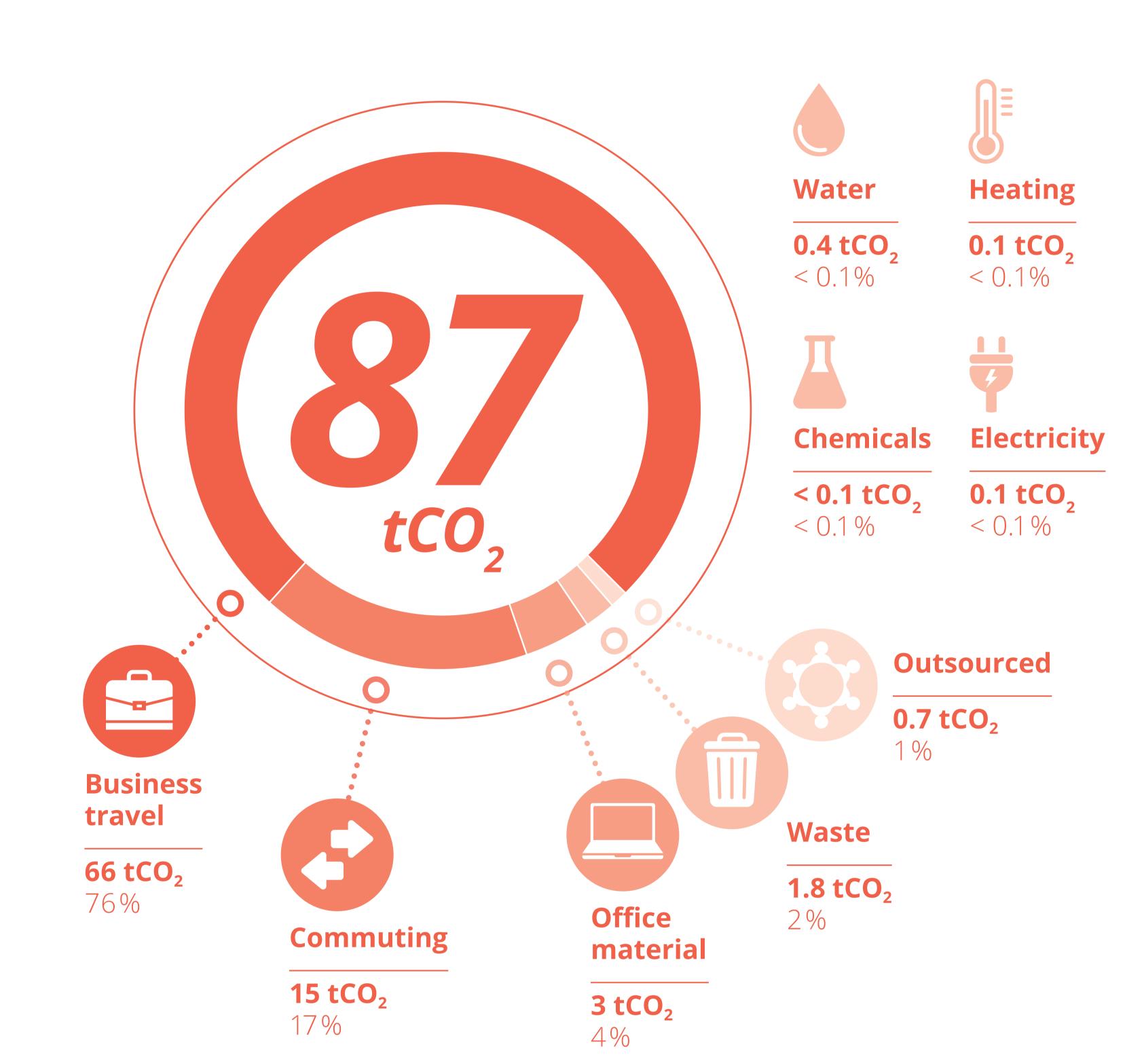
2019

Smart Living Lab Carbana Fatharint

Total Co. emissions



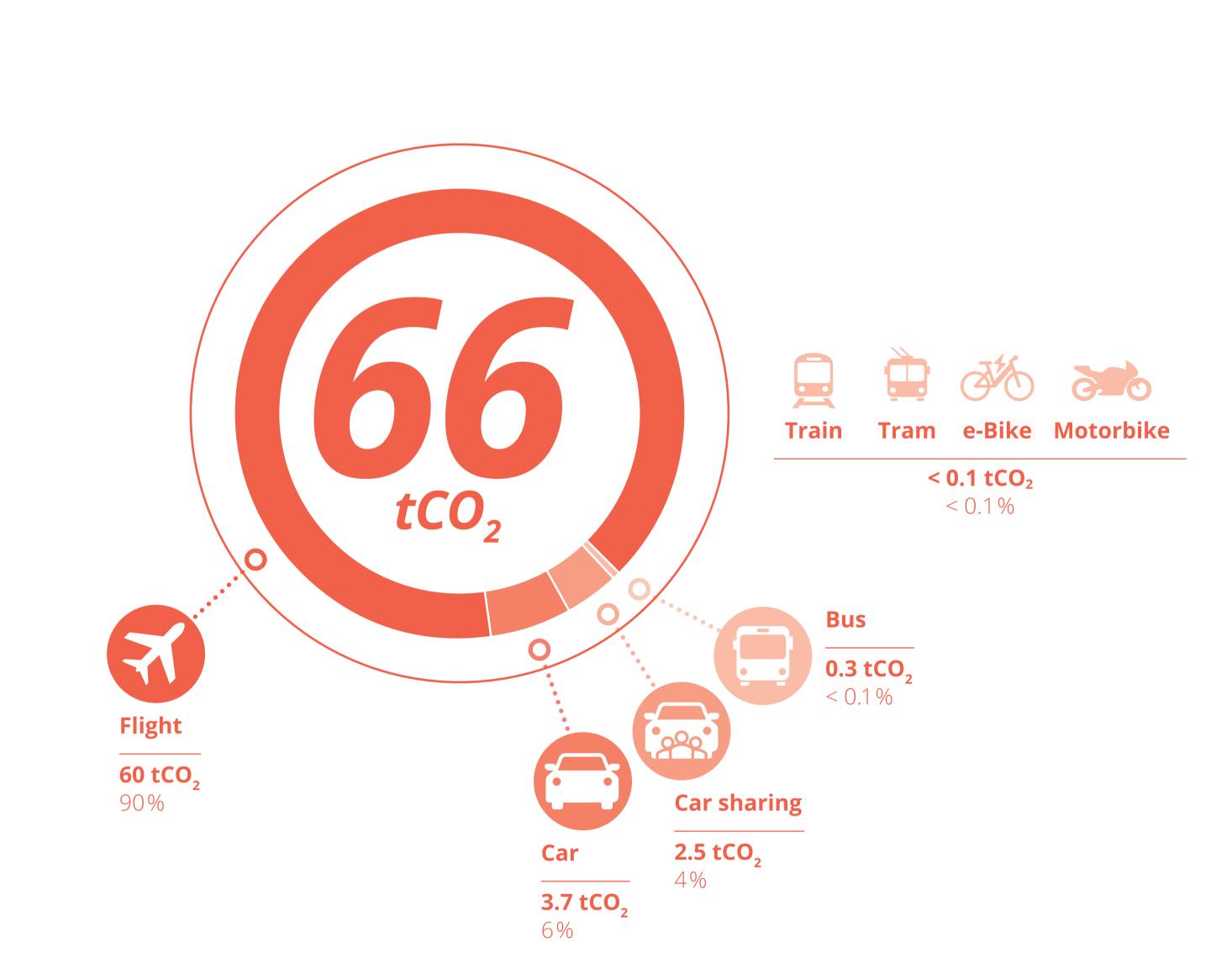
In 2019, the Smart Living Lab's activities generated a total of 87 tonnes of CO₂.

Travel (both business travel and commuting) causes the largest part of the greenhouse gas emissions. The source of emissions with the greatest impact (76%) is business travel.

Commuting is the second largest emission category, accounting for 15 tCO2, equivalent to 17% of the total.

