

MyBOX Smart Energy Living Lab

1. Living Lab Overview

- Nama: MyBox Smart Energy Living Lab
- Location: University of Stavanger Campus, Norway
- Mission & Vision: Energy & Urban Sustainability Living Lab: My Box focuses primarily on renewable energy production and energy efficiency in an urban environment. This type of living lab seeks to develop and test the viability of solutions that can be implemented to improve sustainability in cities, which is crucial given the growing environmental impact of urban centers and the need for cleaner and more efficient energy systems.

2. Why is it a Living Lab?

Real-Context Experimentation: My Box Living Lab operates in a real-world environment where renewable energy technologies are tested and evaluated. This makes it possible to observe and measure the performance of energy innovations in real-world conditions and not just in controlled laboratory environments.

Co-creation and User Inclusion: Actively involves students and academic staff in the development and testing of energy technologies. Students live in the living lab for one semester at a time while they are doing research and their energy behavior is monitored. This collaborative approach is fundamental for living labs, as it allows end users (in this case, students and teachers) to contribute their ideas and feedback to improve the proposed solutions.

Open and Multidisciplinary Innovation: The project fosters an open innovation approach, integrating knowledge from different disciplines and collaborators, including academics, researchers and local companies. This multidisciplinary approach is essential to address the complex challenges of energy sustainability in urban contexts.

Social and Educational Impact: In addition to its technical focus, the My Box Living Lab has a strong educational and social component, seeking to influence user behavior and promote sustainable practices through education and active participation.

3. Infrastructure and Resources

- Facilities: Composed of six stacked shipping containers, equipped with solar energy technologies, battery storage, a vertical-axis wind turbine and highly detailed energy consumption monitoring.
- Collaborators and Partners: Collaboration with the University of Stavanger, Lyse and other academic partners.
- Human Resources: It involves researchers from the project Future Energy Hub who work on the assessing performance of solar and wind energy, energy consumption, thermal performance, energy behaviour, etc.

4. Areas of Focus and Specialization

- Topics of Interest: Integration of renewable energies in urban environments, optimization of energy consumption.
- Key Competencies: Modelling of building energy performance, renewable energy production, consumption, and behavior in urban contexts.

5. Innovation Methodologies

- Open Innovation Approach: The project acts as a live laboratory where technologies are tested and evaluated in a real-world context and students and teachers are involved.
- Co-creation Processes: Direct involvement of students and academic staff in applied research.
- Techniques and Tools: Use of advanced technologies for the measurement and optimization of energy systems.

6. Projects and Challenges

- Featured Projects: Development of hybrid systems that combine solar and wind energy, energy storage, and energy behaviour.
- Impact and Results: Contributions to reducing the carbon footprint and increasing energy efficiency.
- Current Challenges: Improving efficiency and flexibility in renewable energy systems in urban environments.

7. Impact on the Community and the Territory

- Local Contributions: Training students in sustainability and renewable energy.
- Collaboration with Local Entities: Integration of efforts with the local municipality and technology companies.
- Social and Economic Benefits: Promoting a more sustainable campus and raising awareness of sustainability in the local community.

8. Lifelong learning and open knowledge

9. Publications and Resources

<https://www.uis.no/nb/forskning/vindturbin-og-solceller-pa-campus>

<https://www.aftenbladet.no/okonomi/i/EREpj/studentboligen-my-box-vant-konkurranse>