



Corporate Carbon Footprint Report

2024

KGAL GmbH & Co. KG

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01. Glossary

Stationary combustion

This category includes emissions which result from combustion of fuels in stationary sources, e.g., boilers, furnaces, turbines. It can refer to generation of electricity, heat or steam.

Mobile combustion

Emissions associated with mobile combustion result from the combustion of fuels in company owned/controlled mobile combustion sources such as vehicle fleet (e.g. trucks, trains, cars, vans, buses, airplanes, ships and similar.)

Fugitive emissions

Result from intentional or unintentional releases, e.g., refrigeration equipment leaks.

Process emissions

Typically result from manufacture or processing of chemicals and materials, e.g., cement, aluminium, adipic acid, ammonia manufacture, and waste processing.

Fuel and energy-related activities (not included in Scope 1 or Scope 2)

Cover upstream (cradle-to-gate) emissions of purchased fuels and electricity, such as emissions related to grid maintenance, infrastructure, Well-to-Tank emissions and similar.

02. Introduction

Calculate, reduce, contribute to climate projects and communicate - these are the key steps to tackling climate change in accordance with the Paris Agreement. The foundation for any climate action starts with calculation: A company that knows their carbon footprint also knows which parts of their business cause emissions and how high those emissions are. At the same time, a carbon footprint helps companies to understand which areas have the greatest potential for avoidance and reduction, to set reduction targets, and to develop and implement appropriate reduction measures. Annual corporate carbon footprint reports allow companies to check their progress against reduction targets and to identify areas where emissions can be further reduced.

ClimatePartner has measured a Corporate Carbon Footprint (CCF) of **KGAL GmbH & Co. KG**. It represents the Greenhouse Gas (GHG) emissions generated by the company's business activities throughout the reporting period of **2024**, and includes all relevant emission sources within the defined system boundaries. In this report, the CCF refers to **Corporate Carbon Footprint 2024**.

The assessment was based on the world's most widely used greenhouse gas accounting standards for companies: the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

03. Overall results

This is the result of the calculation: **Corporate Carbon Footprint** for the time period **2024**:

Scope 1	0.00 t CO ₂
Scope 2	54.21 t CO ₂
Scope 3	1,215.40 t CO ₂
Overall result	1,269.61 t CO₂

04. Methodology

Principles

In accordance with the GHG Protocol, this assessment follows five basic principles:

- **RELEVANCE**
The carbon footprint appropriately reflects the GHG emissions of the subject and enables the user to make informed decisions.
- **COMPLETENESS**
The carbon footprint covers all GHG emissions within the selected system boundaries. If relevant emission sources were excluded, this is documented and justified.
- **TRANSPARENCY**
All relevant aspects are addressed and documented in a factual coherent, clear, and understandable manner.
- **CONSISTENCY**
Comparable methodologies are implemented so that emissions can be tracked over time. Changes in data, system boundaries, or methods are transparently documented.
- **ACCURACY**
The calculation of GHG emissions is not systematically too high or too low and uncertainties are minimised. The information provided is accurate enough to allow users to make informed decisions.

CO₂ equivalents

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

Each gas has a different ability to warm the Earth's atmosphere, and each remains in the atmosphere for different lengths of time. To make their effect comparable, all gases are converted to CO₂ equivalents (CO₂e) as a basic unit and multiplied by their global warming potential (GWP). The GWP describes how strong a gas can warm the atmosphere compared to CO₂ over a period of time, usually 100 years.

For example, methane has a global warming potential of 30, so the warming effect of methane is 30 times greater than CO₂ over 100 years.¹

System boundaries

Organisational system boundaries

Organisational system boundaries have been established following the operational control approach. Under this approach, a reporting company accounts for 100% of the emissions from operations at which it has the full authority to introduce and implement operating policies.

