

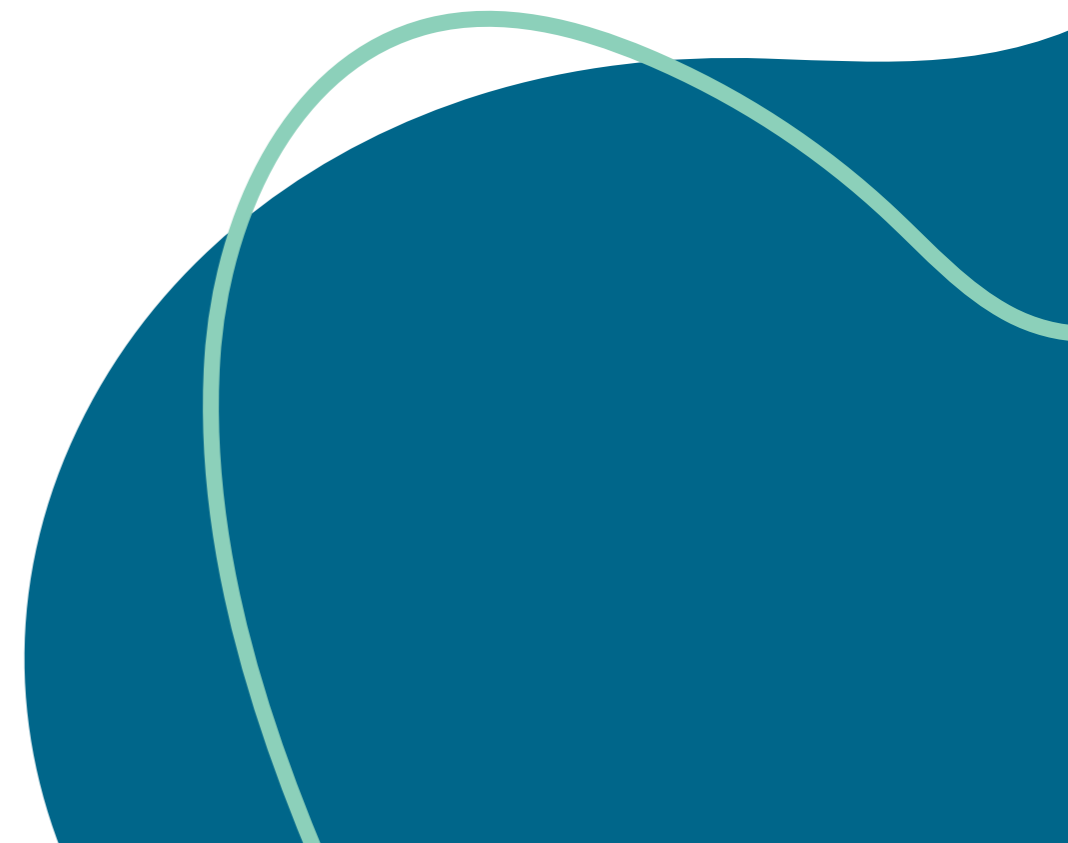
Highlights 2024





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*Jean-Philippe Bonardi,
E4S Co-Managing Director / HEC-UNIL*

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Message from our co-Directors

The E4S Center was launched 5 years ago to mobilize the joint forces of the University of Lausanne, IMD and EPFL to work on the transition towards a more sustainable and resilient economy. A lot has happened since then in our core areas of research, teaching and innovation. If the path is still a long and difficult one, our center is now a well-established brand within our three campuses and our ecosystem, and our impact is tangible on several important pillars of the transition at hand.

This report sheds light on some of the key initiatives that were launched, pursued, or completed in 2024. Several areas of competency have now emerged, including the creation of a methodology to calculate the True Cost of Food, and the Green Value of Real Estate, which accounts for environmental and health externalities or risks. Additionally, the role of Sustainable Finance and Accounting in driving the transition continues to gain prominence.

