eDREAM

INNOVATIVE DEMAND RESPONSE TECHNOLOGIES FOR A DECENTRALIZED ENERGY ECOSYSTEM

This project has received funding from the European Union's Horizon 2020 research & innovation programme under grant agreement n°774478.

eDREAM

A novel blockchain based demand response decentralized ecosystem, aimed at either alleviating power grid local network constraints in real time caused by the imbalances or optimizing nearby energy management.

eDREAM aim

The eDREAM project aims to develop new solutions for DSOs, as well as improving decision-making of aggregators and energy retailers using a new decentralized and community-driven energy ecosystem by fully integrating the micro-grid and VPPs (Virtual Power Plants) to local power disruption network.

The main project's assets are:

- Local flexibility marketplaces, tailored specifically to DSOs and aggregators stakeholders.
- Local peer to peer energy marketplaces tailored to prosumers and aggregators.
- VPP optimization framework through dynamic coalitions, tailored to aggregators.

Benefits for stakeholders

DSOs

- Reduction of overload.
- New energy services business models.
- Improved power losses prediction.
- Enhanced control of the power grid operation.

Aggregators

- Supply-demand matching and decentralized coodinated control.
- VPP flexibility profiling and customer segmentation.
- Increased forecast capability.

Prosumers

- Direct energy trading in a blockchain-based decentralized marketplace.
- Financial revenues from energy generating and demand response.

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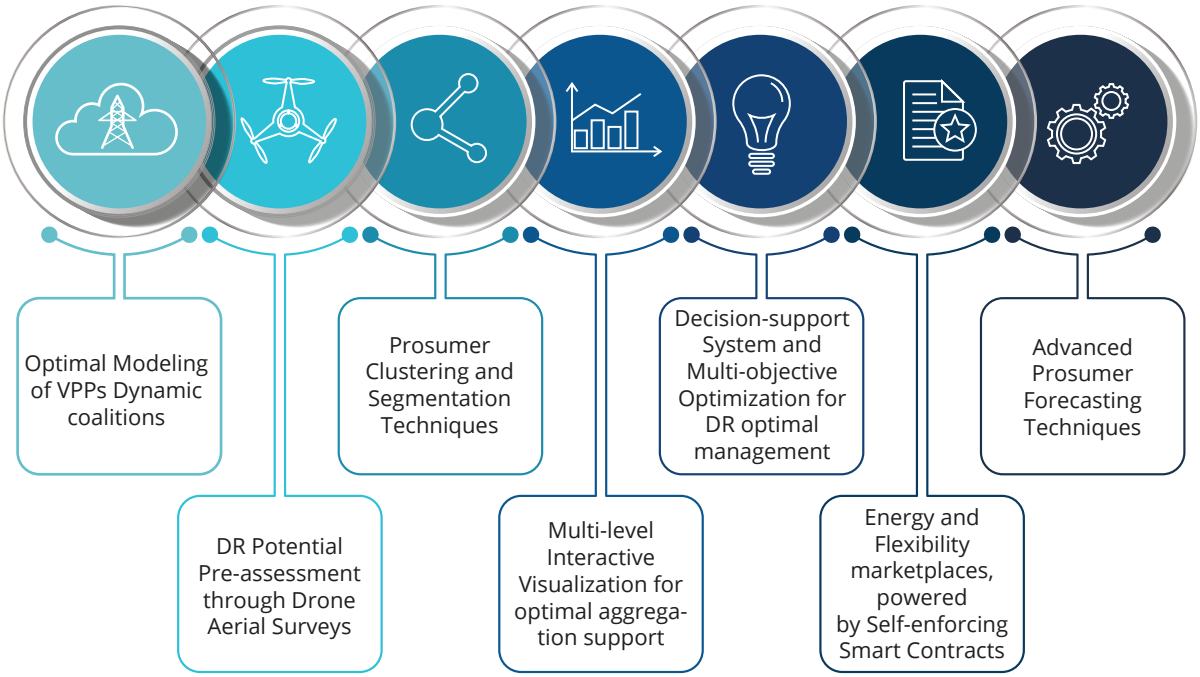
eDREAM Key Innovative Technologies



eDREAM Project Pilots

Pilot A – KiWi, UK

Virtual Power Plants: Optimize output from multiple local generation assets that serve primarily local communities and have export connections at power distribution network.

Pilot B – Terni, IT

Active Microgrid: Enable prosumers to offer via smart contracts their flexibility resources, both production & modulation.

Lab-based Validation of Pilots' Use Cases - CERTH Lab Facilities, Greece

eDREAM

Shaping the future of energy & environment

Drones

Electric vehicles

Thermal imaging

Charging stations

Batteries

Partners

ENGINEERING

iti Information Technologies Institute

Teesside University

KiWiPOWER demand management

TECHNICAL UNIVERSITY OF CLUJ-NAPOCA ROMANIA

Atos

ASM Terni S.p.A.

SERVELECT Energy is money! We save both.

Energy@work

Get in touch

www.edream-h2020.eu

twitter.com/@eDREAMh2020

contact@edream-h2020.eu

eDREAM H2020 Project