

# Carbon footprint 2022

Ethias

24 May 2023



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# Introduction



# Ethias' expectations

Ethias asked CO2logic to calculate the carbon footprint of its office activities in Belgium. This could help Ethias to :



assess its carbon footprint and efforts over time



validate current strengths and areas for improvement

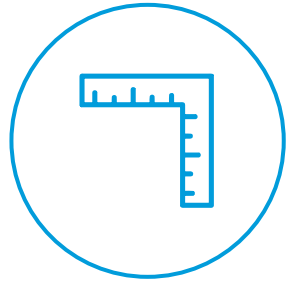


identify a strategy to reduce locally and 'neutralise' globally these GHG emissions with the support of climate projects



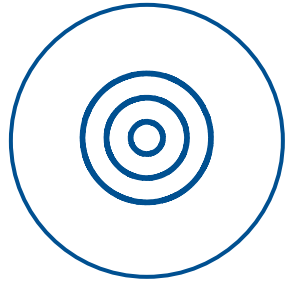
and finally, to be more responsible at the corporate level to strengthen the commitment to carbon neutrality.

# The Climate Action Pathway



## Footprint and risk calculation

Understanding carbon emissions, product impacts and climate change risks



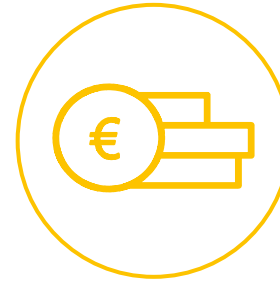
## Define a roadmap and reduction targets

Develop a sustainable strategy, with reduction targets and a roadmap for achieving these targets



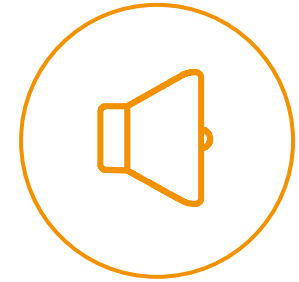
## Reducing the footprint

Improving efficiency, sourcing renewable energy and decarbonising the supply chain



## Financing climate action

Financing climate action, e.g. through avoidance or removal of unavoidable emissions or by investing in impact funds



## Communicate & lead

Involving stakeholders in a sustainable vision and communicating the results



# Climate emergency

## State of play (world)



Current atmospheric concentrations of CO<sub>2</sub> are 417 ppm (+ 32% since 1980)



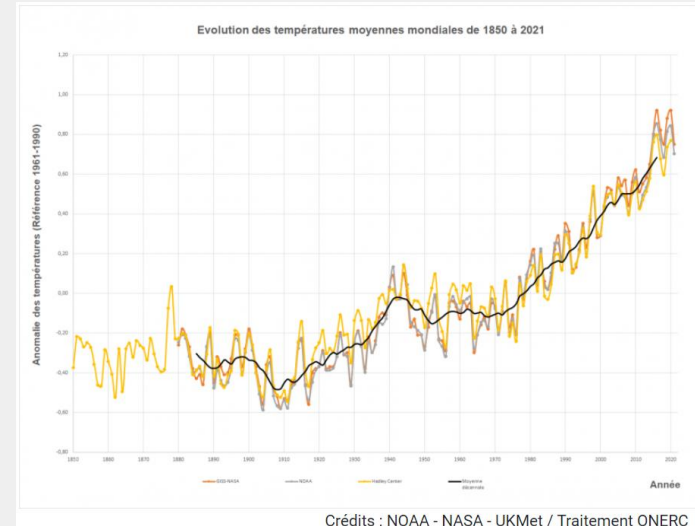
2016 was the warmest year on record, followed by 2019 and 2020.



Globally, **the last 8 years were the warmest ever recorded** by NASA since 1880.



Scientists have indicated that we have **10 years** to reduce global greenhouse gas emissions before we reach a **point of no return**.



# Climate emergency

## State of play (Belgium)

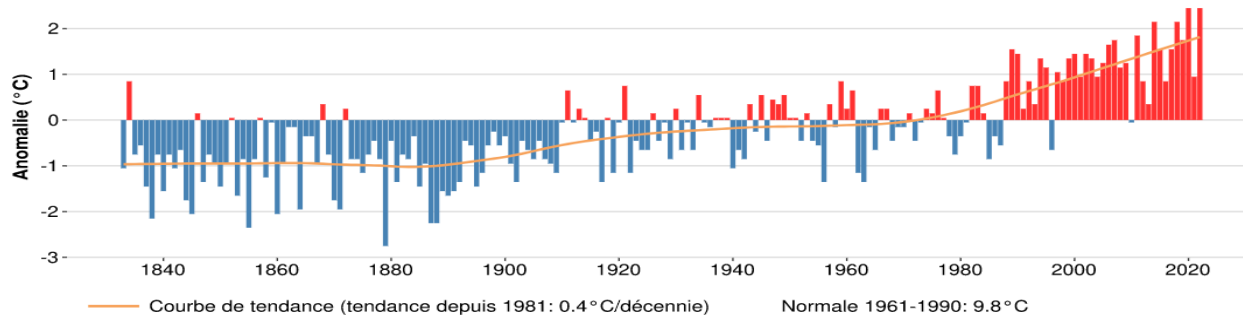
At a more local level too, records are being broken

- **The year 2022 was, together with 2020, the warmest year ever measured** in Belgium. The temperatures in every month (except July) were above the climatological normal.
- The summer of 2016 was the hottest since measurements began.
- If nothing changes, the **estimated cost of** the consequences of climate change for Belgium in 2050 is approximately **9.5 billion euros per year by 2050, or 2% of Belgian GDP.**
- On the other hand, the potential **gains** from climate change, mainly due to milder winters, would only amount to **3 billion euros per year or 0.65% of Belgian GDP.**



Température moyenne annuelle à Bruxelles - Uccle de 1833 à 2022

Anomalie des moyennes annuelles par rapport à la période de référence 1961-1990



# Climate emergency



## State of play (political commitments)

Under current policies, some scientists estimate that end-of-century warming will reach **2.7°C**.

