

A hand pouring water into a small green seedling growing from soil. The background is a soft, light grey gradient.

# MetaSystems Sustainability

Progress Report  
2023

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# STATEMENT BY THE MANAGEMENT

3 We are pleased to present our company's inaugural sustainability report, which reflects our ongoing commitment to environmental and social responsibility. As a leading organization in our industry, we recognize the importance of integrating sustainable practices into our business operations and are dedicated to making a positive impact on the world around us. In this report, you will find a comprehensive overview of our sustainability initiatives, including our efforts to reduce carbon emissions, minimize waste, and support the communities in which we operate. We have also outlined our progress towards achieving our sustainability goals and the strategies we have implemented to drive continuous improvement. Despite the challenges posed by the COVID-19 pandemic and supply chain disruptions, we have made substantial achievements in environmental, social, and governance (ESG) development, as evidenced by the key impact areas and highlights featured in the report. We are committed to transparency and accountability in our ESG efforts, and this report is a testament to our dedication to creating a sustainable and responsible business.

4 We believe that open communication and collaboration are essential in advancing our sustainability agenda, and we are committed to listening to and learning from the diverse perspectives of our stakeholders. As we move forward, we remain steadfast in our pursuit of sustainability and will continue to integrate responsible practices into all aspects of our business. We are confident that this report will serve as a valuable tool for our stakeholders to understand our sustainability journey and the steps we are taking to create a more sustainable future. We thank you for your continued support and look forward to furthering our sustainability efforts in the years to come.

**Dr. Andreas Pfuhl**  
Managing Director  
MetaSystems Hard & Software GmbH

**Dr. Thorsten Belz**  
Managing Director  
MetaSystems Probes GmbH



# REPORT SUMMARY

MetaSystems Hard & Software and MetaSystems Probes (in this report referred to as "MetaSystems") develop software for microscopy, integrate imaging systems, and produce DNA probes for fluorescence in situ hybridization (FISH). The headquarters of the two sister companies are in Germany near Heidelberg. Our customers can be found in institutes, hospitals, and universities in over 100 countries around the world.

The publication of MetaSystems' first Sustainability Progress Report establishes a baseline on the companies' sustainable development. Since 2016, MetaSystems has been using locally generated solar energy to power part of its daily business activities. Additionally, changes have been made to the shipping tariff for MetaSystems products and hardware parts so that the carbon emissions produced during shipments are financially offset. The Sustainability Manager officially joined the team in 2021 and has developed a formalized sustainability strategy together with the companies' management.

The MetaSystems Sustainability Strategy (MSS) outlines 7 sustainable development goals and 11 targets, which are based on four topics of concern: climate action, circularity, social responsibility, and governance. The MSS establishes roles and responsibilities for overall management and project development and covers both MetaSystems Hard & Software and MetaSystems Probes. The strategy refers to several international guidelines and protocols on sustainable development, and was created on a voluntary

basis, i.e., prior to legal or industry requirements.

The data presented in this report covers greenhouse gas emissions produced by MetaSystems (Scope 1 and Scope 2 emissions only). During the reporting period (May 2019 to May 2023), MetaSystems' Scope 1 emissions gradually decreased after peaking in 2021, and Scope 2 emissions decreased drastically to almost 0 kg of CO<sub>2</sub>-equivalent (CO<sub>2</sub>-eq). The latter reduction is a result of a change of energy providers in 2021 and the reduced electricity demand due to production of PV solar panels on the company premises. The data required for an accurate calculation of Scope 3 emissions is incomplete and therefore not included in this progress report. Preparations are being made to properly calculate all emission scopes beyond 2024.

Additionally, the data presented in this report also displays business travel and employee commuting statistics (2020 to 2022), financial compensation for emissions from travel (2020 to 2022), and other financial donations (2011 to 2022). Trends in business travel reflects travel restrictions from 2020 to 2021 due to the global Sars-CoV-2 pandemic and rebound efforts in 2022. A regular financial compensation program was established to cover for company-produced emissions in 2022. The data for financially compensating for greenhouse gas emissions produced during business travel is also shown and accounted for in the 2022 financial donations.

The Progress Report also reviews past and ongoing sustainability projects at

MetaSystems. One of the longest and most prominent sustainability projects is the installation of PV solar panels on the company premises. To date, MetaSystems has prevented 184,725 kg of CO<sub>2</sub>-eq from being produced, with a yearly average of approximately 22,000 kg of CO<sub>2</sub>-eq. With the second installation in 2023, the companies are expected to save a further 25,891 kg CO<sub>2</sub>-eq per year. Additionally, MetaSystems has made efforts to provide the company employees with alternative, sustainable transportation options by installing electric charging stations for e-vehicles on site. In 2024, MetaSystems will be switching to an air heat pump system, which is anticipated to drastically reduce the companies' need for natural gas and therefore reduce Scope 1 emissions.

Finally, the Progress Report discusses sustainable development ambitions for 2024 and beyond. The priority for 2024 is to focus on data collection and management for several compatible sustainability targets – particularly data required to more accurately calculate Scope 3 emissions, which are anticipated to be our largest emissions production area. Proper data collection and management is essential for transparent monitoring of sustainable development progress, and therefore a necessity going forward. Sustainable business and commuter travel is a key development area. Another key development area is reviewing alternative and more sustainable shipping options for products and hardware parts. Waste and recycling management is also a focus point for 2024 and beyond.

# METASYSTEMS TIMELINE:

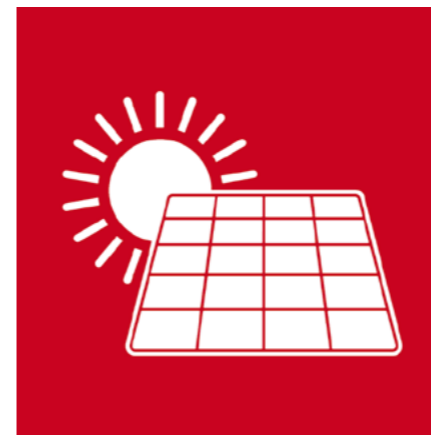
## INTRODUCTION TO SUSTAINABLE DEVELOPMENT

In 2016, MetaSystems installed the first set of PV solar panels on site, officially adding solar energy into the mix of energies used and consumed. In 2021, MetaSystems made two major changes to its business practice, furthering the journey towards sustainable development. First, the companies chose to update shipping processes to be more environmentally conscious, using the UPS "Carbon Neutral" tariff for international shipments to compensate for CO<sub>2</sub> emissions produced. Second, later that year in October MetaSystems officially hired its own Sustainability Manager. In doing so, the companies began to formalize sustainable development and planning into the structural aspects of business operations.

Major tasks included the development of a sustainability strategy to monitor and govern sustainability projects and actions, and preparations for more intensive sustainability data collection to aid in monitoring progress and transparency.

One of the goals of the first two years was to introduce a comprehensive strategy that would assign clear roles and responsibilities to relevant MetaSystems' employees while simultaneously providing a chain of authority and decision making on sustainability choices. It was also essential to identify areas of key concern and development ambition. Throughout the strategy-making process the Sustainability Manager and the Managing Directors identified major topics of concern that would guide the overall direction of sustainable development and target acquisition for the foreseeable future. These targets were selected in a way that encompassed not just environmental goals, but social and governance goals as well.

Upon the completion of the strategy and introduction to corporate management, the remainder of 2023 was spent preparing and beginning the groundwork for achieving several sustainability targets into 2024 and beyond.



# INTRODUCTION TO THE METASYSTEMS SUSTAINABILITY STRATEGY

## PURPOSE

The overall purpose of the MetaSystems Sustainability Strategy (MSS) is to outline and formalize sustainability management at MetaSystems. It was created with key company roles and diverse goals and targets to meet in mind. It has been developed entirely with self-imposed, i.e., voluntary, requirements prior to any legal requirements or industry regulations. The MSS was inspired by and developed in reference to international sustainable development protocols such as the United Nations' Global Compact, the UN's Sustainable Development Goals, and European Union Non-financial Reporting. Additionally, both the Global Reporting Initiative and the Greenhouse Gas Protocol served as the basis for setting up data collection, calculations, and overall management of data.

