

thermoplan  
Swiss Quality Coffee Equipment

# Sustainability report 2022



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## Foreword by the CEO – Adrian Steiner

Dear readers,

I am extremely proud to present to you Thermoplan AG's very first sustainability report. As a driver of innovation in the development and production of high quality fully automatic coffee machines, we see ourselves as pioneers in terms of not only technology, but also sustainability. Our strong commitment to sustainability is firmly embedded in our company vision.

Our long-term goal is to achieve net zero emissions by 2050. To do this, we are focusing on a completely circular economy to ensure the responsible handling of resources, as well as fair social and ecological conditions, together with all of our stakeholders. Our three pillars of **people, product and planet** are the compass that will guide our targeted work toward sustainability and form the framework for our ambitious goals for 2030 and 2050. We strongly believe that transparency is the key to true sustainability all round.

One highlight of our commitment in 2022 was the recognition of our net zero emission targets by the Science-Based Targets Initiative. We are also proud to publish the climate impacts of our machines in our interactive Product Environmental Report. Furthermore, over 2550 hours were dedicated to social projects for the local community in 2022. With our Code of Conduct, we endeavor to increase transparency in our supply chain and guarantee adherence to human rights. These are just a few of our efforts – I invite you to find out more in this report.

Despite our progress, we were unable to reach our absolute emissions goal in 2022 due to strong growth. However, we are aware of the significance of reducing emissions and are working tirelessly to implement specific measures, particularly with regard to our machines. We are confident that with new technologies and innovations, we will continue to meet changing customer needs and see the move to our new LEED-certified plant in 2024 as a further significant step.

Thanks to the sustainability road map that we devised in 2022, we are able to tackle new challenges head-on. We are determined to forge ahead with our continuous learning and improvement process.

This report shows not only our successes, but also the areas in which there is still room for improvement in terms of transparency. Over the coming pages you will find out more about Thermoplan and our sustainability efforts.

Adrian Steiner



## We are Thermoplan

The 2022 highlights of our three pillars: people, product and planet

### People



**481**

employees  
+11% compared to 2021



**38**

nationalities among our employees



**2550 h**

dedicated to social projects



**272 km**

Average distance from component suppliers

### Product



**35k**

machines produced



**80 countries**

receiving exported machines



**98%**

export ratio



**100%**

Life cycle assessment for all machines published

### Planet



**100%**

renewable energy at the Weggis site



**22–24**

Building phase for our new LEED-certified building unique



SCIENCE  
BASED  
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Reduction path approved by SBTi



**25**

E-charging stations installed for free charging possibility



## We are Thermoplan

«Thermoplan: based in Switzerland, in business worldwide – Swiss Quality Coffee Equipment»

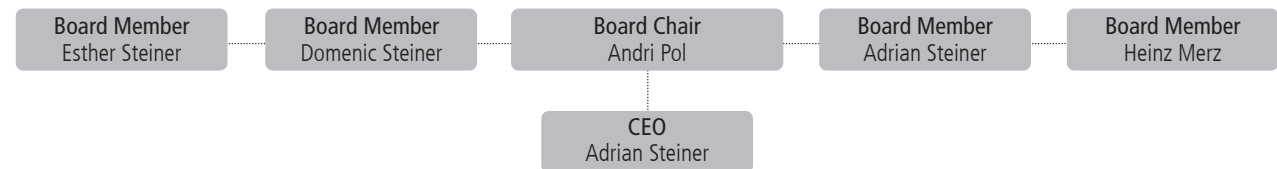
Together with around 480 employees, we develop and produce top Swiss-quality fully automatic coffee machines here in Weggis near Lake Lucerne for professional use in the catering industry and other businesses. More than 200 certified distribution and service partners worldwide make up the Thermoplan network.

The «Made in Switzerland» commitment to quality is more than a promise for us – it is a conviction. With a Swiss cross in our company logo, we are proud to be producing in Switzerland. Thermoplan is a Swiss-made company through and through. Our fully automatic coffee machines are manufactured at our main plant in Weggis and over 70% of our suppliers come from Switzerland.

In just under 50 years, thanks to entrepreneurship and passion, we have grown from a small family-owned business to an internationally successful market leader in the fully automatic coffee machine sector. Founded in 1974 by Esther and Domenic Steiner, Thermoplan AG took its first steps with the production of automatic cream whipping and milk foaming machines. In 1995, the business moved toward fully automatic coffee machines and four years later this new branch became the exclusive supplier for a worldwide U.S. coffeehouse chain.

In 2009, Domenic Steiner handed over the reins of the business to Adrian Steiner, retiring from the operational side of the business in 2010. Adrian Steiner was accepted onto the board of directors as shareholder and has been steering the affairs of Thermoplan AG ever since. In the following years, Thermoplan AG was characterized by new B2B partnerships, technical innovations and growth. This led to the expansion of the fully automated coffee machine range in order to wow a wider customer audience with our top Swiss-quality machines. In 2022, Domenic Steiner passed his role of chair of the board of directors over to long-standing board member Andri Pol. Domenic Steiner continues to be an invaluable member of the Thermoplan AG board of directors.

Since this internal change, the composition of our board of directors is as follows:



The subsidiaries Thermoplan Germany/Austria and Thermoplan USA also operate under the same strategic management.

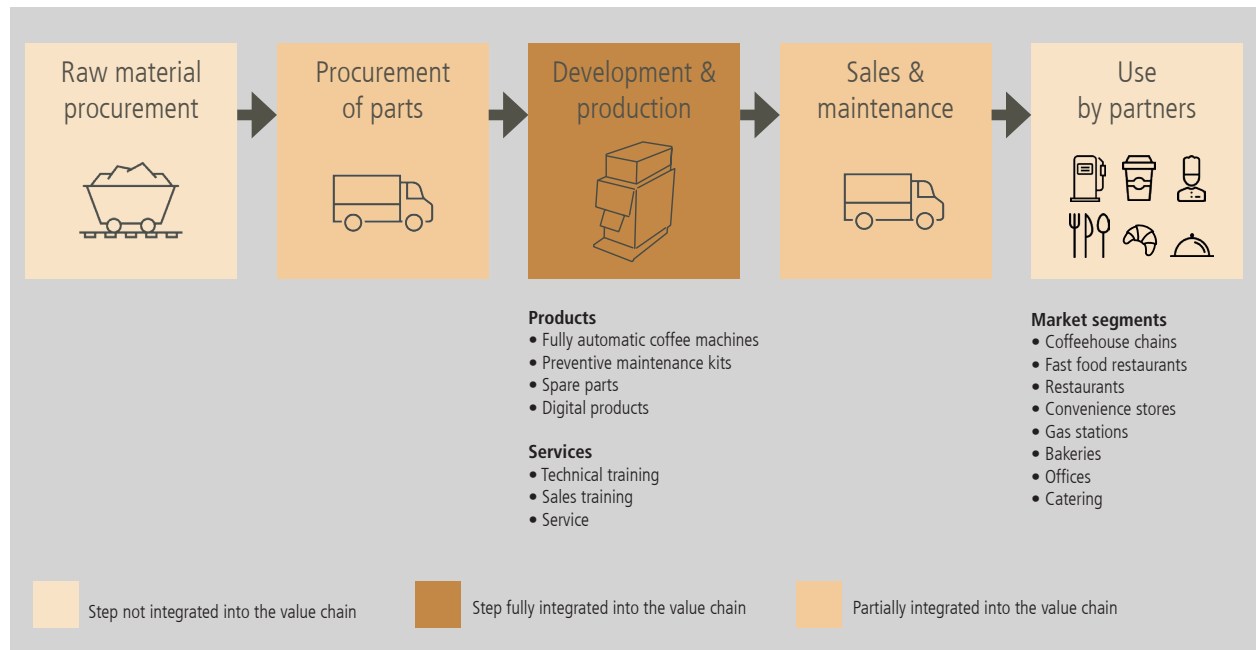


## We are Thermoplan

### Our value chain

Thermoplan has always been a driver of innovation in the development and manufacturing of fully automatic coffee machines for professional use, and that is where the focus of our business lies. In the R&D department, more than one-fifth of Thermoplan's staff works on new and further developments using innovative technologies. It is important to us to understand the needs of our stakeholders and to continue to evolve accordingly. To do this, we form selective supplier partnerships so that we can pool our know-how and have high-quality components made for us. Combined with Swiss precision work, carried out by our employees on the assembly line, we come up with groundbreaking solutions that meet our customers' needs and have market appeal, enabling us to provide outstanding product and service quality.

The following diagram shows the upstream and downstream activities in our value chain on both sides of our main activity of development and production.



To be able to carry out our main activities, we rely on invaluable and long-term upstream and downstream partnerships. We develop the components for our fully automatic coffee machines together with our partners, which then produce them to the highest standards. We work closely with our suppliers throughout the process and create conditions that are favorable for both parties. We also place value on long-term downstream partnerships throughout the process. Thermoplan has a global distribution and service network with partners who provide competent consultation and comprehensive services, delighting customers time and again. In addition to manufacturing long-lasting modular fully automatic coffee machines, we also compile preventive maintenance kits (PM kits) and make replacement parts to guarantee the long service life of our products. These PM kits and spare parts are used by our partners worldwide. We empower our partners to provide such services by offering them technical training here in the company. This enables us and our partners to provide customer-oriented advice, swift delivery of high-quality fully automatic coffee machines and spare parts around the world, and top service quality. These partnerships are the cornerstone of our long-term success in the market segments mentioned here.

## We are Thermoplan

### Our values and cooperation

Our values have been deeply embedded in our day-to-day work since the very beginning and we attach great importance to them, as they are actively observed by our customers and partners.



#### **Flexibility**

We adapt to change and are constantly evolving. We react quickly to the needs of our customers and suppliers and provide convincing innovative solutions. Emphasis is always on the customer.



#### **Enthusiasm**

We maintain the Thermoplan team spirit. Everyone is important and bears responsibility. We enjoy working for Thermoplan and are proud of the company and its products. Wherever we work, we operate in a spirit of partnership.



#### **Simplicity**

We develop and produce products that are easy to use and maintain. Our modularity is an allegory of simplicity. Not only simplicity in our products and service, but also our communication and processes.

Our strong values place our employees at the heart of the business and enable quick decision-making and openness to change. This Thermoplan culture lays the foundations for successful partnerships, which have been a focal point of Thermoplan AG's business activity from the outset.

In addition to our strong values, we have a clear understanding of how we would like to interact with each other. We make it our duty to comply with the Ethical Trading Initiative (ETI) and adopt the ETI base code, which also forms part of our staff rules.

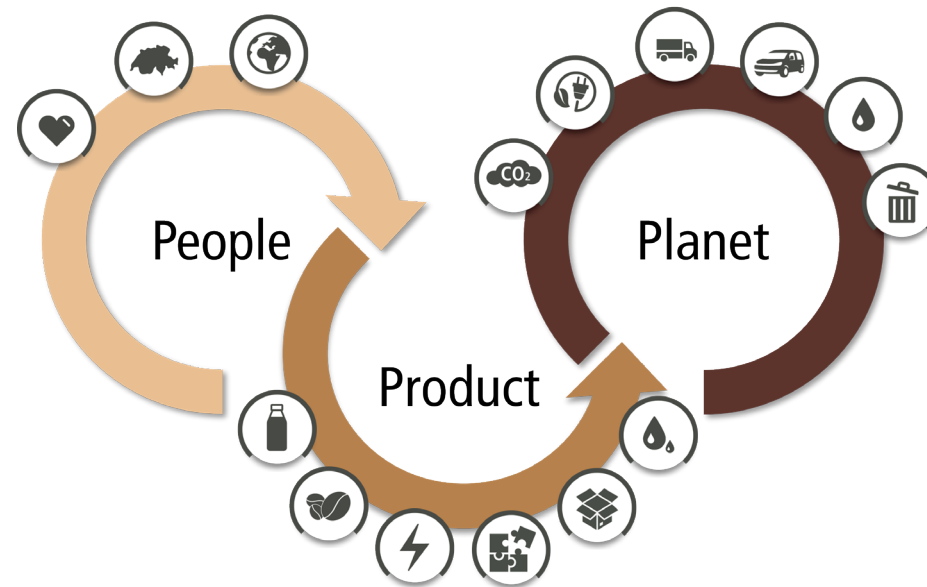
Furthermore, we have clear ideas about the conditions that we wish to maintain in our business relationships. Our code of conduct for suppliers is based on issues that are important to us, that are embedded in our vision, and that we ourselves also adhere to. In particular, we take into account the UN Guiding Principles on Business and Human Rights (UNGPs), the core agreement of the International Labour Organization (ILO) and the ten principles of the UN Global Compact. This code of conduct can be seen on our website and also refers to our complaints procedure, whereby any suspected breaches can be reported anonymously.



## Sustainability at Thermoplan

«Excellence. Enjoyment. Responsibility.

Being able to enjoy premium coffee and manufacture top-quality fully automatic coffee machines is a luxury. A privilege that can bring people together, creates special moments and last, but not least, creates employment»



The long-term strategy of the family of owners sets out the future direction of the company. The sustainable development of the business is one of four selected goals in the owners' strategy. This means that our commitment to sustainability and to continuously work on our net zero target is deeply embedded in the firm.

