University of Antwerp

Carbon Footprint 2024

Januari 2025

UA Carbon Footprint

Project

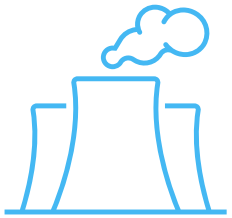
- **Map** UA carbon footprint, in house, on a yearly basis
- **Update** 2018 calculation (Ecolife)
- Gather necessary **data** & guarantee data **quality**
- **Report** & benchmark results, indicate **trends** 2018-2023
- Suggest **improvements**
- Interdisciplinary Team

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)

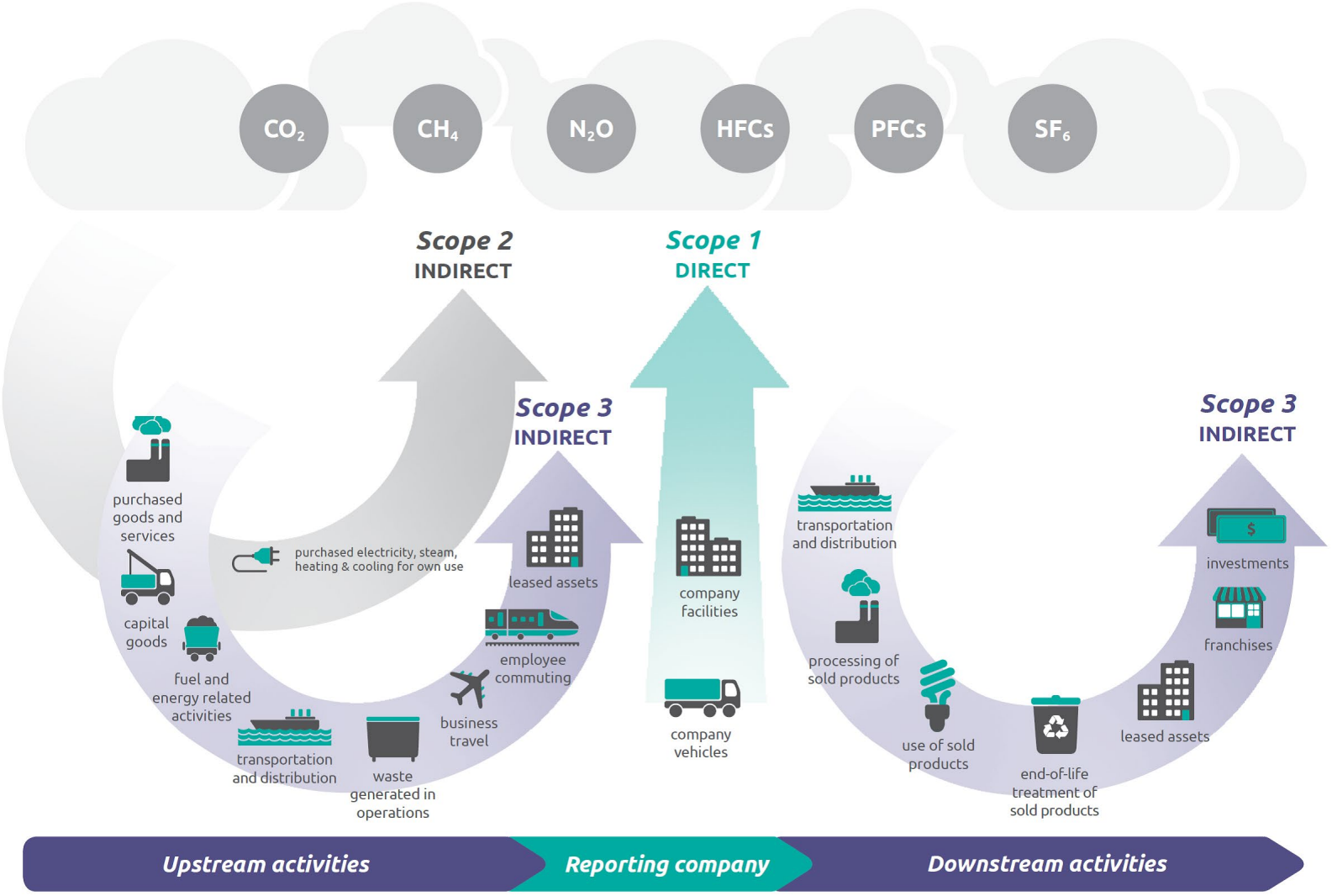
Commutes & Transport to and from UA-campusses

International travel staff & students

Paper Use by students (Universitas)

…

3 Scopes GHG Protocol



Scope: responsable and/or dependable

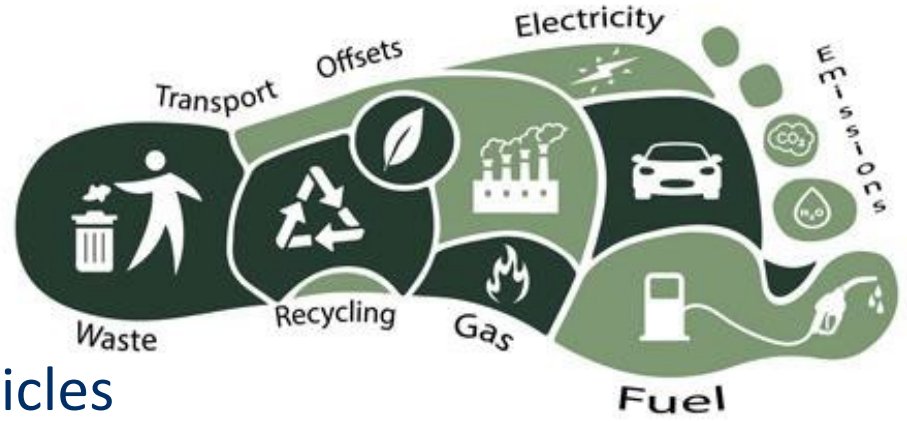
INCLUDED

- 5 sites CDE - CGB - CMI - CST - CMU (50%)
- The Beacon /The Brain Academy (m^2 only)
- Activities & Buildings for Research + Education + Services
- KOMIDA + KOVENTA (for UA)
- Internatinonaal 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

