

CLIMATE CHANGE REPORT 2021

In line with Task Force on Climate-related Financial Disclosures (TCFD)

Version 1.0

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1 INTRODUCTION

Since our creation in 2007, Solactive has become one of the key players in the indexing space. We are a German multi-asset class index provider developing, calculating, administrating, and distributing financial indices on a global basis. Besides standard benchmarks, our main strength is the development of tailor-made indices for clients. We pride ourselves in our combined ability to deliver products faster and with more flexibility than our competitors and at a more reasonable cost. This combination has allowed us to become one of the fastest-growing index providers worldwide.

Our 270 employees operate from offices in Frankfurt, Dresden, Berlin, Amsterdam, Toronto, and Hong Kong to provide a 24/6 coverage to our clients. As of mid-2022, Solactive is calculating more than 20,000 indices for more than 500 clients in Europe, America, and Asia. Approximately USD 250 billion are invested in products linked to or referencing Solactive indices, including more than 500 ETFs. For more details on formative milestones, please refer to our website (<https://www.solactive.com/about-us/>).

Our ESG Approach

The core belief defining Solactive's ESG (Environmental, Social and Governance) approach is that a diverse set of views with regards to ESG will continue to exist in the future as different cultural, regional or institutional backgrounds will keep shaping the approach of market participants towards the topic. Whilst this shall not preclude the financial community from agreeing on reasonable standards, we believe that diversity of approaches is beneficial to the industry and will persist and even increase in the long-term. To reflect this belief our ESG approach revolves around two pillars:

- 1) Open data architecture: Instead of being bound to own proprietary ESG data or data from few selected partners, we offer clients the option of working with the ESG data vendor of their choice. To commit to a data vendor is to commit to its respective view and approach. We believe that our clients' views should be reflected in their data choice and hence provide them the freedom to do so.
- 2) Focus on tailor-made index design: We provide market-leading flexibility when it comes to incorporating clients' ESG preferences into our index methodologies. While we offer a range of core ESG solutions, the clients' views and requirements always drive the ultimate index methodology.

Against this background, Solactive is constantly searching for new concepts to deliver sustainable index and investment solutions to our clients. Our long-standing experience and innovation strength is reflected in the fact that we currently calculate more than 1,000 ESG indices. Our consistent focus on providing solutions across the asset class spectrum allowed us, for instance, to pioneer solutions in fixed income, such as launching the first Green Bond index in 2014 and providing the benchmark for the first Paris-Aligned bond ETF in Europe. Leveraging the advantages of our open architecture, Solactive is constantly exchanging new ideas with full-service ESG providers, niche providers, and non-profit organizations. Besides ESG index development, we facilitate access to sustainability data from our strategic partners and investee companies Minerva Analytics, Iceberg Data Lab, and right°. UK-based Minerva Analytics offers ESG research built on more than 20 years of experience in proxy voting, sustainable stewardship, and data



analysis. Iceberg Data Lab, located in Paris, provides climate and biodiversity data solutions to financial institutions to help them report and manage their environmental impact. Right° is a Frankfurt-based climate fin-tech that offers a temperature alignment tool across asset classes. Additionally, our strategic partner and investee company SparkChange, domiciled in the UK, enables access to carbon allowances markets such as the EU ETS scheme.

We have a significant track record and history of developing and calculating ESG indices used in different forms by our client base across asset managers, ETF issuers, investment banks, asset owners, and others. In 2021 we ranked “Top 4 Index Provider by AuM in ESG ETFs in EMEA” and “Top 2 Index Provider by the number of SDG-aligned indices”¹.

On the environmental impact side, Solactive achieved some early milestones by measuring and recording our carbon footprint for 2019, 2020 and 2021. To keep an eye on further developments of our emissions – also in relation to our reduction targets – we will continue to measure our carbon footprint on an annual basis and report our progress to the Carbon Disclosure Project (CDP).