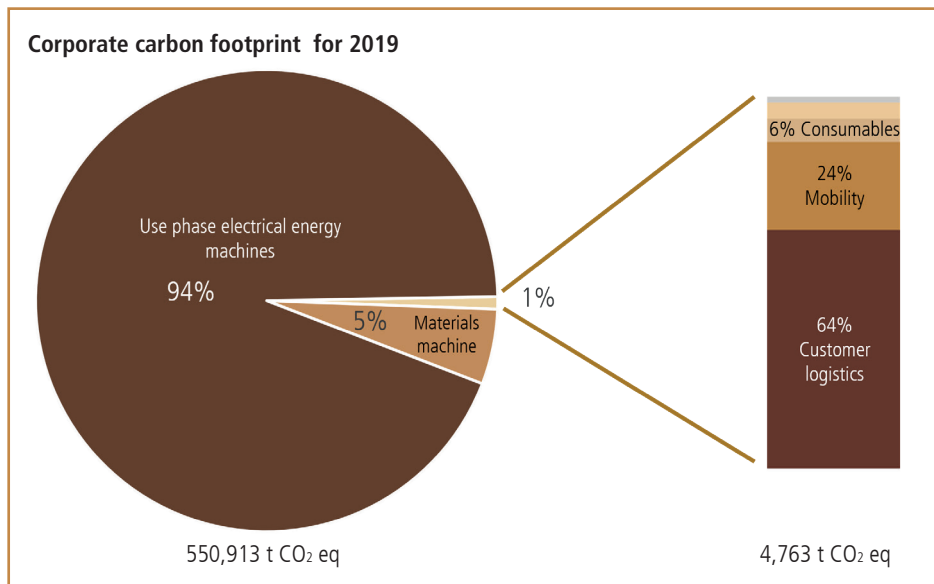
Our SAGO 22–25 company strategy was devised in several workshops by a cross-departmental team. Employees from all company departments, board members and the owners were all represented. This was done to ensure that the company strategy is both far-reaching and implemented across the board. A specific strategic direction of impact in the area of sustainability was defined in the SAGO 22–25 strategy.

This enables us to help future generations enjoy these very same privileges!

### Our material topics

In 2020, an interdisciplinary team started to work out the details of our sustainability concept. To ensure that no stone was left unturned, the first step was to perform a materiality analysis. This analysis enabled us to identify areas in which we have the chance to reduce the negative effects of our business activities and reinforce the positive ones. In particular, it was important to be able to have a facts-based focus on setting our sustainability goal in order to assess the influence of our company on the environment and climate. This was possible thanks to an as-is analysis in the form of a corporate carbon footprint and product lifecycle assessments.

The corporate carbon footprint (Scope 1–3 for 2019) shows that the emissions caused by the usage phase and the materials (Scope 3) account for 99% (546,150 t CO<sub>2</sub> eq) of the total emissions. This is because the total emissions (e.g., from electricity consumption) that a fully automatic coffee machine generates in its lifetime (10 years) are factored into the corporate carbon footprint for the production year. If the usage phase is excluded, the greatest influences on the environment come from customer logistics, mobility and consumables.



#### Corporate carbon footprint at Thermoplan

The corporate carbon footprint is based on the principles of the Greenhouse Gas Protocol and the fundamentals of ISO 14040 and ISO 14044. We apply the Global Warming Potential (GWP) method, based on a 100-year timescale in accordance with the IPCC 2013, and include Scopes 1 to 3. The data used are gathered internally.

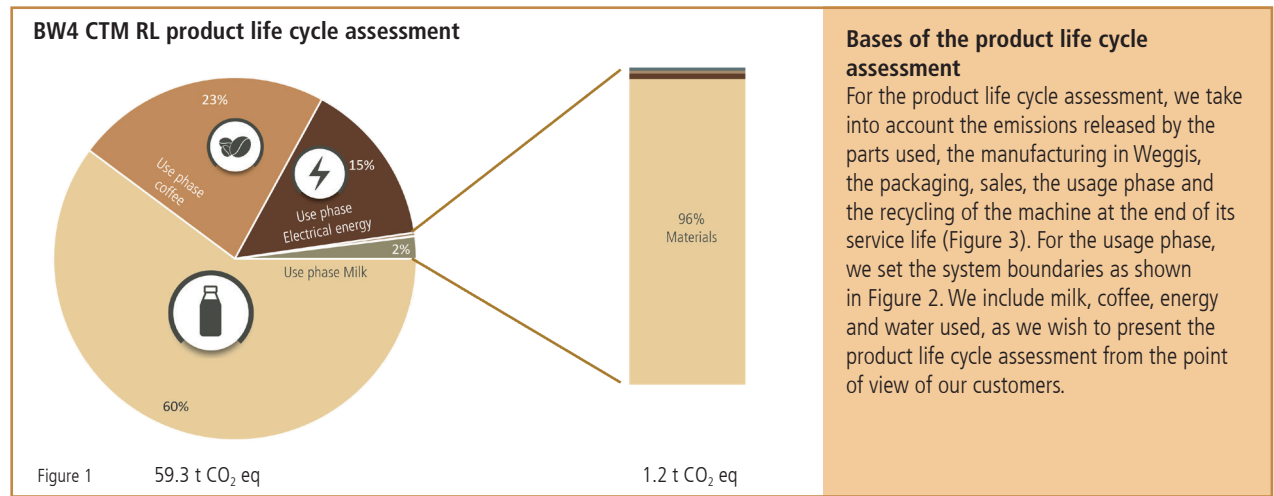
#### What do Scopes 1 to 3 mean?

These are scopes for calculation and can also be understood as system boundaries. Our ambitious climate targets, and therefore also our corporate carbon footprint calculation, takes into account Scopes 1 to 3.

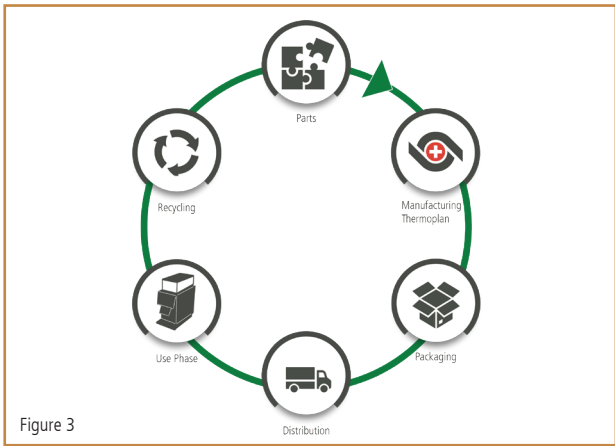
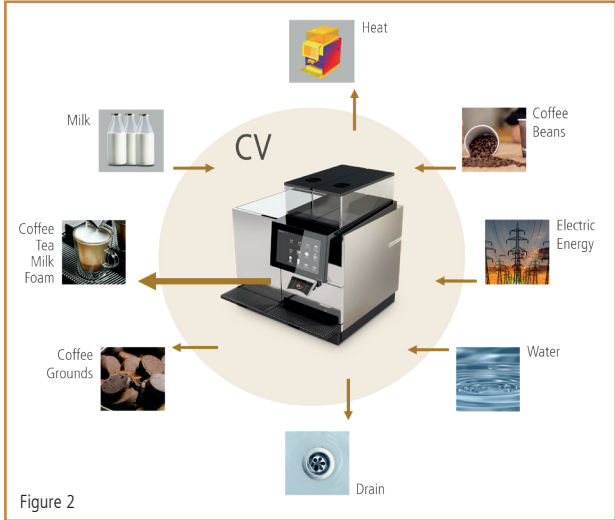
This means that we take responsibility for the emissions that we generate directly (Scope 1), for example, through the use of our own vehicles or our own energy production using the solar panel system. Scope 2 includes the emissions caused by our purchased energy and Scope 3 accounts for those generated by our upstream and downstream value chain. This therefore concerns, for example, the emissions released by the manufacturing of third-party parts or by the extraction of the necessary raw materials. We are also responsible for the emissions caused by the energy consumption of our fully automatic coffee machines throughout their lifespan due to their inclusion in Scope 3. As we adhere to the definition of this scope, milk and coffee that are not processed by our customers with our fully automatic coffee machines are not included in our corporate carbon footprint; however, they are accounted for in the product life cycle assessment (see below).

Product life cycle assessment

The figure 1, below of the product life cycle assessment, in accordance with the CV (control volume) system boundaries (Figure 2), clearly shows that our products have the greatest influence on the climate in the usage phase. This is due to the processed milk and coffee and the energy that the fully automatic coffee machine consumes. The materials used also have an impact on the environment that we cannot disregard. The diagram (Figure 1) shows this by way of example for our Black&White4 CTM RL (BW4 CTM RL). About 60% of the CO<sub>2</sub> footprint is caused by milk, 23% by coffee and 15% by the energy consumed during the usage phase. The materials account for 96% of the remaining 2%.



**More information**  
 The product life cycle assessment is available at: [report.thermoplan.ch](http://report.thermoplan.ch)





Relevance matrix

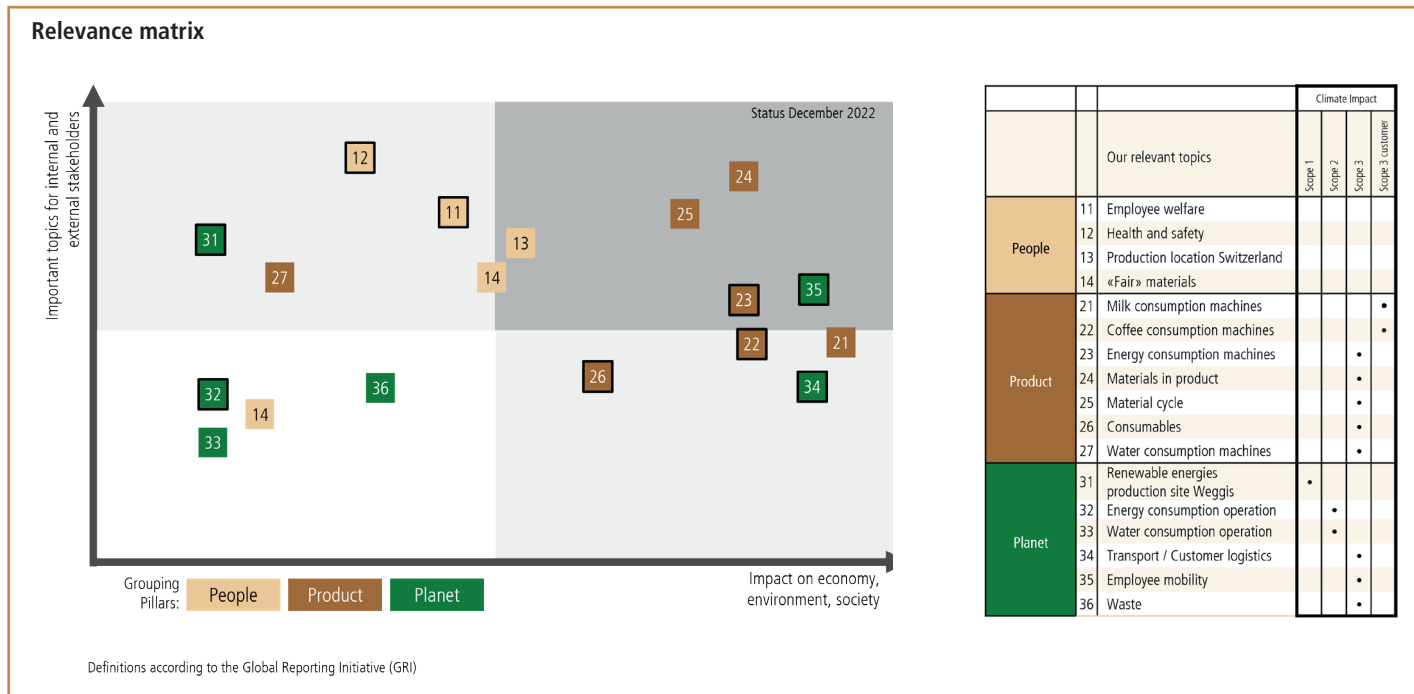
Based on the findings of the corporate carbon footprint and the product life cycle assessment, we evaluated the effects on the economy and on society, as well as the significance for our stakeholders. The subject areas were quantified in several workshops involving a range of stakeholder representatives. Stakeholders from the following categories were involved:

- national/cantonal/regional regulatory authorities
- employees (current and future)/owners
- suppliers
- customers/sales and service partners

The relevance matrix summarizes the as-is analysis according to importance to our stakeholders and influence on the economy, environment and society. Furthermore, the influence of the different subject areas on greenhouse gas emissions is classified based on the scopes of the GHG protocol. The «Scope 3 customer» column means that the area does not come under our own emissions, but is very important to us as it affects the emissions of our customers.

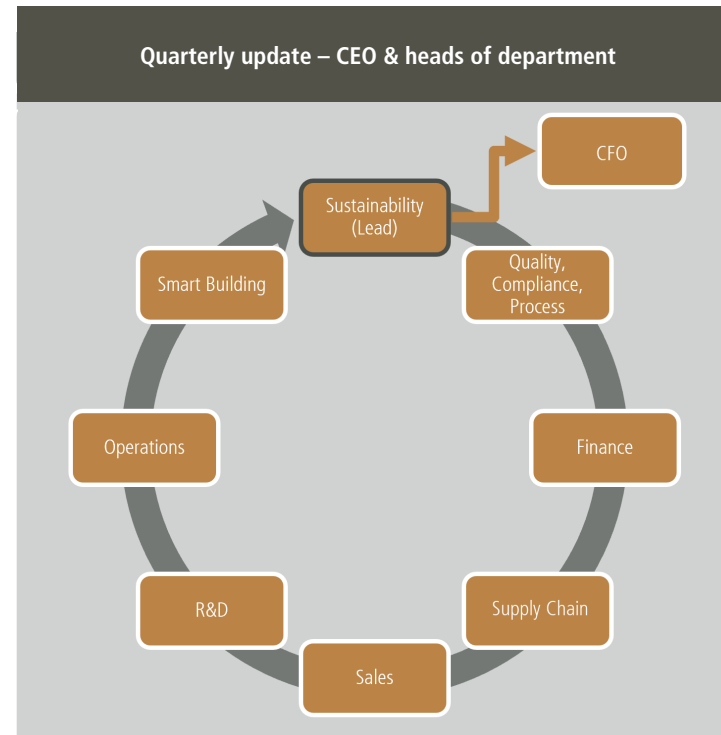
We have divided the areas identified by the as-is analysis into three dimensions, resulting in the three pillars of impact that we acknowledge today: **people, product and planet**. We have organized each of the three directions of impact into subcategories and drafted them out.

As the significance of sustainability areas changes over time, for example, due to changing stakeholder interests and, of course, due to our sustainability measures, we regularly revise our directions of impact and targets and make adjustments where necessary. Building on our three pillars of impact – **people, product and planet**, we treat each other with respect, optimize and reduce resource consumption in the right places, and improve our products for the benefit of our customers and the environment with the help of the latest technologies. This is how we learn a bit more every day about how to keep our footprint on the earth as small as possible.

