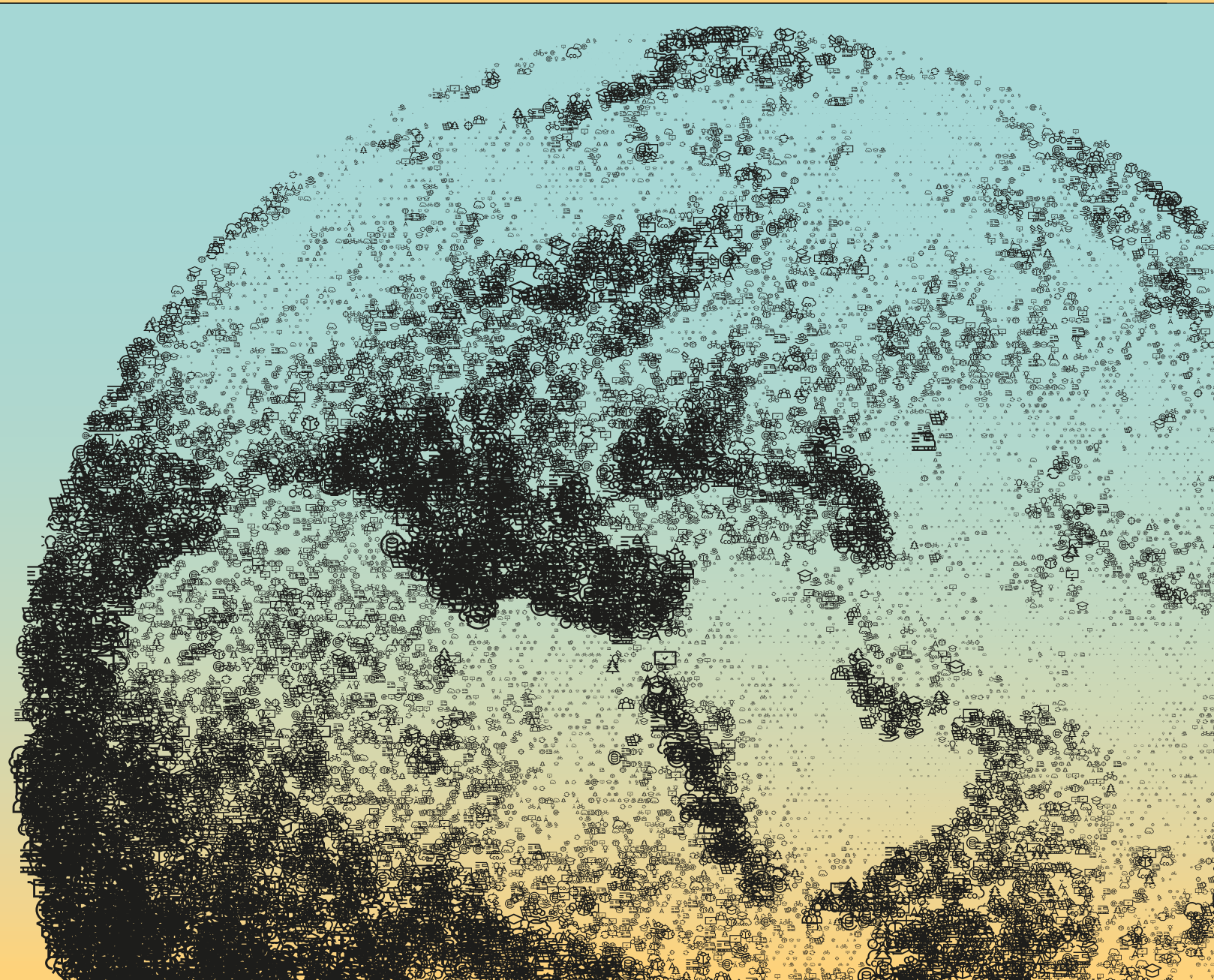
EPFL

2030 Climate & Sustainability Strategy

2024 PROGRESS REPORT

EPFL's Climate & Sustainability Strategy, adopted in 2023, spells out the steps we will take to fulfill our responsibility to our community, society and the environment.

This report describes the progress we've made over the past 18 months (through July 2024) in implementing the strategy across our missions, campuses and operations.



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← Daffodils in front of the BI building, spring 2024

INTRODUCTION

We published our first Climate & Sustainability Strategy in February 2023 to showcase, on both a national and international level, our commitment in these two very important areas and to clearly outline the initiatives we're taking within our organization. The strategy was developed through a collaborative approach involving our students, faculty members and staff from a number of departments and coordinated by the EPFL Sustainability Unit. It shows that both the social and environmental aspects of sustainability are firmly embedded in our School's missions and are addressed through a holistic approach involving our entire community.

This report describes the progress we've made on this strategy over the past 18 months. It's divided into sections covering each of our sustainability focus areas, with a discussion of the main action items we've completed for each one (including one or more highlights), the actions we're currently taking and our priorities for the future.

Here are some of our most notable achievements:

→ We now give all students an education on the basics of sustainability through a new common class for those in their first year. This class teaches students to reflect on the critical challenges facing our planet and illustrates the benefits of a comprehensive, cross-disciplinary and collective approach. A pilot test of the new class was carried out in 2024, and it will be rolled out for all new students in 2025.

→ We stepped up our support for climate research, providing a total of CHF 21 million in funding to seven projects under our Solutions4Sustainability initiative. We also held our first Research & Sustainability Symposium to build bridges and identify synergies among researchers in different fields.

→ We expanded our efforts to make our campuses more sustainable through the Plan Canopée; we have already planted 400 trees out of a planned 1,000 by 2029.

→ We further contributed to university alliances on sustainability. In Switzerland, we helped organize the 2024 Sustainable University Days event and took part in the swissuniversities network; internationally, we served as president of the International Sustainable Campus Network and contributed to EuroTech.

This progress report also describes the measures we're taking to reduce our carbon footprint. In Switzerland, a new climate and innovation act was approved by Swiss voters in June 2023 – after we had issued our Climate & Sustainability Strategy. The implementing ordinance for this act is currently in the consultation process; discussions concern, in particular, the scope to consider for the federal government's requirements and the timeline for reaching net zero. Many of our funding agencies have also introduced new requirements. For instance, the German Research Foundation now asks all applicants to "reflect on ecological sustainability aspects in the planning and implementation of their research projects." We're working to prepare our university and our researchers to fulfill these new requirements, such as by developing a carbon emissions calculator for research labs and an online training course on sustainability for all EPFL employees.

We remain committed to reaching net zero by 2040, even though we recognize the challenge posed by the decrease in our carbon emissions and, therefore, in our energy use. Efforts will need to be ramped up considerably if we're to meet the goals of the Paris Agreement. For now we're monitoring our climate impacts as measured by CO_2 emissions; during the next strategy update, planned for early 2026, we'll add our biodiversity impacts too, on a global scale.

In the area of social responsibility, we're broadening the scope of our work to encompass physical and mental health – two topics that are essential for the well-being of each of us as individuals and therefore of our community as a whole.

Sustainability is becoming an integral part of our School's values. It may be included in certain job descriptions, new employee orientation programs and policies. We believe the EPFL community has amazing potential thanks to our creativity and expertise, and that every one of us has a role to play in unlocking this potential. We're also aware that the changes called for in our Climate & Sustainability Strategy will take time, dedication, flexibility, resilience and compassion. We'd like to thank you for your support as we move forward. Yet we should keep in mind that sustainability doesn't imply sacrifice. Let's make EPFL an example that such changes can make our ecosystem more dynamic, more creative, more productive and, in the end, more humane and impactful.

