



e-systems Group

ACTING CONSCIOUSLY

Carbon Footprint Report 2020/21





Acting consciously

The companies of the e-systems¹ group support their customers² in selling non-food products in a legally compliant manner. National and European legislation is subject to continuous changes, which is a major challenge for most economic actors. The aim of the e-systems is to support the respective actors in this complexity in a goal-oriented and professional way.

The three e-systems companies, take-e-way GmbH, get-e-right GmbH and trade-e-bility GmbH, support over 7,000 customers worldwide with an international team of around 90 employees. The e-systems companies, offer solutions in the area of product compliance on the marketability of products (trade-e-bility), extended producer responsibility (take-e-way) and the associated authorisation services (get-e-right).

Responsibility is not only an elementary part of the e-systems services, but also a fundamental value of the group of companies. In addition to the increasing legal requirements on a European and National level, it is recognised that environmental awareness is increasing within the corporate family and among business partners as well as the society in general. This gave rise to the idea of examining the CO₂ footprint of the e-systems, identifying approaches to reducing CO₂ emissions and implementing appropriate measures so that the effects of the e-systems activities on the climate and the environment are minimised as much as possible.

In doing so, the e-systems is acting according to the following carbon footprint guiding principle:

„We are aware of the importance of climate protection. We would like to make a contribution and are embarking on our path to climate neutrality through environmentally friendly business practices.“

The slogan **acting consciously** emphasizes the proactive actions of the e-systems in relation to protecting the climate. Climate change represents both risks and opportunities for the three companies. Extreme weather events, for example, are viewed as a direct risk. This could, for example, jeopardise the availability of employees. In addition, it is considered an indirect risk that the customers of the e-systems are increasingly affected by the effects of climate change due to their global supply chains. At the same time, climate change also is related to opportunities. It is assumed that the importance of climate-friendly corporate management is becoming increasingly important and that these issues will be incorporated even more into European and National law. As a compliance partner and consulting company, this also provides the opportunity to develop new business models and to support customers in fulfilling and implementing future as well as increasingly demanding environmental requirements. In addition, efforts to protect the climate are also seen as an opportunity for future, but also improved customer and business partner relationships.

This report, primarily, presents the results of the carbon footprint accounting for the years 2020 and 2021 and describes measures of the e-systems with the aim at contributing to the protection of the climate.

1) The designation the e-systems or the e-systems group, consisting of the companies take-e-way GmbH, get-e-right GmbH and trade-e-bility GmbH, reflects the legal entity e-systems Holding GmbH & Co. KG.
2) The e-systems does not use gender-specific language solely for the purpose of a better readability. All personal designations are basically aimed at all people.



Results of the CO₂-Emissions Data of the e-systems Group

The determination of the CO₂ emissions as well as the reporting is based on the Greenhouse Gas Protocol. The Greenhouse Gas Protocol defines a standardised framework in order to, for example, differentiate between direct and indirect emission sources and to increase transparency. Thus, three scopes are defined. Scope 1 looks at direct emissions that come from the company's sources. Scope 2 emissions are indirect greenhouse gas emissions, such as the purchase of energy. Scope 3 includes other indirect emissions that result from the company's other business activities. In this report, the results from the base year 2019³ are used for comparisons with the years 2020 and 2021.

In 2020, the total emissions of the e-systems group amounted to 84.13 tCO₂e⁴. A comparison with the base year shows that a reduction of around 31 percent was achieved. In 2021, the group's greenhouse gas emissions increased by 0.54 tCO₂e compared to 2020. Thus, the 84.67 tCO₂e emitted in 2021 corresponds to a reduction of a good 30 percent compared to the baseline year.

In 2021, the emissions were distributed among the scopes as follows: 17.33 tCO₂e were emitted in Scope 1, 21.76 tCO₂e in Scope 2 and 45.58 tCO₂e in Scope 3.