About 70 students have now graduated from our Master in Sustainable Management and Technology program, contributing to the transformation of organizations across Europe. With more experience

and perspective on the program, we have included electives in the 3rd semester—an addition highly appreciated by the students. Meanwhile, our Transformative Projects, developed in collaboration with companies, remain a resounding success, benefiting both students and corporate partners.

Our events continue to reach a wider audience every year. Between our flagship event, Showcase 2030, and new formats, such as action labs and community meet-ups, we have successfully sparked collaboration between academia, industry, and civil society, fostering innovative solutions to shared challenges. And many other exciting projects are underway!

All of this would not be possible without the support of our three institutions and of our partners, whom we would like to thank dearly. The sky is still the limit for what E4S can become, and we also thank all the people who are engaging with us on a day-to-day basis. Ultimately, it is our community that will make us a force for change.



About E4S

Enterprise for Society (E4S) is a research and action center created by three institutions of academic excellence: the University of Lausanne through its Faculty of Business and Economics (HEC-UNIL), the Institute for Management Development (IMD) and the École Polytechnique Fédérale de Lausanne (EPFL), under the stewardship of its College of Management of Technology.

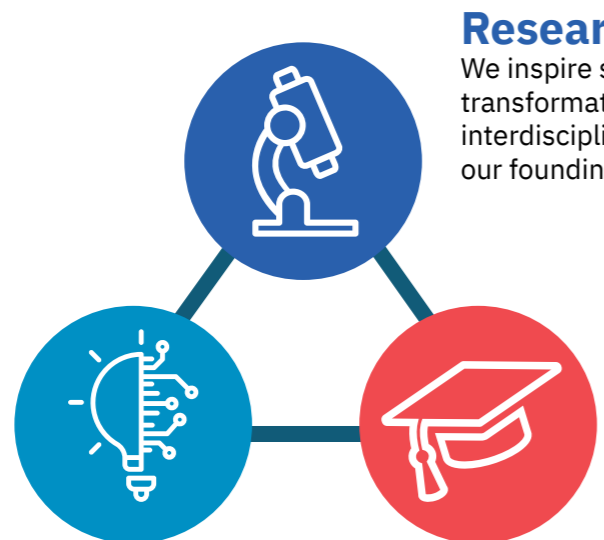
Our Mission



“To inspire and activate the transition to a resilient and inclusive economy within planetary boundaries, seizing the opportunities and addressing the challenges raised by scientific and technological change.”

[Discover more on the E4S website](#)

We pursue this mission through three main activities:



Research

We inspire social and economic transformation by supporting interdisciplinary research across our founding universities.

