's own photovoltaic system. About 2,000 solar modules have been installed on the roofs of the production hall, generating about 740 megawatt hours (MWh) of electricity per annum. This will reduce the plant's CO^2 emissions by around 450 tons per year.

4.2 Product Carbon Footprint

The Product Carbon Footprint (PCF) is the sum of the total greenhouse gas emissions converted to CO_2 that occur during the various life cycle phases of a product. This includes the entire cycle from the extraction of raw materials to the manufacture, use and disposal of the product. The aim of the PCF is to create transparency in order to make environmentally conscious decisions in production and procurement.

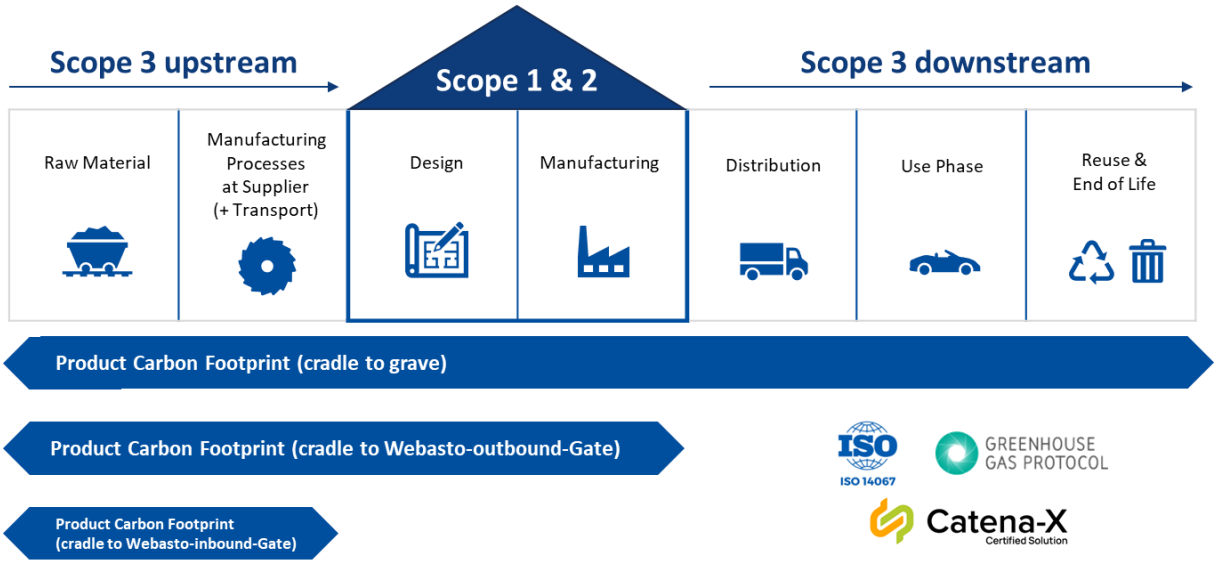
Completeness, data frameworks and standardized steps in accordance with ISO 14067 are important for the calculation. The most important standards for calculating are the “GHG Scope 3 Calculation Guidance” and the “Cartena-X Product Carbon Footprint Rulebook”.

Catena-X - Product Carbon Footprint Rulebook

Focus on the exchange of production carbon footprints from tier to tier with increased consistency for PCF accounting within the automotive industry.

LINK

Customers and interest groups are increasingly demanding transparency about the CO_2 footprint of products. This development is in line with the ambitious climate and environmental targets of the Webasto Group. The use of primary data is crucial for the calculation of the PCF. Primary data is specific to a product or material source and refers, for example, to the origin of the raw material, exact weight data or the type of energy used in the manufacturing process. Throughout the complete supply chain, specific company data enables a more accurate representation of actual emissions compared to average data. By calculating the PCF with primary data, companies can take targeted measures to reduce emissions and develop strategies, as the distribution of emissions within the product life cycle becomes visible. Overall, specific supplier data allows a more accurate calculation of the PCF, which is crucial for reducing the environmental footprint of products.



Appendix

A Helpful Links

Several links have been provided throughout the document already. Below you will find additional links that offer further information and details on sustainability.

Alliance of CEO Climate Leaders', A CEO-led community committed to raising bold climate ambition and accelerating the net zero transition by setting science-based targets, disclosing emissions and catalyzing decarbonization and partnerships across global value chains. LINK

Aluminum Stewardship Initiative (ASI) is a global non-profit organization that establish standards and provides certifications. The organization wants to bring producers, users and stakeholders in the aluminum value chain together to maximize the contribution of aluminum to a sustainable society. LINK

Catena-X is an open data ecosystem for the automotive industry, linking global players into end-to-end value chains. The shared goal: a standardized global data exchange. Examples for use cases are De-carbonization, ESG Reporting and Circularity. LINK

The **Ellen Macarthur Foundation** fosters collaboration among businesses, policymakers, innovators, universities, cities, philanthropic organizations and leaders to build and scale a circular economy. The community engages through specific projects and initiatives. LINK

Drive Sustainability wants to promote sustainability throughout the automotive industry by engaging with suppliers, stakeholders and related sectors on impactful activities. Currently it's a partnership between leading automotive companies. LINK

Embedding Project is a global public-benefit research project that helps companies embed social and environmental factors across their operations and decision-making. LINK

The **Responsible Business Alliance** is an industry coalition dedicated to corporate social responsibility in global supply chains. Members, suppliers and stakeholders collaborate to improve working and environmental conditions as well as business performance through the implementation of leading standards and practices. LINK

Responsible Steel is an international non-profit initiative, focused on standard setting and certification. Worldwide, together with its members, the organization wants to drive a socially and environmentally responsible production of net-zero. LINK

RE100 is the global corporate renewable energy initiative bringing together hundreds of large and ambitious businesses committed to 100% renewable electricity. Led by Climate Group and in partnership with CDP, their mission is to accelerate change towards zero carbon grids. LINK

SamII99 guides small businesses to net zero through practical tips that builds a more resilient and profitable company. LINK

The **Smart Freight Centre (SFC)** is an international non-profit organization focused on reducing greenhouse gas emission from freight transportation. Their goal is to guide the global logistics industry to track and reduce its GHG emissions reaching zero emissions by 2050. LINK

On the **SME Climate Hub** website you will find guidance, trainings and a free carbon footprint calculator. It is a non-profit global initiative that empowers small to medium sized companies to take climate action and build resilient businesses for the future. LINK

The **United Nations Global Compact** assists companies to conducts responsible business practices by aligning their strategies and operations with principles on human rights, labor, environment as well as anti-corruption. LINK

The Chancery Lane Project (TCLP) is a collaborative effort by lawyers and other legal professionals to enable climate conscious contracting. More than 700 legal professionals from more than 180 organizations are participating, working pro bono to create practical legal solutions in the form of model laws and clauses to be wired into legal agreement LINK

The Exponential Roadmap Initiative is an accredited partner of the UN Climate Change High-Level Champions' Race To Zero and a founding partner of the 1.5°C Supply Chain Leaders and the SME Climate Hub. The initiative has created the 1.5°C Business Playbook, a guide to exponential climate action. LINK

Transform to Net Zero is an initiative launched in July 2020 to support and accelerate the move towards a net zero carbon economy through research and guidance for businesses. LINK

B Contact Information

Webasto SE
Krailinger Straße 5
82131 Stockdorf
E-mail: Sustainability.Purchasing@webasto.com