FLEdge

A novel hierarchical edge-based flexibility management ecosystem at both building and city level

INTERNATIONAL HELLENIC UNIVERSITY

GATE

CHALMERS UNIVERSITY OF TECHNOLOGY

DOING GOOD

СТОЛИЧНА ОБЩИНА

elering

THERMO-LOGIC

Kinnon

TAL TECH

energomonitor
Умното потребление на енергията

The challenge

The energy landscape of cities is in a perpetual state of flux, requiring adaptable systems to meet dynamic and shifting demands, stressing the need for energy flexibility. Therefore, energy management systems must be flexible and adaptable to optimize energy resources and effectively address the evolving energy needs of urban environments.

About FLEdge

The FLEdge project aims to develop an intelligent, decentralized, and replicable energy management system for buildings, emphasizing energy flexibility. It seeks to transform energy management systems from the building level to the neighborhood, district, and city levels into energy-efficient and energy-flexible urban areas while enabling dynamic adjustments to optimize energy resources in real-time.

How does Fledge tackle the challenge?

FLEdge will be based on an Edge Energy Management (EEM) device that will process information collected from buildings and make decisions to optimize energy sources, including renewable energy use, load shifting, dimming, pre-heating, and pre-cooling, exploiting energy flexibility. Through its innovative Energy Management Node (EMaN), FLEdge's system will improve the energy performance of buildings, neighborhoods, districts, and cities towards Positive Energy Districts (PEDs), exploiting energy flexibility to adapt to changing demands and conditions.

The architecture
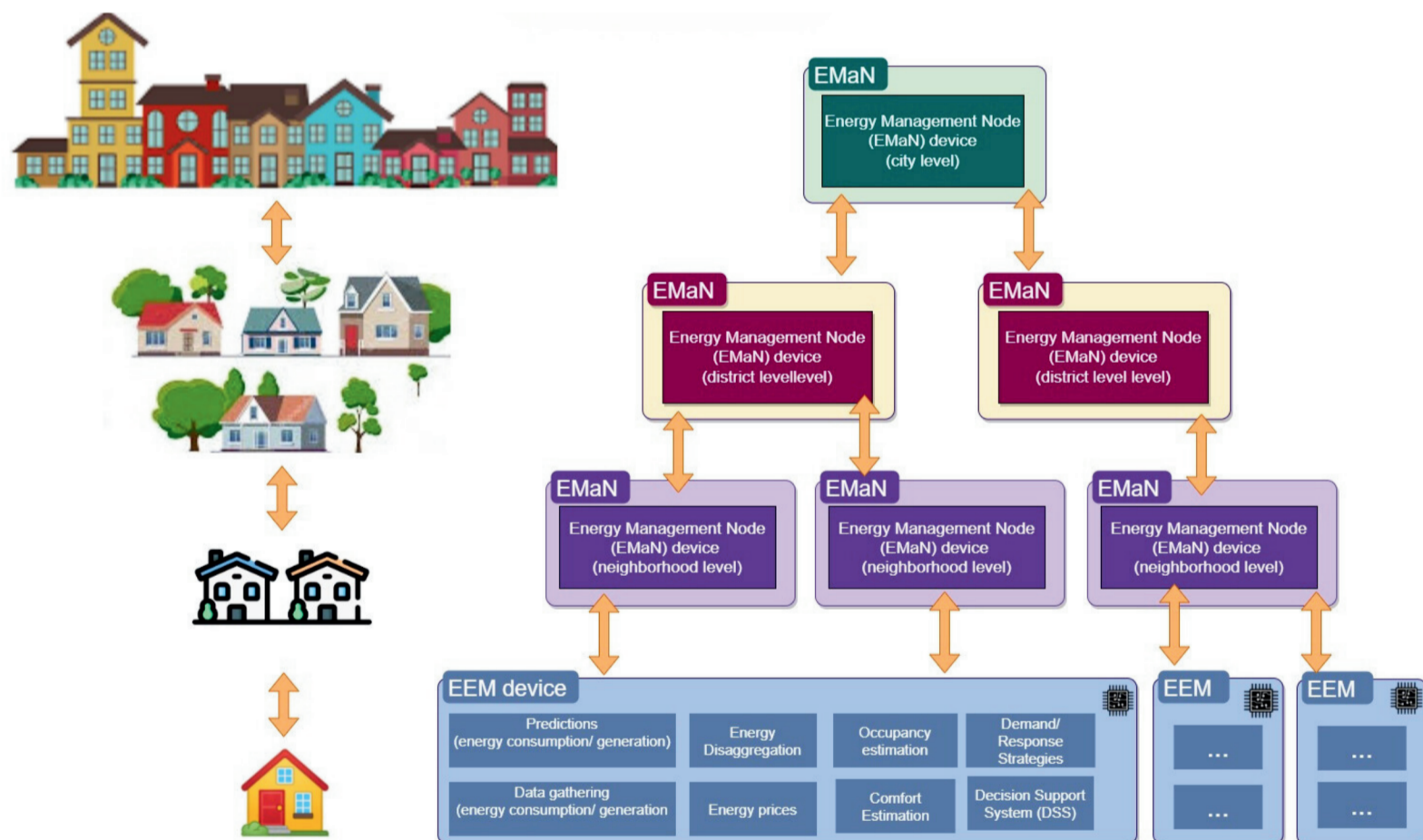
Pilots

- ⊙ Tertiary buildings
- ⊙ Public buildings
- ⊙ Residential buildings

FLEDGE

in Fledge_DUT