2023–2024 KEY FIGURES AND HIGHLIGHTS

Basics of sustainability class ready for all 2,300 first-year students to take starting in spring 2025

7 Solutions4Sustainability R&D projects received a total of CHF 21.4m in funding in 2023

A carbon emissions calculator, tested at labs in each EPFL school, is now ready to go live

360 smartphones were given **new life** at our Point Smart repair shop

Energy-related carbon emissions were cut by 15% between 2006 and 2023, and by 29% between 2019 and 2023

Fuel-oil use was slashed by 95% between 2006 and 2023

The volume of waste shrank by 17% between 2019 and 2023

New Socially Responsible Investment Charter excludes companies that generate over 10% of revenue from fossil fuels

EPFL business trips generated 18% less GHG emissions in 2023 than in 2019

7,747 bikes were repaired and 513 were sold at our Point Vélo bike shop in 2023

The volume of food waste decreased 53% between 2020 and 2023

Food-related carbon emissions were cut by 16% between 2019 and 2023

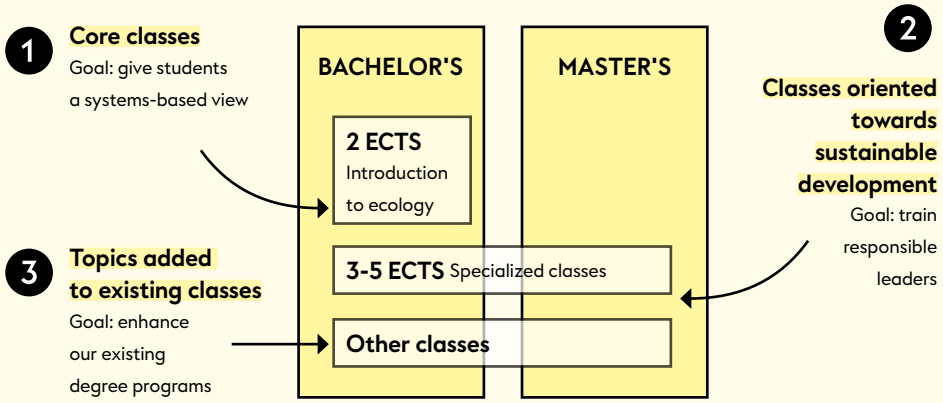
600 trees and shrubs have been planted on our campus since February 2023

Our Trust Point app, which directs users to the personal support that's available at EPFL, has been consulted over 55,000 times since it was introduced in September 2023

EDUCATION

We aim to provide a sustainability-oriented education to our entire community, instructing scientists, engineers and architects on the environmental and societal issues they will face, and on their responsibility to help build a sustainable society. We also train our teachers and give our students the tools, skills and knowledge to determine the role they want to play in securing the future.

Sustainability in our education



Highlights

Our new common class on sustainability will be introduced in the 2024–2025 school year. It was pilot tested with 150 students in 2024 and will be given to all first-year bachelor's students in 2025.

Our teaching departments also developed sustainability classes specific to their fields, which will be incorporated into degree programs starting with the 2024–2025 school year.

Completed actions

→ We opened a transversal skills and career center (CCTC) that helps students develop some of the skills they'll need to drive the energy transition.

→ We carried out a pilot test of our common sustainability class with 150 bachelor's students.

→ EPFL students held the LauzHack hackathon to develop sustainability-oriented programs for our community.

Actions under way

→ Encouraging students to add sustainability criteria to their student projects.

→ Helping professors incorporate sustainability into their class curricula (such as with the tandems initiative).

→ Introducing field-specific sustainability classes into all degree programs starting with the 2023–2024 school year.

→ Developing a new master's program in urban systems.

→ Expanding our minor in sustainability option to all teaching departments.

Future priorities

→ Roll out our new common class on sustainability for all first-year bachelor's students (starting with the spring 2025 semester).

→ Introduce a master's class on teaching sustainability, in order to train teaching assistants for the new bachelor's class.

→ Apply for swissuniversities' PgB initiative to better anchor sustainability at universities across the country.

New action items

→ Introduce an online training course on sustainability for all EPFL employees.

→ Support projects focused on developing low-tech systems.

→ Take part in the international EuroTeQ initiative called Enhance Connections for Sustainable Futures.

→ Introduce a new minor in sustainable construction.

→ Add sustainability criteria to the content, learning objectives and procedures for students' lab sessions.

LIFELONG LEARNING AND OUTREACH

We offer a range of sustainability-oriented educational programs for learners both before and after their university studies. These programs are carried out through our continuing education and outreach initiatives, which foster dialogue with the general public, promote science and engineering, and aim to draw students to careers in these fields. Continuing education is given at our Extension School and at the FCUE continuing education center we run with the University of Lausanne. The goal is to prepare learners to contribute to the energy transition.

↓ 2024 Science Night

Highlights

Our education and science outreach departments ramped up their sustainability-oriented initiatives for primary and secondary school students.

Our Extension School introduced new sustainability-oriented Certificate of Advanced Studies (CAS) and Master of Advanced Studies (MAS) programs to meet growing demand from businesses and the public sector for graduates with these skills.

Completed actions

→ We further incorporated sustainability into the programs run by our education and science outreach departments.

→ We supported the Swiss career orientation agency for high-school students (ASOSP) in its sustainability initiatives.

→ We focused the 2023 edition of EPFL's Scientastic festival on the environment.

→ We held our first two week-long events for high-school students on the topics of science and sustainability (in October 2023 and July 2024).

→ We introduced an extracurricular program focused on sustainability.

→ We developed a science outreach program on sustainable cities for children and teenagers for the 2024–2025 school year.

→ We introduced a 4-day continuing education course on space sustainability.

→ We launched our Sustainability Series of talks and events.

→ We gave cross-disciplinary talks on sustainability topics during EPFL's information days for high-school students.

→ An EPFL student association put on Climate Fresk events.

Actions under way

→ Developing a pilot citizen science project to determine the environmental impact of microplastic from car tires.

→ Working more closely with businesses, government agencies and NGOs to develop sustainability classes and degree programs better tailored to their needs.

Future priorities

→ Develop an MAS on sustainable resilient value chains based on the existing CAS.

→ Introduce a CAS on photovoltaics in 2025.

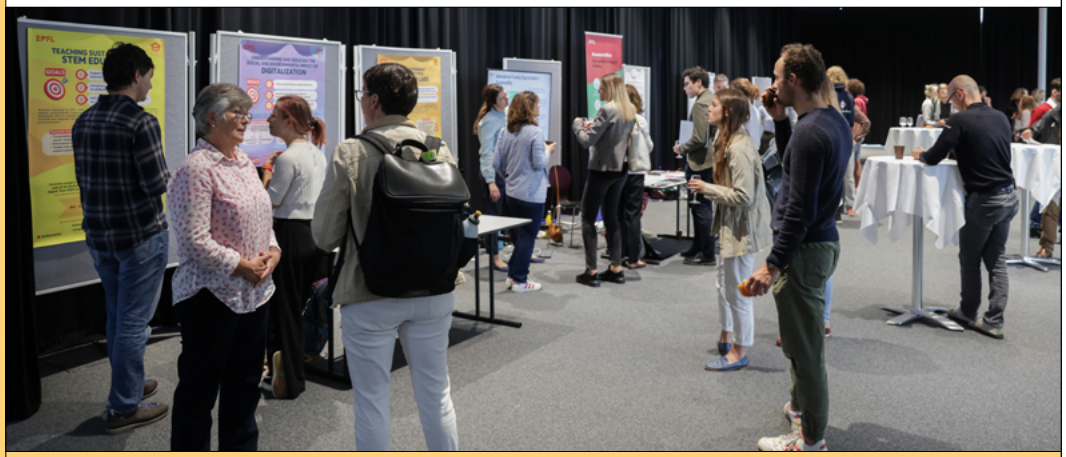
→ Introduce a CAS on carbon-free manufacturing processes in 2025, with a view to developing an MAS on sustainable energy-system engineering along with three other CASs.

→ Develop a continuing education program on the digital transition in public transportation.

RESEARCH

We are committed to conducting high-quality, high-impact research in all science and engineering fields related to the climate and sustainability. Our research is carried out through the kind of collaborative, cross-disciplinary approach that's needed to understand the complex ways in which human activities and the environment interact and to develop comprehensive, actionable solutions. Climate change and sustainability call for methods that sit at the crossroads of basic research and technological innovation. At EPFL, we pool the efforts of our schools, colleges, institutes and R&D centers to implement such methods to address strategic focus areas related directly or indirectly to climate change, energy and sustainability.

↓ 2024 Research & Sustainability Symposium



Highlights

We took concrete steps to reduce our energy dependency and carbon footprint through our work with the Solutions4Sustainability (S4S) initiative and the Coalition for Green Energy and Storage (launched in association with ETH Zurich and other organizations). This entailed leveraging our R&D capabilities for clean energy, carbon capture and storage systems, and other kinds of sustainable technology.

Completed actions

→ We provided a total of CHF 21.4 million in funding to the following seven S4S projects:
- › Heating Bits: Renewable-supplied data centers integrating heating and cooling supply of local districts
- › SusEcoCCUS: to promote energy-efficient carbon capture and storage systems for a sustainable and circular economy
- › MegaBites: Measuring, Modeling, and Improving the Sustainability of EPFL's Food System
- › New Plasma-based Sterilization Methods
- › Solar Steam for sterilization and conditioning of laboratory animal facilities
- › H2lios Neurocam: to develop more accurate sunlight forecasts for EPFL campuses, in order to improve the deployment of solar power
- › CO2 Monitoring & Reduction in Food Systems Through a Circular Economy

→ With the SusEcoCCUS project, we expanded our clean-energy R&D capabilities at our Valais campus by building a demonstrator that links renewable-energy generation facilities to a carbon capture and storage system.

