

CLIMATE CHANGE REPORT 2024

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 sector. 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 on 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 more than 300 employees operate from offices in Frankfurt, Dresden, Berlin, Amsterdam, Toronto, and Hong Kong to provide 24/6 coverage to our clients. As of mid-2025, Solactive is calculating more than 38,000 indices for more than 700 clients in Europe, America, and Asia. Approximately USD 300 billion is invested in products linked to or referencing Solactive indices, including more than 710 ETFs. For more details on formative milestones, please refer to our website (<https://www.solactive.com/about-us/>).

In July 2022, Solactive fully acquired **Minerva**, a UK-based provider of global research and proxy voting solutions. Minerva offers ESG (Environmental, Social and Governance) research and voting services built on nearly 30 years of experience in proxy voting, sustainable stewardship, and data analysis. They provide various services for clients who are responsible for the management of assets valued in excess of GBP 11.3 trillion. While Minerva's primary client base is in Europe, they also provide services to clients in Japan, Taiwan, Singapore, Australia and the US. Together, Minerva and Solactive provide fully bespoke stewardship support services, as well as research, data, ESG indices and benchmarks to their combined global client base.

Minerva's climate-related efforts are presented in their separate TCFD-aligned Climate Change Report, which you can find here: [Minerva Climate Change Report 2024](#). Our joint carbon footprint is displayed in section 2.4 Metrics and Targets of this report.

OUR ESG APPROACH

The core belief defining Solactive's ESG approach is that a diverse set of views with regards to ESG will continue to exist in the future as various cultural, regional, and 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 our own proprietary ESG data or data from a few select 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 views and approach. We believe that our clients' views should be reflected in their data choice and hence provide them with 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 constantly seeks new concepts to provide sustainable index and investment solutions for our clients. Our long-standing experience and innovation strength is reflected in the fact that we currently calculate more than 300 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, the first Blue Bond Index in 2023, 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 subsidiary Minerva, as well as our strategic partners and investee companies: Iceberg Data Lab, right°, SparkChange, and Tumelo.

"At Solactive, we are dedicated to advancing sustainable finance through the development of cutting-edge ESG indices that reflect the changing priorities of investors and regulators alike. We understand that ESG integration is not a one-size-fits-all exercise. That is why we place our clients' individual objectives at the core of our approach, leveraging our open architecture ESG data solutions to deliver flexible and tailored index concepts." – Steffen Scheuble, CEO.

- Minerva addressed the challenge of many emerging and competing sustainability frameworks by mapping the most relevant ones to create Minerva Nexus, a database which allows clients to create fully customized models of the ESG risks their portfolios face. In addition to Nexus, Minerva has continued to enhance the thematic scope of their voting and engagement support to include a range of climate risk related frameworks including TCFD, the SDGs, TPI and Just Transition. As a result of developments in climate stewardship and the rise in climate-related voting, they have assisted their clients in developing comprehensive guidelines for voting and engagement activities.
- **Iceberg Data Lab**, located in Paris, provides climate and biodiversity data solutions to financial institutions to help them report and manage their environmental impact.
- **Tumelo**, based in the UK, provides technology that supports impactful stewardship by offering expression of wish and pass-through voting functionalities.
- **right°** is a Frankfurt-based climate fin-tech that offers a temperature alignment tool across asset classes.¹
- **SparkChange**, domiciled in the UK, enables access to carbon allowances markets such as the EU ETS scheme.¹

¹ These two investee companies are no longer relevant for Solactive.



Solactive has 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 2023 and in the reporting year 2024 we were awarded "ESG Index Provider of the Year" at the Environmental Finance Sustainable Investment Awards.

Solactive has made significant strides in tracking our environmental impact by measuring and recording our carbon footprint since 2019. To monitor ongoing progress and align with our reduction targets, we will continue measuring our carbon footprint annually and report our findings to the **Carbon Disclosure Project (CDP)**. Additionally, since 2022, we have been assessed annually by **EcoVadis** to further benchmark our sustainability efforts.

Being aware of our responsibility to employees, clients and other stakeholders, we adopted a company-wide, comprehensive framework in 2023 to combine and expand all activities related to corporate sustainability. The Management Board has tasked all relevant teams to create and review on a regular basis the company's corporate responsibility strategy, including our environmental and human resources policies. One important aspect of the environmental policy is the measurement and management of the climate impact of our business. Among others it encourages 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.

