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Report on the ECA's 2025 Carbon Footprint

Calculation of the ECA's carbon footprint (Bilan Carbone® method)

21 SOLUTIONS

BC BILAN CARBONE®

2025 ECA Carbon Footprint Report

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2 Context of study

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5 Results by scope

2025 ECA Carbon Footprint Report

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1 Executive summary

2025

~ 985 Full-time equivalent

Three buildings

BC BILAN CARBONE®

7 433 tCO_2e

Total 2025 GHG emissions

7.55 tCO_2e/FTE[1] (total uncertainties 9 %)

33 %

"Passenger transport" was the largest source of emissions

-31 %

Overall decrease in emissions since 2014

[1] Full-time equivalent

2025 ECA Carbon Footprint Report

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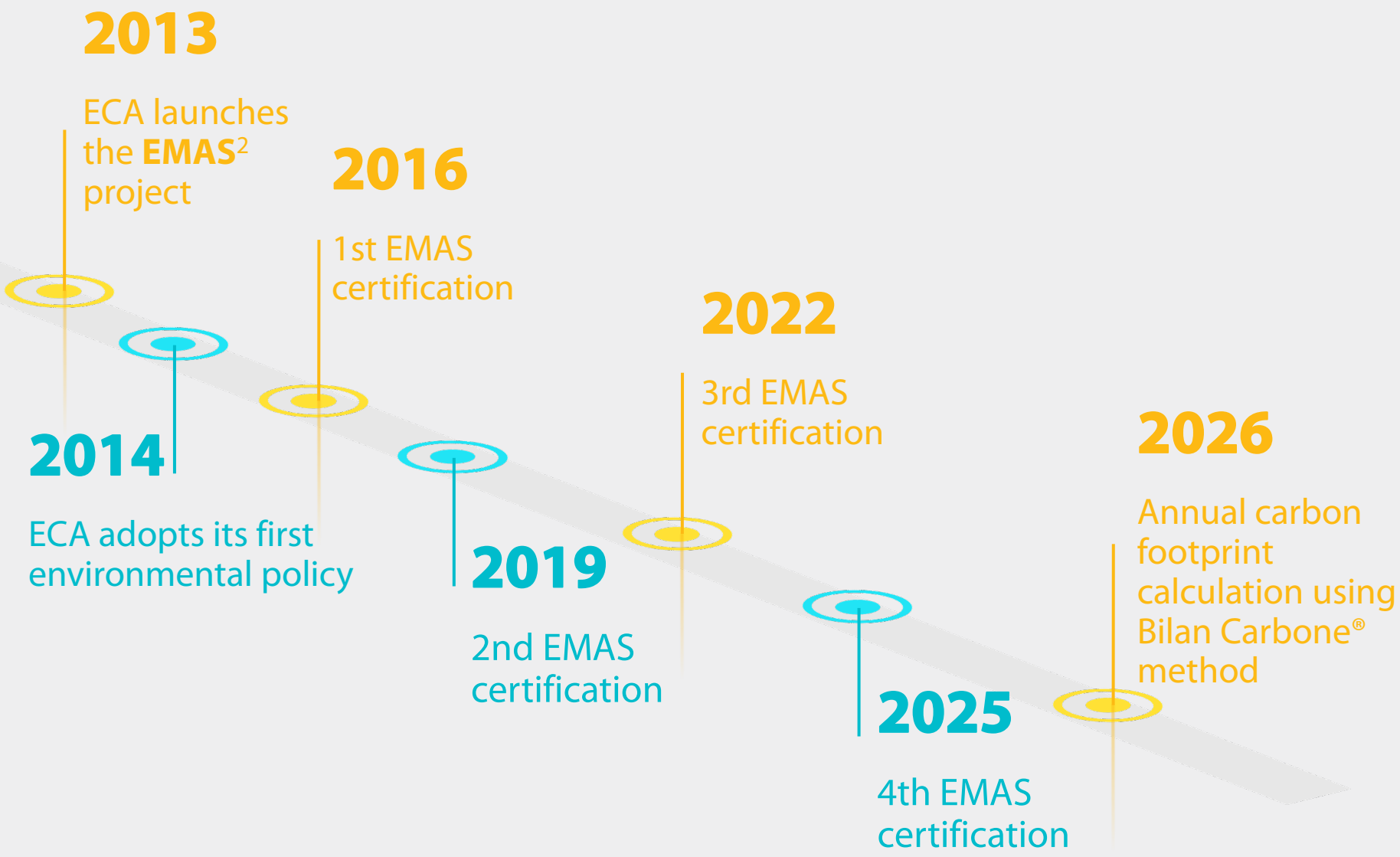
2 Context of the study



[2] Eco-Management and Audit Scheme

2 Context of the study

Main changes for 2025 carbon footprint assessment

The objective of the study was to provide a **high-quality estimate of the greenhouse gas emissions** produced by the European Court of Auditors, **using the Bilan Carbone® methodology**.

The main changes in relation to the 2024 carbon footprint assessment are listed below.

- The 2025 carbon footprint included comparisons with 2014, 2019 and 2024.
- The energy heating mix included more biomass in 2025 then in 2024 (91.6 % biomass and 8.4 % gas).
- The emission factor for electricity consumption was updated and is slightly higher for 2025, (0,212kg CO_2e/kWh) than for 2024 (0,187 kgCO_2e/kWh).
- Data on meals was more accurate in 2025, including the amounts purchased in kilograms for 25 categories of food and beverage (fish, beef, poultry, cheese, egg, fruits, vegetables, sugar, etc.).
- The teleworking rates were calculated using the number of self-declared staff on-site days. In 2025, the calculation of emissions relating to electricity consumption takes the worker's country of residence into account (Luxembourg, France, Belgium, Germany).
- The emission factors for monetary data were updated and mostly decreased. These were used for IT services, goods and services purchased.
- Data on commuting came from the survey conducted in early 2025.

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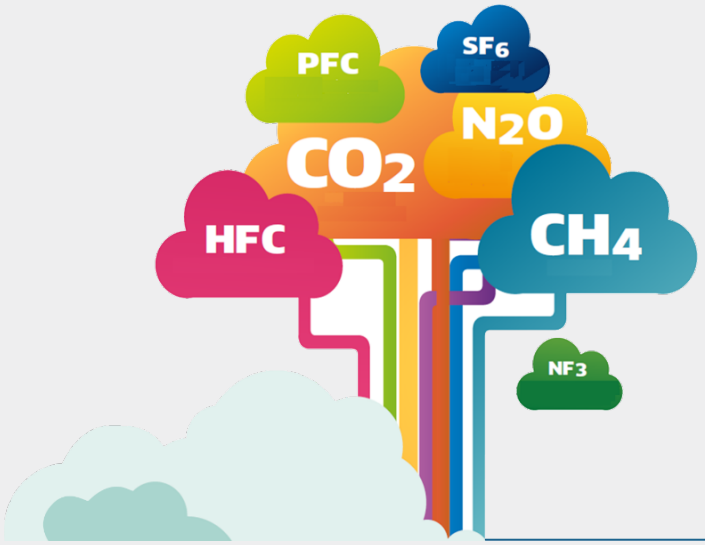
3 Overview of the Bilan Carbone® method

The Bilan Carbone® method was developed in 2004 by the French Environment and Energy Management Agency (ADEME) to quantify organisations' GHG emissions.

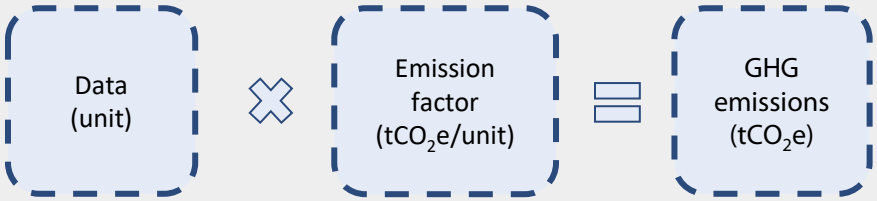
It is promoted by the "Association pour la transition Bas Carbone".



The method covers the following gases:

- ✓ Kyoto Protocol gases: CO_2, CH_4, N_2O, SF_6, NF_3, hydrofluorocarbons ($C_nH_mF_p$), perfluorocarbons (C_nF_{2n+2})
- ✓ CFCs
- ✓ water vapour emitted by planes in the stratosphere

The method multiplies each organisation's activity data by an emission factor, as it is not feasible to measure GHG emissions directly.



