Life MaPerEn

Layman's report

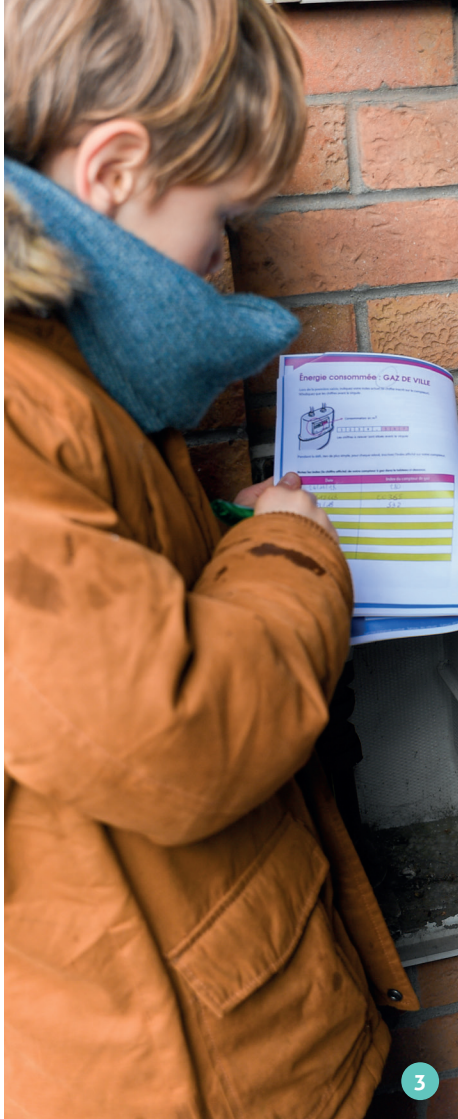
Energy performance management as the driving force of a new governance
LIFE18 GIC/FR/001196

MaPerEn
Management de la Performance Énergétique
Life

> Mobilising users to reduce energy consumptions. Good practices to share.

LIFE18 GIC/FR/001196

Summary



The context

The building sector accounts for substantial greenhouse gas emissions (23% of 2022 emissions on 1 and 2 scopes). Relying on technology is important to reduce emissions (thermal renovation, regulation systems, development of renewable energies, energy storage…), but technology does not provide the expected effects: actually, the impact of users' behaviours is not known too well and is consequently inadequately accounted for during the designing phase and in the operating of the building.
In order to be useful and efficient, they must be adapted and appropriated by users. Besides, users become consumers/actors and claim their ability to act.
Being conscious of the limits of a techno-cantered approach of the development of ad hoc and experimental actions without any exchange of practices, the actors of the Life MaPerEn project have joined forces to experiment, validate and deploy several devices.

OBJECTIVES

MaPerEn's aim is to design the collaborative tools of an energy performance management and to centre it around cooperation to encourage building users to reduce their energy consumptions.

THE EUROPEAN COMMISSION'S LIFE PROGRAMME

The Life programme funds the European Union's environmental policy. It supports projects linked to the conservation of environment and climate. By funding and promoting them, it enables public or private project leaders to develop innovative projects which contribute to the conservation of environment. The Ma PerEn project responds to the priority of spreading good practices and awareness-raising campaigns for the climate (climate section, information and governance).

The Life MaPerEn project

LIFE CLIMATE ACTION / GOVERNANCE & INFORMATION

Lille, France

2,076,600 €
funded by the European Commission : 55%

Oct 2019 to Sept 2023

Coordination
> Institut Catholique de Lille

Associated beneficiaries
> Ville de Lille, Lille Métropole Habitat, JUNIA

Higher education with Institut Catholique de Lille (Université Catholique de Lille)

Social housing with Lille Métropole Habitat

Local authority community with Ville de Lille

The MaPerEn approach

A PROJECT CENTERED ON COOPERATION

The **MaPerEn** project comes within the scope of EU's environmental policy LIFE programme which promotes and funds innovative projects in the fields of environment and climate.

This is the context, in which Catholique de Lille, la ville de Lille, Lille Métropole Habitat and Junia get involved in the awareness-raising and energy performance management plan.

In an environment where buildings are responsible for a substantial amount of greenhouse gas emissions, the aim of the project is to contribute to **the reduction of those emissions.** While centered on a strong **cooperation**, the ambition is to modify building users' behaviour through a transformation of the energy and climate governance modes.

