



Update Carbon Reporting

Update on Verve Group's Carbon Reporting

Verve Group SE is pleased to report its carbon emissions for the fourth time. The report includes the following sections:

- [Emissions 2023](#): This section gives you insights into the carbon emissions 2023 for Verve Group as well as a split for Scope 3 emissions, which is provided for the first time.
- [Outlook](#): This section gives a brief inside into Verve's targets for the upcoming calculations as well as industry developments on carbon measurement.
- [Annex Basis of Data Preparation Year 2020-2022](#): further insights into our calculation methods.

Emissions 2023

Verve Group SE has changed its business model significantly in recent years. We have therefore opted for a new tracking partner with industry expertise and have also adapted our measurement method to better reflect the emissions of an AdTech company. This increases transparency and thus provides a basis for reducing our emissions in the future and becoming more efficient. It should be noted that although efforts have been made, no uniform industry standard has yet emerged, which is why comparability is difficult and there are fluctuations within different time periods as well as within the industry. As a rapidly growing company, we recognize our increasing impact on the environment and will continue to intensify our efforts with the aim of creating transparency and increasing our efficiency.

In 2023, Verve emitted 29,365 tons of CO₂e (excluding the games business). The CO₂e emissions of the games business were 37,500 CO₂e. 18 offices across the world and all entities which were listed under p.136f. in our [Annual Report 2023](#) are included.

Additionally, for 2023, Verve has broken down the Scope 3 related emissions generated within the company according to the GHG¹ categories for the first time to provide further insights.

Categories	2023 ²
Scope 1	0t CO₂e
Scope 2 (market-based)	82t CO₂e
Scope 2 (location-based)	95t CO ₂ e
Scope 3	
Upstream	
No.1) Purchased Good & Services	26,425t CO ₂ e
No. 4) Transportation & Distribution	6t CO ₂ e
No. 5) Waste generated in operations	25t CO ₂ e
No. 6) Business Travel	1,371t CO ₂ e
No. 7) Employee Commuting	1,493t CO ₂ e
No. 8) Leased Assets	45t CO ₂ e
Downstream	
No. 11) Use of sold products	37,500t CO ₂ e
Scope 3 (excl. games)	29,365t CO₂e
Scope 3 (incl. games)	66,865t CO ₂ e
Total Emissions (market based & excl. Games)	29,447t CO ₂ e
Total Emissions (market based & incl. Games)	66,947t CO ₂ e
Total Emissions (location based & excl. Games)	29,460t CO ₂ e
Total Emissions (location based & incl. Games)	66,960t CO ₂ e

Table 1) Emissions 2023

¹ GHG (Greenhouse gases): For further information, please have a look on their website: <https://ghgprotocol.org/>

² Does not include a 10% surcharge

Outlook

In the coming years, we want to reduce our emissions and become more efficient. For this reason, we will continue to optimize the measurement of our CO2e footprint together with our partners in order to develop and implement appropriate reduction measures based on the results. For this reason, we are also keeping an eye on developments relating to industry standards and best practice and adapting to these where necessary.

One framework that is available to the advertising industry is the SRI & Alliance Digitale framework³ which exceeds the requirements of the GHG protocol, and which was initiated by IAB. The SRI & Alliance Digitale Framework does not only consider a company's own emissions, but rather tries to draw a full picture of the emissions that an advertisement would create, meaning that it takes a closer look at the advertising value chain from the point where an advertisement is added to a Demand Side Platform to the ad finally being shown on an end-user device. It places a particular focus on the areas of data centers and user devices, as well as the area of networks. Although these areas were previously included in the calculation of CO2e emissions, the scope is now different as it now also considers how data centers, user devices and networks were built, how they are maintained and how they are treated during their end-of-life.