For this this report, the company decided to include the following calculations within their system boundaries:

- CCF 2024

¹Source: Intergovernmental Panel on Climate Change, "Climate Change 2021 The Physical Science Basis", p. 1017, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport.pdf (retrieved on 08.05.2025)

Operational system boundaries

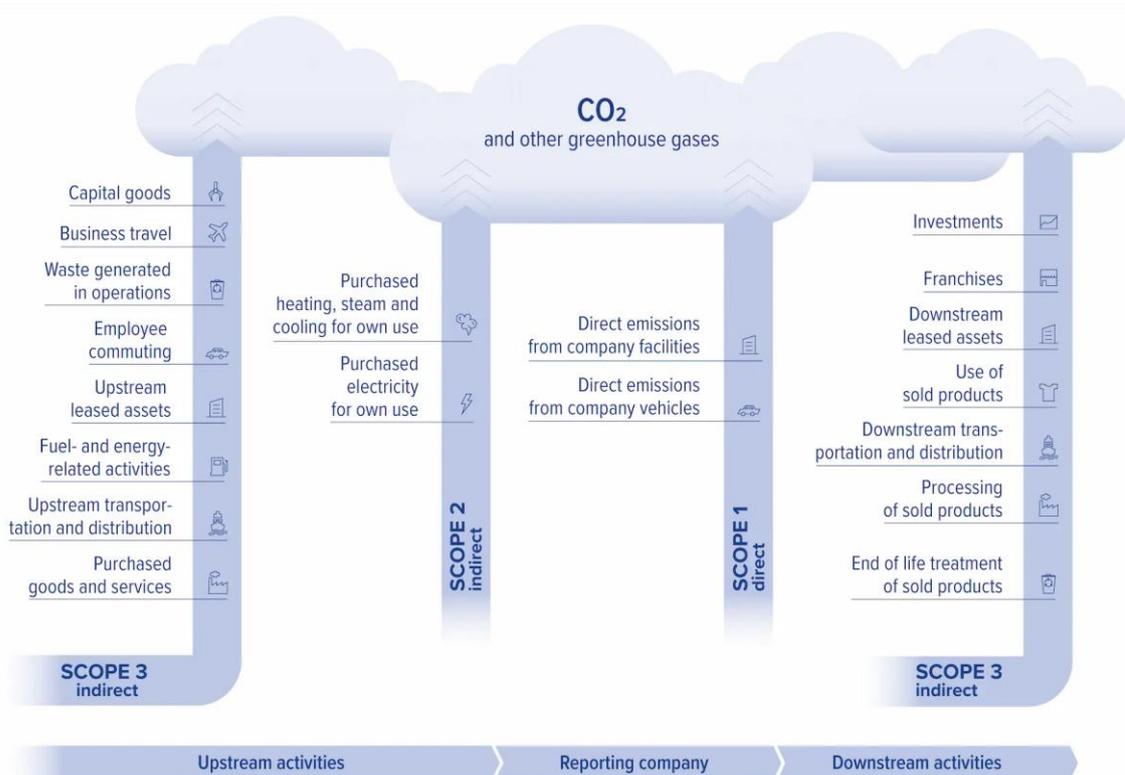
Operational system boundaries indicate which business activities are covered by the carbon footprint. The emission sources have been grouped into three scopes:

Scope 1 includes all direct emissions, for example generated through the use of fuel in company-owned equipment or vehicle fleets.

Scope 2 covers emissions from purchased energy, such as electricity and district heating.

Scope 3 includes all other emissions that are not under direct company's control, such as employee travel or purchased goods.

The visual below provides an overview of all the emission sources under Scopes 1, 2 and 3.



In this assessment, KGAL GmbH & Co. KG decided to address only the most relevant emission categories and to include the remainder of Scope 3 in the future assessments. In addition, there were some exclusions made within the categories that were considered. See Annex 1 for the emission categories that have been excluded from this assessment.

Data quality and collection

There are two types of data used in carbon footprint calculations: activity data and emission factors. Activity data refers to consumption (e.g. energy or fuel), weight (e.g. of generated waste of purchased material), quantity (e.g. number of items bought, mileage travelled etc.) or other measures that an activity can be quantified by. An emission factor is a scientifically measured amount of CO₂ that is generated by a certain activity (e.g. kg of CO₂ per km driven, kg CO₂ per kg of material produced, kg CO₂ per kWh consumed etc.)