USERS AS ACTORS OF THE PROJECT

Students

Employees

Elected representatives and business leaders

Inhabitants

Builing operators

SUSTAINABLE GOALS FOR LIFE QUALITY

Raising users' **awareness** and **encouraging** them **to collaborate**

To persuade them to reduce energy consumptions

Designing collaborative tools meant for users

For the energy performance management

Consolidating energy performancemanagemet governance devices and **making** them **durable**

For knowledge to be shared and to spread the project towards other territories and industries

7 actions

Building a **frame of reference** for the technical analysis of buildings and energy uses

Developing **data collecting** and centralizing tools

Using an innovative **collaborative platform** for the organization, steering and development of devices

Implementing **a user-centered collaborative dynamic**

Testing and deploying **energy performance management devices**

Sharing knowledge and practices to draw up **recommendations** together with the decision-makers

Spreading the lessons drawn from the project towards other territories and other industries

Results

279 buildings betwwen 2019 and 2023 (15 ICL, 2 Junia, 73 LMH & 189 Ville de Lille)

2,060 homes (LMH)

25,000 occupiers of the buildings concerned

1,173 people joining events

2,734 estate items and a **3,674** internet traffic on the technical platform

15 projects shared via the collaborative platform

- **9.4%** electrical consumption
- **12.9%** heating consumption
- **20.6%** GHG emissions

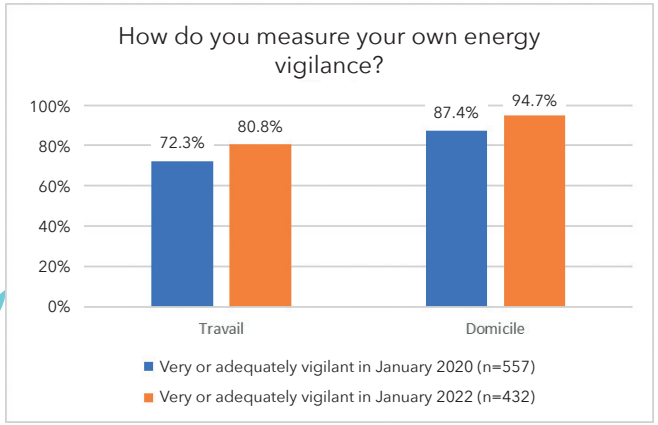
80.8% people considering themselves as adequately or very vigilant on energy consumptions at work

ACTIONS	RESULTS
Frame of reference	Design of **2 sociotechnical frames of reference,** one for office and university buildings and one for housing buildings
Data centralisating and collecting tools	Characterisation of existing **meters and of the monitoring** level, additional equipment, creation of a data collecting platform containing 2,734 estate items.
Collaborative platform	Creation of a **platform to share** and analyse devices, 15 projects online
Collaborative dynamic	Face to face and online **workshops**, MaPerEn **ceremony**…
Energy performance management devices	Ville de Lille : **energy correspondent** device LMH : tenants **awareness raising / appropriation** actions ICL : energy performance management **particpative management** Junia : **RSE** and ISO 14001 certification **process**
Shared practices and capitalisation	1 **recommendation** report meant for decision makers. Interventions during symposia
Spreading of the project towards other territories and	I nterventions in **symposia**, information exchanged with **networks**, « Agir Ensemble » **label**, associated research projects…other industries

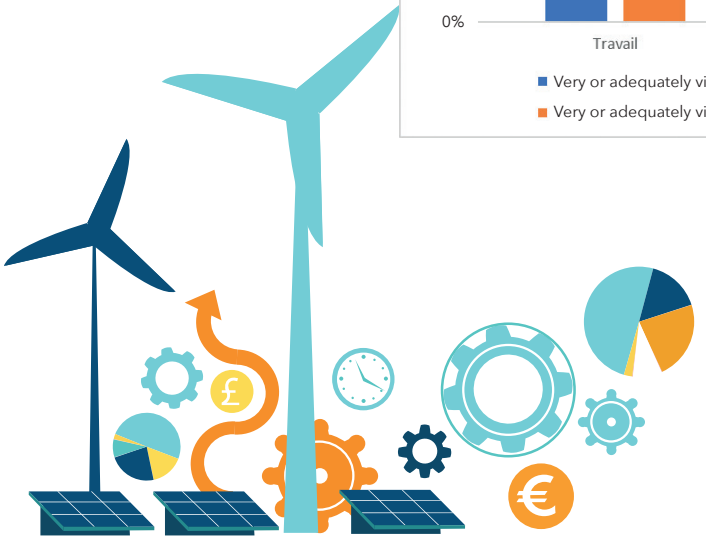
Why a sociotechnical approach?

