

A full-page background image of a dense, green forest. In the foreground, there are sharp, vibrant green trees. In the mid-ground, a thick layer of white mist or smoke rises from the forest floor, partially obscuring the trees behind it. The background shows more forested hills under a slightly hazy sky.

# Corporate Carbon Footprint 2020

**Exasol**.planetly



## EXASOL AG - Corporate Carbon Footprint - Documentation

### Executive Summary

In this project, Planetly carried out a corporate carbon footprint analysis of Exasol's emissions in 2020. According to the GHG Protocol Corporate Standard and GHG Protocol Value Chain Standard, the footprint analysis covers all of Exasol's internal activities for Scope 1, 2 & 3. The Exasol offices in Nuremberg (headquarter), Berlin, Cologne, Hannover, Munich, Atlanta (US) and Courbevoie (France) are in scope of the analysis.

For 2020 **Exasol's gross footprint amounts to 1,345.82 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e)** (location-based approach). Exasol did partly use renewable electricity **(market-based approach)**, therefore **26.14 tCO<sub>2</sub>e** can be deducted. **In conclusion, Exasol's net emissions amount to 1,319.67 tCO<sub>2</sub>e in 2020.**

The results of this second analysis will be used to provide Exasol continuously with transparency on its emissions, enable the setup and implementation of specific carbon reduction measures, and the foundation to track its progress in reducing carbon emissions/the effectiveness of their reduction measures. Therefore, Exasol conducted reduction strategy workshops together with planetly, to set specific reduction targets and create a climate action plan with specific measures which include e.g. a switch to renewable energy sources on all locations, a switch to an electric fleet and employee engagement measures. Exasol also offsets all non-avoidable emissions with high-quality carbon offsetting projects for 2020.

The overall data quality is considered good and comprehensive, with common and statistically insignificant data quality issues. Appropriate and current emission factors are used in the calculation of the footprint. All relevant activity data was collected by Exasol's team, whose responsibility was to ensure data completeness and provided it to Planetly's Carbon Impact Manager. Planetly is not in the position to anticipate missing processes in the defined scope.

### About Exasol

Exasol is passionate about helping companies run their businesses smarter and drive profits by analysing data and information at unprecedented speeds. Exasol developed the world's fastest database for analytics and data warehousing, and offers first-class know-how and expertise in data insights and analytics.

The economic predecessor of the Company was Exasol GmbH, a German limited liability company with its registered office in Nuremberg, Germany, that had been established on 1 September 2000 and was registered in the commercial register (Handelsregister) of the local court (Amtsgericht) of Nuremberg under registration number HRB 20262.

For more information, please check the company's website: <http://www.exasol.com>

## Results Overview

Overall result (2020)	
Scope 1	16.41 tCO <sub>2</sub> e
Scope 2	39.33 tCO <sub>2</sub> e
Scope 3	1,263.94 tCO <sub>2</sub> e
<b>Total</b>	<b>1,319.67 tCO<sub>2</sub>e</b>

What does the result mean?

**The annual corporate carbon footprint is equivalent to...**



... the annual carbon footprint of 269 people (world average).  
[MUNTEAN2018]



... travelling 7,878,627 km with a plane in economy class.  
[DEFRA2020]



... producing 3,583,820 kWh in the coal power plant.  
[DEFRA2020]



... drinking 26,183,929 cups of coffee.  
[REINHARD2020]

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### Boundaries and scope

This report contains all information and results for Exasol's corporate carbon footprint analysis in 2020, using all available data from that year.

The main office in Nuremberg as well as the offices in Atlanta, Berlin, Courbevoie, Hannover, Cologne and Munich were in scope of this analysis.

All relevant Scope 1 & 2 activities and Scope 3 categories have been considered. The operational boundaries were set to include Air-conditioning, Business Travel (Flights, Car Rides, Train Rides), Commute & Home-Office, Drinks and Snacks, Electricity, Heating, Office Supplies, Furniture, IT, Offline, Post, Professional Services, Software Usage, Waste and Water.