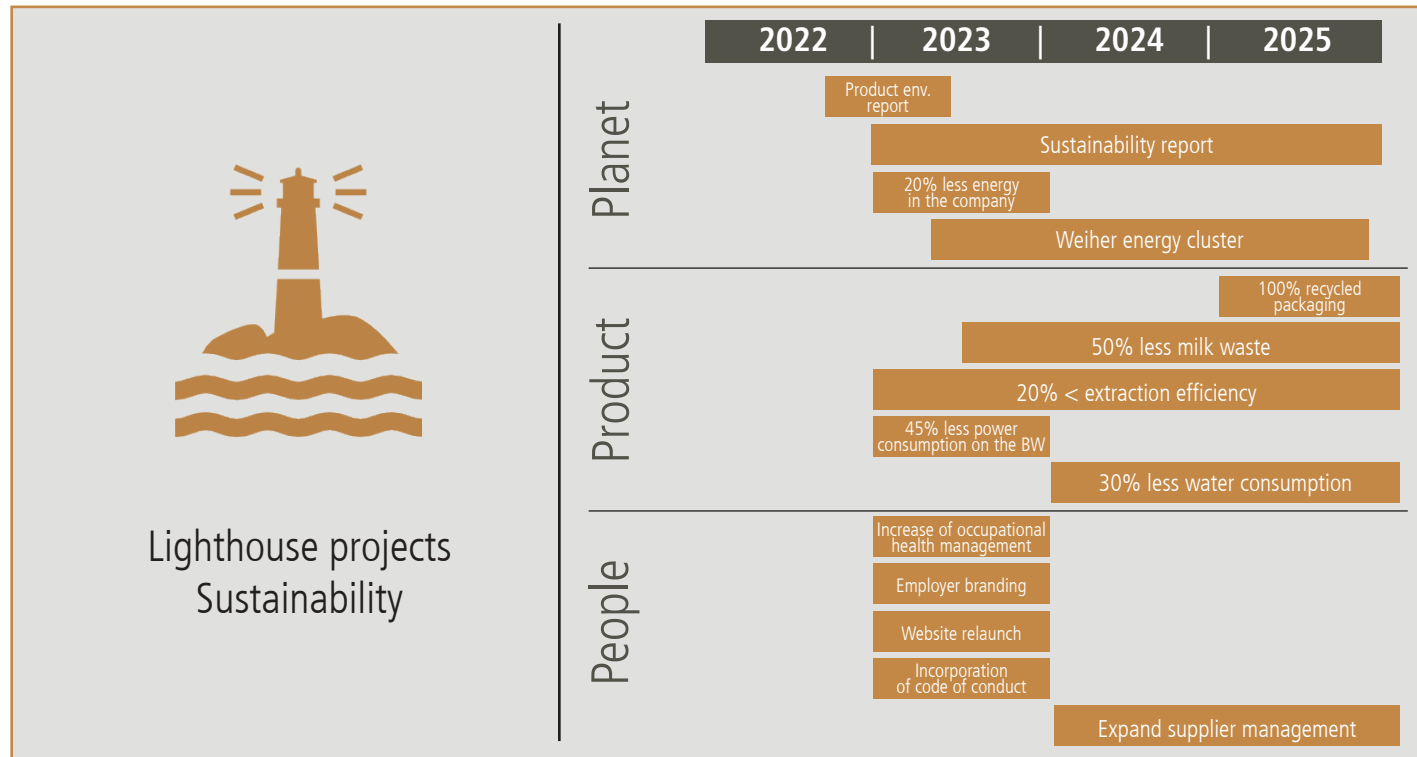


### How we manage sustainability

Sustainability issues go beyond department boundaries, which is why we have decided to address sustainability issues in an operational, interdisciplinary team. There is a sustainability leader for each relevant subject area who, on the one hand, represents their subject area in the peripheral team and, on the other hand, promotes sustainability in their department. This involves the sustainability leader coordinating measures to increase sustainability in their department and monitoring their implementation. Measures within the sections and departments are implemented in the form of impact projects. The head of sustainability is responsible for the overall operational coordination, and those involved report directly to the chief financial officer (CFO).



2023–2025 road map



Resulting from the directions of impact **people, product, planet** and the defined subcategories, in 2022 we devised a road map relating to the operational measures and projects that we wish to revise within the SAGO 22–25 strategy period.

In monthly sprint meetings, the sustainability team discusses ongoing projects and the planning of further projects. Furthermore, the projects and their progress in each quarter are presented to the heads of department and the CEO. Decisive key figures within the **people, product and planet** pillars of impact are updated on a monthly basis on our internal sustainability dashboard. On this dashboard, all employees can see the key figures that interest them.

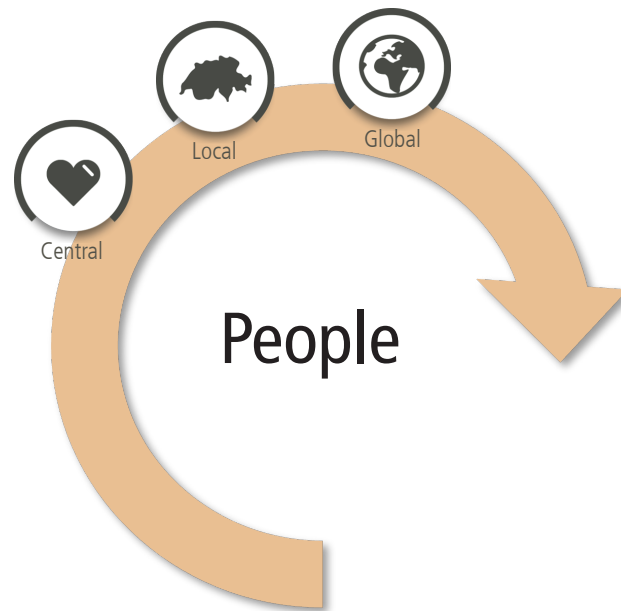




People

## Managing social responsibility

We are committed to the health and safety of our employees as well as fair relationships with our partners



As an employer, we are aware of our social responsibility. This responsibility applies not only to our employees, but also to other groups whose lives are affected by our activities. Our three directions of impact in the area of people (central, local, global) focus on our employees and on our partners and their suppliers. We are aware that conditions vary widely across the globe in the areas of environmental and social issues, that ecological issues often can lead to social injustice and vice versa. This is why we are committed to creating fair social and ecological conditions along the entire supply chain.

The objective of our occupational health management department (People & Health), which is supported by the pillars of health and safety in the workplace, workplace health promotion and care management, is the health and well-being of each and every individual and is covered by the subcategory «central». The two subcategories «local» and «global» are mainly dealt with specifically through our supply chain management department.

### Central

**Promoting employee health and safety as a top priority**

### Local

**Focus on long-term regional supplier partnerships**

### Global

**Commitment to partners on fair social and environmental conditions throughout the supply chain**

Central – Promoting employee health and safety as a top priority

**We employees**

At the end of 2022, we had 481 employees and 13 apprentices at our Weggis site. You can see details of the composition of our workforce in the following table:

**The composition of our workforce**

	2022				2021			
	Male		Female		Male		Female	
	Number	%	Number	%	Number	%	Number	%
Full-time	310	64%	67	14%	314	72%	57	13%
Part-time	46	10%	25	5%	24	6%	20	5%
Temporary	15	3%	5	1%	3	1%	0	0%
Apprentices	11	2%	2	0.4%	12	3%	4	1%
Subtotal	382	79%	99	21%	353	81%	81	19%
<b>Total</b>	<b>481 (100%)</b>				<b>434 (100%)</b>			

Since the very beginning, it has been important to us to support our employees and to recruit specialists from among our own ranks. As an apprenticeship workplace, we are highly committed to investing in the training of future generations of professionals and to supporting all of our employees in their development, agreeing on yearly goals accordingly. Our employees in the assembly department, for example, learn new skills which are then consolidated using a skills matrix for each assembly line. Employees who need knowledge of English for their role attend in-house English courses, and since 2023 we have also provided similar courses in German as a foreign language. Furthermore, we support the specific further training of our staff outside of the company both financially and by making time allowances. This is always in line with our further training rules. In 2022, external further training costs were covered by 0.4% of the total salaries.

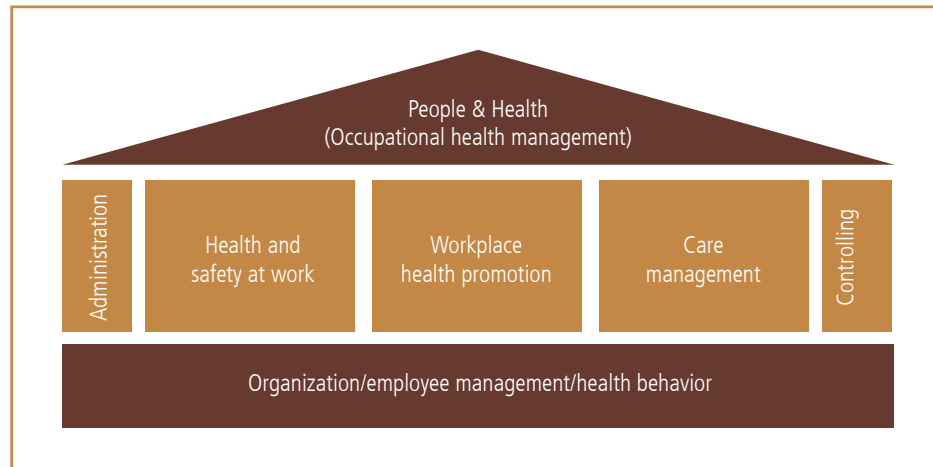
**Health and safety management**

The health and safety of our employees (People & Health) is guided by the following principles:

- participation
- integration
- project management
- a holistic approach

The three spheres of activity of People & Health are health and safety in the workplace, workplace health promotion, and care management. In 2022, newly implemented schemes included our health circle and the restructuring of our pre-assembly team.





### Health circle

In the interests of participation, we provide a platform for our employees to evolve in the area of occupational health. The essential tasks of the health circle are the following:

- gathering information on strains on employee health at their corresponding work stations
- clarifying the causes of strains on health
- devising solutions and suggestions for improvement to structure work so that it is not detrimental to health
- drawing up a list of priorities for implementing measures

The circle, consisting of our CEO, the safety officer, the head of People & Health and one employee per department, holds quarterly meetings in which they analyze the needs of the individual departments, discuss spheres of activity, and assign tasks. This results in specific suggestions for future measures that are submitted to the heads of departments for approval.

### Health and safety at work

Our work safety management system is ISO 45001-certified and involves all of our employees. We also adhere to Swiss legislation, take branch recommendations into account and revise the effectiveness of our activities by compiling and interpreting relevant key figures.

During regular safety inspection tours with the workplace safety officers (KOPAS) and the corresponding process managers, potential hazards are identified and assessed and, if necessary, measures are introduced. This serves to systematically prevent hazardous situations. Each employee also has the opportunity to report any hazard that they may identify at their work station to their supervisor or via a form. In the event of danger, work is to be stopped, the hazard is to be eliminated, and then work can continue.

In the event of an accident, an accident report is compiled to evaluate and document the cause and future prevention measures.

In addition to the safety information provided by the management staff in each situation, our employees also receive regular training. This involves both training that is mandatory for all and specific training for different work stations. Here are a few examples:

- mandatory: health and safety in the workplace/what to do in an emergency
- work station-specific: working with specific hazards/specialist training (emergency medical services in the workplace, etc.)

Key figures on absences due to illness and accidents are compiled and assessed. This leads to specific measures. When assessing absences, many factors play a role. These come to light in on-site meetings and talks upon return and are dealt with case by case. Here, we measure success individually based on the documented support and specific measures in the scope of workplace health promotion.

### Our pre-assembly team

A constantly changing and evolving company sets challenges for its employees. We take social responsibility for any employees who are unable to meet these demands. The goal of our pre-assembly team is to take the pressure to perform off of the employees and give them a chance to continue to work under different conditions. The pre-assembly team produces small components that are required in large numbers or performs other less complex tasks. These tasks may vary depending on the abilities of the employees involved.

## Managing social responsibility

### Number of occupational and non-occupational accidents at work

The table below shows information that we have compiled occupational and non-occupational accidents. Due to the size of the company, we do not calculate quotas, but we provide absolute numbers, as each case is dealt with individually. To be able to assess the accidents that have occurred, we compare them with the specific key figures for the sector, which are published by the Swiss accident insurance agency SUVA halfway through the year.

Type	Details	2021	2022
Occupational accidents at work	recorded accidents at work	23	12
	cases which include daily allowance (over 3 days)	8	6
	per 1000 full-time employees	55	27
	per 1000 full-time employees (SUVA sector) <sup>1</sup>	40	–
non-occupational accidents at work	recorded non-occupational accidents	42	73
	cases which include daily allowance (over 3 days)	9	25
	per 1000 full-time employees	100	163
	per 1000 full-time employees (SUVA sector) <sup>1</sup>	110	–

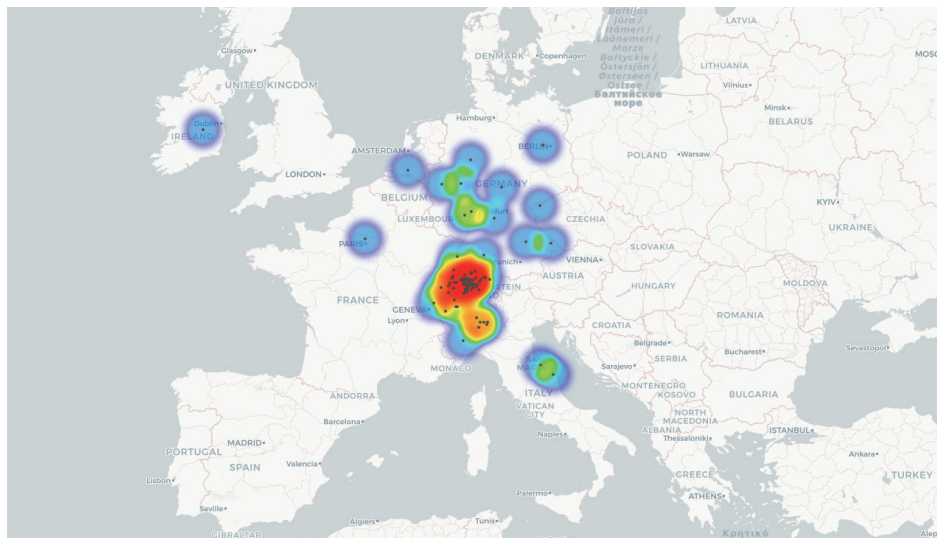
<sup>1</sup> Sector benchmark published halfway through the year

### Local – Focus on long-term regional supplier partnerships

Thermoplan is proud of its long-term partnerships. Together we develop innovative solutions to meet the challenges of the coffee sector. By working together closely, Thermoplan is able to offer its customers top-quality fully automatic coffee machines that meet the highest demands in terms of taste, function and design.