A major limit to the reduction of energy consumptions in buildings is linked to too strong a **belief in the capacity of technical ways to reduce consumptions**. This quirk comes with a lack of attention in energy uses. The frames of reference developed are of a sociotechnical nature as the database includes the major **technical aspects and the uses to which consumptions are due.**

Besides, they deal with the monitoring of the evolution of users' **energy vigilance** throughout the project.



Evolution of energy vigilance



Shared experiences, inspiration and co-elaboration

7 « Challenge your project » workshops

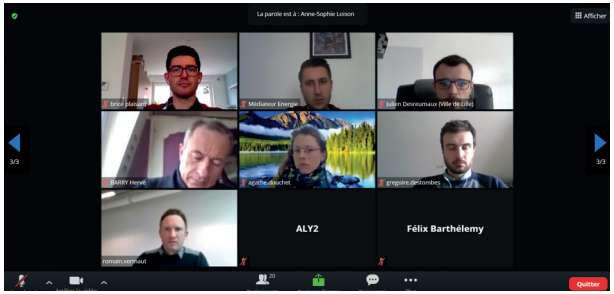
6 Good practice workshops

2 Collaborative platform co-consructruction workshops

1 MaPerEn ceremony

Many visits of sites

22 January 2020:
workshop about the co-design of the collaborative platform



12 April 2021:
« Challenge your project » workshop organized by LMH on building life-cycle analyses

14 June 2023:
MaPerEn ceremony, federating event, visits and round tables

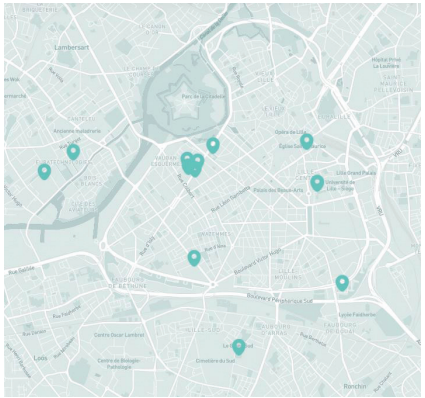
The collaborative platform

The MaPerEn platform is a collaborative interface, open to all, aiming at exchanging and providing knowledge collectively

The aim is to help actors be able to co-construct parts of answers to be shared around their energy projects.

THE FIELDS OF EACH PROJECT SHEET

- Synoptic descripition of the action
- Participants in the project
- Technical partners
- Financial partners
- Governance / action leadership
- Impacts
- Facilitating elements
- Obstacles and difficulties faced / solutions provided
- Assessment
- Perspectives
- + 1 wiki space and associated documents



QUELQUES FICHES A FEW SHEETS

https://www.plateforme.maperen.eu/

The technical platform

The acquisition platform takes in information items about energy consumptions provided by measurement devices installed in buildings and other pieces of information related to uses determining consumptions (inactive periods, works, maintenance, deployment of an awareness-raising device…).

Thanks to the platform, the consumptions in a building can be viewed. Consumptions can be compared and technical characteristics can be known of. It is also possible to schedule technical interventions and warning signals about flows when a defined threshold is exceeded.

It includes 2,734 estate items (buildings, homes) by the end of 2023.