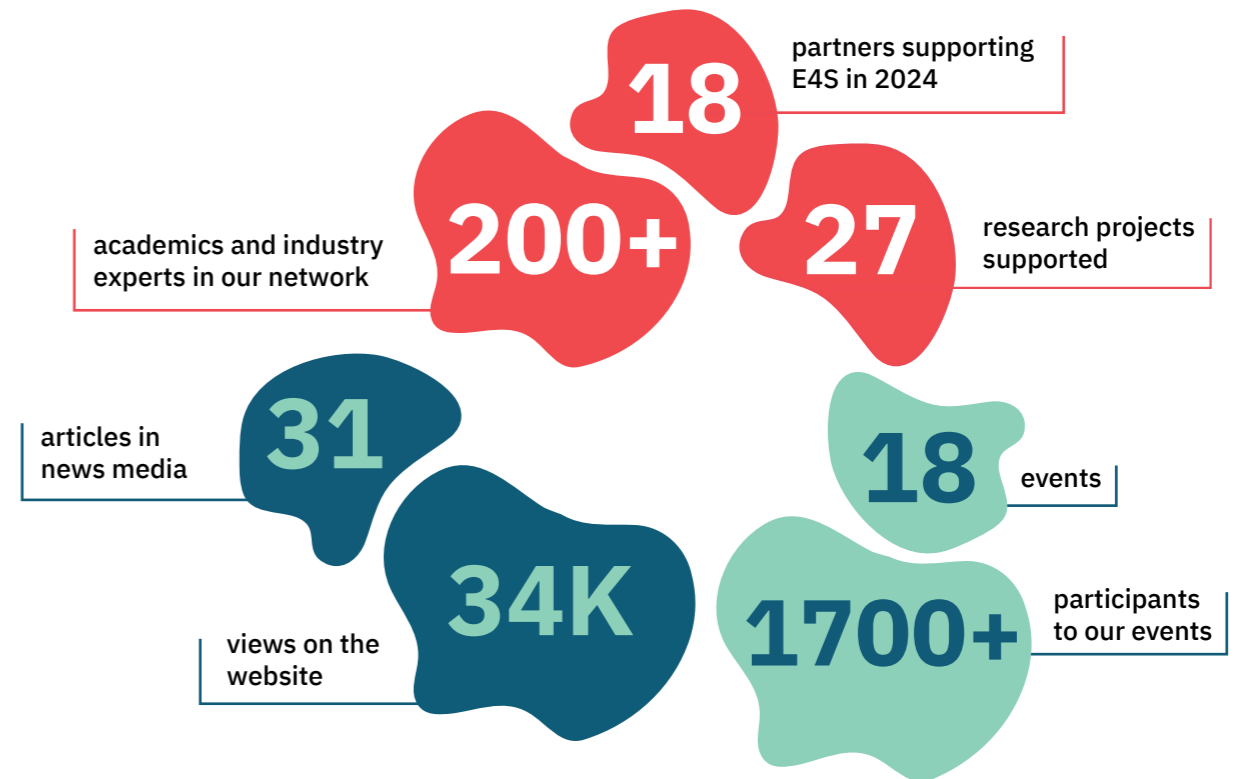
Activation

We activate change by leveraging interdisciplinary research and igniting partnerships between academia and industry to drive sustainable change.

Education

We train the next generation of responsible leaders by promoting a Master’s degree in Sustainable Management and Technology – a joint degree offered by HEC-UNIL, IMD and EPFL.

Our Year in Figures



Research

Snapshot of selected research supported by E4S in 2024

Towards digitalization for sustainable and resilient agriculture: Climate change impacts on agricultural suitability in Switzerland

This project aims to assess how climate change will alter crop suitability across Switzerland and how tools like digital data-driven technologies can inform and guide agricultural policies.

Key figures

Mapping crop suitability via the establishment of functional relations between crop yield and environmental factors can be instrumental in identifying hotspot regions for climate-resilient crop production and informing future agricultural planning.



[Discover the research project](#)

Enhancing Fairness in digital health by improving representation in healthcare data

The study seeks to understand under what conditions patients are willing to share personal data, emphasizing factors like perceived benefits, stigma, and transparency. It also investigates how AI and digital tools can enhance healthcare access and where these technologies can be integrated into patient care. Initial findings reveal significant barriers in Nigeria, including limited AI awareness, poor healthcare access, mistrust, and stigma.

Key figures

By embracing collaborative approaches and focusing on inclusive data collection and sharing, stakeholders can create a healthcare environment in Africa that harnesses the full potential of AI to deliver improved health outcomes for all.



[Discover the research project](#)

Inspiring social and economic transformation

“Adapting agriculture to climate change is crucial to ensure food security for a growing population. In an era of increasing data availability, untapping the potential of data-driven digital technologies to assess climate-driven shifts in crop suitability can inform a fundamental redesign of agricultural systems.”



— Sara Bonetti
Assistant Professor of hydrology,
EPFL

“Successful collaborative frameworks in Africa prioritize inclusivity, strategic partnerships, and sustainable community engagement. By embracing these principles and inclusive data practices, stakeholders can unlock AI’s potential to improve health outcomes for all.”



— Yash Raj Shrestha
Professor of information
systems, UNIL-HEC

New healthcare models to reduce costs and improve care quality in Switzerland

How to tailor capitation systems to the Swiss context, in order to better finance the healthcare system without compromising quality? To answer this question, this project studies two types of models in which preventive care plays a crucial role and that aim at reducing premiums and expanding access to quality healthcare.