We maintain a close, collaborative relationship with our suppliers to guarantee quality, timely deliveries, job security and competitive ability. We treat suppliers like partners and convey our concerns openly and clearly. We give existing suppliers the chance to improve before awarding contracts to new suppliers.

The Covid pandemic provided clear evidence that even stronger supply chains will be necessary in the future. We will remain successful in the long term by knowing our supply chains, selectively improving them and making ourselves resilient in the event of a crisis. We were also affected by the pandemic in 2022, as well as the conflict between Russia and Ukraine. During these times, we are pleased to have been able to rely on many excellent, long-term local suppliers in Switzerland and nearby countries which achieved the impossible for us time and again. Together we were able to guarantee the availability of production materials throughout the year.



More than 70% of the suppliers in our portfolio come from Switzerland. This has several advantages: It boosts the regional economy, reduces transport distances and costs, improves quality assurance and encourages personal contact.

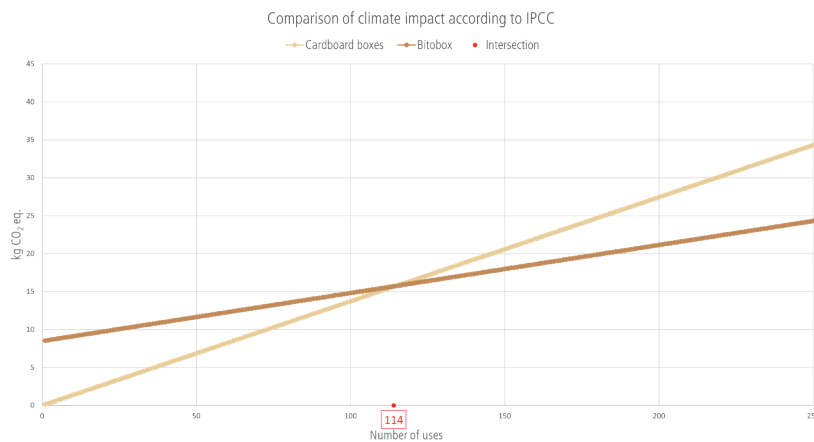
The heat map shows where the suppliers (tier 1) for our BW4 CTM RL are located within Europe. This is to make it clearer where our suppliers come from.

## Managing social responsibility

Since 2019, we have purposefully been using circular packaging for the exchange of goods with our suppliers. Returnable packaging is more robust, standard packaging that goes back and forth between us and our suppliers. The suppliers pack the boxes according to our specifications and we can store them directly in our warehouse shuttle system without having to rearrange them. We routinely carry out checks to see which parts and suppliers for which this kind of packaging solution is suitable and proactively address this with the corresponding suppliers. Introducing returnable packaging has made our incoming goods process more efficient, has resulted in less packaging waste and, compared to cardboard packaging, is more sustainable when the returnable packaging has been through a calculated number of cycles. Implementation with a specific partner was the practical example used in coursework by students from the University of Applied Sciences and Arts Northwestern Switzerland (FHNW). This coursework enabled us to calculate how often returnable packaging, regardless of its weight and the distance traveled, needs to go between us and the supplier to have a smaller effect on the climate (CO<sub>2</sub> eq) than the original cardboard packaging. To achieve this, the carbon footprint (GWP according to IPCC 2013 over 100 years) generated by the cardboard packaging and returnable packaging, including production and transport, is offset. Here is a specific example.

### Example of returnable packaging from injection molding supplier

Distance between supplier and Thermoplan AG: 50 km  
Weight of returnable packaging: 3.9 kg  
Number of uses required: 114



We can see that the returnable packaging line on the Y-axis starts higher up than the cardboard packaging line. This means that manufacturing the returnable packaging causes more emissions than the cardboard packaging. However, due to its multiple use, the returnable packaging causes fewer emissions after a certain point than new cardboard packaging used for each delivery. In this specific example, this is after 114 cycles. If the returnable packaging were 1 kg lighter, the number of uses required would be reduced to 72. The weight of the returnable packaging therefore plays an important role here.

## Managing social responsibility



### Social day

Not only do we maintain a collaborative relationship with our local suppliers, but also with our local community. To give something back to the community around Weggis, we made it a goal in 2022 for each Thermoplan employee to serve the community for one day.

We are aware of the need for social commitments in many areas of our community and see it as our duty to play our part. After all, we are all part of the community, and thanks to our commitment, we can make a positive difference. The options for such activities are highly diverse, as are our employees. These range from helping farmers who need assistance with certain tasks to helping people who are unable to cope with their everyday lives without external help, and even looking after animals in shelters.

We believe that social commitment plays an important role in strengthening our community, and we are pleased that our employees are able to gain a wide range of experiences while carrying out their social work. A total of 2550 hours were dedicated to social services.



## Global – Responsibility along our supply chain

### **Commitment to partners on fair social and environmental conditions throughout the supply chain**

Local suppliers are subject to similar conditions in the areas of the environment and social issues as we are. However, we commit to all our partners to create fair social and ecological conditions along the entire supply chain. It is very important that we openly communicate our expectations regarding social and ecological issues because these conditions vary wildly throughout the world. In the first instance, we raise awareness of these issues among our suppliers and motivate them to relay these requirements to their suppliers in turn if they do not already express requirements of their own that are in line with ours.

To achieve this goal, we adopted the first measures in 2022. Our first code of conduct for suppliers was compiled and sent to our suppliers in the first quarter of 2023 to be enforced by the 1st of April. Implementing the code of conduct makes it possible to report any messages received through the complaints system. That said, at present it is not yet possible to check the effectiveness of the system in terms of compliance with human rights or suspected corruption.

Our supplier self-assessment for new suppliers was also expanded with questions about sustainability, and questions building on this were added to our supplier audit checklist. This means that every supplier that we audit provides information about sustainability. During these talks we have the opportunity to make suppliers aware of specific issues that are important to us for the future. Answers to questions about sustainability currently are not given a score. First of all, we want to raise our suppliers' awareness of the issue and give them time to come to grips with it and come up with strategies that are suitable for their organization.

Another point that we have addressed over the last year was the revision of the supplier assessment for our existing suppliers, which is sent out every year to all suppliers with a yearly turnover of more than 50,000 CHF. On the one hand, the assessment was automated in different areas and, on the other hand, the issue of sustainability was included. The full integration of sustainability into our supplier management system makes it clear that we want to work with suppliers who act in a sustainable manner, and we will be demanding that our suppliers continue to improve in the areas of the environment and social issues.



A photograph of two men in a workshop setting. The man on the left, wearing a dark blue polo shirt and a silver watch, is focused on working on a complex mechanical device with various wires and components. The man on the right, wearing a light beige polo shirt, is looking at the device with a slight smile, appearing to be in conversation or providing assistance. The background is slightly blurred, showing industrial equipment and a window with blinds. A semi-transparent dark grey horizontal bar is overlaid across the middle of the image, containing the word 'Product' in white text. A thin vertical orange line is positioned to the left of the text.

Product



## Managing sustainable product development

We are committed to the responsible use of resources and the circular economy



It is important to us to take responsibility for the impacts caused by our products. This is why we are working continuously to improve our products and provide our customers with added value. As we said in the introduction, we have devised life cycle assessments for our products so that we know where the biggest emissions come from and can take appropriate measures. The facts show that the usage phase of our fully automatic coffee machines makes by far the biggest contribution to the output of emissions. The milk and coffee used and the electricity required during use are the main drivers. Through selected further development of our products, we are able to have a positive influence on the use of these resources by our partners. We are therefore working on improvements along our value chain and increasing resource efficiency for us and our customers.

**Milk**  
Reduction of waste to a minimum

**Coffee**  
Maximum efficiency in coffee extraction

**Energy**  
Continuous increase in energy efficiency across all machines

**Materials**  
Enabling the circular economy through ecodesign

**Consumables**  
Reduction in supply chain by 50% by 2030

**Water**  
Reduction of machine wastewater consumption by 50% by 2030

# Managing sustainable product development

As an international company in a rapidly evolving world, we need to keep abreast of global changes. Our long-term success depends on us keeping an eye on and anticipating developments and reacting to challenges and opportunities that will affect our reality today and in the future. We systematically monitor market changes and the needs of our customers.

Based on this knowledge and global megatrends, we are developing a technology radar that guides the course of innovation for our products. One focus area of this trend radar is devoted explicitly to sustainability so that we can gain the necessary traction. New technologies that make our products more efficient or that make materials more feasible have a great influence on our sustainability, as product innovations enable us to improve.

To fully implement sustainability in the development of our products, we have integrated sustainability criteria in our product innovation process (PIP). The aim of this is to make sustainability a constant part of product development.

Another of our main focuses is to increase the circularity of our products. Our fully automatic coffee machines have always had a modular structure, which minimizes the servicing time and downtime of the individual machines. This modularity also increases the potential for modules or components to be conditioned and reused by our certified service partners. The materials used in our fully automatic coffee machines must meet a great deal of requirements. These requirements affect manufacturing, loading capacity and appearance, as well as contact with foods and cleaning products. The inclusion of additional parameters in terms of the sustainability performance of these materials must be precisely assessed, thought out and conceptualized. This is an extensive task that we will be taking on and which must be worked on by multiple departments.

Another product issue we are working on is consumables. Here, we have already been able to implement measures in the area of packaging. We are continuously improving our understanding of the subject of consumables and thus are able to find out how we can further reduce our emissions in this area.


Over the next couple of pages we will provide more details on our activities in the product area in 2022. Our focus in the year of the report was on the direction of impact subcategories «coffee», «energy» and «materials». The subcategories «milk», «consumables» and «water» are not mentioned in further detail here.

## Product Environmental Report


Black&White4
Black&White4 compact
Blackandwhite4 neo
Thermoplan AG
Background Information


### The premier fully automatic coffee machine with the latest technology


**Functional unit: 1 x BW4 CTM RL (Art: 131.406)**  
Where perfect coffee meets milk foam technology: The Black&White4 is a ground-breaking masterpiece for customers with high standards. This fully automatic coffee machine brings together excellent product quality and high performance and innovation.



### Product Highlights

- 

**Modular**  
The Black&White4 makes service work and maintenance seem like child's play. The fourth-generation module system brings together all of the basic functions on just two machine modules.
- 

**Recycled Materials**  
Around 40 % of the Black&White4 is made of high quality stainless steel. Our stainless steel consists of more than 90 % recycled material, resulting in a recycled content of over 35 % of the entire machine.
- 

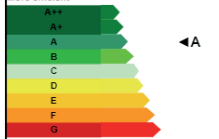
**Milk Alternatives**  
The solution for every type of milk! The powerful Black&White4 is unique on the market and enables the processing of any type of milk - dairy or vegan - at the touch of a button.

### Energy Standard

DIN 18873-2: 1

Energy loss according to DIN 18873-2	
Daily energy loss (kWh)	2.34

EVA EMP 3.1b: 1

Energy	
Manufacturer	Thermoplan AG
Model	BW4 CTM RL
Vending machine	
More efficient	
	
Less efficient	
Total energy consumption	188 wh/L
Measured at	50 L/24h
~ no. of cups in ml	338 cups of 148 ml

Sustainability report 2022 25

## Managing sustainable product development

### Coffee – Maximum efficiency in coffee extraction

In collaboration with two colleges and Innosuisse, we have been actively looking into how to increase our coffee extraction efficiency as this will enable us to make an active contribution toward the optimum use of the invaluable resource that is coffee. Our research team has developed a test bench that allows us to simulate the different influences on coffee extraction and assess them by means of sensors. Of course, the sensory quality of the coffee is a limiting factor for extraction efficiency. For this reason, individuals with the most highly renowned training in the sensory evaluation of coffee (Q graders) test the coffee products produced in terms of their flavor. This project will keep us busy for some time and we are convinced that, using the resulting interpretation tools, we will be able to optimally develop our future brewing units.



### Energy – Continuous increase in energy efficiency across all machines

At the end of 2022 we were able to implement a simple standby function on certain models of our fully automatic coffee machines without restricting machine availability. Furthermore, we devised an intelligent standby concept to save electricity on our fully automatic coffee machines during downtime. The further development of this smart standby function and its initial implementation are planned for 2023. Besides reducing electricity consumption during machine downtime, we are also striving to save energy during actual operation, i.e., while brewing each cup of coffee. In this area, in particular we are working on efficient heating technologies. Since the consumption of cold beverages is also constantly growing, efficient cooling is also vital.

Our company target for 2023 of «Reducing electricity consumption by 30% compared to 2022» does not simply refer to our business in Weggis, but in particular focuses on our machines. We are focusing on reducing energy losses and prioritizing measures that are meaningful and efficient. We want to make our machines more energy efficient and thus also save our customers energy.

Other issues in the area of increasing energy efficiency are on the agenda for 2023. For example, we are also starting another project with Innosuisse to develop an innovative, energy-efficient heating system for our fully automatic coffee machines. With this, our ambitious goal is to make our machines up to 30% more energy efficient. This is a large project with a correspondingly long time span.