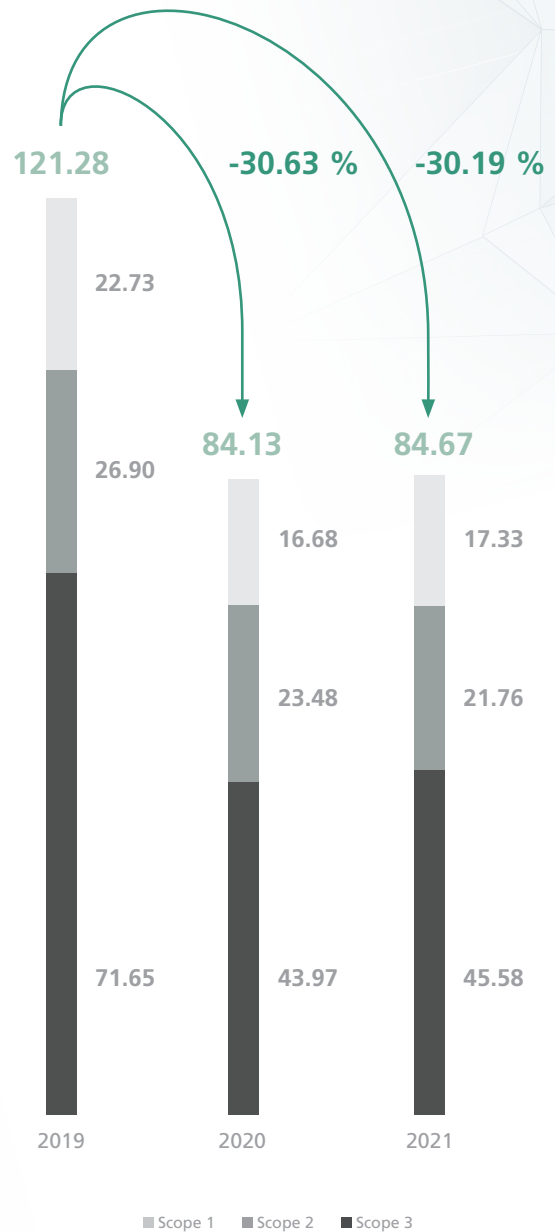


Figure 1: Comparison of CO₂ emissions between the years 2019, 2020 and 2021 in tCO₂e

³) In 2020, the first two CO₂ balance sheets for the e-systems were calculated for 2018 and 2019. Due to the starting point in 2020, the year 2019 was selected as the base year.
⁴) CO₂ equivalent (CO₂e) indicates how much a certain mass of a greenhouse gas contributes to global warming compared to the same mass of CO₂. tCO₂e indicates this in tons.