3 Overview of the Bilan Carbone® method

1 – Collect activity data

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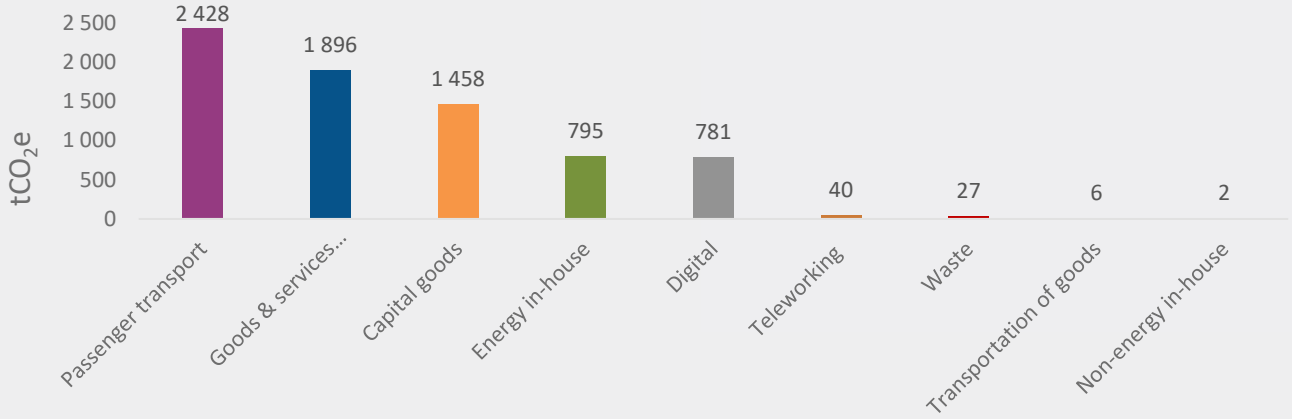
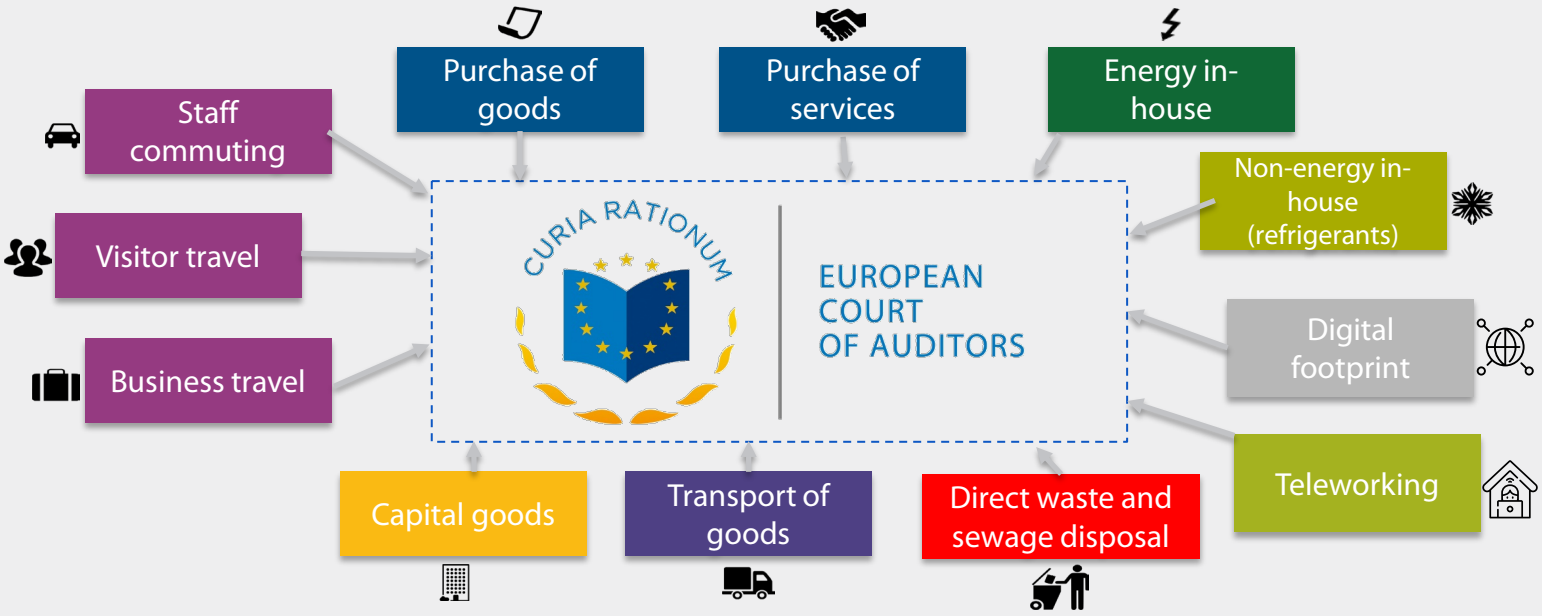
2- Use the emission factors from the Bilan Carbone® database

3 – Visualise and analyse the results



3 Overview of the Bilan Carbone® method

Operational scope of the Bilan Carbone® method in 2025



The ECA's carbon footprint includes direct and indirect GHG emissions (scopes 1, 2 and 3).

3 Overview of the Bilan Carbone® method

Temporal and organisational scope

Bilan Carbone® approach: operational control approach

Temporal scope: ECA activities in 2025

Organisational scope: three buildings in Luxembourg (K1, K2, K3)

Building	Area (m^2)	FTE[3]
K1	23 568	286.4
K2	19 359	224.3
K3	30 780	473.9

Updated 2025 data

Buildings include office space, basements, underground car parks, two cafeterias, a canteen, archives, a library, walkways between buildings, and other amenities.

Activities of ECA officials and other staff: ~**985** full-time equivalent employees (FTE) as at end 2025

[3] Unassigned FTEs were equally distributed between the three buildings.

2025 ECA Carbon Footprint Report

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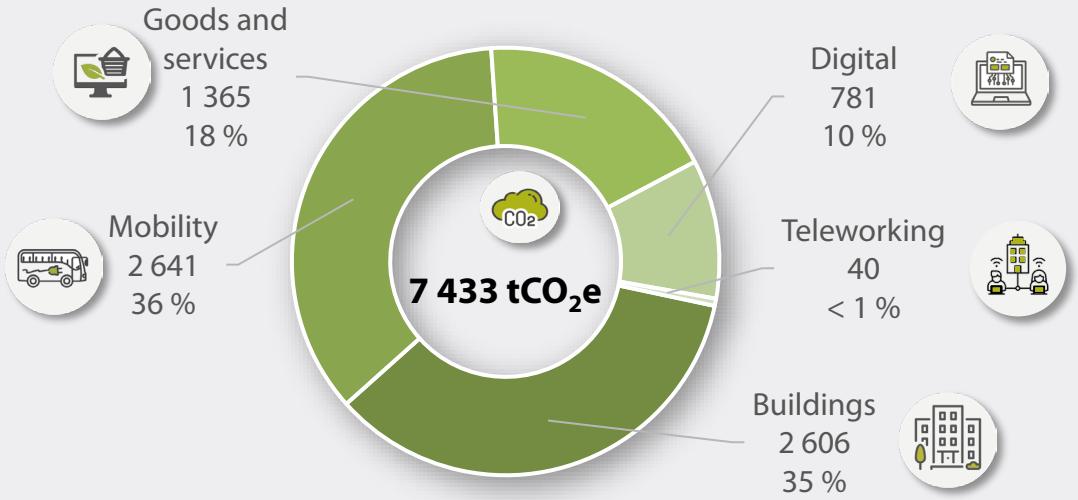
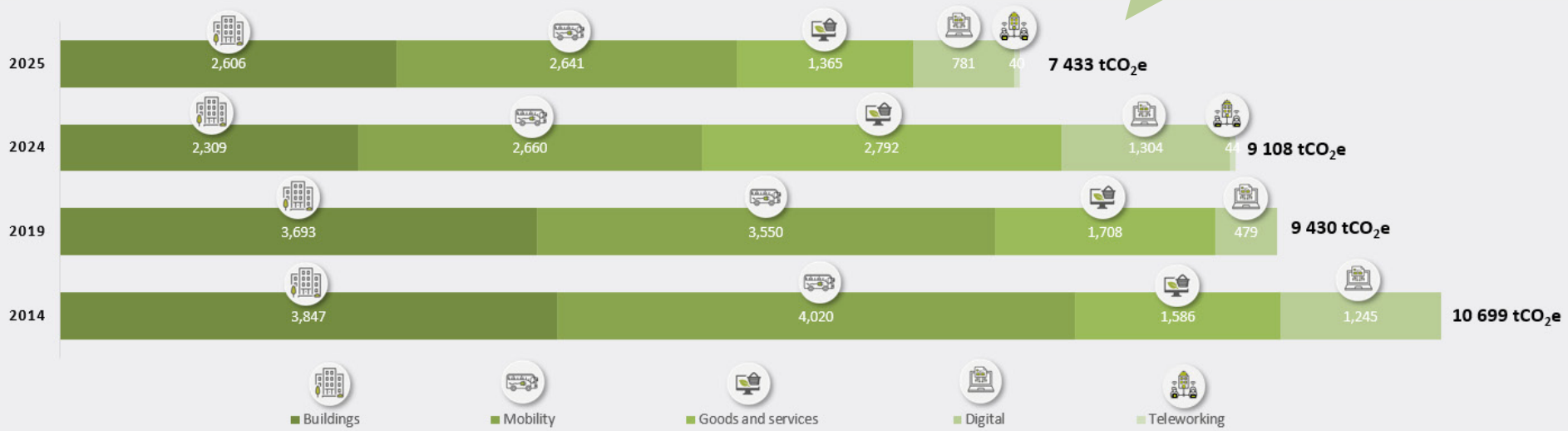
4 Overall results

2025 emissions by main category[4]



Emissions related to buildings and mobility have been gradually reduced since 2014



[4] In this slide, the results are grouped by main category to aid understanding. The categories are not linked to those used in the other slides or the Bilan Carbone® categories.

4 Overall results

Total emissions by building[5]

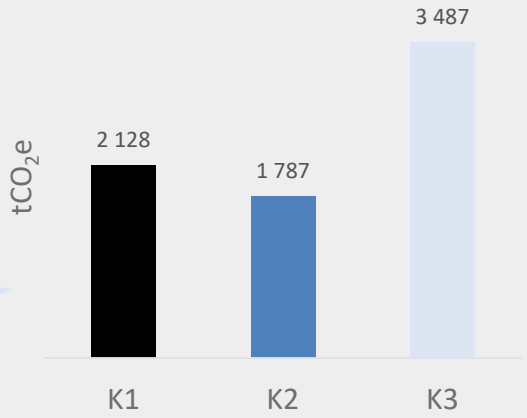
Total emissions were divided between the buildings according to staff headcount.

