

# MATERIAL | VALUE | CHANGE

We value recyclable materials and  
drive innovation to bring about change.

Sustainability Brochure

pre  
zero



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# Introduction

As an environmental service provider, PreZero is always looking for innovative solutions. **Waste? That is recyclable material to us.** Plant fibers? We turn them into packing material. We use artificial intelligence and optical lasers to optimize sorting streams and use insects to recycle organic waste. That is because we want **to shape the future in a more sustainable way** and thereby protect the climate, **not only through our daily work, but also by having bold new ideas.**

To achieve this, we forge visionary new paths throughout the entire recycling loop. Only by being innovative, by establishing strong partnerships and by using the expertise of all our employees, we will be able to achieve our goal: to bring about real change in the handling of recyclables – a **Material | Value | Change.**

Thomas Kyriakis, CEO PreZero Stiftung & Co. KG



# About us

We consider the entire material cycle and have one goal: **to waste as few resources as possible.**

## Who we are and what we do

We<sup>1</sup> are a modern environmental service provider with approximately 30,000 employees operating at over 485 locations across Europe and North America. We use innovative solutions to advance the circular economy. This means that we support our customers in the sustainable development of their circular economy and use efficient processes to achieve environmental and economic success. As the environmental division of the Schwarz Group, together with its retail and production companies, we are the first company group in the world to map a complete material cycle.

### OUR SERVICES



**1** We work for private and commercial customers, as well as at a municipal level. We also help initial distributors of packaging with legally compliant licensing.

**2** We analyze streams of recyclables and advise on the > prevention, recording and separation of waste. Our sophisticated separation system enables us to gain valuable raw materials and reduce volumes of waste.

**3** We collect and dispose of all fractions of municipal and commercial waste – from paper to plastics to organic waste. Cutting-edge technologies ensure that the collection routes are optimized. Safety measures are always kept up to date.

**4** Our state-of-the-art sorting plants can exceed what legal specifications demand. This is the only way we can achieve our goal of efficiently closing the recycling loop.

**5** In the treatment process step, the material streams are prepared for recycling, sometimes with the support of long-standing partners. Our innovative technology ensures that the processing is of the best possible standard.

<sup>1</sup> The words “we”, “us”, “our” or similar each stand for all companies of the PreZero Group.

**6** We recycle material fractions such as plastic, aluminum, glass and wood and manufacture post-consumer recycled materials for the industrial production of packaging film or household items. We also recover residual waste, e.g. energetically, or organic waste at composting plants.

**7** Our packaging management system helps customers to think about recyclability right from the start of designing their packaging. With [> OutNature](#), we offer new and sustainable fiber and paper products for packaging solutions in trade and industry. **PreTurn** provides intelligent pallet pooling services using multi-use pallets.

PREZERO IN FIGURES

**485** locations in **11** countries:  
Austria, Belgium, Italy, Germany, Luxembourg, the Netherlands, Poland, Portugal, Spain, Sweden, USA

**30,000** Employees

Over **12,200**  
waste disposal vehicles

We are the municipal waste disposal company for around **40 million** European citizens.

Around **15 million** metric tons of recyclable materials are sorted, treated and recycled by PreZero every year.

Revenue of EUR **2.1 billion** in the 2021 fiscal year, tripling the previous year's figure.

## Our Story

**2009**

GreenCycle is founded and provides recycling management for Lidl, followed by Kaufland and Schwarz Produktion; this service extends to further customers from 2016 on.

**2018**

The digital waste management platform prezero.com goes online. We integrate the US-based environmental service provider RMG Recycling, and Tönsmeier, the fifth largest waste management service provider in Germany.

**2019**

All waste and recycling management services are now pooled under the PreZero brand. We become a sustainability partner for the Klima Arena, an experience center relating to climate change, and for TSG 1899 Hoffenheim's stadium, which is renamed to PreZero Arena. We also take over the Sky Plastic Group for post-consumer plastics, now called PreZero Polymers.

**2020**

PreZero Dual, our dual system, is launched in seven federal states in Germany. We invest in sorting plants for lightweight packaging (LWP). Our partnership with the WWF goes international and is extended until 2025. We also become waste disposal and recycling partner for the Allianz Arena in Munich. We establish our PreTurn and OutNature brands and acquire the waste disposal company SUEZ Sweden.

**2021**

PreZero Dual is now active across Germany. Household products made from our recyclate are sold for the first time at Lidl and Kaufland, as well as packaging based on the silphium plant. The LWP sorting plant opens in Evergem, Belgium. We take over other SUEZ locations and the environmental services of Ferro-vial in Spain and Portugal.

**2022**

PreZero is represented at IFAT 2022 in Munich for the first time; it is the world's largest industry trade fair. In Germany we commence operations at Europe's most cutting edge LWP sorting plant in Eitting, as well as at the recycling plant Kunststoff Recycling Grünstadt (equity holding) following its modernization. We launch the Zero Waste Arena project with TSG 1899 Hoffenheim and save 400 kilograms of plastic per home game as a result.



INTERVIEW

# „We are able to think and work like a start-up“

## Ending the waste of resources: Marcel Fortuin, Team Lead Innovation reveals how PreZero is leading the way.

The growing world population and increasing urbanization drive, among other things, the rise in demand for waste disposal. Additionally, raw materials are in high demand and climate change is ongoing. What role does waste management play in meeting these challenges?

**\_ Marcel Fortuin:** We are not only currently experiencing climate change first-hand, but also the danger of dependence on limited raw materials. Part of the solution is the recycling, recovery and re-use of recyclable materials. We play a significant role in this as a waste management company. We use our modern sorting and recycling plants to give discarded materials a second life and to supply companies with high-quality

recyclates. Waste management therefore becomes raw material management and perhaps also a hub for the provision of recycling products. By replacing primary raw materials with secondary raw materials, we save huge amounts of emissions.

**Biogas from food waste, household goods from recycled plastic, sustainable fiber and paper products based on the silphium plant: How does PreZero come up with its innovative ideas?**

**\_ Marcel Fortuin:** As part of the Schwarz Group, we are not only able to close our loops in a holistic way, but also develop new ideas internally and test them in practice. We are able to think and work like a start-up

– quickly and efficiently. This speed is also essential, given the urgency of the challenges we are currently facing. We also share our experiences and our knowledge with other divisions as well as with other industries. That clearly drives us. Our solutions and expertise enable us to offer not only to collect and recycle waste, but also to provide expert advice on all stages of production that are relevant to the recycling loop or about processes that have an impact on the cycle. And our customers expect that from us.