Key figures

To address the financial vulnerability of the Swiss healthcare system, individual initiatives are emerging. Customers engaging with these initiatives did not see their premiums increased in 2025 compared to 2024, belonging to the small fraction of 0.6% of unchanged premiums.



[Discover the research project](#)

The “green value” of Swiss real estate

This research addresses the challenges faced by building owners and investors in evaluating energy renovation projects, focusing on how to balance financial returns, risks, and sustainability goals.

We propose a comprehensive methodological framework for evaluating renovation strategies that integrates economic, energy, and construction parameters, factoring in the lifespan of building components and future legislative scenarios.

Key figures

Building resilience to regulatory changes can impact valuation by up to 20%, highlighting the importance of incorporating future compliance scenarios into retrofitting strategies.



— Alix Rey
Research Fellow in Healthcare
Management and Economics, IMD

“Healthcare costs are rising significantly. To develop more affordable and sustainable care, it is essential to test innovative healthcare models that reshape financing and incorporate prevention and coordination of care.”

“To achieve climate objectives, the credibility and certainty of long-term policies are crucial factors in driving investment decisions and fostering commitment to sustainable solutions.”



— Alexandre Pauli
Scientific collaborator,
E4S / EPFL



[Discover the research project](#)

Scenario modelling of the carbon fiber industry in the transition to NetZero 2050

The goal of this project is to propose quantified sustainability initiatives and associated roadmaps (work in progress) to enable step-wise transformation of the carbon fiber value chain while it also invests to meet sustained market growth. This will require investment in new technologies, together with novel ways of collaborating in the carbon fiber value chain especially around product labelling, reverse logistics, and recycling infrastructure.

Key figures

Work-in-progress has mapped mass flows of carbon fiber in the economy from 1980 to 2050 and is building a simulation of the cumulative industrial CO2e footprint and associated decarbonization strategies including monetary flows to generate road maps and recommendations for industry.



[Discover the research project](#)

“The materials sector is a key driver in our impinging planetary boundaries (including novel entities) and is in need of urgent, widespread and fundamental transformation requiring modified mass-flows together with associated capital investment in best carbon footprint materials and to drive increases in circularity.”



— **Martyn Wakeman**
Scientist and lecturer in advance composites, EPFL

“Accounting for the true cost would foster a less degraded environment, fairer remuneration for farmers, and a healthier population”.



— **Veronica Petrencu**
Scientific collaborator and project manager E4S / UNIL-HEC

True Cost of Food in Switzerland

The mission of the project is to contribute to the transformation of the Swiss food system by developing a comprehensive true cost accounting (TCA) framework for food. TCA measures and values the hidden impacts of food production and consumption on the environment, society and health. The project aims at understanding TCAF holistically in the Swiss context, by involving the different food system stakeholders.

Key figures

If refined bread consumption incurs hidden costs on our planet and our health, wholegrain bread consumption has significant hidden benefits on our health due to its underconsumption in the current Swiss diet



[Discover the research project](#)

Assessment of pluvial flood-related physical climate risk in Lausanne

This project seeks to quantify physical risk for pluvial flood events in the current and future climates for the Lausanne area. We adopt an interdisciplinary approach consisting of modeling flow depth, flow velocity, exposure and vulnerability at the resolution of individual buildings, and derive a distribution of losses. An interactive platform allowing geographical visualization of various features of risk at the building scale is under preparation.

Key figures

High-priority zones in terms of adaptation efforts are Lausanne Centre-Ville, Lausanne Sébeillon / Malley, and Lausanne Vinet / Pontaise.



[Discover the research project](#)

“Heavy precipitation events are likely to become significantly more frequent and intense, and it is thus prominent for adaptation to quantify flood-related human and economic impacts.”



— **Erwan Koch**
Scientific and Executive Director of the Expertise Center for Climate Extremes (ECCE), UNIL

Corporate Social Performance: Adapt & adopt an innovative accounting framework

The purpose of this project is to unpack the “S” of ESG. Combining field experimental evidence with quantitative and qualitative content analysis, the study shows how organizations can credibly and impactfully measure corporate social performance (CSP) and how can innovative research methodologies address the complexities of grand challenges.