Biological CO<sub>2</sub> sequestration is not relevant for Exasol's operation. Biological emissions have been included in a few categories (e.g. 7% share of biogenic diesel in vehicle fuel consumption), but a differentiation is not useful in this report, as these factors are not influenced by Exasol, but are a legislative standard.

### Base year and recalculation policy

2020 was selected as the base year. A recalculation may be considered if there is significant methodological progress or improved availability of emission factors.

### Recalculation of the 2019 analysis

According to the GHG Protocol, previous corporate carbon footprints used as a comparison with the current carbon footprint must be recalculated in the following cases:

1. When structural changes take place in the organisation (e.g., the organisational boundaries change due to mergers or acquisitions);
2. When there are changes or improvements in the methodology, emission factors or data that have a significant impact on the outcome;
3. When significant errors, or several errors that are jointly significant, are found.

In the data collection for the carbon footprint analysis of 2019 two errors were found, a recalculation had to be carried out for the activities fleet and external servers. Since the overall difference of 56.6 tonnes CO<sub>2</sub>e is covered by the 10% security margin included in the 2019 offsetting, no additional certificates had to be acquired and Exasol is still considered a carbon-neutral company in 2019.

#### Fleet

During the data collection process for the carbon footprint of 2020, Exasol informed the Planetly team that employees are allowed to use company cars for private purposes. Since Exasol makes use of the German tax law (1% rule), it is not possible to make the split between

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private and business mileage. In the analysis, we therefore have used the estimation provided by Exasol; 70% business and 30% private mileage.

According to the GHG Protocol, the distinction between business-related and private use is important, because only the WTW (well-to-wheel) emissions of the business trips can be counted to Exasol under Scope 1 and Scope 3.3. The WTW emissions from the private journeys fall under Scope 3.13, downstream leased assets.

### Old calculation

Scope	Category	Activity	Consumption [l]	Emissions [tCO2e]
1	-	Fuel	29216	71.99
3	3	Fuel Production	29216	17.20
Sum			58432	89.19

### Updated calculation

Scope	Category	Activity	Consumption [l]	Emissions [tCO2e]
1	-	Fuel	20451	50.39
3	3	Fuel Production	20451	12.04
3	13	Fuel + Fuel Production	17530	26.76
Sum			58432	89.19

## External Servers

In the case of external servers, one of the cloud providers, which accounts for the majority of emissions, was not included in the initial data collection. This was done under the assumption that servers powered by green electricity are accounted for with 0 t CO2e. However, since the average lifespan of cloud servers is short (approx. 4 years), it is important to account for emissions from the manufacturing process.

### Old calculation

Scope	Category	Activity	Consumption [€]	Emissions [tCO2e]
3	1	External Servers	269,491	70.07

### Updated calculation

Scope	Category	Activity	Consumption [€]	Emissions [tCO2e]
3	1	External Servers	863,158	126.63

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### Quality of Activity Data

Overall data quality was considered sufficient to calculate meaningful results. It is within Exasol's responsibility to ensure data completeness. Planetly is not in the position to anticipate missing processes in the defined scope.

For heating, electricity, water and waste consumption, as well as the amount of drinks and snacks, consumption statistics and consumption models developed by Planetly applied. For business travels, mostly spend-based data was entered, which was also converted into distances / fuel consumption with consumption statistics.

The most important activities (Flights, Commute, Professional Services and Servers) have been collected in this project and can be considered accurate.

It has to be noted that emissions were not collected from suppliers. Due to the high uncertainty of spend-based calculations, the accuracy for purchased services can be improved greatly with supplier engagement.