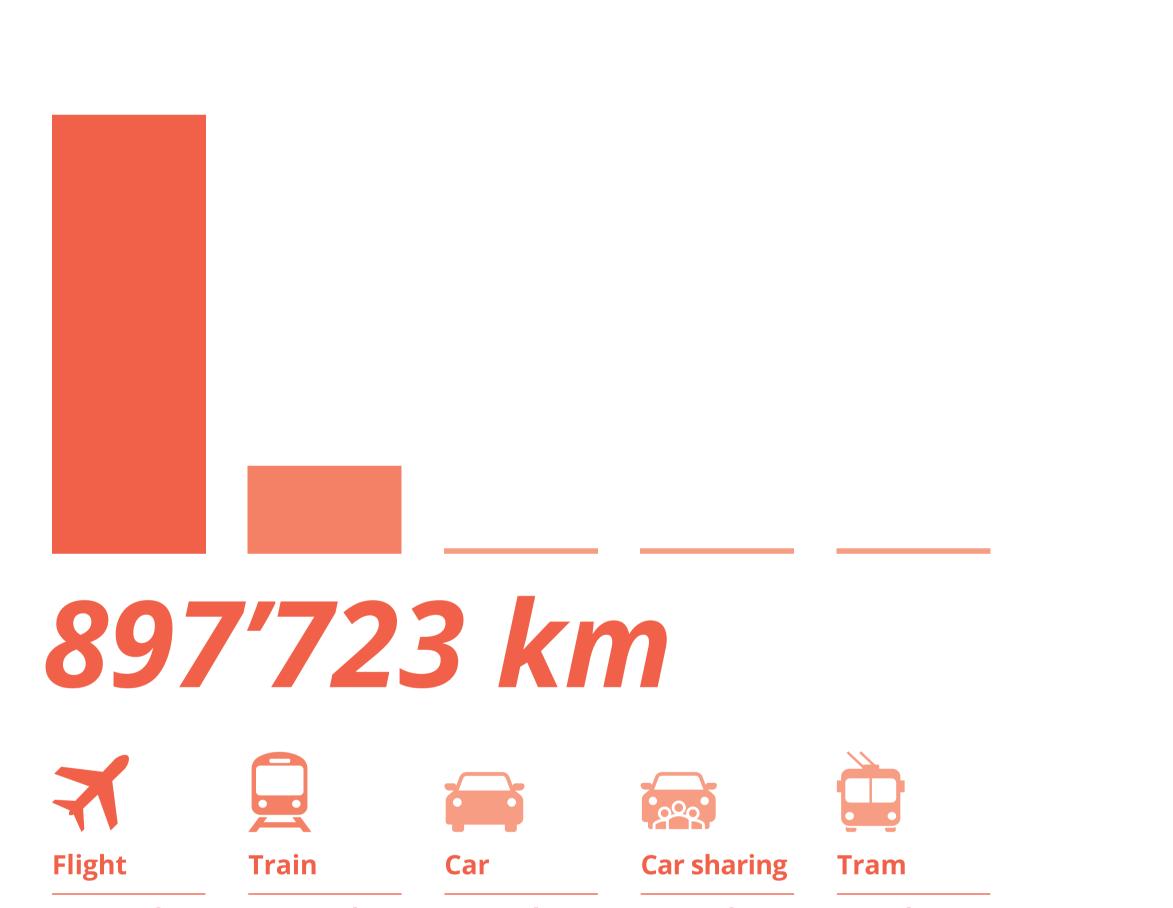
Concerning office material, the majority of emissions come from the purchase of 17 new computers in 2019.

Business travel



90% of business travel emissions are generated by air travel, which represents about 60 tons of CO₂.

Although mostly used for travel, trains have a low impact, because they are powered by hydraulic energy in Switzerland.



