PILOTING THE SYSTEM

To make sure the COLLECTiEF system works, the system is tested in **four pilot sites** across Europe.

The pilot cases are chosen to represent different types of buildings, users, markets, and climate zones over Europe.This will secure the replicability and scalability of the solution.

OUR PARTNERS

NTNU Norwegian University of Science and Technology

LUND UNIVERSITY

THE CYPRUS INSTITUTE
RESEARCH·TECHNOLOGY·INNOVATION

energy@work

R2M SOLUTION
RESEARCH TO MARKET

EM SYSTEMER

NODA Intelligent Systems

GEONARDO
STATE OF THE ART AND BEYOND

CSTB
le futur en construction

CETMA
TECHNOLOGIES DESIGN AND MATERIALS EUROPEAN RESEARCH CENTRE

LSI LASTEM Environmental Monitoring Solutions

ÅLESUND KOMMUNE

TEICOS group

VIRTUAL manufacturing.

GET IN TOUCH AND FOLLOW US

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COLLECTiEF

COLLECTIVE INTELLIGENCE FOR ENERGY FLEXIBILITY

AN EU PROJECT THAT DEVELOPS SOFTWARE AND HARDWARE PACKAGES TO SMART UP EXISTING BUILDING STOCKS IN EUROPE

www.collectief-project.eu

WHY COLLECTiEF?

The energy demand of buildings is one of the major contributors to CO2 emissions.
An improved user-centric energy performance of buildings plays a big role to enhance indoor comfort
and climate change mitigation.

This requires smarting up buildings and energy management methods at a large scale.
Doing so will contribute not only to sustainability, but also to climate change
adaptation of our societies.

COLLECTiEF enhances, implements, tests, and evaluates an interoperable and scalable energy management system based on Collective Intelligence (CI) to be integrated into existing buildings and urban energy systems.

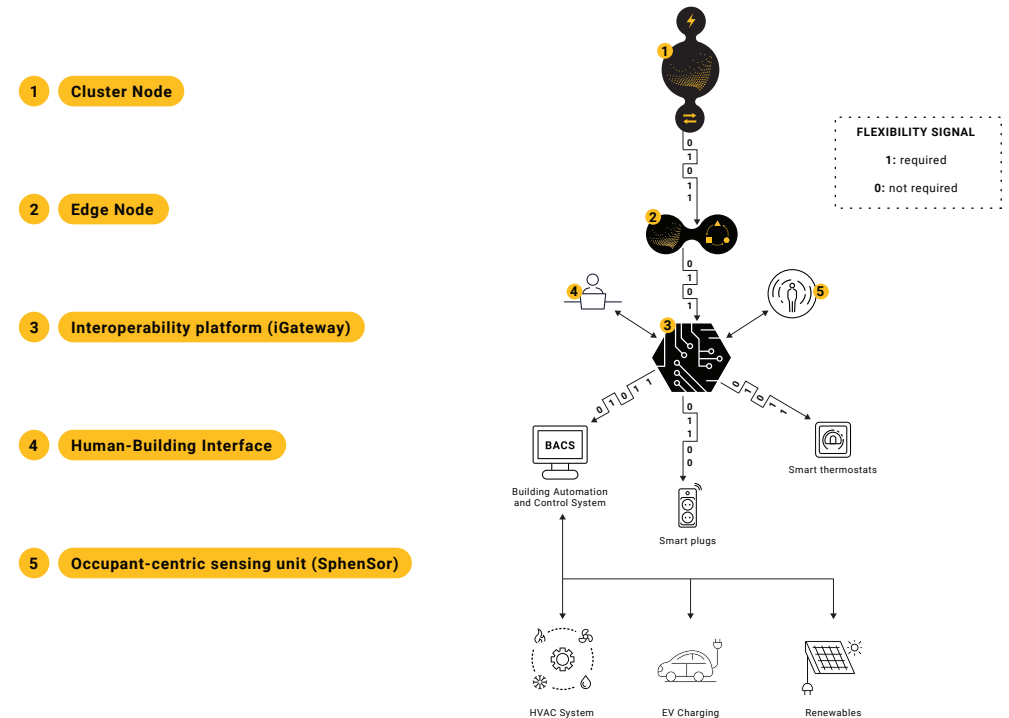Our energy management solutions will:

- Upgrade the smartness level
  of existing buildings

- 0.2-3 €/m² annual energy cost
  savings for buildings

- On average reduce the primary
  energy use by 16%

- Increase user satisfaction by at least 15%

- Increase the demand flexibility by at least 24%
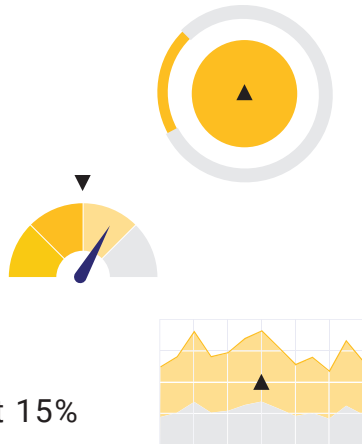
OUR UNIQUE METHODOLOGY

Taking advantage of a collaborative system.

The COLLECTiEF methodology enhances the collaboration between household appliances at the building scale and between buildings at the urban scale to help the urban energy system to pass the peak hours safely. The developed methodology based on collective intelligence allows to do this without risking users' privacy and not communicating users' preferences outside the building.

1. **Cluster Node**
2. **Edge Node**
3. **Interoperability platform (iGateway)**
4. **Human-Building Interface**
5. **Occupant-centric sensing unit (SphenSor)**

FLEXIBILITY SIGNAL
1: required
0: not required

BACS
Building Automation and Control System

Smart plugs

Smart thermostats

HVAC System   EV Charging   Renewables

Did you know?

Buildings are the largest single energy consumer in the EU being responsible for 40% of total consumption.
Renovating and improving energy performances in our building stock is crucial to achieve the EC energy and climate goals by 2050!