Being aware of our responsibility to employees, clients and other stakeholders, an objective of strategic importance was initiated by Solactive's CEO to combine and expand all activities related to Corporate Social Responsibility (CSR) through a company-wide, comprehensive framework. The Management Board has tasked all relevant teams to review and create the company's corporate responsibility strategy, including an environmental policy. One important aspect of the environmental policy will be the measurement and management of the climate impact of our business. Among others it will encourage more sustainable business travel and a reduced consumption of materials. Based on those initiatives Solactive is in the process of building the resources required to reach that goal.

“Achieving the Paris climate goals is one of the most challenging and important tasks of our time. We have to act now to limit the severe impact of climate change, which is observable around the globe already. At Solactive, we take our responsibility as a founding member of the NZFSPA seriously and are committed to helping our clients achieve their net zero goals with credible and transparent climate index solutions while at the same time contributing positively to the achievement of Net Zero through our own responsible business practices.” – Steffen Scheuble, CEO.

Principles for Responsible Investment

Solactive became a signatory of the PRI in 2018 and pledged to contribute to developing a more sustainable financial system globally. We embrace the responsible investment principles, committing to incorporate ESG considerations into investment analysis and our services to support our clients, as well as into our own policies and practices. Furthermore, we work to promote acceptance and implementation of the Principles across the investment industry, and constantly enhance our effectiveness in implementing them and reporting our progress.

Net Zero Financial Service Providers Alliance (NZFSPA)

We are a founding member of the Net Zero Financial Service Providers Alliance (NZFSPA) launched in 2021 to support the

¹ TRACKINSIGHT Global ETF Survey, 2021.



transition to a net zero economy by 2050. Alongside other financial service providers that are members of the NZFSPA, Solactive undertakes to keep developing products and services and engaging with our clients in helping them transition to net zero across their index and systematic investment offerings as well as allowing them to benchmark their progress towards net zero in their investment strategies.

By joining the Alliance, we made a commitment to address our own operational impacts by setting and disclosing progress towards science-based emissions reduction targets in line with the goals of the Paris Agreement and publishing disclosures aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Task Force on Climate-related Financial Disclosure (TCFD)

TCFD was launched in 2015 by the G20 Financial Stability Board (FSB) to develop recommendations for consistent and comparable climate-related corporate reporting. In June 2017, the first reporting guideline was published. The aim is to create transparency in how companies deal with the risks and opportunities of climate change. This should help all participants and stakeholders in the capital market to better understand the financial implications of climate change and to support the transition to net zero through improving transparency. With this inaugural report Solactive has started to gain experience with the implementation of the TCFD recommendations and we will continuously strengthen and develop our climate-related reporting on this basis.



Reprinted from TCFD Overview Booklet (May 2022).



2 TCFD DISCLOSURE

2.1 GOVERNANCE

ESG considerations, including the impact of climate change, are of fundamental importance to Solactive and to our business model. We are therefore committed to continuously develop a sound and effective governance to steer the execution of our strategy.

The Management Board sets the strategy and oversees the execution of this strategy. It also allocates its components, such as the development of ESG and climate-related solutions for our clients and different reporting requirements, across the involved departments of Solactive.