The emissions were calculated using primary or secondary consumption/activity data and emission factors researched by ClimatePartner. The GHG Protocol defines primary and secondary activity data as follows:

Primary data

Is data provided by suppliers or other value chain partners related to specific activities or emissions in the reporting company's value chain.

Secondary data

Includes industry-average data (e.g. from published databases, government statistics, literature studies, and industry associations), financial data, proxy data, and other generic data.

In this assessment, secondary data was used only when primary data was unavailable. Emission factors were obtained from scientifically recognised databases and sources², including: CP calculation, DEFRA, Ecoinvent 3.11, GEMIS 4.95, Mobitool 2.1, Research Paper, supplier specific, CP Calculation.

Scope 1 and 2 data is typically easier to collect because these activities are often run by companies themselves, therefore making activity records more accessible. Scope 3 primary data, on the other hand, tends to be less available and the emission calculation often requires extrapolations, proxies and secondary data sources. The table below summarises the primary and secondary data ratio for Scope 3. It may help to assess the existing data quality and track the progress towards data quality improvement over time.

² Some emission factors might have been calculated by ClimatePartner and labelled as "CP calculation". This means that a specific emission factor was derived by ClimatePartner using original emission factors from scientific emission factor databases, research papers or other credible and verified sources. For example, ClimatePartner might have calculated an emission factor for a coffee break by applying original emission factors for coffee grounds, boiled water and milk.

Data category	Scope	Primary data ratio	Secondary data ratio
Data share for activity data	Scope 3	66.84%	33.16%
Data share for emission factor data	Scope 3	0%	100%

The results of this report are based on the input data provided by **KGAL GmbH & Co. KG**. As ClimatePartner is unable to verify this data, any liability on the part of ClimatePartner for results arising from incorrect, incomplete, or outdated data is expressly excluded.

The accuracy of the results directly depends on the data provided or entered.

Assumptions and limitations

High quality primary data is always recommended for the calculation of an accurate footprint, however it cannot always be collected due to time or operational limitations. To fill the data gaps, extrapolations and estimates were made. While it was done in a pragmatic way, it should be noted that estimations are more likely than not to be conservative to ensure that emissions are not under-counted.

Increasing the primary data ratio and improving its quality to ensure high-level accuracy and credibility of the results is recommended and ClimatePartner can support **KGAL GmbH & Co. KG** with achieving this.

The overview of assumptions that have been made in this assessment are summarised in Annex 2.

Electricity: market-based and location-based approaches

Emissions for electricity were calculated using both the market-based and the location-based methods. This dual reporting approach is recommended by the GHG Protocol.

For the market-based method, the company provided specific emission factors for the electricity they purchased, if available. If this data was not available, secondary emission factors for the residual mix in the country of operation were used, or, if this was unavailable as well, the average grid mix of the country was used.

The report also provides a value measured using the location-based method. According to this approach, the average electricity grid mix for the country was considered and respective emission factors used to calculate the emissions.

05. Carbon footprint results

Overall results

The following emissions were calculated for **Corporate Carbon Footprint** for the period **2024**. This is a consolidated result of all the individual calculations which were selected to be included in this report.

The graphs below provide a visual representation of the overall emissions by scope and an overview of the largest emission sources within this carbon footprint. Identifying hotspots is essential when considering reduction potentials and setting targets.

