



Carbon Footprint 2023

september 2024

UA Carbon Footprint

Project

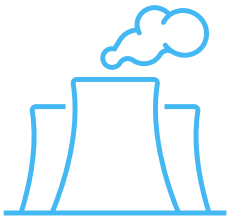
- **Map** UA carbon footprint, in house, on a yearly basis
- **Update** 2018 calculation (Ecolife)
- Gather necessary **data** & guarantee data **quality**
- **Report** & benchmark results, indicate **trends** 2018-2023
- Suggest **improvements**
- Interdisciplinary Team

AIM

- **Risk MGMT:** monitor & understand trends
- Raise **Awareness** on impact of activities
- Support **policy proposals**
 - UA Climate plan
 - International travel policy
 - Strategic patrimonium management
 - ...
- **Simulate** policy impacts in the (near) future

Scope

Impact activities from Education - Research - Services



All Greenhouse gases
Scope 1, 2 & 3



UA activities on campus

Energy use buildings
Purchased goods & services
Waste generated
Food Served by Komida

...

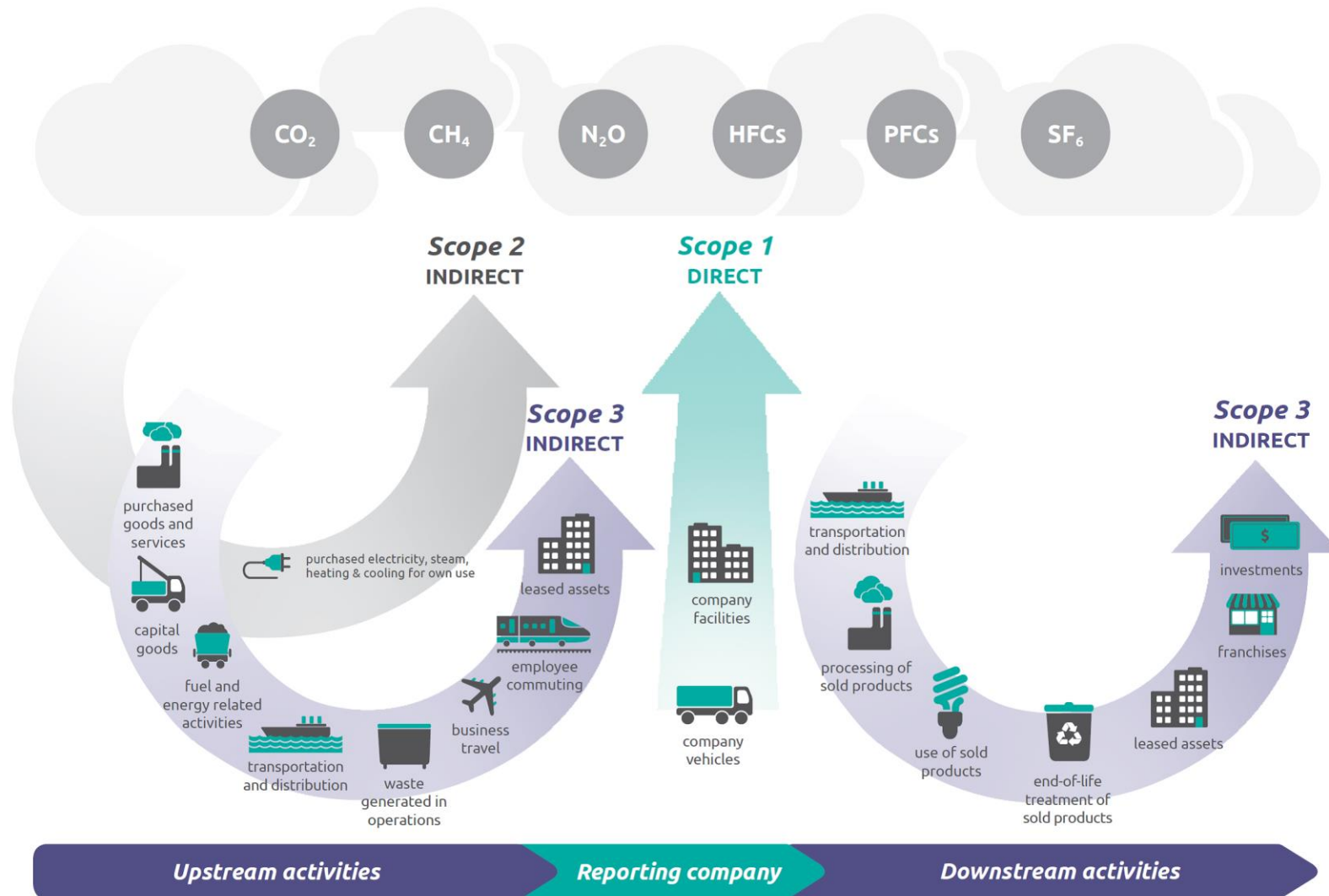


AND off campus (up- and downstream)

Commutes & Transport to and from UA-campuses
International travel staff & students
Paper Use by students (Universitas)

...

3 Scopes GHG Protocol



Scope: responsible and/or dependable

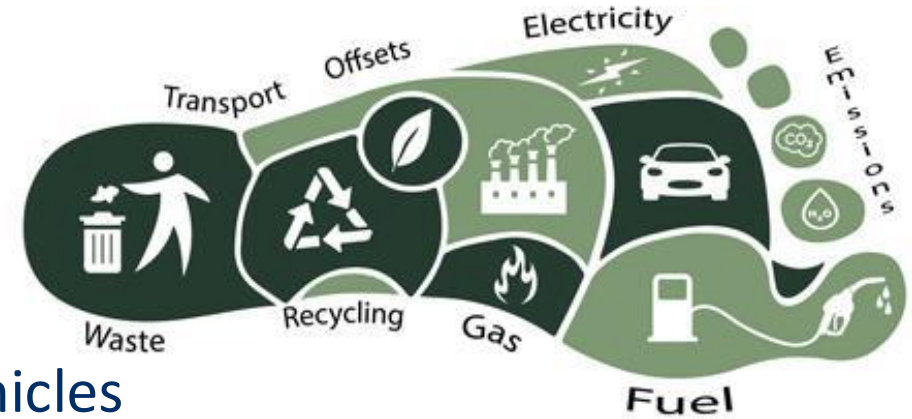
INCLUDED

- 5 sites CDE - CGB - CMI - CST - CMU (50%)
- The Beacon /The Brain Academy (m² only)
- Activities & Buildings for Research + Education + Services
- KOMIDA + KOVENTA (for UA)
- Internationaal reizen staff + students (IN & OUT) ASWU, Erasmus, thesis, ...
- Waste generated on site
- Paper use students via Universitas

NOT INCLUDED

- ~Spin offs: AMS - BlueApp
- Student housing to XIOR
- KOVENTA (exterior)
- Waterconsumption
- International travel: short travels/excursions

Method: impact categories UA



- **Energy:** natural gas, electricity*, heating fuel, fuel vehicles

- **Non-energy:** leakage of cooling agents

- ★ **Inputs:** purchased goods & services

e.g. Maintenance, paper, IT, Mach & equipment (< 2.500€), chemicals, lab equipment, machinery, food, financial services