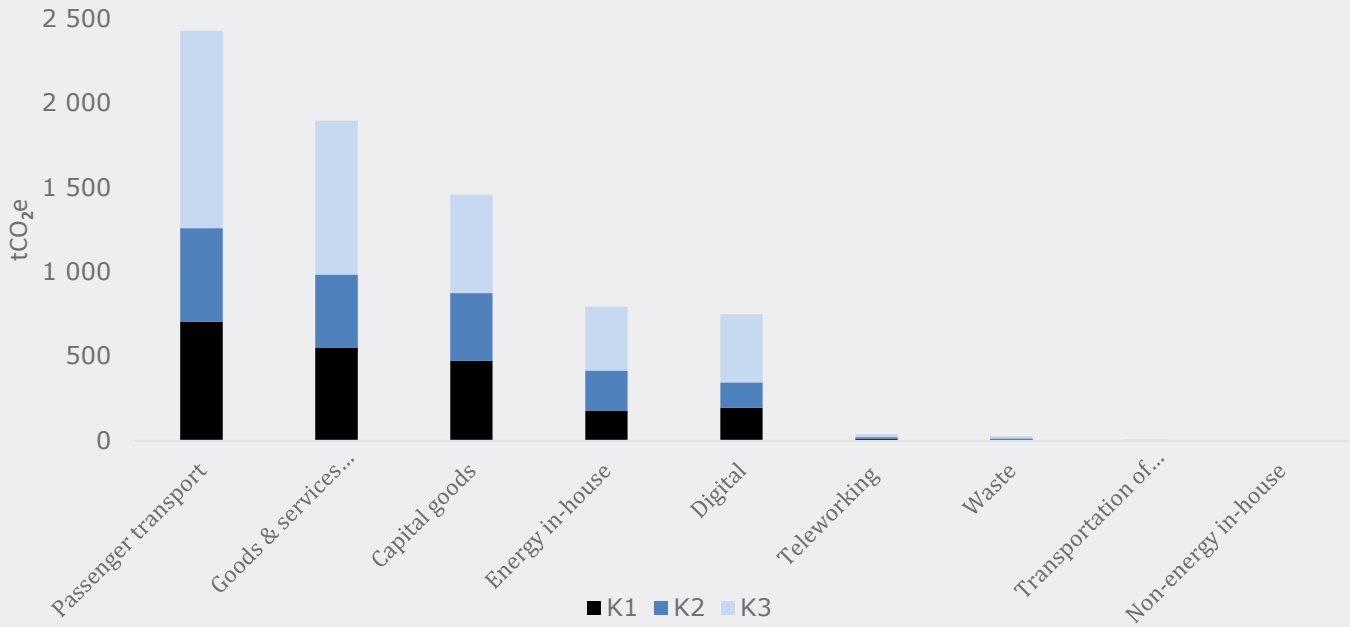
Building	FTE	Share (%)
K1	286.4	29 %
K2	224.3	23 %
K3	473.9	48 %
Total	**984.6**	**100 %**

Building	tCO2e
K1	2 128
K2	1 748
K3	3 487
TOTAL	**7 402**

K3 houses the most staff and produces the largest share of emissions

Total GHG emissions by building



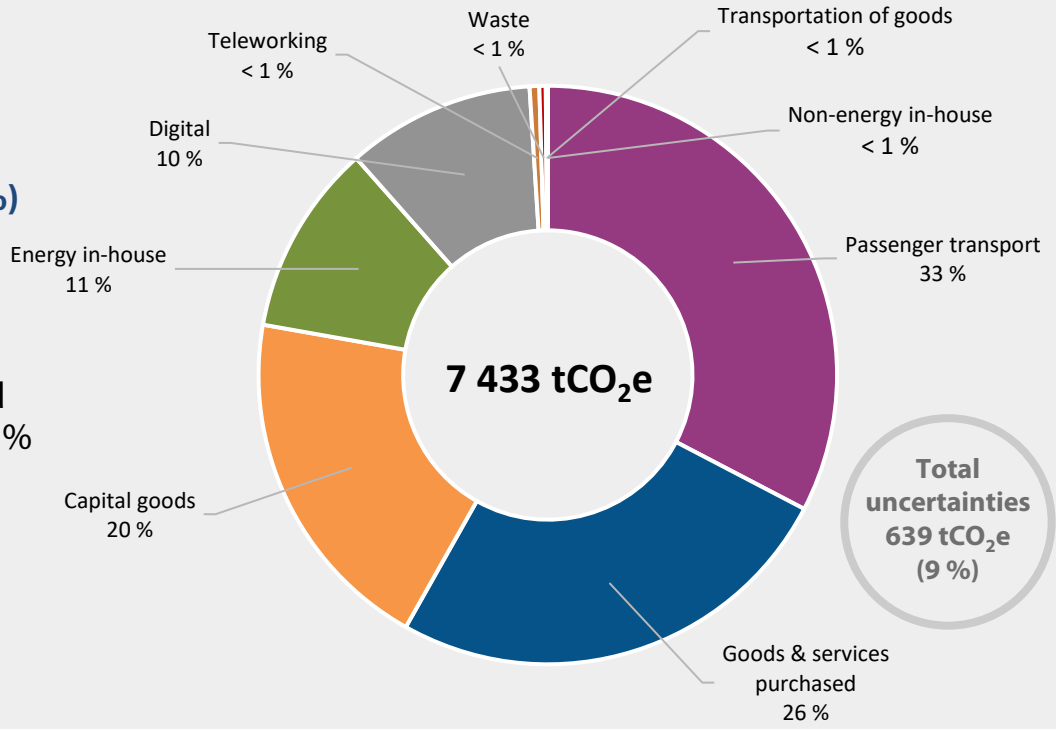


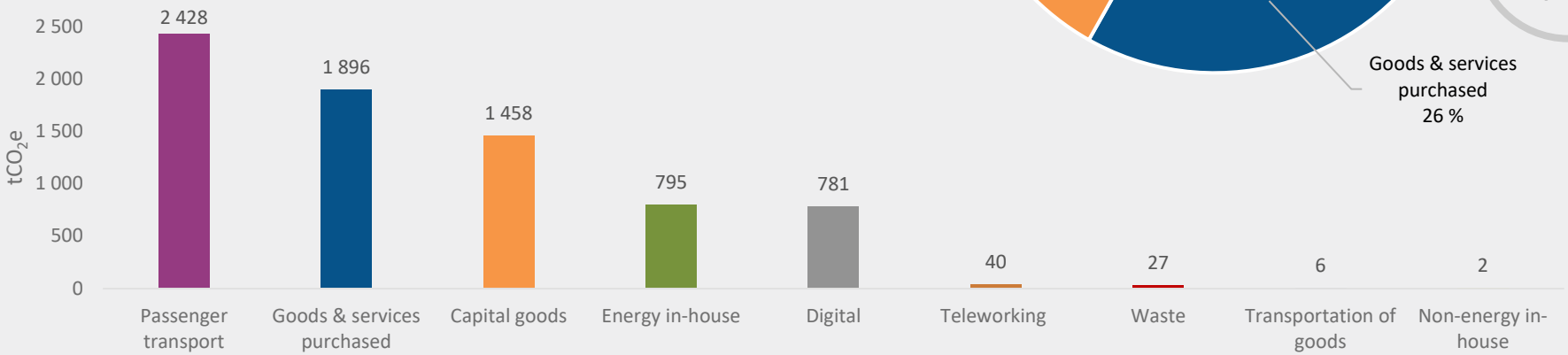
[5] Emissions from external data centre in Betzdorf (31 tCO_2e) not included in this slide.

4 Overall results

2025 Bilan Carbone® results[6]

- ✓ **Total GHG emissions 7 433 tCO_2e**
- ✓ Largest sources of emissions:
  - **passenger transport (32.7 %)**
  - **goods and services purchased (25.5 %)**
  - **capital goods (19.6 %)**
  - **energy in-house (10.7 %)**
  - **digital (10.5 %)**
- ✓ non-energy in-house, waste, teleworking and transport of goods made up the remaining 1 %





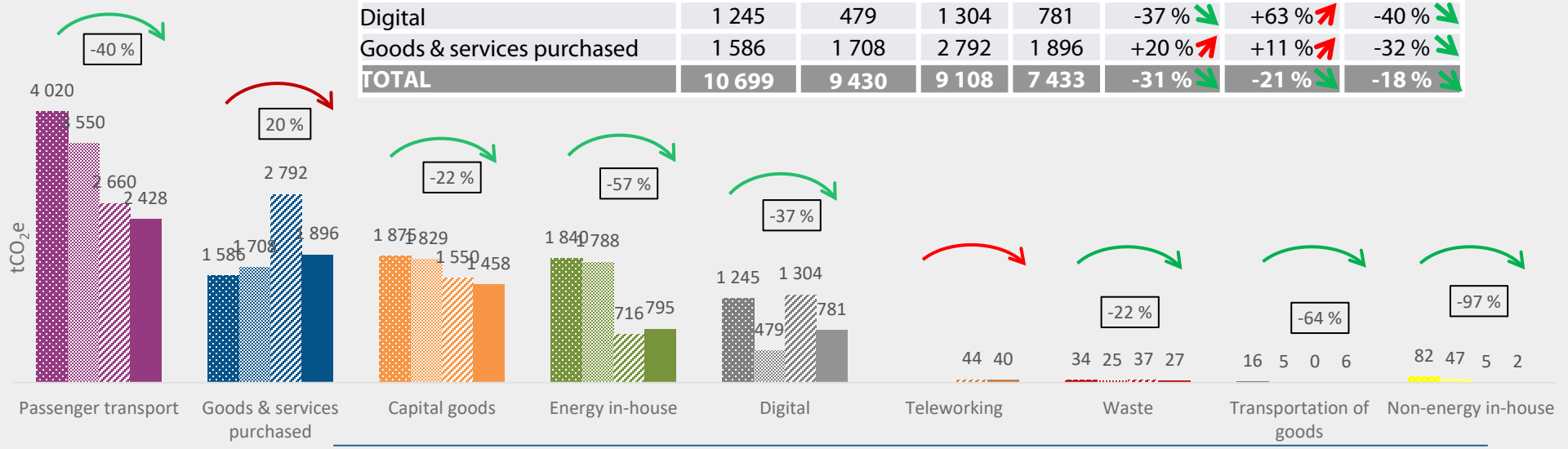
[6] In this slide and the next, the results are presented using the Bilan Carbone® categories.