→ We opened the Center for Worldwide Sustainable Construction at EPFL Fribourg in spring 2023.

→ We held our first Research & Sustainability Symposium in spring 2024.

→ We set up the Sustainability Portal with the University of Lausanne, IMD, the Enterprise for Society Center and Climact. It offers a database for labs and research groups working on sustainability issues.

Actions under way

→ Setting up an R&D "Constellation" on the topics of energy, sustainability and the climate.

→ Mapping out the living labs and demonstrators that have been set up on our campuses.

→ Tracking the percentage of professorship appointments on topics of energy and sustainability: 14% from 2017 to 2022 (16 out of 118) and 27% from 2023 to 2024 (4 out of 15).

Future priorities

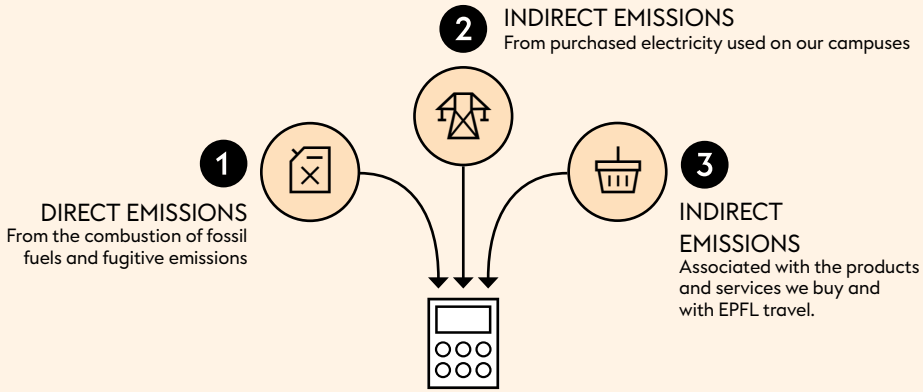
→ Continue the S4S initiative and provide support to researchers through the S4S Advisory Board.

→ Support the Coalition for Green Energy and Storage launched in association with ETH Zurich, EMPA, PSI and Swiss cantons and businesses.

GREEN LABS

In addition to developing sustainable systems and technology for use by society, we also strive to make our own R&D activities as carbon-free as possible. This is done through a combination of bottom-up and top-down initiatives to adopt sustainable lab procedures and support the transition to more responsible research practices.

Our carbon emissions calculator is consistent with the Greenhouse Gas Protocol, as it groups our emissions into three categories



Highlights

We ran a pilot project with research labs at the School of Life Sciences (SV) in 2019–2023 to test a carbon emissions calculator. Based on these results, we plan to make the calculator available to labs at all schools in 2025. This will enable research groups to pinpoint where their emissions-reduction efforts can have the most impact.

Completed actions

- → We ran a pilot project to measure the power use of research equipment across half of a floor of the SV building in order to map power consumption at laboratory level.
- → We developed a green lab handbook for SV scientists.
- → We investigated the option of performing equipment maintenance and repair work in-house, and found this could have saved SV labs CHF 100k in 2023.
- → We were invited to participate (in our capacity as a research institution) at the multi-stakeholder EMBO workshop "Funders' Role in Promoting Environmentally Sustainable Lab Research," in Heidelberg in May 2024.
- → We developed and tested a carbon emissions calculator for SV labs.

Actions under way

- → Developing an online training course on green labs for SV scientists.
- → Supporting the efforts of EPFL's association of postdocs.
- → Taking steps to pool research equipment.
- → Opening an equipment maintenance and repair workshop at SV that can extend equipment's lifespan by 30%.
- → Managing the Swiss Network for Green Labs (which also includes ETH Zurich, the University of Zurich, the University of Basel, the University of Lausanne, the University of Neuchâtel, the University of Bern, and others).

Future priorities

- → Roll out adapted versions of the carbon emissions calculator (whose use will be voluntary) at research labs in all EPFL schools.
- → Use the calculator's results to help scientists develop roadmaps for reducing their labs' carbon emissions, which will soon be a requirement of funding agencies.
- → Hold events such as the Green Academy and workshops on plastic pollution.
- → Incorporate sustainability into the SV's onboarding program.

INNOVATION

We aim to build and foster a culture of innovation at our School that's geared towards developing responses to sustainability and other societal challenges. These innovation efforts are aligned with our educational and research activities and involve a series of programs and initiatives to encourage entrepreneurship and new forms of joint ventures with industry. The goal is to leverage EPFL's science and engineering excellence and our broad range of research disciplines and cultural diversity in order to have a tangible impact at the global level.

Highlights

In 2023, we worked with ETH Zurich, PSI and EMPA to set up the Coalition for Green Energy & Storage. While this initiative is backed by research institutes, its aim is not to conduct R&D but rather to bring scientists, engineers, business leaders, policymakers and funders together to create a "technology sandbox" with the ultimate goal of developing large-scale demonstrators. Researchers will be able to use these demonstrators to develop systems at scale and then transfer them to industry for launch on global markets.
To that end, the coalition will set up pilot sites across Switzerland for running demonstrators and exploring how new technology – such as Power-to-X and seasonal energy-storage systems – can be scaled up.

CGES
Coalition for Green Energy & Storage

Completed actions

→ We added a greentech/cleantech category in our Startup Launchpad program to boost the visibility of those fields. Startups in this category must meet a number of sustainability criteria.

→ We expanded our Changemakers program so that it now supports many more student projects. Twice as many students were involved in 2023 than in 2022.

→ We introduced the Future Leaders program to encourage responsible, sustainability-driven innovation. The program includes content and other materials for students as well as workshops and other events held at The Station in SwissTech Village.

Actions under way

→ Startups based at EPFL's Innovation Park are taking part in the Tech4Regeneration program.

→ We've kicked off the second stage of our Tech4Dev program to transfer technology to low- and middle-income countries. Engineers are working with local NGOs to address challenges in the areas of healthcare, climate change and renewable energy.

New action items

→ Identify sustainability initiatives that can help make citizens, businesses, and policymakers aware of the societal and technological advancements that will be needed to build a more sustainable future.

→ Develop new programs and initiatives within the EPFL ecosystem that can help stakeholders incorporate new technology, societal approaches and scientific discoveries into their strategies.

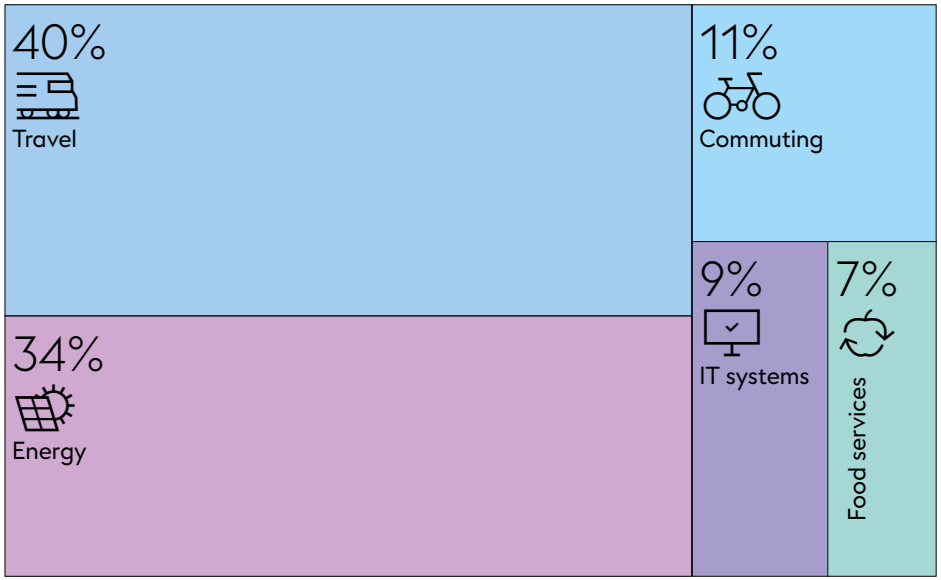
EPFL'S CARBON FOOTPRINT IN 2023

The following diagrams show the main sources of carbon emissions at EPFL. The figures are not intended to show an increase or decrease from prior years. The values in the bar chart to the near right are absolute values by emission source.

This is only a partial look at our School's carbon footprint, since values for purchased goods, construction projects and some research activities are not included or are rough estimates only. If we include the emissions associated with manufacturing the goods we purchase, that could double the total, as indicated in the bar chart to the far right.