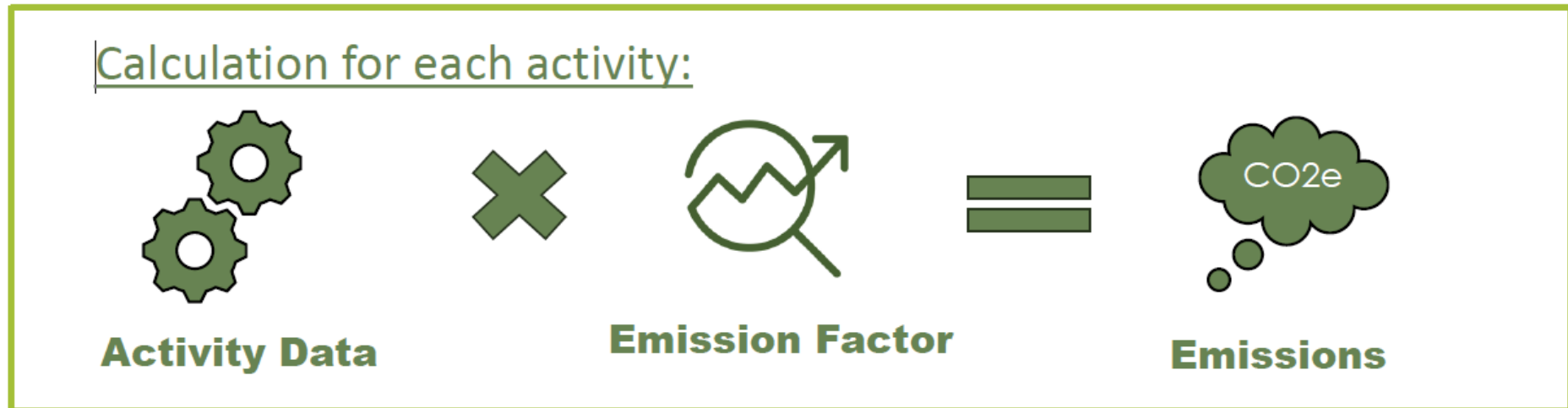
- **Packaging:** e.g. Komida

- **Direct waste:** generated on site

- **Transporting people:** staff & students, commutes & international travel

- **Capital Goods:** buildings, vehicles, ICT, Mach & equipment > 2.500€, solar panels

Method: calculation Bilan Carbone



Data collection by UA



Bilan Carbone data™ V8.9_ENG

Results 2018

Overview	Total	
	t CO ₂ eq	Share
Energy	16 134	39%
Non-energy	75	0%
Inputs	823	2%
Transporting people	18 457	44%
Direct waste	96	0%
Capital goods	5 923	14%
End of life	373	1%
Total	41 882	100%

Uncertainties	
t CO ₂ eq	%
888	6%
20	27%
287	35%
2 665	14%
26	27%
2 189	37%
101	27%
3 574	9%

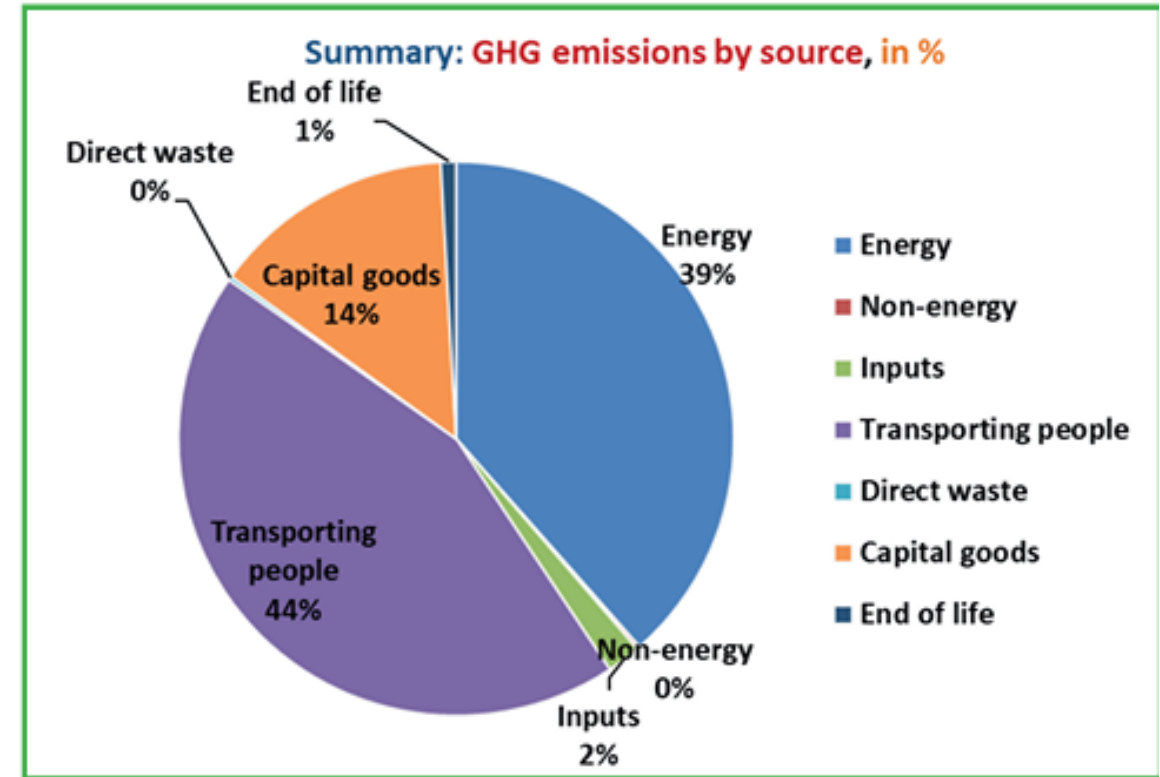
Top 3

Energy

Transporting people

Capital goods

Focus on Energy & Mobility



160 million km car

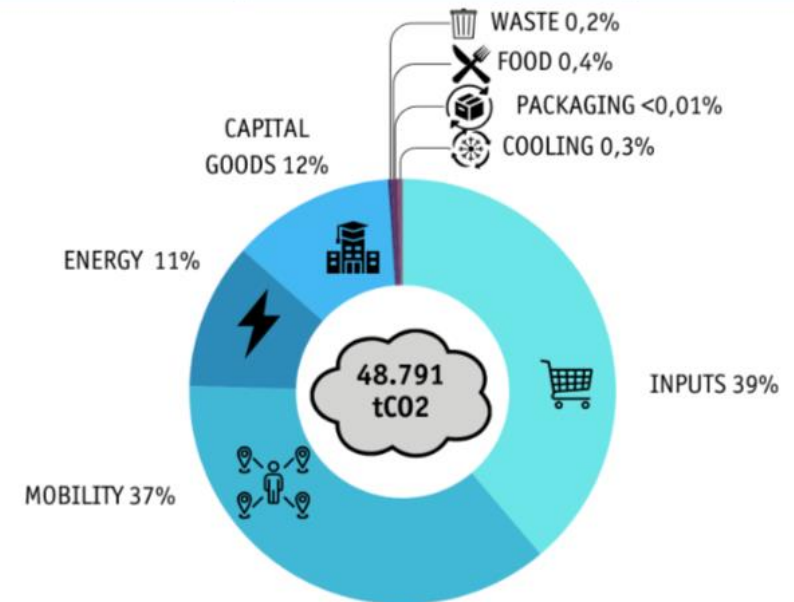
2100 people in Belgium

1,7 million trees

Results 2023

Overview	Total	
	t CO2e	Share
Energy 1	5.429	11%
Non-energy 1	186	0,4%
Inputs - goods and materials	19.175	39%
Future packaging	3	0,01%
Transporting people	17.868	37%
Direct wastes	107	0,2%
Capital goods	6.023	12%
Total	48.791	100%

Uncertainties	
t CO2e	%
297	5%
47	25%
8.318	43%
0,4	12%
4.470	25%
18	17%
2.200	37%
9.701	20%