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 capital markets to better understand the financial implications of climate change and to support the transition to net zero through improving transparency. In 2022, we published our first Climate Change Report for the business year 2021 and started to gain experience with the implementation of the TCFD recommendations. 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

This chapter outlines how our Management Board and Senior Management oversee climate-related risks and opportunities. It describes the roles, responsibilities, and structures in place to ensure effective oversight and integration of climate considerations into strategic and operational decision-making.

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 developing 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 departments involved within Solactive.

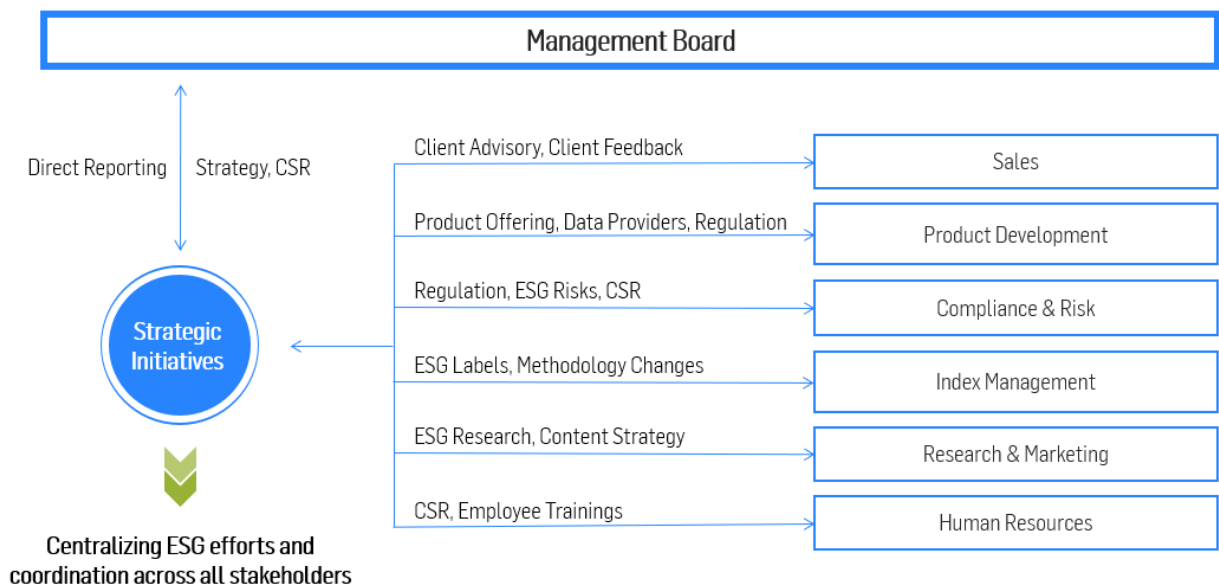
A wide range of staff is directly involved in the creation and offering of sustainability-focused solutions, spanning product development, operations, sales, research, and compliance. To ensure efficient communication between all relevant efforts and to ensure a fully aligned approach, the Strategic Initiatives team was appointed as a central coordinator and clearing house for Solactive's ESG strategy and sustainability-related efforts. The team reports directly 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 for the investment industry,
- regularly engages with academics, regulators, clients, and partners as well as our strategic investee companies on topics including regulation, ESG label requirements, product innovation, data provider collaboration, and corporate initiatives like the Corporate Social Responsibility (CSR) framework.

Through the above, the Strategic Initiatives team completes a picture of the current ESG and climate-related landscape in the market and can 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.



In 2023 Solactive's Environmental policy and its Human Resources Framework for Corporate Social Responsibility were finalized and approved by the Management Board. The Environmental policy describes how Solactive handles the material ecological topics in its business, e.g., business travel, employee commute and the efficient use of energy and water. In addition to the policy, Solactive also internally published Responsible Consumption Guidelines for all employees, offering tips and best practices for a responsible consumption of energy, water and paper, and the avoidance of waste in the offices. The Human Resources Framework for Corporate Social Responsibility is about the material social topics in our business, e.g., health and safety, diversity, equity and inclusion, and human capital development.