**In Germany, almost 45% of plastic waste is incinerated. PreZero is addressing this challenge via PreZero Polymers. Why is the recycling of plastics challenging?**

**\_ Marcel Fortuin:** I turn to the positive aspect first: that means 55% of plastic waste is being recycled! But there is still sometimes an issue with the correct sorting of waste, with contaminants that remain in

## Team Lead Innovation

Marcel Fortuin has been working at PreZero for over a year and has been the Team Lead of Innovation in Neckarsulm since September 2022. The Dutchman has 20 years of experience in the waste management industry and, prior to that, he was the Managing Director of an innovation campus and start-up center in the Netherlands for new digital business models.



the material streams or with packaging that is made from too many different materials, not all of them being recyclable. That's why we, here at PreZero, constantly develop the technology used at our sorting plants further and work on solutions that will increase the recyclability of waste. For example, by optimizing packaging design.

### How does PreZero manage to implement its innovations across all countries?

**\_Marcel Fortuin:** We are well connected, exchange ideas regularly and in depth, share practical experiences and discuss relevant issues. Our structures

give the national companies the flexibility to consider national parameters in their processes and to implement them in a targeted way for their customers.

### How are conditions currently changing for PreZero? What role does digitalization play in your innovation work?

**\_Marcel Fortuin:** An increasing number of companies are now aware of their responsibility to conserve the planet's finite resources and are therefore incorporating more recycled materials into their production processes. This requires close coordination with companies like ours to determine the material properties

and guaranteed availability of the recyclate – a process that is also, in turn, dependent on the available waste streams. These complex processes would be unimaginable without digitalization

### What does the future of an innovative circular economy look like to you?

**\_Marcel Fortuin:** It's actually already in the name: an economy that works in a circular way. To achieve this, we need to keep questioning old structures or habits, for example accept that the color of products made from recyclate will appear different. I believe that it is possible. And new technologies will help us along the way. I am delighted to contribute to shaping this change.

# Sustainability at PreZero

To drive the material value change, we are embedding sustainability into our business processes and develop our sustainable business activities.

## What we want to achieve

As an environmental service provider, our business model promotes the circular economy and thereby also protects the environment and climate. This enables us to support our commercial and municipal customers in their commitment to sustainability. As part of the Schwarz Group, we also contribute to the achievement of common sustainability targets and play a key role in the international [„REset Plastic“](#) strategy to reduce plastic use. We want to increase the respectful use of natural resources to create environmental and social added value that will ensure the long-term success of our companies and our customers.

That is our aim and we want to meet it and make it measurable. Furthermore, we want to meet the changing political conditions and growing demands of our stakeholders – from our employees to our business

partners to the wider public. We are therefore developing a sustainability strategy. As a first step, we have identified topics that are relevant for us based on a materiality analysis.



## Where we can have the biggest impact

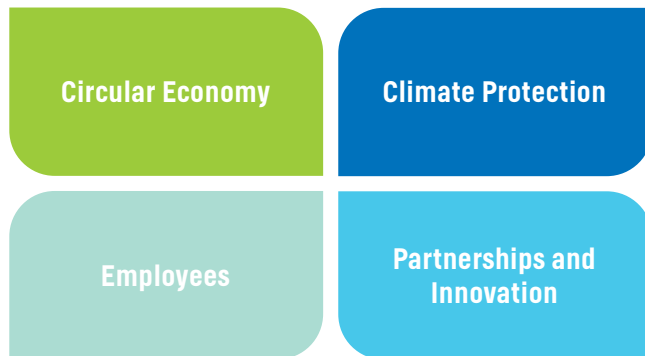
Our materiality analysis at the end of 2020 identified sustainability topics that were relevant for PreZero, based on the United Nations' 17 Sustainable Development Goals (SDGs). Their actual importance for the companies was determined throughout the value creation stages of “Activities of business partners”, “Collection and management of recyclables at our own sites” and “Product range/use” and then evaluated in three steps:

- Prioritization from an external point of view: Survey of 587 stakeholders from all national companies at that time (employees, business partners, scientific institutions, NGOs, associations, politics).
- Impact assessment: To what extent are these topics impacting the environment and society in the context of our business activities?
- Assessment according to business relevance: This involved a survey of around 30 managers and a workshop with the Management Board.



## The strategy we are following

The following key topics form the framework for our strategic process:



For each key topic, goal descriptions and action areas were defined. These will be presented in the following sections. Our guiding principle summarizes our commitment to sustainability:

**Together with our employees and partners, we work every day to close loops, think innovatively and, thus, protect the environment and climate.**

To make our CSR management measurable, the CSR departments are jointly developing strategic targets at the international level, based on our action areas. These are to be implemented in the national companies using national measures. Due to the diverse range of business models, national sustainability strategies, including national targets, will be developed based on the common international CSR strategy. Our progress will be communicated transparently in future sustainability reports.

## How we manage sustainability at PreZero

As in the other companies of the Schwarz Group, the overall responsibility for CSR is with our CEO Thomas Kyriakis. The central point of contact is the CSR International team within Corporate Communications. It coordinates sustainability issues at PreZero at an international level and helps the national companies to develop their sustainability strategy and implement their targets. The team also develops organizational and process recommendations for CSR management – in coordination with the CR/CSR departments of Schwarz Group.

In addition to the CSR Managers, the CSR representatives in the relevant departments are responsible for the content-related development and implementation of the sustainability strategy.

## Our principles

We are committed to fulfilling our corporate duty of care – through our Human Rights Policy Statement, our code of conduct for business partners, and by being a member of the [UN Global Compact](#) as part of the Schwarz Group. We want to observe and strengthen social and environmental standards in our global value chains, prevent the violation of these standards, and take appropriate remedial measures, if required. The values that our employees use as the basis for their actions within the company are presented in the [Employees](#) section.



# Circular Economy

For a cleaner tomorrow, we are actively shaping all phases of the circular economy – from packaging and product design via the use phase to collection and recovery.



ACTIVELY  
CLOSING  
LOOPS



## What we have set out to do

The key topic 'circular economy' reflects our core business. We contribute actively to the circular economy with our product design, our licensing activities and our 53 sorting and recycling plants. This enables us, together with our customers and business partners, to save resources, to increase the use of secondary raw materials and to drive the reduction of CO<sub>2</sub> emissions. Thereby we are contributing to the circular economy action plan, which is a key element of the European Green Deal. The latter aims to decouple the economy from the consumption of resources and to make the transition from a throw-away society to increased re-use, repair and recycling.