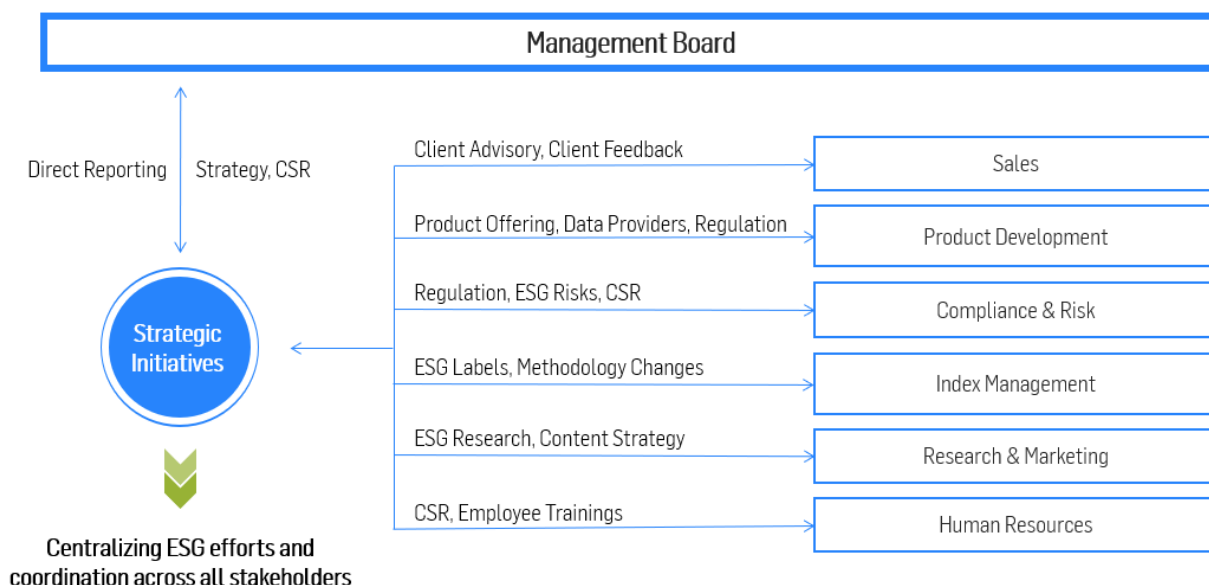
A wide range of staff is directly involved in the creation and offering of sustainability-focused solutions – spanning product development, operations, sales, research, and compliance. To ensure efficient communication between all relevant efforts and to ensure a fully aligned approach, the Strategic Initiatives team was appointed as a central coordinator and clearing house for Solactive's ESG strategy and sustainability-related efforts. The team directly reports to the CEO, which demonstrates the strategic importance of ESG for Solactive.

The Strategic Initiatives team

- orchestrates and coordinates the work of all units,
- serves as an ESG knowledge center,
- drives strategic projects with regard to ESG products and services as well as corporate sustainability,
- identifies companies in which Solactive may invest. One of the key criteria for consideration is whether these target investee companies provide more choice of ESG data and tools to the investment industry,
- regularly engages with academics, regulators, clients and partners and our strategic investee companies on topics like regulation, ESG label requirements, product innovation, data provider collaboration, and corporate initiatives like the CSR framework.

Through the above, the Strategic Initiatives team completes a picture of the current ESG and climate-related landscape in the market and is able to identify global trends and analyze upcoming challenges and opportunities in the field of ESG and sustainability.

These are being addressed and discussed with the compliance and risk teams (see [2.3 Risk Management](#)) as well as the management board and business units. The solicited internal and external feedback enables us to have a better understanding of market dynamics, to create innovative product lines and help clients achieve their financial ESG goals.



2.2 STRATEGY

The uncertainty regarding future regulatory adjustments and the risks posed by climate change presents a significant challenge for the financial industry. On the one hand, this manifests itself in both acute and long-term physical climate risks, e.g., damage to office buildings or data centers due to extreme weather events. On the other hand, there are transition risks caused by the transition to a low-carbon economy to reach net zero. The journey to limit global warming could not only shift consumer preferences but make entire business models obsolete. However, there are also opportunities for new technologies and business areas as well as companies that show leadership in the transition.

Along the value chain and all business units of Solactive, we have identified climate-related risks and opportunities for our business model and strategy (see tables below). The identification, mitigation and leverage of those risks and opportunities shape our overall business strategy and is updated on a yearly basis. Part of this process is a continuous dialogue with our internal experts, our clients, our strategic partners, and other external stakeholders. We outline how the risks and opportunities impact our business strategy and financial planning, and how we are working on mitigating the risks and utilizing the opportunities. Mainly, we continuously work on improving our products and services as well as our internal processes and targets to reflect the changing market environment.



