



HOLISDER

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Integrating Real-Intelligence in Energy Management
Systems enabling Holistic Demand Response
Optimization in Buildings and Districts
Project presentation



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768614.



Project solution



- HOLISDER will deliver an “open” and modular end-to-end interoperability and data management framework (based on algorithms) that will:
 - enable open standards-based communication along the Demand Response value chain;
 - enable interoperability between Building and District Energy Management systems, Smart Home systems and devices



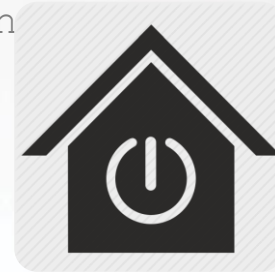
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HOLISDER objectives



1 - Introduce residential and tertiary energy consumers as active players in energy markets and ensure significant benefits through their engagement in implicit human-centred and

2 - Enable intelligence response programmes enhancement of currently available BEMS and Smart Home Systems with the integration of ICT-enabled human-centric DR optimization and predictive maintenance functions



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HOLISDER objectives



3 - Deliver an open standards-based modular solution that ensures end-to-end interoperability between smart grids, EMS and smart home devices and holds a high replication potential around EU M

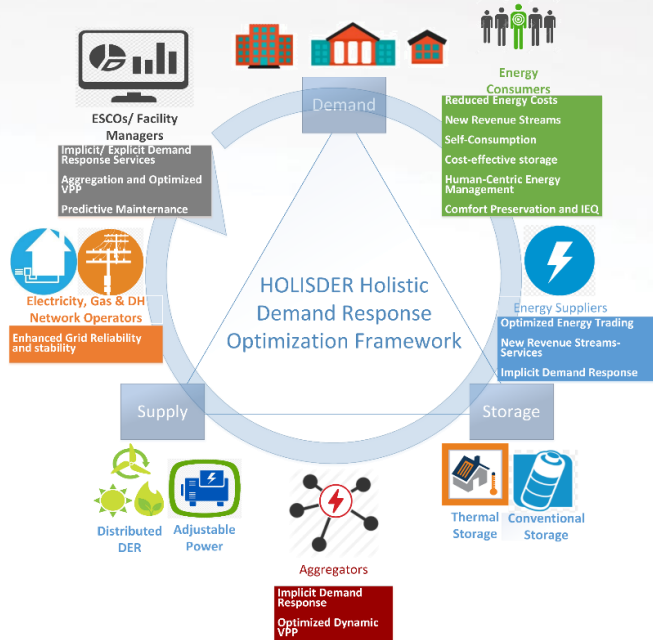
4 - Safeguard grid reliability and the transition to a more fossil-free energy future through complementary explicit demand response strategies on the basis of aggregated flexibility



utilization.

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HOLISDER concept



- Significant **energy costs savings**
- Creation of **new revenue streams**
- Wide promotion of **self-consumption**
- Utilization of the currently unleashed **storage capacity** of buildings
- Proper tackling of **consumers' reluctance** to participate in **Demand Response**
- Further facilitation of consumers' participation in **energy markets**
- High **replicability** across different building types and systems
- Advanced adaptability to demand response **regulations** around EU Member States
- Enhanced operational **stability** and **security** of energy networks



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Pilot sites



HOLISDER framework will be validated in **4 large-scale pilot sites**:



- 2 commercial, 53 residential buildings in **Athens**, Greece
- 3 commercial, 8 residential buildings in **London**, UK
- 2 commercial, 1 residential buildings in **Helsinki**, Finland
- 2 commercial, 44 residential buildings in **Belgrade**, Serbia

Demonstrations will take place in buildings of various typologies (residential and tertiary) in four diverse areas (climatic, demographic) under real operation conditions showcasing the wide replication potential of HOLISDER.



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