To keep strengthening our long-term contribution to the circular economy, we have set priorities and action areas within this key topic. We want to use our

**innovative recycling plants** to further improve our **recycling output** in terms of quality and quantity and thereby **increase the use of secondary raw materials**. We aim to reuse or recycle **all waste streams** as much as possible. To do this, we use safe processes to ensure that no recyclables or harmful substances end up in the environment. At the same time, it is important for us to keep expanding our **consulting service regarding waste prevention and recirculation** and to thereby **empower our business partners to reduce their environmental impact**. One focus here is **Design for Recycling**, a key element for the effective recycling and return of materials.

## How we manage our projects

We want to implement the projects within our action areas effectively by exchanging ideas and by collaborating with the national companies. To do this, the CSR

team works together with international departments and the national companies to develop common targets to which individual measures should contribute.

### NEWS TICKER

+++ **Strong together** +++ We get involved in associations and initiatives relating to the circular economy or to recovery- or recycling-specific topics. In Germany, for example, we are a member of the German Association for the Waste Disposal, Water and Circular Economy Industry (BDE e.V.) and the Circular Economy Initiative of the Federation of German Industries (BDI e.V.).



HOW WE ACTIVELY SHAPE THE CIRCULAR ECONOMY

## Circular Thinking

To promote the circular economy with our customers, we provide consultation regarding design for recycling as well as waste disposal and environmental management.



We do not just collect and sort – we also consult on waste prevention in the production process, for example.

**Development of circular structures:** In Germany, our **Q by PreZero** brand enables production and industrial companies to develop circular systems to save resources, become independent of volatile markets and position themselves as pioneers of sustainability. With **PreZero.scope**, we give advice on holistic waste disposal concepts using optimized operating processes. **PreZero.**

**repack** helps us to analyze packaging and develop recyclable solutions. And **PreZero.rechain®** provides concepts to close product cycles, including reverse logistics or technologies for material processing.

**Standard for zero waste:** In 2021, we initiated the development of a new standard, in cooperation with a

consortium of NGOs and representatives from society and science to develop a new standard. **Zero Waste DIN SPEC 91436** describes a holistic reference model for measuring and improving the maturity level of the waste and recyclables management in companies and organizations, which is based on the “zero waste” vision. Since 2022, this standard has been rolled out at Lidl (Netherlands, Czech Republic) and Kaufland (Slovakia, Romania) as well as in projects like the “Zero waste arena” for the German Bundesliga football team TSG 1899 Hoffenheim. Other projects and a phased launch in other national companies of Lidl and Kaufland are planned.

**Status check:** At PreZero in the Netherlands, we offer our **Quick Scan** service to companies and municipalities: Based on the material selection, benchmarks, waste streams, partners, facilities and logistics, we determine the status quo within two minutes. This assessment lends itself to derive next steps for our path to greater sustainability.

**Know-how for efficiency:** In Sweden, we train companies, among others, in how to manage waste efficiently by sorting it correctly so they can save disposal costs. Additionally, we consult and support the investigation of contaminated areas as well as the stock taking and handling of hazardous goods and chemicals.

## Effective selection

For us, there is no waste, just recyclables in the wrong place. Therefore, we rely on modern sorting plants as the basis for successful recycling.

### Fully automated for high-quality sorting

One of our sorting plants is located in Evergem, Belgium. More than **80,000 metric tons of lightweight packaging** from Brussels and part of the Flanders region are **sorted here fully automatically** every year, supported by around 100 employees. Air and ballistic separators as well as overbelt magnets and 26 near-infrared devices sort **14 fractions of plastic**, such as polyethylene, polypropylene, polystyrene or polyethylene terephthalate. Robots also separate beverage cartons, PET trays, aluminum and packaging made of high-density polyethylene.

The plant in Evergem is the first of its kind in Belgium, and there are others in the Netherlands and Germany. Since January 2022 in Eitting, Germany, lightweight packaging from household recycling is being separated into **18 different plastic fractions** – and also sorted by color. This amounts to **120,000 metric tons** per year. The big plus at Europe's most modern plant to date is that so-called **black scans identify black plastics**. These are often not recognized as plastic by conventional plants that use standard sorting systems and are therefore not recycled. Sorting robots also help our 50 employees with quality control and re-sorting.

„The sorted fractions have a high purity level of over 95%, as requested by the processing industry. This means that we can make a significant contribution to the acceptance of secondary raw materials.“

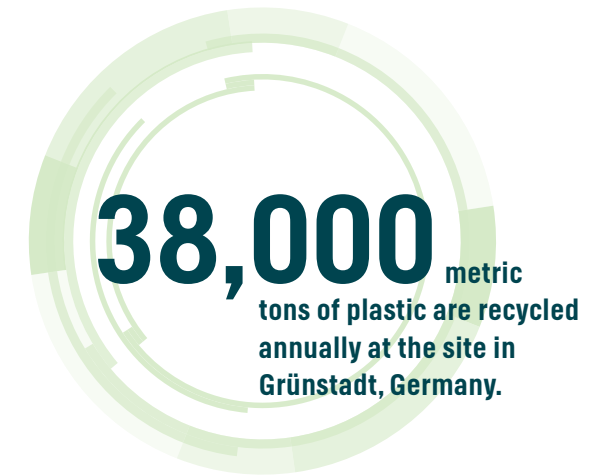
Claudy Lejeune, CEO PreZero Belgium



At our plant in Eitting, a black scan identifies black plastic that otherwise often is not recognized as plastic.

## Materials for a new life cycle

Whether it is plastic or organic waste, we give recyclables a second life, close loops and thereby create new values for real change.



### Plastic recycling at PreZero

We produce recyclates as well as end products. This enables us to cover two major parts of the value chain for plastics. Two examples from PreZero:

**1** Since March 2022, the reprocessing plant Kunststoff Recycling Grünstadt – an equity holding in Germany – has been able to recycle 38,000 metric tons of plastic per year. Fractions such as polypropylene and polyamides are turned into grist, granulate or compounds using sorting, hot washing and extrusion technology. The high-quality HDPE recycled material is used as packaging for detergents, hygiene products and cosmetics.