These two policies complement our existing Code of Conduct and Information Security and Data Protection policies in order to cover all three areas of ESG.

2.2 STRATEGY

In this chapter, we explain how climate-related risks and opportunities could affect our business model and strategy. It highlights how we are positioning ourselves to remain resilient in a changing climate and market environment.

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 it is updated on a yearly



basis. Part of this process is a continuous dialogue with our internal experts, our clients, 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 Physical Risks

Likelihood	Time frame	Impact
unlikely	0-1 years short-term	low
likely	2-5 years medium-term	medium
very likely	5-20 years long-term	high

Description & possible impact	Likelihood	Time frame	Impact	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		0-1 years		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. 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		5-20 years		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.



Table 2: Climate-related Transitional Risks

Policy & Legal

Description & possible impact	Likelihood	Time frame	Impact	Mitigation & resilience
Regulations leading to increased pricing of greenhouse gas emissions: Impact on financial planning		2-5 years		Although our business as an index provider is not greenhouse gas 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).
Regulation and policies affecting existing and new products and services, Solactive's corporate governance, and compliance obligations: Higher compliance and operating costs, legal liabilities, product or service restrictions and/ or reputation damage		2-5 years		Solactive stays informed about evolving ESG-related regulations in its different countries of operation and adapts its business practices, products and services accordingly. We maintain regular exchange and engagement with policymakers, regulatory bodies, industry associations and other stakeholder groups to address concerns and build trust. We will ensure that this risk is reflected in financial and resource planning. Solactive is also committed to develop and communicate a clear sustainability strategy and maintain its climate-related reporting.

Market

Description & possible impact	Likelihood	Time frame	Impact	Mitigation & resilience
Changing customer behavior: Decreased revenues due to reduced demand for existing products and services		2-5 years		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 for this change in preferences and are driving forward our corresponding products and services.



Reputation

Description & possible impact	Likelihood	Time frame	Impact	Mitigation & resilience
Increased stakeholder concern or negative feedback: Decreased revenues and difficulties in talent management		2-5 years		A perceived imbalance between our products and our operations in terms of sustainability could lead to concerns or negative stakeholder feedback. Possible consequences could be decreasing client satisfaction and revenue and difficulties in attracting and retaining talent. To mitigate this risk, we established an Environmental Policy and an HR Framework on Corporate Social Responsibility (both internally published in 2023) and founded a Corporate Sustainability Community beginning of 2023 to include employees in our initiatives.

Table 3: Climate-related Opportunities

Products & Services

Description & possible impact	Likelihood	Time frame	Impact	Utilization strategies
Shift in consumer preferences: Increased revenues resulting from increased demand for climate protection related products and services		2-5 years		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 300 ESG indices for our clients and feel prepared to accommodate changing customer demands.



Market

Description & possible impact	Likelihood	Time frame	Impact	Utilization strategies
Access to new client segments: Increased demand for highly customized solutions which is at the core of our DNA	<div><div></div><div></div><div></div><div></div><div></div></div>	2-5 years	<div><div></div><div></div><div></div><div></div><div></div></div>	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

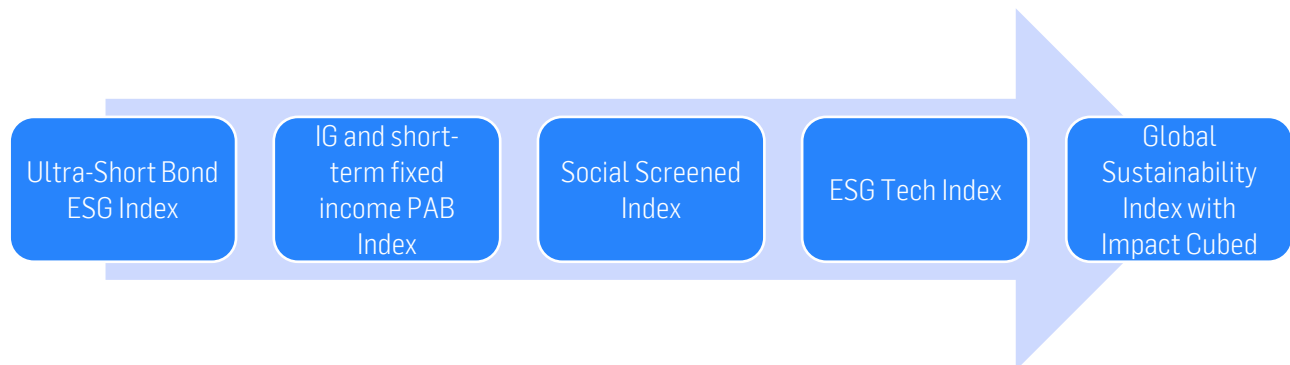
The map illustrates the locations of Solactive facilities worldwide. It is important to note that the operational significance of each Solactive location varies. Whilst there are physical risks for some of these locations, in particular Hong Kong and Amsterdam, we have implemented comprehensive measures to ensure business continuity and recovery in these areas.





