

interconnect

The digital convergence of smart homes and electricity grid has started in Europe with over 50 entities

The future of smart energy management solutions will start by testing 7 connected large-scale pilots across Europe

InterConnect (*Interoperable Solutions Connecting Smart Homes, Buildings and Grids*) is the name of the project that gathers 51 European entities to develop and demonstrate advanced solutions for connecting and converging digital homes and buildings with the electricity sector. The main goal? Bringing efficient energy management within reach of the end-users by interoperable Solutions Connecting Smart Homes, Buildings and Grids.

The project, which was approved by the European Commission under the Horizon 2020 programme, places the foundation for the future of smart energy management solutions by seven connected large-scale test-sites in Portugal, Belgium, Germany, the Netherlands, Italy, Greece and France.

Eleven European countries are involved – Austria, Belgium, France, Germany, Greece, Italy, Poland, Portugal, Serbia, Slovenia and the Netherlands - in this 36 M€ project that will last four years.

The solutions developed within the scope of InterConnect will allow a digitalisation of homes, buildings and electric grids based on an Internet of Things (IoT) architecture. By including digital technologies (artificial intelligence, Blockchain, Cloud and Big Data) based on open standards, such as SAREF, it will guarantee the interoperability between equipment, systems and privacy/cybersecurity of user data. Energy users in buildings, either residential or non-residential, manufacturers, distribution grid operators and the energy retailers will have the opportunity to take advantage of these solutions.

The InterConnect project will focus on eight major domains: standardisation, ontology, digital platforms, IoT, cloud, electric grid, big data and cybersecurity.

“At the end of the project, several outcomes are expected, such as a domain interoperable IoT reference architecture; interoperable functional components for residential and non-residential buildings; improved customer energy management; digital marketplace & interoperability toolkit; interoperable and replicable distributed system operators interface and business use cases for new energy and non-energy services”, explains David Rua from INESC TEC, the R&D Portuguese institution that is leading the InterConnect project.

Regulators and policymakers, end-users (home/ building owners), developers (SMEs and start-ups) and integrators will benefit from the advanced solutions that will be available in the demonstrators throughout the project and afterwards generally available in the market by 2023.

Besides the developments that will be conducted by the 51 partners of the consortium, the project will also foster innovation to expand the ecosystem of players by offering opportunities for entrepreneurs through open calls. Three open calls will be launched by the project, from its second year, to select 42 innovative bottom-up projects – 14 prototypes and 28 small-demonstrators.

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Led by INESC TEC, and with the Dutch R&D institution TNO as the technical innovation coordinator, the InterConnect consortium is composed by partners with different profiles: R&D and consultancy, manufacturers and associations, IoT/ ICT providers, DSOs, retailers and end-users.

The following partners are part of the InterConnect consortium: INESC TEC (Portugal), EEBUS (Germany), TNO (the Netherlands), VITO (Belgium), EDPD (Portugal), VizLore (Serbia), Th!nk E (Belgium), FundingBox (Poland), Wings ICT Solutions (Greece), SONAE (Portugal), Fraunhofer IEE (Germany), VolkerWessel iCITY (the Netherlands), Planet Idea (Italy), GridNet (Greece), YNCREA Mediterranee (France), Athens University of Economics and Business – Research Center (Greece), Elektro Ljubljana (Slovenia), ThermoVault (Belgium), TRIALOG (France), Domótica SGTA (Portugal), Schneider Electric Portugal Lda (Portugal) Vrije Universiteit Brussel (Belgium), IMEC (Belgium), DuCoop (Belgium), 3E (Belgium), CORDIUM CVBA (Belgium), Stichting VU (the Netherlands), HERON (Greece), COSMOTE (Greece), ENEDIS (France), ENGIE (France), SENSINOV (France), Whirlpool (Italy), RSE SPA (Italy), POLIMI (Italy), cyberGRID (Austria), RDGfi (Belgium), E.DSO (Belgium), OpenMotics (Belgium), KEO GMBH (Germany), ABB (Belgium), UNI KASSEL (Germany), DFKI (Germany), Fh-Dortmund (Germany), Bosch Thermotechnik (Germany), BSH (Germany), Miele (Germany), Wirelane GmbH (Germany), Vaillant GmbH (Germany), Daikin Europe (Belgium) and KNX (Belgium).

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