**2** In 2021, we acquired the bag and film manufacturer Roplast Industries in Oroville, USA, and the German KBG Group to enter into the recycling of plastics for flexible packaging. At two plastic recycling plants, film bales and mixed hard plastics are processed into recyclates made of polyethylene (LDPE, HDPE) and polypropylene (PP). This means that, for the first time, we are able to produce packaging ourselves for customers in the food and retail sectors as well as in e-commerce.

We recycle post-consumer plastics into high-quality raw materials.





We recycle up to 60,000 metric tons of organic waste at the composting plant in Portugal.

## Organic compost for eight municipalities

In Portugal, we are converting up to 60,000 metric tons of organic waste into organic compost for eight municipalities around Porto. The premise for the ten-year contract is a high-quality product with no odor.

We accomplish this by using our closed, 3,100 m<sup>2</sup> plant with 18 composting tunnels, which we took over from Ferrovial Services in 2021. Impurities such as metal, glass, paper or plastic are removed and then the right combination of input mix, oxygen, temperature and moisture are added. The result is high-quality compost.



**40,000** metric tons of wood waste are recycled by us in the Netherlands into around **75 million Europallet blocks** – EPAL, FSC and PEFC certified.

# Climate Protection

For a cleaner tomorrow, **we are reducing greenhouse gas emissions** within our own companies and along the entire value cycle by consistently implementing our business model.

ADVANCING  
CLIMATE  
PROTECTION



## What we have set out to do

In order to achieve the Paris climate target of 1.5 °C, we need to avoid and reduce greenhouse gas emissions. We have therefore committed ourselves, as part of the Schwarz Group, to a scientifically validated climate target.

The [Science Based Targets Initiative](#) (SBTi) is a partnership between Carbon Disclosure Project (CDP), United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). It has developed its own standard based on the Greenhouse Gas (GHG) Protocol for setting greenhouse gas reduction targets. This enables companies to formulate science-based targets for reducing emissions. We have set our own SBTi-validated climate target as part of the Schwarz Group.



### Our target

We will procure 100% green electricity<sup>1</sup> in all national companies by the end of the 2022 fiscal year. In doing so, we contribute to our common target, validated by the SBTi: In total, the companies of Schwarz Group will reduce their operational greenhouse gas emissions by 55% by 2030 compared to 2019<sup>2</sup>.

To increase the potential for further reductions, we have defined action areas within our key topic 'climate protection': We want to use our services to continue **reducing greenhouse gases through closing loops** along the value chain and also to **empower our customers to reduce their emissions**. The increased use of secondary raw materials will then save primary raw materials and therefore also GHG emissions. Additionally, we aim to **optimize our sustainable energy production** throughout the value cycle, exemplarily by means of our biogas plants and by installing photovoltaics at our sites. At an operational level, another way is to **reduce our transport and logistics emissions** by optimizing processes and modernizing the vehicle fleet, as well as by introducing **efficiency measures at our sites**.

## How we manage our projects

All national companies contribute to the climate target through individual measures. The CSR department works with all departments and national companies to develop a joint, international climate strategy based on our common action areas. The next step will be to develop SMART national targets and measures to achieve those targets.

We have been preparing our annual corporate carbon footprint in accordance with the GHG Protocol since 2019. It includes all sites that have been part of the PreZero Group for a full fiscal year. As we are growing inorganically, we continually have to adjust our base year and our reduction targets.

A large number of PreZero locations have a certified environmental and quality management system, such as ISO 14001 and ISO 9001. All operational sites aim to be certified accordingly by the end of 2023. Some sites also use energy management systems according to ISO 50001.

<sup>1</sup> Excluding any purchase agreements that we cannot control, such as individual leased properties with a binding electricity procurement clause.

<sup>2</sup> This aim of Scope 1 & 2 may also include biogenic emissions and the removal of biogenic input materials.



HOW WE ADVANCE CLIMATE PROTECTION

## Eliminating emissions

One of the ways we are reducing GHG emissions is by using and producing renewable energies at our sites.

### Into the future using the power of the sun

How are we already helping to protect the climate? By generating low-emission, renewable electricity. Two examples:

**1** Since 2015, our Luxembourg site in Holzthum has been using 200 m<sup>2</sup> of solar panels with an output of up to 30 kilowatt peak, the maximum electrical output that can be achieved under certain standard conditions. Around 28,500 kWh of electricity are produced annually. That covers about 90% of the site's annual electricity consumption. Furthermore, in Bettemburg, Luxembourg, we built our site using low-energy construction methods. The energy required for the heating and air conditioning of the building is therefore lower than with

conventional construction methods. The building is also fitted with two air-water heat pumps.

**2** In Norrköping, Sweden, solar panels have been producing up to 25,000 kWh per year for the last ten years. They therefore supply all cabin and engine heaters in our collection vehicles and the office lighting.



### NEWS TICKER

+++ **Strong together** +++ Jointly, we are involved in associations and initiatives relating to climate protection. For example, we participate in the UN Global Compact's Climate Ambition Accelerator Program. This program supports companies in increasing their contribution to achieving the 2030 Agenda.

## Waste to energy

Energy transition with PreZero: we use waste as an alternative energy source for either municipalities or companies.

### Biomethane for Madrid's gas network

**What it is about:** The Valdemingómez biogas plant, southeast of Madrid, is Spain's only plant capable of converting biogas from organic waste into biomethane. Mid 2021, in a joint venture with SUEZ and Enagás Renewable, PreZero increased the plant's thermal energy capacity from 100 GWh/year to 189 GWh/year.

**What we achieve:** 80% more biomethane in Madrid's gas network. That is enough for 20,000 households or 500 local buses and a savings of more than 43,500 metric tons of CO<sub>2</sub> per year. The plant also contributes to Spain's climate plan, which aims to achieve a 42% share of renewable energy by 2030.

**How we do it:** The organic waste of the 3.2 million Madrid inhabitants is pre-treated and anaerobically fermented at the biogas plant. The resulting biogas is cleaned, converted into biomethane and fed into the gas network. The fermentation residue is turned into fertilizer via a composting process. In May 2022,



The Valdemingómez biogas plant processes the organic waste of the 3.2 million Madrid inhabitants.

Madrid's city council started the expansion of the plant to increase its total composting capacity.