## SCOPE

The Scope of the MSS includes both MetaSystems Hard & Software and MetaSystems Probes (collectively referred to as "MetaSystems"). Currently, there are no immediate plans to include additional MetaSystems organizations, though this can change at any time.

The MSS defines sustainable development as development that meets the environmental, social, and economic needs of the present without compromising the ability of future generations to meet their own needs (Brundtland Commission 1987, European Commission, United Nations Sustainable Development Agenda). The MSS also considers the scope of sustainability to cover the concept of ESG, i.e., Environment, Social, and Governance, meaning development will consider and include actions that cover a diverse goal and target spectrum.



## ROLES

Roles in the Sustainability Governance and Management structure are broken into four major categories: (1) Managing Directors, (2) the Sustainability Manager, (3) Heads of Department, and (4) Other Colleagues.

The responsibilities of each role are split into two categories: the strategy level (long-term planning concepts) and the project level (short-term project dependent actions).

### (1) Managing Directors

The Managing Directors are responsible at the strategy level for decision-making and target project approval. They are also responsible for overseeing the Sustainability Progress Review. At the project level, they are responsible for collaboration with the Sustainability Manager on target projects when necessary.

#### Managing Directors

**Strategy Level**

- Decision-making
- Target Project Approval
- Progress Review

**Project Level**

- Target Project Collaboration

#### Sustainability Manager

**Strategy Level**

- MSS Implement.
- Research & Expertise
- Development Guidance
- Progress Reporting

**Project Level**

- Target Project Leadership
- Data Collection
- Data Management

#### Heads of Department

**Strategy Level**

- Knowledge of MSS
- Implementation Assistance (Department-specific)

**Project Level**

- Target Project Collaboration
- Data Collection Assistance
- Feedback

#### Other Colleagues

**Strategy Level**

- Knowledge of MSS

**Project Level**

- Assistance with Target Projects Collaboration
- Feedback

### (2) The Sustainability Manager

The Sustainability Manager has most of the responsibility pertaining to our sustainable development. At the strategy level, the position is responsible for overseeing the implementation of the MSS and overall development guidance. The Sustainability Manager is also responsible for creating and managing the annual Sustainability Progress Report for MetaSystems as well as providing all other colleagues with expertise pertaining to sustainability. At the project level, the Sustainability Manager is responsible for the overseeing of all target projects, in addition to data collection and management.

### (3) Heads of Department

The Heads of Department are responsible at the strategy level to be aware of and familiar with the MSS. They may be required to assist the Sustainability Manager in department-specific implementation of the MSS. At the project level they are responsible for collaboration with the Sustainability Manager on target projects when necessary. They may also be required to assist with department-specific data collection. They are also encouraged to share feedback with the Sustainability Manager and Managing Directors on how sustainable development is impacting their departments.

### (4) Other Colleagues

All remaining colleagues are responsible at the strategy level to be aware of and familiar with the MSS. At the project level, they may be responsible for assisting their respective Head of Department and the Sustainability Manager with target projects when necessary. They are also encouraged to share feedback with their Head of Department on how sustainable development is impacting their typical working operations.

## SUSTAINABILITY GOALS AND TARGETS

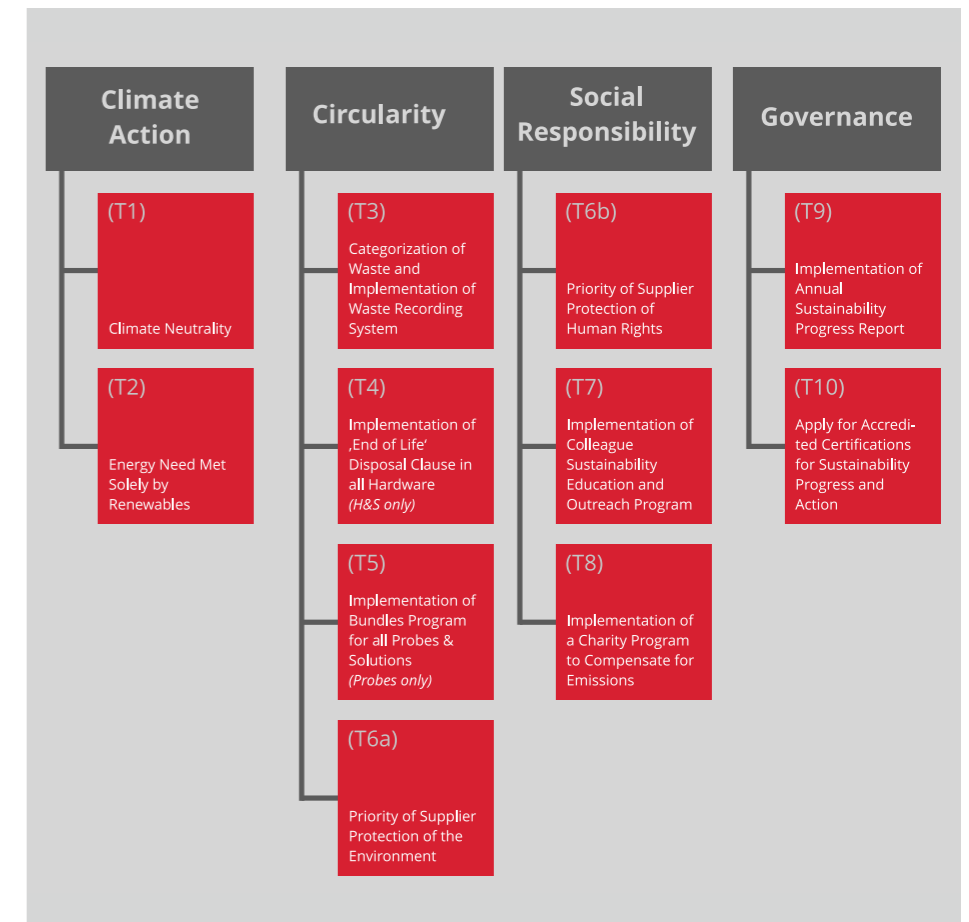
The MSS has identified four topics of concern that we as companies want to address in our sustainable development: Climate Action, Circularity, Social Responsibility, and Governance.

From our topics of concern, we have identified seven broad goals that we plan to work with for the foreseeable future. For Climate Action, they are (1) reduce our greenhouse gas emissions and (2) increase our energy efficiency. For Circularity, they are (1) better circularity management of products and hardware parts and (2) optimize our supplier logistics. For Social Responsibility, they are (1) increase our responsibility to all workers and (2) increase our community support. For Governance, it is (1) increase the transparency of our development progress.



From our goals, we have identified a total of 11 targets to achieve for the foreseeable future:

- (T1) Climate Neutrality
- (T2) Energy Needs Met Solely by Renewables
- (T3) Categorization of Waste and Implementation of Waste Recording System
- (T4) Implementation of an "End of Life" Disposal Clause in all Hardware (Hard & Software only)
- (T5) Implementation of a Bundles Program for all Probes & Solutions Deliveries (Probes only)
- (T6a) Priority of Supplier Protection of the Environment
- (T6b) Priority of Supplier Protection of Human Rights
- (T7) Implementation of a Colleague Sustainability Education and Outreach Program
- (T8) Implementation of a Charity Program to Compensate for Our Emissions
- (T9) Implementation of an Annual Sustainability Progress Report
- (T10) Apply for Accredited Certifications for Our Sustainability Progress and Action



## JUSTIFICATION FOR GOALS AND TARGETS

### Climate Action Goals:



Climate action covers all three core values: Innovation, Communication, and Community. Climate action encourages innovative problem-solving to tackle the climate emergency, including finding solutions to reduce emissions and improve energy efficiency. Communicating progress in addition to listening to and learning from stakeholders is the key to successful climate action. Finally, the intent of climate action is to improve the vitality of all impacted communities and being mindful of best practice.

