

Smart Living Lab



Goals >

- Sustainable link between Fribourg's image and the EPFL brand and global network to position the canton and the bluefactory site, both in Switzerland and internationally, in the field of new technologies.
- key role in the Swiss Innovation Park (SIP), forming the heart of the SIP West of Western Switzerland at bluefactory, alongside the EPFL Innovation Park and Biopôle in Lausanne, Campus Biotech in Geneva, Microcity in Neuchâtel and Energypolis in Sion.

History >

The Smart Living Lab brings together the expertise of EPFL, the Fribourg School of Engineering and Architecture (HEIA-FR) and the University of Fribourg (UNIFR) in the research areas of "Building Technologies", "Well-Being and Behaviour", "Interactions and Design Processes" and "Energy Systems". Founded in 2014, it develops its research activities in the bluefactory innovation district in Fribourg and will see the construction of its own building on the same site from 2023.

Key Partners >

EPFL, HEIA-FR, UNIFR, Etat de Fribourg

Country >

Switzerland, Fribourg

Host >

EPFL



Governance Model (Macro level) >

- Joint Steering Committee

The role of the Joint Steering Committee is to oversee the implementation of the Smart Living Lab, including infrastructure and budgetary aspects. It decides on the objectives to be pursued and sets priorities.

- Steering Committee

This Committee leads the Smart Living Lab programme within the framework of the competences given by the Joint Steering Committee. It manages the day-to-day tasks. The Steering Committee is co-chaired by the Academic Director and the Operational Director of the Smart Living Lab.

- Scientific Committee

The scientific committee brings together the academic leaders of the Smart Living Lab's research groups. It is chaired by the academic director of the research centre.

Business Model (Macro level) >

The Smart Living Lab is a joint project between the EPFL, the School of Engineering and Architecture of Fribourg and the University of Fribourg. Each academic partner contributes its own resources and receives funding contributions from the Canton of Fribourg.

In addition, the Canton de Fribourg provides the premises located on the bluefactory site as well as funding for construction of the Smart Living Lab building. The Smart Living Lab has an annual budget for events and communication, which is funded by all four partners.

- Developp Fribourg like a stragegic place for researching applies and be recognized nationally and internationally for this topic
- Be more attractive to research and found interesting founding
- Have an impact on the regional ecosystem

Projects (Meso Level) >

- **POLYNORM** – Demonstrate the potential of reuse in construction through the realisation of a concrete and emblematic case which aims to dismantle from its initial site an industrial hall destined for demolition: the POLYNORM hall and to reuse it elsewhere with a new vocation. The project is divided into two phases: De-POLYNORM and Re-POLYNORM.
- **SOCIAL ANALYSIS OF URBAN FORMS** – Just as building design needs to integrate the complex system of occupants, larger scale design needs to take into account the patterns of human behaviour that make up a city. Areas of investigation include: How optimisation can assist urban planning decisions to maximise the accessibility of amenities on foot – the pedestrian potential of a city. This approach explicitly addresses the environmental aspects of urban design (e.g. reducing dependence on cars), but there are also potential social benefits, such as improving social cohesion and social resilience to shocks such as natural disasters. Data-based analysis of the relationship between different components of walkable urban form and social cohesion at the neighbourhood level. Drawing on large open datasets, what can a nuanced statistical analysis of the impact of urban form on human interaction at the city level learn?
- **Citizen Development** – To enable non-technical users to create/configure software applications using visual languages and interfaces. Potential application areas include: Smart home automation, blockchain-based applications for smart living and smart cities, energy management.

Tools and Methods (Micro level) >

Many of the projects at the Smart Living Lab involve collaborations with private partners, such as electricity suppliers, network operators, lighting system manufacturers, architects, energy or life cycle consultants, start-ups or entrepreneurs.

Partners can collaborate with the Smart Living Lab in different ways:

- Contribute to the funding of research with high potential for their fields of activity, through open research programmes.
- Develop a strategic partnership, such as the incubator supported by Baloise
- Obtain answers to specific questions by conducting a research project with one or more Smart Living Lab research groups
- Use the research facilities of the Smart Living Lab to develop an innovative project
- Participate in networking and innovation events.

Key Challenges >

- Getting building constructing
- Reach several important milestones
- Have a stronger organization to manage specific aspects of projects
- What's next ?
- Have results in spite of the many changes
- Potential Opencall in 2024
- Somebody to run workshops, use all the types of tools, create and support processes

Links to more info >

Smart Living Lab website

<https://www.smartlivinglab.ch/fr/>

