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# DATAWEEK

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# Odyssey of AI:

## Navigating the Data Seas

27 - 28 May / Athens

IN COLLABORATION WITH

ATC ATHENS TECHNOLOGY CENTER

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DEMOKRITOS NATIONAL CENTRE FOR SCIENTIFIC RESEARCH

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NEUROPUBLIC Information Systems & Technologies

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# ODEON project

TEXT

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# ODEON at a glance

## HORIZON-CL5-2023-D3-01-15

Supporting the green and digital transformation of the energy ecosystem and enhancing its resilience through the development and piloting of AI-IoT Edge-cloud and platform solutions

## 5 pilot sites

Distributed in 5 different EU member states

## 48 months

Starting in January 2024
Ending in December 2027

## 35 parnters

From 13 different member states

Total budget: 22.56 M€
Total funding: 17.87 M€

# ODEON
## partners

# Technology innovation goals

ODEON aims to revolutionize the **Green and Digital Energy transition** through the creation of an inclusive ecosystem of stakeholders characterized by the **integration of a mesh of Data, Intelligence, Service, and Market flows in the energy system**. ODEON enables the resilient operation of the energy system considering the increased **RES integration**, and the effective orchestration of **the flexibility from assets residing at the edges of the system (edge-computing).**

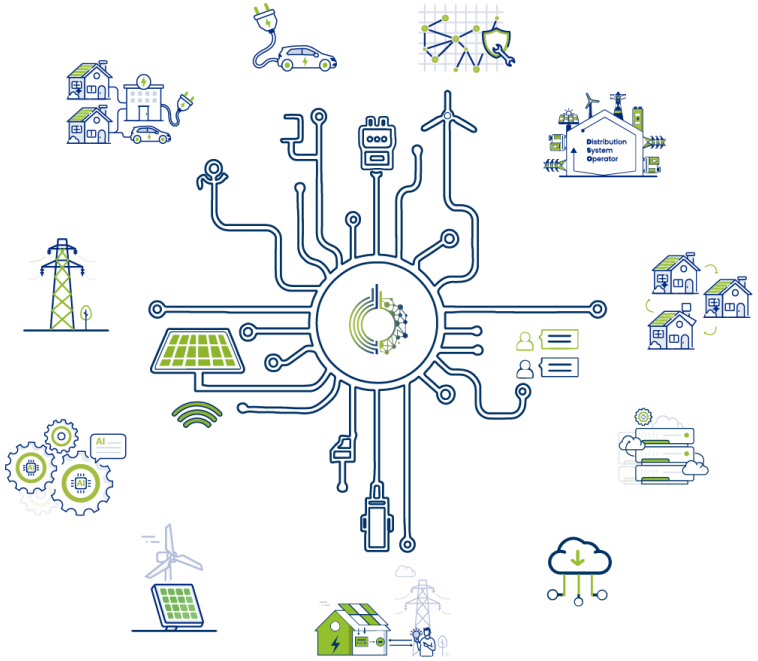
01 **To promote a highly distributed open framework for orchestrating federated data management, sharing and intelligence**

02 **To deliver innovative energy services enhancing grid resilience and decentralized flexibility**

03 **To encourage data exchanges by fostering technical and semantic interoperability**

04 **To promote a decentralized environment in the energy field**

05 **To provide intelligence-enabled solution and services driven by data to achieve energy transition goals**