Analysis of the devices deployed by partners

The devices deployed by partners

Ville de Lille > energy correspondent device

LMH > awareness-raising actions towards / appropriation by tenants

ICL > energy performance participative management

Junia > RSE process and ISO 14001 certification

Common ingredients:
the 5 pillars of the human expertise between technology and users

- The measure and monitoring of the consumptions
- Awareness raising and communication
- Devices facilitating the moving into action
- Technical and educational accompanying to reinforce the sensibility and the action capacity of the users
- Support of the governing bodies

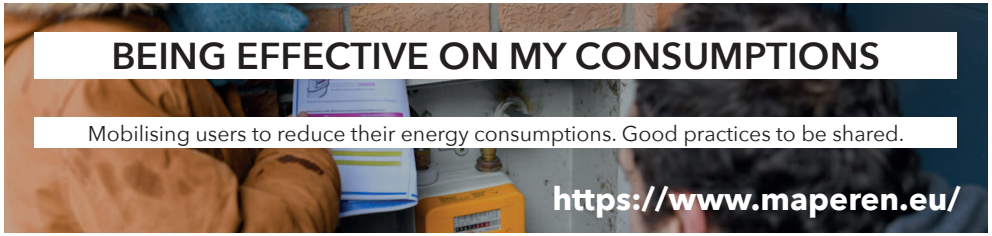
Why should users be involved ?:
3 arguments

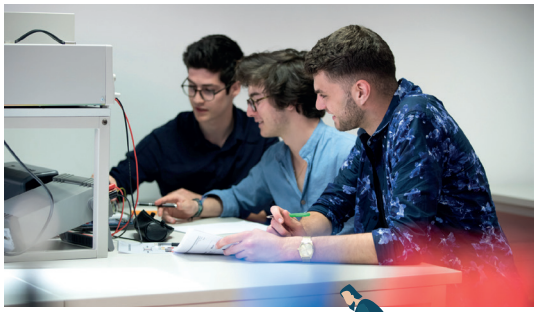
- To target consumption reductions as a complement to technical devices
- To favour the appropriation of technical or organizational solutions in which users must be involved
- Consulting users beforehand is a key factor in the success of the design or choice of technical solutions.

Tools and guides

Advice to

- Inhabitants
- Real estate operators
- Elected representatives or business leaders
- Students
- Employees





Methodological guides of the sociotechnical frames of reference (collective housing buildings and office buildings)

Collaborative platform specifications

Experience feedback and suggestions for new actions

Descriptive report presenting the devices deployed, the methodology and the expected result

Recommendations meant for decision-makers for their action strategy.

Communication, events, diffusion

1,173 people have heard of thye project via Networking

3,353 collaborative visitors on the MaPerEn site and **217** on the collaborative platformcollaborative

15 projects on the collaborative platform

1 article in Voix du Nord (newspaper), articles by Cerdd, rev 3 (Hauts de France Region)…

Over **1,000** Twitter subscribers

11 videos on Youtube

14 JUNE 2020
MAPEREN CEREMONY

Student trips to partners' places and round tables

- Building occupier mobilising experiences
- Platforms and tools at the service of the transition process
- Change time
- Involvement of users in the transition process

Interventions during the 21st, 22nd, 23rd editions of the European Energy Transition Conference

www.maperen.eu

Recommendations for the attention of decision-makers

31-page report – contents:

- Reminder of the aim of C6 task and **working process**
- **Lessons drawn from experiences shared** with partners **and stemming from exchanges of views** with local authority community', businesses', higher education's, social housing organisations' […] existing **networks**…
  - Sociotechnical approaches, place of users
  - Inclusion of users' involvement in a general framework
  - Facilitating elements
  - Management modes, various action categories
  - HR, training, rewards…
  - Users involvement in three sectors: ESR, local authority community, HLM
  - Focus on energy sobriety plans
- **Recommendations for the attention of decision-makers**

TO SUM THINGS UP, WHAT RECOMMENDATIONS SHOULD BE PUT TO THE ATTENTION OF DECISION MAKERS?

- Including the energy management involving users in a comprehensive policy and strategy within the organisation
- Defining and organising an ambitious action plan meant to be durable
- Implementing actions and means arousing users' commitment
- Relying on human resources to make users' involvement easier

Socio-economic impacts

- **Creation of 2 FTE** who cannot be delocalized: one energy performance manager and one monitoring position
- **€595,852** of energy saved in 2022
- Cost of the project: **€2,076,600**. ROI: 3,4 years
- Significant evolution of building users' energy vigilance. **25,000 people** potentially concerned

« After-life plan »

FOLLOW UP WITHIN ICL

Institut Catholique de Lille: actions related to the socio-ecological transition strategy are multiplying

Implementation of Vision 2030, ICL's strategic project with its challenge named "inventing the integral – lively, sustainable and participative – campus on an energy-climate dimension basis.