Top 4

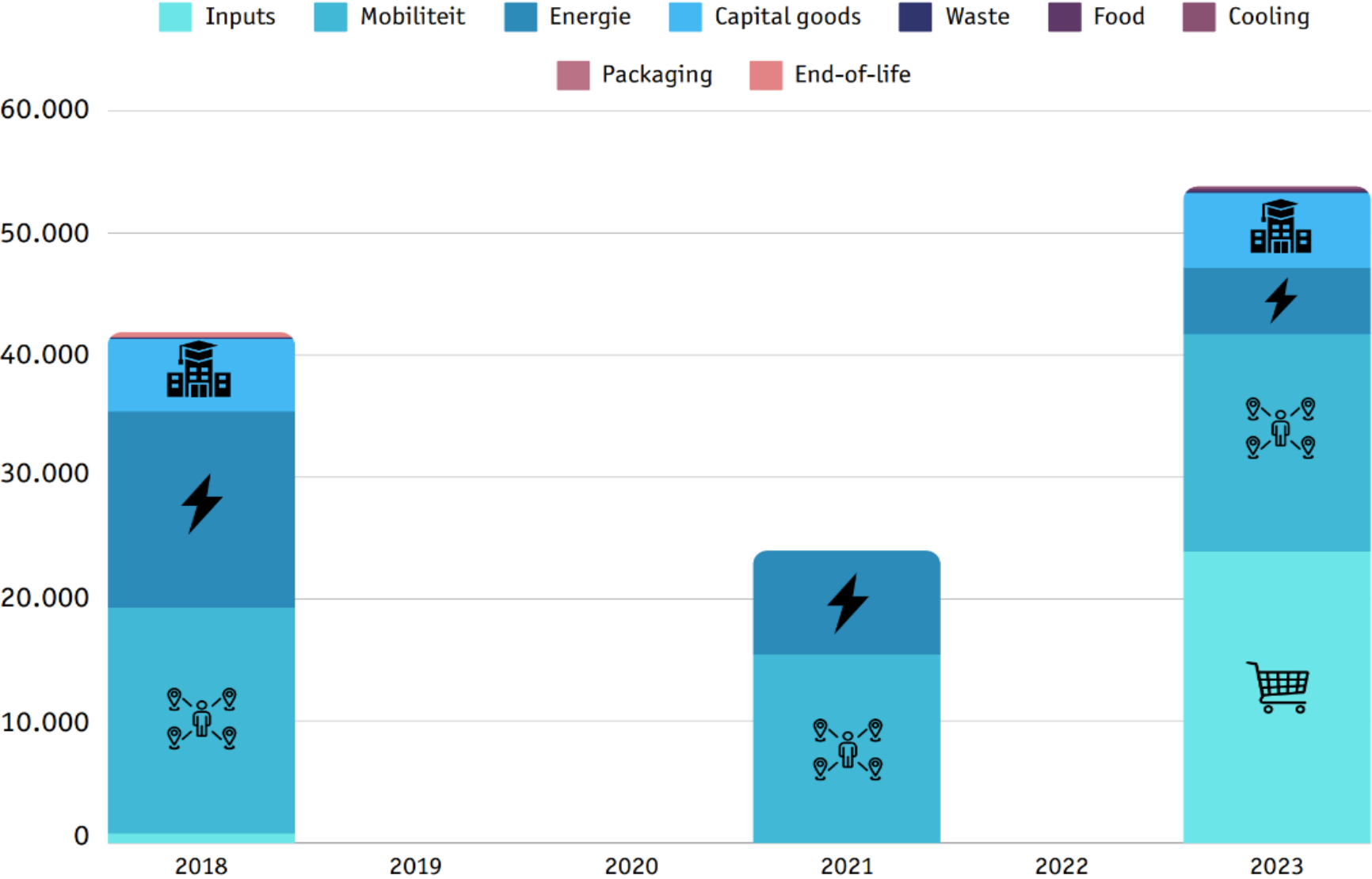
Inputs: new topic, (very) high uncertainty