ODEON goals

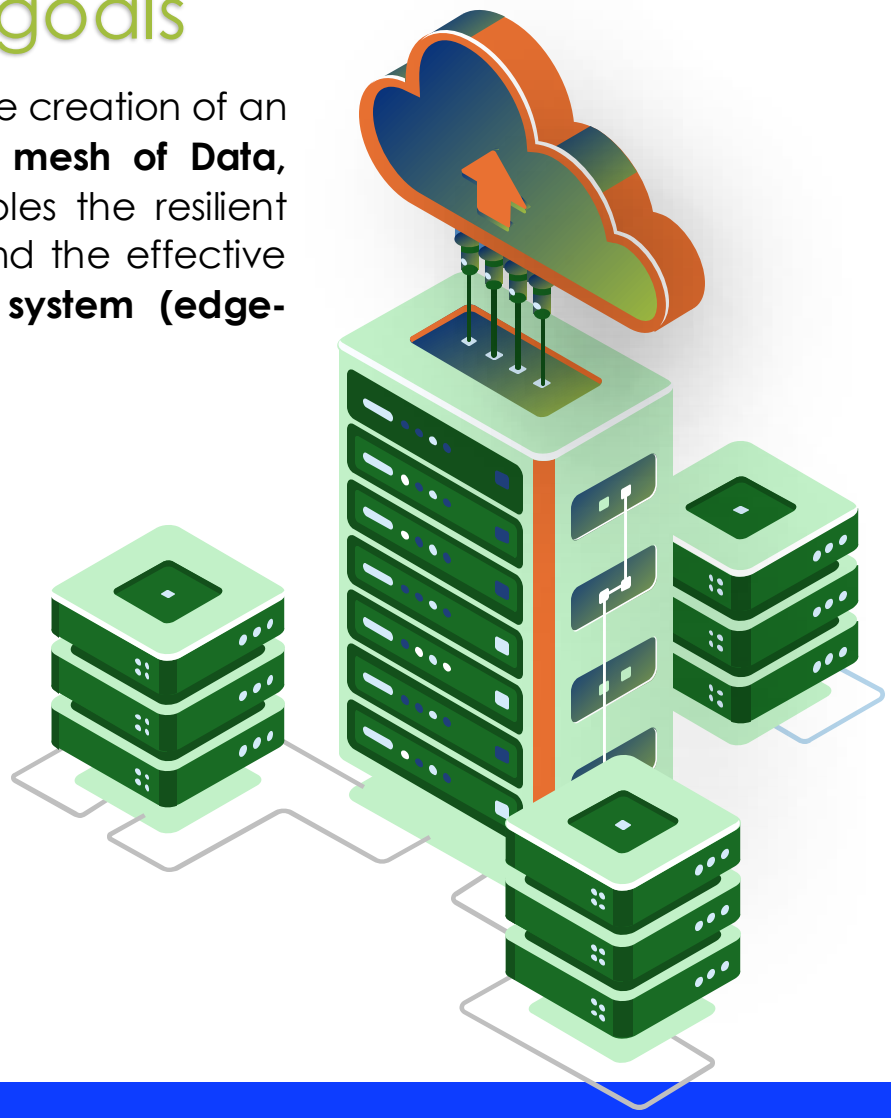
# Business innovation and Market Uptake goals

ODEON aims to revolutionize the **Green and Digital Energy transition** through the creation of an inclusive ecosystem of stakeholders characterized by the **integration of a mesh of Data, Intelligence, Service, and Market flows in the energy system**. ODEON enables the resilient operation of the energy system considering the increased **RES integration**, and the effective orchestration of **the flexibility from assets residing at the edges of the system (edge-computing).**

01 **To demonstrate and validate the concept in 5 large-scale demonstrators across real-life and critical conditions**

02 **To prepare the grounds for the successful replication and market uptake**

03 **To promote ODEON as a reference Cloud-Edge Data and Intelligence enabler for the Green and Digital Transition through intense dissemination and knowledge transfer**



# ODEON Innovations

## ODEON Cloud-Edge Data and Intelligence Service Platform

Reference Energy Data Spaces implementation around energy data

## ODEON Catalogue of AI Artefacts

Machine-Learning mechanisms for enabling energy services

## ODEON Energy services for DSO

- Flexibility-based Network Management
- Dynamic Power Flow Management and Quality restoration
- Network Planning and Reinforcement Assessment
- Asset management and Predictive maintenance