Partial GHG emissions breakdown

Breakdown of EPFL's partial greenhouse gas (GHG) emissions in 2023



Emissions by category

Total	34,166 t CO_2-eq
Food services	2,343 t CO_2-eq
Commuting	3,753 t CO_2-eq
Travel	13,684 t CO_2-eq
IT systems* (manufacturing)	2,939 t CO_2-eq
Energy	11,446 t CO_2-eq
Electricity	8,732 t CO_2-eq
Natural gas	2,397 t CO_2-eq
District heating	237 t CO_2-eq
Fuel	80 t CO_2-eq

* Change in method relative to 2019

Emissions associated with purchased goods (2024)

43,000 t CO_2-eq

Margin of error ± 20,000 t

SUMMARY OF EMISSIONS REDUCTION TARGETS

We have set the following targets by category to reach the overall goal of cutting our carbon emissions by 40% by 2030 :

- → Energy : 50% reduction from 2006 levels (Swiss government's mandatory target)
- → Travel : 30% reduction from 2019 levels (Swiss government's target for air travel)
- → Commuting : 30% reduction from 2019 levels
- → Food services : 30% reduction from 2019 levels
- → IT systems : target still being established

↓ Daffodils between the BCH and BS buildings, spring 2024

We achieved a 22% reduction in quantifiable GHG emissions between 2019 and 2023, which is already over half of our 40% target for 2030. Most of this reduction can be attributed to:

- → The 2022 renovation of our heating plant, which nearly eliminated our need for fuel oil (95% reduction from 2006 levels).
- → An 18% decrease in emissions from EPFL travel, owing in part to our new travel policy and the consequences of the Covid pandemic.
- → A 39% drop in emissions from our IT systems, partly reflecting a change in measurement method that includes a more granular inventory of our computer equipment.
- → A 16% decline in emissions from food services thanks to our 20–30 Strategy, which sets objectives such as: 50% vegetarian dishes served at our restaurants, one vegetarian day per week, an entirely vegetarian restaurant, and smaller portion sizes for meat.
- → Commuting was the only category in which we recorded an increase in emissions (7%). This was due to a rise in the modal share of personal vehicles, which was partly a consequence of the pandemic.

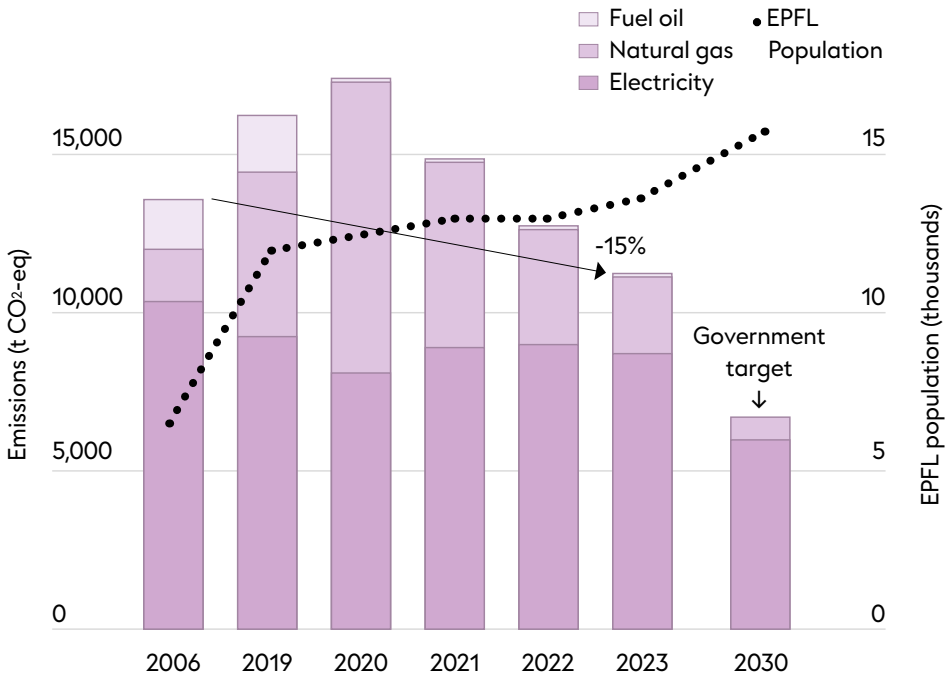
It is also important to note that the EPFL community grew 13% over the same period.

SWISS GOVERNMENT'S MANDATORY TARGETS

The Swiss government decided in July 2019 to step up the pace of emissions reductions in the public sector, setting a target of a 50% decrease in building-related emissions (from 2006 levels) by 2030. At EPFL, we achieved a 15% decrease in our energy-related emissions (from 2006 levels) by June 2023, thanks largely to the renovation of our heating plant, which nearly eliminated our need for fuel oil.

In 2006, EPFL was already using water from Lake Geneva to heat and cool the buildings on our Lausanne campus (see the Energy and Buildings section). Note that the number of people at EPFL doubled between 2006 and 2023 (from 8,759 to 17,563 people). After renovating our heating plant, we consume very little fuel oil.

Energy-related emissions

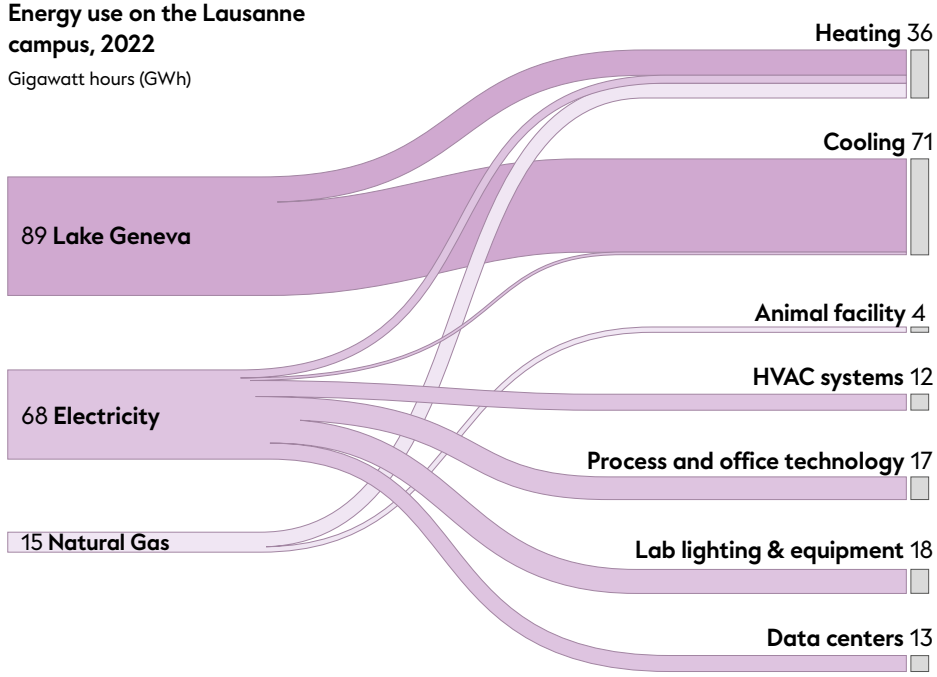


Note: Electricity emissions were calculated using the conversion factor of 125 g CO2-eq/kWh (source: KBOB 2022), which takes into account imported electricity.

Energy sources

Energy use on the Lausanne campus, 2022

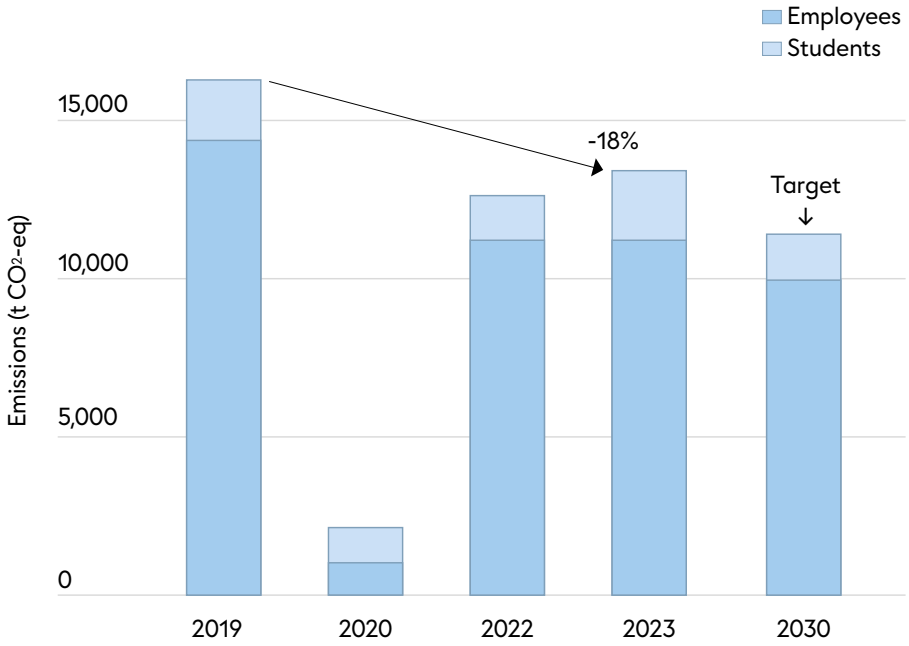
Gigawatt hours (GWh)



SWISS GOVERNMENT'S TARGETS FOR AIR TRAVEL

The Swiss government has set specific targets for the reduction in carbon emissions from air travel. The following graph shows EPFL's emissions from air travel only, although the travel category discussed elsewhere also includes train and car travel.

