Greenhouse Gas footprint 2023

Introduction

Otrium is committed to drive positive change through its business model and platform. Otrium's ultimate goal is to have a net positive impact. This means giving back more than we take through our business model, social and environmental impact.

As part of this commitment, Otrium is looking into its own environmental impact and has conducted a carbon footprint analysis. The results of the analysis are depicted in this Greenhouse Gas report which is in accordance with the Greenhouse Gas Protocol. This report outlines the fourth greenhouse gas emission calculation for Otrium. Otrium conducted its first carbon footprint analysis based on the year 2020.

Carbon to climate

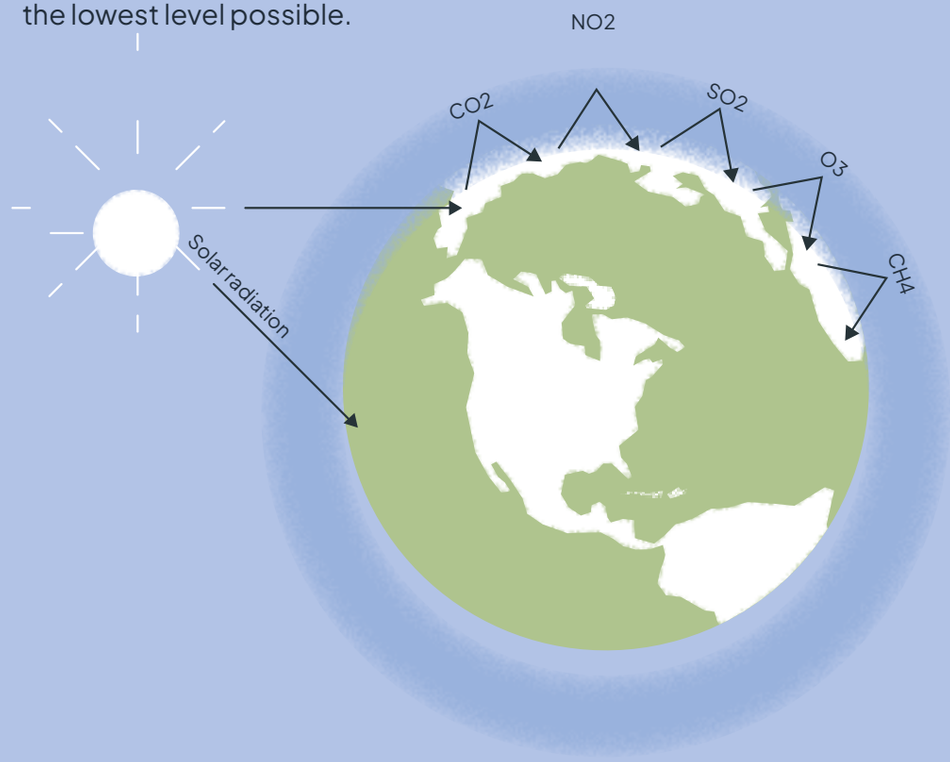
Carbon and climate change are closely intertwined. A carbon footprint measures the amount of carbon dioxide (CO2) released into the atmosphere as a result of our actions – both individual and corporate. However, CO2 is just one type of emission under the broader category known as Greenhouse Gas (GHG) emissions.

GHG emissions include not only CO2 but also other gases such as methane (CH4), nitrous oxide (N2O), and fluorinated gases, all of which contribute to the greenhouse effect, which is the primary cause of global warming and climate change. To measure a company's environmental impact, these emissions are converted to carbon dioxide equivalents (CO2–eq) based on their Global Warming Potential, providing a unified metric for comparison.

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas.

Burning fossil fuels generates GHG emissions that trap heat within the atmosphere. They let sunlight pass through the atmosphere and they prevent the heat that the sunlight brings from leaving the atmosphere. They function as a blanket wrapped around Earth, trapping heat and raising temperatures, as seen in the illustration below.

A carbon footprint is measured by tons of CO2–eq, thus a smaller carbon footprint means a smaller impact on the environment and climate change.The carbon footprint represents the total volume of GHGs resulting from economic and human activity. Knowing the carbon footprint of an activity, which is measured in tons of CO2–eq, is important when it comes to taking measures and launching initiatives to reduce it to the lowest level possible.