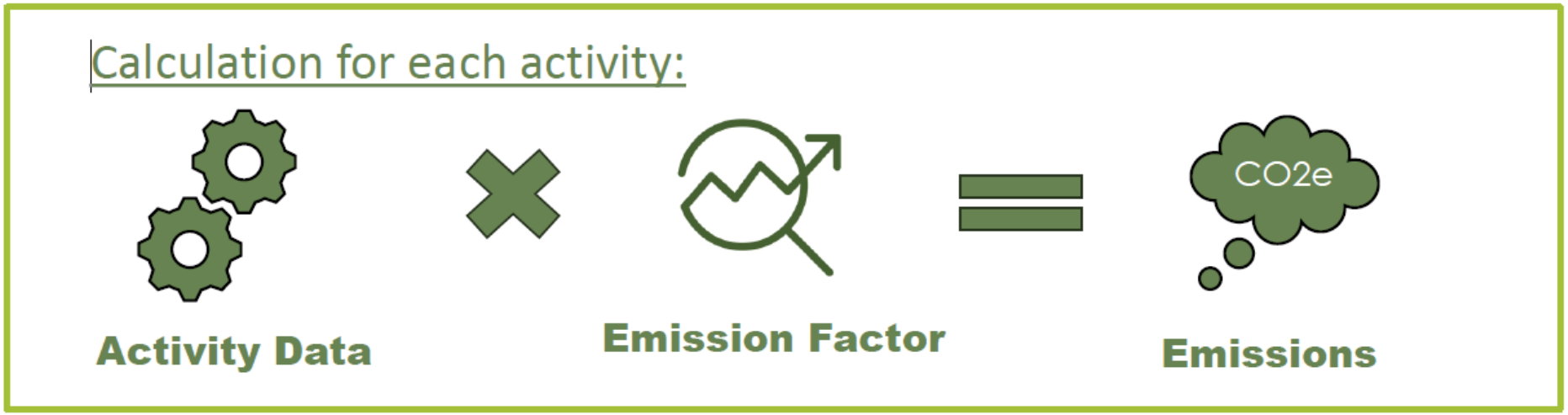


- **Energy:** natural gas, elektricity*, heating fuel, fuel vehicles
- **Non-energy:** leakage of cooling agents
- **Inputs:** purchased goods & services

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

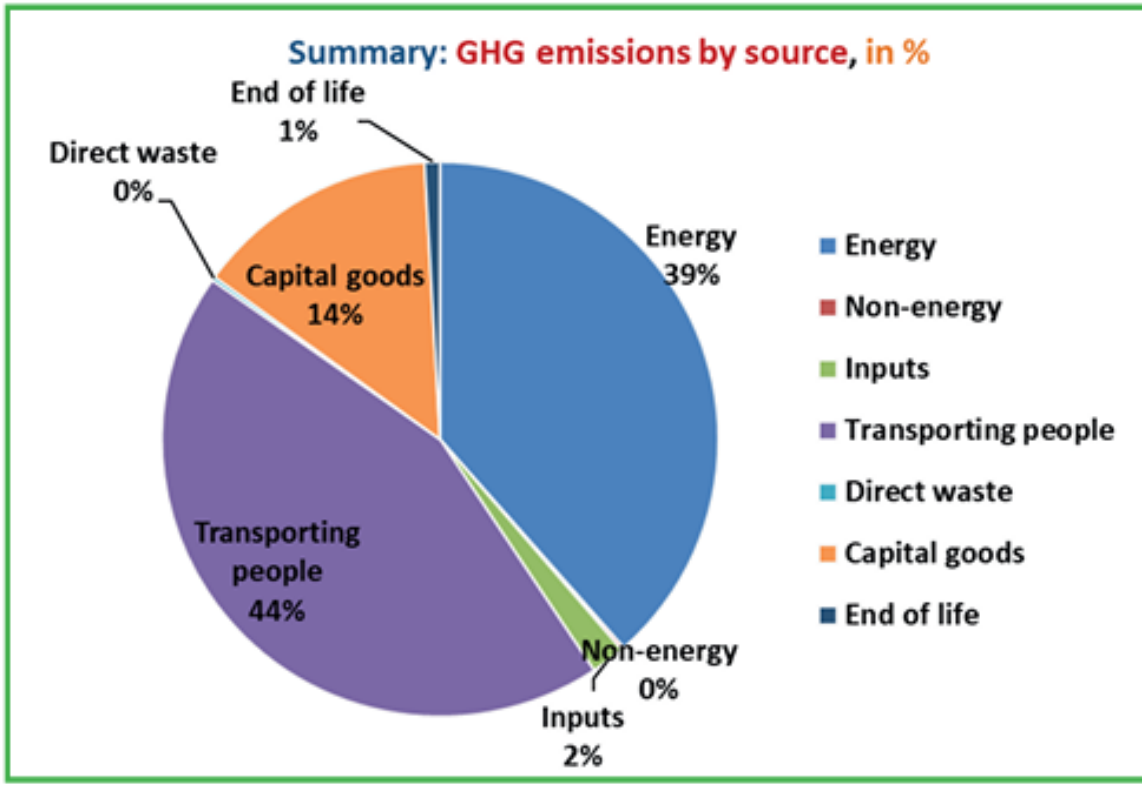


Data collection by UA

Bilan Carbone data™ V8.9_ENG

Results 2018

Overview	Total		Uncertainties	
	t CO_2eq	Share	t CO_2eq	%
Energy	16 134	39%	888	6%
Non-energy	75	0%	20	27%
Inputs	823	2%	287	35%
Transporting people	18 457	44%	2 665	14%
Direct waste	96	0%	26	27%
Capital goods	5 923	14%	2 189	37%
End of life	373	1%	101	27%
Total	41 882	100%	3 574	9%



Top 3

Energy
Transporting people
Capital goods

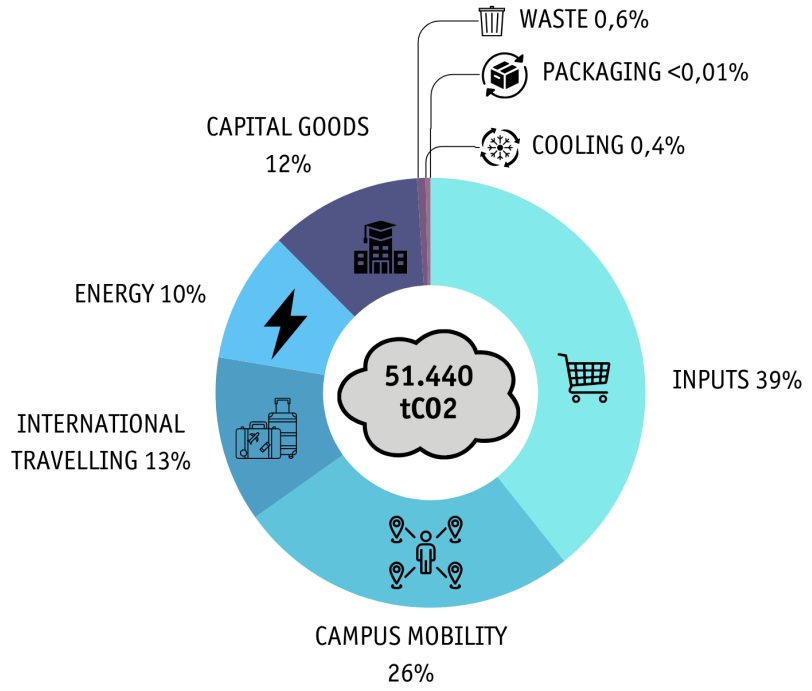
Focus on Energy & Mobility

160 million km car
2100 people in Belgium
1,7 million trees

Results 2024

Overview	Total t CO2e	Total Share	Uncertainties t CO2e	Uncertainties %
Energy 1	5.065	10%	271	5%
Non-energy 1	186	0,4%	47	25%
Inputs - goods and materials	20.130	39%	8.110	43%
Future packaging	4	0,008%	1	12%
Transporting people	19.631	38%	4.498	25%
Direct wastes	326	0,6%	45	14%
Capital goods	6.098	12%	2.251	36%
	51.440	100%	15.223	19%