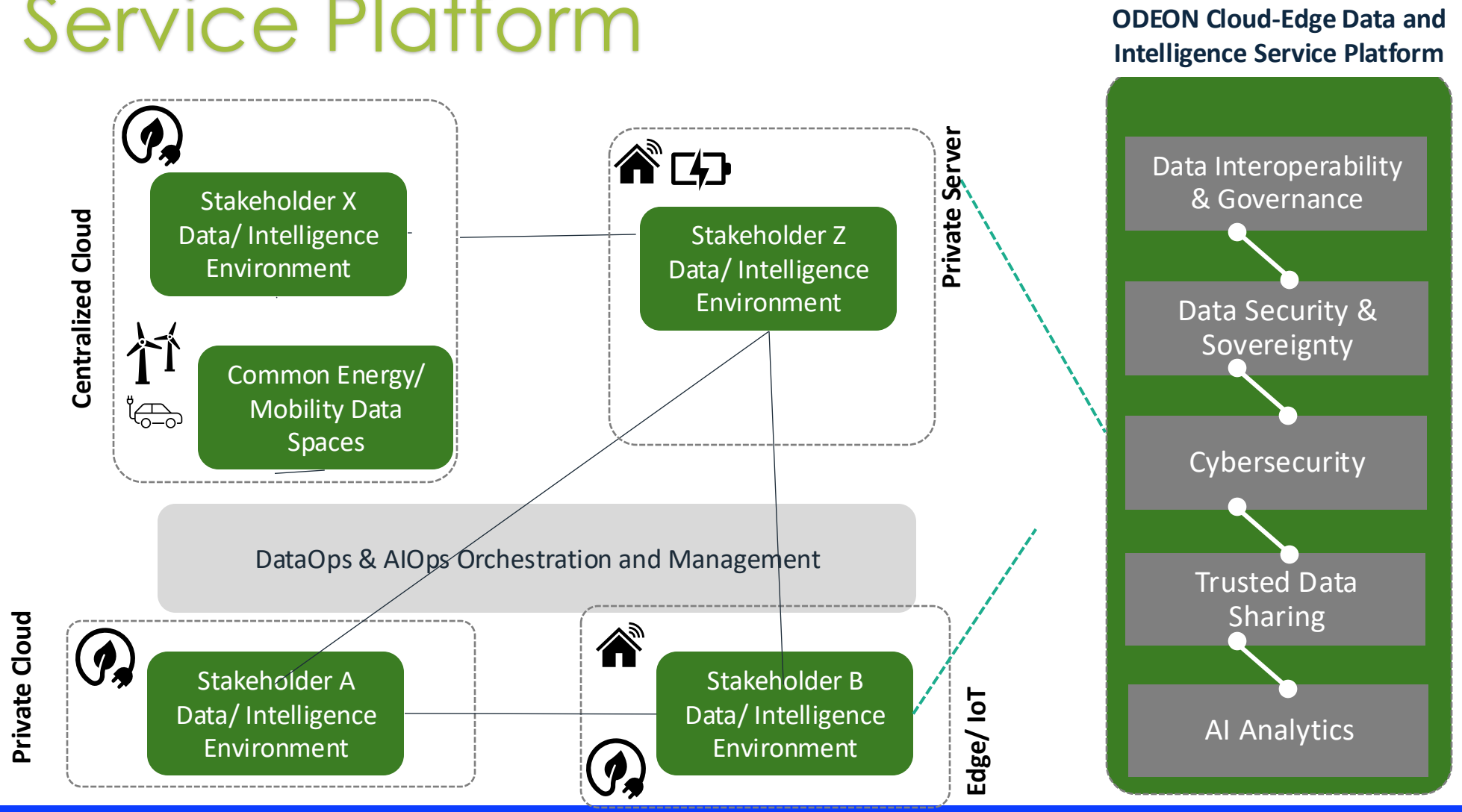
## ODEON Energy Services for LECs/Aggregator

Reduction of energy costs and increase their autonomy by management in RES and flexible assets