[1]https://ghgprotocol.org/sites/default/files/2022-12/Required%20gases%20and%20GWP%20values_0.pdf
[2]https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/

Organisational boundary

The organisational boundary is set in accordance with the Greenhouse Gas Protocol. Otrium consolidates emissions via the operational control approach. Otrium thus accounts for 100% of greenhouse gas emissions from operations over which it has operational control. For Otrium this implies in 2023, the Amsterdam office, London office, New York office and the leased vehicles.

Operational boundary

Scope 1

Direct greenhouse gas emissions occur from sources that are controlled by the company, for example, emissions from combustion in boilers and vehicles. For Otrium these are:

- Combustion of leased vehicles over which Otrium has operational control

Scope 2

Scope 2 emissions are indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the Otrium. Scope 2 emissions physically occur at the facility where the energy is generated. For Otrium this relates to:

- Electricity usage and district heating at the Amsterdam, London and New York hubs (offices)

In accordance with the Greenhouse Gas Protocol, Otrium is required to report on scope 2 emissions (location based and market-based).

Scope 3

Scope 3 emissions are a consequence of the activities of the company but occur from sources upstream or downstream in the supply chain and are not controlled by the Otrium. Otrium reports on absolute scope 3 emissions relating to:

- **Category 1: Purchased Goods and Services**
  - Purchased consumer packaging and the disposal hereof
  - Server data. This entails the emissions coming from data centre-servers which we use to store all data and the architecture behind our e-commerce platform
  - Purchased services
  - Purchased goods
- **Category 2: Capital Goods**
  - Purchased electronic devices
- **Category 3: Energy-Related Activities**
  - Emissions from activities such as the extraction, production, and transportation of fuels and energy consumed by the organisation
- **Category 4: Upstream Transportation and Distribution**
  - Combustion of natural gas at the Amsterdam office (other offices don't use gas) and warehouses
  - Upstream transport
  - Downstream transport
- **Category 5: Waste Generated in Operations**
  - Waste generated from warehouses
  - Waste generated from offices
- **Category 6: Business travel**
  - Business related travel, such as flights, trains, taxis,rental cars and hotel stays
- **Category 7: Employee commuting**
  - Commuting by employees working at offices
- **Category 8: Upstream Leased Assets**
  - Emissions from the leased IWG Co-working spaces in the UK
- **Category 11: Use of Sold Products**
  - Emissions resulting from the use of products
- **Category 12: End-of-Life of Sold products**
  - Emissions associated with the disposal and treatment of products

Calculation methodology

Scope 1, 2 and 3 emissions are calculated with supplier specific data where possible. Both a market-based approach and a location-based approach are used to calculate the emissions relating to scope 2.

If only partial invoices are available, the data is extrapolated to a full year (if the asset was in operation for a full year). If an asset was introduced for use during a year, only data for that period is considered.

Source of emissions	Calculation method
Gas usage	greenhouse gas emissions = Ξ m3 gas purchased per annum per country * country specific emission factor
Petrol	greenhouse gas emissions = Ξ litre of petrol used per annum * country specific emission factor for combustion of 1 litre of petrol
Electricity (market based)	greenhouse gas emissions = Ξ kWh per annum * emission factor specified in energy contract
Electricity (location based)	greenhouse gas emissions =Ξ kWh per annum * country specific emission factor
District heating	greenhouse gas emissions =Ξ kWh per annum * country specific emission factor
District cooling	greenhouse gas emissions =Ξ kWh per annum * country specific emission factor
Commuting	greenhouse gas emissions = Ξ km travelled * amount of employees commuting * emission factor per mode of transport
Business travel	greenhouse gas emissions = Ξ km per type of class and distance range per annum * emission factor per type of class and distance range
First mile logistics	greenhouse gas emissions = Ξ amount of transports * km shipping distance * avg. weight * emission factor tonnes CO2 – eq/tonne km
Last mile logistics	greenhouse gas emissions = Ξ amount of shipped parcels per courier * emission factor per shipped parcel per courier
Packaging disposal	greenhouse gas emissions = Ξ amount of returned orders * emission factor per kg of disposed packaging material
Customer returns	greenhouse gas emissions = Ξ return rate * amount of CO2 emissions for shipped parcels
Waste from warehouse	greenhouse gas emissions = Ξ kg of waste per element * emission factor per kg wasted element

Results

The total amount of greenhouse gases emitted for scope 1, 2 and 3 in 2023 was 10,525.70 tons CO2 – eq conform to the market-based approach and 10544.05 tons conform to the location based approach. In the graph below the emission sources and scopes are depicted (market based).