The climate action goals were identified with two straightforward ambitions in mind – (1) to identify and reduce greenhouse gas (GHG) emissions and (2) increase the efficiency of energy usage. Following global trends, we acknowledge that these two goals are aligned with major and innovative climate action efforts in both the private and public sectors. These goals are data-driven and easy to communicate, but still demand the respect and discipline of identifying areas where we as companies can improve our performance.

### Circularity Goals:



Circularity is about improving the sourcing, system integration, probes production, distribution, use, reuse, and disposal of products and hardware parts – meaning it is crucial to analyze the companies' impact. Innovative solutions shall improve the life cycle of products and

hardware parts with more meaningful and sustainable options. Communicating changes and intentions to our customers, business partners, and suppliers will allow us to positively expand our circular influence. By introducing sustainable intentions to our communities in which we coexist, we help build them up better.

The circularity goals were identified by similar innovative ambitions to our climate action goals. These goals aim to achieve e.g., overall, more efficient management of products and hardware parts through all stages of their life cycles. This includes from their very foundation through raw material sourcing and supplier partnership development to their recycling and end-of-life disposal methods. We proactively avoid products and hardware parts becoming obsolete to the best of our knowledge and belief. Our circularity ambitions aim to improve our reach throughout relevant markets and industries by positively raising our expectations and trying to bring the life cycles of products and hardware parts to their best ethical and sustainable performances.

### Social Responsibility Goals:



Social responsibility refers to our values of communication and community. This responsibility is to improve the communities around us, and much like circularity, build them better together. Our responsibilities to the people in and around our communities shall be communicated to business partners and suppliers by making our expectati-

ons for respecting human rights clear.

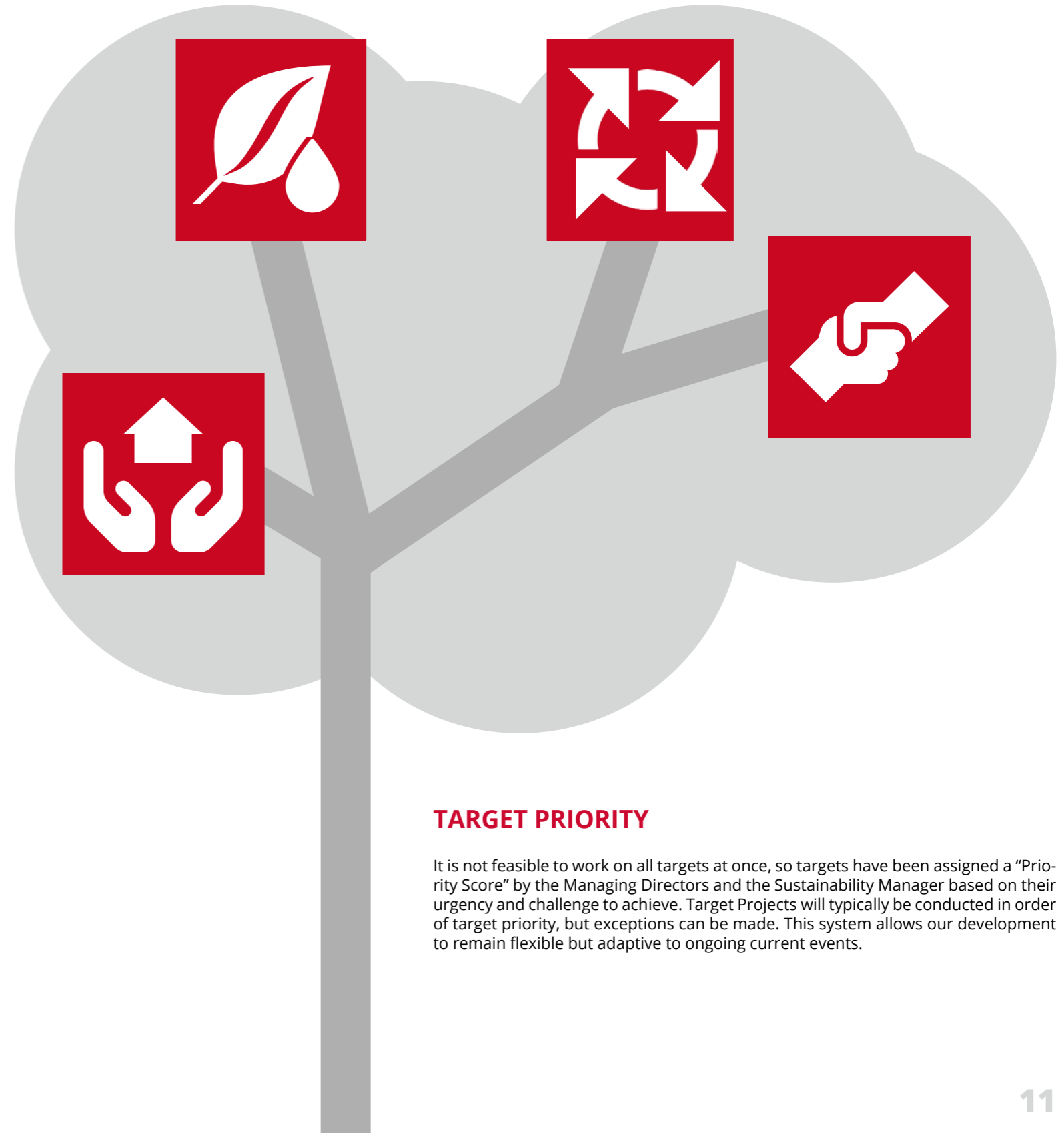
The social responsibility goals were identified as the beginning of our ambitions to uplift our communities and all workers – both MetaSystems employees and all workers along supply chains. It is important to acknowledge these responsibilities of protecting human rights throughout the everyday operations of the companies, whether through financial support or other methods.

### Governance Goals:



Governance reflects our values of innovation and communication. Introducing sustainability concepts voluntarily requires self-reflection, patience, and a willingness to challenge ourselves. While internal in nature, innovative governance decisions allow us to successfully meet these sustainability challenges. Being intentional in our communication of efforts is also necessary for successful sustainability governance integration.

The governance goals were identified through the acknowledgement that we are at the beginning of our official sustainable development journey. The purpose of having governance goals overtime is to better prepare our companies to respond to the ever-changing landscape of sustainability and to hold ourselves to higher expectations.



## TARGET PRIORITY

It is not feasible to work on all targets at once, so targets have been assigned a "Priority Score" by the Managing Directors and the Sustainability Manager based on their urgency and challenge to achieve. Target Projects will typically be conducted in order of target priority, but exceptions can be made. This system allows our development to remain flexible but adaptive to ongoing current events.

# DATA & ANALYSIS: BASELINES

## SCOPES 1 & 2 EMISSIONS (MAY 2019 – MAY 2023)

### Definitions:

To tackle both targets T1 and T2, which directly deal with greenhouse gas (GHG) emissions, we have calculated our emission output with the Greenhouse Gas Protocol's calculation tool.

In this section, we define GHG emissions as the six gases listed under the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>) that contribute to the natural greenhouse effect (Source: European Environment Agency, UNFCCC, Kyoto Protocol, GHG Protocol).

Additionally, we define the three different scopes of GHG emissions – Scopes 1, 2, and 3 – in alignment with the Greenhouse Gas Protocol. We define Scope 1 emissions as all direct greenhouse gas emissions, i.e., emissions from sources that are owned or controlled by the reporting entity. Scope 2 and Scope 3 emissions are defined as indirect emissions from consumption of purchased electricity, heat, or steam, and other indirect emissions respectively. Indirect emissions are defined as emissions that are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity (Source: GHG Protocol).

Calculations are displayed in CO<sub>2</sub>-eq, i.e., a carbon dioxide equivalent or CO<sub>2</sub> equivalent. CO<sub>2</sub>-eq is the metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential (SOURCE: Eurostat).

### Disclaimer:

In alignment with the Greenhouse Gas Protocol's reporting requirements, only Scopes 1 and 2 emissions should be considered complete in this baseline report.