Travel-related carbon emissions



→ In our Climate & Sustainability Strategy, we set a target of cutting carbon emissions from EPFL travel (of all kinds) by 30% (from 2019 levels) by 2030.

→ The drop in emissions in 2020, 2021 and 2022 partly reflects the pandemic-related restrictions on air travel.

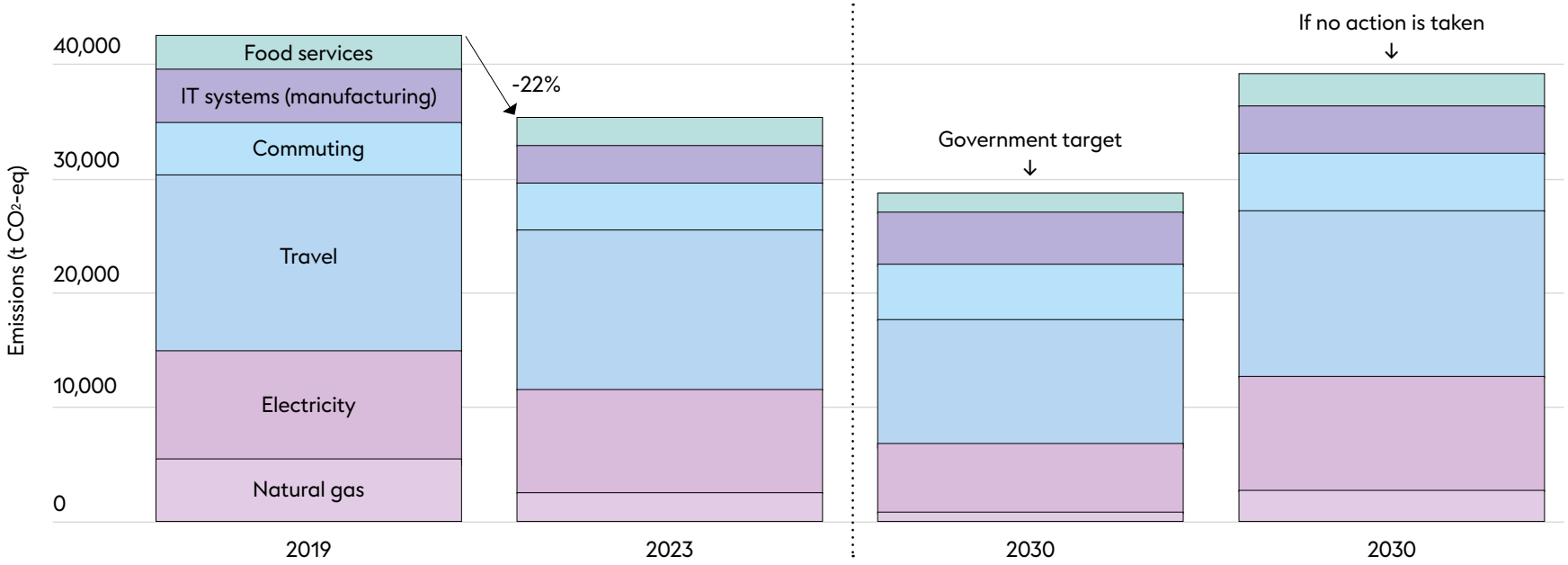
→ Travel-related emissions were 18% lower in 2023 than 2019.

→ The post-pandemic rebound in emissions we expected to see in 2023 didn't materialize, which suggests EPFL community members intentionally travelled less. This was one of our goals with our new travel policy, for instance. If this encouraging trend continues, we won't need to introduce stricter rules.

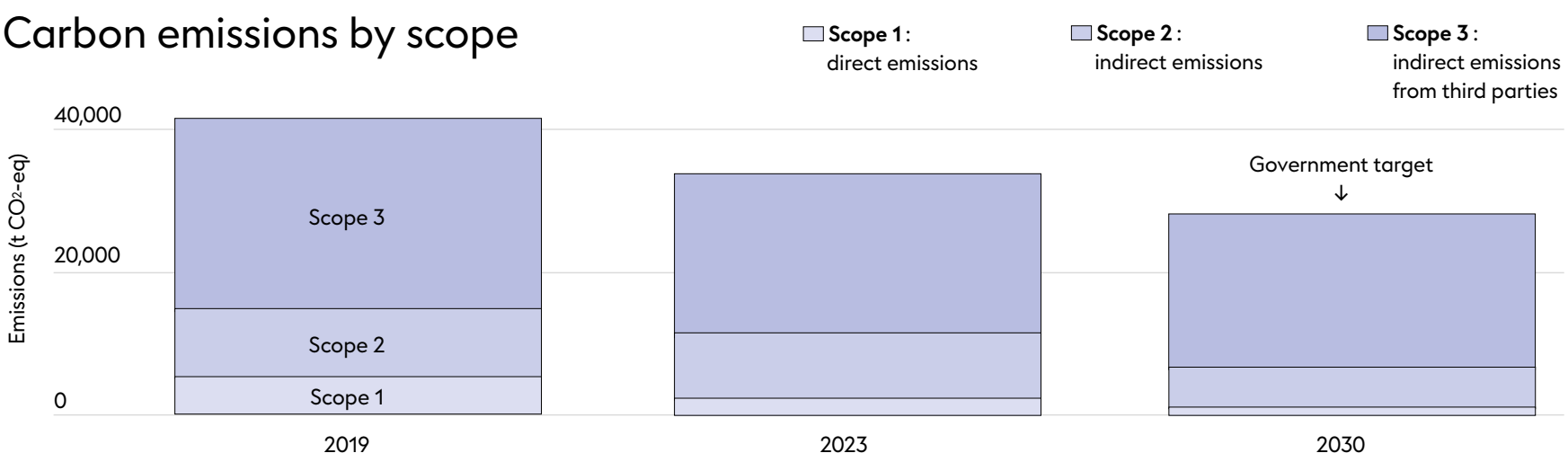
↓ Maison de la Mobilité, which opened in October 2023

TARGETS BY CATEGORY AND SCOPE

Carbon emissions by category



Carbon emissions by scope



ENERGY AND BUILDINGS

The renovation of our heating plant in 2022 nearly eliminated our need for fuel oil (consumption dropped 95% between 2006 and 2023). We still use natural gas, mainly for our animal facility and for premises we rent from the University of Lausanne (UNIL). In 2025, UNIL will install a new heating plant with heat pumps that draw water from Lake Geneva, which will further lower our requirement for natural gas.

The energy-saving measures we introduced in the winter of 2022–2023 along with energy-efficiency improvements reduced our need for electricity, but this was offset by the growth of our School. In particular, new heat pumps (to replace fuel oil) and the increased use of computers and data centers for research purposes pushed up our power consumption.

Highlights

We launched the Solar Steam project, funded by the Solutions4Sustainability (S4S) initiative, to investigate whether we can replace some of the natural gas used for sterilization and climate control at our animal facility with solar-power-generated steam. The steam would be fed to the existing gas-fired-boiler system as a cleaner alternative.
The technology employs a selective absorber coating developed and patented at EPFL.

We drafted a Masterplan for renovating and expanding the capacity of EPFL buildings and facilities, and plan to publish it in 2024. It provides a framework for prioritizing renovation work taking into accout the challenges of climate change.
Based on the results of feasibility studies we conducted in 2023, we plan to install 6,300 m^2 of solar panels by end-2024, for an estimated power generation capacity of 1.7 GWh/yr.

Completed actions

→ In the RFP for our new Advanced Science Building and the Esplanade redevelopment, we added the requirement that the buildings meet the DGNB sustainability certification criteria.