### Electricity, heat and CO<sub>2</sub> from non-recyclable waste in the Netherlands

**What it is about:** Increasing landfills? Not here: PreZero's waste-to-energy plant in Roosendaal converts 360,000 metric tons of non-recyclable waste into energy every year. This releases heat and CO<sub>2</sub>. The heat is fed into the power grid as electricity via a generator at a rate of 250,000 MWh per year, and the residual heat is fed into the local heating network. From 2025, heat and CO<sub>2</sub> should also be used at the greenhouses

in Steenberg and Dinteloord as an alternative to natural gas. The project's implementation and testing phase has already started.

**What we achieve:** The project, named Osiris, is expected to save approximately 100 million cubic meters of fossil fuels a year, which is roughly the consumption of around 85,000 households. It is subsidized by the Dutch renewable energy support program SDE++.

**How we do it:** We are investing in underground pipelines with a length of over 25 kilometers which lead to the greenhouses.

## Taking the right path

From smart route planning to alternative drives: we have put a lot in motion to save emissions in our logistics.



155,000 commercial and industrial customers and 40 million residents rely on our logistics services for a safe and reliable waste management. To reduce emissions, we use **alternative drives**, **optimize our waste collection routes** using modern vehicle technology and telematics systems, and **train our drivers**.

### Optimal calculation

PreZero Germany has set up a digital tool that calculates the emissions from our primary and secondary logistics and shows the underlying consumption and process data. This tool is used as the basis for developing our reduction strategies and corresponding measures in our logistics.



## Alternative power ahead!

We use a range of different drives. Our highlights:

- In the Netherlands, around 30 trucks and loaders use alternative fuels: rear loaders for municipal waste are fueled by **natural gas** (CNG/LNG) and **hydrogenated vegetable oil** (HVO), waste collection trucks use **hydrogen**, and we also use hybrid electric trucks. Another ten vehicles are planned for 2022.
- In Spain, we are preparing for the development and testing of **electric vehicles** for waste disposal, as well as for charging them using natural gas range extenders on long routes.
- In Germany, we are working with the Fraunhofer Institute, among others, on the development of the “Hyland” **hydrogen infrastructure project**.
- In Sweden, the testing of a **battery-operated vehicle** in daily operation has provided positive results: five electric vehicles will be added at the end of 2022.



### Turning less into more – the Green Collective Initiative

Shared vehicles  
+ combined collection routes  
= fewer climate-damaging emissions and safer cities due to reduced traffic.

That is the calculation of the Green Collective Initiative of PreZero in the Netherlands, the waste management company Renewi

and other providers for the industrial waste disposal of their customers. The collection traffic in twelve cities has already been reduced by around 50% as a result. Every 100 kilometers driven less lead to an average **saving of up to 160 kg of CO<sub>2</sub>**. By the end of 2023, at least 30 urbanizations will be part of the initiative.

# Employees

For a cleaner tomorrow, we as responsible employers create the basis for future-oriented thinking in an attractive work environment.

ALWAYS  
SUPPORTING  
EMPLOYEES



## What we have set out to do

Our employees, who mainly do operational work, i.e. collecting or sorting, are making a significant contribution to the material value change. We want to fulfill our responsibility to them by offering room for development with the right to have a say and an attractive salary. We also want to provide a safe and healthy work environment and to enable our employees in pursuing a good work-life balance.

For the key topic 'employees', the following action areas were defined: We will support our employees in a participatory corporate culture and offer them long-term **prospects**. We will also remain committed to their **health, safety** and **well-being**. The focus here will be on reducing work accidents. We will **deal with each other in an appreciative way**, starting with recruitment and onboarding. **Fairness, equal opportunities** and **diversity** are essential for us. We will promote these aspects, for example, through international exchanges and structured salaries.

## How we manage our projects

The HR departments in the national companies are responsible for their employees. They are in regular exchange with the country partners of the international HR department. The HR departments are in contact with the departments of CSR, International Operational Functions, and Legal and Compliance. Together, we develop targets that the national companies implement nationally.

The Health and Safety department coordinates the topic of occupational health and safety. In 2022, an international accident reporting process has been developed jointly, which allows us to learn from each other and derive preventative measures. Our Chief HR Officer is responsible for the topic of diversity and equal opportunities.

The following, jointly developed principle of corporate responsibility applies to all PreZero employees, as they are part of the Schwarz Group: "We comply with applicable laws and internal policies." By joining the

UN Global Compact as one, we also show our commitment to the principles of responsible, sustainable corporate management. We ensure compliance accordingly through our training, compliance management system and complaints tool.

As of the end of 2020, we expect all business partners to comply with our Code of Conduct and, thereby, to comply with established standards to reduce negative environmental and social impacts along the supply chain and in production.





HOW WE VALUE OUR EMPLOYEES

## Values and change

Our employees are the foundation of our vision. We show them our appreciation and respect. The challenge? Our strong growth.



### Our growing PreZero world

The number of our employees has increased seven-fold in the last two years. In 2021 alone, 7,200 new employees joined us in Germany, Sweden, the Netherlands, Poland and Luxembourg as a result of our SUEZ integration. In the same year, around 16,000

new colleagues joined us in Spain and Portugal – from former Cespa and Ferrovial Services. Our task is therefore not only a sustainable transformation, but also their integration into our PreZero world. That is why our post-merger integration (PMI), managed by the HR departments of the affected national companies, is based on three pillars:

**Inform:** We communicate transparently, clearly and comprehensively about PreZero in various formats, such as via the intranet or our social media channels.

**Involve:** We teach about our values in workshops. Every department has its own roadmap, supported by the HR departments. We carry out employee surveys about satisfaction and integration.

**Integrate:** Our training, whether it is digital or in person, ensures that employees can find their way around their new environment safely and get to know structures and processes.

### Our PreMag employee magazine

In spring 2022, as part of our PMI, we sent out our second PreMag magazine to all our employees.

It included insights into new locations, showed the voluntary work of employees and presented our partnership with the WWF. Female colleagues who work in professions that are often still considered to be “a man’s thing” also had their say.

Our PreMag comes in an envelope made of silphium paper and is printed on FSC-certified recycled paper. We know that producing and delivering it causes emissions, but we have deliberately chosen this communication channel to make sure we reach every employee.



## Strengths and opportunities

**What it is about:** We comply with all statutory regulations in dealing with employees. However, we want to anchor social compliance even more firmly in the companies.

**How we approached it:** In 2021, we conducted 90-minute interviews with significant contacts in our, then, eight national companies, and asked them where we are good at “dealing with employees” and where we could improve. The topics: health and safety at the workplace, working hours, remuneration, equal rights,

employee representation and collective bargaining, complaint mechanisms, training and development, and advisory services. The results were also incorporated into our action areas.

