VPP4ISLANDS

Virtual Power Plant for Interoperable and Smart isLANDS

Novel technologies to ensure the stability of smartgrids and the decarbonisation of islands

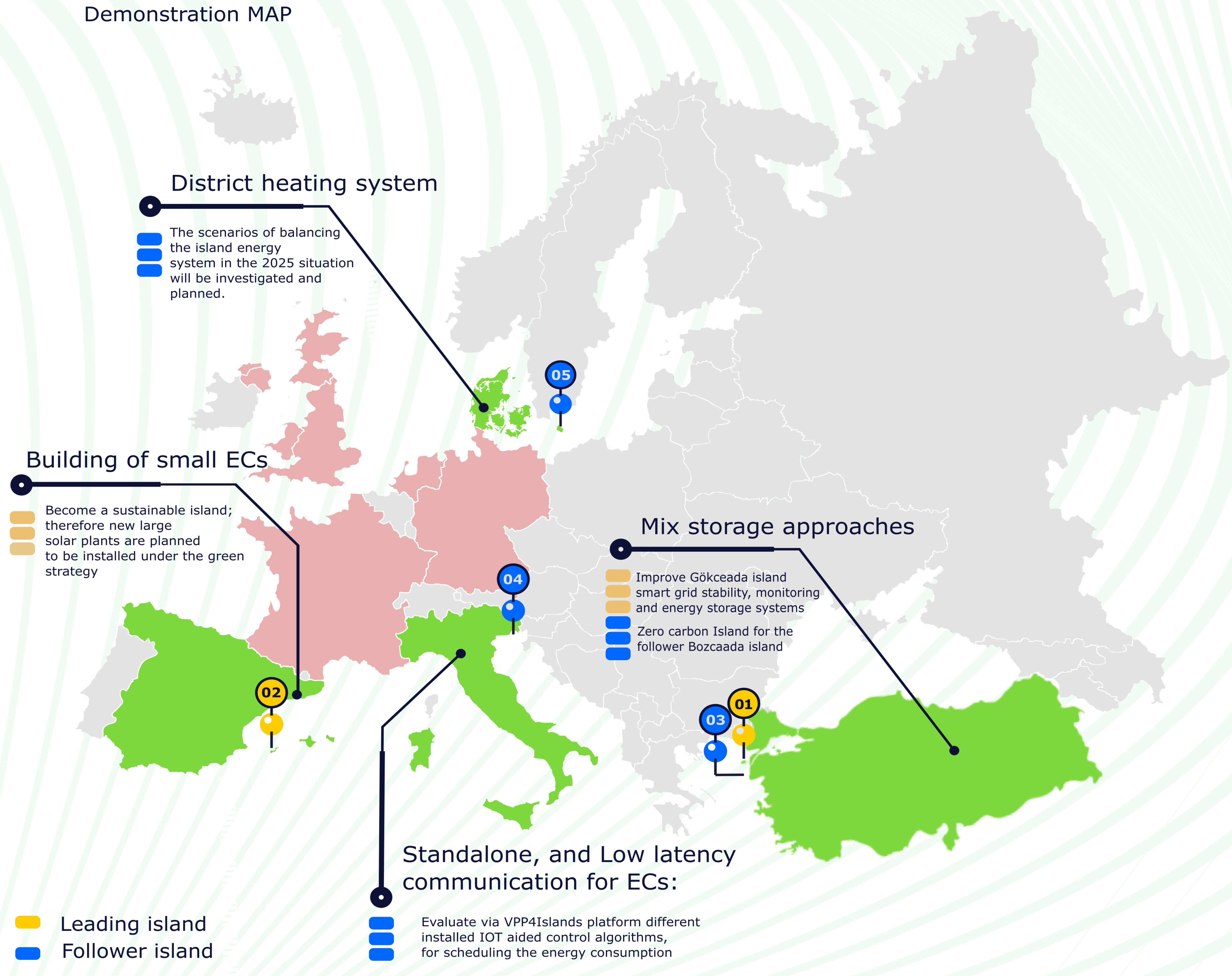
Virtual Power Plant (VPP)

Virtual Energy Storage System (VESS)

Digital Twin (DT)

Distributed Ledger Technology (DLT)

Demonstration MAP



District heating system

🟦 The scenarios of balancing the island energy system in the 2025 situation will be investigated and planned.

Building of small ECs

🟨 Become a sustainable island; therefore new large solar plants are planned to be installed under the green strategy

Mix storage approaches

🟨 Improve Gökceada island smart grid stability, monitoring and energy storage systems

🟦 Zero carbon Island for the follower Bozcaada island

Standalone, and Low latency communication for ECs:

🟦 Evaluate via VPP4Islands platform different installed IOT aided control algorithms, for scheduling the energy consumption

🟨 Leading island

🟦 Follower island

Exploiting the full potential of intermittent renewable energy sources like the sun and wind has received a helping hand from so-called virtual power plants (VPPs).

VPPs remotely aggregate distributed energy resources from different physical locations into a network that reliably distributes energy around the clock. Islands face many challenges in terms of energy supply, demand side management and energy security.

The EU H2020 funded VPP4ISLANDS project is revolutionising conventional VPP by integrating virtual energy storage technology, digital twin and distributed ledger technology to enable enhanced VPPs and the creation of smart energy communities on islands.

Coordination Team
Aix Marseille University

Aix*Marseille université, initiative d'excellence — France
algoWATT GREEN TECH SOLUTIONS — Italy
Schneider Electric — Spain
blockchain2050 the metablockchain company — Netherlands
Brunel University London — UK
REGENERA energy&environment — Spain
Cardiff University Prifysgol Caerdydd — UK
CiViESCo — Italy
inavitas — Turkey
IDEA INGENIERIA — Spain
RDI'UP Innovative Research — France
FTK Forschungsinstitut für Telekommunikation und Kooperation — Germany
CSIC Consejo Superior de Investigaciones Científicas — Spain
TROYA ÇEVRE TROYA ÇEVRE DERNEĞİ — Turkey
ULUDAĞ ELEKTRİK DAĞITIM — Turkey
Consell Insular de Formentera — Spain
BORNHOLMS ENERGI & FORSYNING — Denmark
Bozcaada Belediyesi 1923 — Turkey
Italy

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 957852.