2024 ESG Highlights & Progress

Products & Services



On the fixed income side, there are two ESG products we want to highlight for the year 2024:

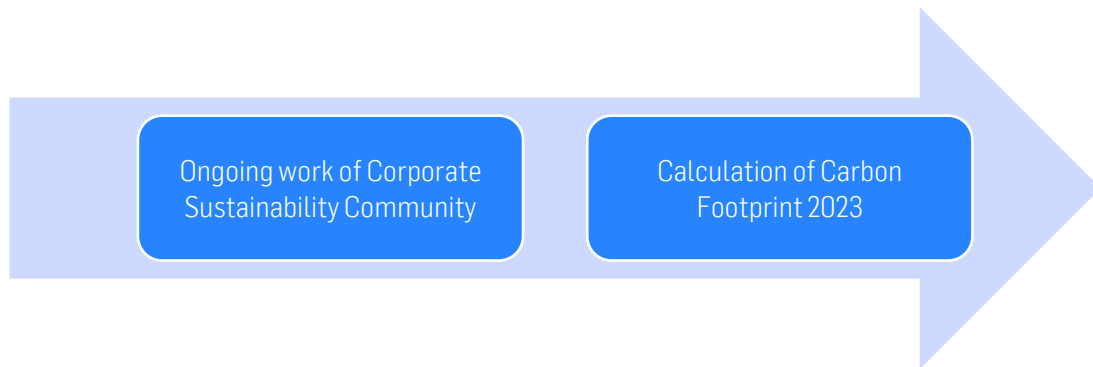
- The Solactive EUR Ultra-Short Diversified Bond ESG Index is designed to meet the growing demand for sustainable fixed income investments by combining short duration with responsible investment principles. The index incorporates ESG factors and country risk ratings into its selection process.
- Another newly launched index focuses on short-term debt securities. The Solactive ISS Sustainable Select 0-1 Year USD Corporate IG Index is a Paris-aligned benchmark on investment grade Corporate Bonds denominated in USD with a maturity below 1 year.

On the equity side, the following ESG products and investment ideas were created:

- The Solactive Transatlantic Social Screened Composite 50 Index puts a heavy focus on the least targeted category of E, S, and G, by filtering for companies performing well in social ratings.
- Focusing on the fastest growing sector over the past years, Tech, the Solactive L&G ESG US Tech Focus 100 Index aims to improve climate metrics, recognizing the impact the sector has on global climate change.
- Using state of the art data and models provided by Impact Cubed, the Solactive iCubed Global Sustainability Index achieves broad and substantial ESG improvements while yielding expected returns that closely align with the market cap weighted benchmark.



Corporate Sustainability



In February 2023, Solactive established an internal Corporate Sustainability Community. The community offers an open space to brainstorm and discuss ideas and projects on how Solactive can operate and grow its business in a sustainable way and positively interact with its community. It is open to every employee who wants to contribute to achieving this goal. During the year the community organized several events:

- Fundraising events for local charities.
- Social Days with Frankfurter Tafel, where employees helped with food distribution to people in need.
- Collection of blankets, toys etc. for the animal shelter Tierschutzverband Frankfurt.

To continue our climate-related efforts, we calculated our greenhouse gas footprint for 2023, (see [2.4 Metrics and Targets](#) for more information on the carbon footprint for 2024).