Figure 1. Emissions categorised by scope 1,2 and 3

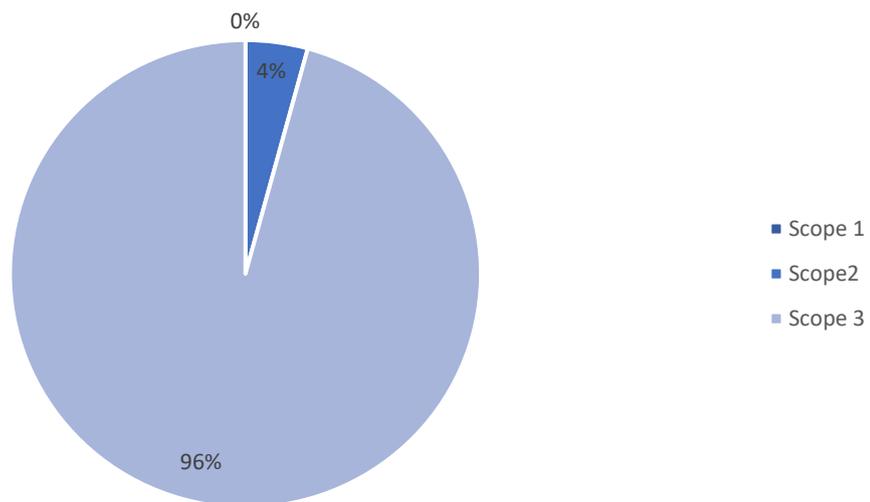
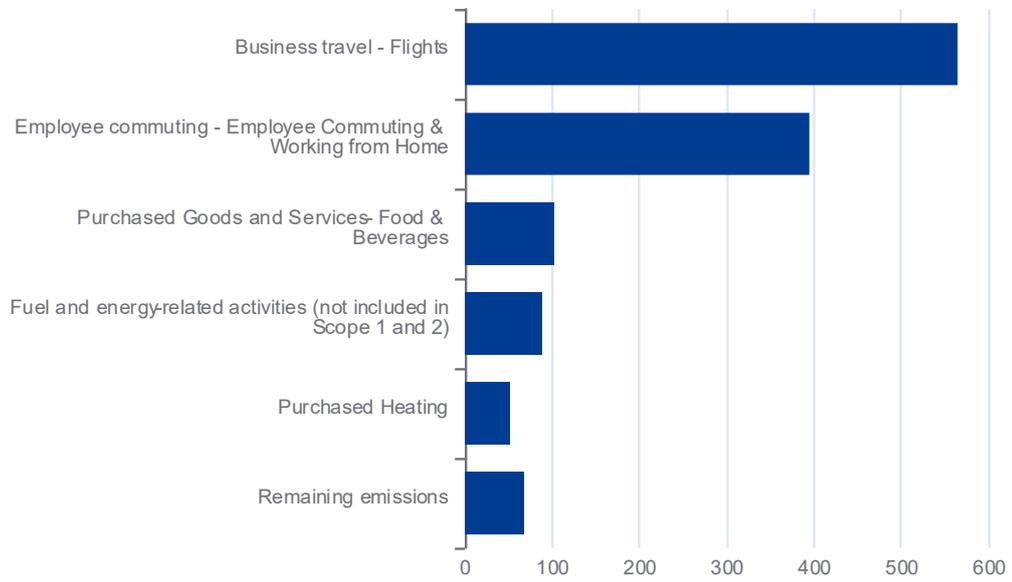


Figure 2. The largest emission sources



Emission sources	t CO ₂	%
Scope 1	0.00	0.00
Stationary combustion	0.00	0.00
Scope 2	54.21	4.27
Purchased electricity <small>Calculated using the market-based method</small>	2.44	0.19
Purchased heating	51.78	4.08
Scope 3	1,215.40	95.73
Purchased goods and services	124.74	9.83
Fuel- and energy-related activities (not incl. in Scope 1 or Scope 2)	88.38	6.96
Waste generated in operations	10.37	0.82
Business travel	597.06	47.03
Employee commuting	394.84	31.10
Overall results	1,269.61	

Electricity	t CO ₂
Purchased electricity <small>Calculated using the location-based method</small>	187.75

A further breakdown of **Scope 3** categories is presented in the table below.