 Bus
 e-Bike
 Motorbike

 3756 km
 270 km
 187 km

 < 0.1%</td>
 < 0.1%</td>
 < 0.1%</td>

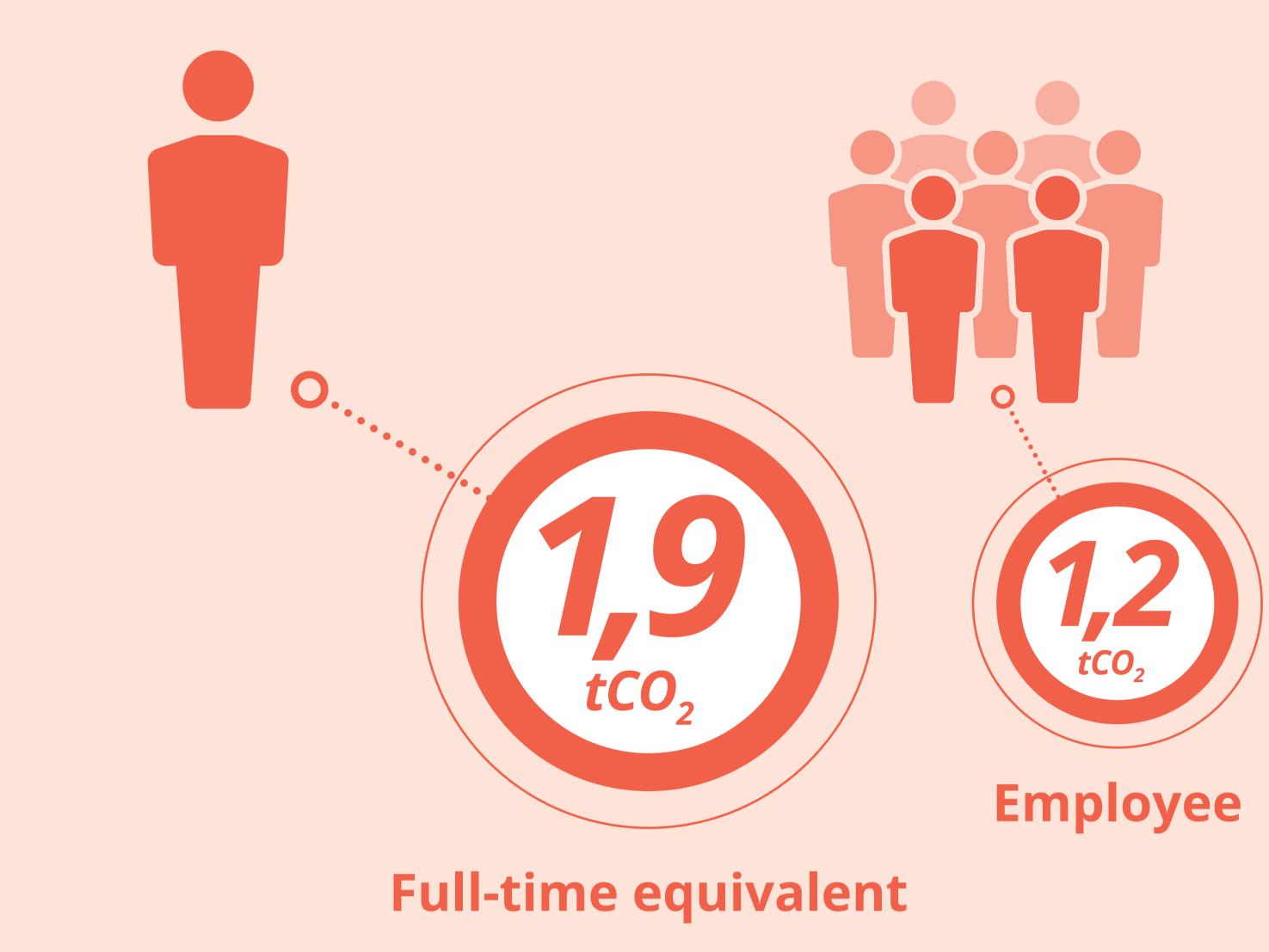


Carbon footprint per employee Commuting

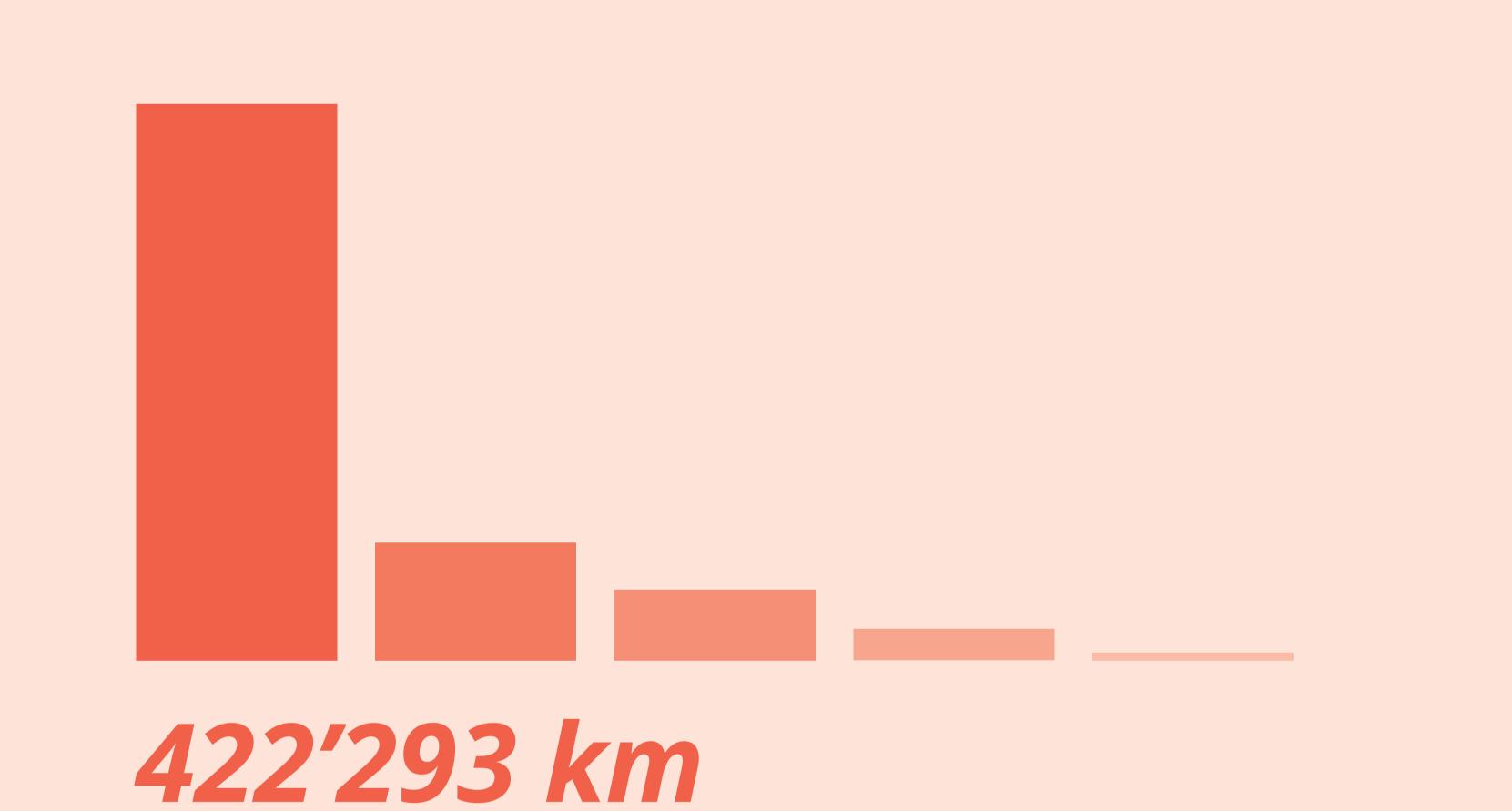
Smart Living Lab Carbon Footprint

Carbon footprint per employee

70 Smart Living Lab employees (46 full-time equivalent) work on the blueFACTORY site (2396 m²). The respective carbon footprint per employee and per full-time equivalent is:



For comparison's sake, activities from companies in the industrial sector in French-speaking Switzerland generate emissions of between 10 to 30 tCO2 per employee; those in the construction sector between 3 to 8 tCO₂, and those in the services sector between 1 to 3 tCO₂.



Train Car Bus Walking Bike Scooter Tram 300'581 km 63'412 km 38'928 km 15'269 km 3946 km 1269 km 157 km 71% 15% 9% 4% 1% < 0.1% < 0.1%