As collecting Scope 3 emissions can be both lengthy and challenging, we consider our efforts to holistically account for our Scope 3 emissions insofar incomplete. We have made significant headway on collecting Scope 3 valuable data from business travel and travel to and from work and will highlight some of our initial findings in the following section. However, we believe it is imperative to calculate Scope 3 emissions when we have both a larger and accurate pool of required data.

For Scope 1 and 2 emissions, we have chosen to display our calculations based on the market approach. The emissions factors used are provided

by EnBW, an energy supply company. The raw data is supplied from our energy contract cycle with EnBW from 2019 to 2021 and Green Planet Energy from 2021 to 2023, which runs from May to May.

### Data Results:

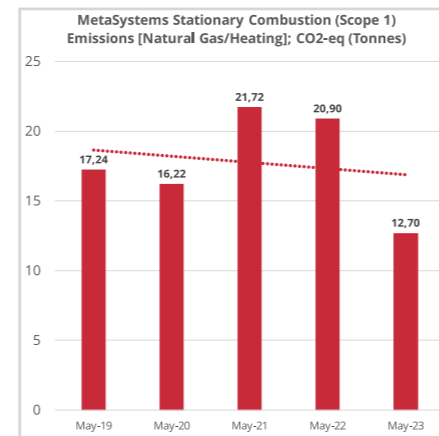


Figure 1 shows the stationary combustion emissions (i.e., Scope 1 emissions) that are produced on the company premises and are directly owned by the companies. MetaSystems' Scope 1 emissions come from the consumption of natural gas for heating and other energy purposes. The data figures come from the companies' natural gas provider, Erdgas Südwest from 2019 to April 2020, and Green Planet Energy from May 2020 to 2023. The calculations are conducted with the Greenhouse Gas Protocol Calculation tool using the market-based method.

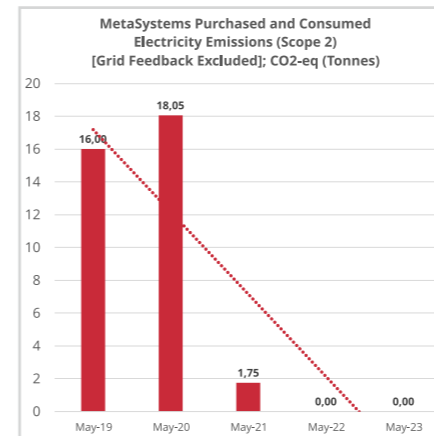


Figure 2 shows the emissions from purchased and consumed electricity (i.e., Scope 2 emissions) that are produced and owned by the electrical providers but are indirectly caused by MetaSystems' electrical needs. The data is from the electrical provider EnBW from May 2019 to April 2021, and from Green Planet Energy from May 2021 to May 2023. The calculations are conducted with the Greenhouse Gas Protocol Calculation tool using the market-based method. The calculations exclude electricity produced on site and fed back into the grid.

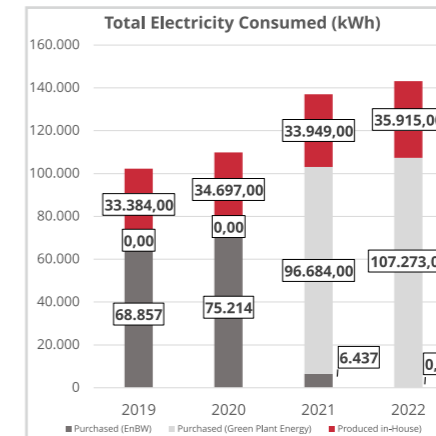


Figure 3 shows the total amount of electricity consumed by MetaSystems from 2019 to 2022. The data is from the electrical provider EnBW from May 2019 to April 2021, and from Green Planet Energy from May 2021 to May 2023. Additionally, the data figures for electricity produced in-house on company premises with PV solar panels is provided by Netze BW, the distribution system operator.

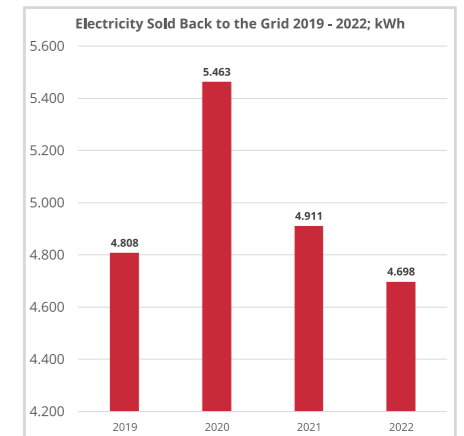


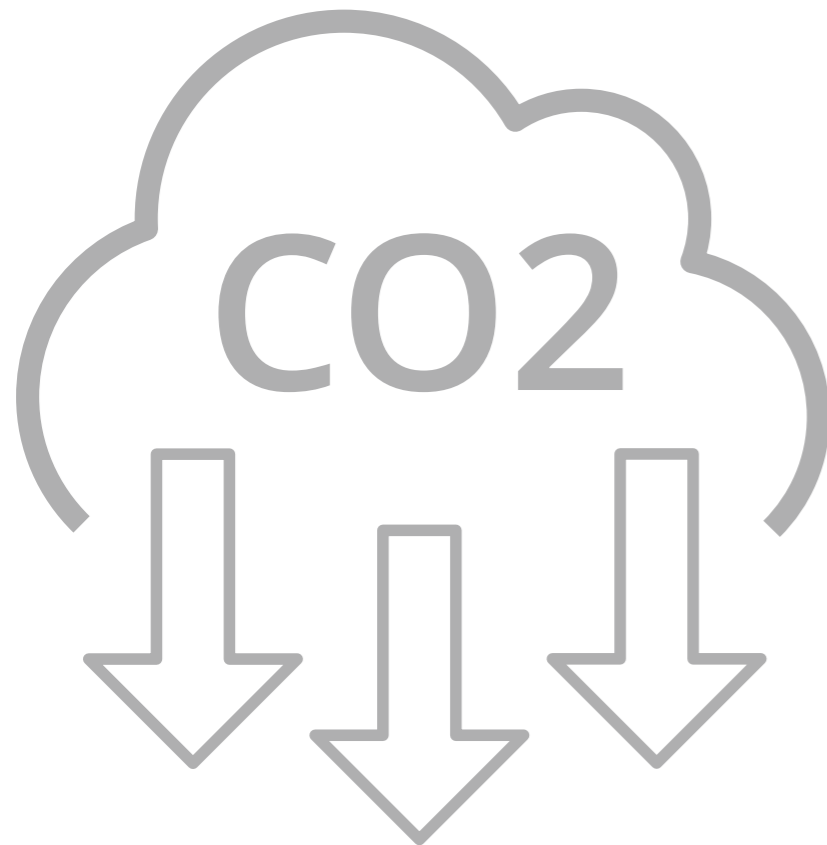
Figure 4 shows the total amount of electricity sold back to the local grid by MetaSystems from 2019 to 2022. The data figures are provided by Netze BW.

**Data Analysis:**

Figure 1 "MetaSystems Stationary Combustion (Scope 1) Emissions" highlights our total amount of Scope 1 emissions (in tonnes of CO2-equivalent). The trend indicates that MetaSystems has consumed a gradual increase in stationary combustion on site peaking in 2021, with a drop beginning to form in 2022 and continuing into the first half of 2023. This decrease is a combination of efforts to reduce reliance on traditional combustion-based natural gas and heating and external factors. Additional efforts to reduce natural gas-based emissions are planned for 2024.