## Managing sustainable product development

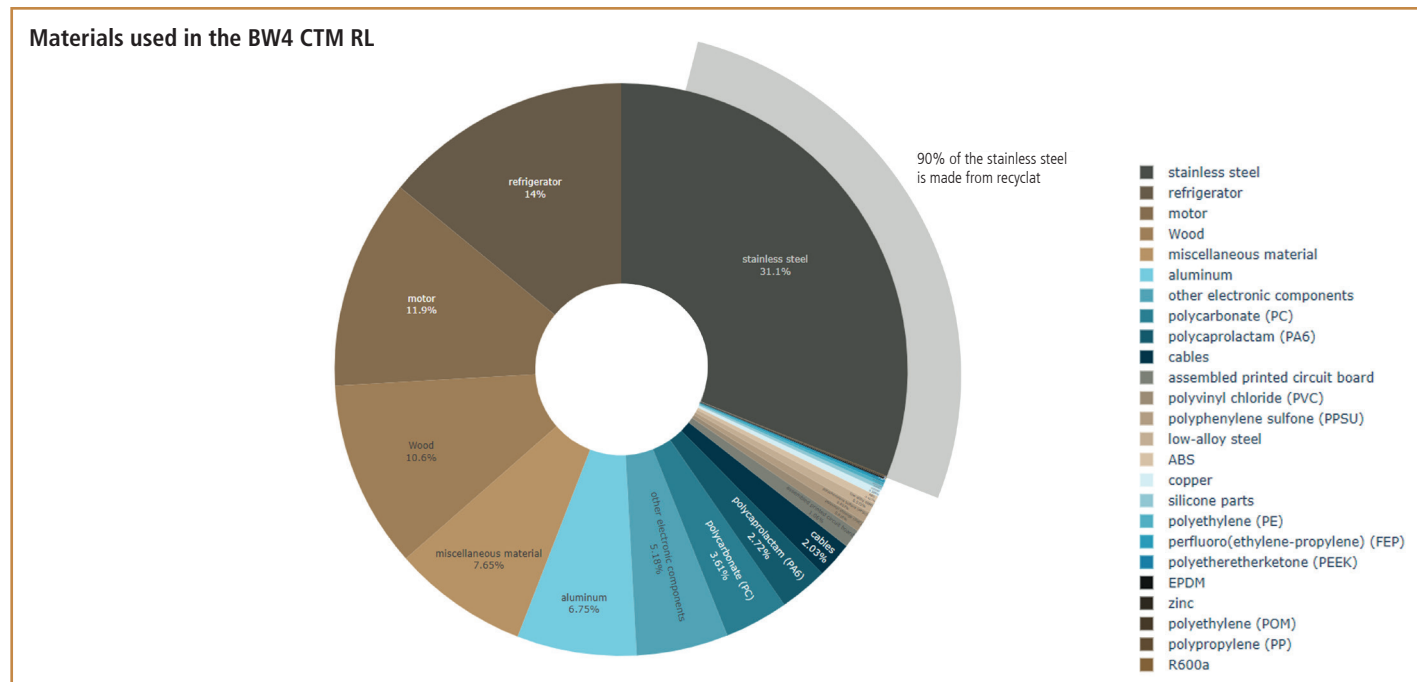
### Materials – Enabling the circular economy through ecodesign

In the product life cycle assessment, the materials used in our fully automatic coffee machines have a relatively low significance. However, if we disregard the usage phase, they are the main factor in the reduction of emissions caused by our machines. For our product life cycle assessment, the materials used are divided into 27 categories. The figure below shows the example of a BW4 CTM RL, approximately 40% of which is made of stainless steel. 90% of the stainless steel used is made from recycled materials. In the future we would also like to be able to perform this type of evaluation on other materials that involve recycled components. This is not possible at present due to lack of available data.

In 2022, we worked with a student from FHNW on their coursework to evaluate the sustainability performance of plastics. This was simulated using an existing component that currently is made of fossil fuel-derived plastic. A number of criteria regarding technical suitability were also taken into account in this work. To further address this issue,

however, additional technical explanations and the consistent inclusion of the life cycle assessment of the plastics will be necessary.

How can we boost the circularity of our fully automatic coffee machines through the selection and application of the materials used? This is a question that we will be dealing with over the next few years. We know that creating a circular economy involves more than just selecting materials, but this is certainly a decisive factor. On our journey toward a circular economy, we will therefore be working on a number of issues. In 2023, we will be making the first preparations in our R&D department to integrate a circular economy into our future product development. At present, it is a matter of assessing how the life cycle of our machines can be made as sustainable as possible and which indicators and criteria need to be taken into account to enable such an assessment.



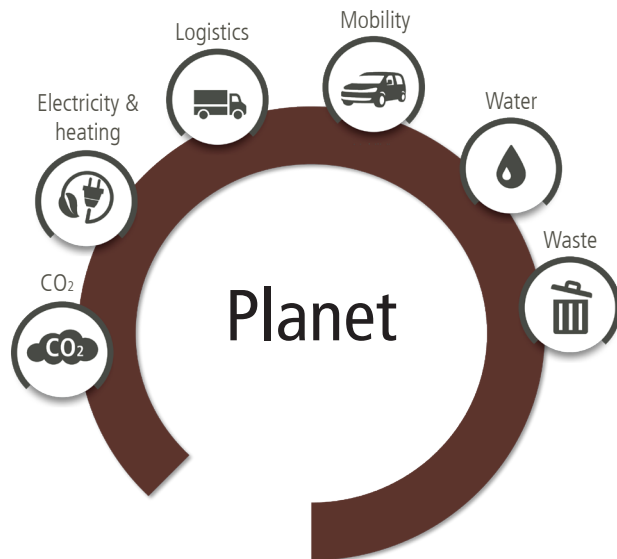


Planet



## Managing climate goals

As a Swiss innovation company, we will achieve net zero emissions along the entire value chain (Scope 1-3) by 2050.



Based on the corporate carbon footprint from our base year 2019 (Section 2.1), the path was established that we need to follow to achieve net zero emissions by 2050. Furthermore, the significant issues that we need to prioritize to be able to follow the path successfully were identified. Our employees have the chance to see emission data and other indicators, which are updated on a monthly basis on our sustainability dashboard. We have also consolidated our commitment to our targets by having our CO<sub>2</sub> target approved by the Science-Based Target Initiative (SBTi) and by publicly committing to this on their platform.

**CO<sub>2</sub> emissions**  
Reduction by 50% by 2030 (Scope 1-3) as an interim target

**Electricity and heat**  
Production with 100% renewable energy since 2022

**Logistics**  
Optimisation in terms of CO<sub>2</sub>-free transports

**Mobility**  
Focus on environmentally friendly transport for employees

**Water**  
Reduction of operational usage by 50% by 2030

**Waste**  
Maximise recycling

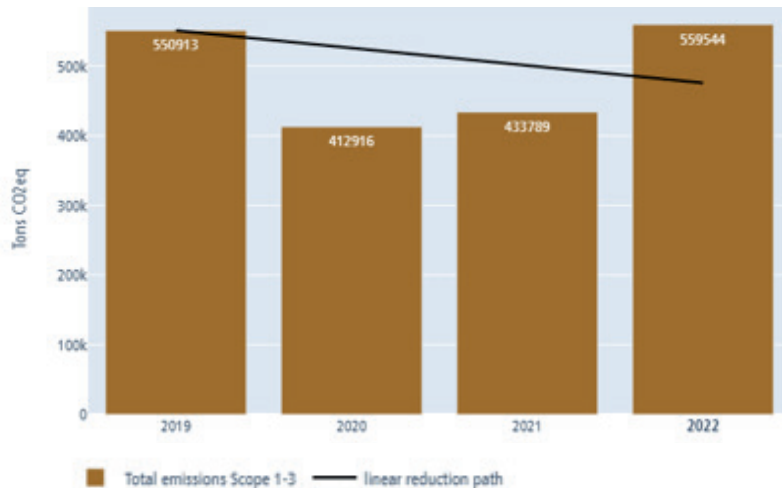
## Managing climate goals

### CO<sub>2</sub> emission Scopes 1 to 3 – Reduction by 50% by 2030 (Scope 1-3) as an interim target

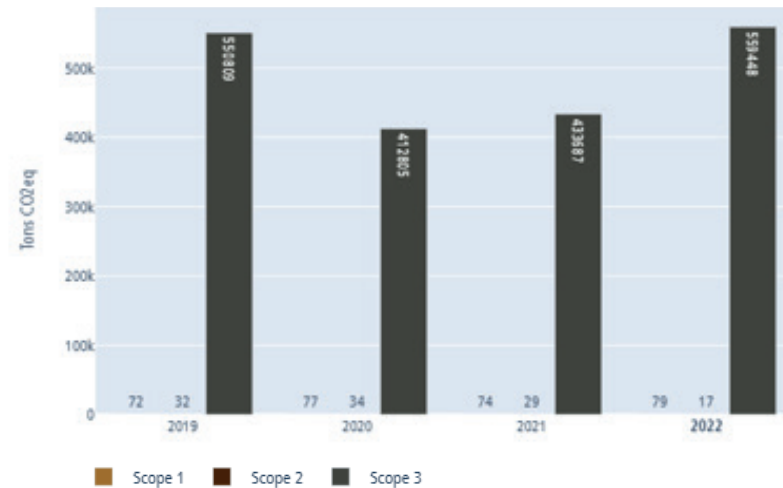
The graph below shows our total emissions (Scope 1–3) in tons of CO<sub>2</sub> eq over the last four years. Starting from 2019, the linear reduction path that we want to follow is defined (black line). It is plain to see that we were below the intended reduction path in 2020 and 2021. This was due to a lower order volume in connection with the Covid pandemic. The graph shows that we failed to meet our CO<sub>2</sub> emission reduction target in 2022, as we were unable to implement any measures with a great leverage effect to reduce emissions, and these measures have a delayed effect. Our emissions strongly correlate with our order volume, which was very high in 2022. The measures with the greatest leverage are in development and we are confident that we can get back on track on our reduction path.

The graph on the right shows our calculated emissions in Scope 1 to 3 over the last four years. It is plain to see that Scopes 1 and 2 do not appear as bars at all. This is because the emissions caused by Scope 3 predominate so heavily. Scope 3 includes emissions generated in the upstream and downstream value-added steps. For example, this includes the energy consumption of all of the machines that we manufacture, the materials used and the customer logistics for worldwide sales. However, for a closer look at our direct emissions (Scope 1) and emissions resulting from our energy requirements (Scope 2), you can see the left-hand graph on Page 31. This shows that in 2022 we were able to drastically reduce the Scope 2 emissions as compared to the previous years. This was due to the change of energy source, about which we provide further details on Page 32.

Scope 1–3 Emissions and reduction path



Scope 1–3 Emissions

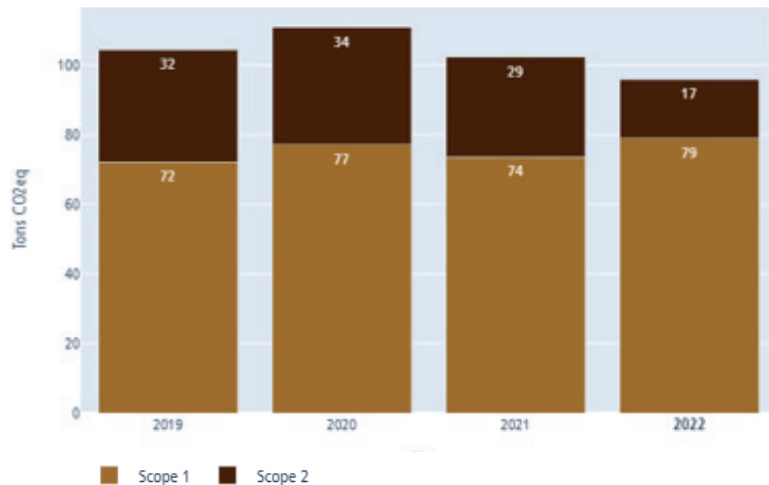


## Managing climate goals

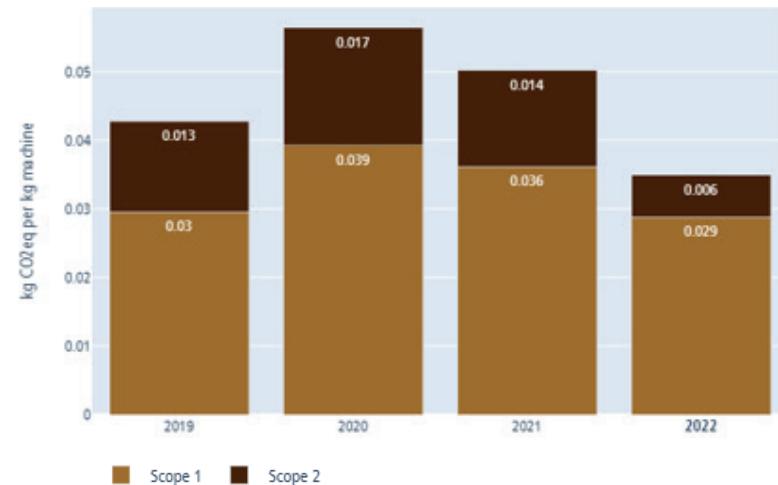
The right-hand graph shows the intensity of our emissions, which was calculated per kilogram of machine produced in the year of the report. We manufacture machines and modules with highly diverse weights, which is why this unit was chosen. The direct (Scope 1) and indirect (Scope 2) emissions are shown. You can see that in 2022, we emitted 0.035 kg CO<sub>2</sub> eq per kilogram of machine, which is slightly less than the figure for the base year. In 2020 and 2021, the intensity per kg of machine was higher, as fewer machines were produced and therefore the emissions were calculated based on a lower output.

On the way to our long-term net zero target for 2050, we have set an interim target to halve the amount of emissions from the base year 2019 by 2030. Both targets are highly ambitious, especially when we also take into account the intended growth curve for Thermoplan AG. As we are growing and our production volume is increasing, in the future we will need more energy and water, for example, and the higher number of machines produced will also have a significant influence on the total emissions.