Results of the CO₂-Emissions Data of the e-systems Group

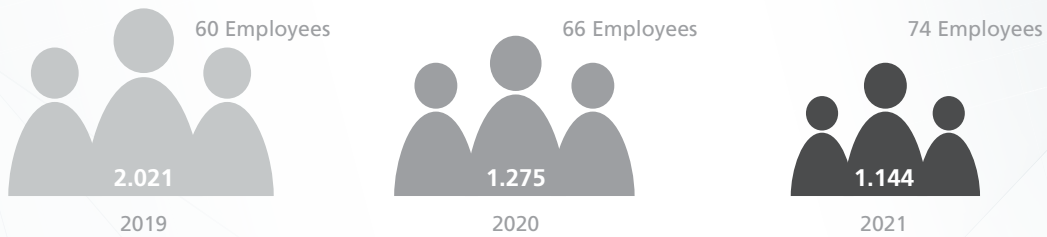


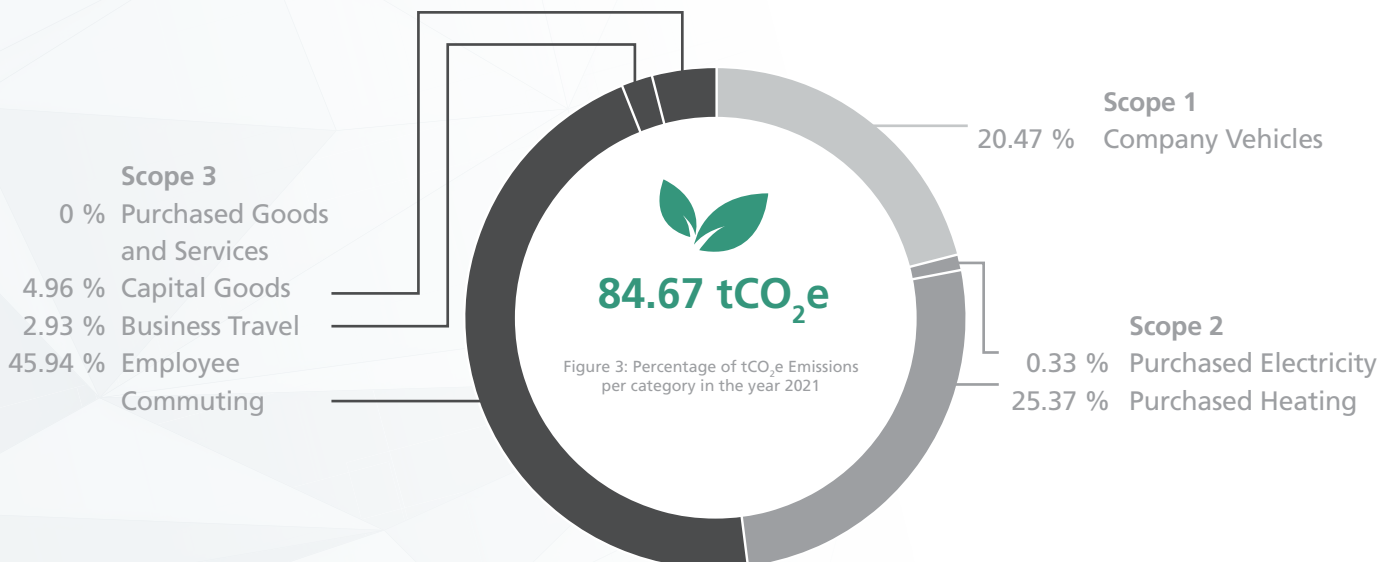
Figure 2: Emissions 2019, 2020 und 2021 in tCO₂e per employee

The emissions from 2021 were 1.144 tCO₂e per person correspondingly, if set in relation to the number of employees.

Figures 1 and 2 demonstrate that the e-systems group has been able to record a reduction in emissions.

The positive development is mainly due to the merger of the e-systems locations and the decline in business trips due to the corona pandemic.

Figure 3 shows that the mobility sector (employee commuting, company vehicles and business travel) emitted the majority of greenhouse gas emissions with a total of approximately 69 percent of the total emissions. With around 26 percent of the total emissions, purchased energy also played a significant role. The remaining, approximately, 5 percent was emitted by purchasing capital goods.





SCOPE 1 Company Vehicles

Within Scope 1, the e-systems companies take the category company vehicles into account. Contrary to the specifications of the Greenhouse Gas Protocol, the emissions from the leased vehicles are also part of the analysis. The decision was made to also include the associated emissions in the compensation measures and to create an incentive for reduction measures for the leased vehicles.

In 2020, the e-systems emitted emissions of 16.68 tCO₂e in the category company vehicles. This was a reduction of about 27 percent compared to the base year. In 2021, on the other hand, the e-systems recorded a slight increase compared to the previous year with emissions of 17.33 tCO₂e. In comparison to the base year, a reduction of 24 percent was still achieved in 2021.

The reductions in 2020 were achieved by getting rid of a company vehicle during the year. In addition, in 2020, another vehicle was no longer taken into account, because this vehicle was transferred to a company that does not belong to the e-systems group. In 2021, the small increase of around 4 percent is mainly because of the addition of three company vehicles. The slight increase is due to the fact that although one vehicle was sold with higher consumption because of conventional drive technology, two of the new vehicles are equipped with alternative drive technologies. A hybrid vehicle and a vehicle powered by natural gas were added to the e-systems fleet.

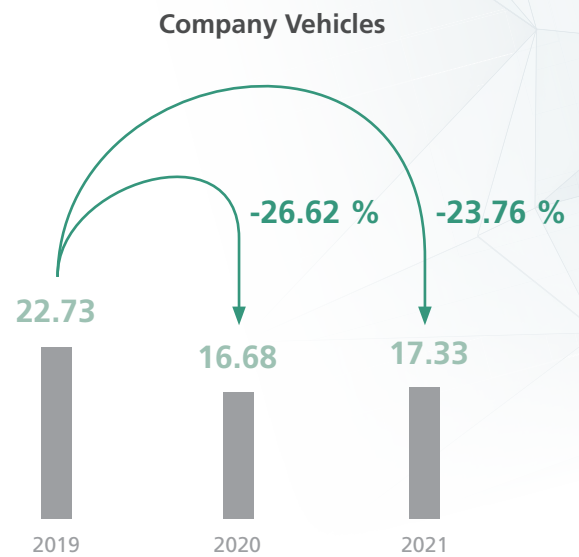


Figure 4: Scope 1 emissions of the e-systems group in the years 2019, 2020 and 2021 in tCO₂e



SCOPE 2

Purchased Electricity and Heating

Scope 2 includes indirect emissions from purchased energy. For the e-systems group, consideration of electrical energy and heat is mandatory.