→ In the area of solar energy, we conducted feasibility studies for:
› The installation of 4,500 m^2 of solar panels on the noise barriers along the highway, for an estimated power generation capacity of 2.25 GWh/yr.
› The installation of 3,750 m^2 of solar tiles on the EPFL Pavilions (formerly ArtLab) building, for an estimated power generation capacity of 0.65 GWh/yr.

Actions under way

→ Installing 6,300 m^2 of solar panels on the rooftops of campus buildings, for an estimated power generation capacity of 1.7 GWh/yr.

→ Replacing existing light bulbs with LEDs. 35% had been switched by end-2023; the target is 50% by 2023.

→ We're currently replacing the lights in the:
› Rolex Learning Center parking garage (which will save 170 MWh/yr, or 90%).
› INF 1-2-3 lecture halls (which will save 11.5 MWh/yr, or 70%).

→ Carrying out a study on how to reduce the need for heating on our campus buildings.

→ Continuing the Solar Steam project (part of the S4S initiative).

→ Continuing research to develop new plasma-based sterilization methods that will also save energy at our labs (part of the S4S initiative).

Future priorities

→ Publish the Masterplan for renovating and expanding the capacity of EPFL buildings and facilities.

→ Prioritize and implement specific renovation campaigns (e.g., for LED lighting and energy-efficiency renovations).

→ Investigate alternatives for the natural gas used at our animal facility.

New action items

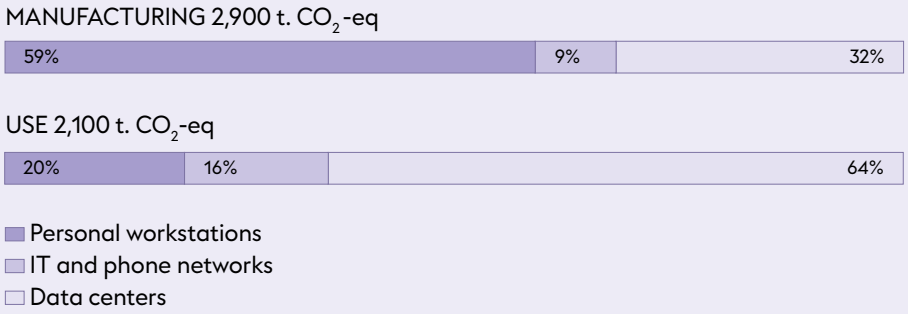
→ Develop and implement energy-saving measures to be adopted on an individual and School-wide level, and which will be renewed annually.

IT SYSTEMS

At EPFL, we're getting better at estimating the carbon emissions associated with our IT systems, including our equipment and data centers. In addition, thanks to targeted awareness campaigns, stakeholders are joining in on our efforts to promote a sustainable IT strategy.

However, our need for computing power – especially when it comes to AI – is growing exponentially, for both research and education. We can meet this need in a responsible way by adopting coherent, standardized IT policies across our campuses that are designed to extend our equipment's lifespan and minimize the power used by our computing and computational science facilities.

Breakdown of EPFL's IT-related carbon emissions
IT systems accounted for 10% of our partial emissions in 2022.



Highlights

In May 2023, we opened our Point Smart repair center, where EPFL students and staff can have their smartphones and tablets fixed at cost price. The goal is to extend the lifespan of these devices.

In 2024, we migrated Point Smart to Poseidon, our existing laptop repair service. 360 smartphones have been repaired since Point Smart was launched.

Completed actions

- → We set up a Research Computing Platform to pool data storage and computing capabilities, in addition to our existing SCITAS service.
- → We added sustainability criteria to our main IT system RFPs (e.g., for SCITAS servers, Plexus and network equipment).
- → We extended the lifespan of IT equipment at our central services by 5–6 years.
- → We updated our Sustainability and Mobility & Travel websites in accordance with environmental criteria.
- → We carried out a number of awareness campaigns targeting both experts and non-experts.

Actions under way

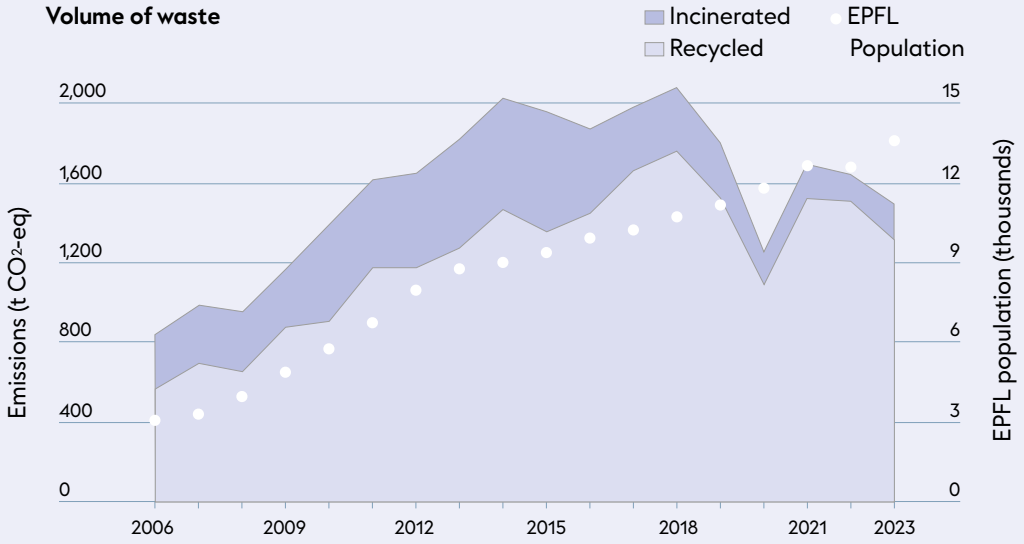
- → Performing more detailed impact assessments of our IT equipment.
- → Progressively adding carbon emissions data from our data centers, data management systems, cloud services and computing systems to our total emissions figures.
- → Carrying out the Heating Bits project (part of the Solutions4Sustainability initiative) to explore how we can run our data centers with as little carbon emissions as possible.

Future priorities

- → Expand our sustainable IT strategy by forming two working groups to examine options for extending our equipment's lifespan and cutting the power use of our data centers.
- → Extend the lifespan of IT equipment at our schools and colleges by 5–6 years.
- → Encourage research labs to use the carbon emissions calculator to measure their environmental impact.
- → Develop an awareness campaign on scientific data management.

PROCUREMENT AND WASTE MANAGEMENT

Our procurement and waste management policy follows a circular-economy approach that includes challenging our needs, extending the lifespan of our equipment and recovering our waste. As part of this effort, we're forming partnerships with suppliers who share our vision and running awareness campaigns to guide our community towards sustainable practices.



Highlights

We introduced a sustainable procurement charter and created a website to communicate this policy to our staff and suppliers. The goal is to provide greater clarity and bolster our efforts in this area.

We reduced the volume of waste on our campuses by 17% between 2019 and 2023, even though the number of people at EPFL grew by 13% over the same period.

Completed actions

- → Half of the RFPs we issued in 2023 contained sustainability criteria (up from 30% in 2022).
- → We created a "toolkit" grouped by category to help our community make sustainable purchases.
- → We set up EcoPoints in the Alpole, STI, ENAC, IC and Microcity buildings.
- → We shrank the volume of waste on our campuses by 9% between 2022 and 2023.
- → We developed a guide for using the recycling bins that EPFL community members can rent for events.

Actions under way

- → Examining the possibility of setting up an in-house online marketplace for second-hand equipment, with the goal of concept approval in 2024.
- → Assessing the CSR performance of our 5–10 biggest suppliers for each purchasing category.
- → Improving how we manage organic waste from our restaurants.
- → Expanding the types of waste recycling at our waste collection centers.

Future priorities

- → Develop an in-house online marketplace for second-hand equipment and run a pilot test.
- → Work closely with our biggest suppliers in each category to help reduce the environmental impact of our purchases.
- → Implement a system for assessing the sustainability of all our suppliers.
- → Establish best practices that encourage our community members to ask whether they really need something before they buy it.
- → Renovate our central waste collection site as part of the Coupole-Esplanade redevelopment.
- → Set up permanent waste collection centers and communicate on our three levels of waste management (EcoPoints, waste collection centers and central waste collection site).
- → Set up even more EcoPoints on our campuses.

New action item

- → Extend our sustainable procurement policy to include over-the-counter contracts and informal requests for quotes.

FINANCES AND SUSTAINABLE PARTNERSHIPS

Our institution receives funding from many different organizations that support our educational programs, research, facilities and events. To make sure this funding is coherent with our values, we plan to develop a clear governance and partnership policy based on demanding environmental, social and governance (ESG) criteria.