Scope	Tons CO2-eq.	Share
Scope 1	2.053	0.02%
Scope 2	15.13	0.14%
Scope 3	10508.48	99.84%
Total	10,525.70	100%

Comparing 2023 to 2022

Comparing our 2023 CO2 -eq. impact to our 2022 gives us a clear insight into where we've improved and where we still have room to grow. Pictured below are the largest impact areas. With this in mind, our future efforts to reduce these numbers can be better targeted.

Legend

X means not included in the scope of this year's report

V means included in the scope of this year's report

Data-point	2022 scope	2022 scope	Notes
First mile logistics	V	V	Data is gathered on the number of drops received per brand, assumptions are made regarding the locations of brand warehouses and the distances from these locations. For future GHG reports, improvements are going to be made regarding data gathering processes such as mode of transport during transportations, distance travelled.
Commuting	V	V	A survey was sent to employees to gather information regarding the distances they travel and the modes of transport they use to get to offices.
Gas, Amsterdam office	V	V	Data is received from the landlords, which includes gas usage, this data is used to calculate emissions.
Energy, Amsterdam office	V	V	Data received from the landlords, which includes information on electricity usage alongside any green certifications, this data is used to calculate emissions.
Energy, London office	V	V	The London office closed in July 2023. Data received from the landlords, which includes information on electricity usage alongside any green certifications, is used to calculate emissions.
Energy, London co-working spaces	V	V	The London co-working spaces started to be used in August 2023. Data is extrapolated from the other London office due to a unique scenario where the owner is unable to give metrics specific to % usage Otrium.
Energy, New York office	V	V	The New York office closed at the end of 2023. Data received from the landlords, which includes information on electricity usage, this data is used to calculate emissions. Emissions are based on assumptions due to the CoGen power plant generating heat, which makes the Industrious office not have any gas bills (since the gas/heat comes from the CoGeneration). The CoGen power plant is more energy efficient than normal fuel-based energy sources.
Gas & Energy, Warehouse in NL	V	V	The gas & energy used in our NL warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.

Data-point	2022 scope	2023 scope	Notes
Gas & Energy, Bleckmann Warehouse in US	V	V	The US Bleckmann warehouse closed at the end 2023. The gas & energy used in our US warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.
Gas & Energy, Radial Warehouse in US	X	V	The US Radial warehouse opened in October 2023 and closed at the end of 2023. Data received from the landlords, which includes information on electricity usage, this data is used to calculate emissions.
Waste, Warehouse in NL	X	V	The waste produced at our NL warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.
Waste, Warehouse in the UK	V	V	The waste produced at our UK warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.
Waste, Warehouse in the NL	V	V	The waste produced at our NL warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.
Waste, Warehouse in the US	V	V	The waste produced at our US warehouse is tracked and measured by our partner Bleckmann and is sent to us through their annual report.
Waste, Radial Warehouse in US	X	V	The US Radial warehouse opened in October 2023 and closed at the end of 2023. Data received from the landlords, which includes information on waste produced, this data is used to calculate emissions.
Business travel	V	V	For business travel the spent-based method from the GHG Protocol was primarily used - except for business flights, where the distance-based method was used. Travel-related invoices were used to calculate how much we spent on flights, trains, taxis, car rentals, etc.
Packaging	V	V	Our partner Vaayu tracks deliveries on their platform and packaging emissions are calculated with package dimensions provided by Otrium and Vaayu's data.
Electronics	V	V	Emissions are calculated per purchased electronic device.
Server data	V	V	Server data emissions are calculated with a spend based method.
Business travel	V	V	Travel data is collected, and this data, which includes expenditure and fuel usage, is used to calculate emissions.
Last mile logistics	V	V	Our Partner, Vaayu collects last mile data for us by integrating with our logistics systems and couriers. It monitors real-time delivery data and applies specific emission factors to calculate greenhouse gas emissions.
Customer returns	V	V	Combined with the other last mile data, Vaayu collects return data for us by monitoring real-time delivery data and applying specific emission factors to calculate greenhouse gas emissions.
Purchased goods and services (not for resale)	X	V	Purchased goods and services are calculated using spend data.
Energy-Related Activities Not in Scopes 1 and 2	X	V	Data used from fuels and energy consumed by the organisation. Vaayu uses their own methodology to calculate these emissions.