Even if the commitments made at the UN conference in Glasgow in 2022 are met, all countries would emit about **twice the amount of emissions in 2030** that would **limit warming to 1.5°C**.

The current targets for 2030 place the world on a climate trajectory with a temperature increase of **2.4°C** by 2100.

Since the inclusion of the climate neutrality targets of the US and China, the estimated temperature increase based on national contributions and long-term targets is **2.1°C** by 2100.

If all the announced commitments and targets under discussion are implemented, the estimated temperature rise would be **1.8°C** by 2100 under this optimistic scenario, with a peak warming of 1.9°C.

**A major effort is therefore needed in *all sectors* during this decade to reduce emissions and limit the temperature increase to 1.5°C.**

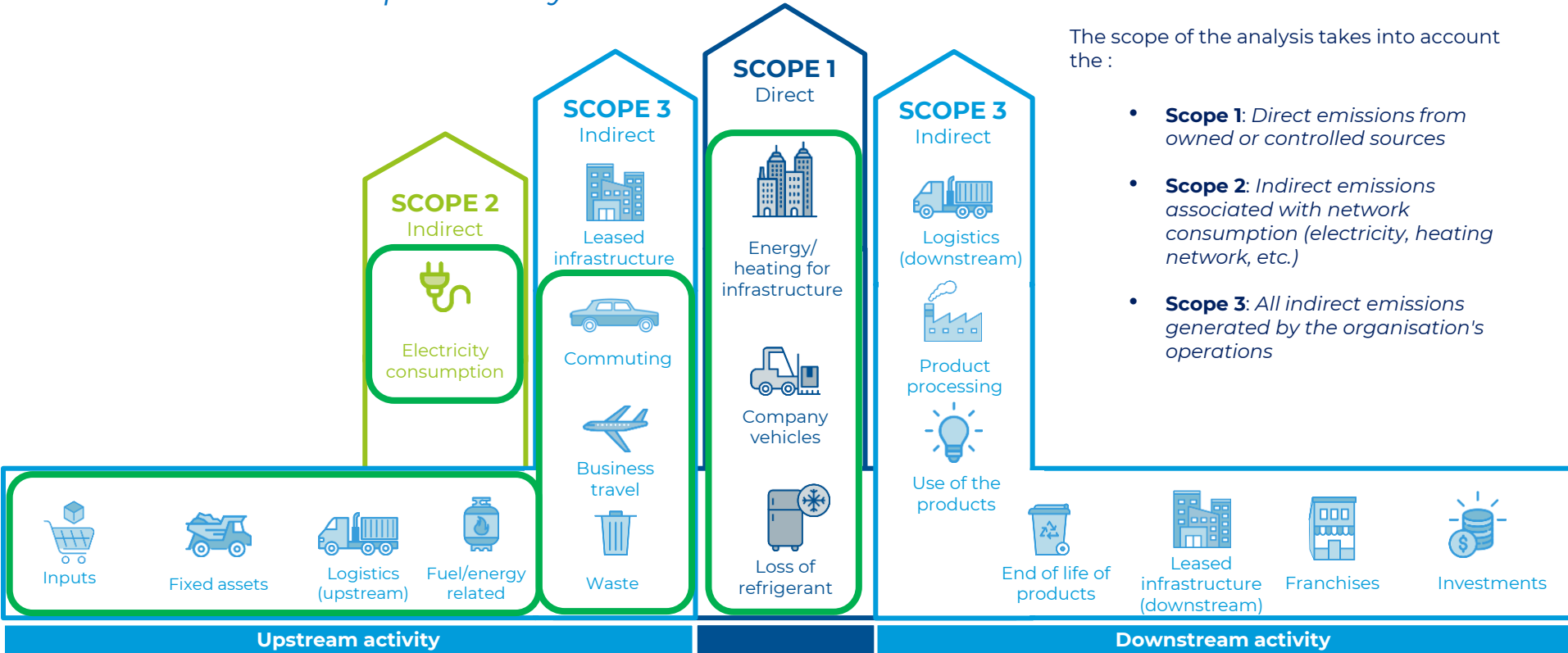


# Data collection



# Methodology

## GHG Protocol & Scope of analysis



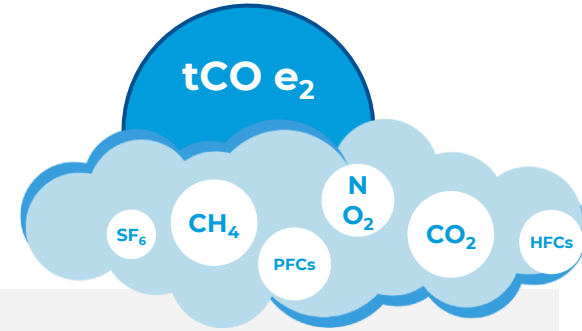
The scope of the analysis takes into account the :

- **Scope 1:** Direct emissions from owned or controlled sources
- **Scope 2:** Indirect emissions associated with network consumption (electricity, heating network, etc.)
- **Scope 3:** All indirect emissions generated by the organisation's operations