Transporting people

Capital goods

Energy

UA 2018-2023

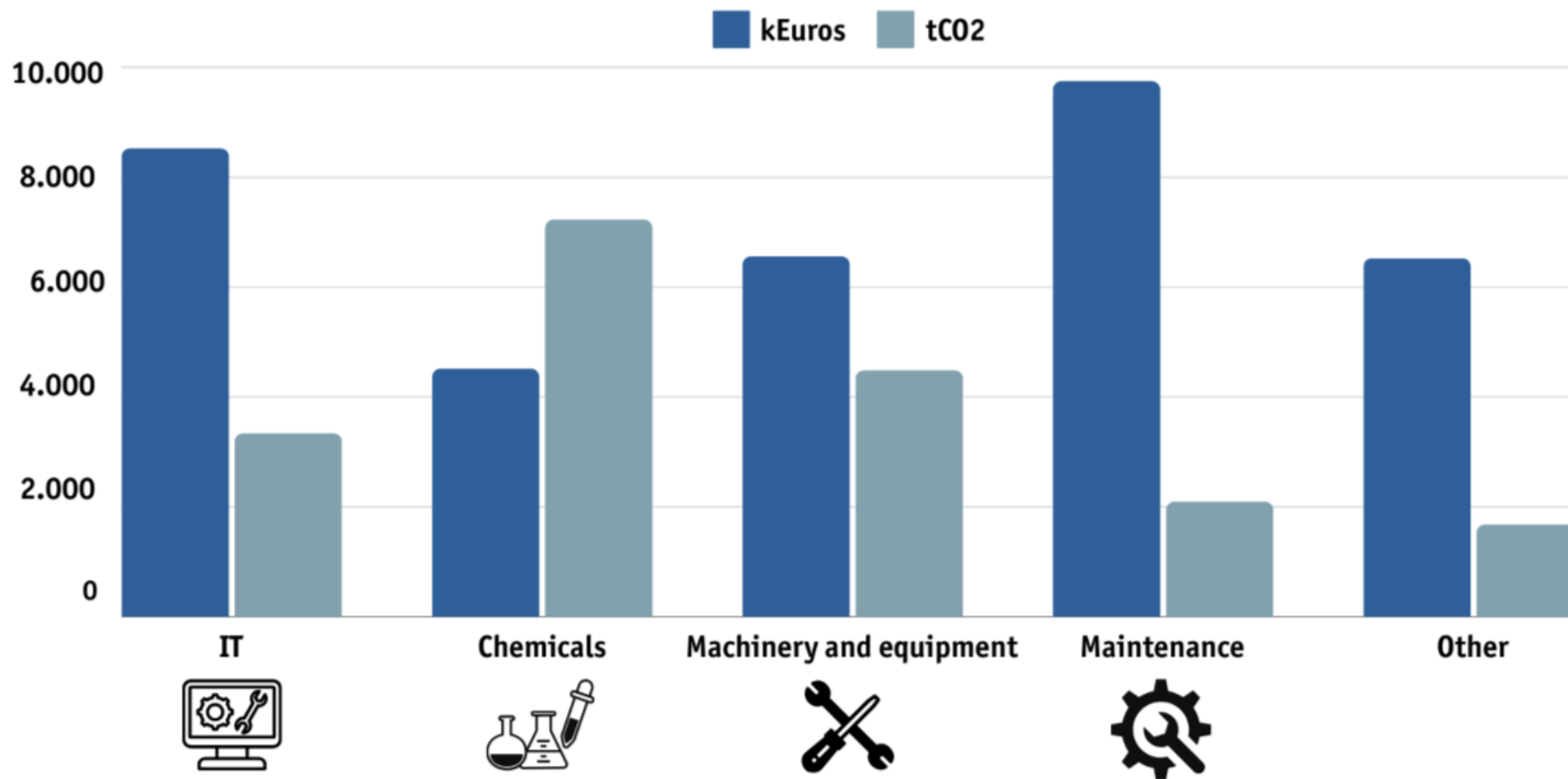


Changes

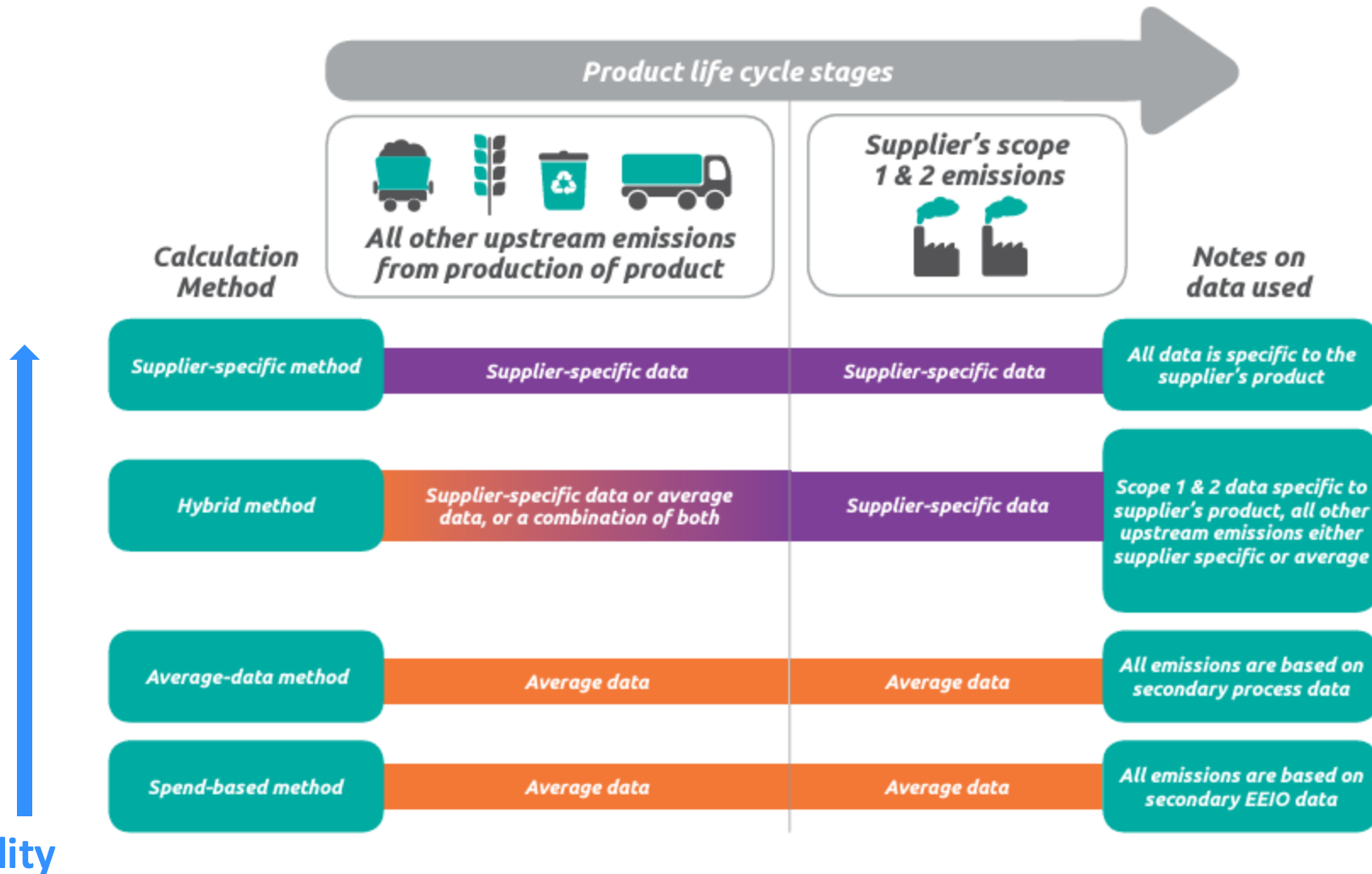
- Inputs ↗
- Mobility →
- Buildings →
- Energy ↘

Inputs (39%)

Selectie uit GL ADFIN 2023: 45 M€ & 19.175 tCO₂e



Spend-based ...



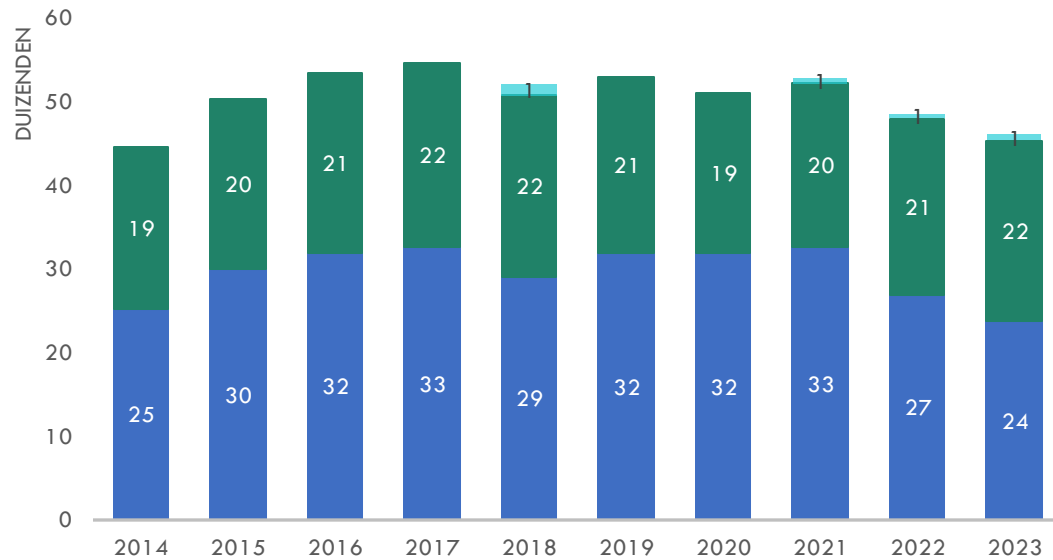
Energy (11%)

Aug 2022: peak energy prices



Evolution MWh

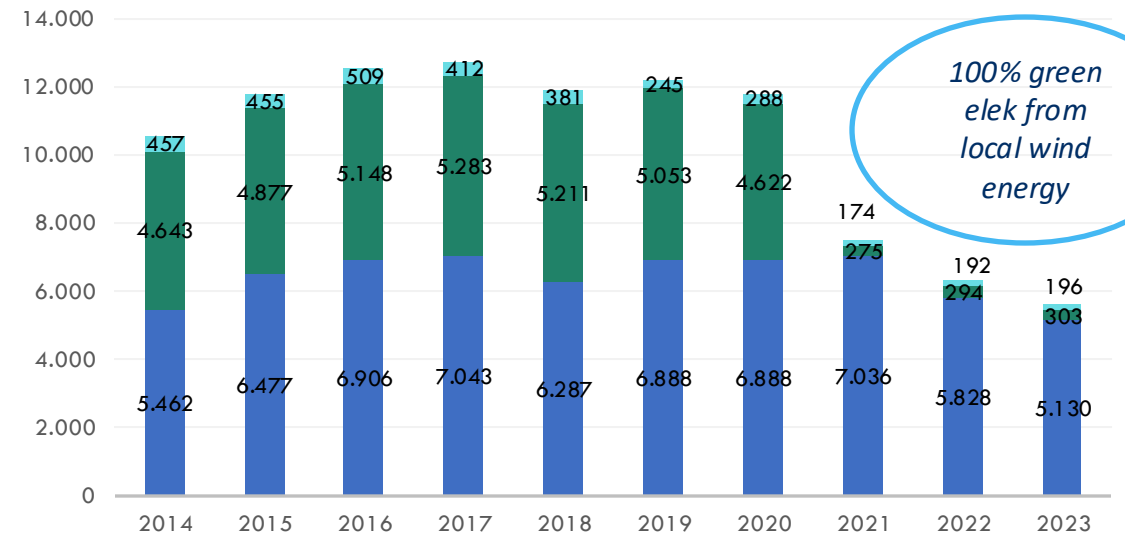
Energy Use (MWh)



- Sum of Natural gas total (MWh)
- Sum of Elek total (MWh)
- Sum of Heating Oil CST (MWh)

Evolutie tCO2e

Energy Use (tCO2e)