Figure 2 "MetaSystems Emissions Purchased and Consumed Electricity Emissions (Scope 2) [Grid feedback excluded]" highlights the companies' total amount of Scope 2 emissions (in tonnes of CO2-equivalent). Our primary sources for purchased electricity include Electricity EnBW, Electricity Green Planet Energy, and electricity fed into the grid. In alignment with the Greenhouse Gas Protocol, electricity fed into the grid is excluded from these figures and is calculated separately. The trends indicate a steep decline in electricity produced Scope 2 emissions, due to switching providers from the standard electricity provider to Green Planet Energy in 2021 (formerly Greenpeace Energy) in combination with the PV solar panels installed in 2016 and 2023 (Figure 3). Green Planet Energy provides electricity produced from 100 % renewable energies (Source: [Green Planet Energy Gewerbestrom](#), [Green Planet Energy Kraftwerke](#)), thus reducing the Scope 2 emissions drastically. While the total amount of electricity consumed on site has increased since 2019, the source of the electricity has changed significantly, thus explaining the decrease in Scope 2 emissions despite an increase in electricity consumption.

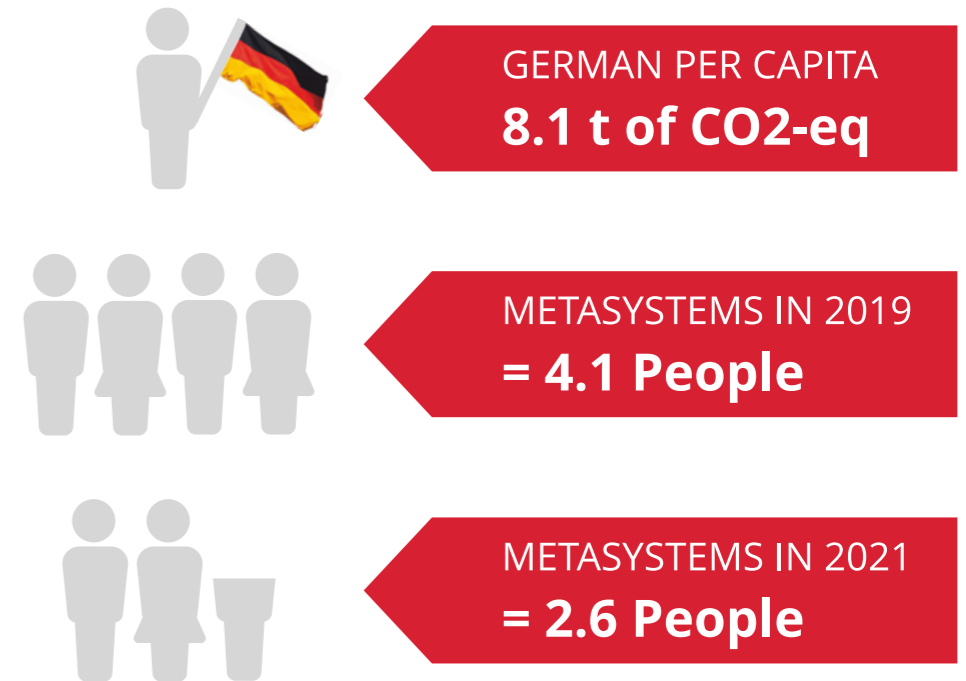
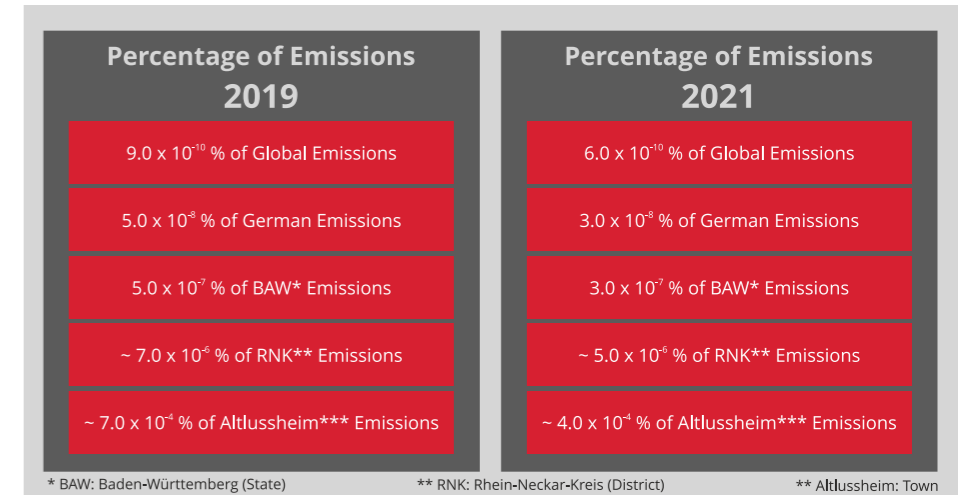
Additionally, the amount of electricity fed into the grid has initially peaked in 2020, decreasing to 2022 (Figure 4). However, with a second installation of solar panels in 2023, this number is expected to increase in as early as 2024 (see Sustainability Project Highlights: PV Solar Panels & Solar Power).



**Emissions Comparisons:**

Figure 5 (right) displays the emissions comparisons for MetaSystems to its community. The upper illustration shows the percentage of emissions that MetaSystems is responsible for in 2019 and 2021 at the following levels: Global, Germany (country), Baden-Württemberg (state), Rhein-Neckar-Kreis (region), and Altlusheim (city). The years were chosen because (1) 2021 was the most recent available data at the time of calculation for all levels, and (2) to present a more accurate amount before and after the start of the global pandemic. The data presented only accounts for Scopes 1 and 2 emissions (as in alignment with the Greenhouse Gas Protocol) and Scope 3 emissions are, unfortunately, omitted. Once Scope 3 emissions data is reliably collected, the figures will be reassessed to include these numbers. Overall, MetaSystems accounts for an extremely small amount of emissions in its community, and efforts will be made in the following years to continue to reduce our share to zero.

The lower illustration displays the German per capita amount of yearly tons of CO2-eq (8.1 tons as of 2021). The data shows that MetaSystems accounted for 4.1 individuals in 2019 and 2.6 individuals in 2021, based on Scope 1 and 2 emissions calculations. MetaSystems has already significantly reduced its emissions counts between 2019 and 2021, and current and future sustainability projects are striving to continue this reduction into 2024 and beyond.





## BUSINESS TRAVEL & COMMUTING

We have made significant headway on collecting Scope 3 valuable data from business travel and travel to and from work and highlight some initial findings here. However, and at this point in time we must confirm that our data on a holistic view of Scope 3 emissions is insofar incomplete. Nonetheless, for now efforts to consider Scope 3 emissions are focused on business and employee travel data. Here, we explore some of the trends identified in the data from 2020 through 2022.

### Data Results: Business Travel – 2020 to 2022

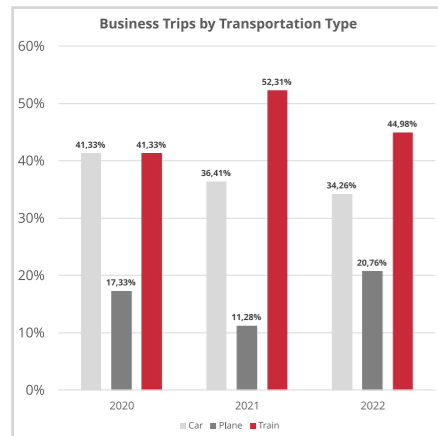


Figure 6 depicts business trips taken between 2020 and 2022, differentiated by the three main modes of transportation used by the companies: car, plane, and train. Train is the most common mode of transportation for business trips, followed by car and plane.

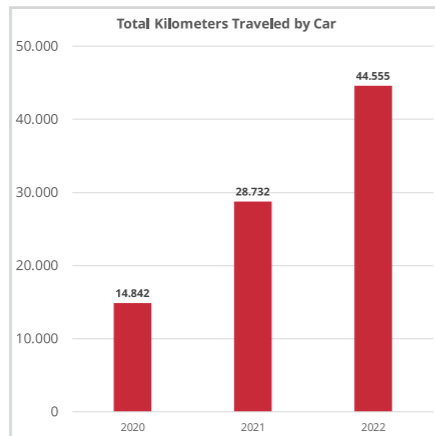


Figure 7 depicts the total amount of kilometers (traveled) by car from 2020 to 2022. The number of km recorded increased gradually over the three-year period.