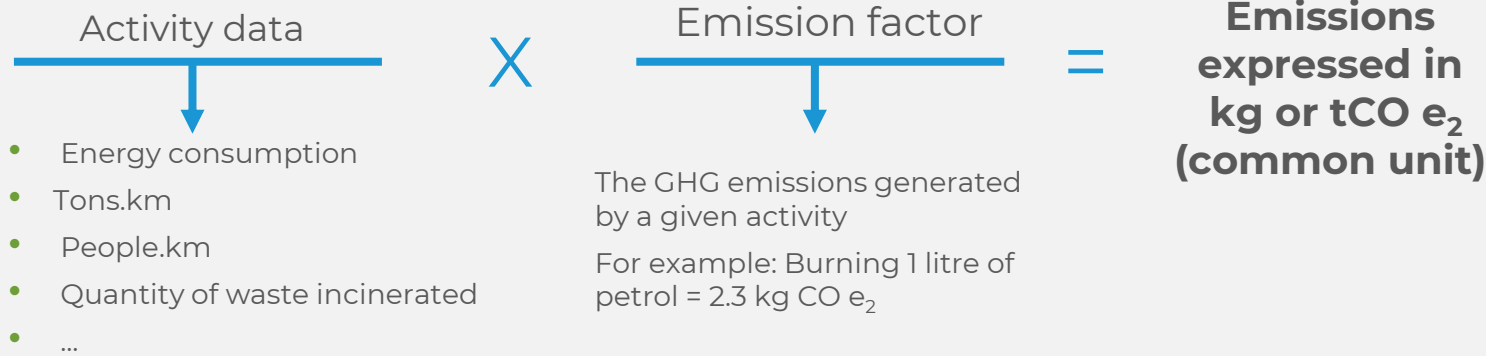
— Included in the Ethias carbon footprint

# Methodology

- Each greenhouse gas has a varying capacity to trap heat in the Earth's atmosphere over a period of time, known as the **global warming potential**.
- All greenhouse gases (GHGs) considered are reduced to a common unit, tonnes of **CO<sub>2</sub> equivalent (tCO<sub>2</sub> e)**.

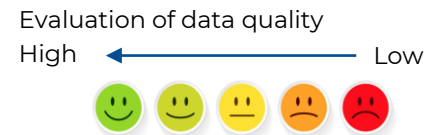


## *The calculation principle is simple:*



# Data quality and assumptions

The following data was used to calculate Ethias' carbon footprint.



Buildings		Quality
<b>Heating</b>	Gas consumption per site in kwh was used. As in previous years, gas consumption has been calculated in HCV rather than ICV.	
<b>Electricity</b>	Green electricity consumption per site in kwh was used.	
<b>Refrigerant gas losses</b>	According to the data received, there is no use of refrigerants at any of the three sites.	
Mobility		
<b>Company car</b>	Fossil fuel and electricity consumption for company cars were used.	
<b>Business travel</b>	The distances and mode of transport of the business trips made were used (including, for flights, whether they were business or economy flights).	
<b>Commuting &amp; teleworking</b>	The distances and days of teleworking were used. An estimate was made for the 160 employees who left the company during the year 2022 and for whom the commuting distances were not known.	
Other		
<b>Waste</b>	Data on waste quantities in kilograms were used.	
<b>Purchasing</b>	Data on the type and quantity of purchases were used.	

# Results



# Total carbon footprint



**Total emissions:** 4 339 tCO<sub>2</sub>e

**Scope 1:** Direct emissions from energy combustion in buildings and company cars, and refrigerant gas leakage

**2,580 tCO<sub>2</sub>e** 59.5% of total

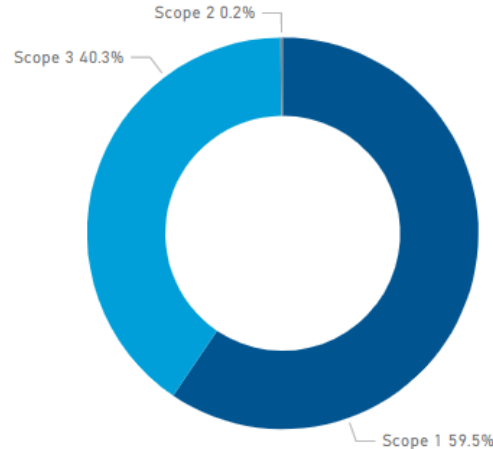
**Scope 2:** Indirect emissions from the production of electricity consumed

**9 tCO<sub>2</sub>e** 0.2% of total

**Scope 3:** Indirect emissions from business travel, commuting, teleworking, capital goods (IT), and purchases of goods and services and indirect energy-related emissions not included in scopes 1 and 2.

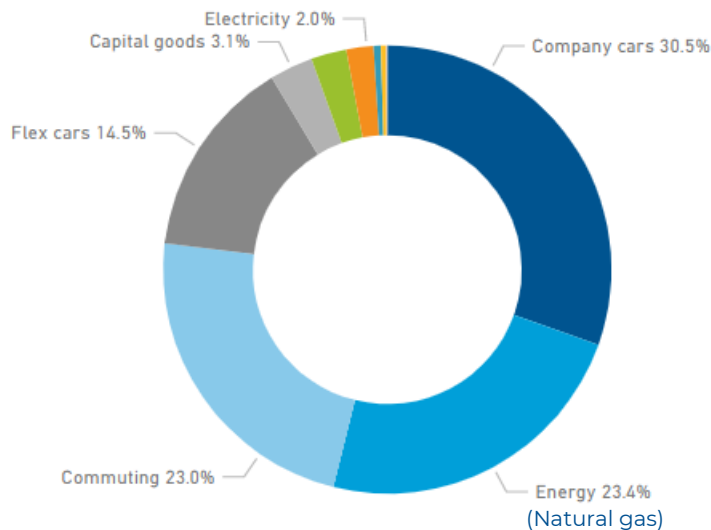
**1 750 tCO<sub>2</sub>e** 40.3% of total

GHG emissions breakdown per scope



# Emissions by category

GHG emissions breakdown per category



- Total emissions: **4,339 tCO<sub>2</sub>e**
- This corresponds to **2.6 tCO<sub>2</sub>e per FTE**
- The main source of emissions is **Company cars + flex cars** (30.5%+14.5%), followed by **Commuting** (23%) and **Energy** (natural gas + electricity) (23.4%+2%).
- This corresponds to a **reduction in emissions of 7%** compared to 2021.