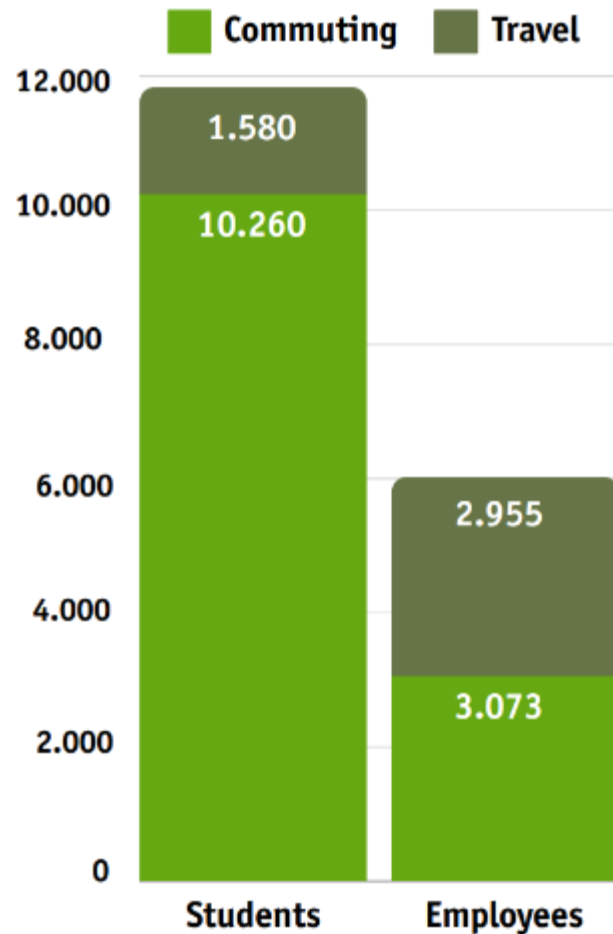


- Sum of Natural Gas (tCO2e)
- Sum of Elek (tCO2e)
- Sum of Heating oil (tCO2e)

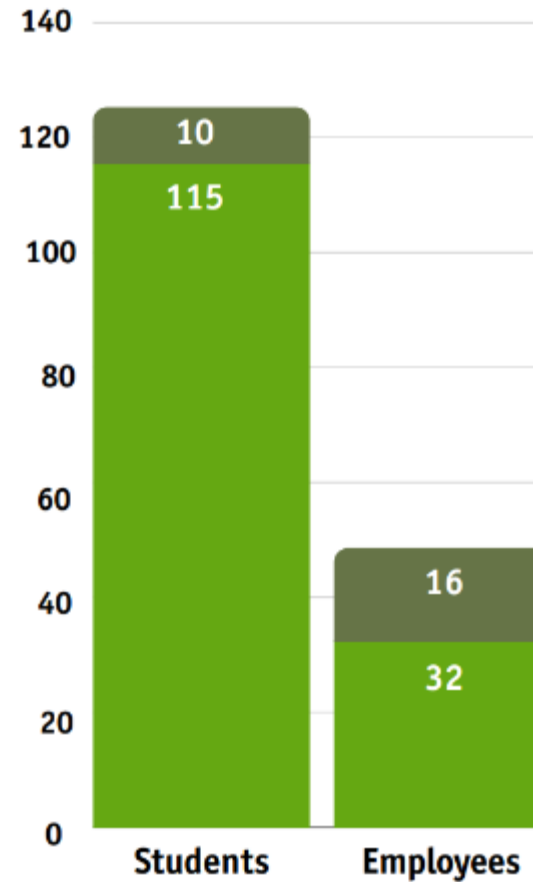
100% green elek from local wind energy

Transporting people (37%)

Total tCO2 Emissions Transport

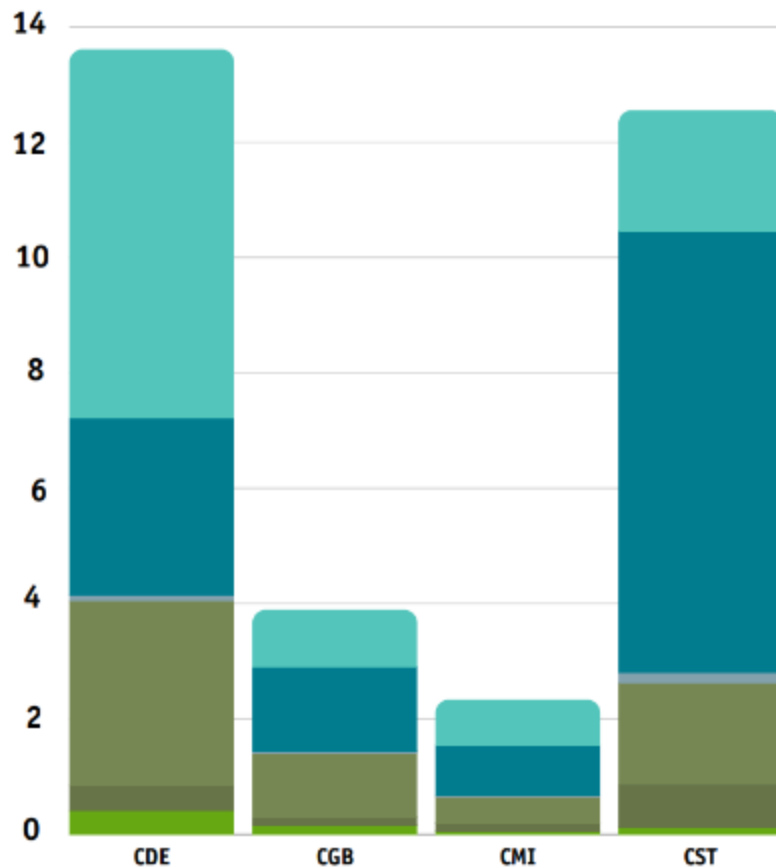


Total distance (in million km)