Key figures

Through the 24-hour hackathon, all participants successfully developed actionable Key Performance Indicators (KPIs) for Corporate Social Performance, showcasing the effectiveness of interdisciplinary engagement in addressing ESG challenges.



[Discover the research project](#)

“Measuring progress on addressing grand challenges requires innovative, collaborative approaches that bridge theory and practice, empowering diverse stakeholders in the process. By applying these principles to corporate social performance, we advance impact measurement methodologies and offer practical insights that can inform businesses, policymakers, and academics.”



— **Sophie Bacq**
Professor of Social Entrepreneurship, IMD



Graduation class 2022-2024 (2nd cohort), 5 October 2024, IMD

Education

Training the next generation of responsible leaders

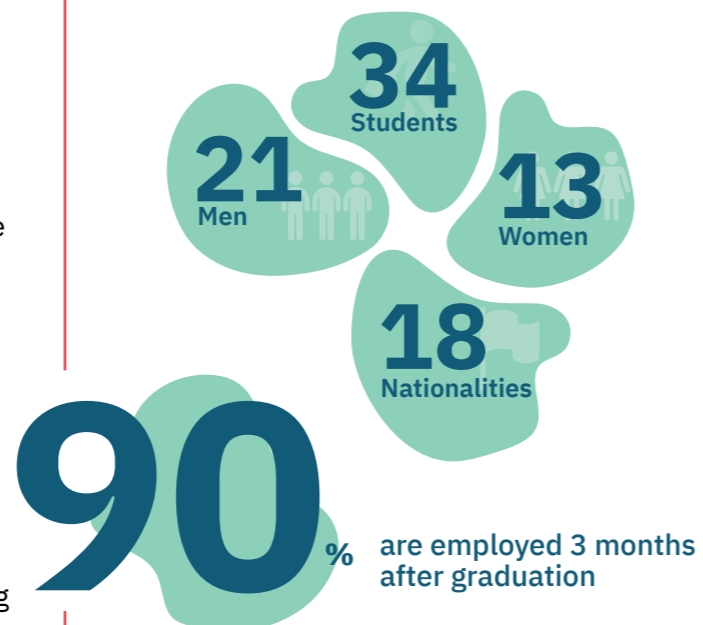
Master's degree in Sustainable Management and Technology

The Master in Sustainable Management and Technology (SMT) is taught by professors from HEC-UNIL, IMD, and EPFL, three world-leading institutions at the forefront of research and education in technology and management. The Master is open to students with a Bachelor's Degree in Engineering, Economics and/or Management and aims at training them to be the leaders of a sustainable, prosperous, and inclusive society.

Students will build competencies along three dimensions simultaneously and in a balanced manner: technology & innovation, economics & management, and tools & skills for developing sustainable solutions.

While the program builds on theory and real-life applications, it is committed to enhancing students' personal and social skills by encouraging interdisciplinary teamwork on practical projects and by systematically mixing students of different profiles. The coursework and team projects are complemented by lectures and workshops led by industry experts, as well as by an internship in the final semester.

About the 2024 Graduates:



Sustainability Project Lead, SBB-CFF

Head of Operations and Climate, Frigg

Research Assistant, Stockholm Resilience Center

ESG Consultant, KPMG

[Learn more about the SMT Master](#)

Elective Courses

In 2024, we introduced a list of elective courses in the 3rd semester to provide students with the opportunity to specialize in subjects of their choice. Students must select courses totaling a minimum of 14 ECTS from a list primarily offered by EPFL and UNIL-HEC. Students from the 3rd cohort (2023–2025) were the first to benefit from this significant curriculum change in Fall 2024.