Table 1: Climate-related Risks – Physical and Transitional

a) Physical Risks

	Description & possible impact	Likelihood	Magnitude of impact	Time frame	Mitigation & resilience
Acute	Increased severity and frequency of extreme weather events such as cyclones and floods: Decreased customer satisfaction due to service disruptions or delays (power loss or telecommunications failure) and increased costs from repairing or restoring damaged locations	likely	medium-high	short	While most of Solactive's office and infrastructure locations are in climate resilient regions, our Hong Kong office faces acute physical risks due to extreme weather. Through business recovery plans the impact is estimated to be limited. Business recovery focuses on ensuring that Solactive's business operations can quickly resume when the primary workplace hosting those operations becomes inoperable or is not accessible. We ensure business recovery through: 1) the ability to securely remote access critical systems; 2) the ability for the critical systems to be operated from multiple locations; and 3) succession plans and a 24x6 management of the core processes. Solactive conducts live tests of these solutions on a periodic basis. The work-from-home strategies implemented during the COVID-19 pandemic also contribute to business continuity.
Chronic	Rising sea levels: Increased cost related to relocation	likely	low	long	Solactive's offices in Hong Kong and Amsterdam could be directly affected from rising sea levels due to their location on the coast. However, these locations are the smallest of our offices and therefore the effort of a possible relocation, if needed at some point, would be relatively small. Additionally, we see this as a long-term trend, so that we can track the development for all our locations and prepare for an appropriate solution.

b) Transitional Risks

	Description & possible impact	Likelihood	Magnitude of impact	Time frame	Mitigation & resilience
Policy & Legal	Regulations leading to increased pricing of greenhouse gas emissions: Impact on financial planning	very likely	low	medium	While the nature of our business is neither material nor GHG emission-intensive, we strive to conduct our operations in a safe manner that minimizes negative environmental impact and reduces carbon emissions. Solactive is committed to net-zero emissions by 2050 and we



					have set greenhouse gas emission targets to specify this path. These targets are validated by the Science Based Targets initiative (SBTi).
	Increased regulation of existing products and services: Higher compliance costs	likely	medium	medium	Solactive stays up to date concerning ESG-related regulations in its different countries of operation and maintains regular contact with regulatory bodies. We will reassure that this risk is reflected in financial and resource planning. Additionally, new products and services will be developed continually thanks to our agile product development processes. We are careful to maintain this agility to respond to regulatory changes.
Market	Changing customer behavior: Decreased revenues due to reduced demand for existing products and services	very likely	medium-high	medium	We observe a shift in customer demand towards more sustainability and climate-oriented strategies, resulting in less demand for existing conventional solutions. However, we think the shift will be gradual and there will continue to be a need for standard benchmarks and thematic as well as smart beta indices. In addition, we also see this shift as an opportunity as shown in the next table. For the reasons mentioned below, we are prepared to cater this change in preferences and are driving forward our corresponding products and services.

Table 2: Climate-related Opportunities

	Description & possible impact	Likelihood	Magnitude of impact	Time frame	Utilization strategies
Products & Services	Shift in consumer preferences: Increased revenues resulting from increased demand for climate protection related products and services	very likely	medium-high	medium	Solactive recognizes changing customer demand for ESG integrated and climate aware products. While conventional indices are still a major part of the business, a shift in consumer preferences will require an increased focus on sustainable product development capabilities across our service offering. Therefore, we have and will broaden the capabilities within Solactive's team, continue partnerships with ESG data and service companies and prioritize extending our offering in this area. Furthermore, we made strategic investments in ESG service providers and already



					offer various ESG alternatives to conventional benchmarks. We are convinced that our strength and philosophy to create customized (index) solutions will enable us to support our existing and future clients by integrating ESG and climate considerations in our products in a very flexible way. Today, we already calculate more than 1000 ESG indices for our clients and feel prepared to accommodate changing customer demands.
Market	Access to new client segments: Increased demand for highly customized solutions which is at the core of our DNA	likely	medium-high	medium	We experience that customization is key in the ESG area. Thanks to our open architecture and the resulting flexibility to integrate different ESG data providers as well as our core capabilities to highly customize data integration, we are becoming particularly attractive for client segments who represent their own ESG opinion and want to implement their individual preferences.