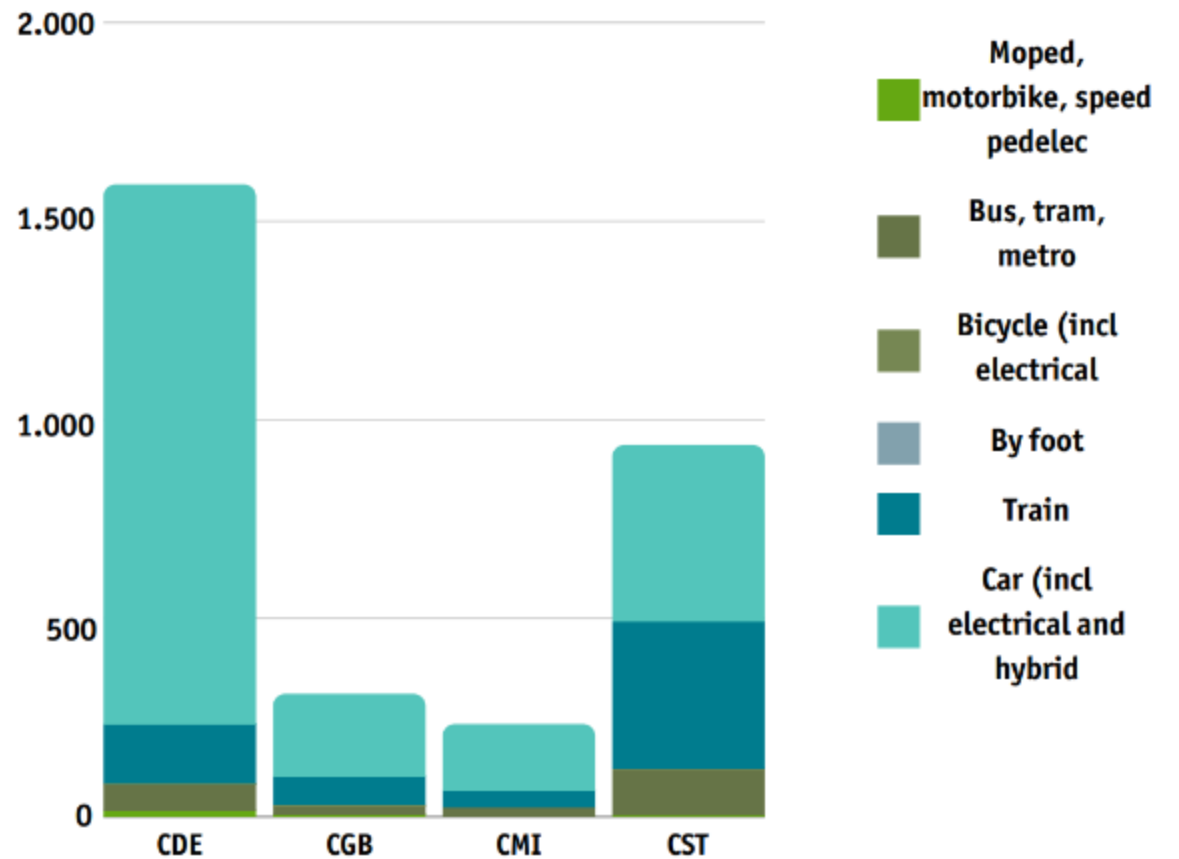


Staff commutes (6%)

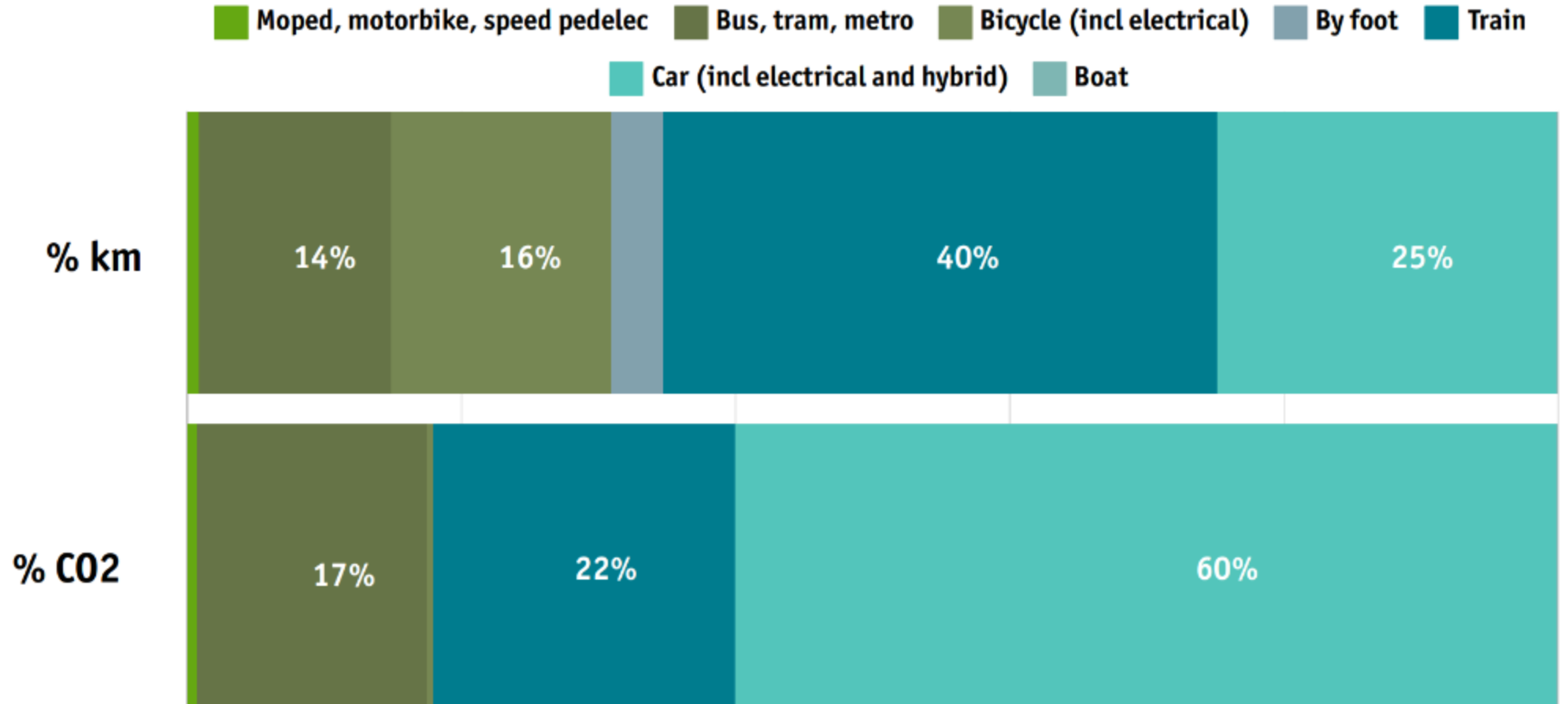
Total distance per campus (in million km)



Total tCO2 per campus

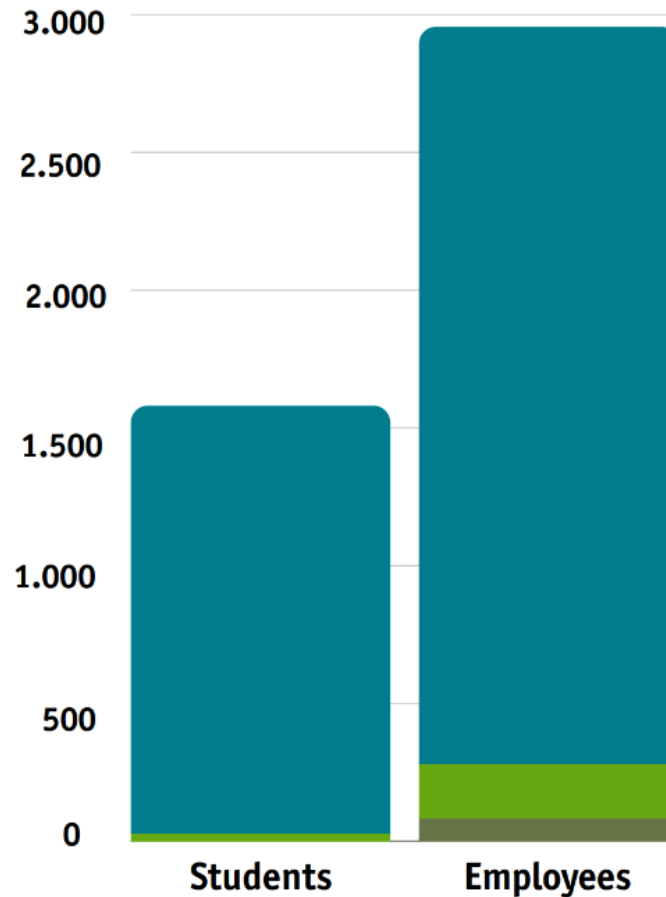


Student commutes (21%)

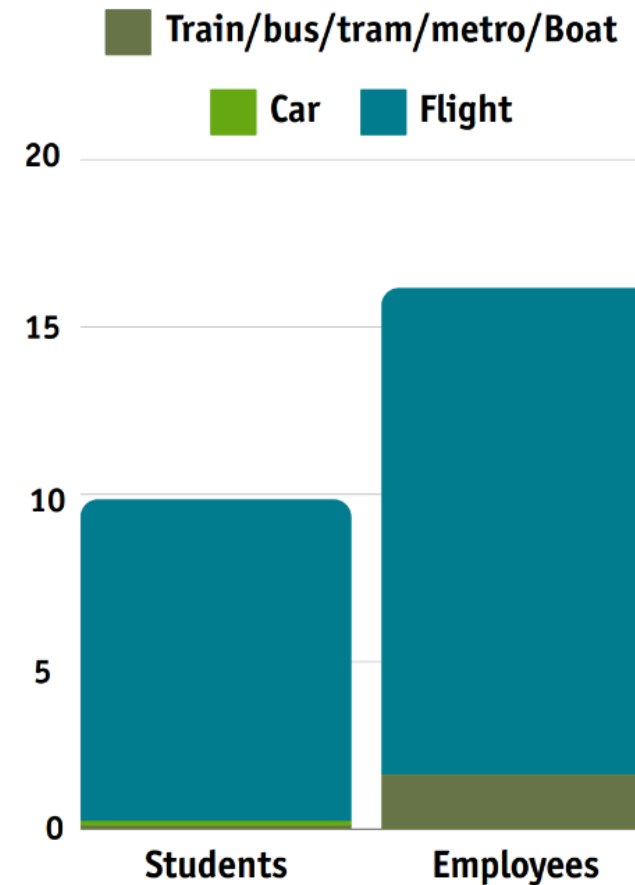


International travel (3+6%)