Advanced sustainable accounting and finance

Business and society - corporate sustainability

Energy conversion and renewable energy

Innovation for construction and the environment

Legal aspect of sustainability & digitalisation

Life cycle assessment in energy systems

Material flow analysis and resource management

Nature finance

Risk analytics

Sanitary engineering for development

Social innovation Lab

Social norms change

Sustainability in the global context

Sustainable transformation and future-fit business

Value chain management in practice

“Building on the power of collaboration, on bright minds like the students, and on a relentlessly curious and inquisitive mindset, we can successfully address the challenges of the 21st century. I am grateful for our interactions with the class throughout the semester, and I certainly learned from our discussions with E4S; students, the leaders of tomorrow. They will achieve great things - no doubt about it.”



— Sébastien Chahidi
Lecturer, Sustainable transformation and future-fit business

“What I value most about this master's program is the exploration of multiple dimensions through hands-on projects. From conducting a life cycle assessment to offering community impact improvement recommendations for an SME, and pitching a nature-based solution to a panel of experts, I conclude this third semester equipped with valuable tools and network to tackle the world's toughest challenges.”



— Mariana Leon Salazar
SMT master student

Transformative Projects

The Transformative Projects are part of the SMT Master program. They aim at solving applied, real-life interdisciplinary issues in the fields of technology, management, and sustainability. Teams of 3-4 students from different disciplines work together on a topic provided by a company with the objective to propose new perspectives or solutions that can have the potential to transform an industry or societal practices.

In 2024-2025, students worked on the following projects in collaboration with our partner institutions:

Enerdrape:
Renewable Energy as a Service and CO2 Savings-Based Business Model

Groupe E:
Diffusion of Positive Energy Homes

Infomaniak:
The Data Center of the Future which already exists!

Romande Energie Services:
Towards a Decarbonized Romandie: A Strategic Plan

RTS:
From Reducing Carbon Footprints in Event Production to Integrating Sustainability into RTS Operations

Swiss Re:
Geospatial Analysis: Assessing Economic Exposure to Price Climate Risk

Sicpa:
Trust in Value Chains as Enabler of Sustainability

Sonceboz:
The Sonceboz CO2 Reduction Project for Electric Motors

Symbiotics:
Enhancing access to impact investment through tokenization

“The Transformative Project allowed me to connect with the industry and experience firsthand the sustainability efforts made by companies. It was a fantastic opportunity to engage in a truly hands-on project.”



— Maxime Sperandio
SMT master student

“The E4S collaboration was a great success for us. The students were very motivated and pro-active and we were able to leverage each other’s knowledge and experience in an efficient, collaborative and creative way. Their results were outstanding.”



— Patrick Saner
Head Macro Strategy,
Swiss Re



[Learn more about the Transformative Projects](#)

SMT Master’s Events

29.01 Final Presentation
Transformative Projects

12.04 Visit
Watches and Wonders, Geneva



24.04 External speaker
Ferdinand Prisi, CEO & Chairman of the Board, Oktogona SA - Creation of environmental viable solution to reduce CO2 use by planting Miscanthus

26.04 Visit
Cartier Manufacture and Maison des Métiers d’Arts, La Chaux-de-Fonds



24.09 E4S Sustainable Future
With Vanessa Rueber, Patagonia - How to build an impactful career

05.10 Graduation ceremony
Class of 2022 – 2024

10.10 External speaker
Frederic James Gentizon, Founder and CEO, Innergia Group SA – A new sustainable (ESG) economic model

11.11 External speaker
Tatiana Fedotova, Founder and Managing Director, LeafTurtle – Water as a sustainable development goal and as a key strategic business consideration



12.12 Poster Conference
Key aspects and current issues of climate change (organized in collaboration with Climact)

Activation

Community Meetups

In 2024, E4S introduced Community Meetups, a dynamic event format designed to bring researchers together across disciplines and institutions. These participatory sessions focused on mapping expertise and exploring trends in sustainability-related topics such as Circular Economy or Biodiversity.



[More on the Community Meetups](#)

Action Labs

Building on past experiences, we expanded and refined the concept of Action Labs in 2024. These interactive sessions are carefully designed to spark collaboration between academia, industry, and civil society, fostering innovative solutions to shared challenges. Inspired by the principles of Human-Centered Design Thinking, Action Labs take participants on a journey from identifying key challenges to brainstorming actionable solutions and activating tangible projects.