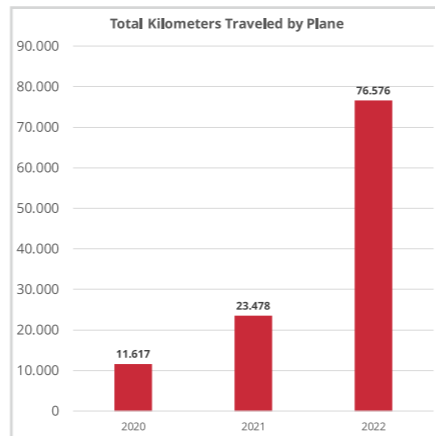


Figure 8 depicts the total amount of kilometers (km) traveled by plane from 2020 to 2022. The number of km recorded increased significantly over the three-year period.



### Data Results: Employee Travel to and from Work

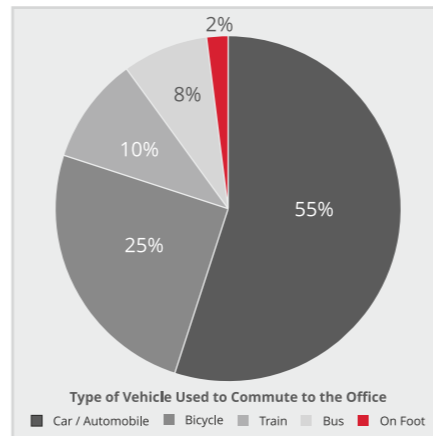


Figure 9 shows the type of vehicle(s) employees use to travel to and from the company premises by percentage. The data considers if colleagues use multiple means to get to work during a typical work week. The majority of employees travel to and from work by car or another automobile (55%). The second largest method of transportation is by bicycle (25%) followed by train (10%) and bus (8%). A small percentage of employees travel to work on foot (2%).

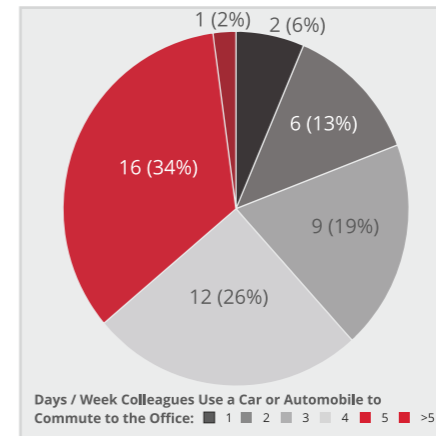


Figure 10 focuses on employees who travel to work by car or automobile. Colleagues who travel to work are most likely to drive all 5 days of a typical work week (16.34%), however, a significant amount of employees only take the car 4 days a week (12.26%). Just under 10% only use the car 3 days a week (9.19%), while others only use the car 2 days a week (6.13%) or one day a week (3.6%). In extremely rare cases, a few employees commute to the company offices with an automobile for more than 5 days a week (1.2%).

### Data Analysis:

Between 2020 and 2022, some patterns in business and commuter traffic become apparent. Train travel is the preferred mode of transport for business trips in all three years. This includes trips within Germany, but also to parts of Europe. The percentage of business trips by car was as high as by train in 2020 and then declined in the following two years. This can probably be attributed to the fact that the car was a safe health option during the SARS-CoV-2 pandemic. The percentage of air travel decreased significantly in 2021 but increased again the following year.

When contrasting business travels by car against those by plane, the significant contrast in potential carbon footprint becomes more evident. In 2020, although air travel accounted for just about 30% of the combined air and car travel, it contributed to 78.3% of the total distance covered by car travel. Moving to 2021, plane travel constituted 23.66% of the combined air and car travel, yet it encompassed 81.7% of the same mileage. Then, in 2022, while plane travel made up 37.74% of the combined air and car travel, the distance

covered by plane surpassed the distance traveled by car by 171.9%. Where possible, journeys within Europe are made by train, while air travel should be reserved for international trips. As business travel continues to recover, it will be important to consider the regional distance to customers and business partners and which mode of transport is most suitable and accessible for each trip.

Reviewing travel to and from work by our employees, private car is the number one choice of transportation, followed by bicycle, train, bus, and on foot, respectively. On average, employees commute to the office 3.8 days a week, with the average distance one way being 23.86 km. Overall, employees choose a somewhat diverse selection of transportation methods, but reliance on private cars is still significant.

A small number of employees participate in regular carpooling (12.3%; i.e., at least once a week). Carpooling is one method that can reduce the amount of emissions produced by employee travel, but currently is not actively encouraged. Additionally, the data suggests that employees who use public trans-

portation (i.e., train, bus) are more likely to use multiple methods in a single trip – largely due to the distance from the local train station to the company premises (the shortest route being 2.2 km). This can be a potential inhibitor to using public transportation methods that may have an overall smaller carbon footprint.

### COMPENSATION & CHARITABLE DONATIONS:

Achieving climate neutrality is one of MetaSystems' significant sustainable development targets. In order to assist in progression towards climate neutrality, we began a financial compensation to help mitigate the impact of lingering company emissions. In doing so, we are able to work on multiple targets at the same time, as T8 supports efforts to achieve T1. In 2022, we began to formalize our financial donation efforts by targeting organizations whose missions aligned with our sustainability topics of concern.

In this section, compensation for emissions from business and employee travel are the focus, as we are currently able to account for our Scope 3 emissions in this area based on the available data. Scopes 1 and 2 emissions are also considered, however, as discussed further below, our Scope 3 emissions are much more significant based on company business practices. The charitable donations program has a larger scope than purely addressing emissions, and also accounts for several social topics of concern as well.

The data statistics account for 2020 to 2022, as reliable data recordings exist between this time period and the data collection for 2023 is at the time of publication not finished.



### Data Results: CO2 Emissions Compensation

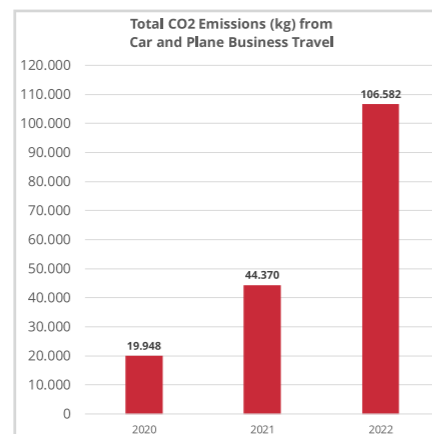


Figure 11 shows the calculated amount of CO2 emissions for combined car and plane business travel from 2020 to 2022, in kilograms of CO2-equivalent (kg CO2-eq). The data for car travel was calculated using the [Myclimate tool](#), which uses the Ecoinvent database (Version 3.6) based on the IPCC 2013 (Intergovernmental Panel on Climate Change) evaluation method. The data for plane travel was calculated using the [Atmosfair tool](#), which uses a self-made Atmosfair Airline Index for CO2 emissions based on the ICAO CO2 calculations method. The rate of CO2 was calculated for cars at 0.3 kg per km in the calculation tools. The total combined amount of emissions in kg of CO2-eq steadily increased between 2020 and 2022.

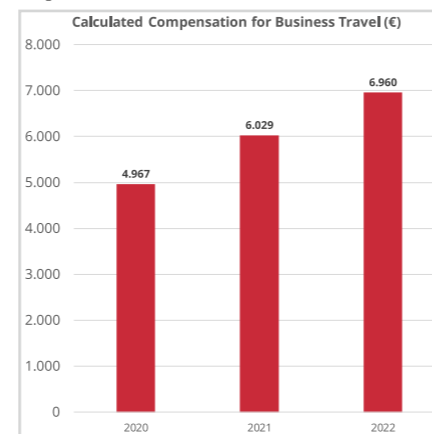


Figure 12 shows the calculated financial compensation (in Euros) required to completely cover emissions from business and employee travel to and from work between 2020 and 2022. Both the Myclimate and Atmosfair tools were used to calculate for car and plane travel, respectively. Additionally, travel to and from work was also considered in the calculations. However, it was considered as a worst-case scenario calculation, estimating the amount of emissions by assuming all employees were traveling five days a week with combustion-based vehicles. The total combined amount of compensation needed per year in euros (€) gradually increased between 2020 and 2022.