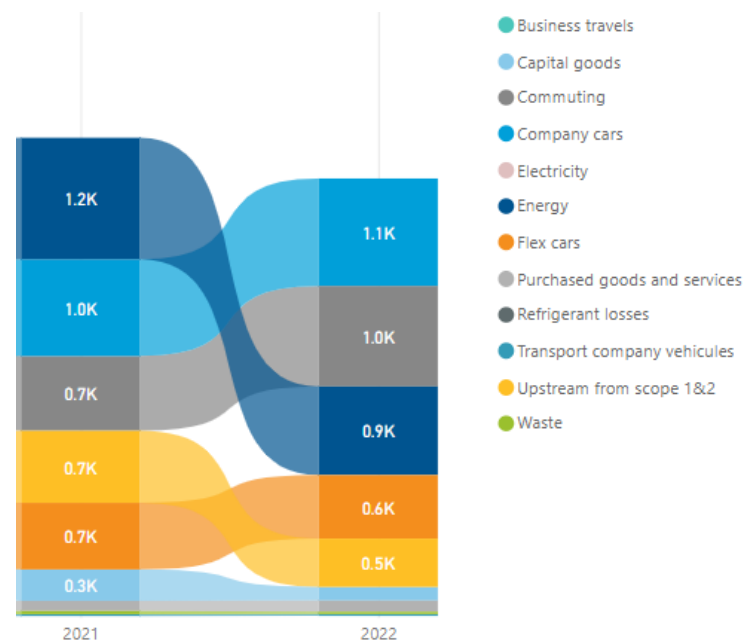


# Evolution of GHG emissions by category

There has been a **downward trend in emissions over the** last 4 years.

N.B. The category "upstream from scope 1 and 2" corresponds to the indirect energy-related emissions of all other categories (company cars, flex cars, natural gas, electricity).

Category	Emissions		Change (2021 vs 2022)
	tCO e <sub>2</sub>	%	
<b>Mobility</b>	<b>2 969 tCO e<sub>2</sub></b>	<b>68,5%</b>	<b>+7%</b>
Company car	1,322 tCO e <sub>2</sub>	30,5%	+10%
Commuting to work	998 tCO e <sub>2</sub>	23%	+35%
Flex cars	629 tCO e <sub>2</sub>	14,5%	-24%
Business travel	3 tCO e <sub>2</sub>	0,1%	n/a in 2021
Company car for freight	17 tCO e <sub>2</sub>	0,4%	-29%
<b>Buildings</b>	<b>1,100 tCO e<sub>2</sub></b>	<b>25%</b>	<b>-20%</b>
Natural gas	1 015 tCO e <sub>2</sub>	23%	-12%
Electricity	85 tCO e <sub>2</sub>	2%	+4%
Refrigerant gases	0 tCO e <sub>2</sub>	0%	0%
<b>Other</b>	<b>269 tCO e<sub>2</sub></b>	<b>6%</b>	<b>-43%</b>
IT equipment (capital goods)	136 tCO e <sub>2</sub>	3%	-56%*
Waste	22 tCO e <sub>2</sub>	0,5%	-30%
Purchase of goods and services	111 tCO e <sub>2</sub>	2,6%	+11%



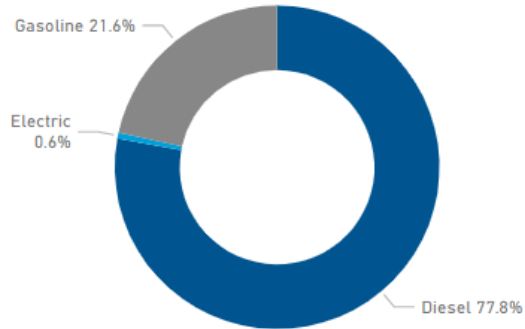
\*Change of methodology from Carbon Footprint (calculation of emissions based on IT equipment depreciation) to GHG Protocol (calculation of emissions based on annual IT equipment purchases)

# Focus on company cars and flex cars

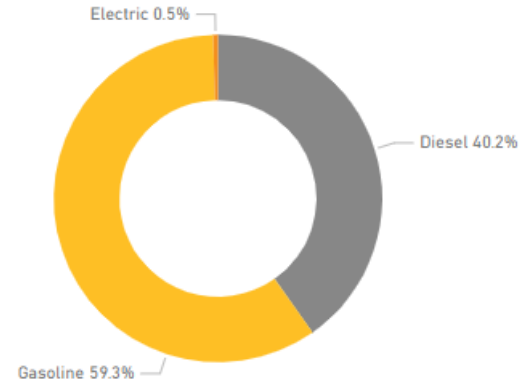
1,951 tCO<sub>2</sub>e or **45% of total emissions** (30% for company cars and 15% for flex cars) and **-4% compared to 2021**

- Company cars represent **1,322 tCO<sub>2</sub>e** (+10% compared to 2021).
- Freight with company vehicles represents **17 tCO<sub>2</sub>e** (-29% compared to 2021).
- Flex cars represent **629 tCO<sub>2</sub>e** (-24% compared to 2021).