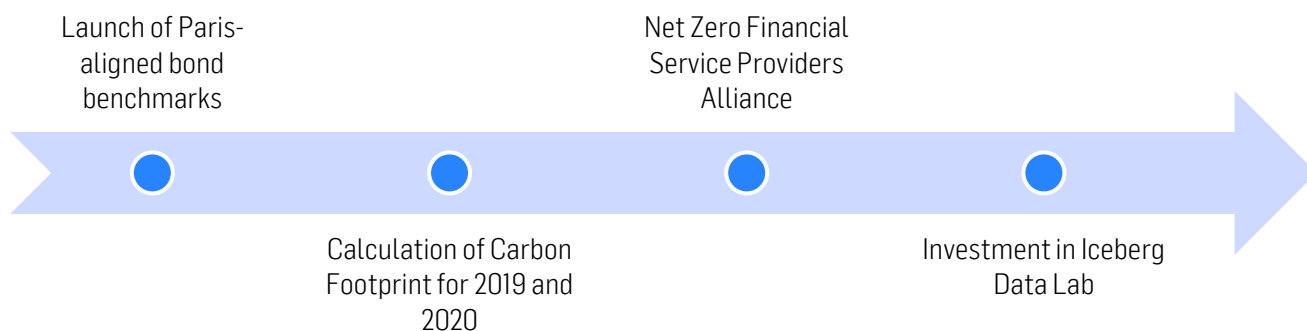
Map of Solactive Locations

The map illustrates the locations of Solactive facilities all over the world. Whilst there are physical risks for some of these locations, in particular Hong Kong and Amsterdam, we have measures in place to ensure business recovery. The significance of Solactive's operations varies by location.



2021 ESG Highlights & Progress

In 2021 we launched a range of new climate-related indices and worked on our corporate sustainability goals by calculating our company carbon footprint for the first time. We also became a founding member of the Net Zero Financial Service Providers Alliance.



Already in 2020, we launched a wide range of EU Paris-aligned and Climate Transition benchmarks that address the opportunities and risks to support investors tackling climate change. Designed based on the IPCC Special Report on Global Warming of 1.5°, Paris-aligned benchmarks target to deliver index portfolios that limits global warming to 1.5° Celsius. In the beginning of 2021 Solactive became the first index provider to launch Paris-aligned corporate and sovereign bond benchmarks in the fixed income space. Later the same year, Solactive developed further Paris-aligned benchmarks on the equity side that incorporate customized and more extensive ESG screens than required by regulation. These indices serve various types of market participants, ranging from ETF providers and active asset managers to asset owners.

In 2021, we calculated our CO₂-footprint for the first time, looking back at the years 2019 and 2020 (see [2.4 Metrics and Targets](#) for more information on the company carbon footprint for 2021).

We became a founding member of the NZFSPA in September 2021.

Also in September 2021, Solactive announced a strategic investment in Iceberg Data Lab, a European provider of environmental data solutions including a corporate biodiversity footprint, to support the development of the company to provide our clients with access to this innovative data (see [1 Introduction](#) for more information).



2.3 RISK MANAGEMENT

Solactive manages the risks and opportunities arising from climate change as part of its strategy setting and overall planning process, itself informed amongst other by its risk management processes.

From a strategy setting and execution oversight standpoint, risks and opportunities are discussed, priorities are being set and key action plans agreed, on a quarterly basis between leaders of the various delivery teams and the management board. On a yearly basis, an annual planning process takes place, setting the priorities for the forthcoming year. Risk considerations, including those arising from climate change, provide an input into these processes.

From a risk management standpoint, the risk office serves as a second line of defense in the firm's overall approach, sets the risk management framework and checks that the overall risk architecture of the firm is fit for purpose. This is done through a variety of tools, including the identification by the delivery teams of the risks faced by the organization, and their grading in terms of level of severity. We assess level of severity through the combination of their likelihood to happen, the timeframe at which we expect this likelihood to materialize, and the expected impact of the risk should it materialize. The management board then decides, based on the resources available and its risk appetite, the resulting priorities in terms of risk mitigation initiatives.

Our current perspective on the main risks and opportunities presented by climate change are laid out in the [2.2 Strategy](#) section above. The overall conclusion is that whilst we are acutely aware of and sensitive to climate risk, the immediate climate and transition risks that the firm faces are well within the bounds of our existing risk tolerance, with an emphasis being set on the opportunities arising from them through the changing attitudes of our clients and the desire to adopt more climate sensitive benchmarks as part of their risk allocation.