### Data Results: Charitable Donations

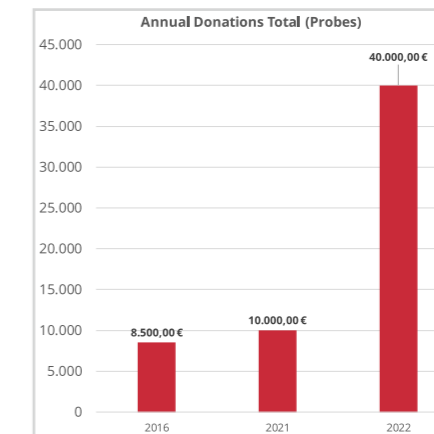
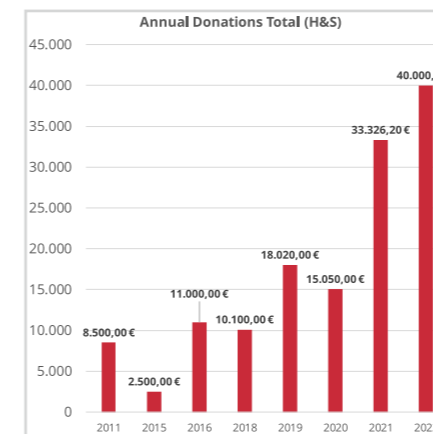


Figure 13 highlights the financial donations of MetaSystems, split between Hard & Software and Probes. Donations from Hard & Software began inconsistently in 2011 but have become an annual occurrence since 2018. Donations from Probes begin inconsistently in 2016 due to previously being a part of Hard & Software prior to 2015. In 2022, a formal charitable donation program was introduced, beginning a regular annual financial donation to various charities and other non-profit organizations.

#### Charities Supported

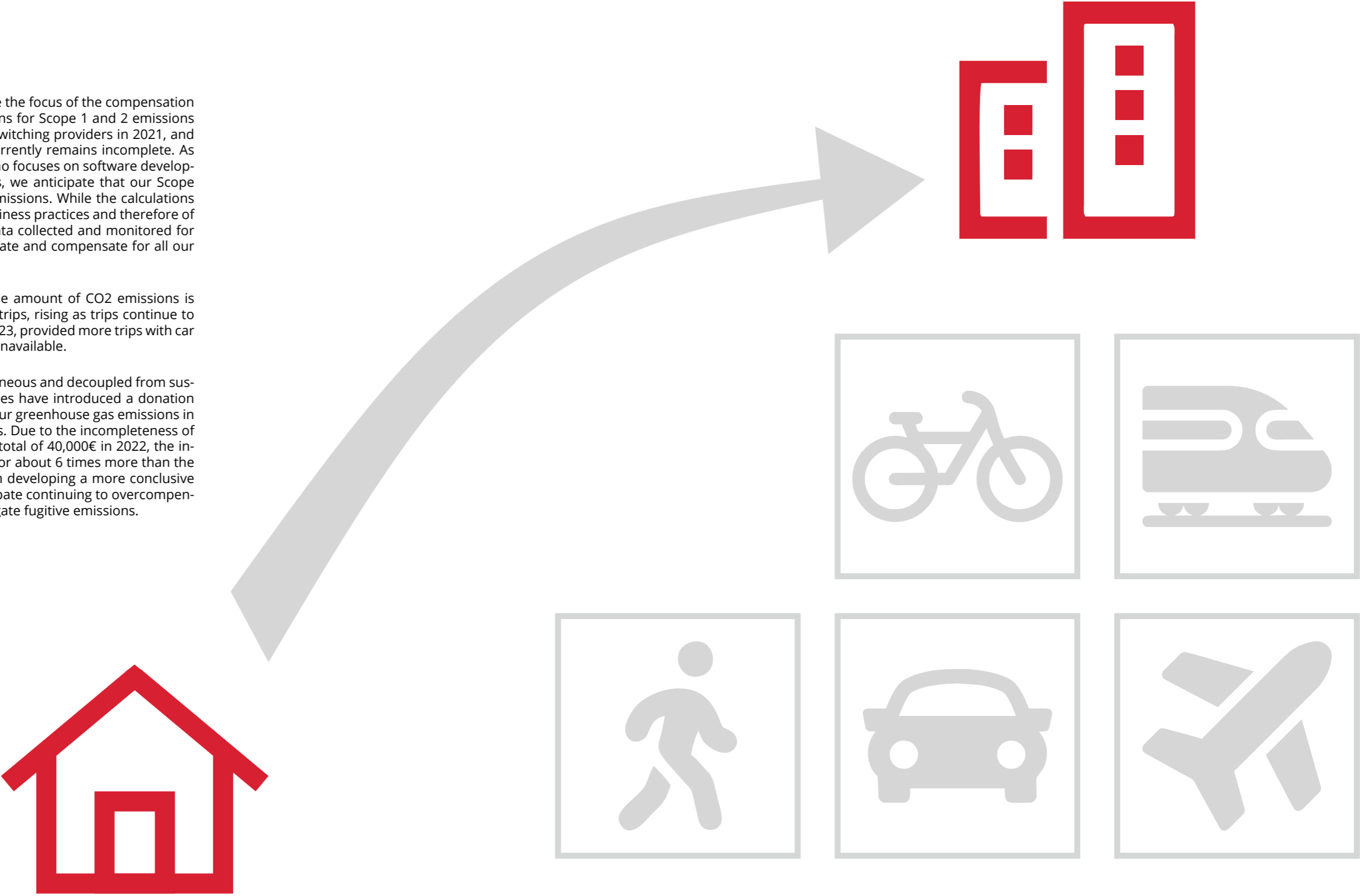
For both MetaSystems Hard & Software and MetaSystems Probes, the major recipients in January 2023 were Atmosfair with 20,000 €, 10,000 € for Médecins Sans Frontières, and 10,000 € for Ukraine war victims.

**Data Analysis:**

Business and employee travel-based emissions were the focus of the compensation calculations for two main reasons: (1) the calculations for Scope 1 and 2 emissions were comparatively insignificant, particularly after switching providers in 2021, and (2) an accurate picture of our Scope 3 emissions currently remains incomplete. As MetaSystems is a non-energy-based organization who focuses on software development, system integration, and provision of services, we anticipate that our Scope 3 emissions account for the biggest share of our emissions. While the calculations above represent only a significant portion of our business practices and therefore of our emissions, efforts will focus on widening the data collected and monitored for Scope 3 emissions, and ultimately allow us to calculate and compensate for all our indirect emissions in the future.

Based on the calculations, it becomes clear that the amount of CO2 emissions is directly impacted by the amount of business travel trips, rising as trips continue to increase. We anticipate this trend to continue into 2023, provided more trips with car and plane are taken. The data for 2023 is currently unavailable.

Prior to 2022, charitable donations remained spontaneous and decoupled from sustainability efforts. As of January 2022, the companies have introduced a donation plan in alignment with complete compensation for our greenhouse gas emissions in addition to supporting socially-minded organizations. Due to the incompleteness of our calculations, we voluntarily elected to donate a total of 40,000€ in 2022, the inaugural year of our official program. This accounts for about 6 times more than the amount of compensation calculated. As we work on developing a more conclusive view of the companies' Scope 3 emissions, we anticipate continuing to overcompensate for the projected figures in order to better mitigate fugitive emissions.