Scope 1–2 Emissions



Scope 1–2 Emissions per kg of machines produced





## Managing climate goals

### Electricity and heat – Production with 100% renewable energy since 2022

#### We use 100% renewable energy

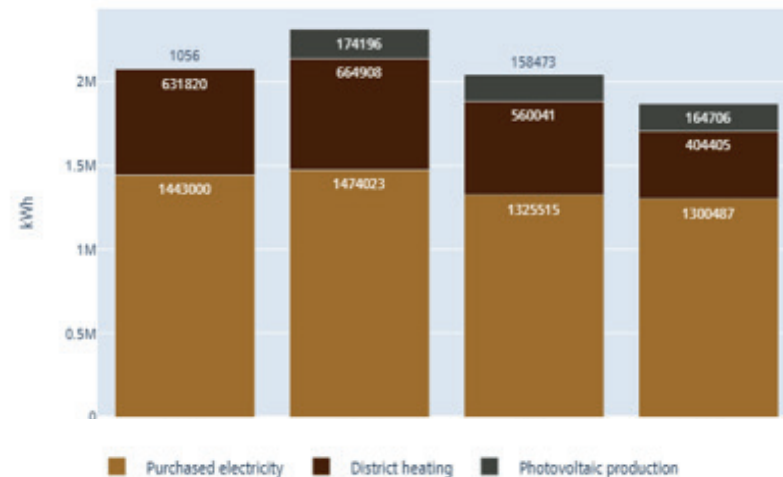
We actively support pioneering technologies. This is why we have set ourselves the goal to use only energy from 100% renewable sources at our Weggis site. We take responsibility for the environmental effects of the energy we obtain and have therefore opted for hydroelectricity. In 2022, we obtained 100% of our energy from renewable sources. We have therefore met this target.

Certificates guarantee this when we procure such energy. We also generate our own power with our solar panel system on the roof of our shuttle system warehouse and plan to extend the area of solar panels.

Above all, we want to use the available energy efficiently. The previously mentioned target for 2023 of «Reducing electricity consumption by 30% compared to 2022» refers in particular to our activity at the Weggis site. In 2023, a range of measures will be taken such as changing the lighting in the production halls and optimizing the ventilation and compressor controls.



#### Energy



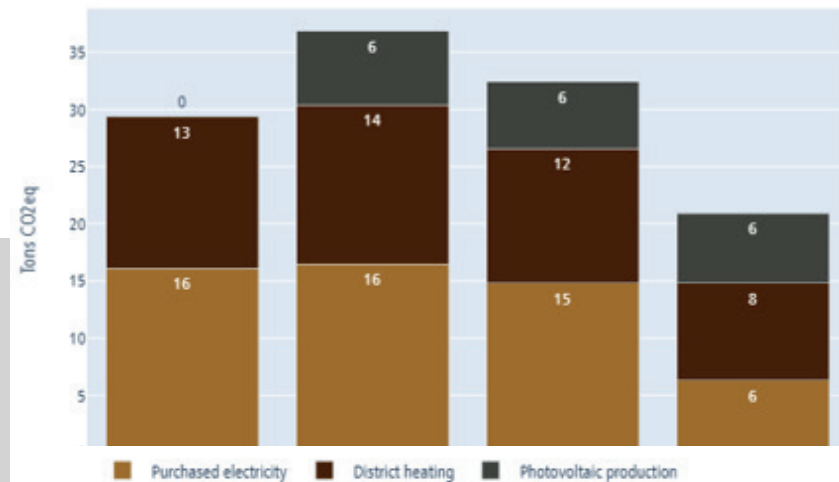
## Managing climate goals

### Energy consumption and the energy intensity of our products

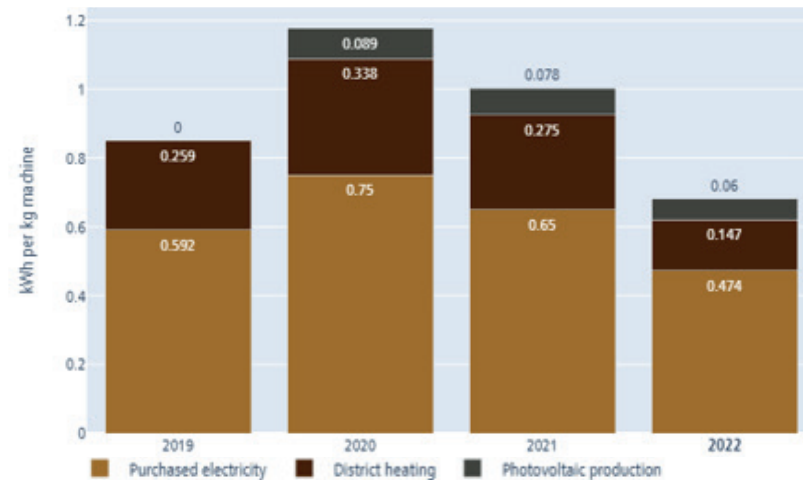
The graph on Page 32 shows our electricity and heat consumption since 2019, broken down into purchased electricity, district heating and our own energy production using our solar panel system. The emissions generated are shown in the graph below. You can see that we put our solar panel system into operation at the end of 2019. Furthermore, it is clear that the amounts of electricity purchased in 2021 and 2022 were very similar, but the emissions generated were reduced by more than half. This is because, since 2022, we have exclusively purchased hydroelectricity and so were able to reduce our emissions. A steady decrease in energy consumption is also evident. These key figures were compiled monthly based on data from our suppliers and our solar panel system and are shown on our sustainability dashboard.

The graph below shows the energy intensity. This is the energy consumed in our organization per kilogram of machine produced. You can see that the energy intensity in 2022 was lower than in the base year (2019). This is due to the slightly lower energy consumption and higher number of fully automatic coffee machines produced.

Emissions – Energy



Energy per kg of machines produced





## Managing climate goals

### **New building – unique**

unique is the name of our new building project. It is synonymous with the heavy involvement of all individuals since the start of the project for the purpose of achieving the best possible success together. By using this name, we are also expressing our openness to new technologies and our focus on sustainability. A building of this kind and using these methods is not yet a standard affair in Switzerland. With unique we will have another seven integrated production areas and more logistics facilities and offices. Our new building unique is LEED® certified. We are aiming for LEED platinum level.

### **Energy generations and efficiency at the unique plant**

We are continuously checking to see to what extent existing roof areas can be further fitted with solar panel systems. Our new building unique is equipped with a large solar panel system, and the covered area will produce approximately 450,000 kWh of energy a year. This solar panel system will help to cover our energy requirements without the assistance of external energy sources.

Furthermore, the building will be able to be heated and cooled more effectively thanks to the thermo-active building system. The principle is the same as underfloor heating. Pipes are laid in the concrete and, depending on the outdoor temperature, hot or cold water is fed into the pipes. This delivers the energy (hot/cold) directly to the building structure, in our case the concrete, and thus heats or cools the surrounding area. This is more efficient than a normal ventilation system, which demonstrates greater losses due to the length of pipes used.



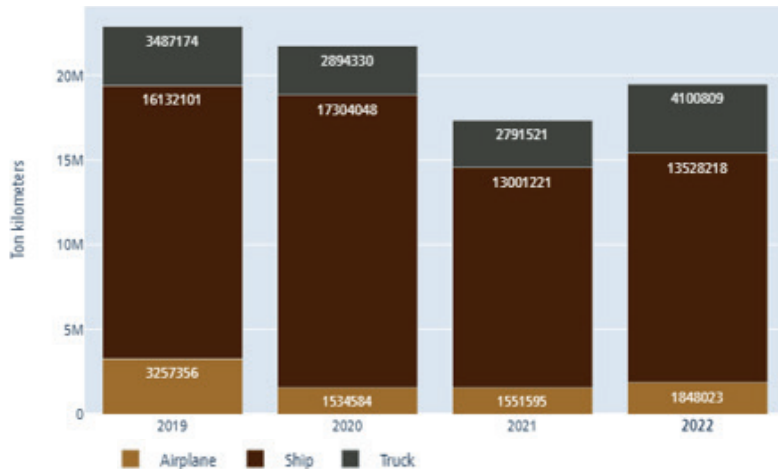
## Managing climate goals

### Logistics – Optimisation in terms of CO2-free transports

The transportation of our finished fully automatic coffee machines has a great influence on our Scope 3 emissions. However, the emissions generated by the delivery of parts also need to be reduced. For this reason, the operations department has set down the sustainable further development of the delivery concept in the 22–25 department targets. In 2022, our delivery concept was optimized by receiving deliveries from just a single logistics service provider. This enables us to use synergies optimally, reduce emissions and costs, and cut down on paperwork. In terms of the new plant unique, further optimizations will be worked on in the coming months.

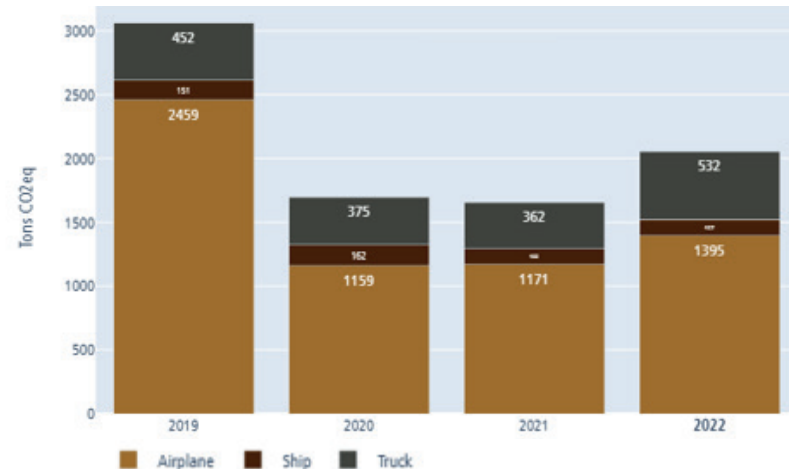
We manage our customer logistics, or outbound logistics, according to the Ex Works rule. This means that the customer buys the fully automatic coffee machine from the plant and thus is responsible for its transportation from our site. Therefore, we are not able to determine the mode of transport (truck, cargo ship, air freight) ourselves and choose the one with the lowest emissions. Long delivery times caused by sea freight are already taken into account by our partners during their ordering process. In the event of urgent end customer requirements, in special cases the transport method is changed to air freight.

#### Customer logistics



The graphs below show the ton-kilometers for each mode of transport (left-hand graph) brought about by our customer logistics in the years since 2019, and the emissions generated [Tons of CO<sub>2</sub> eq] (right-hand graph). We differentiate between transport by ship, truck and plane. These data can also be seen in our sustainability dashboard and are updated on a monthly basis. The ton-kilometer is a transport performance unit for freight and is calculated by multiplying the transported mass (tons [t]) and the distance traveled (kilometers [km]). We can see right away that the relatively infrequent transportation by plane is responsible for the largest proportion of the emissions. In reporting year 2022, for instance, less than 10% (8.9%) of all ton-kilometers were traveled by plane. However, this mode of transport is responsible for about 2/3 (66.1%) of all emissions generated by our customer logistics. Overall, the ton-kilometers and emissions increased slightly in 2022 compared to the previous year, but are somewhat lower than in the base year 2019. These values depend greatly on where our customers are located.

#### Emissions – customer logistics



## Managing climate goals

### Mobility – Focus on environmentally friendly transport for employees

#### An emerging mobility concept

As is clear from our corporate carbon footprint, the mobility of our employees on the way to and from work and during work is a major source of emissions. Here we look at a few ways in which we as a company can improve this, while each and every one of us can make their own decision to reduce the emissions on their commute. By switching to public transport or a bicycle, or by carpooling, many of us have already made the more sustainable choice.

To gain a deeper understanding of the mobility of our employees, in 2022 we were able to carry out coursework with a student from the Zurich University of Applied Sciences (ZHAW). The aim was to analyze the mobility behavior of our employees and to demonstrate alternatives to privately owned cars and how they can be encouraged with specific measures. In doing so, we took into account the particular transport situation in Weggis and the fact that we have employees with both set and flexible working hours.

As a result, we now have a better understanding of how our employees get to Weggis and what potential

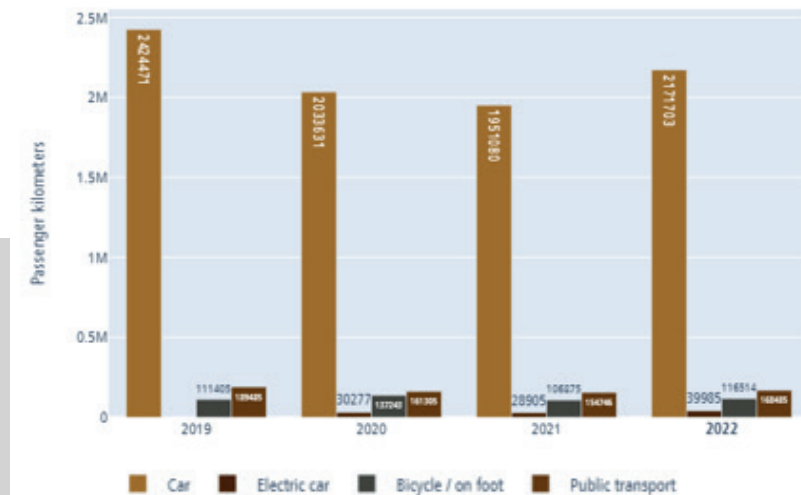
there is for optimization. This work will be continued in 2023 as a Bachelor's thesis and will bring us closer to devising a concept.