2.3 RISK MANAGEMENT

This section details the processes we use to identify, assess, and manage climate-related risks. It shows how these processes are integrated into our overall risk management framework, ensuring that climate considerations are treated consistently alongside other key business risks.

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

On a quarterly basis, leaders of various delivery teams meet with the Management Board to discuss and set priorities for addressing risks and opportunities, as well as to agree on key action plans from a strategic and execution oversight perspective. An annual planning process also takes place to establish priorities for the upcoming 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, it 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 risk identification by the delivery teams, and grading them based on severity. We assess the 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 for 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. In 2023 we added all climate-related risks to our internal risk database, including already existing treatments. We defined owners for each risk who are responsible for the yearly update. That way we are able to secure an automatic yearly review cycle and ensure that new estimations regarding scope and timeline can be incorporated.

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.



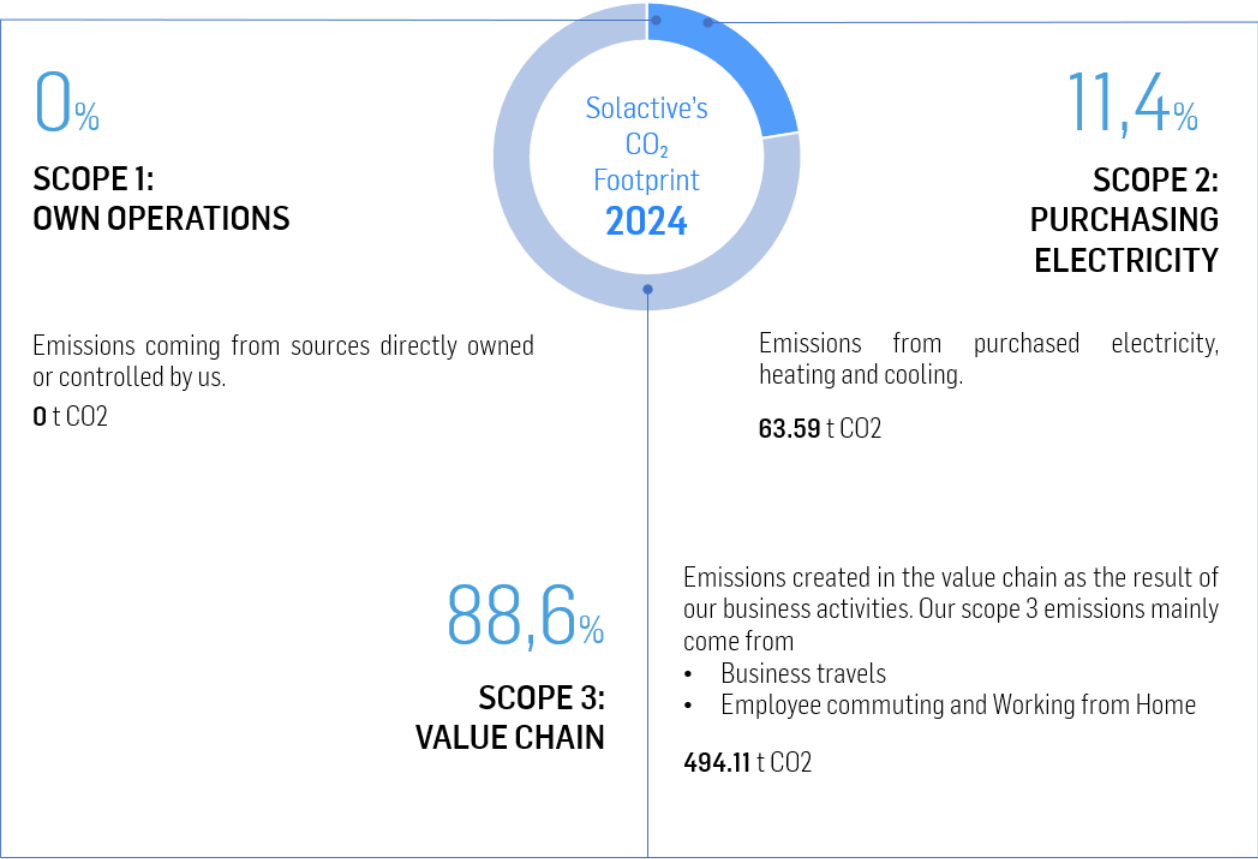
2.4 METRICS AND TARGETS

In this chapter, we disclose the key metrics and targets we use to assess and manage climate-related risks and opportunities. It includes data on greenhouse gas emissions, as well as our progress toward meeting defined climate goals.