In 2020, 23.48 tCO₂e were emitted by the purchase of energy. A comparison with the base year shows that a reduction of around 13 percent was achieved. In 2021, energy consumption was further reduced to 21.76 tCO₂e, so that compared to the base year an overall reduction of around 19 percent was recorded.

The positive development in 2020 is primarily the result of the change at the Eidelstedt site from conventional electricity to electricity from renewable energy sources. The increased home office activity of employees has also had a beneficial effect on the company's energy consumption. The progress in 2021 can be derived from the merger of the company sites.⁵ It is worth mentioning that most of the emissions are emitted by the district heating supply for the office building.

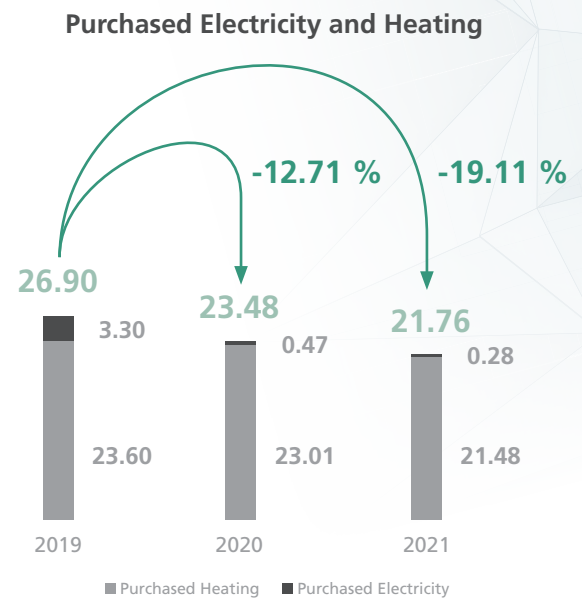


Figure 5: Scope 2 emissions of the e-systems group in the years 2019, 2020 and 2021 in tCO₂e

⁵ On March 31, 2021, trade-e-bility GmbH moved to the Wandsbek location. As a result, all companies of the e-systems group are now located at one site.



SCOPE 3 Other CO₂ Emissions

In addition to the Scope 1 and Scope 2 emissions, the e-systems also took Scope 3 emissions into consideration. This step made it possible to take into account further indirect emissions from the value chain that were caused by the business activities of the e-systems companies.

In 2020, the e-systems companies accounted for a total of 43.97 tCO₂e emissions in Scope 3 (a decrease of about 39 percent compared to the base year) and in 2021 a total of 45.58 tCO₂e (a decrease of approximately 36 percent in compared to the base year). The individual Scope 3 categories and their changes in terms of the emissions emitted are presented below, which can also be seen in figure 6.

In the category **purchased goods and services**, emissions of 0.54 tCO₂e were emitted in 2020 and were even completely avoided in 2021. The significant reduction, of about 64 percent, in comparison between 2020 and the base year is due to a lower paper consumption. The measure of double-sided printing has proven to be helpful because of the reduction achieved in 2020. In 2021, climate-neutral paper was used, which resulted in the complete avoidance of CO₂ emissions in this category.

The e-systems companies recorded emissions of 2.01 tCO₂e in the category **capital goods** in 2020. This is an increase of approximately 21 percent compared to the base year. In contrast, CO₂ emissions of 4.20 tCO₂e were emitted in 2021. This is an increase of approximately 153 percent compared to the base year.

The increase in both years is due to the need to purchase new office equipment. The rise of about 109 percent between 2020 and 2021 is also because of the same reason.