## ODEON Energy Services for Prosumers

Informed and transparent participation in flexibility and energy transactions

# ODEON Cloud-Edge Data and Intelligence Service Platform



# ODEON Catalogue of AI Artefacts

**ODEON Catalogue of AI Artefacts**

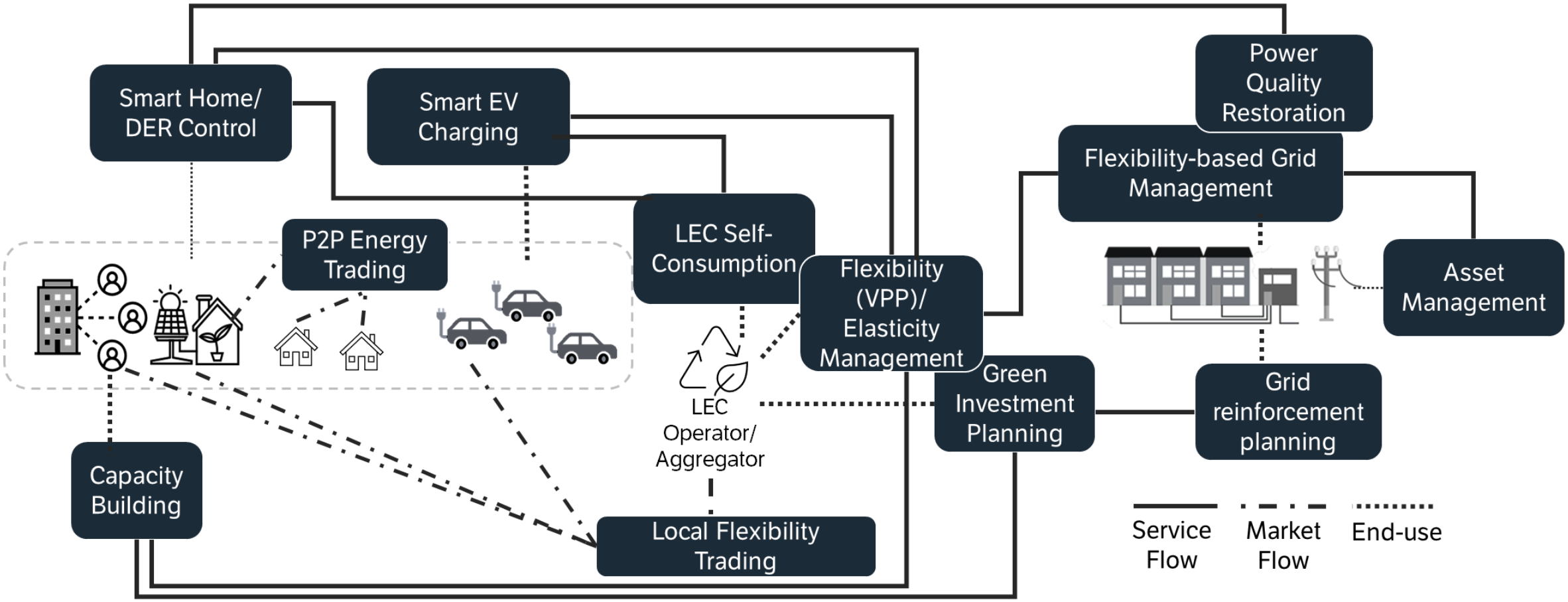
Machine-Learning mechanisms for enabling energy services

ODEON provides a catalogue of **ML artefacts** that can be used by **energy app developers** to provide the intelligence needed by their apps, contracting through the ODEON **marketplace** the artefacts published by **AI analytics developers**. These artefacts can either be deployed at **cloud** infrastructure (public or private) or at **edge** nodes, depending on the requirements of both the energy app developer and the final user.