**Results:** Three areas were prioritized, based on the needs of the employees in the national companies:

- Developing international training and development programs
- Developing benefit programs (advice services for employees) in the national companies
- Raising awareness of the complaint management system

### IMPROVEMENT AREAS FOR EMPLOYEES



### NEWS TICKER

+++ **Always ready to talk** +++ In the Netherlands, six employee relations consultants are always available as conversation partners for their colleagues. Three topics relating to sustainable employment are focused on every year – in 2022 the focus was on vitality, future talks for managers and perspectives for people over 60.



Employees at PreZero Spain get involved in projects of their own choosing – PreZero supports them through additional contributions.

## Practicing sustainability

Our employees are already helping to increase sustainability through their work. To motivate and empower them even more, the CSR departments worked together to develop the **CSR Compass**, a reference guide that shows responsibilities, processes, etc., to ensure a common understanding. The CSR Compass has been available on the intranet, amongst other places, since the fourth quarter of 2022.

We also want to support our employees in being **sustainable in their private lives**. An example of this is *Súmate*, a PreZero social action program in Spain, where employees can vote for projects they want to support by donating a fixed amount from their salary. PreZero doubles their donation.



# Partnerships and Innovation

For a cleaner tomorrow, we are developing cross-sector approaches together with our partners and actively contribute to innovative recycling solutions as a driving force.



MAKING  
PROGRESS  
TOGETHER



## What we have set out to do

We use a combination of partnerships and innovation to find new approaches to efficient recycling management and to closing loops. Only collaborating with others will result in more holistic solutions and innovative processes for the circular economy, which will, in turn, lead to new partnerships. That has a positive effect on our common sustainability strategy: we can promote the circular economy and climate protection and are able to offer a future-oriented working environment.

We have defined action areas and want to use these as the basis for advancing our key topics: We work in cross-industry **partnerships** to look for new solutions to close recycling loops. To do this, we exchange ideas with business partners, associations, initiatives or NGOs. We also advance **innovations** in all phases of the value chain – within our own companies and with customers and partners. However, we not only want to establish sustainable business models, but we also want to fulfill our **function as a social role model for sustainable action**. For this reason, we are actively involved in inclusion projects, donations and support campaigns in cities and municipalities. We are also addressing all of these action points in a holistic way **together with our partner WWF Germany**.

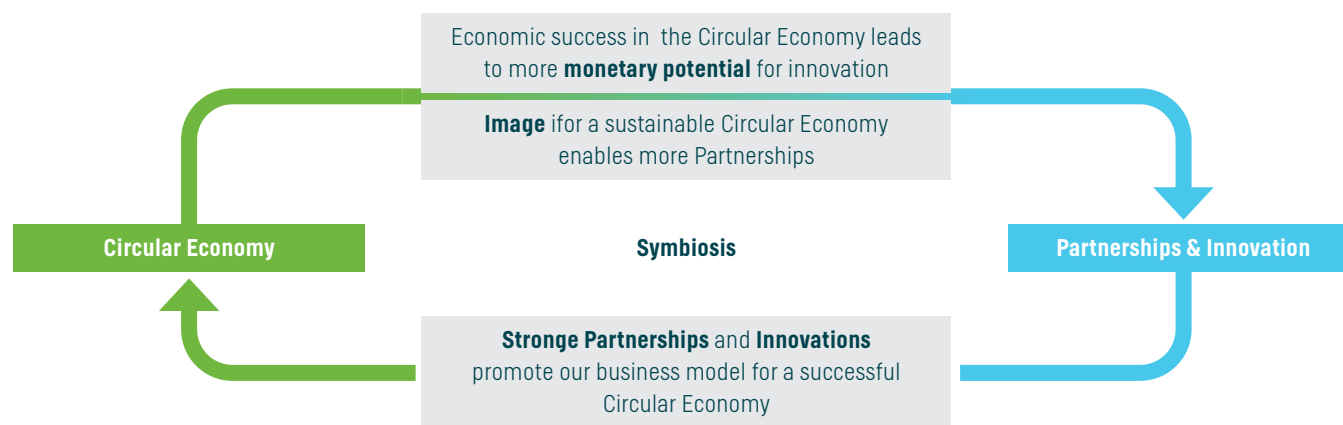
## How we manage our projects

The companies of the PreZero Group are currently developing common targets for all action areas which will be implemented by putting national measures in place. Additionally, the national companies are setting national targets. The Innovation department and the International Operational Functions coordinate the search for new technologies and business models at the international level. Thereby the digitalization of processes is always considered.

We remain in constant dialogue with our stakeholders in a variety of ways. Their expectations, among other things, are incorporated into the sustainability strategy which is being developed.

In terms of our social commitment, the Marketing and CSR departments have developed a donation and sponsorship policy accordingly. The national companies are very active in supporting local social and ecological projects. International activities, e.g. our partnership with the WWF, is coordinated by the CSR department as a service provider.

### SYMBIOSIS OF PARTNERSHIPS AND INNOVATION



HOW PARTNERSHIPS MAKE A DIFFERENCE

## Together we get things done

More expertise and more resources: Having good partners enables us to work even more effectively and to inspire people for change.



### Together against plastic waste

Since 2015, together with WWF Germany, we have been fighting against ghost nets and against the entry of plastic waste into the oceans. Together, we want to strategically promote sustainable business practices and to firmly anchor sustainability in society and politics. In 2020, the partnership was extended by five years and set up internationally. In 10 national companies, we plan to work with the WWF on national issues. WWF managers are coordinating the collaborations. This works holistically via five components:

Caption: PreZero and the WWF during their joint recovery of ghost nets near the island of Rügen. © Axel Bahr

## 1 Projects

We provide expertise and financial support for the recovery of **ghost nets from the Baltic Sea**. Around 10,000 plastic fishing nets end up in the inland sea every year and endanger the ecosystem. Since 2018, we have been helping the WWF to develop a waste management system on the islands of **Phu Quoc in Vietnam** and **Koh Libong in Thailand**. Most of the world's plastic enters the oceans via Southeast Asia due to a lack of waste prevention and collection.



## 2 Knowledge exchange

We mirror developments like [> silphium paper](#) or the [> Zero Waste DIN Spec](#) with the WWF. We support WWF projects and studies with our expertise, for example, the [> WWF plastic study "Packaging turnaround now"](#) in 2022. It shows how packaging waste can be significantly reduced by 2040. We also take part in campaigns like the **Earth Hour**.