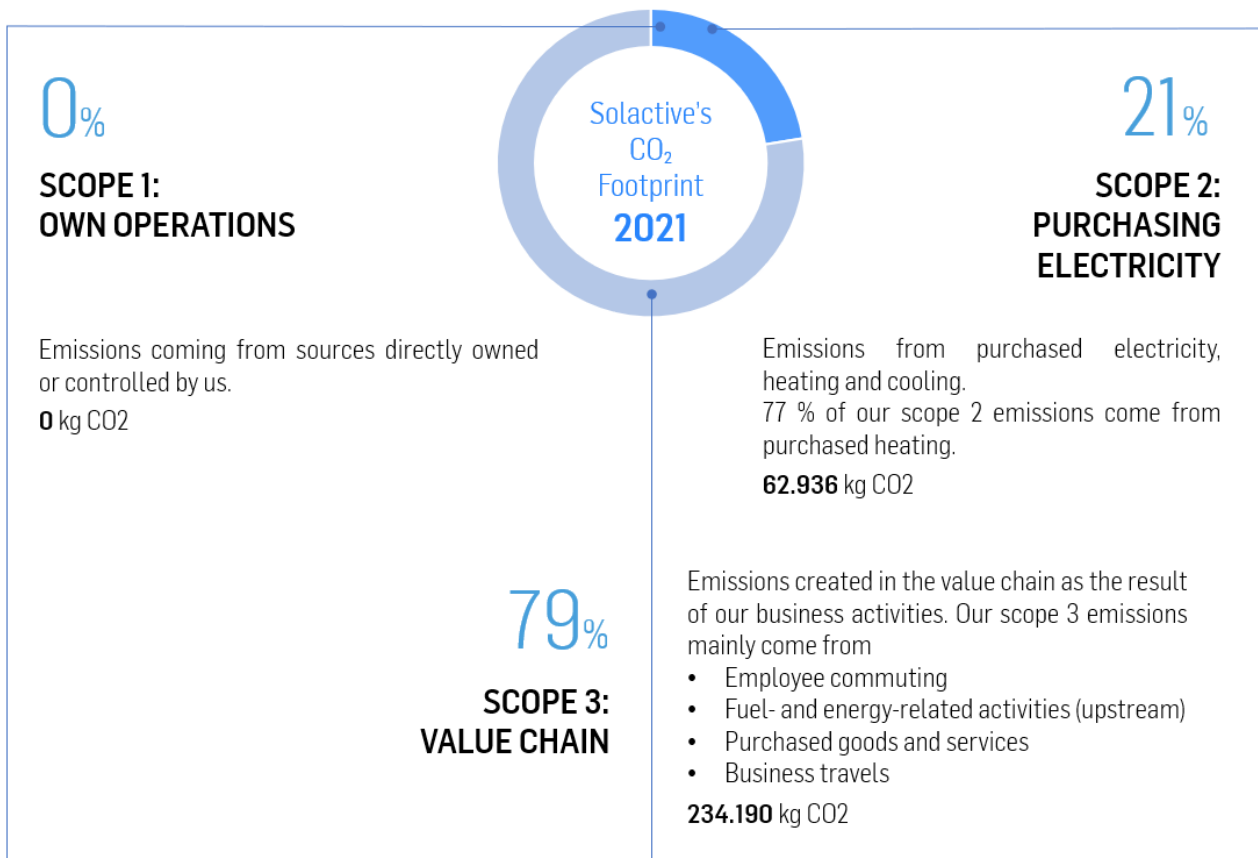


2.4 METRICS AND TARGETS

Company carbon footprint

While the overall environmental impact from Solactive's business activities is limited, we started measuring our emissions footprint in line with the Greenhouse Gas Protocol to create more transparency for our stakeholders as well as to make our contribution to climate protection by fulfilling our self-imposed reduction targets.

Our total greenhouse gas emissions for 2021 are 297,13 t CO₂e.