Some **examples** of these AI artefacts are:

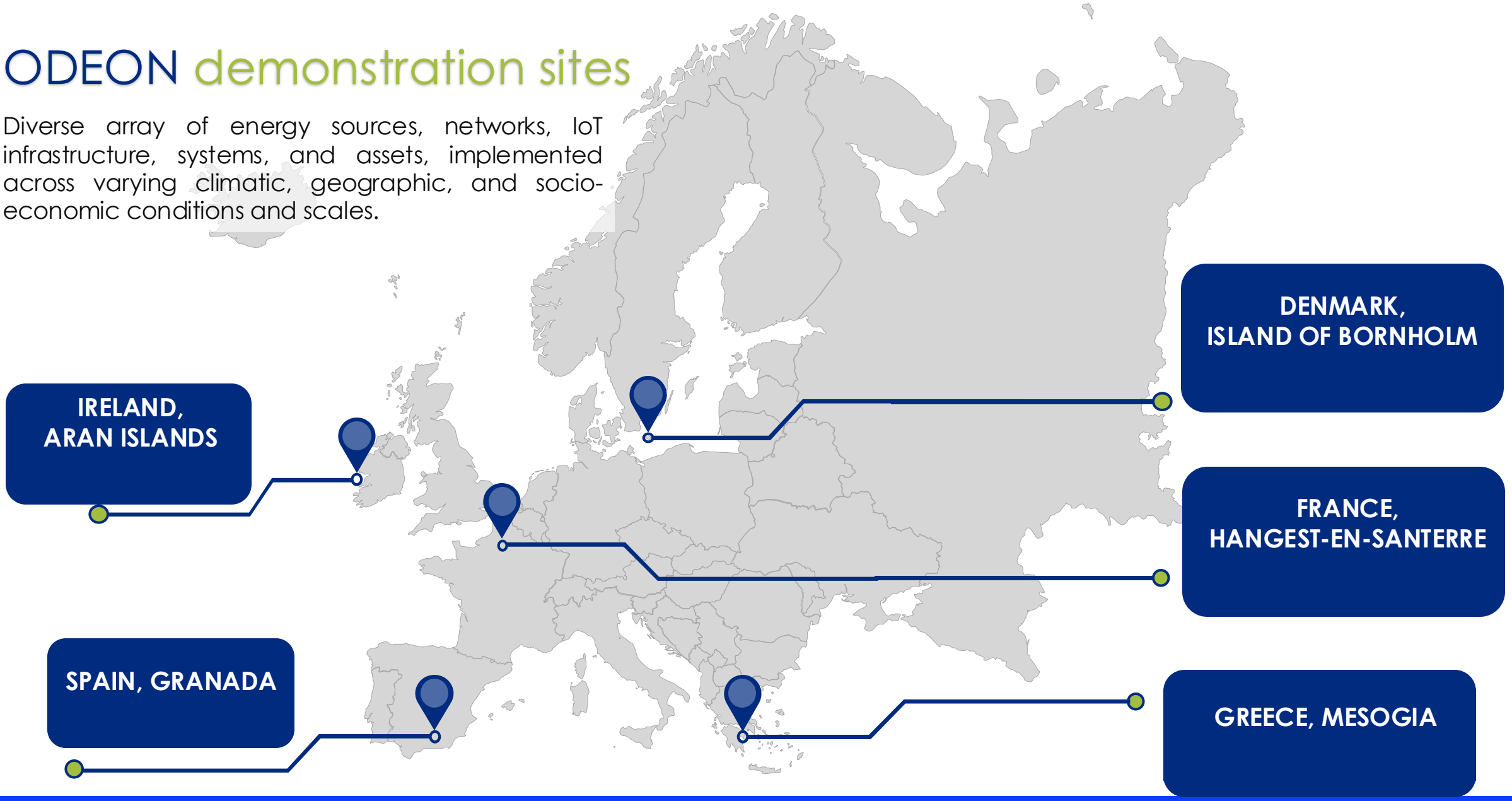
- Demand and generation profiling and forecasting.
- Flexibility Profiling and Forecasting.
- Flexible resource management.
- Grid operation and planning
- Market Price and Tariff Optimization Systems.
- Consumer energy behavior analysis.
- Load Disaggregation

# ODEON Energy services



# ODEON demonstration sites

Diverse array of energy sources, networks, IoT infrastructure, systems, and assets, implemented across varying climatic, geographic, and socio-economic conditions and scales.



ODEON

FEDERATED DATA AND INTELLIGENCE ORCHESTRATION
& SHARING FOR THE DIGITAL ENERGY TRANSITION

# Thank you!

## Contact Us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