Share of greenhouse gas emissions per source in 2024

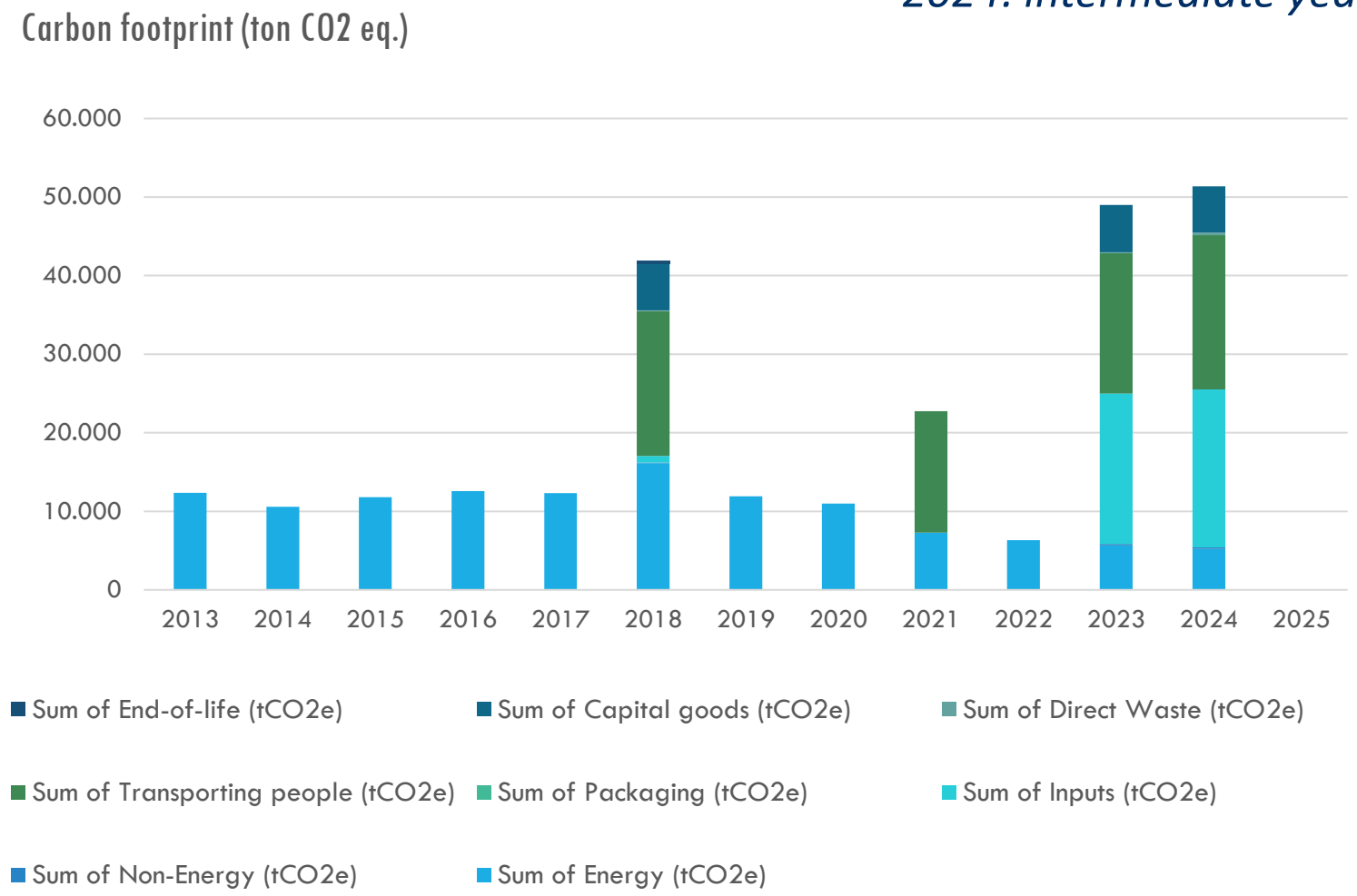


Top 4

Inputs: new topic, (very) high uncertainty
Transporting people
Capital goods
Energy

UA 2018-2024

2018: base year
2021: Energy & mobility only
2023: full footprint
2024: intermediate year



Changes

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

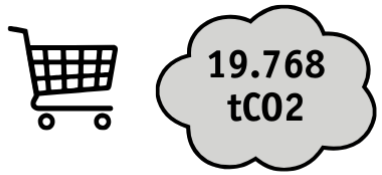
2024 vs 2023

+1.000 tCO2e AIR travel from international students added

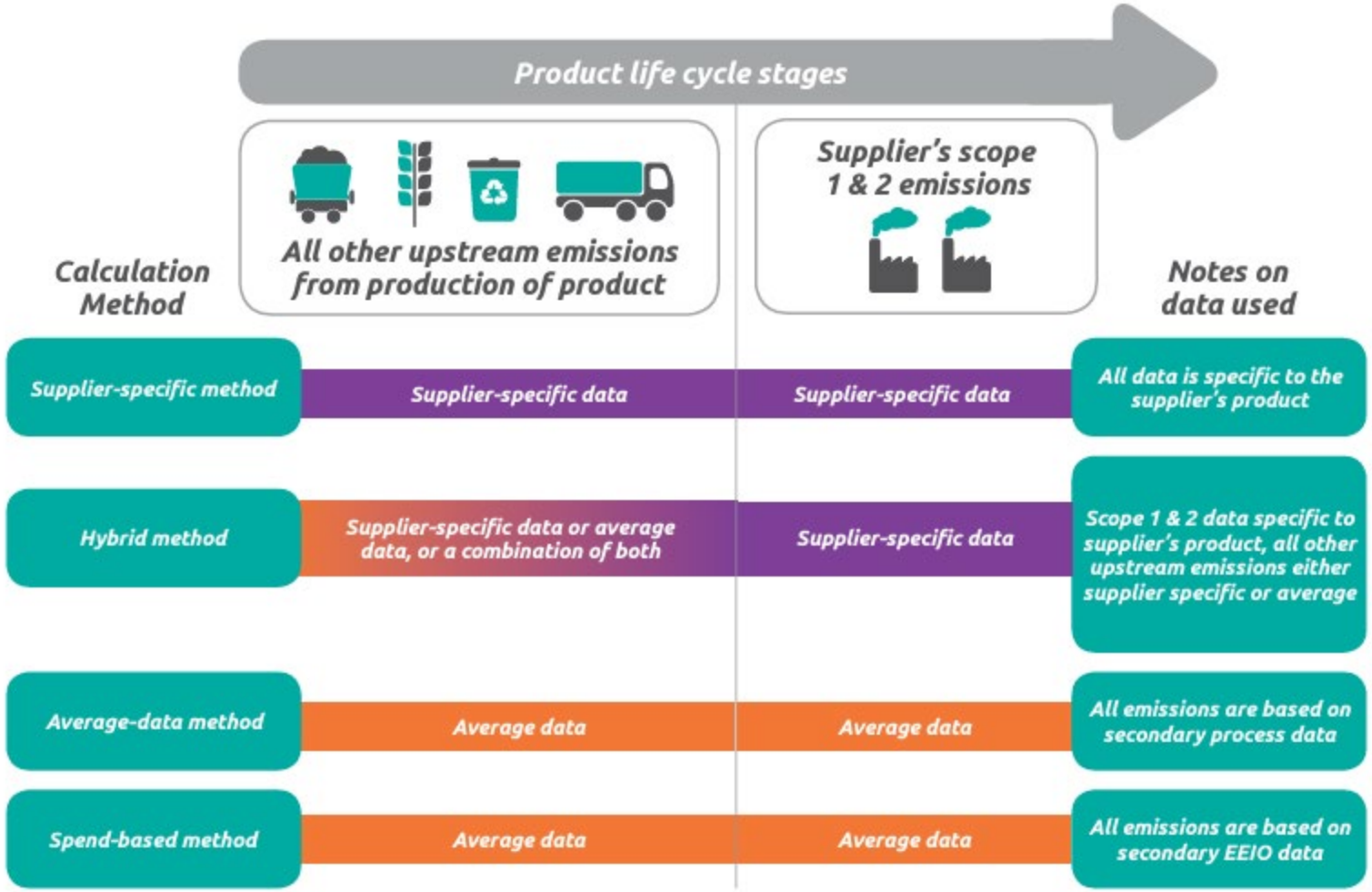
+ 200 tCO2e waste correction in calculation)