Emission distribution company cars (%tCO<sub>2</sub>e)



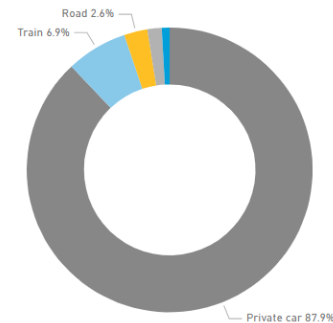
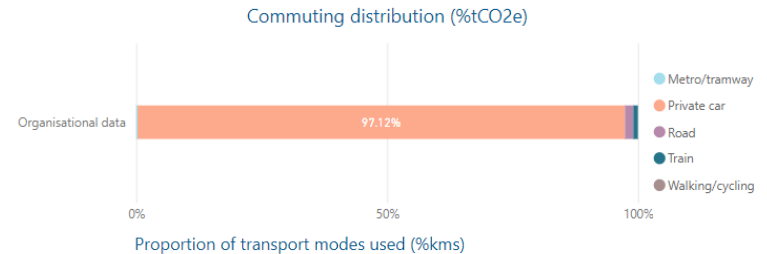
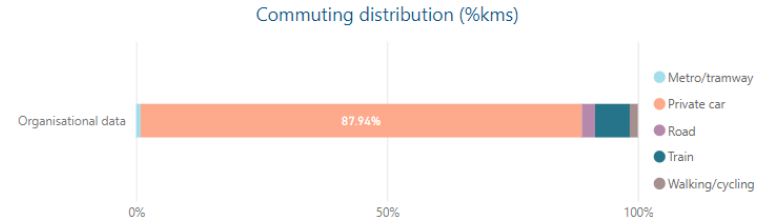
Emission distribution flex cars (%tCO<sub>2</sub>e)



# Focus on commuting and teleworking

998 tCO<sub>2</sub>e or **23% of total emissions** and **+35% compared to 2021**

- In 2022, the vast majority of kilometres travelled (88%) were by car (excluding company cars).
- The emissions from travel by type of transport (excluding company cars) are:
  - **Private car: 830 tCO<sub>2</sub>e** (+30% compared to 2021)
  - **Public transport (metro/tram, bus ('road'), train): 25 tCO<sub>2</sub>e** (+177% compared to 2021)
  - **Walking and cycling: 0 tCO<sub>2</sub>e**
- This category also includes **emissions related to teleworking (scope 3): 143 tCO<sub>2</sub>e** (+49% compared to 2021) calculated on the basis of electricity consumption and heating.
  - This increase is explained by the fact that there has been a change in the emission factor for teleworking between 2021 and 2022. Telework emissions are estimated at **0.9 kgCO<sub>2</sub>e/person/day compared to 0.4 in 2021.**



# Focus on building energy (gas + electricity)

1100 tCO<sub>2</sub>e or **25% of total emissions** and **-20% compared to 2021**

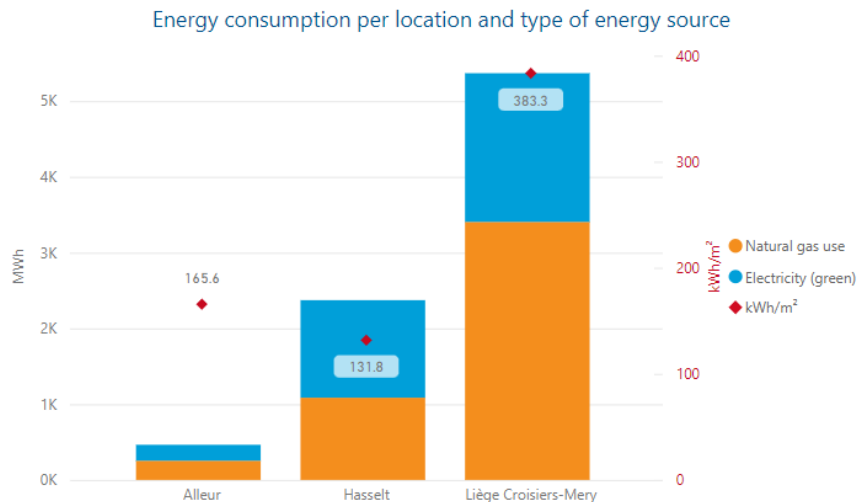
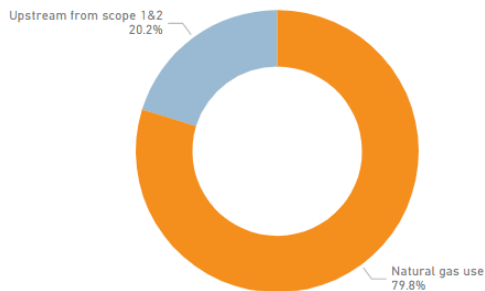
**Natural gas** accounts for **1,015 tCO<sub>2</sub>e** (92% of building energy emissions) and green electricity accounts for **85 tCO<sub>2</sub>e** of indirect emissions associated with electricity generation.

Ethias' offices emitted **1,100 tCO<sub>2</sub>e** (8,201 MWh) **in 2022** compared to **1,373 tCO<sub>2</sub>e** (8,398 MWh) **in 2021** (-20%).

- **Natural gas:** 4,745 MWh, i.e. a reduction in consumption of -20% compared to 2021.
- **Electricity:** 3,456 MWh, i.e. an increase in consumption of +37% compared to 2021. Ethias has contracts for **green electricity**, thanks to which 731 tCO<sub>2</sub>e have been avoided under scope 2.
- No **loss of refrigerant gas** in Ethias' cooling systems has been reported in 2022.

	2019	2020	2021	2022
Natural gas (MWh)	6 523	5 429	5 878	4 745
Electricity (MWh)	5 514	4 420	2 520	3 456

Breakdown of energy emissions per type (%tCO<sub>2</sub>e)