Completed actions

→ We formed a Global Ethics and Partnerships Committee.

→ We drafted an initial list of potentially sensitive financial partners and industries.

→ We published our Socially Responsible Investment Charter.

→ We began making investments in line with the new Charter.

Actions under way

→ Our working group is continuing to review and update our Charter, and we regularly adjust our sustainability-oriented investments.

Future priorities

→ The Global Ethics and Partnerships Committee will regularly update our list of potentially sensitive financial partners and industries.

→ We will continually monitor compliance with the criteria set forth in the Socially Responsible Investment Charter.

Highlights

We formed a Global Ethics and Partnerships Committee in 2024 to examine the potential environmental, political, social, governance, ethical and military risks associated with new partnership opportunities, such as donations, R&D contracts with businesses, sponsorships and research chairs.
We have also committed to making socially responsible investment decisions that are aligned with our ethics and environmental and social values. To provide greater transparency on this process, we have published a Socially Responsible Investment Charter that includes strict criteria regarding investments in fossil fuels (oil, natural gas and thermal coal) and the exclusion of companies that generate over 10% of their revenue from the extraction, transmission or distribution of fossil fuels or from fossil-fuel-based power generation.

↓ Urban furniture set up on our Lausanne campus in 2023

TRAVEL

We introduced a new travel policy that aims to cut the carbon emissions from our international travel by at least 30% (relative to 2019 levels) by 2030. We're also running awareness campaigns about the social and environmental impacts of air travel, encouraging our community to reduce intercontinental flights and to travel by train to destinations in Europe, upgrading our videoconferencing systems so that they're a viable alternative to intercontinental trips, and expanding the services available at EPFL to support responsible travel, such as by setting up a central travel agency and coordinating efforts with public transport operators.

↓ Travel Less Without Loss campaign, fall 2023

Highlights

Thanks to our new sustainability-oriented travel policy and central travel agency, our community can now benefit from professional support and systems while remaining compliant with Swiss law, meeting due diligence requirements and working towards the Swiss government's climate targets. Between 2019 and 2023, the number of flights taken for EPFL travel fell by 34% and our air-travel-related carbon emissions shrank by 18%.

Completed actions

→ We set up a central travel agency operated by Kuoni BT to help EPFL community members book flights.

→ We updated and simplified the process for granting public transport tickets to students carrying out a master's or semester project at another EPFL campus.

→ We increased our subsidy for Swiss GA Travelcards (2nd class) from 15% to 25% of the regular price.

→ We approved plans to create a single reservation system for all EPFL meeting rooms.

→ We ran an awareness campaign called Travel Less Without Loss to highlight the damaging impacts of air travel.

Actions under way

→ Monitoring the implementation of our travel policy, improving the services we offer and stepping up our communications in this area.

→ Migrating all EPFL meeting rooms to a single reservation system.

→ Drafting a policy for the purchase and use of EPFL vehicles.

Future priorities

→ Implement an online travel booking system, and train our administrative staff on it.

→ Clarify and simplify the procedure for purchasing national and international train tickets.

→ Form a working group to examine how we can introduce a mandatory climate contribution.

New action items

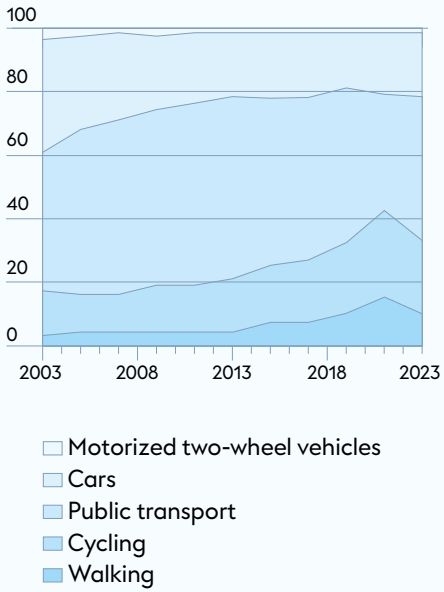
→ Troubleshoot and improve our online booking systems for Swiss and international train travel.

→ Pool and streamline our EPFL car fleet and switch to electric vehicles.

COMMUTING

We actively encourage our community members to use clean transportation methods and have rolled out a number of measures to help them. These include working with public transport operators to expand their services, increasing our subsidies for Swiss Travelcards and promoting cycling through events (e.g., Bike to Work and bike repair classes), bicycle subsidies, our Point Vélo repair shop and new bike racks. We also encourage walking, and we incorporate amenities for pedestrians and people with reduced mobility into our construction and renovation projects.

Modal share of transport at EPFL, 2003–2023 (as %)



Highlights

Through an initiative involving local universities and the Lausanne public transport operator, public bus line No. 1 was extended to the EPFL campus, improving the service available to our commuters. Over 3,000 people take this line on average each day.

We will issue an updated parking policy on 1 January 2025 designed to allow the occasional use of cars for getting to campus. The policy will better match the supply of parking to demand and support the growth of our School, while promoting the creation of new public spaces.

Commuting is the only category in which our carbon emissions increased (by 7% since 2019), which can be attributed to a 3 percentage-point increase in the modal share of cars, partly as a consequence of the pandemic.

Completed actions

- → We carried out an assessment and developed an action plan to make our campuses more accessible to people with reduced mobility.
- → In 2023, our Point Vélo repair shop serviced carried out 7,747 repairs and sold 513 bikes.
- → We created 332 additional bike parking places in 2023, increasing the total by 10%.
- → We held bike repair classes on our associated campuses.
- → Public bus line No. 1 was extended to run from the Lausanne train station all the way to the EPFL campus.
- → We opened the Maison de la Mobilité transportation center in association with Lausanne-area public transport operators.
- → We carried out an assessment and estimated the carbon emissions of deliveries at EPFL.

Actions under way

- → Taking part in a preliminary study for the M1 metro line and helping to develop a 2040 roadmap for public transport in western Lausanne.
- → Updating our parking policy and improving the EPFL carpooling website.

Future priorities

- → Publish a roadmap for transportation and public spaces at EPFL.
- → Form a committee to examine parking issues and implement our new parking policy.

New action items

- → Hold coaching sessions on commuting (for those who drive and cycle to campus).
- → Design and build more bike racks on our Lausanne campus.
- → Expand our Point Vélo bike repair shop.
- → Run pilot projects to promote clean transportation at EPFL (through a living lab approach).

FOOD SERVICES

We are continuing to implement our sustainable food-services strategy that aims to dramatically change how we eat on campus, emphasizing meals that are nutritionally balanced and affordable and have a low environmental impact.
Our food-services and sustainability managers visited five universities in England in early 2024 and came back with fresh ideas on how to improve our supply chains and encourage our community to choose vegetarian dishes.

↓ Appetizers prepared in EPFL kitchens, July 2024

Highlights

We slashed the amount of food waste on our campuses by over 50%, from 51 g/plate in 2020 to 24 g/plate in 2023. We're continuing these efforts by trying out new measures. In 2023, we developed a monitoring and decision-support system that automatically compiles restaurant data (purchases, waste, energy use, sales and nutritional values). Our approach is to use EPFL as a living lab to study people's eating habits and the associated environmental impacts. Two such projects are MegaBites (part of the Solutions4Sustainability initiative) and Food & You. The monitoring phase will conclude at the end of 2024.

Completed actions

- → We brought in chefs from Hiltl restaurant to train all our chefs on vegetarian cooking.
- → We ran vegetarian cooking workshops for our staff.
- → We worked with the Castor Freegan student club to develop vegan meals using unsold food from Migros (around 350 people served once a month).
- → We ran targeted awareness campaigns (e.g., Food Cafés, and promoting the organic produce from Goupil farm that's used at our cafeterias).
- → We began monitoring the carbon emissions associated with food sold in our vending machines, using technology that makes data collection easier and more transparent.
- → We eliminated disposable cups from our coffee machines.
- → We added the option of free (meatless) second servings for our entire community.

Actions under way

- → Continuing the MegaBites project to use data science to improve the sustainability of our food services.
- → Continuing the CO2 Monitoring & Reduction in Food Systems Through Circular Economy project (part of the Solutions4Sustainability initiative), which employs robotics and digital twins.