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### Scope 1 & 2 Footprint

		CO <sub>2</sub> e	CO <sub>2</sub> *	CH <sub>4</sub> *	N <sub>2</sub> O*	
Scope 1	Cooling	0.06	Not available			tonnes
Scope 1	Fleet	16.35	Not available			tonnes
Scope 2	Heating	36.04	36.04	0.00	0.00	tonnes
Scope 2 (Location Based)	Office Electricity	29.43	29.28	0.02	0.13	tonnes
Scope 2 (Market Based)	Office Electricity	3.29	3.27	<0.01	0.01	tonnes
Scope 1 + 2 (Location Based)	Total	81.88	65.32	0.02	0.13	tonnes
<b>Scope 1 + 2 (Market Based)</b>	<b>Total</b>	<b>55.74</b>	<b>39.31</b>	<b>&lt;0.01</b>	<b>0.01</b>	<b>tonnes</b>

\*GHGs are expressed in tonnes of CO<sub>2</sub>-equivalent

\*\*GHGs that were not reported separately (HFCs, PFCs, SF<sub>6</sub>) are included in the inventory but due to missing information cannot be disclosed.

### Scope 1 Emissions

The company uses petrol and diesel fuel for its vehicles. The fuel consumption has been measured, and emission factors have been used from [GLEC2019]. As already mentioned above, the company owned cars are also used by the employees for private trips. Since the 1% rule applies, the exact share between business and private mileage can't be stated by Exasol, but the team provided an estimation of 30% business and 70% private mileage for the year of 2020. This is justified by the ongoing COVID19-pandemic and the resulting high increase in home office and virtual meetings. The remaining 70% of fuel consumption and resulting emissions are accounted for under Scope 3, category 13.

Fugitive emissions from air-conditioning are relevant for Exasol's footprint. However, the office in Atlanta, had no data available regarding the exact amount of refilled cooling liquid, therefore, the amount used was estimated based on the office area with [PLANETLY2020-8]. The emission factors from [DEFRA2019] were used to account for the impact. Without internal production, no process emissions are relevant for Exasol.

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### Scope 2 Emissions

The exact type of heating for neither of the offices was known; therefore, the type of heating was assumed to be district heating as it has the highest emission factor and would be the most conservative approach. Activity data on heating consumption was not available, therefore, consumption has been estimated based on their respective space area [EC2002]. Emission factors for district heating have been used from [UBA2019] for the German locations, from [MEDDTL2012] for the French office and [BAFA2019] for the other locations.

Electricity consumption has been taken from electricity bills for the headquarters in Nuremberg. For all other locations, the missing electricity consumption has been estimated with [PLANETLY2020-4].

For the Market-Based approach, tariff- and supplier specific emission factors have been used.



## Scope 3 Footprint

Category	Activity	tCO <sub>2</sub> e
01 Purchased Goods & Services	Consumables & Food	38.99
01 Purchased Goods & Services	Cooling-Liquid	0.01
01 Purchased Goods & Services	External Servers	170.21
01 Purchased Goods & Services	External Services	751.53
01 Purchased Goods & Services	Partners	19.49
01 Purchased Goods & Services	Water	0.20
<b>01 Purchased Goods &amp; Services</b>	<b>Total</b>	<b>980.42</b>
02 Capital Goods	Equipment	51.60
<b>02 Capital Goods</b>	<b>Total</b>	<b>51.60</b>
03 Fuel- & Energy related activities	Electricity T&D losses	1.29
03 Fuel- & Energy related activities	Fuel Production	3.94
03 Fuel- & Energy related activities	District Heating Distribution	6.08
<b>03 Fuel- &amp; Energy related activities</b>	<b>Total</b>	<b>11.31</b>
04 Upstream Transport & Distribution	Postage	0.21
<b>04 Upstream Transport &amp; Distribution</b>	<b>Total</b>	<b>0.21</b>
05 Waste generated in Operations	Waste	0.18
05 Waste generated in Operations	Water Treatment	0.41
<b>05 Waste generated in Operations</b>	<b>Total</b>	<b>0.58</b>
06 Business Travel	Business Travel Flight	69.28