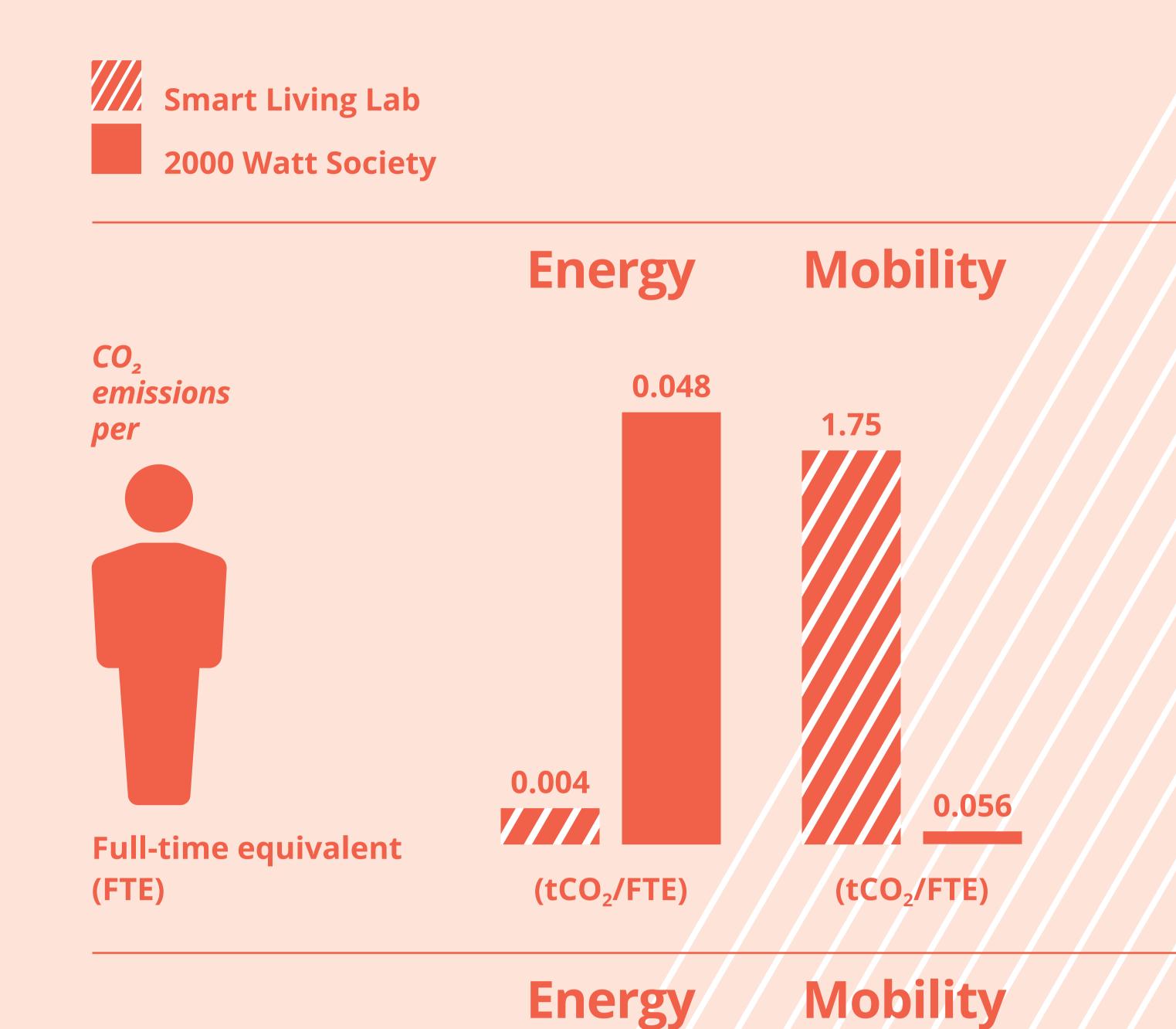
Most of the kilometers travelled from home to work are either made by public transport (train, bus), bike or on foot. This represents 16% of the emissions in this category, or 2.3 tCO₂.