Inputs (39%)

Selectie uit GL ADFIN 2024: 56 M€



Spend-based …



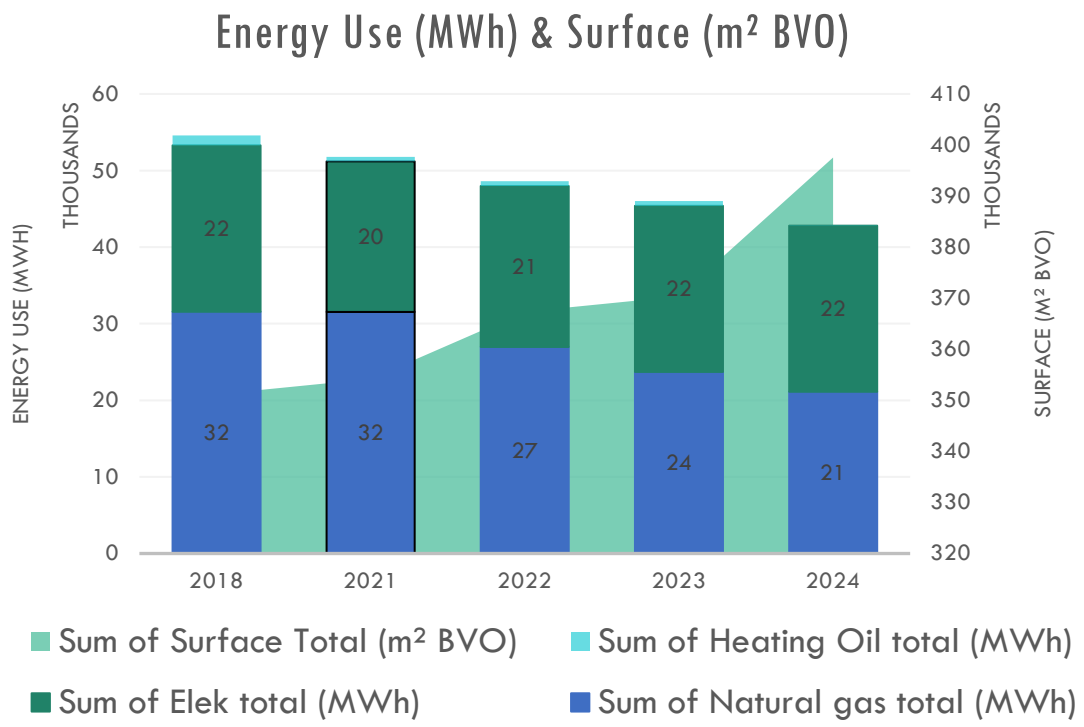
Data quality

GHG-Protocol scope 3 calculation guidance link

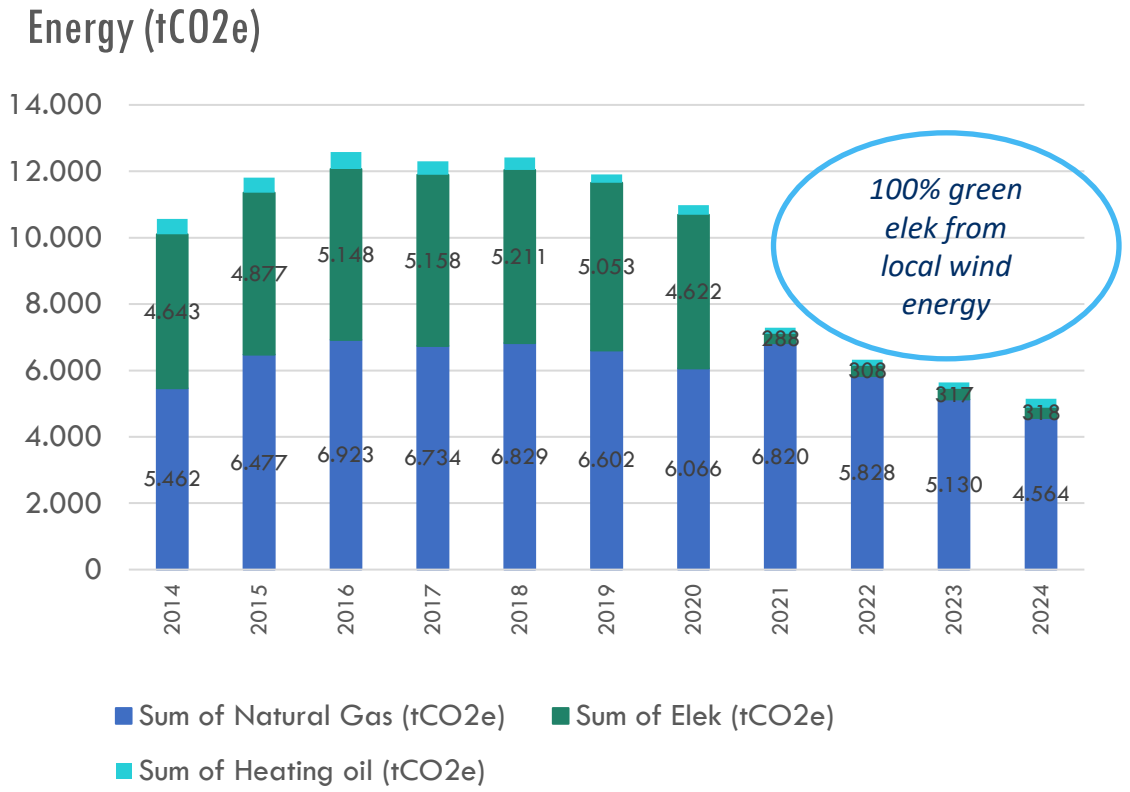
Energy (11%)