4 Overall results

Comparison with previous years

Overall, emissions have decreased by 18 % from 2024 to 2025 and by 31 % since 2014

Emission sources tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Capital goods	1 875	1 829	1 550	1 458	-22 % ↘	-20 % ↘	-6 % ↘
Energy in-house	1 840	1 788	716	795	-57 % ↘	-56 % ↘	+11 % ↗
Non-energy in-house	82	47	5	5	-97 % ↘	-95 % ↘	-54 % ↘
Passenger transport	4 020	3 550	2 660[7]	2 428	-40 % ↘	-32 % ↘	-9 % ↘
Transportation of goods	16	5	0	6	-64 % ↘	+17 % ↗	+4 615 % ↗
Waste	34	25	37	27	-22 % ↘	+8 % ↗	-29 % ↘
Teleworking	0	0	44	40	/	/	-9 % ↘
Digital	1 245	479	1 304	781	-37 % ↘	+63 % ↗	-40 % ↘
Goods & services purchased	1 586	1 708	2 792	1 896	+20 % ↗	+11 % ↗	-32 % ↘
TOTAL	**10 699**	**9 430**	**9 108**	**7 433**	**-31 % ↘**	**-21 % ↘**	**-18 % ↘**



[7] New visitor travel hypothesis since 2024: 50 % of visitor travel emissions are allocated, as most visitors do not only visit the ECA.

2025 ECA Carbon Footprint Report

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5 Results by scope

Business travel

Data and assumptions

- ✓ Total kilometres by mode of transport.
- ✓ Car: private, official and rented cars. Fully electric cars are now included under GHG emissions from business travel.
- ✓ Air: distinction between short-haul and long-haul flights (threshold 5 000 km).

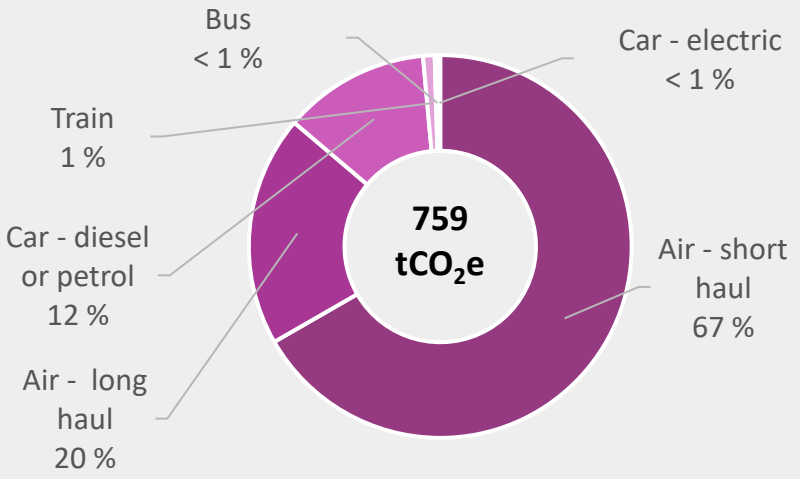
Results

Business travel	tCO_2e	Km
Air – short-haul	506	1 956 122
Air – long-haul	148	972 890
Car – diesel or petrol	94	366 052
Train	7	186 295
Bus	3	15 964
Car – electric	1	11 541
TOTAL	**759**	**3 508 874**

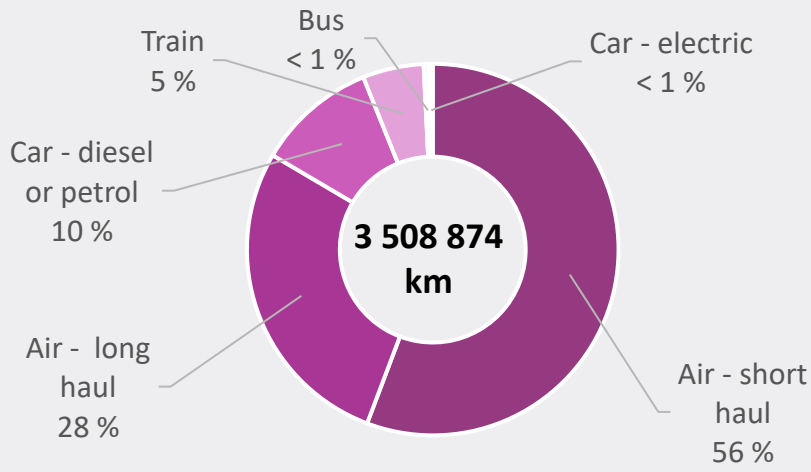
Air travel remains the main source of emissions, partly because Luxembourg is poorly served by rail.

Passenger transport

GHG emissions from business travel



Kilometres travelled for business travel



5 Results by scope

Goods & services purchased

Goods & services purchased (26 %)

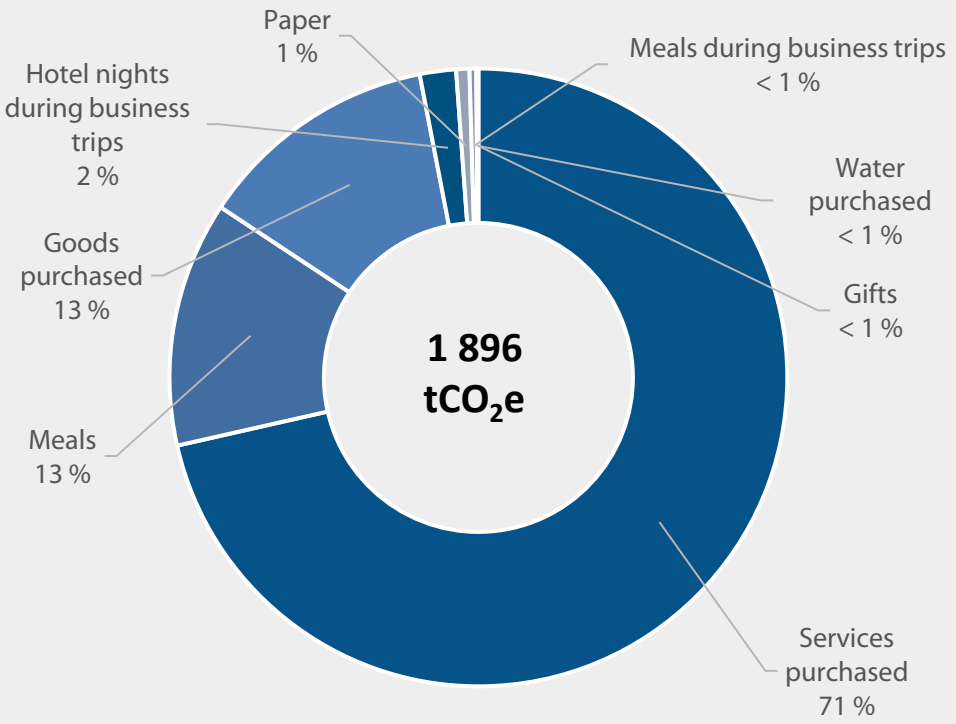
Data and assumptions

- ✓ **Services:** (go to slide)
- ✓ **Goods:** (go to slide)
- ✓ **Water purchased:** total water consumed in 2025
- ✓ **Gifts:** number and type of gifts converted into weight by type of material

Results

Type of goods or services	tCO_2e
Services purchased	1 355
Meals	243
Goods purchased	240
Hotel nights during business trips	36
Paper	13
Meals during business trips	6.7
Water purchased	1.1
Gifts	0.9
TOTAL	**1 896**

Total GHG emissions from goods and services purchased



5 Results by scope

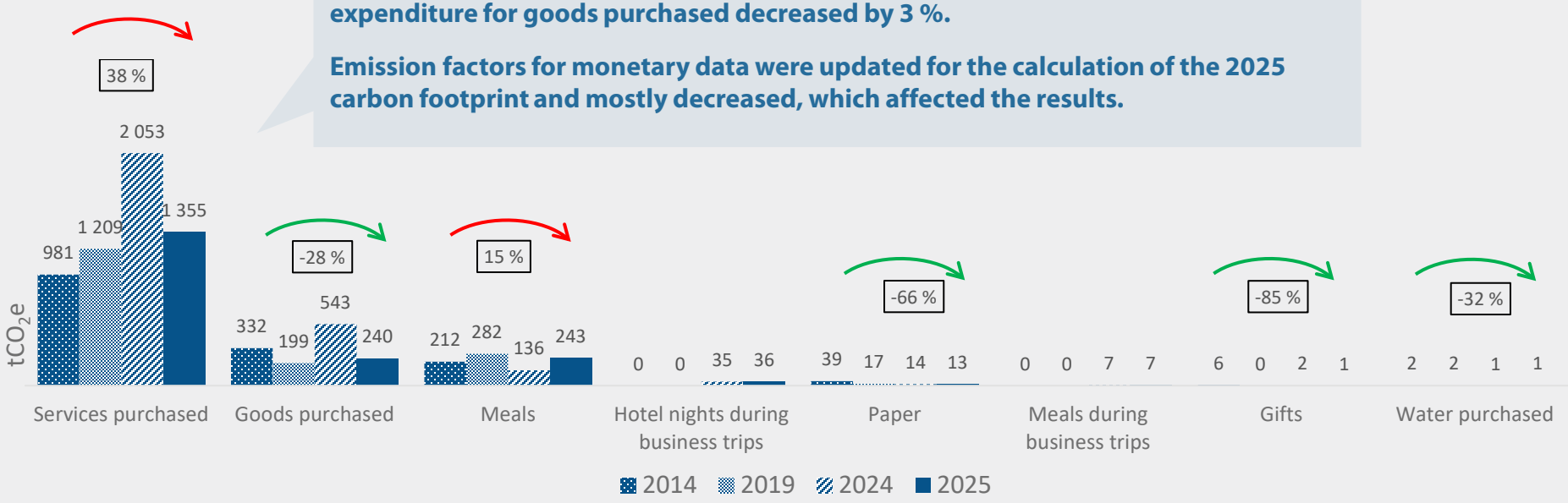
Goods & services purchased

Comparison with previous years

GHG emissions (tCO_2e)	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Total goods and services purchased	**1 586**	**1 708**	**2 792**	**1 896**	**+20 %** ↗	**+11 %** ↗	**-32 %** ↘

Between 2024 and 2025: expenditure for services purchased increased by 7 %, and expenditure for goods purchased decreased by 3 %.