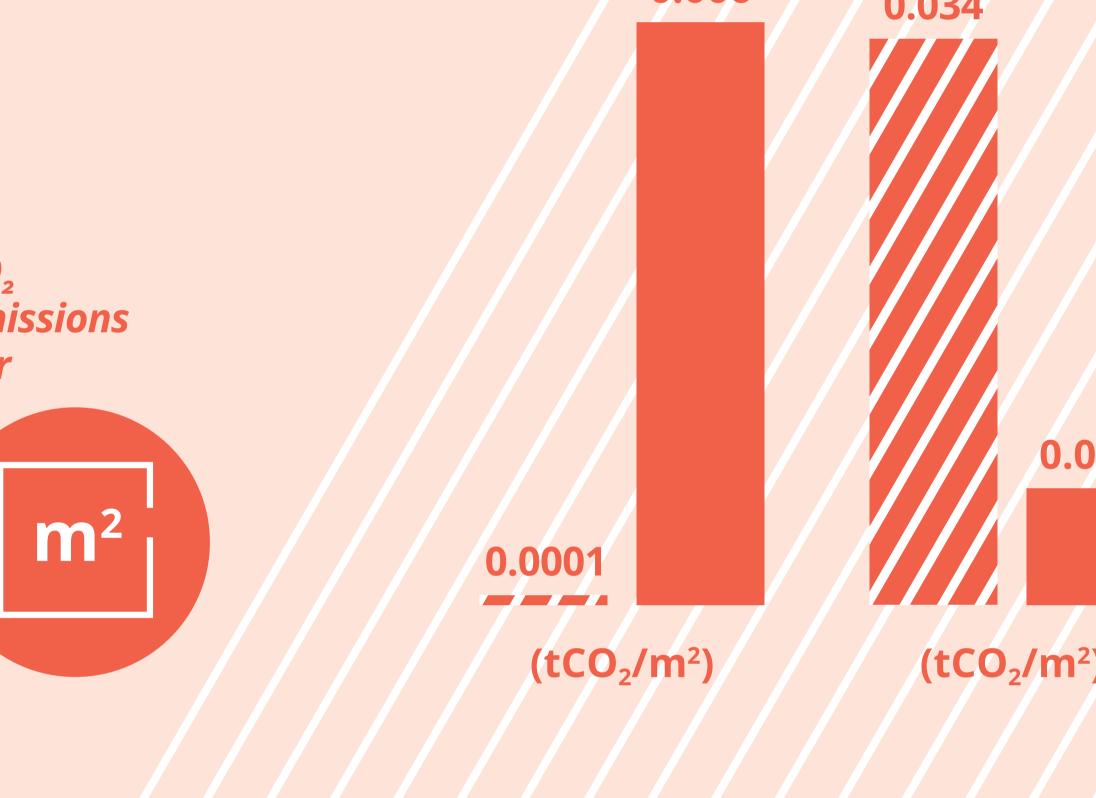


Benchmark Net Zero Carbon Smart Living Lab Carbon Footprint

> Switzerland's carbon emission reduction target

Benchmark







The Smart Living Lab's emissions in terms of energy consumption per employee are already lower than the 2000 Watt Society target for 2050.

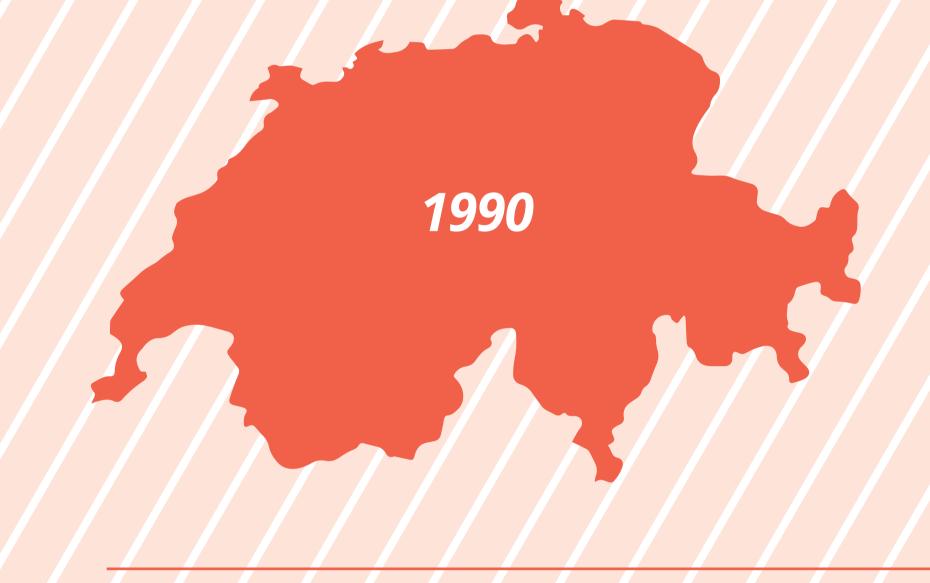
Heating in the Blue Hall on the blueFACTORY site is provided by a heat pump powered by electricity from hydraulic and photovoltaic sources, which accounts for the Smart Living Lab's low carbon footprint.

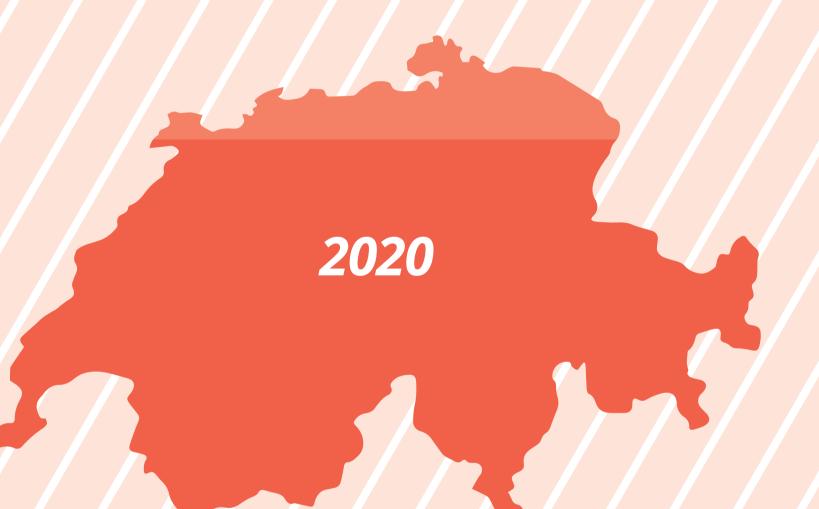
Smart Living Lab employees' mobility has a much higher carbon footprint than the 2000 Watt Society target. Transport is indeed one of the most important emission sources all throughout Switzerland.

