FLEXIGRID

INTEROPERABLE SOLUTIONS FOR IMPLEMENTING HOLISTIC FLEXIBILITY SERVICES IN THE DISTRIBUTION GRID

FLEXIGRID project

30 May 2022

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 864579.

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AGENDA

1. FLEXIGRID project overview
2. Greek demo site

1. FLEXIGRID project overview

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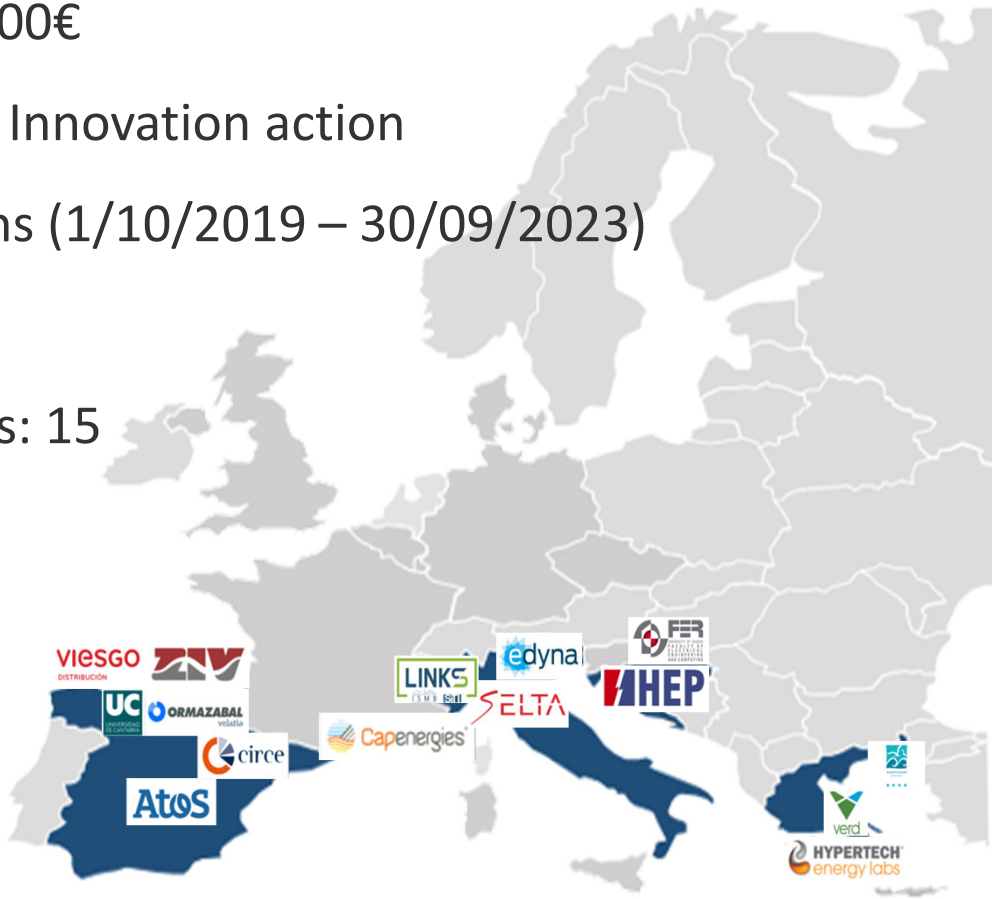
1. FLEXIGRID project overview

- Budget: 8.541.073,00€
- Type of Action: IA - Innovation action
- Duration: 48 months (1/10/2019 – 30/09/2023)
- Coordinator: CIRCE
- Number of partners: 15



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1. FLEXIGRID project overview

Project objectives

The **main goal** of FLEXIGRID is to allow the distribution grid to operate in a **secure and stable** manner when a **large share of variable generation electricity sources** is connected to low and medium voltage grids.

To do so, FLEXIGRID proposes a three-level approach aiming at **(1) Flexibility**, **(2) Reliability**, and **(3) Economic Efficiency** through the development of innovative hardware and software solutions.

These solutions will be demonstrated in **four Demo-Sites** across Europe ensuring their interoperability through their integration into an open-source platform able to harmonize the data flow between FLEXIGRID solutions and the real grid.