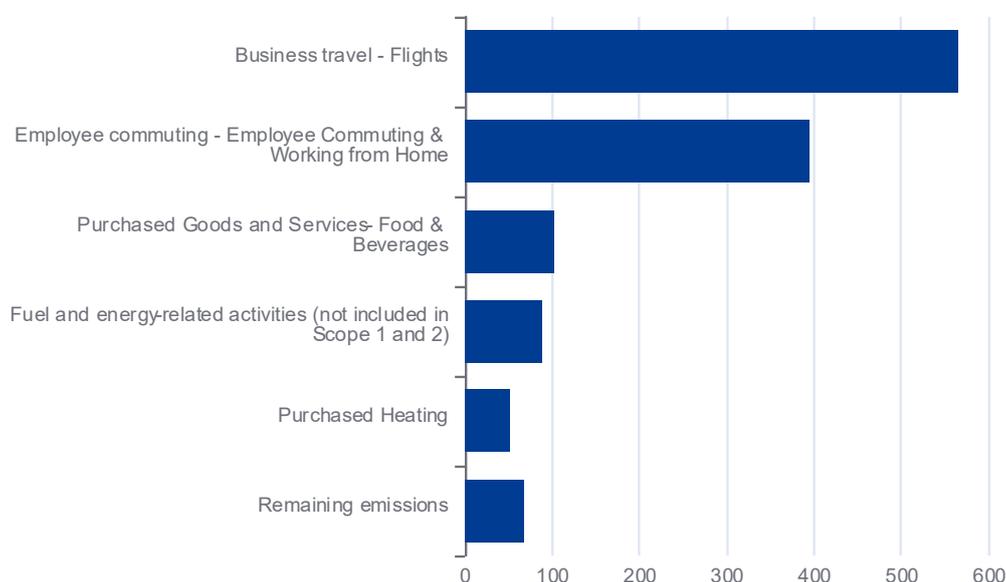
Emission sources	t CO ₂	%
Scope 3	1,215.40	95.73
Purchased goods and services	124.74	9.83
Purchased goods	21.06	1.66
Food & beverages	101.79	8.02
External data center	1.17	0.09
Water	0.73	0.06
Fuel- and energy-related activities (not incl. in Scope 1 or Scope 2)	88.38	6.96
Waste generated in operations	10.37	0.82
Business travel	597.06	47.03
Private & rental vehicles	21.82	1.72
Rail travel	0.47	0.04
Flights	564.96	44.50
Hotel stays	9.82	0.77
Employee commuting	394.84	31.10
Employee commuting and Working from home	394.84	31.10
Overall results	1,269.61	

Results per calculation

This section provides an overview of the results per an individual calculation. The figure below shows an overall emission breakdown per calculation. The following tables provide further insight into the emission sources for each individual calculation.

CCF 2024

Figure 3. Emissions per calculation



Emission sources	t CO ₂	%
Scope 1	0.00	0.00
Stationary combustion	0.00	0.00
Scope 2	54.21	4.27
Purchased electricity	2.44	0.19
Purchased heating	51.78	4.08
Scope 3	1,215.40	95.73
Purchased goods and services	124.74	9.83
Purchased goods	21.06	1.66

Emission sources	t CO ₂	%
Food & beverages	101.79	8.02
External data center	1.17	0.09
Water	0.73	0.06
Fuel- and energy-related activities (not incl. in Scope 1 or Scope 2)	88.38	6.96
Waste generated in operations	10.37	0.82
Business travel	597.06	47.03
Private & rental vehicles	21.82	1.72
Rail travel	0.47	0.04
Flights	564.96	44.50
Hotel stays	9.82	0.77
Employee commuting	394.84	31.10
Employee commuting and Working from home	394.84	31.10
Overall results	1,269.61	

Electricity	t CO ₂
Purchased electricity	187.75
<small>Calculated using the location-based method</small>	

06. Next steps

Comprehensive climate action can be defined by a four-step approach which we call a net zero cycle. It consists of carbon footprint measurement, emission reduction, contribution to climate projects and transparent communication. A carbon footprint allows companies to understand their impact and make informed decisions when it comes to planning ahead: setting targets and implementing reductions, while contribution to climate projects is a way for companies to take responsibility of those emissions that cannot be avoided in the present.