Aug 2022: peak energy prices

Evolution MWh

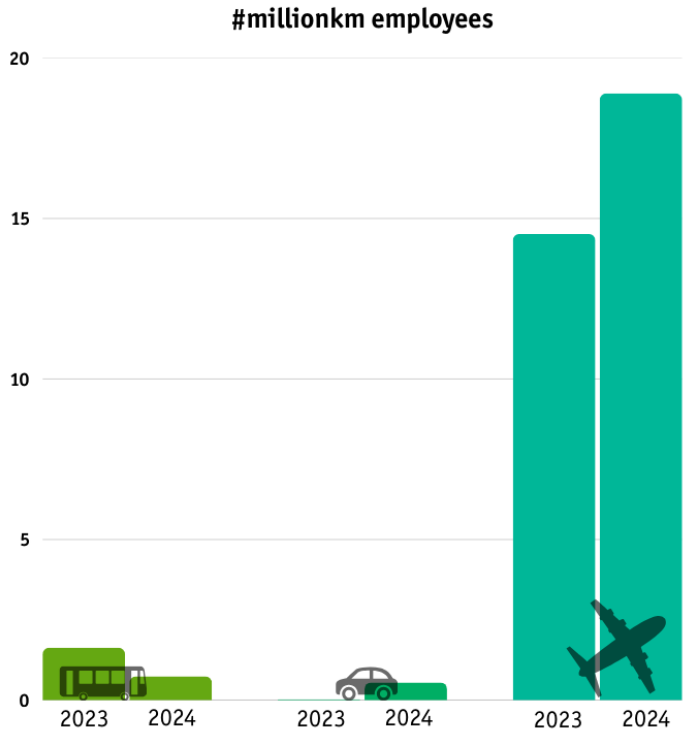


Evolution tCO2e

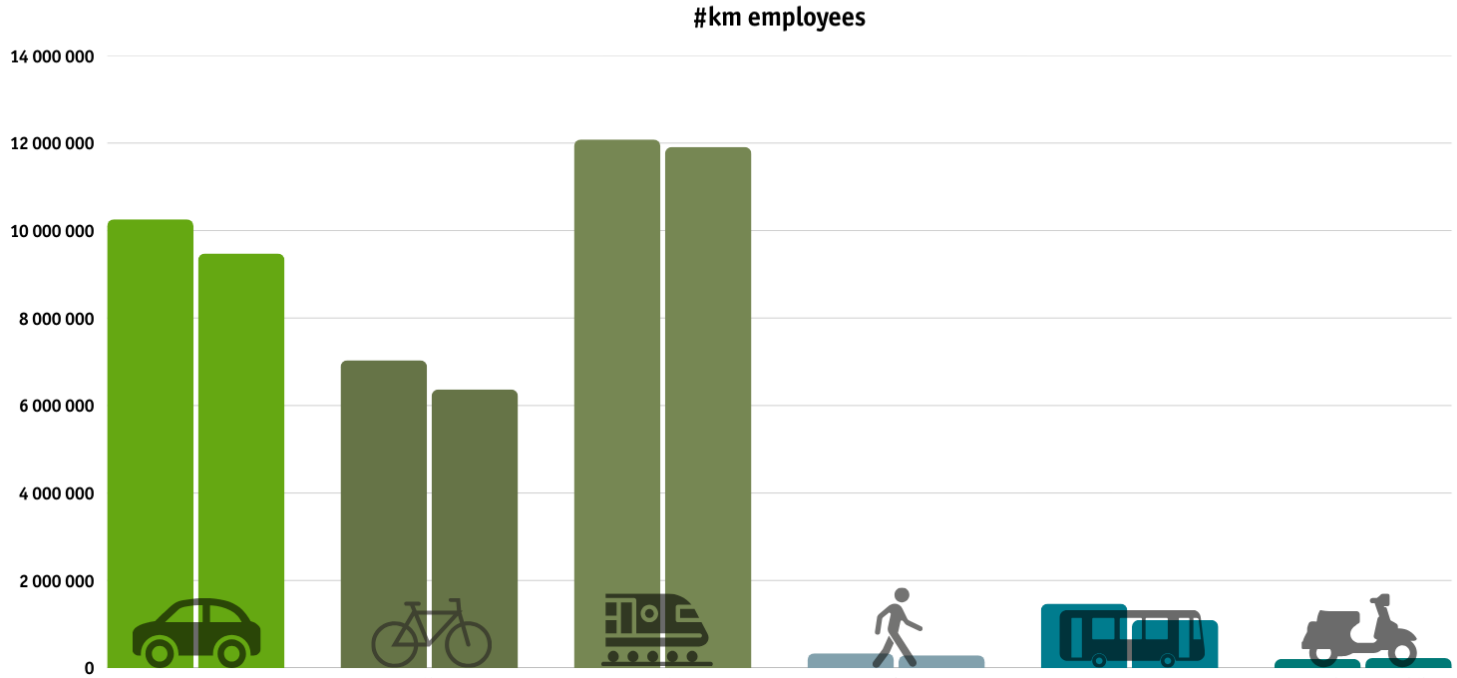


Transporting people (38%)