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06 Business Travel	Business Travel Street	19.75
06 Business Travel	Business Travel Rail	4.23
<b>06 Business Travel</b>	<b>Total</b>	<b>93.26</b>
07 Employee Commuting	Commute	28.18
07 Employee Commuting	Home-Office	48.80
<b>07 Employee Commuting</b>	<b>Total</b>	<b>76.98</b>
11 Use of sold Products	Online Interaction	2.22
<b>11 Use of sold Products</b>	<b>Total</b>	<b>2.22</b>
13 Downstream leased assets	Company Cars for private usage	47.35
<b>13 Downstream leased assets</b>	<b>Total</b>	<b>47.35</b>
<b>Scope 3</b>	<b>Total</b>	<b>1,263.94</b>

## Category 1 - Purchased Goods and Services

### Consumables

Consumables are all items needed for operations that are not depreciated. These are commodities, food/beverages, print materials, etc. and have been collected on a global level. Data for the purchases in 2020 has been collected for the relevant offices; this data has then been assessed with spend-based emission factors from [EXIOBASE2018], which contain environmentally extended input-output (EEIO) emission factors for most countries until 2011. In some cases, data has been estimated based on average spending per employee; this has been the case for drinks and snacks with [PLANETLY2020-13]. The emissions for meals, that are provided for the employees at work, were calculated using emission factors from [REINHARDT2020] and [MELVIN2015] using the average number of servings per employee per week.

### External Servers

The energy consumption and infrastructure of cloud based and external servers is a relevant factor in overall worldwide emissions. A spend-based model to calculate these emissions based on different publicly available information like data centre efficiency and electricity emission factors, has been developed by Planetly. This model has a moderate degree of uncertainty because most data centres do not disclose detailed information on their emission performance. The calculation is based on total server expenses and [PLANETLY2020-2]. These expenses have been collected on a global level. Server providers that operate their server sites

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green have been considered as well, but only the production emissions of the infrastructure have been included in the calculation.

### External Service Providers

Several external service providers have been contracted. The expenses for these service providers have been assessed with spend-based emission factors from [EXIOBASE2018], which contains EEIO emission factors for most countries until 2011. These factors are based on macroeconomic models and include complete activities of service providers (including their business travel, electricity consumption at customers' offices, office emissions, etc.). This method is recommended by the European Environment Agency.

Expenses of external services have been collected on a global level. The largest share of these issues is attributable to financial services, human\_resources and marketing.

The accuracy of the calculation can be increased enormously with more primary data if, in the future, subcontractors have to provide information on their own carbon footprint and that of their products. A stricter sustainability policy on the selection of subcontractors can also lead to a reduction in the resulting emissions. Within the reduction workshops, a sustainability policy for the procurement of goods and services, including service providers, was discussed. Together, we reviewed the current procurement policy and supplier rating criteria and discussed options on how to CO2e emissions more present.

### Water

The water consumption for all locations was estimated based on previous calculations done by Planetly [PLANETLY2020-4]. For the calculation of the effects of the water supply and treatment [DEFRA2019] has been used.

### Cooling Liquid

We also include the production emissions of the used cooling liquid for the office air conditioning in Atlanta. The amount of refilled cooling liquid was either given or estimated based on [PLANETLY2020-8] and the emissions were calculated with [CASCINI2013].

## Category 2 - Capital Goods

### Equipment

All capital goods purchased in 2020 for the offices have been collected on a global level and assessed with [EXIOBASE2018]. This includes furniture, IT equipment, and other capital goods used in the offices.

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### Category 3 - Fuel & Energy related Activities

#### Electricity transmission & losses and fuels

Upstream emissions for electricity have been calculated based on the most up-to-date emission factors from [IEA 2019]. Fuel production has been calculated with [GLEC2019] and district heating distribution losses were calculated with [UBA2019].

### Category 4 - Upstream Transport & Distribution

#### Postage

The number of letters and parcels was given by Exasol for both national and international deliveries. The emission factors from [IPC2019] are used to assess the impact.

### Category 5 - Waste generated in Operations

#### Offices

Information about the actual amount of waste was missing for all the locations. Therefore, the amount of waste per employee was estimated based on [PLANETLY2020-3]. The emissions were then calculated with emission factors from [DEFRA2019] and scaled with the total number of employees.

#### Waste Water

Waste water is based on the actual or estimated water consumption (see purchased goods and services). Emissions factors are taken from [DEFRA2019].