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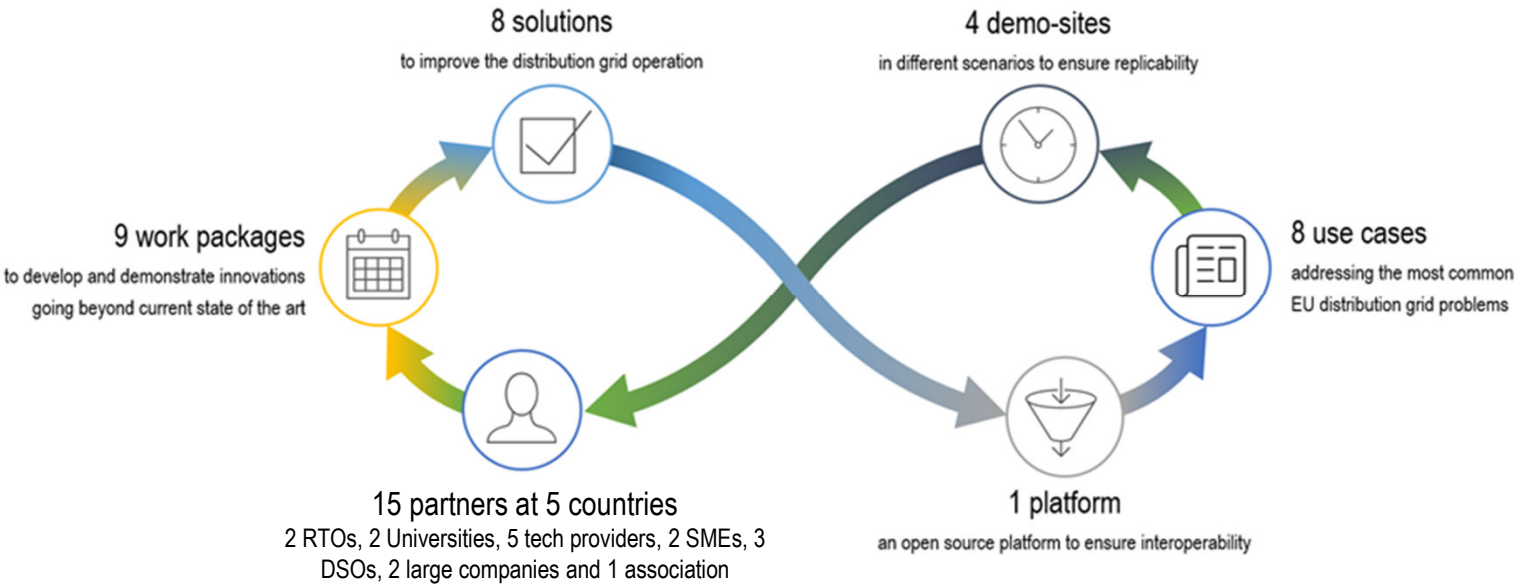
1. FLEXIGRID project overview

Main characteristics



2. Greek demo site

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2. Greek demo site

Objectives

- **Objective 1**: Coordination of Distributed Energy Resources (DER) including renewables and storage with the aim to maximise the benefit for the microgrid owner while ensuring optimal operation for the local grid
- **Objective 2**: Support the local network using blackout support capabilities of local, distributed storage systems for critical loads
- **Objective 3**: Reduce the impact on the upstream distribution network and in turn minimise the grid costs for the owner

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2. Greek demo site

Innovative solutions to be implemented

Overarching Platform
developed in FLEXIGRID and demonstrated in Greek Demo

Solution 9
FUSE platform

Software modules
developed in FLEXIGRID and demonstrated in Greek Demo

Solution 6
Forecasting of load and generation

Solution 7
Scheduling and congestion management

Hardware solutions
developed in FLEXIGRID and demonstrated in Greek Demo

Solution 4
Energy Box

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2. Greek demo site

Makryammos Hotel – MV connected resort

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2. Greek demo site

Main data

Hotel Resort with up to 450kW maximum demand

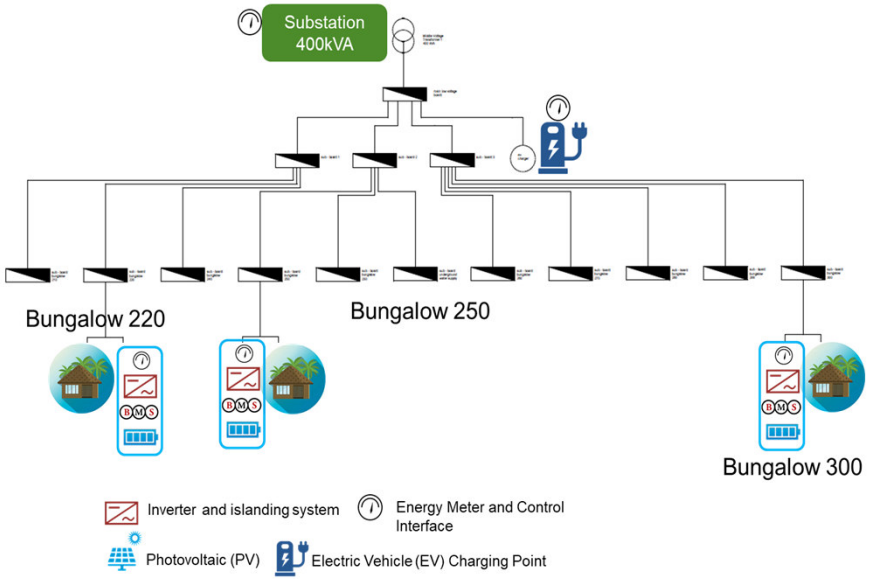
Hotel is connected via MV connection to the distribution network of the interconnected island

The hotel is in the process of a transformation towards a “green” hotel that includes the installation of

50kWp PV,

3 battery systems and

2 EV charging units



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2. Greek demo site

Benefits for the hospitality industry

- ✓ Reduction of energy costs
- ✓ Reduction of CO_2 emissions
- ✓ Optimization of infrastructure use
- ✓ Contribution to tenants' comfort through black-out support utilizing battery storage systems

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Thank you!

http://www.flexigrid-h2020.eu/

LinkedIn

Aleida Lostale: alostale@fcirce.es

Spiros Vlachos: spivla@gmail.com

Marily Efstratiadi: me@elinverd.gr

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