ICL's carbon trajectory with a, energy-building and energy uses section. Objective: -40% in 2030 compared to 2019.

Grenoble Agreement commitments signed on February 8th, 2022. Item 2.9: "To follow up and publish one's carbon footprint". Item 2.10: "to reduce greenhouse gas emissions by 30% by the 2028-32 period, compared to the 2018-22 period".

Deployment of a training to socio-environmental challenges through the ODDyssée training platform (climate, biodiversity, energy & resources, economy, society).

On the university federation scale, MaPerEn is a component of the energy and societal transition Live TREE programme.

UNIVERSITÉ CATHOLIQUE DE LILLE 1875

LIVE TREE
L'Université Catholique de Lille en Transition Energétique

« After-life plan »

FOLLOW UP WITHIN LMH

Lille Métropole Habitat: Support to tenants

After a rehabilitation: supporting tenants in the technical appropriation of their homes to avoid a rebound effect, which is often observed after works and prevent from reaching the theoretic performance expected over the estate.

When they move in: support tenants in the technical appropriation of their homes.

Once these subjects dealt with, in a second phase, LMH will be ready to launch a reflection on a more comprehensive awareness-raising project for the residents of their buildings so that they hold all the cards to optimize and cut their consumptions without losing any comfort.

« After-life plan »

FOLLOW UP WITHIN VILLE DE LILLE

Ville de Lille: Sobriety amplification and focus

Extension of the energy-correspondent device to all the buildings owned by the City, through an integration in its various performance markets.

Inclusion of the quality of indoor air in the process.

Furthering of exchanges of views between community in order to share the experience and operate its diffusion.

Recruitment of a sobriety policy officer who will lead the collective dynamic, steer the process, keep the sobriety plan active and implement new actions in the field, particularly uses diagnoses.

« After-life plan »

FOLLOW UP WITHIN JUNIA

Junia: energy efficiency and actions to raise students' awareness

Decarbonation of building heating systems thanks to the switching to Lille's urban heat network for three of the buildings concerned, which led to a 60% reduction of the carbon impact of the heating system.

Reinforced insulation of the buildings: roof, airtightness, insulation and carpentry works.

Optimisation of the control of equipment in buildings: automation of the management of heating substations, automation of the regulation of air-treatment units.

Change uses in practical classes and laboratories: replacement of gas Bunsen burners by an electric equivalent device and rationalization of the use of equipment.

Each newcomer (whether student or employee) is made aware of environmental rules and good practices.

« After-life plan »

CONTINUATION AND EXPANSION OF THE PARTNERS' SCHEMES, PERPETUATION OF THE COLLECTIVE, EXTENSION TO OTHER PLAYERS AND OTHER SECTORS OF ACTIVITY.

Objectives of the after-life plan (2024-2026)

- Improve the energy performance of buildings and reduce greenhouse gas emissions.
- Strengthen energy performance management.
- Co-construct CSR policy with end users (environment, energy, climate, water, biodiversity, inclusion, etc.).
- Helping to build the intelligent city of tomorrow in conjunction with the city of Lille and the Lille European Metropolis.
- To promote internally and externally the methodology that fosters integrated, user-centred governance.

-> Deployment of the tools developed during the project (website, collaborative platform and technical platform).
-> Initial and ongoing training
-> Increasing the number of staff dedicated to energy performance management
-> Expansion of the network of partners
-> Dissemination of methodology, tools and recommendations
-> Contribution to European collaborative projects Horizon Europe and New European Bauhaus

THE FIRST EXTENSIONS

Creation of a local alliance for the **Agir Ensemble label.**

Incluniv research project "Mobilisation and inclusion in the ecological transition of universities" funded by ADEME.

MaPerEn

Management de la Performance Énergétique

Life

COLLECTIVE ENERGIES

MaPerEn is a European project aiming at reducing greenhouse gas emissions by involving users in the energy performance of buildings.
An ambitious collaborative dynamic led by Université Catholique de Lille (Colleges and Junia), Lille Métropole Habitat social landlord and the City of Lille.

Le projet Life MaPerEn est co-financé par le Programme Life de l'Union Européenne

The Life MaParEn project has received funding from the LIFE Programme of the European Union

LIFE18 GIC/FR/001196

Mention légales - Contact - © Copyright 2023