Emission factors for monetary data were updated for the calculation of the 2025 carbon footprint and mostly decreased, which affected the results.



5 Results by scope

Services

Data and assumptions

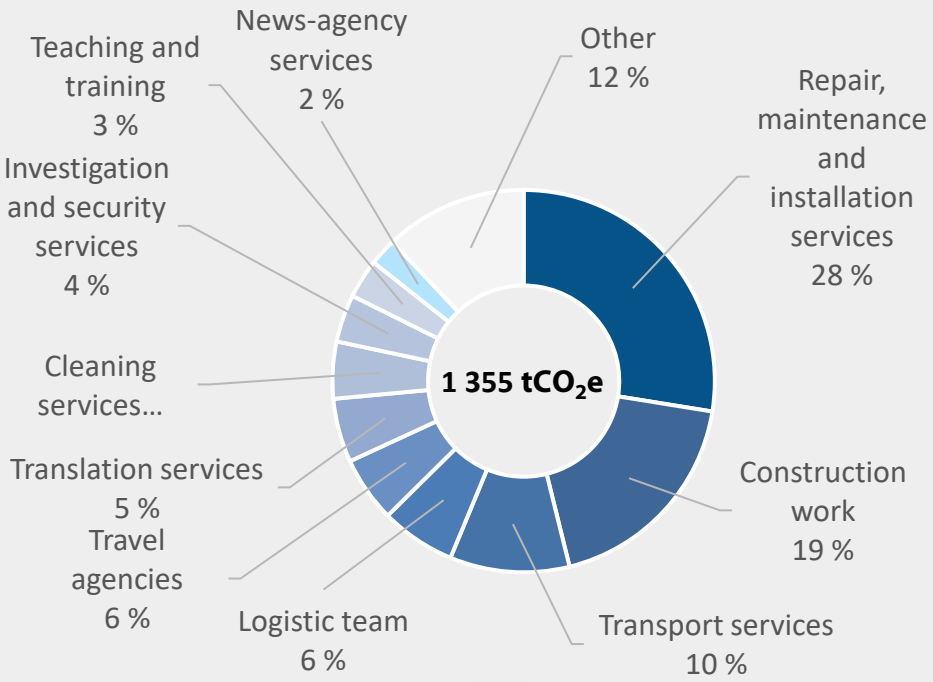
✓ Data provided: services purchased by category type and amount in euros.

Results

Type of service	tCO_2e
Repair, maintenance and installation services	358
Construction work	242
Transport services	131
Logistics team	82
Travel agencies	72
Translation services	70
Cleaning services	63
Library, archives, museums and other cultural services.	56
Investigation and security services	52
Teaching and training	43
News-agency services	30
Other	156
TOTAL	**1 355**

Goods & services purchased

GHG emissions from services purchased



The "Other" category includes architect services, engineering, construction & related consultancy, events and protocol, recruitment and provision of personnel services, testing, inspection, analysis, monitoring & control services, legal, accounting, auditing, business & management services, Insurance & pension services, hotel and restaurant services, interpreting services, etc.

5 Results by scope

Goods

Data and assumptions

✓ Data provided: goods purchased by category type and amount in euros

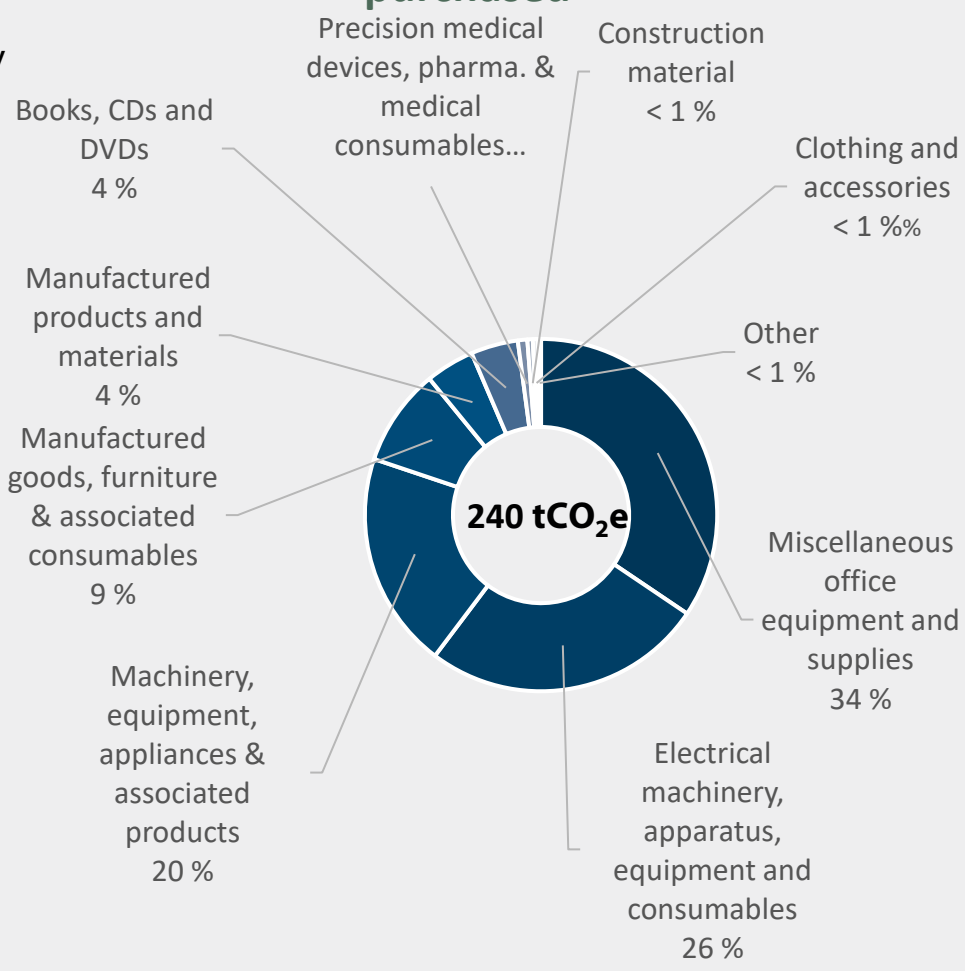
Results

Type of Goods	tCO_2e
Miscellaneous office equipment and supplies	83
Electrical machinery, apparatus, equipment and consumables	62
Machinery, equipment, appliances & associated products	48
Manufactured goods, furniture & associated consumables	21
Manufactured products and materials	11
Books, CDs and DVDs	10
Precision medical devices, pharma. & medical consumables	2
Construction material	1
Clothing and accessories	1
Other	1
TOTAL	**240**

Miscellaneous office equipment and supplies are mainly linked to costs such as new audiovisual materials and an investment in the modernisation of the conference room.

Goods & services purchased

GHG emissions from goods purchased



5 Results by scope

Meals

Data and assumptions

✓ **Data provided**: food and beverages purchased by category type and amount in kilograms.

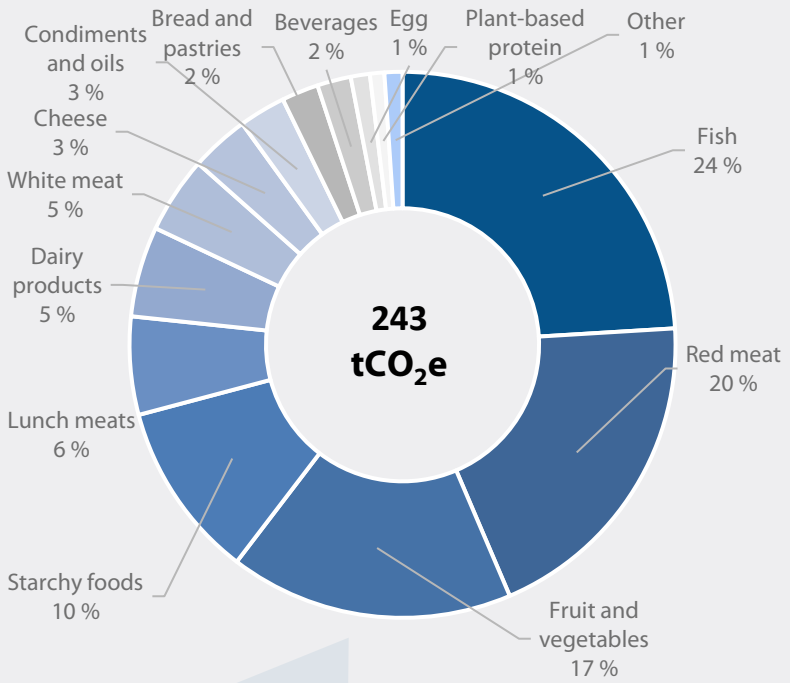
Results

Type of meal	tCO_2e	kg
Fish	58	3 952
Red meat	48	4 836
Fruit and vegetables	41	43 707
Starchy foods	26	11 863
Lunch meats	14	1 038
Dairy products	13	6 997
White meat	11	4 290
Cheese	8	1 621
Condiments and oils	7	4 130
Bread and pastries	5	6 802
Beverages	5	16 918
Egg	3	1 232
Plant-based protein	2	1 424
Other	3	3 663
TOTAL	**243**	**112 473**

The "Other" category includes sugar, legumes, plain flour, and cornflour.