Structured into three distinct phases—**Explore, Ideate, and Activate**—Action Labs offer a collaborative space to tackle some of the most pressing sustainability issues. Each session is tailored to a specific topic, enabling participants to co-create impactful projects and foster commitment from diverse stakeholders.

Through these innovative formats, E4S continues to position itself as a catalyst for sustainable transformation, empowering researchers and practitioners to connect, ideate, and act on the challenges of our time.



[More on the Action Labs](#)

Building Communities of Change

These meetups provide an opportunity for researchers to connect, share their current research projects, and discover collaboration opportunities. With a structured format combining expert presentations, Q&A sessions, and networking opportunities, the meetups have already started to break silos and build stronger research communities. As a result, they enable researchers to not only align their efforts but also secure support for their innovative projects.

Community Meetup on Biodiversity	42 Participants	21 Speakers
Community Meetup on Circular Economy	35 Participants	21 Speakers

- Topics covered:**
- **The Future of Impact Measurement in the Era of Mandatory Sustainability Reporting**
This series explored mandatory sustainability reporting’s transformative potential, engaging over 50 participants across academia and industry.
 - **The True Cost of Food**
Hosted during the FoodHack Summit, this action lab introduced the True Cost of Food project to industry actors, engaging over 40 participants in reshaping food system sustainability.
 - **One Wellbeing: The next frontier of sustainability**
This action lab fostered cross-disciplinary dialogues on the intersections of human, environmental, and economic health, involving 34 participants.



— Alisa Gessler
Scientific Collaborator,
E4S / HEC-UNIL

“Our Action Labs invite diverse stakeholders to leave their comfort zones, learn from each other and join forces to accelerate the transition to a sustainable economy.”

The UNIL IMD EPFL Sustainability Portal

The Sustainability Portal serves as an interactive map connecting researchers, startups, and centers from E4S’s founding institutions. By showcasing sustainability-focused initiatives and expertise, the portal has become an essential tool for fostering interdisciplinary collaboration.

In 2024, E4S partnered with DTangle, a spin-off from CERN, to enhance the portal’s capabilities. Together, we are exploring advanced methods for visualizing data, enabling users to gain deeper insights and identify impactful opportunities within the community. This collaboration aims to unlock

the portal’s potential as a powerful resource for researchers, offering intuitive tools to analyze trends and create connections that accelerate the transition to a sustainable future.

“Mapping expertise across UNIL, IMD and EPFL is a critical first step in fostering impactful collaborations. The Sustainability Portal provides a shared platform to connect academic actors, launch new initiatives, and drive systemic change.”



— Julia Bory
E4S Lead Activation Pillar

15000

actions on the website

595

projects listed

2000

new users

514

members

[Discover the Sustainability Portal](#)



Showcase 2030

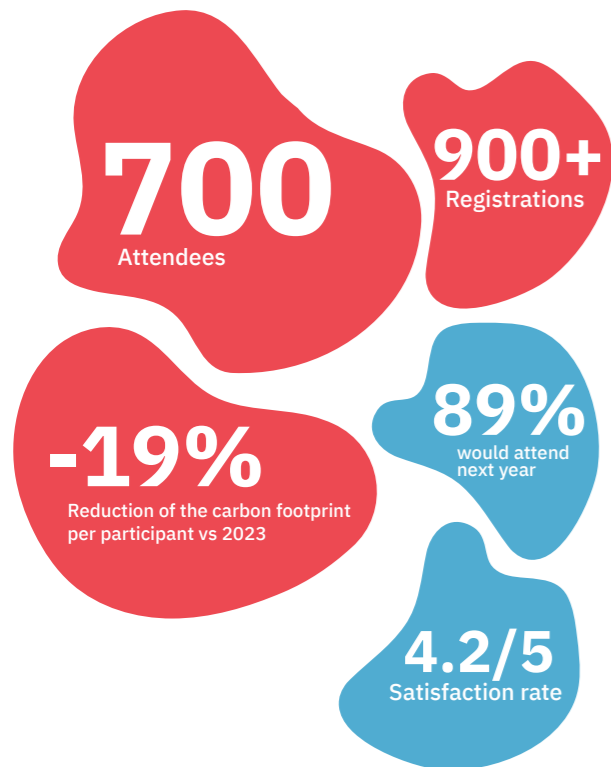
Showcase 2030 is an impact innovation summit that gathers an ecosystem of changemakers, from academia, businesses, start-ups, investors, large organizations, NGOs, policy-makers and the civil society, to engage in a collaborative, action-driven, multi-stakeholder platform to build a net-positive planet.