Results 2023 (market based approach)

Scope	Location	Category	Kg CO_2-eq.
Scope 1	Leased vehicles	Fuel usage	2,053.00
Scope 2	Amsterdam hub	Purchased electricity	0.00
		Purchased heat	8,150.00
	London (TOG)	Purchased electricity	0.00
		Purchased heat	6,000.00
	New York hub	Purchased electricity	979.44
	Electric vehicles	Purchased electricity	36.32
Scope 3	London (IWG)	Purchased electricity + heating	3,010.00
	Warehouse Almelo, the Netherlands	Warehouse - power	684,990.00
		Warehouse - gas	890.00
		First mile logistics	1,342,593.50
	Warehouse, the United Kingdom	Warehouse - power	28,600.00
		Warehouse - gas	0.00
		First mile logistics	191,990.00
	Warehouse, the United States, Bleckmann	Warehouse - power	86,740.00
		Warehouse - gas	130,380.00
	Warehouse, the United States, Radial	Warehouse - power	542,330.00
		Warehouse - gas	27,480.00

Scope	Location	Category	Kg CO_2-eq.
Scope 3	Both US Warehouses	First mile logistics	429,870.00
	Emissions pertaining to multiple locations	Last mile logistics + Customer returns	2,125,186.50
		Waste from operations	963,250.00
		Business travel	279,480.00
		Commuting	43,200.00
		Energy-Related Activities Not in Scopes 1 and 2	6,410.00
	Purchased goods and services (not for resale)	Packaging material (purchase and disposal of)	939,710.00
		Servers	862,930.00
		Electronic devices	5,820.00
		Purchased goods	75,010.00
		Purchased Services	1,738,610.00
Total			**10,525,698.75**

		2022 kg of CO_2-eq.	2023 kg of CO_2-eq.	Explanation	Next steps
Scope 1	Leased vehicles	4,340.70	2,053.00	We stopped using leased vehicles in August 2023	Switch to fully electric lease cars when needed.
Scope 2	Electricity (market based)	675.70	1,015.75	>2 offices closed in 2023, leaving only the Amsterdam office >Inclusion of leased electric vehicle emissions	Introduce efforts on helping to change to renewable energy at all offices.
	Heating	38.62	14,150.00	Emission factor for heating changed with the switch to Vaayu.	Improve energy efficiency of existing and new facilities.
Scope 3	*Category 1:* Purchased consumer packaging	519,893.45	939,710.00	> Added envelopes in our single line orders, eliminating the 'air' in some of the packages resulting in lower emissions. >In April 2022, we introduced a packaging machine, creating envelopes + less air for single line orders resulting in reduced waste generation.	>Where possible, eliminate the amount of packaging materials used, improve ability to reuse materials and introduce recyclable packaging materials. >Apart from to reduce, reuse and recycle; improve knowledge on what happens with packaging used, create incentives on getting packaging back to improve certainty of recycled materials.
	Category 1: Server data This entails the emissions coming from data centre-servers which we use to store all data and the architecture behind our e-commerce platform	33,469.00	862,930.00	Large change in emission factor for server data with switch to Vaayu	>Restructure our architecture to consume less energy from server providers. >Request our service providers to provide us with the actual emissions data produced by their operations, rather than relying on the spend-based estimation method.
	Category 1: Purchased services	-	1,738,610.00	Addition of purchased services to the 2023 co2 report	> Track our purchased services spend better
	Category 1: Purchased goods	-	75,010.00	Addition of purchased goods to the 2023 co2 report	>Track our purchased goods spend better