### Category 6 - Business Travel

#### Flights, Rental Cars, Taxis & Trains

To account for Exasol's business travel is important in the calculation of a corporate carbon footprint, especially, because the mode of transport used can be an important driver of carbon emissions. All flights, train rides, taxi rides, rental cars and private cars have been collected by Exasol.

To calculate the average distances travelled by train and flights, Exasol provided us with the number of the total amount of train rides and flights for 2020, divided into the booking class and into the 3 categories Short-, Medium- and Long-distance. For flights, the category "Short" includes flights under 900 km, "Medium" flights between 900 and 2700 km, and "Long" includes flights with a travelled distance of more than 2700 km. The categories for trains are



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similarly divided by the distance travelled; "Medium" accounts for train rides between 100 and 300 km. Everything below or above these ranges counts to the corresponding category "Short" or "Long". Emission factors from [DEFRA2019] depending on the distance travelled as well as the booking class were used to calculate the resulting emissions.

For Rental Cars, the price for the rental period was given by for a rental in the US; the distance driven and fuel consumption have consequently been determined with [PLANETLY2020-10] Emissions have been determined based on [DIN2013].

Taxis have been calculated with a spend-based approach. The amount of money spent in each country (Germany, Great Britain and USA) was provided by Exasol and translated into distance travelled with data from [RANDELHOFF2011] and [WADE2017]. Emissions factors have been used from [UBA2020].

Additionally, private cars were used for business travels. The distance travelled was estimated based on total fuel costs with [PLANETLY2020-7]; emission factors from the same source have been used.

## Category 7 - Employee Commuting and Home-Office

### Commuting & Home-Office

Data for Commuting and Home-Office has been collected with an employee survey, which was answered by 69.14% of employees. In the survey, the employees are asked for the number of workdays, Home-Office hours, and kilometres travelled each day per mode. With this information, the total kilometres commuted per year and mode, and total hours spent in Home-Office are calculated. Commute emissions have then been calculated with [UBA2020] and [HBEFA2018].

For Home-Office, the [PLANETLY2020-11] model is used to assess the impact of one hour of remote working. In the model, the energy consumption is based on the average electricity consumption needed for the use of a laptop, lighting and cooling- and gas consumption for the heating of the house.

## Category 11 - Use of sold Products

### Online interaction

An important and unavoidable point for carbon accounting nowadays presents online interactions by clients and other Internet users. By spending time in the Exasol's Social Media Accounts (LinkedIn, Twitter) and website, viewers use electrical energy with their end devices, which in turn generate emissions. Energy consumption emissions then have been estimated based on average energy consumption of cell phone or laptop chargers and the electricity mix of the respective customers' countries taken from [IEA2019]. The exact consumption data, including the residence country, the number of sessions and the average session length, has

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been provided by the analytics tool of Exasol's and converted into electricity consumed with [PLANETLY2020-14]. Emissions have been calculated with [IEA2019]. All data relevant for online interaction has been collected on a global level.

### Category 13 - Downstream leased assets

#### Company Cars for private usage

As already described under "Scope 1 emissions", the company cars are also made available to employees for private trips. However, these private trips do not count as Scope 1 emissions, but fall under the category of downstream leased assets. The fuel consumption for diesel and petrol was reported, and 70% of the well-to-wheel (WTW) emissions were attributed to this category.

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### Offsetting Projects

Exasol is offsetting its emissions for the year 2020 with five high-quality offsetting projects located in Honduras, Peru, Borneo, Rwanda and India. All projects have been certified by either the Gold Standard or the VCS Standard and contribute to different Sustainable Development Goals.