2024 theme: Embracing sufficiency in innovation
Can technology and innovation help us live within planetary boundaries?

The format

- Inspiring Keynote Speeches
- Experts' Masterclasses
- Immersive Solutions Exhibition

Key Figures Showcase 2024 edition



The concept behind the 2024 edition

Our world faces urgent challenges that demand a profound understanding of the constraints on our systems. Amidst a climate crisis and growing resource needs, the impact of humanity on the environment is at a breaking point.

Technology and innovation can help us break the code for our survival: but what kind of technology and innovation are needed to help us live within planetary boundaries? While tech advancements are crucial, their reliance on physical resources necessitates a conscious evaluation of their impacts. We must make informed choices to build sustainable systems.

This event wouldn't have been possible without our partners : Fondation Valery, the Canton de Vaud, Cleantech Alps, the Office fédéral de l'énergie OFEN, EPFL and Planted.

"Enterprise for Society Center offers us a valuable day of reflection and perhaps solutions for living better together on this planet: what an opportunity! Brilliant, responsible rally as always!"

Congress & Sustainability Manager, Lausanne Tourisme

[Watch the aftermovie here](#)



/ Perspectives : a podcast by E4S

'Perspectives' draws on the diverse knowledge of the E4S network to explore systemic solutions to pressing challenges, such as climate change, biodiversity loss, technological transformation, and social inequality.

The podcast consists of 3-episode mini-series on a specific topic. Each episode explores a different perspective on the same challenge with experts from various disciplines, including business, social sciences and technology.

4 series have been released for a total of 12 episodes

1. The Future of Economic Growth
2. The Energy Transition
3. ESG and Impact Reporting
4. The Circular Economy

[Listen to the podcast](#)



/ Servetia

Servetia is a pioneering initiative dedicated to supporting the adoption of renewable energy through servitisation. Under a pay-per-use model, servitisation allows energy systems to be delivered without upfront capital investments. In 2024, Servetia launched a comprehensive website to guide energy users, businesses, and providers in adopting Efficiency-as-a-Service models. Acting as a consultancy, Servetia bridges the gap between stakeholders, offering tailored support at every stage of their projects.

[Discover more about Servetia](#)



/ Selected Events

24.01 E4S Annual Summit
Event dedicated to gathering our community of partners, academic network, and supporting institutions to present the achievements of our center and define together the strategic development of our activities
In 2024, focus on 2 themes: Sustainable Finance and Purpose-Driven Governance.

05.03 Community Meetup on Biodiversity

13.06 Action Lab on the True Cost of Food

29.10 Showcase 2030
2024 theme: Embracing sufficiency in innovation

14.11 Town Hall
Researchers from UNIL, IMD and EPFL connected, discovered the latest developments at E4S and shared valuable feedback to help maximize the impact of the center's activities.

10.12 Building Bridges Workshop hosted with NatureFinance
"A new era of performance measurement: Reconciling diverging perspectives on nature valuation"



2024 Partners



“By uniting the strengths of academia and business under one purpose, E4S is sparking innovations that redefine value creation and inspiring the next generation of leaders to build solutions that thrive towards a sustainable future—ensuring enterprise flourishes alongside the wellbeing of society and our planet.”



— André Hoffmann
Vice-Chairman of the Board of Directors, Roche



E4S

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