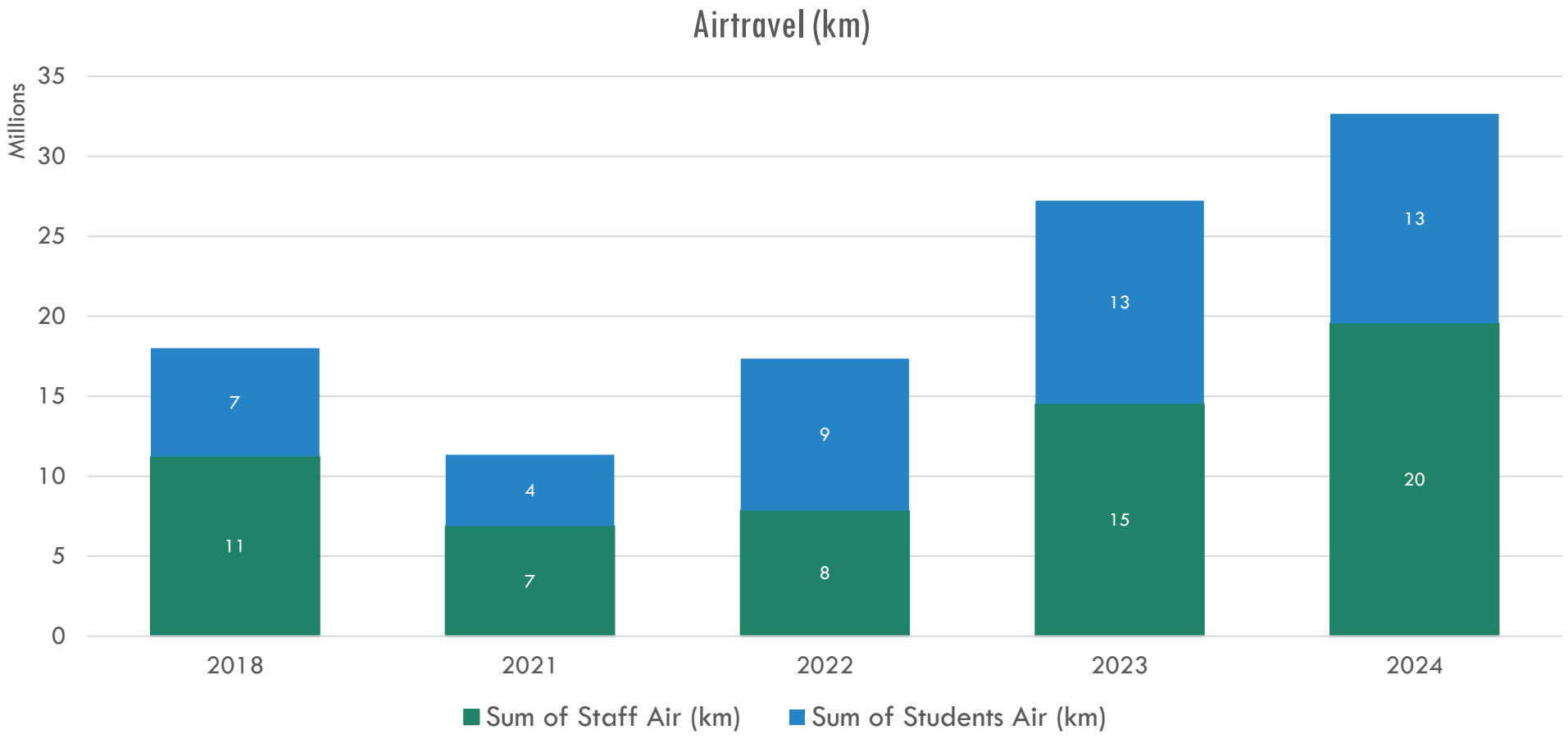
EVOLUTION OF BUSINESS TRAVEL



EVOLUTION OF COMMUTING

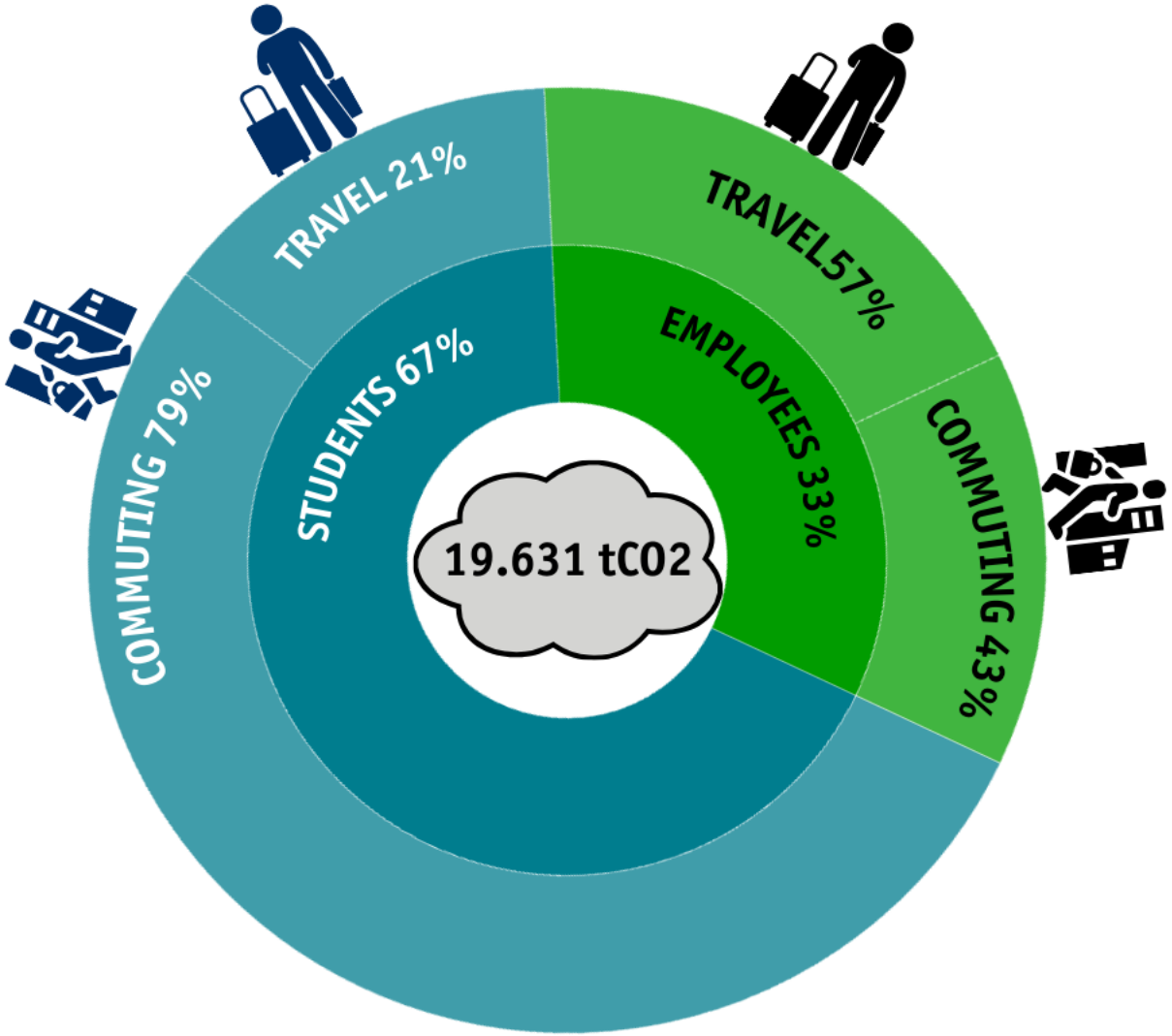


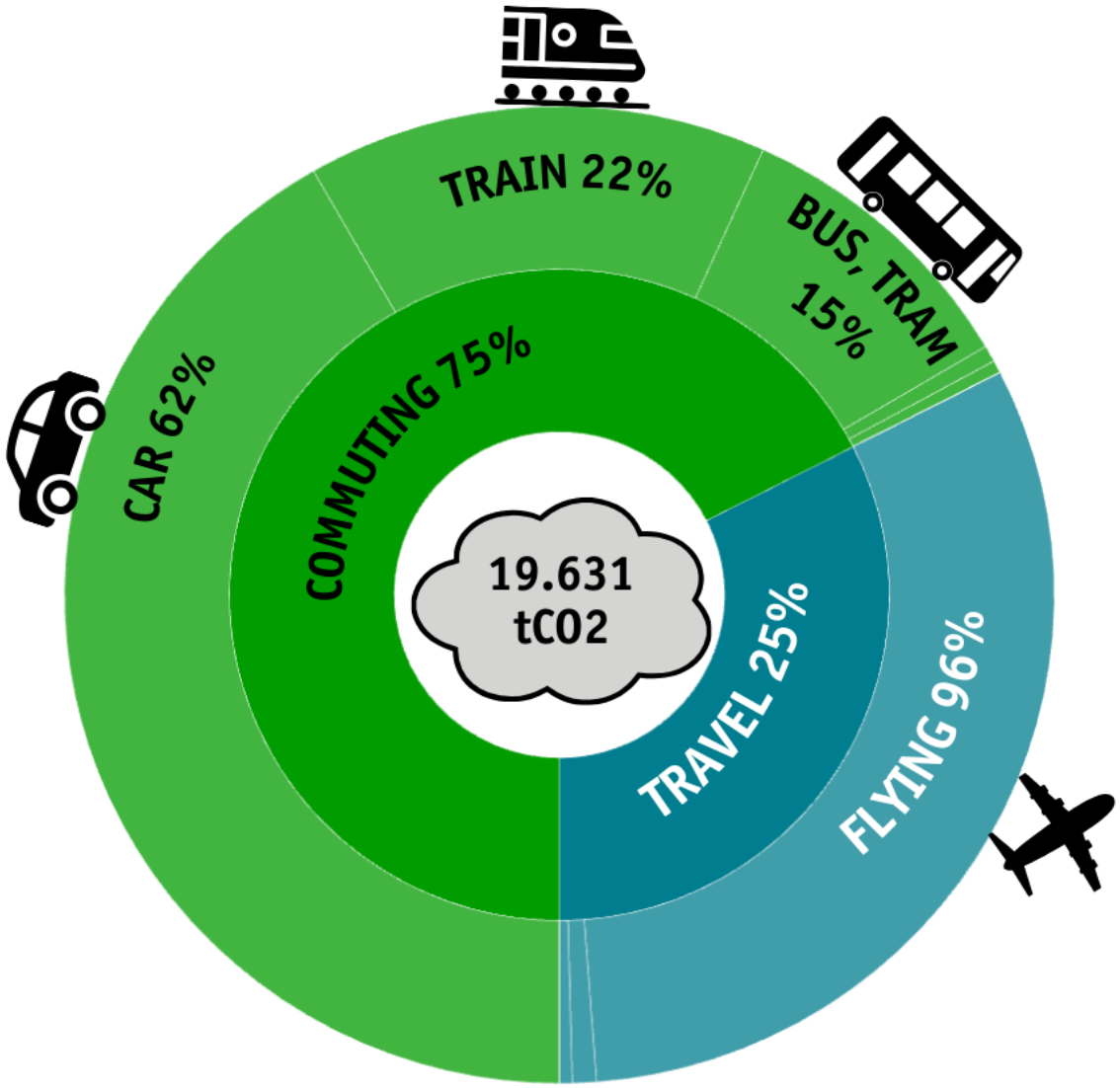