#### The impacts caused by our employee mobility

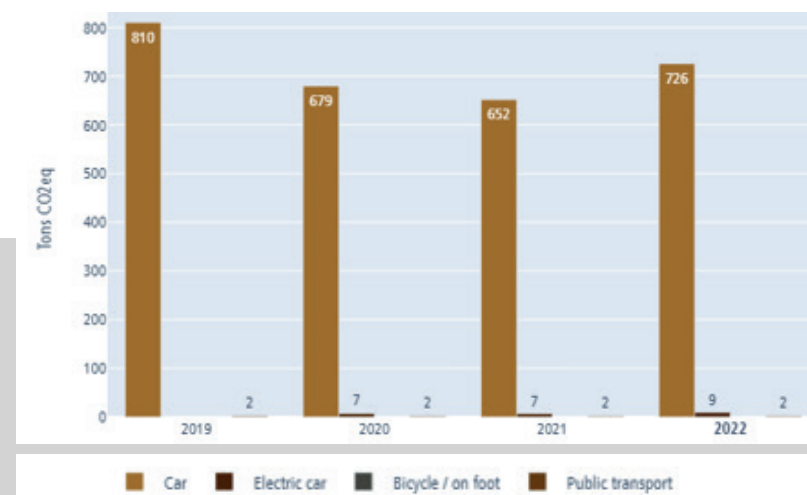
In 2019, we gathered data on the means of transport used for commuting. Said data included workloads, proportion of time spent working from home and the distance of the quickest route between home and work. These data are now being offset against the rising number of employees to maintain the values that are presented in the graph below. Furthermore, the changing amount of time spent working from home by employees who do not work in assembly is also taken into account.

We can see right away that by far the most passenger kilometers are traveled by car, and this is of course also the main cause of emissions.

#### Employee commuting



#### Emissions – employee commuting



## Managing climate goals

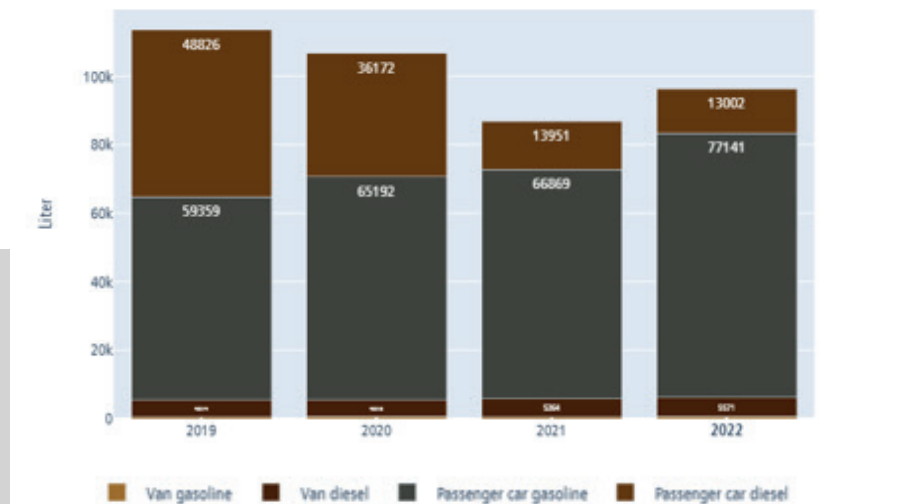
### Company vehicles and business trips

The passenger kilometers traveled on business trips and the fuel consumed by our own vehicle fleet are shown in the two graphs below. Many business trips in 2020 and 2021 were canceled due to the Covid pandemic, and we turned to digital solutions. The number of passenger kilometers traveled rose again accordingly in 2022. Our employees travel around the Rigi mountains with company vehicles and currently use gasoline and diesel as fuel.

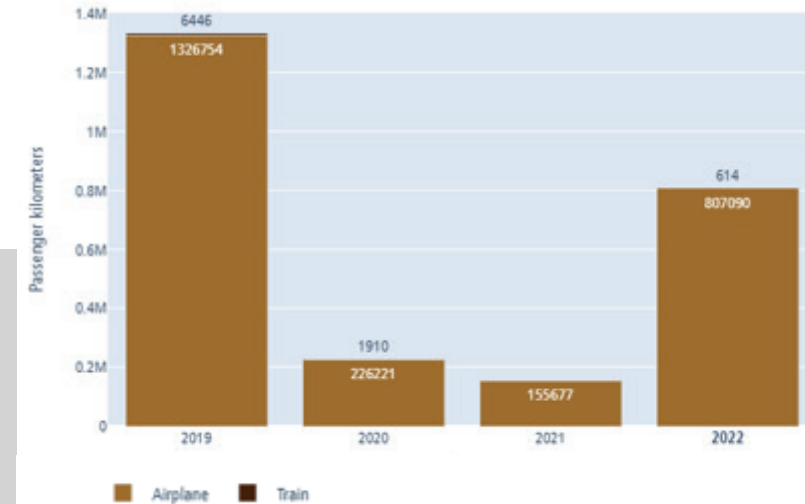
In terms of mobility, we also actively support forward-looking technologies such as electric vehicles. Our employees are able to charge their electric vehicles free of charge at the company headquarters. We installed 25 charging stations in 2022. The installation of these charging stations was funded by our CO<sub>2</sub> fund.

The graph below on the right shows the emissions caused by business trips and running our own vehicles.

Own vehicle fleet



Business trips

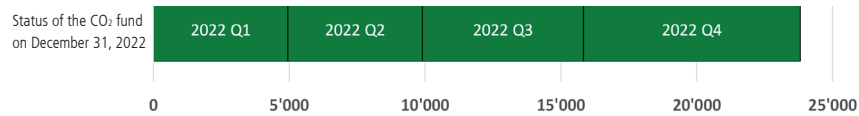




## Managing climate goals

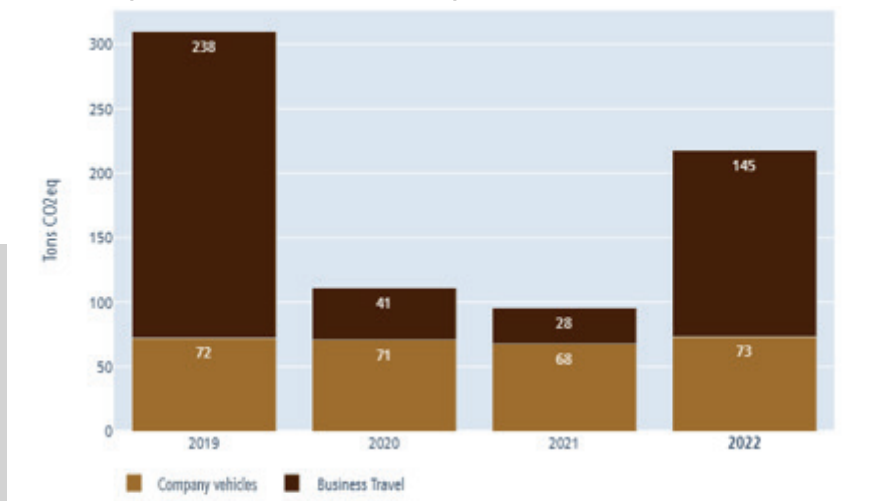
### CO<sub>2</sub> fund

In 2022, we set up an internal CO<sub>2</sub> fund. The aim is to offset company emissions. We started with flights. For every ton of CO<sub>2</sub> generated by flights taken, we pay 150 CHF into the CO<sub>2</sub> fund. This means that by the end of 2022 we had deposited a total of about 24,000 CHF, corresponding to the offsetting of 159 tons of CO<sub>2</sub>.



In the future, we want to offset more emissions within the company using the CO<sub>2</sub> fund and use the money that we raise for other sustainability projects. The graph below shows the emissions caused by business trips and running our own vehicles.

### Emissions – private vehicles and business trips





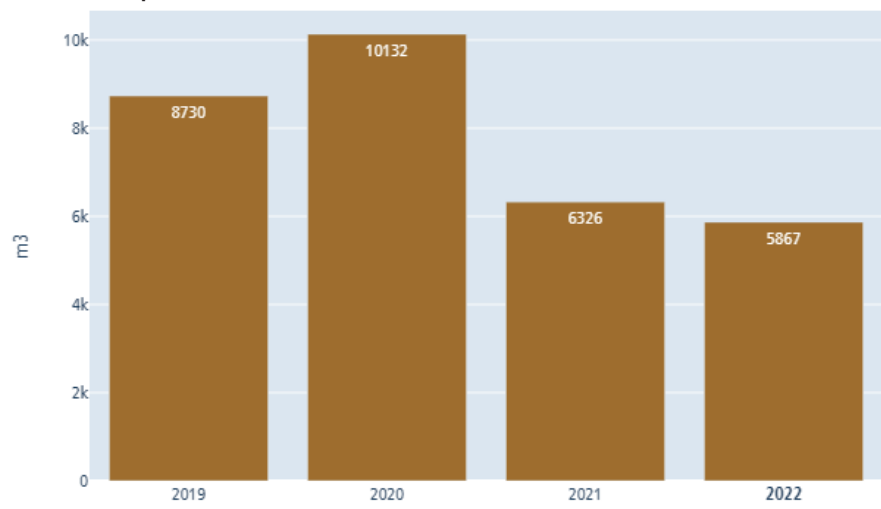
## Managing climate goals

### Water – Reduction of operational usage by 50% by 2030

We are aware of the global significance of water as a resource and commit to handling it responsibly. Despite the favorable conditions at our production site (no known water stress) and no water-intensive processes, we have set ourselves the ambitious target of reducing our water consumption by 50% by 2030. This will enable us to make an active contribution to more sustainable and resource-saving production. We obtain our water from the local authority in Weggis. They specify that the water consists of 80% spring water (groundwater) and 20% lake water (surface water). The water is directly recirculated into the pipelines belonging to the local authority in Weggis without any pre-treatment here in the company. The graph below shows our water consumption. Here you can see that our water consumption dropped sharply from 2020 to 2021. This is particularly due to the demolition of Plant 1. In comparison with

the previous year, the amount of water consumed dropped again in 2022. The water consumed has no influence on emissions. This is why emissions are not shown in the graph. A meter reading is taken to see how much water is used at each plant every month and is included on our dashboard. In Weggis, the amount of water used also corresponds to the decisive amount for calculating the recirculation of water/wastewater. Since at present we obtain all of our water from the local authority, the amount of water consumed is equal to the amount of water recirculated.

Water consumption



## Managing climate goals

When modifying our infrastructure, we ensure whenever possible that water-saving options are implemented. We started to optimize our final tests in 2021. In doing so, we assessed the optimum number of product extractions on one of our machine models during the final test, which is run on every finished machine. This enabled us to reduce our water consumption. In 2022, the project was extended to further machine models and adjustments were made accordingly.

### **Saving drinking water at Plant 5 – unique**

Did you know that you can also flush toilets using rainwater (also known as gray water)? That is precisely what we are going to do in the future at our plant unique. The rainwater from the roof will be collected in a giant 330,000-liter tank (retention basin) and will feed the toilet tanks in the new plant, corresponding to a size of about 1650 bathtubs full of water. Collecting rainwater directly saves valuable drinking water which otherwise would be used for flushing toilets. With a full retention basin of rainwater, we can flush the toilets 55,000 times (1 flush uses 6 liters of water). When the plant is up and running, we will deduct the rainwater that we obtain from our retention basin from the water obtained from the local authority so that we can record the amount of waste water. At the same time we can also show how much drinking water we have saved.



## Managing climate goals

### Waste – Maximise recycling

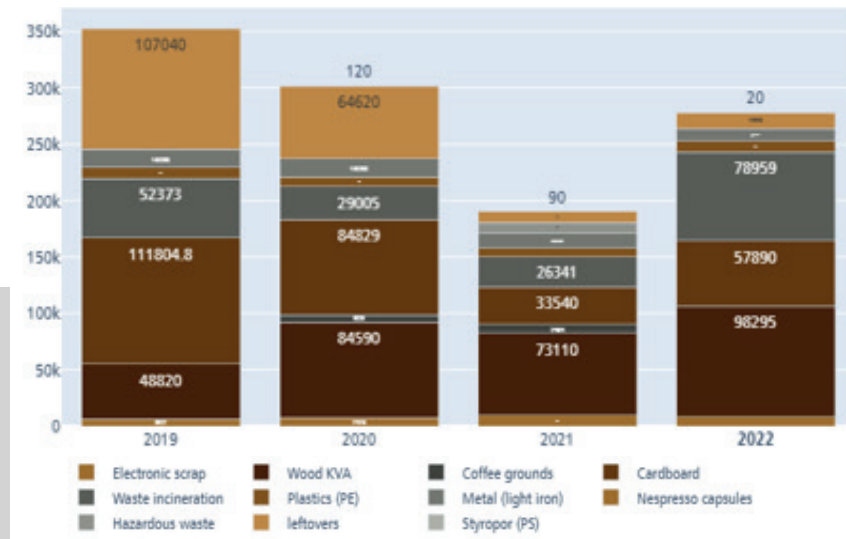
#### Waste prevention and emissions from recyclable materials

Recycling and the separation of waste are elementary parts of our waste management system. The waste flows generated are separated and collected in different groups of recyclable materials until they are taken away by our partners. These procedures are firmly integrated into our processes. This enables us to channel as many recyclable materials as possible away from the waste disposal system. Large amounts of cardboard and wood in particular are accrued here.

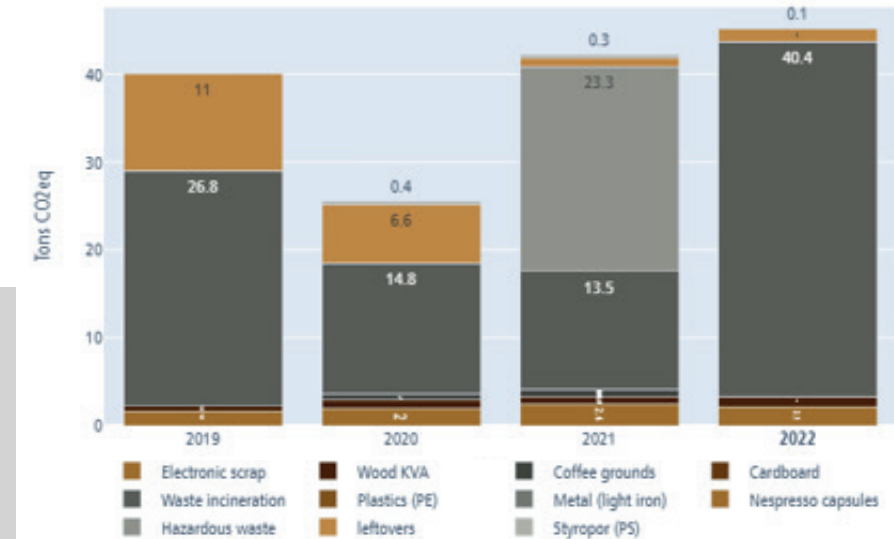
Of course, we would also like to prevent the generation of waste, whether by using returnable packaging or reducing food waste. In the area of food waste, we devised a concept to reduce the food waste generated in our company canteen by 50% in 2022 and 2023. The waste returned to the collection point has already

been reduced by a quarter by reintroducing self-service (lifting of Covid measures). More importance has thus been placed on the problem of overproduction as a further source of food waste, and initial ways to reduce this have also been put into effect. By continuously gathering data we are able to create a factual basis from which we can see whether these efforts result in improvements.