Project	Compensation Volume (tCO <sub>2</sub> )
Andean Amazon REDD+ Rainforest Project, Peru	726
REDD+ Rainforest Project, Borneo	726
<b>Total</b>	<b>1,452</b>

### Andean Amazon REDD+ Rainforest Project, Peru

The Amazonian rainforest is a symbol of this and has found itself at most risk. In 2019 it was measured to be losing prime forest at a rate of three football fields a minute. REDD+ is an acronym for Reducing Emissions from Deforestation and Forest Degradation. United Nations REDD+ projects pursue long-term strategies for addressing the underlying causes of deforestation and degradation. This REDD+ project conserves 182,000 hectares of one of the most threatened ecosystems in the tropical, Peruvian Amazon, through forest management and community programmes. Protecting this area is of critical importance to the survival of Peru's endemic fauna and flora and creates 515,000 tonnes of emission reductions each year.

Even with the protection of the Peruvian government as one of the nation's Natural Protected Areas, the project area faces intense deforestation, pressure from illegal logging and unsustainable farming practices. Since the mid 1990's a boom in coffee prices has led to surging coffee production and until the implementation of the project in 2008, led to 4000 hectares (7000 football fields) of land being cleared each year. Voluntary conservation agreements with families living in the region have halted deforestation, in exchange for ecological agriculture training, organisational capacity building, Fair Trade certification, and market linkages that have transformed their livelihoods.

The project works to provide land security for the families that inhabit the forest and is establishing new approaches to sustainable farming, primarily in the coffee supply chain. Through conservation agreements, communities receive direct technical assistance aimed at improving ecological health and crop yields. The project is helping farmers to realize the economic value of forest protection and modelling a sustainable development pathway for the Government of Peru and civil society stakeholders, who view this project as a leading example of how REDD+ can support the country's broader conservation.

This project benefits both local communities and protects threatened biodiversity and wildlife

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habitat. The project is accredited under Voluntary Carbon (VCS) and Climate, Community & Biodiversity (CCB) Standards.

### REDD+ Rainforest Project, Borneo

Deforestation amounts to the cause with the second-largest impact on climate change, after fossil fuel burning. Since 1973, over 400,000 hectares (4,000 square kilometres) of rainforest have been lost on the island of Borneo. Oil palm plantations have been the cause of almost half of the forest loss on Borneo since 2000, which have devastated rainforests across all of Indonesia. REDD+ is an acronym for Reducing Emissions from Deforestation and Forest Degradation. United Nations REDD+ projects pursue long-term strategies for addressing the underlying causes of deforestation and degradation.

This project has successfully defended 64,500 hectares of carbon and biodiversity rich lowland peat forest from conversion to oil palm plantations, which surround the project area. This project prevents 3.5 million tonnes of CO<sub>2</sub>e from being released into the atmosphere each year. Additionally, it continues to effectively support local communities living in and along the boundaries of the project, who have traditionally held no tenure and who have used the forest in an unsustainable way, and protect biodiversity and wildlife habitat. The project protects over 120 threatened and endangered species including the endangered Borneo Orangutan, The project is accredited under Voluntary Carbon (VCS) and Climate, Community & Biodiversity (CCB) Standards. Moreover, this is now the world's first forest conservation project to independently verify its contributions to sustainability under the newly created Sustainable Development Verified Impact Standard (SD VISta).

### Conclusion & Next Steps

With this second Corporate Carbon Footprint Report, Exasol gains transparency on its emissions. Scope 1 accounts for 16.41 tCO<sub>2</sub>e (1.24%), while scope 2 emissions account for 39.33 tCO<sub>2</sub>e (2.98%), the scope 3 emissions have an impact of 1,263.94 tCO<sub>2</sub>e (95.78%). All of yet unavoided emissions (1,319.67 tCO<sub>2</sub>e + 10% security margin) have been offset with high quality and certified offsetting projects.

Within the reduction workshops conducted in 2021, Exasol and Planetly build a reduction strategy, including an overall vision, specific decarbonization targets in line with SBTi criteria for small and medium-sized companies (SME), actionable measures, KPIs and internal responsibilities. Thereby, Exasol commits to reduce absolute scope 1 and scope 2 emissions by 42% by 2030 from a 2020 base year and commits to measure and reduce scope 3 emissions. The implementation of the reduction roadmap is planned to achieve this target.