Due to the corona pandemic, **business travel** decreased significantly in both years 2020 and 2021 compared to the base year. In 2020, the e-systems was able to show a reduction of approximately 61 percent compared to the base year having a value of 8.59 tCO₂e and in 2021 even around 89 percent less emissions than in the base year having a value of 2.48 tCO₂e. Even though measures such as the integration of climate protection aspects in the travel guideline have been completed, these could not have any quantifiable effects due to the pandemic. The decline from 2020 to 2021 of around 71 percent is also caused by the effects of the pandemic.

In addition to the category business travel, the e-systems companies were also able to significantly reduce emissions in the category **employee commuting** in the years 2020 and 2021. In 2020, the e-systems emitted emissions of 32.83 tCO₂e (approximately -29 percent compared to the base year) and in 2021 emissions of 38.90 tCO₂e (approximately -16 percent compared to the base year). The above-described development can also not be explained by individual measures. It is related to many employees working in the home office due to the corona pandemic. The increase from 2020 to 2021 of around 19 percent is linked to the willingness of employees to participate in a survey on employees' commutes and the associated extrapolation. It is also assumed that the increasing number of employees has led to an increase in emissions.



SCOPE 3 Other CO₂ Emissions

Definition of the Scope 3 Categories

For the above presented categories, boundaries where defined. These are described in more detail below.

Purchased Goods and Services: Exclusive consideration of printer paper consumption.

Capital Goods: Goods and investment projects starting with a purchase value of EUR 800.00.

Business Travel: All business trips by employees outside the city in which the company is based. Trips with company vehicles have already been taken into account in Scope 1 and are therefore not considered here.

Employee Commuting: All journeys made by employees between their place of residence and the company's place of work are taken into account in this category. Trips with company vehicles have already been taken into account in Scope 1 and are therefore not considered here.

Other CO₂ Emissions

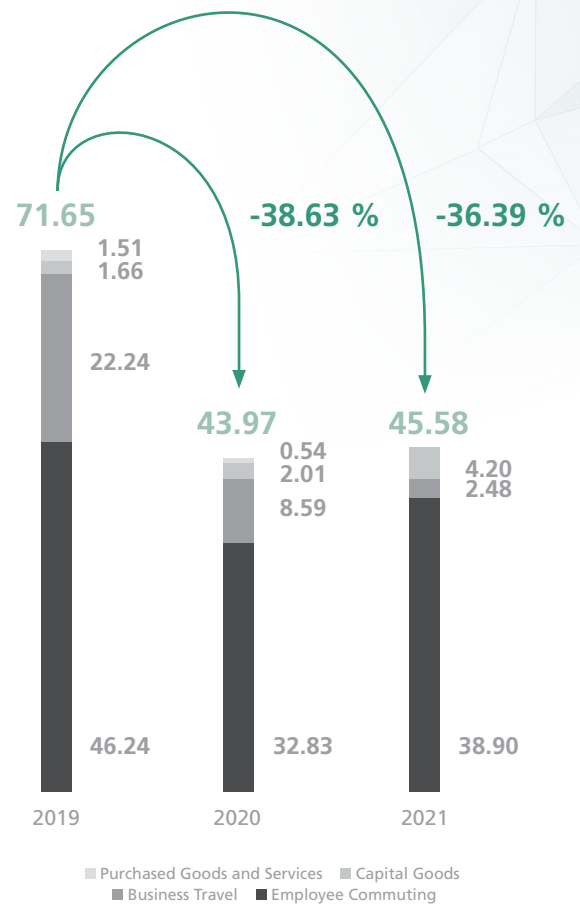


Figure 6: Scope 3 emissions of the e-systems group in the years 2019, 2020 and 2021 in tCO₂e



Method of Carbon Footprint Accounting

By preparing the annual Carbon Footprint Report, the e-systems documents the greenhouse gas emissions emitted by the business activities of its companies. The procedure used is based on the specifications of the Greenhouse Gas Protocol, a standard for accounting and reporting greenhouse gas emissions.

Scope of the Report

In the years 2020 and 2021, the e-systems group decided to set the limits for carbon accounting at the company's locations. Thus, with the aim to create more consistency, the same approach was chosen as in 2019, the base year. In contrast to the methodology of the equity share approach⁶, the greenhouse gas emissions of a sub-tenant were taken also into account. By doing so, the e-systems exceeds the scope of the Greenhouse Gas Protocol. In 2020, take-e-way GmbH, get-e-right GmbH and another sub-tenant⁷ were based at the Wandsbek location. trade-e-bility GmbH was still based at the Eidelstedt site in 2020. However, this changed in 2021 when trade-e-bility GmbH moved to the Wandsbek location. After trade-e-bility GmbH moved, only the emissions from the Wandsbek site were considered.