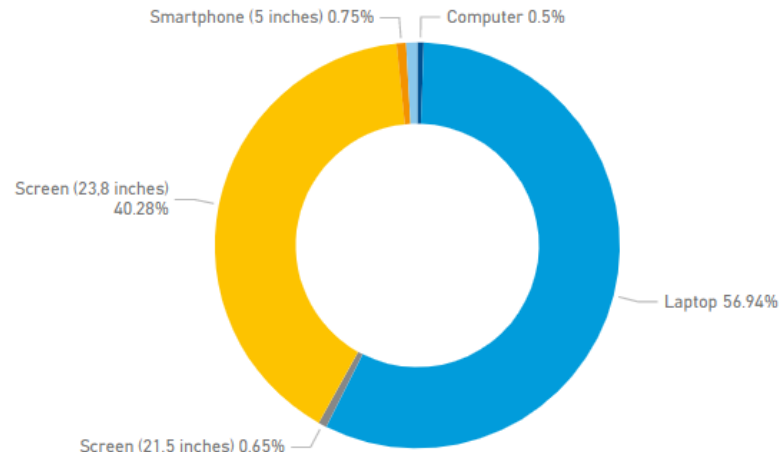


# Focus on IT equipment ('capital goods')

136 tCO<sub>2</sub>e or **3% of total emissions** and **-56% compared to 2021**

- The main sources of emissions are **laptops (57%)** and **monitors (40%)**.
- In 2021, the emissions from IT equipment amounted to **311 tCO<sub>2</sub>e**. This could be due to the fact that in 2021 a large number of monitors, printers and iPads were being depreciated.
- In 2022, we switched from the **Bilan Carbone methodology** (calculation of emissions based on IT hardware depreciation) to the **GHG Protocol** (calculation of emissions based on annual IT hardware purchases).

Breakdown of capital goods emissions (%tCO<sub>2</sub>e)

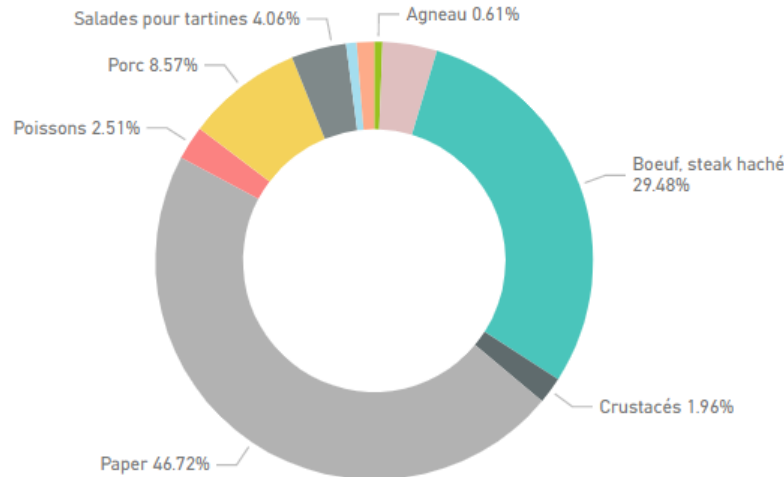


# Focus on purchased goods

111 tCO<sub>2</sub>e or **2.6% of total emissions** and **+11% compared to 2021**

- The main sources of emissions are
  - **paper: 52 tCO<sub>2</sub>e** (vs. 85 tCO<sub>2</sub>e in 2021)
  - **meat: 46 tCO<sub>2</sub>e** (vs. 15 tCO<sub>2</sub>e in 2021). This increase is mainly due to a better granularity of the data this year.
- Drinks are not taken into account.

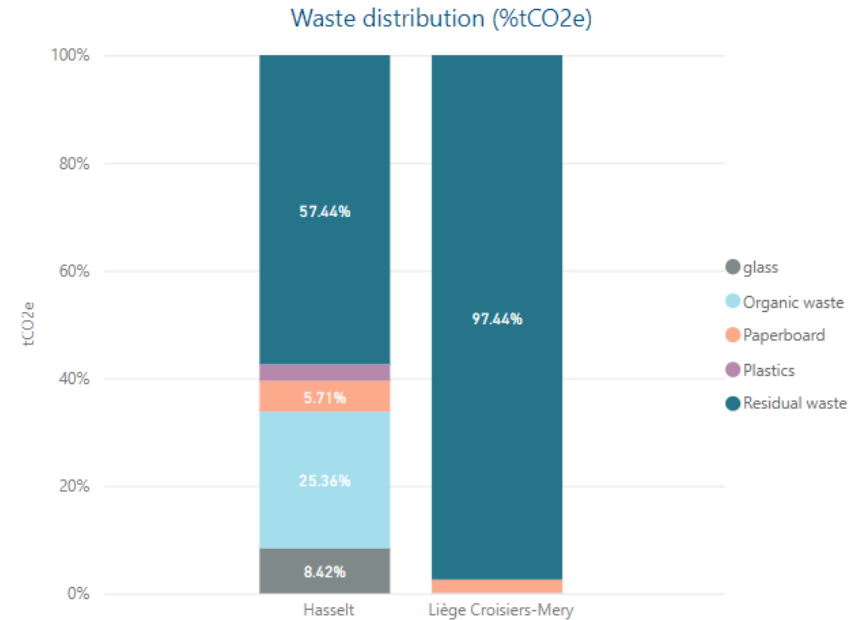
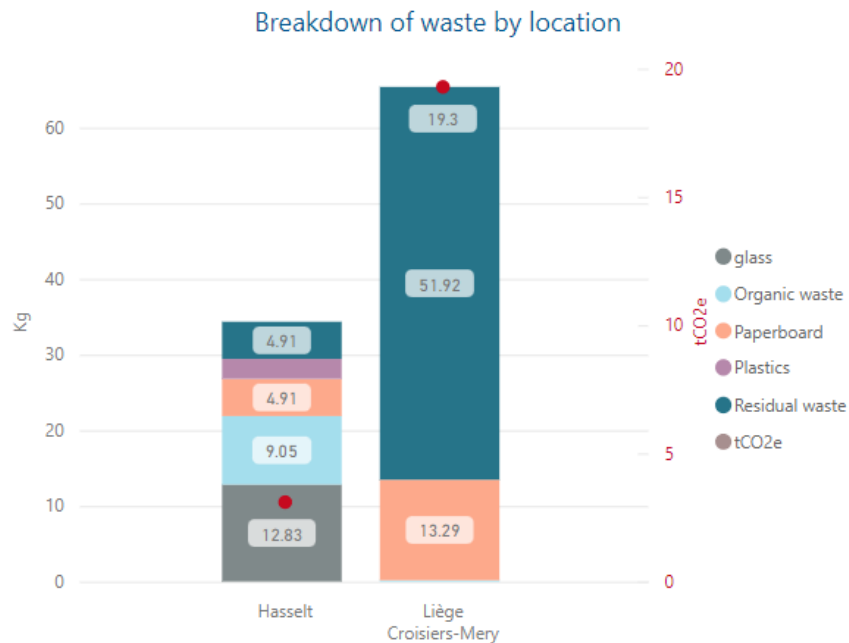
Breakdown purchased goods emissions (%tCO<sub>2</sub>e)