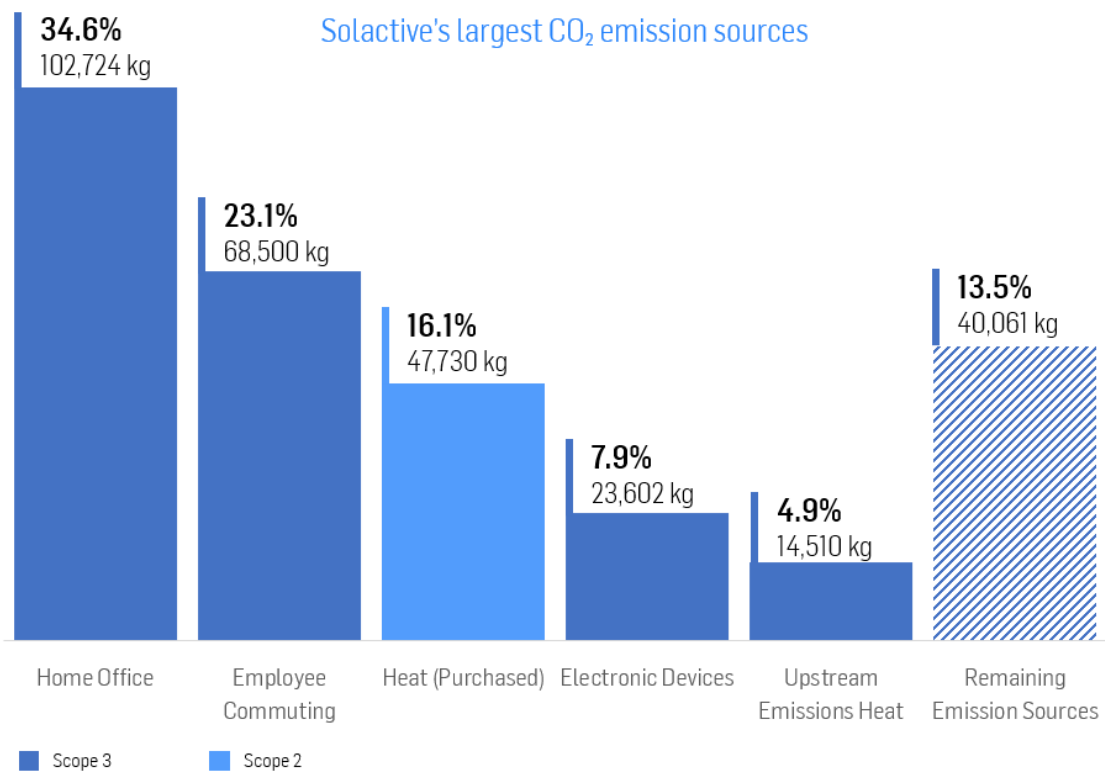


The CO₂ emissions were calculated using consumption data and emission factors researched by our service provider ClimatePartner. Wherever possible, primary data was used. If no primary data was available, secondary data from highly credible sources was used. The emission factors were taken from scientifically recognized databases such as ecoinvent and DEFRA.

The corporate carbon footprint calculates all emissions as CO₂ equivalents (CO₂e), which this report also refers to as "CO₂". This means that all relevant greenhouse gases, as stated in the IPCC Assessment Report, were taken into account in the calculations. These include carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).



Emissions for electricity were calculated using both the market-based method and the location-based method. This dual reporting approach is recommended by the GHG Protocol. For the market-based method, Solactive used specific emission factors for the electricity we purchased, if available. If these specific factors were not available, factors for the residual mix in the country of operation were used, or, if this was unavailable, the average grid mix of the country was used. In the location-based method, the average electricity grid mix for the country is calculated. This enables a direct comparison of Solactive's values with the country-specific average.



Reduction Targets

In 2022 Solactive submitted a 1.5°C aligned target to the Science Based Targets initiative (SBTi): We will reduce scope 1 and 2 emissions by 46% by 2030 compared to the base year 2019. In addition, we are committed to reduce our scope 3 emissions though as an SME we are not yet setting an official target.

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