Net/Zero/Carbon

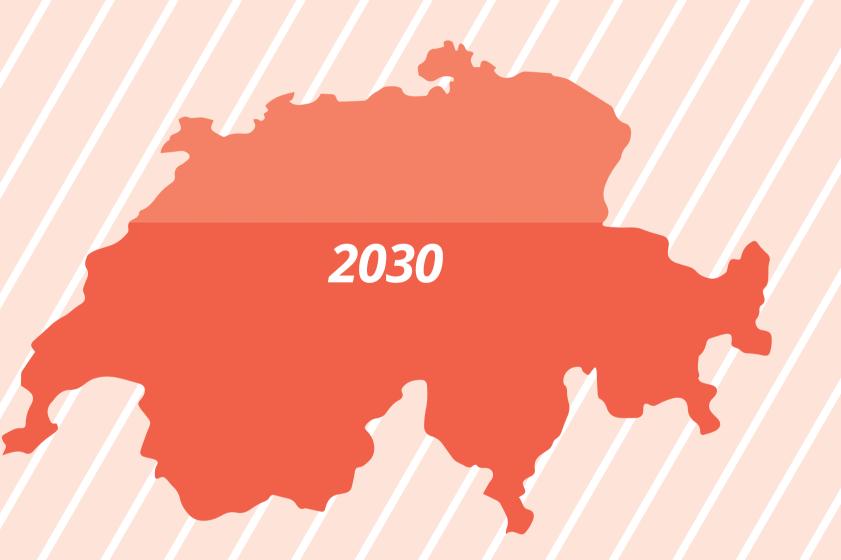
CO, emissions - CO, storage = 0

Switzerland's carbon emission reduction target has not yet been achieved. Thus a significant reduction of CO2 emission is needed to reach the -30% and -60% targets. In addition, the concept of Net Zero Carbon requires a storage of an amount of CO₂ equivalent to the remaining emissions in 2050.

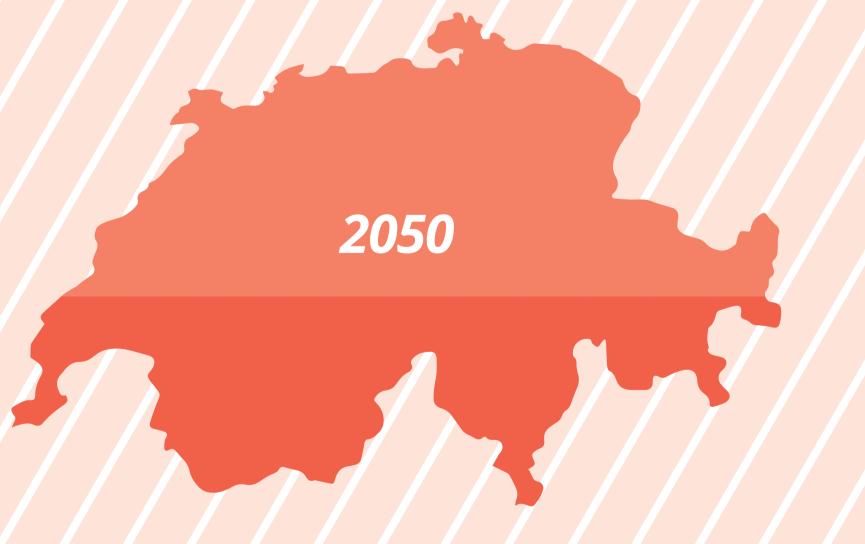




of CO₂ emissions



of CO₂ emissions



of CO₂ emissions



Total CO, emissions Business travel

Design and illustrations: Aline Deschenaux

• Data and calculations for 2019: Climate Services (ISO 14 001 certified environmental management systems)

Production: Smart Living Lab / Sustainable Development service of the HEIA-FR

2.1 tCO₂

12 tCO₂

Walking Tram Bike

< 0.1 tCO₂

is therefore strong.

Even though only 15% of kilometers are

travelled by car, this means of transportation

generates 83% of total emissions. Its impact

• Data and calculations for 2019: Climate Services (ISO 14 001 certified environmental management systems) Production: Smart Living Lab / Sustainable Development service of the HEIA-FR



Design and illustrations: Aline Deschenaux



• Data and calculations for 2019: Climate Services (ISO 14 001 certified environmental management systems)

Production: Smart Living Lab / Sustainable Development service of the HEIA-FR

