# Focus on waste

22 tCO<sub>2</sub>e or **0.5% of total emissions** and **-30% compared to 2021**

- Residual waste** is responsible for **22 tCO<sub>2</sub>e** (assumption applied: residual waste is incinerated).



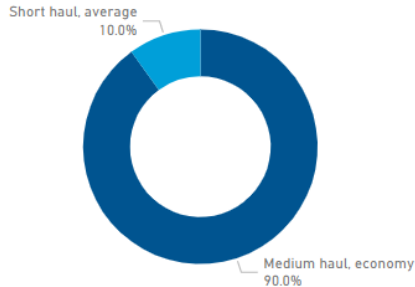


# Focus on business travel

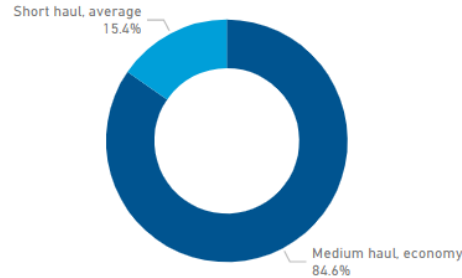
3 tCO<sub>2</sub>e or **0.1% of total emissions** (no business travel in 2021)

- Business travel is only a small part of the carbon footprint.
- The **majority of the km.p travelled** was **by train (63%)**, yet this represents a **minority of the emissions** from business travel (**19%**).
- **Air travel** accounts for only **37% of the kilometres** travelled but **81% of the emissions** from business travel.

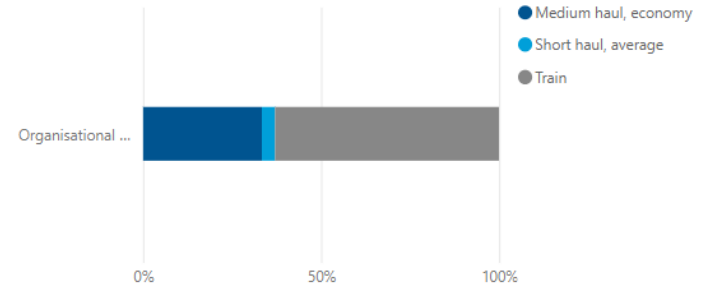
Distribution of business travel emissions - Air (%kms)



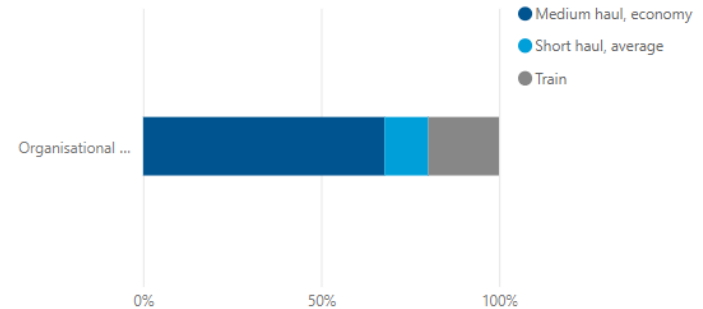
Distribution of business travel emissions - Air (%tCO<sub>2</sub>e)



Business travel distribution (%kms)



Business travel distribution (%tCO<sub>2</sub>e)

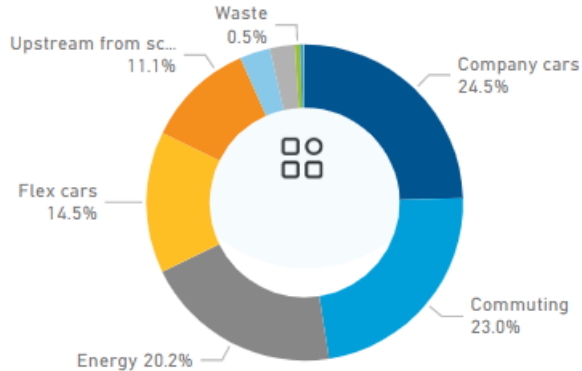


# Summary and contextualisation

4 339

tCO<sub>2</sub>e, Tot. company emissions

GHG emissions breakdown per category



- Ethias' carbon footprint of **4,339 tCO<sub>2</sub>e** is equivalent to:
  - **507** world tours by car
  - **2,420** return flights Brussels-New York
  - **426** times the annual emissions of an average Belgian
  - **4,721** tonnes of paper consumed
  - **52** football fields of forest are needed to capture these emissions for 1 year

# Next steps

# Workshops - developing a reduction plan

Following the carbon footprint report, CO2logic will provide support in the quantification of different reduction scenarios, focusing on the main emission items through two workshops.

## Focus on energy in buildings

Energy-related emissions represent 25% of Ethias' total emissions. The services included are :

- Preparation session (phone call)
- On-site workshop with relevant stakeholders (1h30)
- Calculation of reduction scenarios

## Focus on mobility

Mobility-related emissions represent 68% of Ethias' total emissions. The services included are :

- Preparation session (phone call)
- On-site workshop with relevant stakeholders (1h30)
- Follow-up of reduction scenario calculations

The other emission items represent 6% of Ethias. The opportunities to reduce these emissions can also be discussed in the two workshops above.