Goods & services purchased

GHG emissions from meals



Fish and meat (all types) account for more than 50 % of emissions in 2025, but only 13 % of the total weight of food purchased.

5 Results by scope

Capital goods (20 %)

Data and assumptions

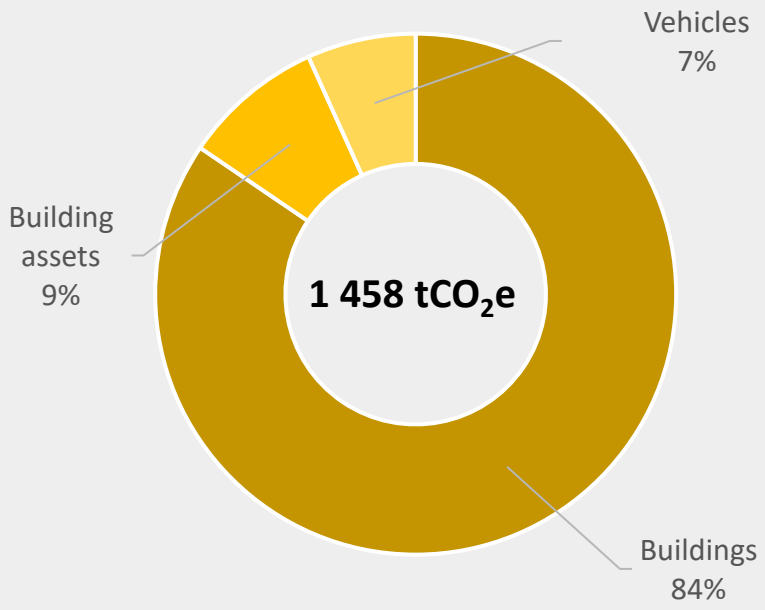
- ✓ **Buildings and car parks**: parking and office space, renovation works included (+ 5,085 m^2)
  Depreciation: 40 years
- ✓ **Building assets**: generators, refrigerators, air conditioning units, machinery, etc. (units per building); furniture, equipment and tools (per building by purchase price)
  Depreciation: 8 years
- ✓ **Vehicles**: model of leased and owned vehicles across all three buildings
  Depreciation: 4 years

Results

Type of capital good	tCO_2e
Buildings	1 232
Building assets	128
Vehicles	98
TOTAL	**1 458**

Capital goods

Total GHG emissions from capital goods



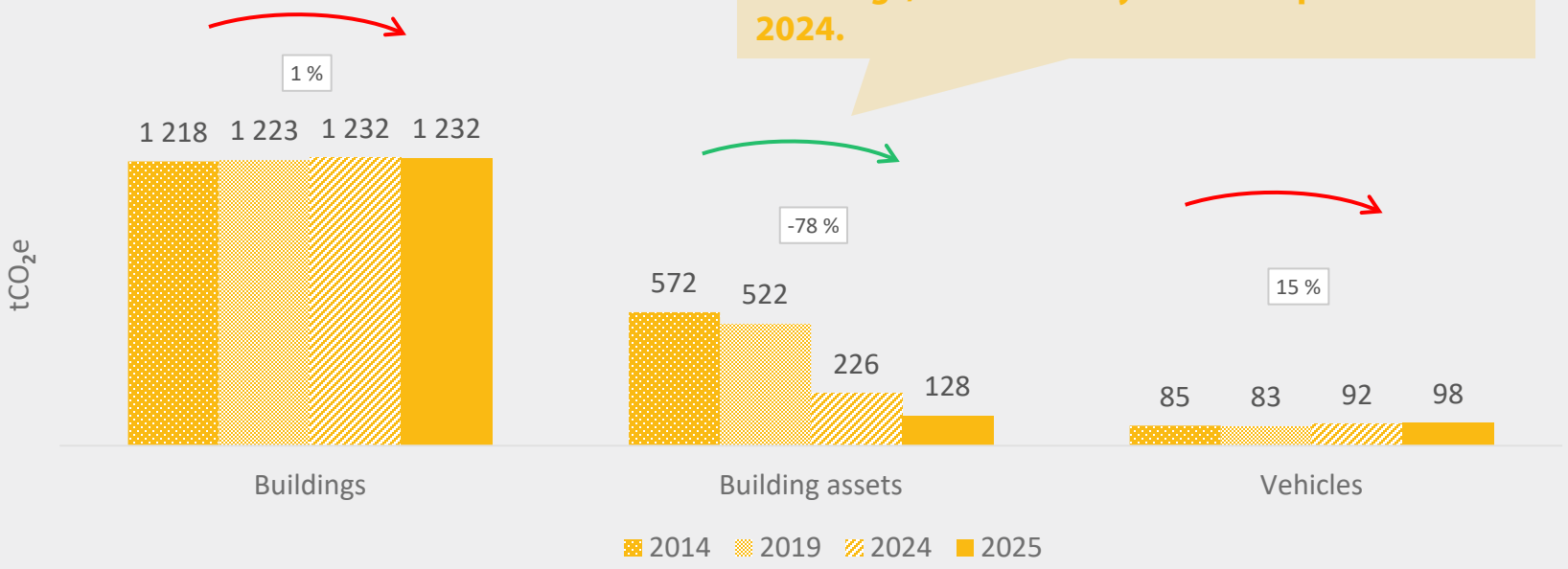
5 Results by scope

Capital goods

Comparison with previous years

GHG emissions tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Total capital goods	**1 875**	**1 829**	**1 550**	**1 458**	**-22 %** ↘	**-20 %** ↘	**-6 %** ↘

The total amount spent in 2025 for "equipment, furniture, machinery and tools" (for the three buildings) decreased by 49 % compared with 2024.



5 Results by scope

Energy (in-house) (11 %)

Data and assumptions

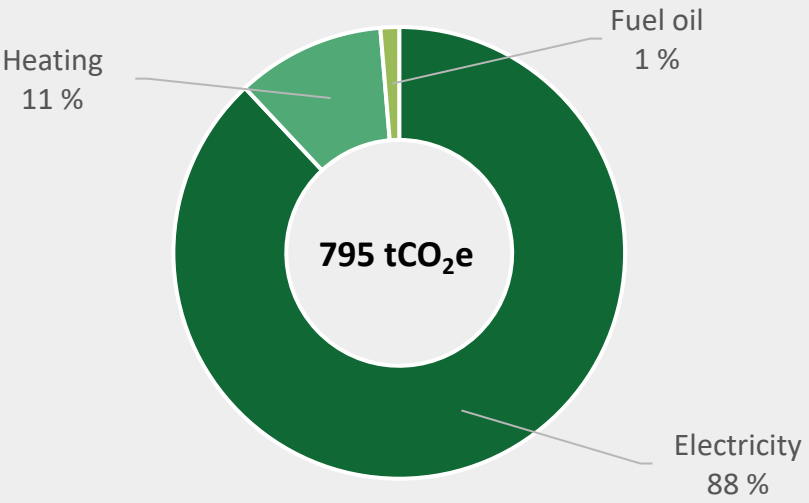
- ✓ **Electricity consumption:** the ECA purchases guaranteed green electricity, but the Bilan Carbone® method calculates actual electricity consumption from the latest national grid emission factor (location-based).
- ✓ **Heat consumption:** 2025 consumption for each building (energy mix as notified by the heating plant manager).
- ✓ **Fuel oil:** fuel oil purchased in 2025 for generators (one in each building).

Results

Type of energy source	tCO_2e
Electricity	700
Heating	84
Fuel oil	11
TOTAL	**795**

Energy (in-house+EDC[8])

Total GHG emissions from energy



[8] EDC : External data centre

5 Results by scope

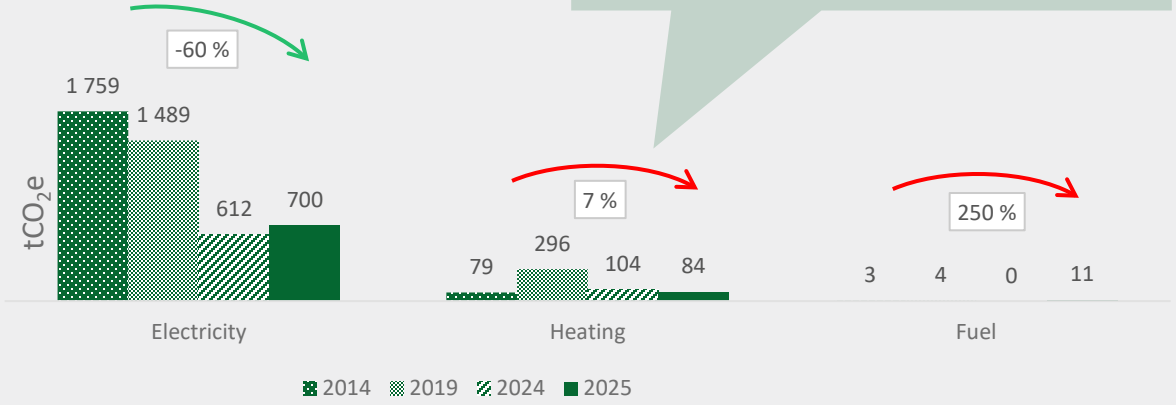
Energy (in-house + EDC)