Covered Emissions and Categories

The Scope 1, Scope 2 and Scope 3 categories shown in Figure 7 were taken into account. Further Scope 1 categories could be excluded, as these are not relevant and applicable for the business activities of the e-systems group of companies. When selecting Scope 3 categories, the same categories were used as for 2019, the base year. These were chosen because they were considered to be highly relevant to the overall balance or because great potential for reduction measures were identified. In the following years, the inclusion of further Scope 3 categories will be examined again.



Figure 7: Covered categories

6) According to the equity share approach, the greenhouse gases of an operation are assigned to the company depending on the equity ratio or the share equity stake.
7) The emissions of VERE e.V. were included at the Wandsbek site in 2020 and 2021.



Method of Carbon Footprint Accounting

Data Quality

In most cases, billing and consumption values were used as the basis for data collection. In a few categories, however, an extrapolation or estimate had to be used in order to be able to create a more holistic value. In particular, an extrapolation had to be carried out for the Scope 3 category of **employee commuting**, since not all employees were able to take part in the related survey.

In addition, in the Scope 3 category for **capital goods**, the weight had to be estimated to calculate the emission values if no weight information was available from the manufacturer. Furthermore, the emissions for this category were amortised over five years to ensure comparability for a longer period of time.

Due to the lack of data availability at the time, the data was collected for the Eidelstedt location in the category **company vehicles** for the year 2020, an estimate had to be used for one vehicle.

The emissions in the category **purchased heating** were calculated for the Wandsbek location on the basis of the energy certificate for both years 2020 and 2021. Due to an update of the energy certificate, there is a slight increase in the area of purchased heating for the Wandsbek location. In 2021, for the period before the move of trade-e-bility GmbH to the Wandsbek side, the calculation of the emissions in the category purchased heating was also based on the energy certificate for the Eidelstedt location.

Examination and Confirmation of the CO₂ Balance

Fraunhofer UMSICHT carried out the examination and confirmation of the carbon footprint accounting for the years 2020 and 2021. The CO₂ balance of the entire company group of the Buhck Umweltservices GmbH & Co. KG, a shareholder of the e-systems, was checked and confirmed by the institute with regard to the methodical approach, the CO₂ emission factors and the plausibility.

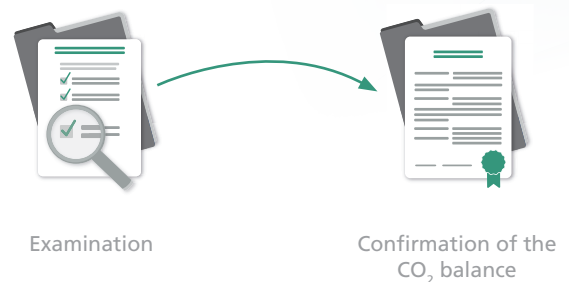


Figure 8: Verification process



Compensation and Reduction Measures

The carbon footprint accounting forms the basis for the identification and implementation of compensation and reduction measures. Thus, they form the path of the e-systems companies towards climate neutrality.

Compensation Measures

The emissions of the e-systems group from Scope 1 and Scope 2 have been offset by compensation measures since 2019. In the base year, 49.63 tCO₂e were compensated. In 2020, fewer compensatory measures were already necessary. As a result, 40.16 tCO₂e were offset in 2020. Even less emissions had to be compensated in 2021, with only 39.09 tCO₂e.

The compensatory measures are carried out by a shareholder of the e-systems, the Buhck Umweltservices GmbH & Co. KG. In order to compensate, CO₂ certificates are purchased annually with the mediation of AQ Green TeC GmbH. By doing so, the e-systems covers emissions from the use of company vehicles and purchased heating as well as electricity. With the generated revenue from the CO₂ certificates, Carbonbay GmbH & Co. KG finances the maintenance and operation of three small hydroelectric power plants in Honduras. These projects have been certified with the Gold Standard⁸.