On the basis of the two workshops, CO2logic will submit **the measured scenarios to Ethias** in a report, highlighting the links with Ethias' existing "Change Over" plan.

# Examples of actions to consider

## Energy

- Energy audit possibly followed by the implementation of an energy control system, insulation improvements, etc.

## Company cars and flex cars

- Switch to electric company cars and flex cars
- Establish a company car policy with a target of CO<sub>2</sub>e /km
- Offer training to employees on eco-driving and tyre pressure

## Commuting to work

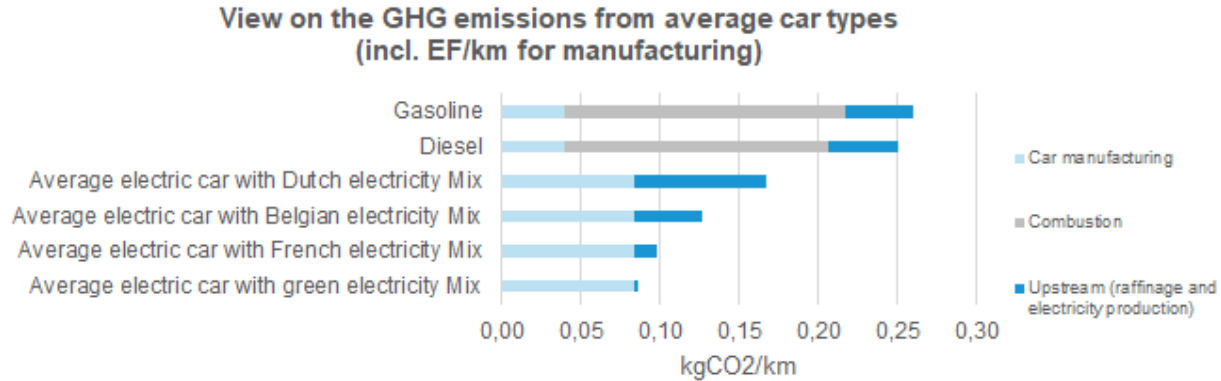
- Encourage soft mobility through the reimbursement of public transport season tickets

## Business travel

- Establish a business travel policy that includes the promotion of rail travel within a certain distance

# Example: the switch to electric cars

- The climate impact per kilometre driven with a car varies considerably depending on the type of car.
- By electrifying your fleet, you have the opportunity to **significantly reduce your carbon footprint**.
- Electric vehicles **outperform internal combustion engines over** their entire life cycle **in almost all geographical areas**, even with carbon-intensive electricity generation.\*



\*[https://www.nature.com/articles/s41893-020-0488-7.epdf?sharing\\_token=bHmiZV-6tRf6M0Q9\\_00at9RgN0jAjWel9jnR3ZoTv0OMBHrNGD6k2npei17x4aWWLctOfloyfalbH9WNy5EPZCOSWTbm4pFmXuvEuQUnMLucyflmQln5HpLaUaMirBC\\_mtUmMau4zf7ef7XRkIb2wAgWHQwZCmHKorQ52ejCILCwzQUU6uUUyhF8ueBoAFxtetSghqYdWq3bbQOYSqHa3VvC8xlyap8UU3F2YanhOE%3D&tracking\\_referrer=www.theguardian.com](https://www.nature.com/articles/s41893-020-0488-7.epdf?sharing_token=bHmiZV-6tRf6M0Q9_00at9RgN0jAjWel9jnR3ZoTv0OMBHrNGD6k2npei17x4aWWLctOfloyfalbH9WNy5EPZCOSWTbm4pFmXuvEuQUnMLucyflmQln5HpLaUaMirBC_mtUmMau4zf7ef7XRkIb2wAgWHQwZCmHKorQ52ejCILCwzQUU6uUUyhF8ueBoAFxtetSghqYdWq3bbQOYSqHa3VvC8xlyap8UU3F2YanhOE%3D&tracking_referrer=www.theguardian.com)

# Science Based Targets (SBTs)

- ✓ The science-based targets (SBTs) can serve as an inspiration. They offer companies a clear pathway to reduce GHG emissions in line with the Paris Agreement targets (the 1.5°C threshold).
- ✓ The SBT initiative is a partnership between the CDP, the UN Global Compact, the World Resources Institute (WRI) and the World Wildlife Fund (WWF).
- ✓ SBT is one of the most internationally recognised methods for a company to demonstrate ambition and ensure that its reduction targets are consistent with science.
- ✓ This framework provides companies with sectoral and geographical decarbonisation pathways compatible with.
- ✓ Once targets have been set and approved, a company does not need external certification to continue to participate in the SBT initiative. It must publish its progress annually.





# Supporting a certified climate project

- ✓ After calculations and implementation of a reduction plan, most organisations find that they cannot reduce their emissions to zero. There are still GHG emissions.
- ✓ After developing a reduction plan, Ethias can support a certified climate project to offset these remaining GHG emissions.
- ✓ Certified climate projects offer sufficient guarantees of effective reduction of project-related CO<sub>2</sub> emissions.<sup>2</sup>
- ✓ By offsetting the remaining GHG emissions, an organisation chooses to take responsibility for the impact of its CO<sub>2</sub> emissions instead of passing it on to society.
- ✓ CO2logic can support you with a portfolio of over 900 existing climate action projects to offset your hard-to-remove emissions.

# Communication

- ✓ Once you have adopted a reduction plan and funded a certified climate project, our enhanced CO<sub>2</sub>-Neutral label ensures that a company has real, credible and transparent climate ambitions and actively calculates, reduces and offsets its local and global impact. There is a bronze label, a silver label and a gold label.



- Independent third-party validation
- CO<sub>2</sub> neutral recognition
- Indication of neutrality scope
- Traceability of the claim and transaction (unique QR code redirecting to client's page on CO<sub>2</sub>-neutral website)



# The team



# Your team



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