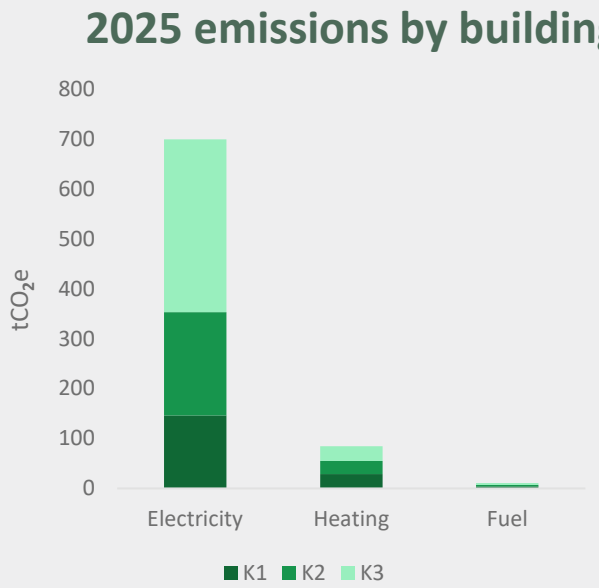
Comparison with previous years

GHG emissions tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Total energy	**1 840**	**1 789**	**716**	**795**	-57 % ↘	-56 % ↘	+11 % ↗

Electricity consumption increased by 7 % between 2024 and 2025

In 2025, the energy mix from district heating comprised a higher percentage of sustainable energy sources (91.6 %) than in 2024 (87.5 %)





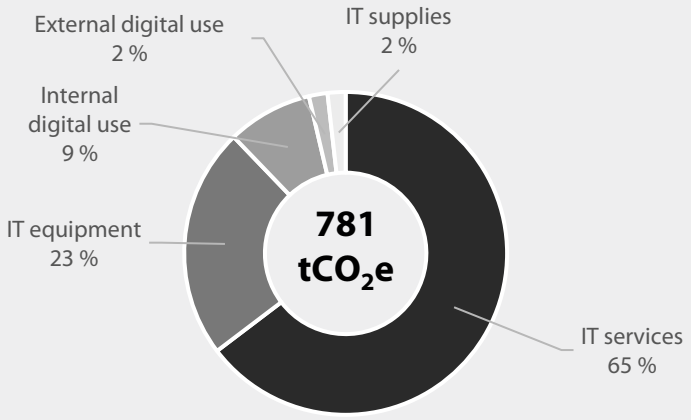
5 Results by scope

Digital (10 %)

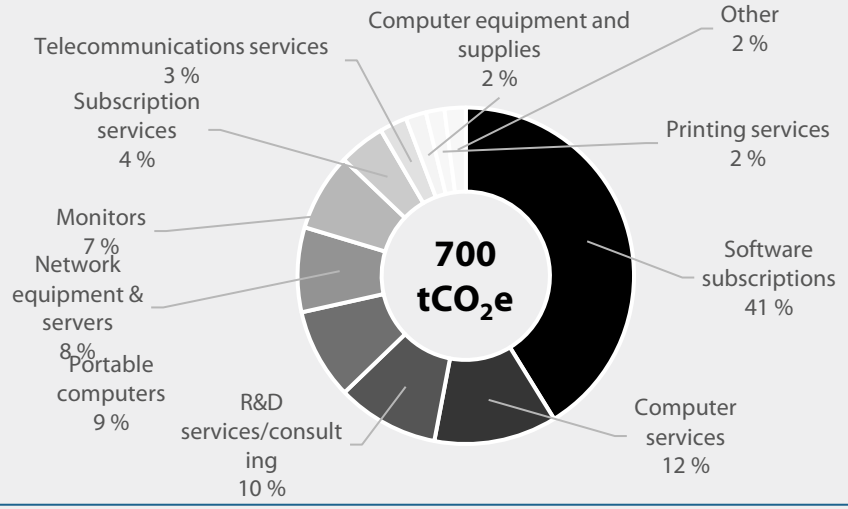
Data and assumptions

- ✓ **Internal digital use:** energy emissions related to K3 and Betzdorf data centres.
- ✓ **External digital use:** emissions related to users of the ECA's website (including viewing of reports and online videos), Facebook, LinkedIn, Twitter, Instagram, Teams and email communication based on 2025 data.
- ✓ **IT equipment:** IT inventory by type of good.

Total GHG digital emissions



Focus on IT services, supplies and equipment



Results

Type of emissions	tCO_2e	
IT services	505	**700 tCO_2e**
IT equipment	181	
IT supplies	14	
Internal digital use	67	
External digital use	14	
TOTAL	**781**	

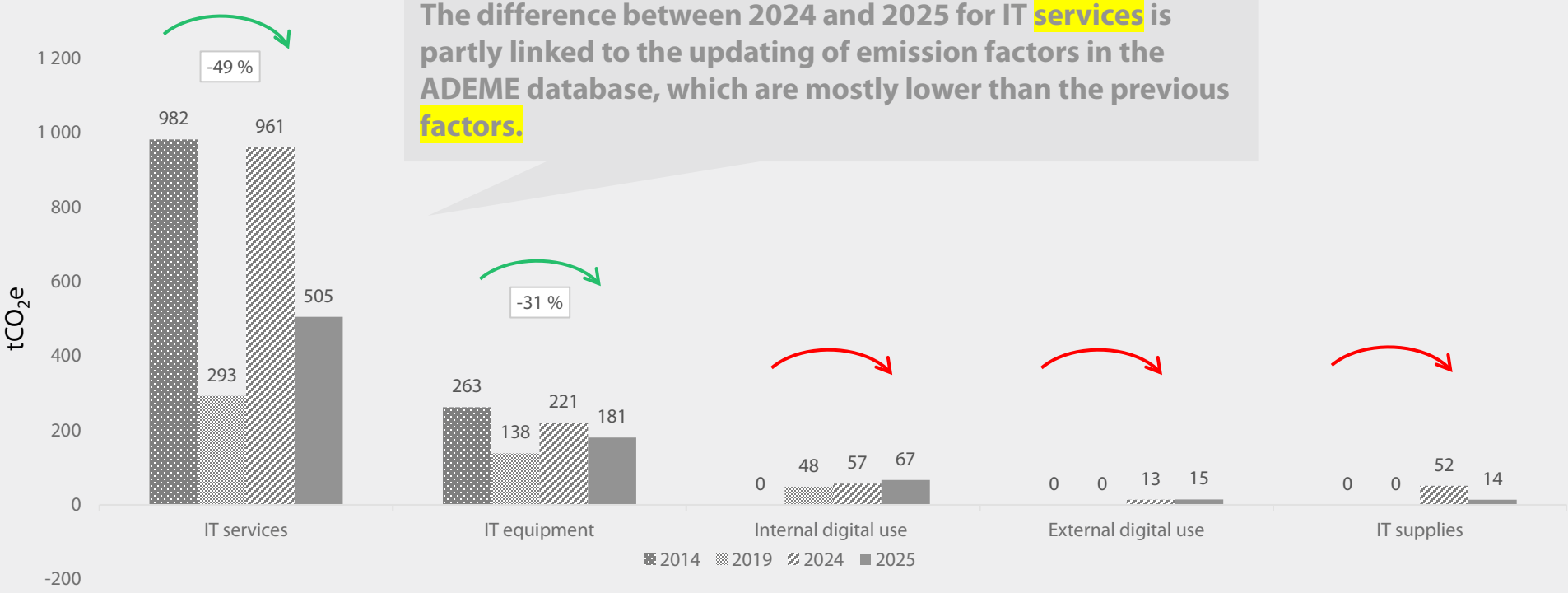
5 Results by scope

Digital

Comparison with previous years

GHG emissions tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Total digital	**1 245**	**479**	**1 304**	**781**	**-37 %** ↘	**+63 %** ↗	**-40 %** ↘

The difference between 2024 and 2025 for IT services is partly linked to the updating of emission factors in the ADEME database, which are mostly lower than the previous factors.



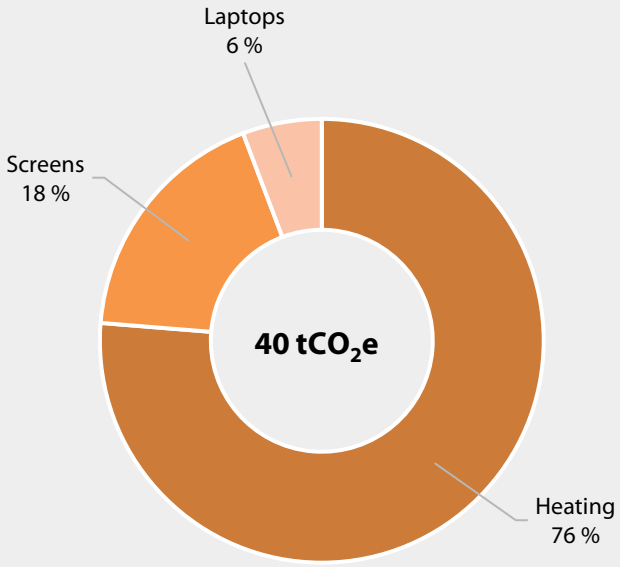
5 Results by scope

Teleworking (< 1 %)

Data and assumptions

- ✓ **Heating:** emissions related to home heating from natural gas, fuel oil, heat pumps, electricity and green electricity for GHG Protocol, district heating and wood. Heating consumption was based on an assumed 6 months of use and adapted to account for whether staff turn down or leave on their heating.
- ✓ **Electricity:** in 2025, the calculation of emissions relating to electricity consumption takes the worker's country of residence into account.
- ✓ **Laptops and screens:** emissions related to the energy consumption of IT equipment (electricity and green electricity for GHG Protocol).