Setting reduction targets

Reducing emissions is vital, and setting clear, ambitious and measurable targets is the best way to start. The reduction targets should reflect current scientific and technological understanding, and a reduction plan detailing specific actions and team responsibilities can help the organisation to make quick and meaningful progress.

ClimatePartner recommends differentiating between short-, medium-, and long-term reduction targets because some measures can be implemented quickly whilst others take time, for example, making changes to processes, product design and supply chains. Creating reduction plans is a continuous, iterative process that should be an integral part of the corporate strategy.

Mitigating and reducing emissions

While many similar solutions may apply to different companies, each organisation should evaluate and choose those measures that are most relevant to their sector, industry or business.

In general, there are two ways to reduce emissions:

Reduce activities

that emit greenhouse gases, for example, by reducing energy consumption, the use of raw materials, or the number of business trips taken by employees.

Reduce intensity

by choosing services, raw materials, and energy products with lower emission factors, for example, by switching to a green electricity tariff.

Some reduction measures a company may consider include:³

Scope 1 + 2

Use renewable energy sources

by switching to biogas, green electricity, etc.

Use more low-emission refrigerants

by switching to ammonia, propane, etc.

Increase energy efficiency

through newer machinery and similar

Optimise processes and products

through new procedures, improved product design and other production activities

Scope 3

Conserve resources

through avoidance, such as making fewer business trips, using less packaging, producing less waste, etc.

³ This overview does not guarantee completeness. Each measure must be assessed for appropriateness to the specific company.

Use more low-emission raw materials	such as plant-based, regional and recycled raw materials
Choose low-emission options for daily activities	such as taking the train instead of flying, using a company bicycle instead of a company car, etc.
Engage with your suppliers	encouraging them to share their knowledge and experience in implementing sustainability practices and solutions
Engage your employees	by offering incentives to implement climate-friendly measures, providing ongoing training opportunities, etc.

Contributing to climate projects

While emission reduction remains crucial in limiting global warming to 1.5 degree target of the Paris Agreement, currently, both government and corporate net zero strategies are not doing enough to keep decarbonisation progress in line. This means that the climate action measures you are implementing today may not have the desired impact or deliver the results the planet urgently requires. Financial contributions to climate projects outside of your company's value chain help tackle those emissions that cannot be avoided at the present time and create a positive impact today.

More than just climate action

Climate projects work in different ways. Some remove CO₂ from the atmosphere (e.g. through reforestation projects), while others prevent further CO₂ emissions (e.g. through the expansion of renewable energy). In addition, these projects promote economic, social, and sustainable development of the region. Each of our projects is certified according to international standards, thus ensuring that they improve the lives of local communities as well as mitigate climate change.

Verified emissions savings

The exact amount of CO₂ saved by each project is verified by independent organisations. Project developers can then sell these CO₂ savings in the form of certified emission reductions. The resulting income then finances the project, which would not be able to operate without it.

For more information about the climate projects, visit www.climatepartner.com/carbon-offset-projects, or watch a video explaining why financial contribution to these projects can make a difference: <http://www.climatepartner.com/thewholejob>.

For this carbon footprint, the recommended contribution amount is:⁴

Emission sources	t CO ₂
Carbon Footprint	1,269.61
Financial contribution to climate projects incl. 10% safety margin	1,396.57

Communicating transparently

From reporting to investors, to press releases, and on-pack consumer messaging, your communication about climate action should be transparent, clear and credible. [Read more](#) about how ClimatePartner can help you communicate your impact.

⁴ The 10% safety margin is applied to cover the uncertainties in the underlying data that naturally arise from the use of database values and assumptions.