Company carbon footprint

Although our business as an index provider is not greenhouse gas intensive, we measure 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 2024 are 557,7t CO₂e.**²



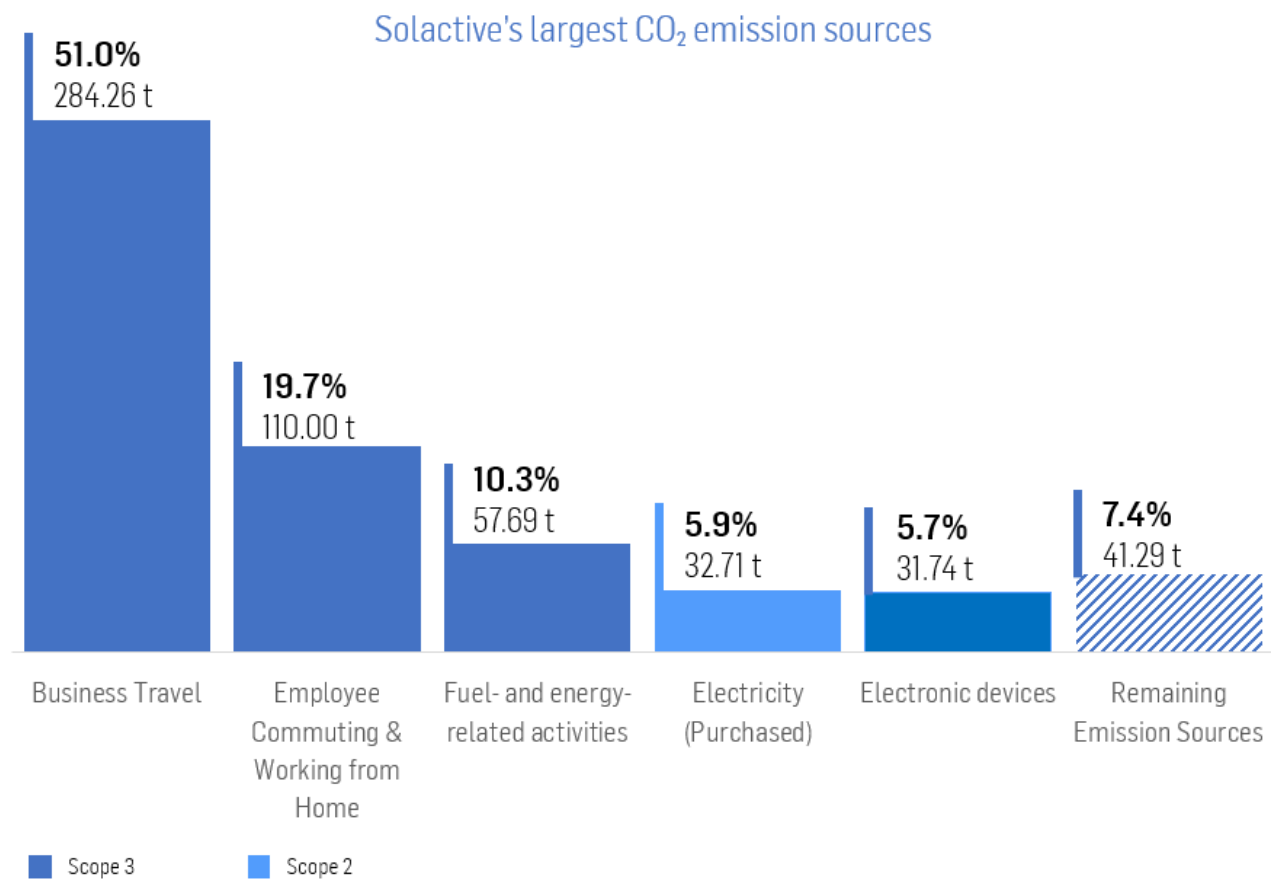
The CO₂ emissions were calculated using consumption data and emission factors researched by our service provider ClimatePartner. Wherever possible, primary data were used. If no primary data were available, secondary data from highly credible sources were used. Emission factors were taken from scientifically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

² Excluding our subsidiary Minerva Analytics.