International travel by AIR



STAFF: business trips
STUDENTS: ASWU + Erasmus in & out + diploma students (inlcuded since 2024)

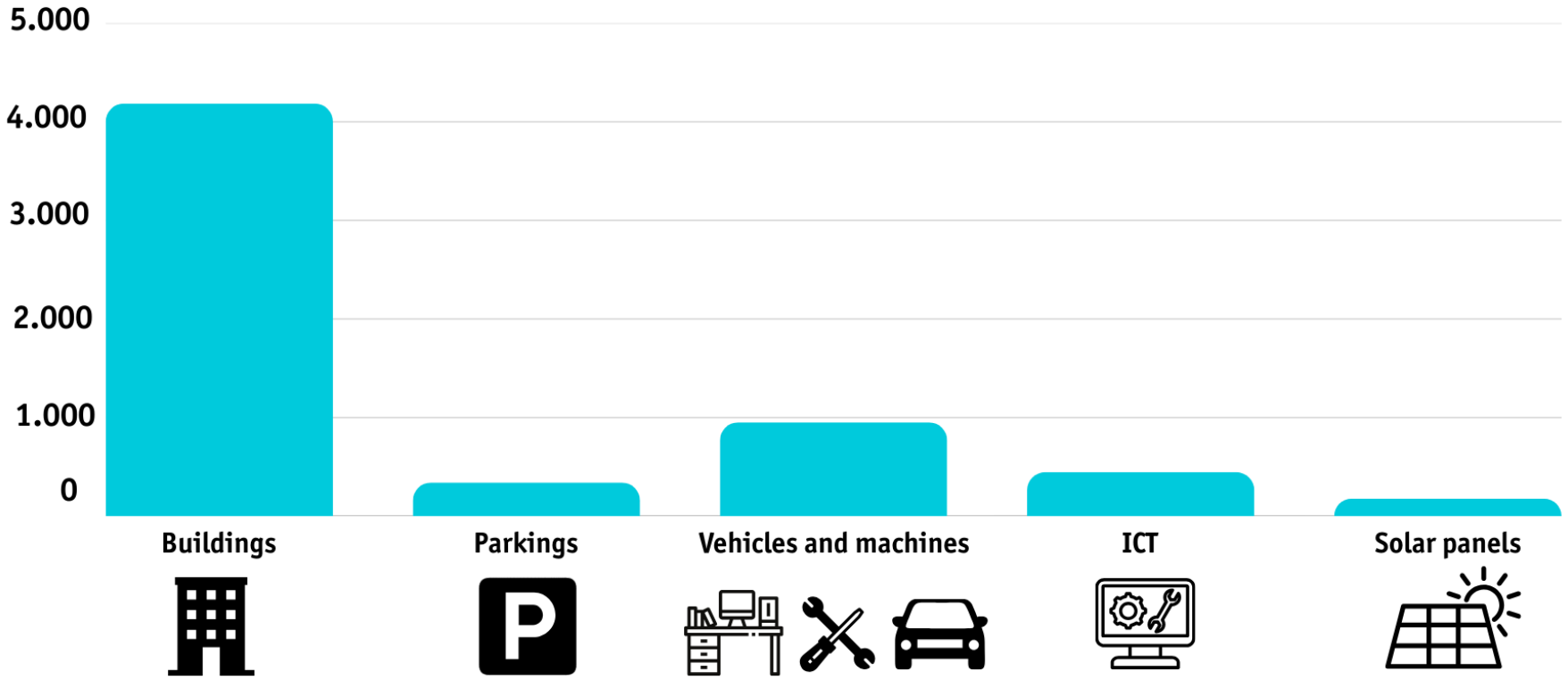
Transporting people (38%)