Total tCO2 Emissions



Total distance (in million km)



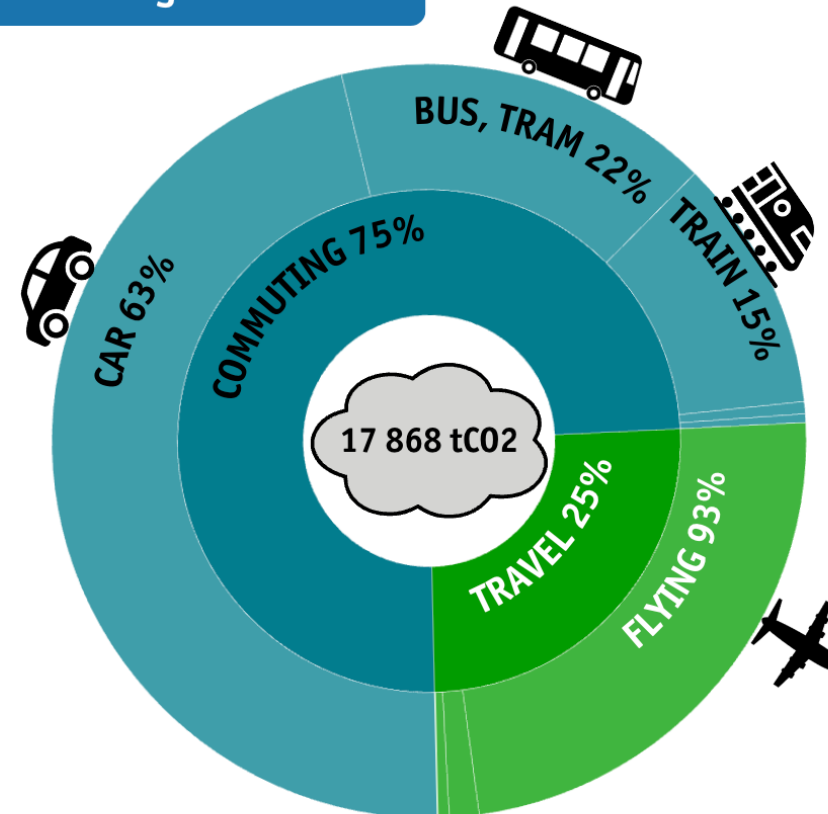
A closer look...

TRANSPORT CO2 EMISSIONS A closer look at commuting and travels

- Commuting accounts for 3/4th of transport emissions.
- 63% of these emissions are due to cars.



- Travels account for 1/4th of transport emissions.
- 93% of these emissions come from flying