07. Annex 1. Excluded categories

CCF 2024

Scope	Emissions category	Included	Explanation
Scope 1	1.1 Stationary Combustion	Yes	
Scope 1	1.2 Mobile Combustion	No	No emissions to report
Scope 1	1.3 Fugitive Emissions	No	keine Nachfüllung 2024; keine flüchtigen Emissionen vorhanden
Scope 2	2.1 Purchased Electricity	Yes	
Scope 2	2.3 Purchased Heating	Yes	
Scope 2	2.4 Purchased Cooling	No	keine Nachfüllung 2024
Scope 3	3.1 Purchased goods and services		
	Purchased goods	Yes	
	Food & Beverages	Yes	
	External data center	Yes	
	Water	Yes	
Scope 3	3.3. Fuel and energy-related activities (not included in Scope 1 and 2)	Yes	
Scope 3	3.5 Waste generated in operations	Yes	
Scope 3	3.6 Business travel	Yes	
	Private & rental vehicles	Yes	
	Rail travel	Yes	
	Flights	Yes	
	Hotel stays	Yes	
Scope 3	3.7 Employee commuting	Yes	

08. Annex 2. Assumptions

CCF 2024

Scope	Emissions category	Assumption
Scope 1	1.1 Stationary Combustion	Basiert auf Vorjahreswert
Scope 2	2.1 Purchased Electricity	<p>Jan-Oktober basiert auf tatsächlichen Daten; Für Nov und Dezember wurde der Durchschnitt der Vormonate genutzt. Laut Rechnung von Wien Energie konnten vom gesamten Verbrauch (=5.651 kWh) 76,78% Ökostrom zugewiesen werden. ;</p> <p>Jan-Oktober basiert auf tatsächlichen Daten; Für Nov und Dezember wurde der Durchschnitt der Vormonate genutzt. Laut Rechnung von Wien Energie konnten vom gesamten Verbrauch (=5.651 kWh) 23,22% Strom aus Erdgas zugewiesen werden.</p>
Scope 2	2.3 Purchased Heating	Basiert auf Vorjahreswert
Scope 3	3.1 Purchased goods and services Purchased goods	<p>Annahmen Konferanzanlage: Gewicht für "Poly Studio V72" is 3,3 kg => 3x Konferanzanlage = in Summe 10 kg;</p> <p>Annahme Lautsprecher: Gewicht für "Bose FreeSpace" ist 1,4 kg (1 Stk) und "Jabra Speak" ist 195 g => 1 stk x 1,4 kg + 3 stk. x 200g = in Summe 2 kg;</p> <p>Annahme Mikrofon: 1 stück für 200g; ;</p> <p>Annahmen Gewicht: Kabelbegriffe und dessen Gewicht wurden gegooglet. In Summe 217 stk. Kabel, Gewichtsannahmen schwanken zwischen 13 gramm und 900 gramm => Resultat von 51,5 kg;</p>

	External data center Water	Annahme, dass Emissionsfaktor für "USB Stick" repräsentativer ist als "Power Adapter", inkl. Annahme zu Gewicht, dass 50 Stk. von solchen Adapter (50x 100g) = 5 kg ausmacht Schätzung auf Mittelwert 2024 Übertrag des Wertes aus 2023; Basiert auf Vorjahreswert
Scope 3	3.3. Fuel and energy-related activities (not included in Scope 1 and 2)	Jan-Oktober basiert auf tatsächlichen Daten; Für Nov und Dezember wurde der Durchschnitt der Vormonate genutzt. Laut Rechnung von Wien Energie konnten vom gesamten Verbrauch (=5.651 kWh) 76,78% Ökostrom zugewiesen werden. ; Jan-Oktober basiert auf tatsächlichen Daten; Für Nov und Dezember wurde der Durchschnitt der Vormonate genutzt. Laut Rechnung von Wien Energie konnten vom gesamten Verbrauch (=5.651 kWh) 23,22% Strom aus Erdgas zugewiesen werden. ; Basiert auf Vorjahreswert
Scope 3	3.5 Waste generated in operations	CP Hochrechnung, basierend auf m2 des Büros; CP Hochrechnung basierend auf m2 des Büros
Scope 3	3.6 Business travel Private & rental vehicles	Mietwagen; gefahrene Distanz geschätzt auf Basis der angemieteten Tage Mietwagen; gefahrene Distanz geschätzt auf Basis der angemieteten Tage

09. Imprint

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