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).

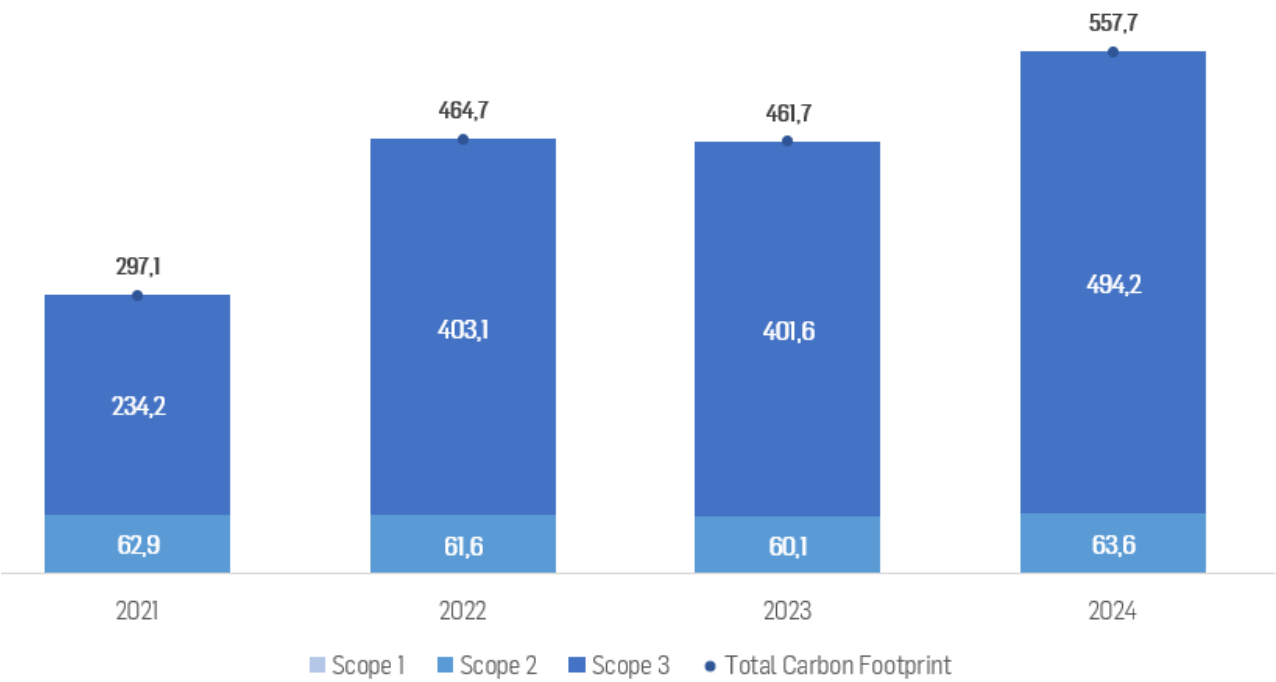
Emissions for electricity were calculated using both the market-based method and the location-based method. This dual reporting approach is recommended by the GHG Protocol. For the market-based method, Solactive used specific emission factors for the electricity we purchased, if available. If these specific 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.



The five largest emission sources in 2024 were business travel, employee commute and work from home, fuel- and energy-related activities (upstream emissions from electricity, heat and cooling), electricity and purchased electronic devices. The overall carbon footprint slightly increased by 21% in comparison to the previous year (see graph below). This is mainly due to increased business travel activities.



Development of Solactive's Carbon Footprint (in t CO₂e)



Solactive's subsidiary Minerva Analytics is not reflected in the company carbon footprint above. However, Minerva also measured its 2024 footprint, which amounts to 109,5 t CO₂e. Our joint total greenhouse gas emissions for 2024 are 667,2t CO₂e. The main drivers for Minerva's 2024 emissions are purchased electronic devices (42.5%) and working from home (21.0%).

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 2019³. In addition, we are committed to reduce our scope 3 emissions without an official target, in line with the SBTi path for SMEs.

³ The target will be adapted to include our subsidiary Minerva Analytics.

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