# SUSTAINABILITY PROJECT HIGHLIGHTS

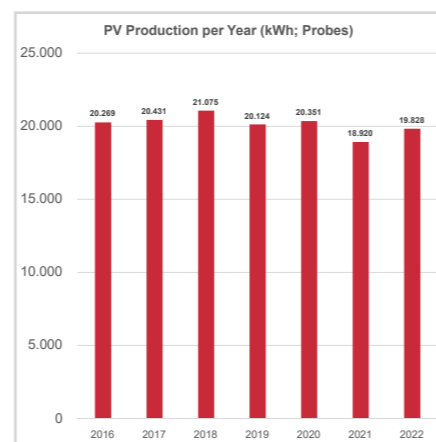
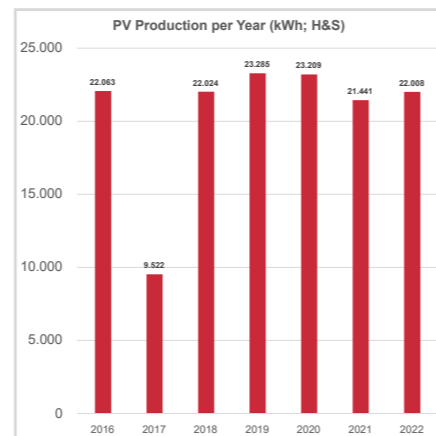
## PV SOLAR PANELS & SOLAR POWER

Since 2016, MetaSystems has been adding solar energy to our energy mix. As of 2023, there are a total of 2 installations of solar panels placed on the company premises, one installed in 2016 and the other installed in 2023. The solar panels provide 60 kWh and 53.6 kWh, respectively, for a total of 113.6 kWh at their peak performance. Excess electricity production is fed back into the local grid, operated by Netze BW.

The figures on the right showcase the quantity production (in kWh) of the first installation between 2016 and 2022 for both Hard & Software and Probes. All years reported were categorized by Netze BW as “good performance” or better, excluding 2017 for Hard & Software where there was a temporary technical malfunction in performance.

Between 2016 and 2022, MetaSystems saved collectively 184,725 kg of CO2-equivalent (H&S = 93,441 kg; Probes = 91,284 kg) from being produced with conventional fossil-based energies.

With the second installation of PV solar panels on the premises, MetaSystems is expected to generate an additional 55,647 kWh per year. Additionally, MetaSystems is projected to save an additional 25,891 kg of CO2-equivalent per year.



## SUSTAINABLE EMPLOYEE TRANSPORTATION

MetaSystems has made strides in making alternative modes of transportation more accessible to our employees. In 2022, a charging station for electric vehicles was installed on the premises. Additionally, the company established a partnership with JobRad, which allows employees to rent or purchase e-bikes to use for travel to and from work and more.



## ALTERNATIVES TO NATURAL GAS

MetaSystems will be installing an air heat pump on site in 2024 to completely phase out the usage and consumption of natural gas. This will significantly reduce our Scope 1 emissions. More data figures are anticipated for 2024.

# OUTLOOK AND AMBITIONS FOR 2024 AND BEYOND

In the immediate future, MetaSystems plans on addressing one of our biggest challenges when it comes to our sustainable development – consistent, accurate, and readily available data. In order to accurately monitor our development and progress, it is essential to have complete and accurate data on the targets we wish to achieve. In 2024 and beyond, we are dedicating our efforts to understanding the wide pool of data needed for the transparent disclosure of progress. We are learning how to properly collect, store, and manage this data to meet industry standards and government regulation, as well as our own expectations.

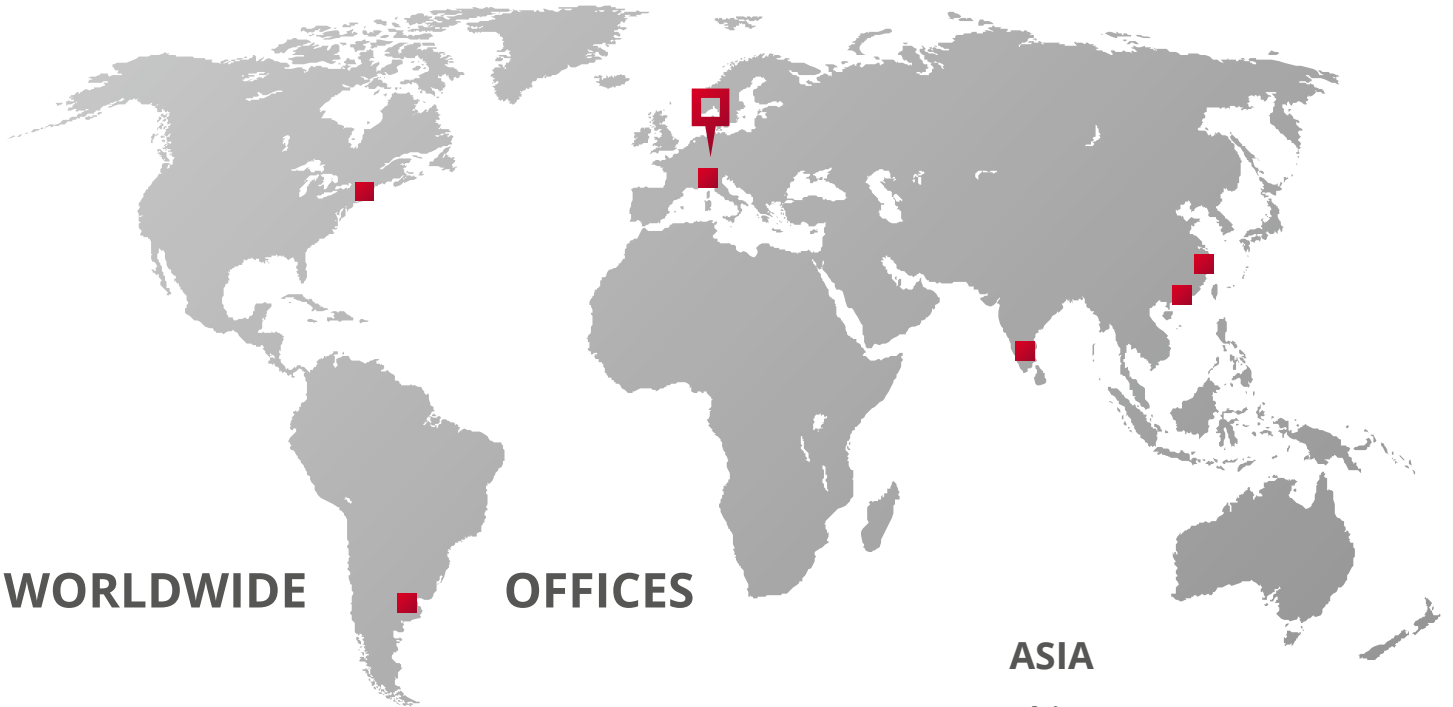
Additional areas of concern are some of our biggest sources of Scope 3 emissions – business travel, shipping, and packaging. As of now, we are beginning the process of collecting and managing the data needed to appropriately monitor our progress on these developments. Focusing on these emission areas will help us begin tackling several targets (T1, T2, T4, T5, and T7). Once a proper holistic baseline is established, we anticipate identifying problem areas and seeking out reliable methods of emissions reduction and compensation that allow us to make more sustainable choices for business traveling and how we manage our shipments. We plan on reviewing alternative and more sustainable options for employee commuting as well and identifying options that our colleagues would like to have.

Additionally, we plan to broaden the data collected to fully account for Scope 3 emissions, based on the Greenhouse Gas Protocol's methodology. This will allow us to better track our full emissions spread and more accurately make immediate annual financial compensation efforts. In the longer term, we will be better equipped to monitor and identify problem areas and employ tailored development solutions to reduce emissions in all areas of business operations.

Better management of our waste is also a goal that we have interest in establishing proper baselines for in the near future. We believe that installing proper waste data recording systems will allow us to better monitor our waste management, which will in turn assist us with managing our energy efficiency and more sustainable packaging.

Finally, being open to better educating ourselves on sustainable development options and listening to stakeholders' concerns and perspectives is essential to proactive change. MetaSystems will be dedicating itself to engaging in dialogue to better curate our sustainable development projects in a way that is accommodating for not just our companies, but our clients and business partners.





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