## 3 Political cooperation

Together with the WWF, we engage in **dialogues with politicians** and make demands, such as the **development of minimum standards for recyclability**. We also presented our discussion paper [> "Packaging turnaround now"](#) at the IFAT in Munich. Together with the WWF, we also got involved in the [> Plastic Resolution](#). This demand to the United Nations Environment Assembly (UNEA) for a treaty against plastic pollution was agreed upon unanimously at the beginning of March 2022. It will now be developed further with all stakeholders until the end of 2024.

## 4 Communication

We post together on social media or publish advertisements and have also created a partnership brochure together.

## 5 Donations

We collect donations for the work of the WWF via special campaigns. For example, our 2021 Christmas charity campaign raised EUR 10,000.

## Better together

PreZero helps people in difficult life situations and supports the occupational integration of people with disabilities. An example of this is the PreZero Jesteśmy z Tobą Foundation in Poland. Since 2013, it has been enabling seriously ill people to access treatment or rehabilitation through various projects and support programs and helps people in need that have been affected by illness, accidents or natural disasters. This non-profit organization is also committed to tackling the social and occupational exclusion of people with disabilities. It assists them in obtaining professional qualifications by offering courses and supports their job search.

### NEWS TICKER

+++ **Sports partnerships** +++ We engage in a sustainability partnership with TSG Hoffenheim for the **PreZero Arena**, we are waste disposal partners for the **Allianz Arena**, and have been advising the RB Leipzig soccer club on future-oriented management of recyclables for its **Red Bull Arena** since 2022. PreZero in Poland is also an active sponsor of the **Grand Prix for the Polish volleyball league** and conducts on-site education on the circular economy.



HOW INNOVATION MAKES A DIFFERENCE

## Today for the future

We want to bring about a material value change – economically and socially. We are realizing this vision using innovative technologies.



### Wind of change

In Spain, the proportion of wind energy in the overall generation of power has risen steadily. In 2021, it amounted to a quarter. This means that old, inefficient or defective wind turbines have to keep being replaced. To advance the circular economy in the wind energy sector, we are planning to build a recycling plant for wind turbine blades together with the companies Endesa, GE Renewable Energy and its subsidiary LM Wind Power. Commissioning of the plant in the northern province of Castile and León is planned for 2024.

The aim is to recycle more than 6,000 metric tons of glass fiber and carbon fiber per year from the wind turbine blades for the wind energy, construction or ceramics sectors. With this new, innovative business area, PreZero will tackle the challenge of recycling thermoset composite materials from wind farms.

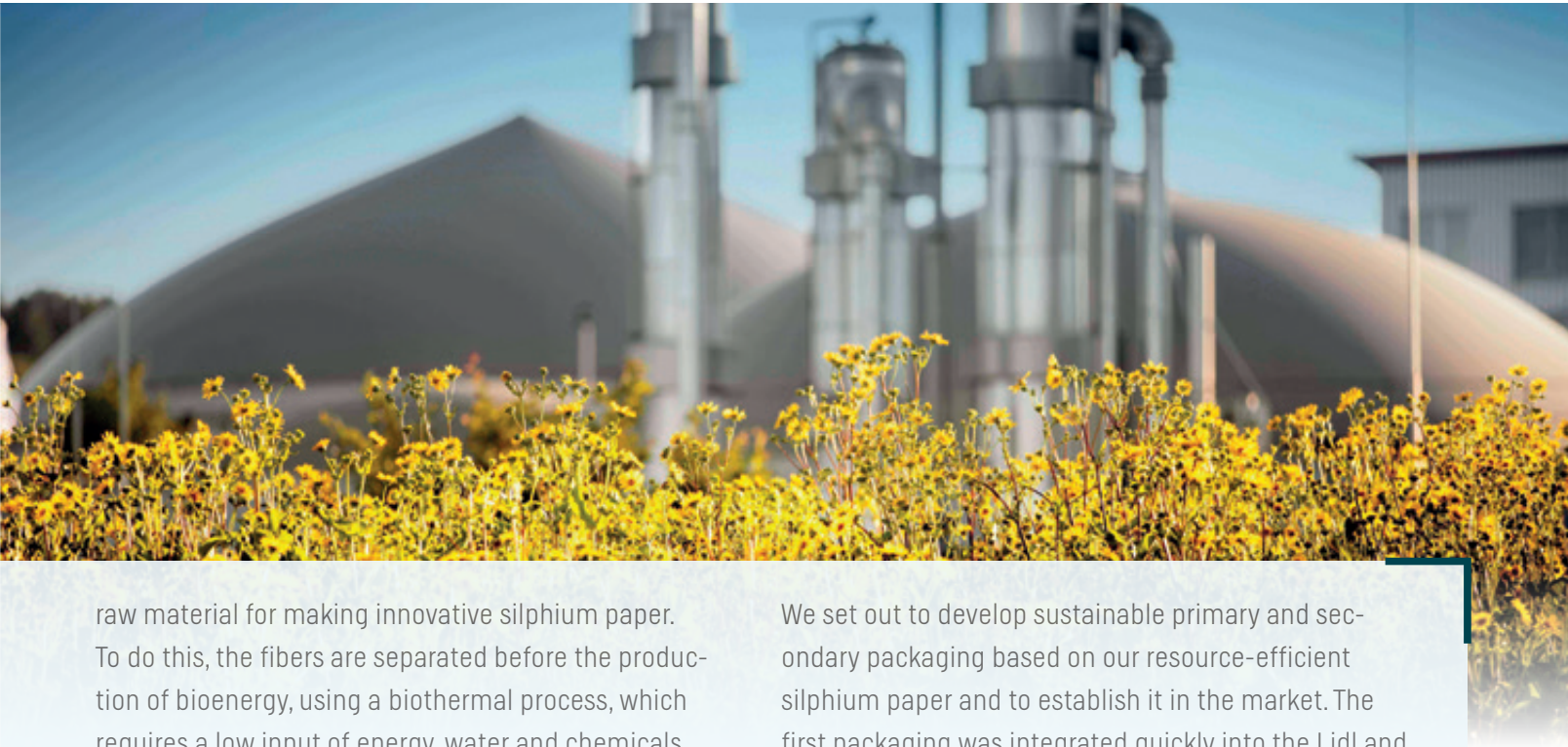
Glass and carbon fibers can be obtained for the wind energy, construction or ceramics sectors from rotor blades of wind turbines.