		2022 kg of CO_2-eq.	2023 kg of CO_2-eq.	Explanation	Next steps
Scope 3	*Category 2:* Purchased electronic devices	6,513.00	5,820.00	No significant changes	Continue to reuse and repair old and used electronic devices as much as possible. When new devices are needed, try to only buy second-hand and recovered devices.
	Category 3: Energy-Related Activities Not in Scopes 1 and 2	-	6,410.00	Addition of Energy-Related Activities Not in Scopes 1 and 2 to the 2023 co2 report	
	Category 4: First mile logistics	47,366.15	1,964,453.50	>Significant change in the emission factor for deliveries with switch to Vaayu. >Improved data gathering and eliminated the inclusion of assumptions which resulted in a lower total of CO2 – eq not all processes are tracked yet.	Improve data gathering to get more exact emissions. Introduce policy on more efficient and less emitting transportation vehicles, only work with transportation companies which are constantly improving environmental footprint with less carbon emissions.
	Category 4: Last mile logistics + Customer Returns	732,559.75	2,125,186.50	>Significant change in the emission factor for deliveries with switch to Vaayu. > Improved the data gathering and eliminated the inclusion of assumptions which resulted in a higher total of CO2 – eq. > Opted to partners deploying more efficient and sustainable transportation vehicles. >In 2022 we introduced a return policy which resulted in fewer returns from our end-customers to our warehouse.	Improve data gathering to get more exact emissions. Introduce policy on more efficient and less emitting transportation vehicles, only work with transportation companies which are constantly improving environmental footprint with less carbon emissions.

		2022 kg of CO_2-eq.	2023 kg of CO_2-eq.	Explanation	Next steps
Scope 3	*Category 4:* Warehouse and office utilities usages (gas and electricity)	152,126.79	1,501,410.00	>Decreased the number of offices from three to one, with the US office closing at the end of 2023 and the UK office closing in July. >The Radial warehouse opened in October 2023 and closed at the end of 2023, resulting in high emissions for the short period of its operation. >Warehouses with a renewable energy certificate still have emissions because Vaayu does not apply supplier-specific rates for Scope 3 emissions	>Continue transitioning to renewable energy sources to reduce reliance on traditional gas usage. Improve energy efficiency of existing and new facilities. >Continue switching to green energy and work together with suppliers to incentivise this. Help to improve energy efficiency of existing and new facilities. >Improve energy efficiency of existing and new facilities.
	Category 5: Waste generated from operations	4,853.01	963,250.00	>Significant change in the emission factor for waste >Inclusion of waste from offices >The Radial warehouse opened in October 2023 and closed at the end of 2023, resulting in two US warehouses being used simultaneously and then closed simultaneously. Additionally, the Bleckmann warehouse also closed at the end of 2023. >Our warehouse partner Bleckmann introduced a zero-waste program steering down a large amount of emissions	Eliminate waste, our warehouse suppliers are currently working on a zero-waste target.
	Category 6: Business travel	71,564.53	279,480.00	>Due to the end of the COVID-19 era, we slowly started having more offsites and warehouse visits for our employees >The closure of the US market resulted in a significant increase in business travel.	>Introduce the travel policy and carbon budget. > Usage of train over plane > Only travel when necessary (virtual meetings) >Introducing an app where all travel related data is stored for better and more accurate data gathering.
	Category 7: Employee commuting	43,310.93	43,200.00	No significant changes.	Incentivise train travel (or other public transport), biking instead of driving your own car.
	Category 8: Upstream Leased Assets	-	3,010.00	>Following the closure of the London White Collar Factory office, we began using co-working spaces.	
Total kg of CO2-eq.		1,616,711.63	10,525,698.75		

Tons of CO_2 – eq. per source								
Purchased goods and services	**Last mile logistics (incl. returns)**	**First mile logistics**	**Warehouse utilities (gas and electricity)**	**Waste (Operations)**	**Packaging material**	**Commuting + Business travel**	**Office utilities (gas and electricity**	**Energy-Related Activities Not in Scopes 1 and 2**
25.48%	20.19%	18.66%	14.26%	9.15%	8.93%	3.09%	0.17%	0.06%

Responsibilities

The Sustainability Team is responsible for the correct reporting of the greenhouse gas footprint.

The Sustainability team is supported by the Logistics team, the Partnerships team and the Finance team which assists in gathering the data and assures completeness regarding the locations in scope. The data is gathered in the dashboard of our carbon accounting partner Vaayu. Willow Sustainability (an advisory consultancy firm) reviewed the calculations and the final report before publication. They provided valuable feedback and recommendations for improvement. The calculation is done annually, and the results are disclosed on the website of Otrium. The methodology used is in line with the Greenhouse Gas Protocol, a Corporate Accounting and Reporting Standard.

Thank you

Our sustainability partners and accreditations

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