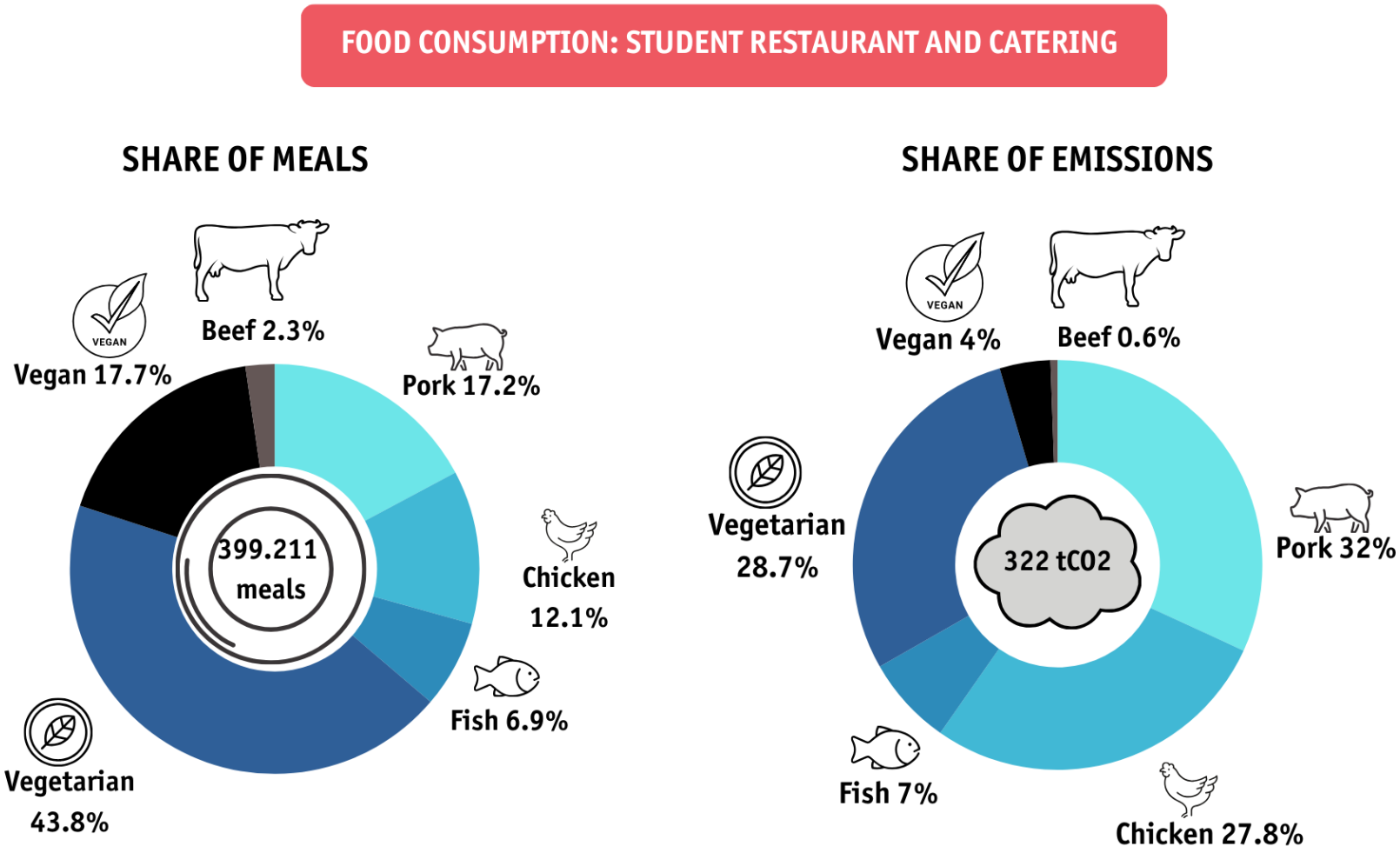
Capital Goods (12%)

CAPITAL GOODS EMISSIONS in tCO2

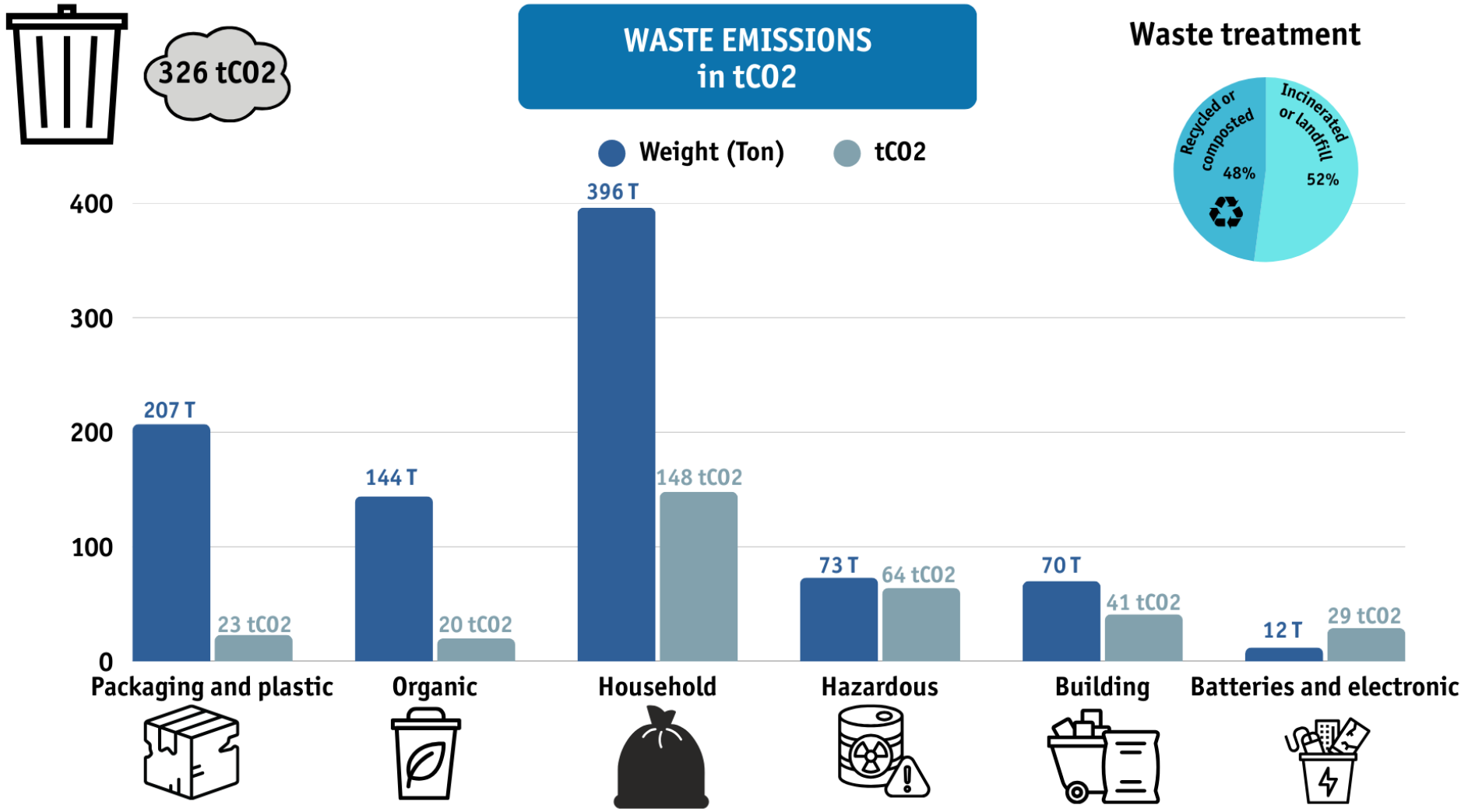


FOOD (0,6%)

Komida & plant based: 72 tCO2e avoided in 2023
(if all meals & sandwiches were with porc)



Direct Waste (0,6%)



Changes 2024 vs 2023

- **WASTE**
  - RA & PMD (SGS & Stad) underestimated in 2023. Brought to 52 pick ups/year instead of just 1 (= error) for 2024 (PMD: +40 tCO2e / RA: +214 tCO2e)
- **FOOD**
  - new! data for KOVENTA 2024 included (+ 75 tCO2e)
- **INT. TRAVEL STUDENTS**
  - new! Diplomastudenten IOB included (+1.214 in #, +ca. 1.000 tCO2e)
- **CAPITAL GOODS**:
  - new! ICT data ontvangen voor desktops/laptops in central beheer
- **INPUTS**
  - new! na oplevering masters thesis on Chems & labproducts GL (in k€)
    - 50/50 chems/lab equipment ➔ 48/42/10 consumables/chems/equipment (-200 tCO2e)
    - EF chems 1.600 kg CO2e/k€ ➔ lager (table 11 thesis)

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