Promotion of Regional Climate Protection

Climate protection should not only be supported by compensation measures in other parts of the world, but also on a regional level. In order to do so, a shareholder of the e-systems is involved in the renaturation of the Herrenmoor in Schleswig-Holstein, Germany.⁹ The project aims at, among other things, the protection of species typical of raised bogs and the promotion of peat growth by stabilising the water balance. Once renaturation has been completed, around 2,565 tCO₂ can be bound annually.



Figure 9: Annually bound emissions in Herrenmoor after renaturation

⁸ The Gold Standard certifies climate initiatives that, among other things, reduce greenhouse gases. According to the German Environment Agency, this is an important quality standard for climate projects.
⁹ The project is managed by Stiftung Naturschutz Schleswig-Holstein e. V.



Compensation and Reduction Measures

Reduction Measures

Even after three years of carbon footprint accounting, the e-systems group is still at the beginning of its path towards climate neutrality. However, additional measures have been implemented since the publication of the last carbon footprint report.

Measures relating to the Scope 1 category **company vehicles** are presented first. The pool-vehicle of the e-systems group, which was available to employees for customer visits and business activities in and around Hamburg, was sold. However, in order to continue to ensure mobility for these purposes, employees can use car sharing. This measure was implemented in 2021. In addition, employees who are entitled to a company car are offered the option of choosing a hybrid or electric vehicle. Both measures are intended to continuously reduce the CO₂ emissions in Scope 1.

In Scope 2, the Eidelstedt site switched to renewable electricity in 2020 to reduce emissions in the category **purchased electricity**. The Wandsbek site already purchased renewable electricity in 2018 and 2019. A further reduction in the Scope 2 categories of **purchased electricity and heating** was achieved by the relocation of trade-ability GmbH from the Eidelstedt location to the Wandsbek site.

In addition, a measure to promote the conscious use of electricity and heating energy was implemented in 2022. For example, displays were developed and distributed in the office areas that list energy-saving tips for employees. These displays are to be supplemented and revised over time. Employees are also encouraged to participate in this process. This measure aims to achieve savings in both Scope 2 categories.

Additional measures were implemented for Scope 3 categories. Mobile working was introduced due to the corona pandemic, but a long-term solution was developed in spring 2022. All employees of the e-systems companies are now being offered the opportunity to work permanently from home and/or in a mobile office. This measure also has the positive side effect of reducing emissions in the category **employee commuting**. Since October of this year, the use of public transport has also been promoted by subsidising the hvv-Profiticket. The measures listed are intended to continuously reduce emissions in Scope 3.

Independently of the scopes listed above, the e-systems was able to have its environmental management system successfully certified, according to ISO 14001, during the first half of 2022. This step is another major milestone for the three companies of the e-systems group in the efforts to systematically implement environmental, climate change and sustainability issues using a certified management system.



Outlook

The three e-systems companies are aiming at fulfilling their corporate responsibility. In line with the slogan **acting consciously**, the three e-systems companies are proactively pursuing their continuous path to contribute to the protection of the climate and thus keep an eye on the effects of their actions. From the point of view of the e-systems, the commitment to protecting the climate will also play an increasingly important role in the economy, which the three companies want to fulfil at an early stage. The second carbon footprint report is another important step in addition to the ISO 14001 certification and the additional measures implemented. The e-systems is continuously developing and creating a measurable progress on the basis of the CO₂ balance and the carbon footprint reports. It is expected that the reduction successes of the last two years will not continue, as these were also due to the corona pandemic. Thus, an increase in emissions, especially in the category business travel, is expected in the coming years.

The company group aims to implement at least three different measures per year. Selected measures from 2021 were successfully implemented in 2022. The aspirations of the e-systems have already been met for this year.

The implementation of various measures will continue to be examined. Because of the nature of the business activities, opportunities to reduce emissions are seen primarily in Scope 3, besides replacing conventionally powered vehicles with electric vehicles in the company fleet. This also includes measures to increasingly integrate the topic of climate change into the purchasing and selection processes of business partners, bicycle leasing as well as the possibility of having access to a charging infrastructure for electric vehicles in the immediate vicinity of the office building. In addition, service innovations will continue to be pursued that aim to support the e-systems' customers in their efforts to protect the climate and to keep the associated increasing legal complexity as low as possible.