Total GHG emissions from teleworking



Results

Teleworking	tCO_2e (2024)	tCO_2e (2025)
Heating	36	31
Screens	6	7
Laptops	2	2
TOTAL	**44**	**40**

2025: 67.51 days teleworked /FTE
2024: 66.45 days teleworked /FTE

5 Results by scope

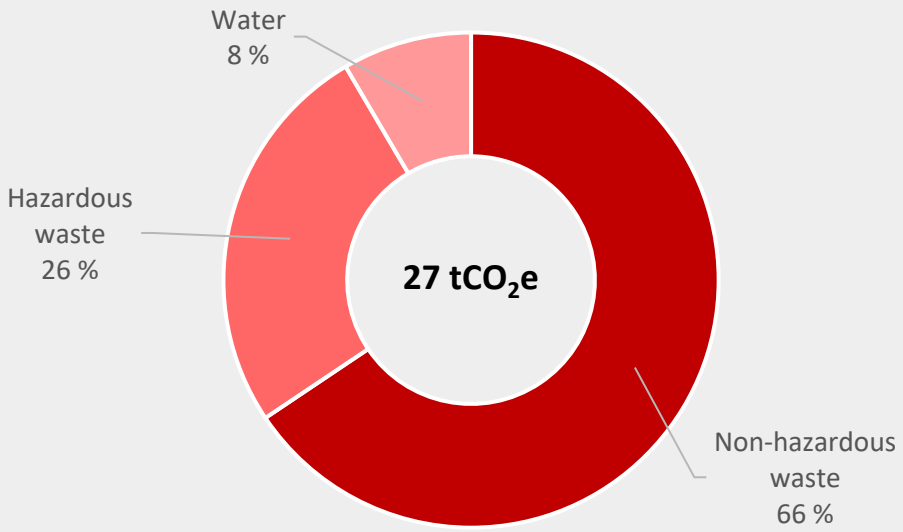
Waste (< 1 %)

Data and assumptions

- ✓ **Waste:**
- ✓ Non-hazardous: food and household waste, plastics, paper, cardboard and glass packaging. Recycling emission factors for these flows are more accurate and only consider the collection and storage of waste. Processing is not taken into account as it is considered to be linked to the recycling plant.

  Hazardous: wastewater and sewage, light bulbs and fluorescent tubes, packaging waste containing harmful products, scrap metal, batteries, accumulators and electronic waste.
- ✓ **Water use (sewage):** water consumption allocated to buildings based on occupancy.

Total GHG emissions from waste



Results

Type of waste	tCO_2e (2024)	tCO_2e (2025)
Hazardous waste	6	7
Non-hazardous waste	29	18
Water	2	2
TOTAL	**37**	**27**

5 Results by scope

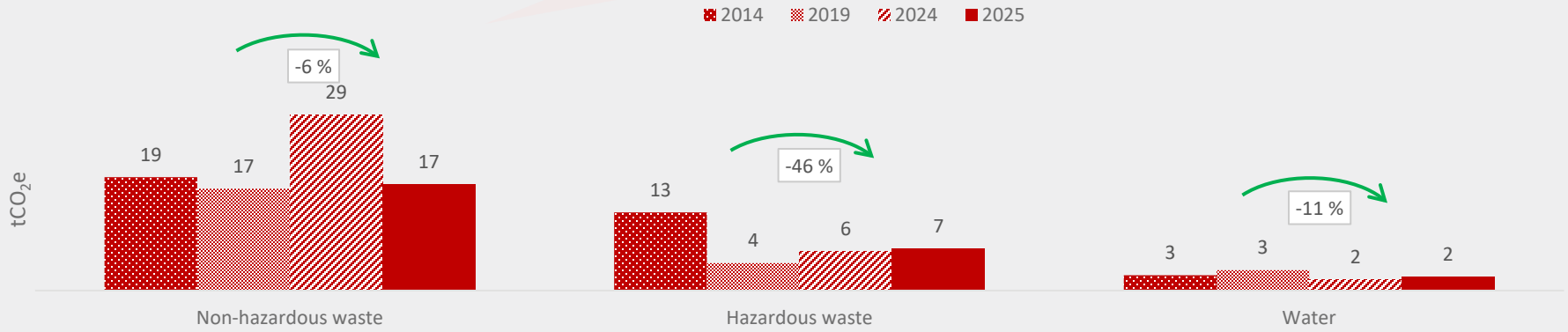
Waste

Comparison with previous years

GHG emissions tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
Total waste	34	25	37	27	-22 % ↘	+8 % ↗	-29 % ↘

Accuracy of data on end-of-life waste has been improved, with data digitalised through use of a connected scale since 2023.

Amount of non-hazardous waste (in tonnes) decreased by 29 % between 2024 and 2025.



Transport of goods

Transport of goods (< 1 %)

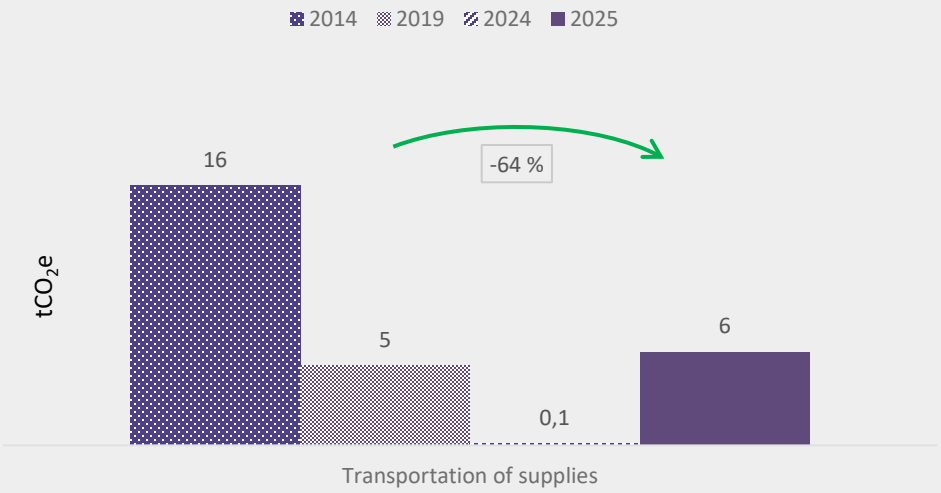
Data and assumptions

- ✓ **Transport by suppliers:** real data available for 2025.

Results

Emission source	tkm	tCO_2e
Total transport of goods	34 432	6

Average distance per delivery in 2025: 30 km



5 Results by scope

Non-energy in-house

Non-energy in-house (< 1 %)

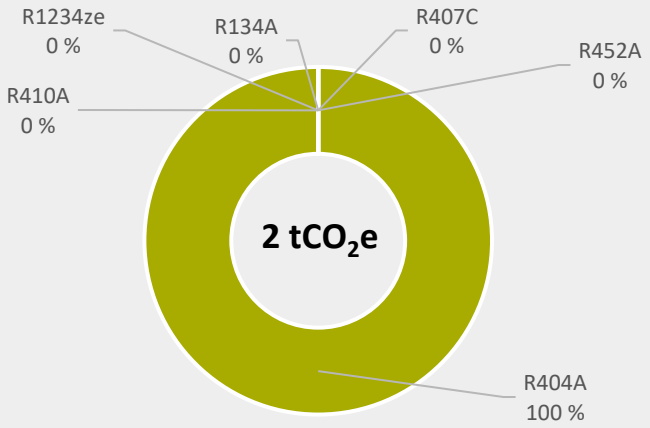
Data and assumptions

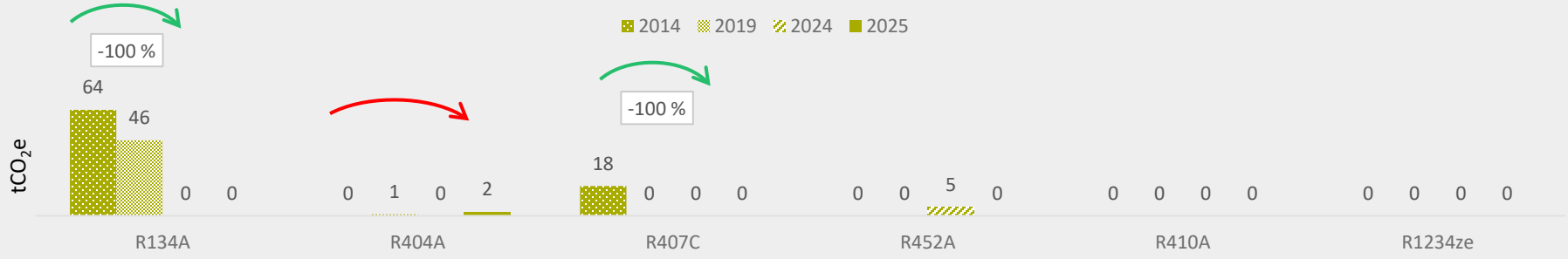
✓ **Refrigerant gases:** cooling equipment refilled with refrigerant gases in 2025 (R404A). Refills were treated as leaks.

Results and comparison with previous years

GHG emissions tCO_2e	2014	2019	2024	2025	Change 2014-2025	Change 2019-2025	Change 2024-2025
R134A	64	46	0	0	-100 % ↘	-100 % ↘	/
R404A	0	1	0	2	/	+150 % ↗	/
R407C	18	0	0	0	-100 % ↘	/	/
R452A	0	0	5	0	/	/	-100 % ↘
R410A	0	0	0	0	/	/	/
R1234ze	0	0	0	0	/	/	/
Total	**82**	**47**	**5**	**2**	-97 % ↘	-95 % ↘	-54 % ↘

Total non-energy GHG emissions





This report was created for the European Court of Auditors (ECA) by 21 Solutions & COMASE, using ECA data.

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