Less energy use and a renewable raw material for packaging: the silphium plant makes it possible.

### Pre-thinking packaging

Up until now, the production of paper has involved a high use of energy, water and chemicals. The logging also endangers the forest ecosystem. Our OutNature brand has therefore specialized in sustainable fiber and paper products, based on the Danube Silphium energy plant. This winter-hardy perennial is insect friendly, and its dense roots protect the ground from erosion. The use of pesticides is virtually unnecessary. Up to now, the silphium plant has primarily been used as an energy crop for producing biogas. OutNature now also uses the plant as a renewable



raw material for making innovative silphium paper. To do this, the fibers are separated before the production of bioenergy, using a biothermal process, which requires a low input of energy, water and chemicals. The cultivation, fiber processing and paper production all take place in Germany. This reduces transportation routes and strengthens local value creation. The positive climate footprint for the silphium plant fibers was officially confirmed in mid-2021 in an ecological balance sheet issued by Fraunhofer UMSICHT.

OutNature uses the plant as a renewable raw material for making innovative silphium paper.



We set out to develop sustainable primary and secondary packaging based on our resource-efficient silphium paper and to establish it in the market. The first packaging was integrated quickly into the Lidl and Kaufland assortments. Consumer goods manufacturer Procter & Gamble (P&G) became another key partner alongside us. P&G wants to become “net zero” by 2040 – and will also need innovative packaging to do this. The first displays of silphium-based P&G brands Gillette and Always have been available in Lidl and Kaufland since the end of 2021.



**In the USA, PreZero recycles organic waste every day to keep it in the loop. The use of black soldier fly larvae on an industrial scale creates protein-rich insect protein as an alternative to fishmeal and provides insect oil as a more sustainable palm oil substitute for animal feed production or nutrient-rich fertilizer.**

INTERVIEW

# „We can shape sustainability together“

PreZero is currently developing its sustainability strategy. Team Lead CSR Anna Frankenberg reveals what drives PreZero, what the challenges are and what the next steps look like.

*What drives PreZero when it comes to sustainability?*

*— Anna Frankenberg:* Our focus is on the circular economy in our business activities as well as on the needs of our customers and business partners in terms of environmental and social issues. New regulations, for example, for the supply chain or for European reporting are changing the conditions we work in. We therefore need to see sustainability as an integral part of our corporate strategy. What can we influence as a company? What has an impact on our business model? These are the questions we have to ask ourselves.



Team Lead  
CSR International

Anna Frankenberg joined PreZero in 2019. Prior to this, the business economist worked at Bildungscampus in Heilbronn, where she managed projects to strengthen strategic partnerships with European companies. She gained further experience as a teacher in Uganda and by working on a project for sustainable tourism.



**Carbon footprint and materiality analysis as well as key topics and action areas – all done. So what is next?**

**\_Anna Frankenberg:** We want to use our common strategy to make sustainability scalable and to implement it in every PreZero company. In 2023, we will report in line with the Global Reporting Initiative standard for the first time. That is why we are developing SMART targets together for our action areas.

**How challenging is the diversity of the national companies – and the growth of PreZero?**

**\_Anna Frankenberg:** It is a challenge to develop standardized indicators to render the contribution made by

different national companies measurable, and to connect all the relevant departments with each other. I am delighted that numerous sustainability measures and projects have already been initiated at the national level. However, it is also clear that our huge growth to 30,000 employees in eleven countries is inevitably having an impact on key topics, targets and our carbon footprint.

**And where do you place the focus in this challenge?**

**\_Anna Frankenberg:** What is most challenging is to understand the different dimensions of sustainability. That is why we want to keep learning from each other and grow together as a company.

# Key figures of the 2021 fiscal year<sup>1</sup>

## Circular Economy

**53** sorting and recycling facilities

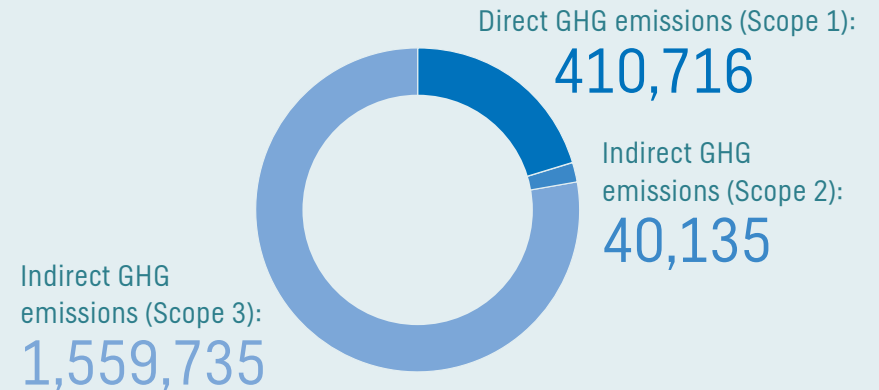
**> 150,000** metric tons  
annual capacity for the production  
of plastic recyclates

**684,000** metric tons  
annual capacity for the sorting of  
lightweight packaging (LWP)

## Climate Protection

Volume of greenhouse gas emissions according to the GHG Protocol  
(in metric tons of CO<sub>2</sub> equivalent<sup>2, 3</sup>):

**2,010,586** GHG emissions in total



<sup>1</sup> Due to PreZero's inorganic growth, not all locations are currently included in the data.

<sup>2</sup> Analyzed sources for the emission factors: International organizations (e.g., IEA, IPCC), LCA databases (e.g., Ecoinvent), diff. national institutions (e.g., DBEIS / DEFRA), and industrial associations and organizations (e.g., PlasticsEurope, FEFCO).

<sup>3</sup> All locations that were part of PreZero for the complete 2021 fiscal year are included in the corporate carbon footprint.

## Employees<sup>4</sup>

**45.4** years average age

**54** nationalities

**8.3%** absence rate

## Partnerships and Innovation

**100** active partnerships  
(associations, organizations or working groups)

**€ 1,439,641**  
expenditure for donations and sponsorship<sup>5</sup>

<sup>4</sup> As of Q2/2022.

<sup>5</sup> Donations and sponsorship agreements internationally, with a focus on local and regional projects (focus: environment, education, social projects).





# Legal notice

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## **Concept, text and layout**

Accenture GmbH Kronberg im Taunus  
Artelier

## **Picture credits**

All images from PreZero

## **Content**

Status as of Q4 2022

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