In 2024, another approach for a new industry framework, the Global Media Sustainability Framework (GMSF)⁴, developed by a working group led by Ad Net Zero⁵ has been introduced. The framework provides a comprehensive, product-level greenhouse gas (GHG) assessment of digital media delivery emissions. It includes emissions from creative production and storage, excluded by the SRI framework, distribution, and consumption. The Ad Net Zero Global Media Sustainability Framework increases the precision of emission calculation by incorporating new data, such as the share of impressions delivered through edge nodes vs central data centers, or a more complete representation of the programmatic ecosystem. Corporate overhead emissions from all the companies involved in the ad delivery supply chain are also included in the calculations as opposed to the SRI.

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³ SRI (Syndicat des Régies Internet) & Alliance Digitale: For more information, please have a look on their website: https://www.sri-france.org/wp-content/uploads/2023/06/SRI_Calculating-the-carbon-footprint_V2.pdf

⁴ GMSF (Global Media Sustainability Framework): For more information about [the Global Media Sustainability Framework](#), please have a look on their website: <https://adnetzero.com/news/ad-net-zero-announces-global-framework-to-measure-medias-carbon-emissions/>.

⁵ Ad Net Zero: For more information, please have a look on their website: <https://adnetzero.com/>

Appendix: Basis of Data Preparation Year 2020-2022

Verve follows the “Operational Control Approach” from the GHG protocol, so all operations which Verve Group SE controls are included. This includes 18 offices across the world and all entities which were listed under p.110f. in our [Annual Report 2022](#).

Our approach for Scope 1:

Scope 1 is concerned with emissions generated directly within the company. This could include emissions from, for example, the company’s own fleet or the burning of oil for heating, which would be covered under Scope 1. Verve Group does not have a company fleet which could generate any emissions for Scope 1. Additionally, for Verve Group, office heating was partially included under Scope 3 category 8 (upstream leased assets) for 2020-2022 as some offices were rented through coworking space providers which are considered as leased assets.

Our approach for Scope 2⁶:

Scope 2 reflects indirect emissions which are not listed under Scope 1 such as emissions from purchased electricity. In general, Scope 2 emissions are split between location-based and market-based emissions.

Location-based emissions calculate emissions from electricity based on the average emission intensity of the national power grid a company is using. This means that the emissions of an organization are impacted by the location of its offices. If a company is based in a country where the national electricity mix is based mainly on coal-fired power plants, this company will have more emissions compared to if the same organization would be based in a country where the national electricity mix is provided primarily by renewable energy.

Market-based emissions consider the emissions from the electricity mix the organization actually purchases. For example, a company who chooses a renewable energy provider, would have no emissions in terms of its electricity usage contrary to a company who does not actively purchase renewable energy and is allocated the country’s residual grid mix.

For Scope 2, mostly estimated amounts on the basis of FTE per office were used. For purchased electricity from renewable resources, Verve Group used the actual consumption data.

Our approach for Scope 3⁷:

Scope 3 covers all other activities of the company along its value chain within the so-called GHG categories, which are part of the universally accepted “Corporate Value Chain (Scope 3) Accounting and Reporting Standard” for carbon measurement devised by the GHG protocol:

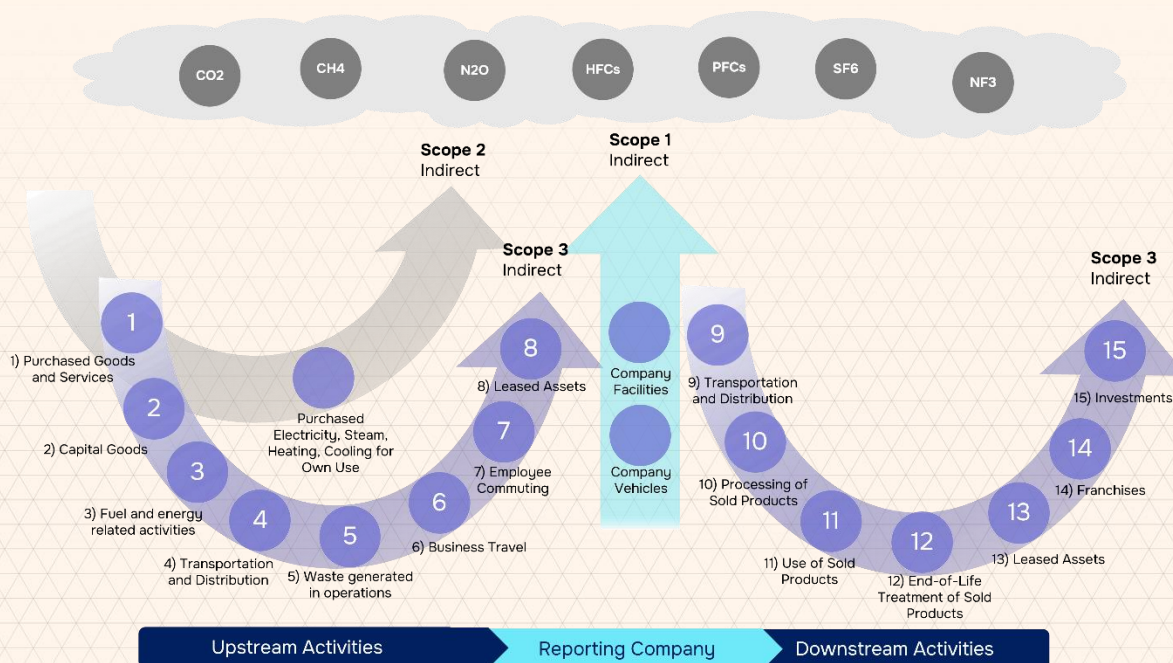


Figure 1) Carbon emissions - Scopes after GHG; cf. Greenhouse Gas Protocol, “Corporate Value Chain (Scope 3) Accounting and Reporting Standard”, p. 5

⁶ If you want to learn more about the measurement of [Scope 2 GHG categories](#), please have a look on the official website: <https://ghgprotocol.org/>

⁷ If you want to learn more about [value chain accounting](#) and the measurement of [Scope 3 GHG categories](#), please have a look on the official website: <https://ghgprotocol.org/>

Upstream the value chain, Verve identified the following GHG categories:

- No.1) Purchased Goods & Services
- No. 2) Capital Goods
- No. 3) Fuel and energy related activities⁸
- No. 4) Transportation & Distribution
- No. 5) Waste generated in operations
- No. 6) Business Travel
- No. 7) Employee Commuting
- No. 8) Leased Assets

Downstream the value chain only one category was identified:

- No. 11) Use of sold products.

For the years 2020 to 2022, Scope 3 was reported as a total and not split into the various sub-categories.

For all scopes, Verve aims to use activity data wherever possible, because they are the most accurate and deliver the best quality of data. This includes games data and business travel as well as number of employees, and the size of our offices. When certain activity data is unavailable, Verve relies on industry framework estimated data and used averages for example the grid mix of consumed energy of the players of our games of our gamigo games portfolio

Also, the energy consumption in Verve's offices as well as the consumption of energy by our users through the usage of our services or the heating of our offices have been calculated like that. Where neither activity data nor industry averages were available, spend data was used. The group leverages spend-based emission factor databases such as EXIOBASE and the Environmental Protection Agency (EPA). Within the purchased goods & services category, this affects, consulting services as well as most of the other purchased goods and services. This includes data centers.

⁸ If not covered in Scope 1 & 2



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About VERVE

Verve operates a fast-growing, profitable ad-software platform that matches global advertiser demand with publisher ad-supply while improving results through first party data from own content. Verve's main operational presence is in North America and Europe. Through investments in organic growth and innovation, as well as targeted M&A, Verve has built a one-stop shop for programmatic advertising, enabling companies to buy and sell ad space across all digital devices (mobile apps, web, connected TV and digital out of home), with the mission to make advertising better. Verve is registered as Societas Europaea in Sweden (registration number 517100-0143) and its shares are listed on Nasdaq First North Premier Growth Market in Stockholm and in the Scale segment of the Frankfurt Stock Exchange. The Company has two secured bonds that are listed on Nasdaq Stockholm and on the Frankfurt Stock Exchange Open Market.