Waste



Emissions from waste



## Managing climate goals

### Quantities of recyclables handed in

The waste flow has been systematically recorded since 2022 using the invoices from our waste disposal companies and is very detailed. Before that, the different amounts of waste were recorded in another document. This led to different waste data and the end-to-end data quality was not fully guaranteed.

The graph on Page 41 shows the amounts of recyclable materials that we have collected and salvaged over the last four years. In 2022, around 71,000 kg of waste for the incineration plant was generated and 195,000 kg of recyclable materials such as cardboard, wood, polyethylene (PE) and metals were separated, collected and handed over. It is clear that the largest flows are generated by cardboard and wood. These flows consist mainly of the packaging material in which our parts are delivered. The collected cardboard is recycled and the wood is incinerated to produce heat. We can also see that the amounts of cardboard and wood that we hand over for reuse are much higher than those of the previous year. This is linked to the order volume and the additional orders triggered. Compared to the base year, the amount of cardboard has been approximately halved. The amount of wood that we hand over for reuse has, however, doubled.

General waste is the main cause of emissions related to the waste flows. The hazardous waste generated in 2021 is the sole exception. Hazardous waste refers to remnants of solvents and adhesives which reached their expiration date due to lack of use and had to be disposed of. This small amount of hazardous waste in terms of weight had a great influence on the emissions caused by our waste in 2021. Another factor, which was above all a main trigger of emissions in the past, is food waste and, in this case, specifically milk waste. In the years in which the figures are high, endurance tests were performed for two new fully automatic coffee machine models. These are linked with large quantities of milk waste, which resulted in these high values. This procedure was finally modified and these tests are carried out using a validated method that no longer requires milk.

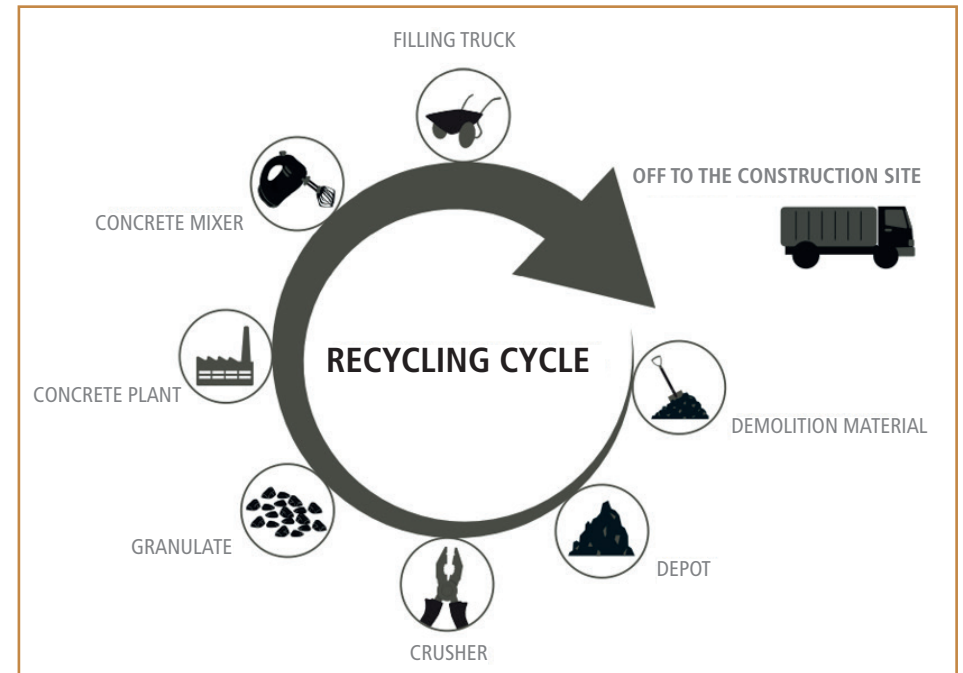




## Managing climate goals

### Recycling of concrete rubble for our plant number 5 – unique

Building sites also require a waste management system. Our Plant 5, known as unique, is LEED-certified, which means that not only the building itself, but also the demolition of existing buildings, must be carried out under certain conditions. One such condition is the implementation of a waste management system for the separation and treatment of recyclable materials. This is precisely how concrete rubble from the existing buildings that are being demolished finds its way back to our building site. The old concrete is used to make new recycled concrete for the foundation slab of Plant 5. Another part of the concrete rubble is used for backfilling. The figure on the right shows how the recycling of concrete rubble works. You can find a more detailed description in the inside story of Josef Küttel AG on our website, which talks about the construction of unique.





## GRI index

GRI standard	Disclosure	Further information	Page	Reference [chapter in report]
GRI 2: General information 2021				
The organization and its reporting practices				
2-1	Organization profile	Further information		
2-1 a	Organization name	Thermoplan AG		
2-1 b	Ownership and legal form	Family-owned stock corporation		
2-1 c	Headquarters of the organization	Weggis, Switzerland		
2-1 d	Business premises	Thermoplan Germany, Thermoplan USA		
2-2	Companies included in the organization's sustainability reporting			
2-2 a	Entities included in sustainability reporting	Thermoplan AG (Thermoplan DE, AT, USA not taken into account for operational measures and life cycle assessment calculation)		
2-2 b	Entities included in the consolidated financial statements	no published consolidated financial statements		
2-3	Reporting period, frequency and contact point			
2-3 a	Reporting period and reporting cycle of sustainability reporting	January 1, 2022 to December 31, 2022		
2-3 c	Release date	October 13, 2023		
2-3 d	Contact person if you have any questions about the report	Matteo Trachsel mtrachsel@thermoplan.ch		
2-4	Restatement of information			
2-4 a	Explanation of the reasons and effects	None, as first edition		
2-5	External audit			
2-5 a	Politics and practice	No external audit		
2-5 b	Link to the external audit report, description of the audited topics, audit standards, level of audit, limitations, description of the relationship	No external audit		
Activities and employees				
2-6	Activities, value chain and other business relationships			
2-6 b	Value chain		6	Our value chain
2-7	Workers			
2-7 a	Total number of employees by gender and region		16	Central – We employees
2-7 b	Total number of permanent employees, temporary employees, employees with non-guaranteed working hours, full-time and part-time employees by gender and region		16	Central – We employees
2-7 c	Methodologies and Assumptions	Headcounts at the end of the reporting period	16	Central – We employees
2-7 d	Contextual information	Due to the strong growth, we are dependent on some temporary employees. There are part-time employees due to flexible working models	16	Central – We employees
2-7 e	Significant fluctuations	no significant fluctuations	16	Central – We employees
2-8	Workers who are not employees			
2-8 a	Total number of workers who are not employees (type, contractual relationship)		16	Central – We employees

2-8 b	Methodologies and Assumptions	not relevant because there are no such workers		not applicable
2-8 c	Significant fluctuations	not relevant because there are no such workers		not applicable
Governance				
2-9	Management structure and composition of the highest control body and its committees		4	We are Thermoplan
2-10	Nomination and selection process for the highest control body	not applicable because it is family owned		
2-11	Chairman of the highest control body		4	We are Thermoplan
2-12	Role of the highest control body in setting goals, values and strategies		8	Sustainability at Thermoplan
2-13	Delegation of authority to manage impacts		12	How we manage sustainability
2-14	Role of the highest control body in sustainability reporting		8	Sustainability at Thermoplan
2-15	Conflicts of interest			not applicable
2-16	Communicating critical concerns		7	Our values and cooperation
2-17	Collected knowledge of the highest control body			not applicable
2-18	Evaluation of the performance of the highest control body			not applicable
2-19	Compensation policy			confidential
2-20	Procedure for determining remuneration			confidential
2-21	Ratio of total annual compensation			confidential
Strategy, policy and practice				
2-22	Sustainable Development Strategy Statement		3	Foreword by the CEO
2-23	Political commitments		7	Our values and cooperation
2-24	Embedding political commitments		7	Our values and cooperation
2-25	Procedures for eliminating negative effects		7	Our values and cooperation
2-26	Mechanisms for obtaining advice and reporting concerns		7	Our values and cooperation
2-27	Compliance with laws and regulations	No fines were levied against Thermoplan AG during the reporting year.		
2-28	Memberships	<ul style="list-style-type: none"> <li>- Europa-Forum Lucerne</li> <li>- GS1 Switzerland</li> <li>- Gwärb Weggis</li> <li>- IHZ</li> <li>- Industry Association for Home, Heating and Kitchens</li> <li>- procure.ch</li> <li>- Brändli Foundation</li> <li>- SVBL</li> <li>- Swiss American Chamber</li> <li>- Swissemem</li> <li>- Lucerne Economic Development Agency</li> </ul>		
Involvement of stakeholders				
2-29	Approach to stakeholder engagement		11	Relevance matrix
2-30	Collective agreements	We don't have collective agreements. We refer to the applicable labor law.		

## GRI index

GRI 3: Material topics 2021				
3-1	Procedure for determining material topics		9	Our material topics
3-2	List of essential topics		9	Our material topics
204 - Procurement practices				
204-1	Share of spending on local suppliers		19	Local – focus on long-term regional supplier partnerships
205 - Anti-corruption				
205-1	Business establishments that have been checked for corruption risks	Recently implemented complaint mechanism, no evaluation possible yet	22	Global – responsibility along our supply chain
301 - Materials				
301-1	Materials used by weight or volume	Can be viewed for our BW models in the Product Environmental Report. Without division into renewable/non-renewable		
301-2	Recycled raw materials used	Data basis currently only available for stainless steel	27	Materials – “Enabling the circular economy through ecodesign”
302 - Energy				
302-1	Energy consumption within the organization		32	Electricity and heat – production with 100% renewable energy since 2022
302-3	Energy intensity	Outlook for 2023 corporate goal	32	Electricity and heat – production with 100% renewable energy since 2022
302-4	Reducing energy consumption	Outlook for 2023 corporate goal	32	Electricity and heat – production with 100% renewable energy since 2022
302-5	Reducing energy requirements for products and services		26	Energy – Continuous increase in energy efficiency across all machines
303 - Water and Wastewater (2018)				
303-1	Water as a shared resource		39	Water – Reduction of operational usage by 50% by 2030
303-2	Dealing with the effects of water recirculation		39	Water – Reduction of operational usage by 50% by 2030
303-3	Water extraction		39	Water – Reduction of operational usage by 50% by 2030
303-4	Water return		39	Water – Reduction of operational usage by 50% by 2030
305 - emissions				
305-1	Direct GHG emissions (Scope 1)	Since Weggis is our production site and over 95% of all our employees work in Weggis, the offices of Thermoplan Germany and Thermoplan USA were not taken into account in the calculation of the company's ecological balance.	30	CO2 emissions Scopes 1-3 – reduction by 50% by 2030 (Scope 1-3) as an interim target
305-2	Indirect energy-related GHG emissions (Scope 2)		30	CO2 emissions Scopes 1-3 – reduction by 50% by 2030 (Scope 1-3) as an interim target
305-3	Other indirect GHG emissions (Scope 3)		30	CO2 emissions Scopes 1-3 – reduction by 50% by 2030 (Scope 1-3) as an interim target
305-4	Intensity of GHG emissions	Intensity per kg machine For scopes 1 and 2	30	CO2 emissions Scopes 1-3 – reduction by 50% by 2030 (Scope 1-3) as an interim target
305-5	Reducing GHG emissions	Overall reduction as well as reduction in the individual support directions.	29	Planet – Managing climate goals
306 - Waste (2020)				
306-1	Waste generated and significant waste-related impacts		42	Waste – Quantities of recyclables handed in
306-2	Management of significant waste-related impacts		19	Local – focus on long-term regional supplier partnerships
			27	Materials – “Enabling the circular economy through ecodesign”
			41	Waste – maximizing recycling
306-3	Waste generated		42	Waste – Quantities of recyclables handed in
306-4	Waste diverted from disposal		42	Waste – Quantities of recyclables handed in
306-5	Waste forwarded for disposal		42	Waste – Quantities of recyclables handed in

308 - Environmental assessment of suppliers				
308-1	New suppliers verified based on environmental criteria		22	Global – responsibility along our supply chain
308-2	Negative environmental impacts in the supply chain and measures taken		22	Global – responsibility along our supply chain
403 - Occupational Safety and Health				
403-1	Management system for occupational safety and health protection		16	Central – Health and Safety Management
403-2	Hazard identification, risk assessment and incident investigation		16	Central – Health and Safety Management
403-3	Occupational health services		16	Central – Health and Safety Management
403-4	Employee participation, consultation and communication on occupational safety and health protection		16	Central – Health and Safety Management
403-5	Employee training on occupational safety and health protection		16	Central – Health and Safety Management
403-6	Promoting employee health		16	Central – Health and Safety Management
403-8	Employees covered by an occupational health and safety management system		16	Central – Health and Safety Management
403-9	Work-related injuries		18	Central – Number of occupational and non-occupational accidents at work
403-10	Work-related illnesses		18	Central – Number of occupational and non-occupational accidents at work
404 - Training and further education				
404-2	Programs to improve employee skills and for transitional assistance		16	Central – We employees Central – Health and Safety Management
404-3	Percentage of employees who receive regular performance and professional development reviews		16	Central – We employees
414 - Social evaluation of suppliers				
414-1	New suppliers verified based on social criteria		22	Global – responsibility along our supply chain
414-2	Negative social impacts in the supply chain and actions taken		22	Global – responsibility along our supply chain



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