

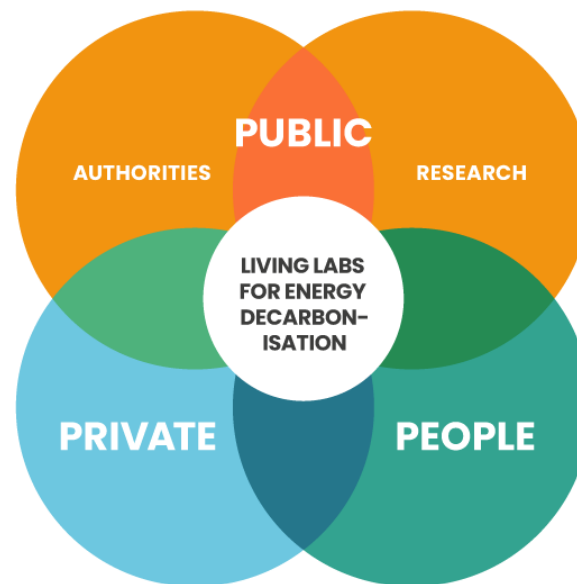
UserGap >

What is the Influence of users on the performance gap in energy-efficient buildings?

 Gland, VD / 2016 – 2019

Eikenott is a sustainable neighbourhood in which Living Lab methods and tools were applied. The aim was to better understand the components of the performance gap and how to reduce it.

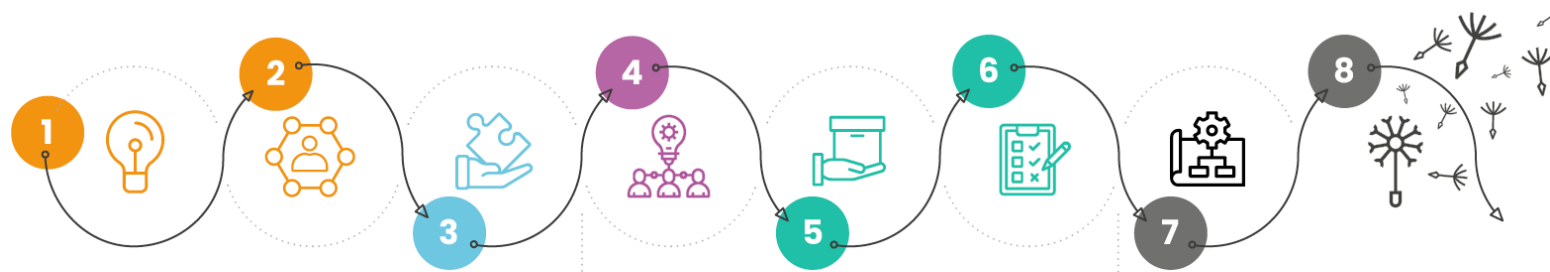
Transdisciplinary research was conducted at the MACRO (neighbourhood), MESO (buildings) and MICRO (households) levels. The action research allowed to co-design an energy performance plan with key stakeholders.



Partners >

SFOE, CRDE, HES-SO VS, HEIG-VD, University of Neuchâtel, TEP Energy, Losinger Marazzi, Bureau EHE

Methodology > The Living Lab Integrative Process



	1	2	4	5	6	7	8
Description	Analysis of the energy consumption in 300 apartments, typology of consumers. Identification of main performance gaps.	Community based social marketing to understand the barriers to energy performance	Co-design workshops: => performance plan	Energy performance Plan & Devices for energy efficiency	Energy Performance plan integrating social marketing	Development of recommendations for constructors, policies, norms	Test in other neighbourhoods with the start up enoki
	Survey in the neighbourhood & load curve analysis, technical analysis Power-Interest Matrix	Qualitative Interviews with selected Stakeholders Ethnography	Workshops (quadruple helix) New Serious game designed and tested	TupperWatt evenings with the neighbours	Ex-post analysis of electrical, thermic and hot water consumption	Policy recommendations, conferences, scientific and professional articles	Sequential approach analysing economic, technical and social data
Tools/process							

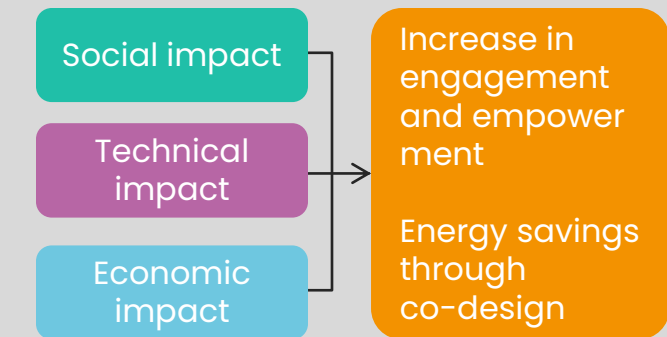
Lessons learned

- Factors linked to energy and environment are not directly influencing the satisfaction to live in the neighbourhood
- The "correct" use of blinds has a strong impact on thermic consumption in low consumption buildings.
- Automation could help users with default setting but the regulation and maintenance are often neglected
- Energy services and maintenance need a leadership with an actor situated in the neighbourhood.
- There is a "**social performance gap**" measured with the importance/performance matrix applied to energy

Outcome

The analysis of the social performance proved to be very interesting for complementing the technical and economic analyses and thus the design of new neighbourhoods and retrofit projects. Challenges of multiple types of data collection, sequential approach and complexity of analysis of various sources were noted.

Impact



More info