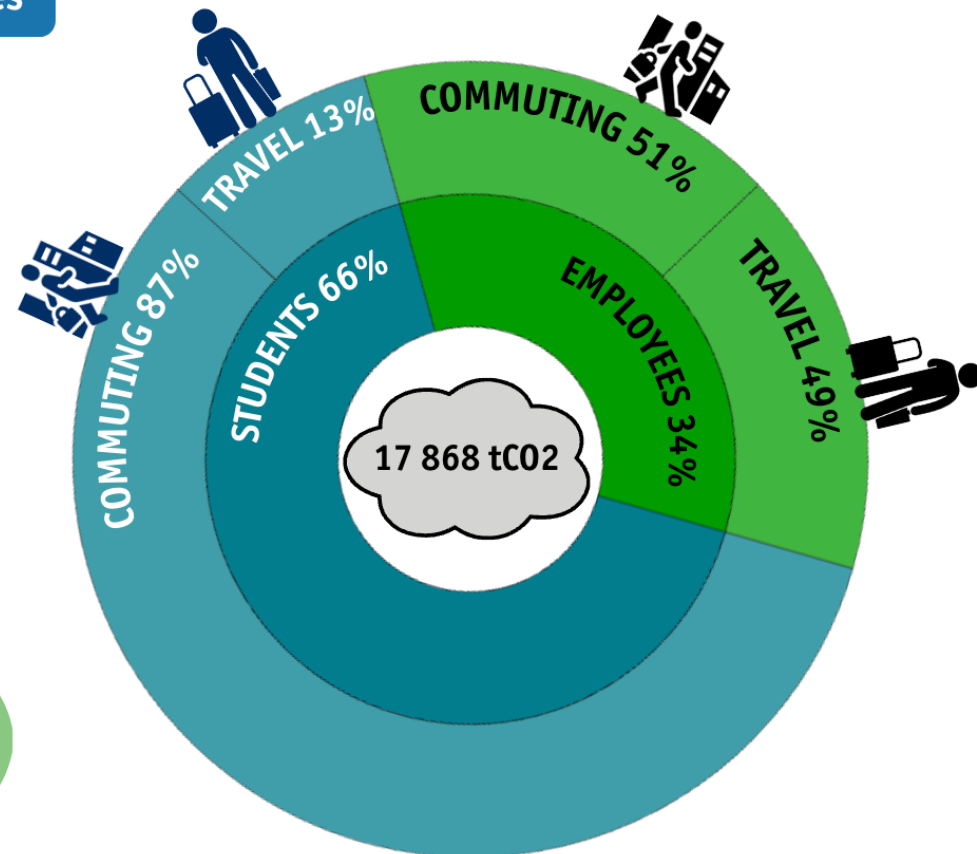
Students vs staff

TRANSPORT CO2 EMISSIONS Comparison of students and employees

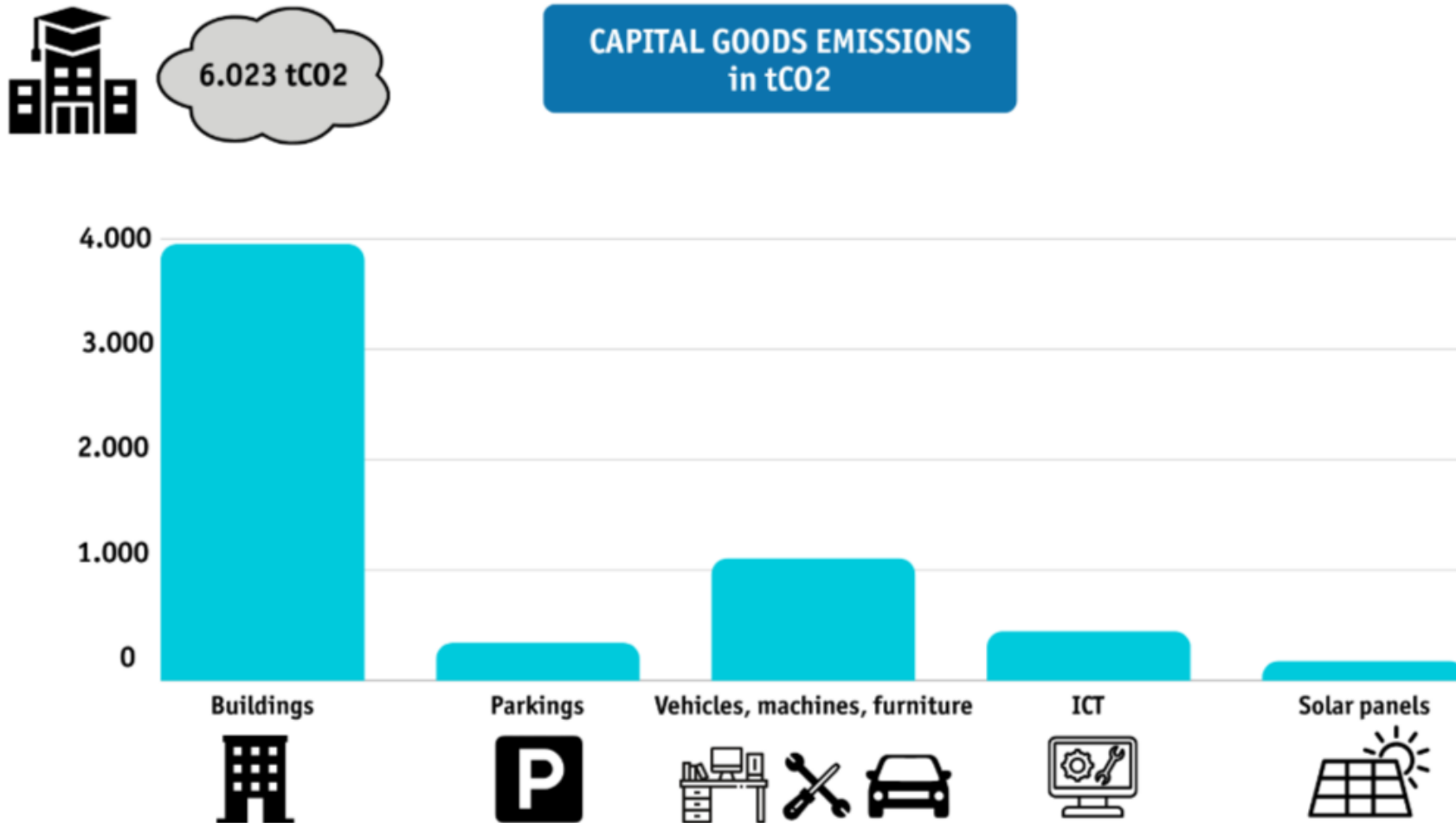
- Students account for 66% of transport emissions.
- 87% of these emissions are commuting related



- Employees account for 34% of transport emissions.
- Almost half of these emissions are related to travels



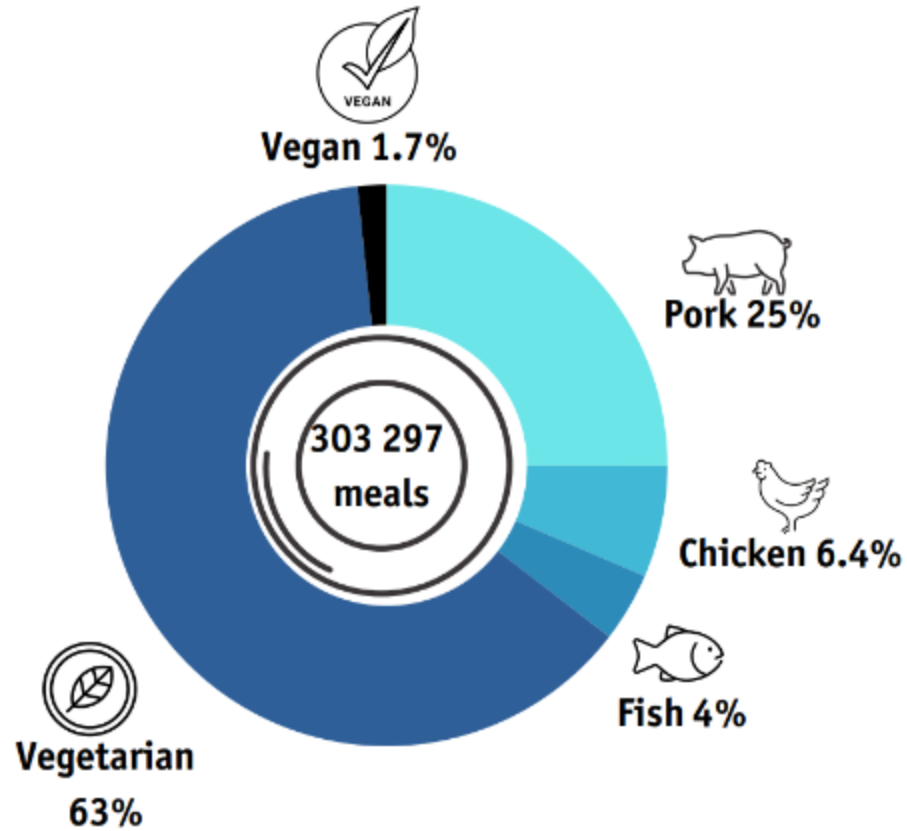
Capital Goods (12%)



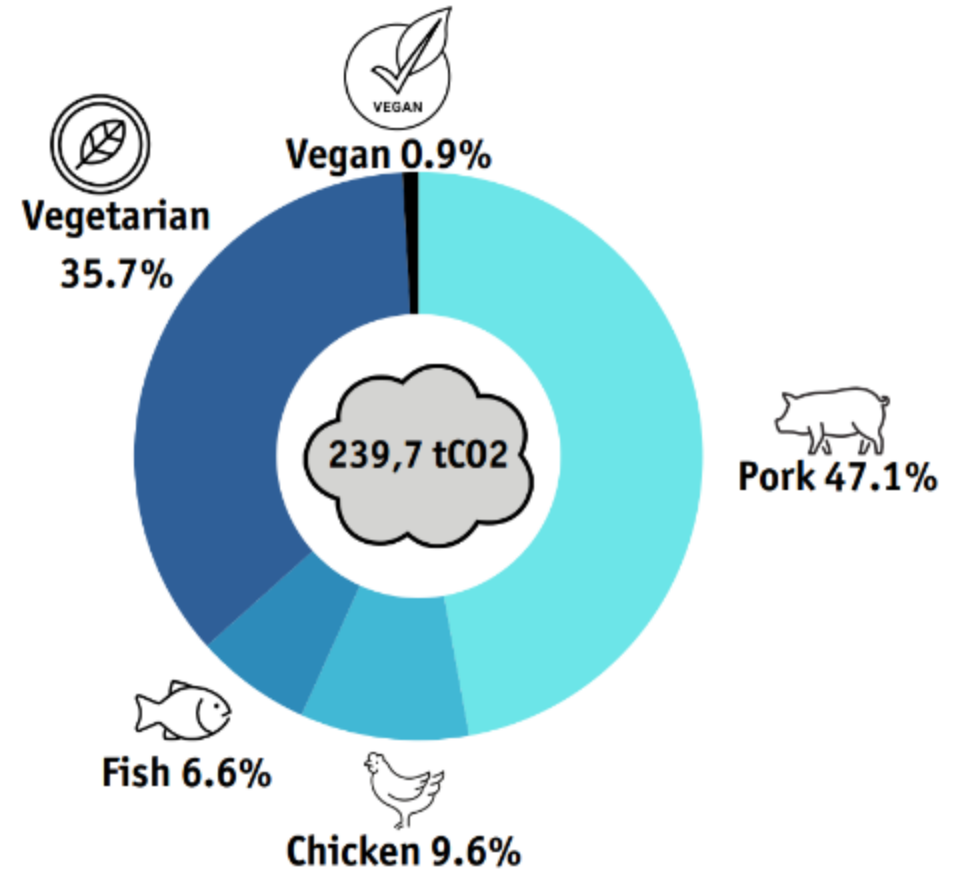
FOOD (0,4%)

*Komida & plant based: 72 tCO2e avoided
(if all meals & sandwiches were with porc)*

SHARE OF MEALS



SHARE OF EMISSIONS



Direct Waste (0,2%)