Key reduction actions include the use of electric vehicles in Exasol's fleet, the usage of servers powered with green electricity and an adaptation of supplier criteria for purchased services.





## References

Reference	Author	Year	Title
BAFA2019	Bundesamt für Wirtschaft und Ausfuhrkontrolle	2019	Merkblatt zu den CO2-Faktoren - Energieeffizienz in der Wirtschaft - Zuschuss und Kredit
CORNELL2019	Cornell	2019	Greenview - Cornell Hotel Sustainability Benchmarking Index
DEFRA2019	Defra	2019	Greenhouse gas reporting: conversion factors 2019 - full set
DEFRA2020	Defra	2020	Greenhouse gas reporting: conversion factors 2020 - full set
DIN2013	Deutsches Institut für Normung e.V.	2013	DIN EN 16258 - Methode zur Berechnung und Deklaration des Energieverbrauchs und der Treibhausgasemissionen bei Transportdienstleistungen (Güter- und Personenverkehr)
ECOINVENT2019	EcoInvent	2019	EcoInvent Version 3.6
EC2002	European Communities	2002	European Communities
EXIOBASE2018	Exiobase 3.4 - Stadler et al.	2018	Exiobase 3.4
GLEC2019	Global Logistics Emissions Council	2019	Framework for Logistics Emissions Accounting and Reporting, version 2.0
IEA2019	International Energy Agency	2019	Emission Factors
HBEFA2018	Handbuch Emissionsfaktoren des Strassenverkehrs	2018	HBEFA Version 4.1
IPC2018	International Post Corporation	2018	Delivery Efficiency
IPC2019	International Post Corporation	2019	Delivery Efficiency
IPCC2006	Intergovernmental Panel on Climate Change – Metz et. al.	2006	Safeguarding the Ozone Layer and the Global Climate System
KORDS2019	Kords, Martin	2019	Durchschnittliche Preise für Mietwagen pro Tag in ausgewählten Ländern weltweit im

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Jahr 2018			
MEDDTL2012	Ministère de l'Écologie, du Développement durable, des Transports et du Logement	2012	Arrêté du 8 février 2012 modifiant l'arrêté du 15 septembre 2006 relatif au diagnostic de performance énergétique pour les bâtiments existants proposés à la vente en France métropolitaine
MUNTEAN2018	Muntean et al.	2018	Fossil CO2 emissions of all world countries - 2018 Report, EUR 29433 EN, Publications Office of the European Union
NILSOON2011	Nilsoon et al.	2011	The environmental impact of the consumption of sweets, crisps and soft drinks
PLANETLY2020-2	Planetly	2020	Modelled spend-based emission factors for different cloud providers
PLANETLY2020-3	Planetly	2020	Modelled waste generation by average office employees
PLANETLY2020-4	Planetly	2020	Average consumption of electricity, water and heating, based on previous calculations
PLANETLY2020-7	Planetly	2020	Modelled Private Car and Fuel Production emissions based on average for gasoline and diesel
PLANETLY2020-8	Planetly	2020	Modelled aircondition liquid consumption and estimated production emissions
PLANETLY2020-10	Planetly	2020	Modelled consumption factors for public transportation, taxi and car rental
PLANETLY2020-11	Planetly	2020	Modelled emission factor for Home-Office per hour
PLANTELY2020-14	Planetly	2020	Modelled online-interaction based on IEA2019
REINHARD2020	Reinhard et al.	2020	Ökologische Fußabdrücke von Lebensmitteln und Gerichten in Deutschland
SCARBOROUGH2014	Scarborough et al.	2014	Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK
UBA2019	Umweltbundesamt	2019	Emissionsbilanz erneuerbarer Energieträger
UBA2020	Umweltbundesamt	2020	Vergleich der durchschnittlichen Emissionen einzelner Verkehrsträger im Personenverkehr in Deutschland - Bezugsjahr 2018

## About Planetly

Planetly is a technology start-up on a mission to help build a carbon-neutral economy. Our Software helps you to introduce and automate carbon management, from data collection to reduction strategies and offsetting measures.

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