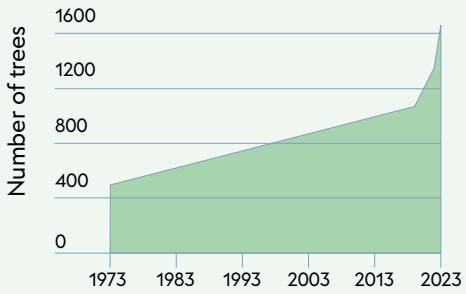
Future priorities

- → Finalize our monitoring and decision-support system.
- → Train EPFL chefs on vegan (in addition to vegetarian) cooking.
- → Use nudging to encourage our community to choose vegetarian dishes (with the results measured by MegaBites).
- → Promote local, organic produce grown at Goupil farm.
- → Improve the sorting of organic waste at our restaurants.

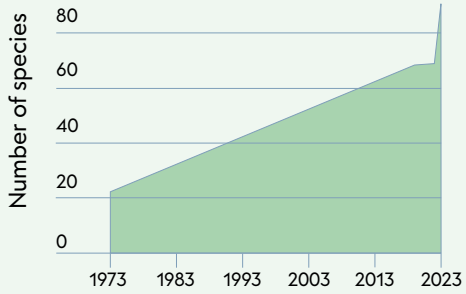
RESILIENT CAMPUSES

Our Lausanne campus was built in the 1970s based on a novel concept, with the architecture and landscaping modeled after a small city where nature and buildings can merge seamlessly. However, as more buildings went up on campus to support our School's growth, the amount of paved-over surface area increased while that of outdoor spaces and vegetation decreased. We now intend to change that trend by leveraging the full potential of our natural surroundings, showcasing our heritage buildings, creating a pleasant living and working environment for our community and making all our campuses resilient to climate change.

Growth in the number of trees



Growth in tree diversity



Highlights

We further rolled out our Campus Piéton project to turn the road between Route des Noyerettes and Avenue Piccard into a pedestrian-only area. The zone now has a speed limit of 20 km/h along with urban furniture and potted trees, giving a glimpse of the developments to come. The roadwork will take place in 2025.

We also continued our Plan Canopée project to plant 1,000 trees on our campuses by 2029. So far, we've planted 400 of them, including 200 since February 2023.

Completed actions

- → We implemented our forest conservation program.
- → We planted 200 trees and 400 shrubs.
- → We improved biodiversity on our campuses by planting more pollenating plants (through a "blossoming campaign" and by creating four habitats specifically for wild bees).
- → We carried out Phase 1 of the biodiversity redevelopment of the bike-rack rooftop on the northern part of our Lausanne campus.
- → We completed the initial renovations to improve the accessibility of our public spaces (elevator installed on the Diagonale, connecting it to the bus No. 1 stop).
- → We set up more urban furniture and equipment for sports and games.

Actions under way

- → Conducting studies to build a wet habitat on our Lausanne campus.
- → Examining the possibility of creating biosolar rooftops as part of the installation of solar panels on our CH, PH, CE and CM buildings.
- → Conducting studies for a comprehensive rainwater management plan that will reduce the impact of runoff on our natural surroundings, increase our water resources, improve infiltration, promote biodiversity and reduce the risk of flooding caused by runoff.

Future priorities

- → Develop a roadmap for transportation and public spaces at EPFL, consistent with our Masterplan for renovating and expanding the capacity of EPFL buildings and facilities.
- → Add guidelines on preserving our protected heritage buildings as maintenance is performed, in order to improve the outdoor spaces in this historical part of campus.
- → Issue a call for architecture bids for the next phases of our Campus Piéton project.
- → Further roll out our Plan Canopée project.
- → Finalize our comprehensive rainwater management plan.
- → Build a sizable wet habitat on our Lausanne campus.
- → Install biosolar rooftops.

COMMUNITY AND AWARENESS-BUILDING

The transition to a sustainable society goes hand in hand with encouraging behavioral change and creating a climate of respect and wellbeing – essential elements of any responsible organization. At EPFL, social responsibility is a key pillar of our holistic, long-term approach to sustainability. This includes creating an inclusive, supportive working and learning environment where diversity is valued at both the individual and group levels and where people feel a sense of belonging. We want everyone in our community to not only thrive, but also contribute to our collective effort to respond to societal and environmental challenges.

Highlights

We supported individuals and student associations that are spearheading sustainability and diversity initiatives, in order to strengthen our community's engagement, forge ties among our members and leverage synergies. We want to make it possible for anyone wishing to contribute to our School's efforts to do so, based on their activities as a student or employee.
We also worked to address mental health issues with a view to developing a School-wide strategy. To that end, we conducted a survey of all our community members and will use the results to develop targeted measures.

At EPFL, we aim to continually reduce psycho-social risks and have improved our system for filing complaints, such as by setting up the Trust and Support Network and the Respect Compliance Office.
We further pursued our gender-equality efforts; our 2023–2024 Gender Monitoring Report indicates that the percentage of female professors (tenure-track, associate and full) grew from 12% in 2014 to 25% in 2023. And 37% of the new professors hired between 2017 and 2023 were women.

Completed actions

- → We replaced our Respect Cell with the Respect Compliance Office.
- → We introduced new policies on psycho-social risks and whistleblowing.
- → We launched the Trust Point app.
- → We formed a Trust and Support Network Council to align the various bodies involved in support at EPFL.
- → We formed a mental health task force and added the topic of mental health to our Health Days event.
- → We introduced a week-long break in the fall semester, starting in 2024.
- → We launched the EPFL Without Barriers initiative to break down social and environmental barriers and come up with recommendations.
- → We introduced a new funding system for student associations working on sustainability, equality or diversity projects.
- → We held a photography exhibition that showcased women's contributions to science and engineering.
- → We published a guide to holding sustainable events.

Actions under way

- → Developing a series of continuing education courses on mental health, targeted to different groups of people.
- → Rolling out our Inclusive Name Change initiative enabling everyone at EPFL to use their preferred name.
- → Organizing activities to heighten our community's awareness of nature.
- → Developing a process for identifying EPFL's values.

Future priorities

- → Define the priority steps in our EPFL Without Barriers initiative.

New action items

- → Incorporate sustainability into our organization-wide initiative on EPFL's values.
- → Analyze how sustainability issues could be included in our hiring process and new job descriptions.

GOVERNANCE, MONITORING AND REPORTING

We set up a governance, monitoring and reporting system on sustainability that covers our entire organization. The goal is to oversee how sustainability is incorporated into our degree programs and services at all our schools and colleges and on each campus. The main components of our system are described below.

Gouvernance

→ The EPFL Sustainability unit will be placed under the Vice Presidency for Support to Strategic Initiatives effective 1 January 2025; this will help us better align our sustainability initiatives with our School's research activities.

→ The EPFL Equal Opportunity Office will be placed under the Vice Presidency for Human Development effective 1 January 2025.

→ We will form a sounding board made up of both in-house and outside experts to provide feedback in sustainability issues.

Decentralization

→ We appointed sustainability managers within individual schools, so that we can better meet the needs of their specific disciplines and communities; STI and ENAC will soon have sustainability managers, in addition to SV and SB. We're also considering setting up sustainability units at our associated campuses.

→ We created several new positions that serve as an interface between EPFL Sustainability and various departments. This will help us better understand the everyday needs of those departments and expand our scope of action.

Joint initiatives

Pooling our efforts with other organizations in Switzerland and abroad will be essential if we are to meet our climate targets. Together, we can learn from our successes and failures. EPFL Sustainability is an active member of several alliances:

› The swissuniversities sustainability committee
› The EuroTech Sustainable Society focus area
› The International Sustainable Campus Network (where we serve as president)

Reporting and monitoring

We've set up reporting and monitoring systems to track our progress on both qualitative and quantitative indicators. These data will enable us to track how we're doing relative to our objectives and to communicate on our results. We're in the process of adding:

> a reporting system grouped by topic, available on the EPFL Sustainability website
> an additional monitoring system (on top of the one for carbon emissions) focused specifically on topics like water and biodiversity

Rankings

We began participating in sustainability rankings in 2023, when the QS Sustainability Ranking was no longer optional.

→ Our QS Sustainability Ranking jumped from 341 in 2023 to 114 in 2024, thanks to enhanced reporting, the adoption of our Climate & Sustainability Strategy, and several targets that were reached.

→ Results of the 2024 WWF sustainability survey of Swiss universities weren't yet published at the time of writing this progress report. In the previous survey, in 2021, we were in the second highest category ("upper middle").

↓ ISCN conference in Lausanne, June 2024

ACKNOWLEDGEMENTS

We would like to thank everyone at EPFL who carefully reviewed this progress report, including:

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- → the Vice Presidency for Responsible Transformation
- → the Sustainability Office at the School of Life Sciences
- → the Sustainability Office at the School of Basic Sciences

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← Garden on the second floor of the CE building, spring 2024