

## Data solutions for energy: from mobility to home and appliances

The Commission has established numerous large-scale pilots to help drive the digitisation of industry across Europe and beyond in recent years.



Many of the digital solutions developed by EU-funded projects in the energy and mobility sectors will soon be available on the market, some of which already having proven to be effective during various real-life trials.

Around €1 billion in EU funding was made available through the Horizon 2020 programme for efforts in research and innovation under the European Commission's Digitising European Industry focus area. Major investments have been set out in establishing large-scale pilots (LSPs) in order to provide answers to societal challenges, support digital innovation and policymaking across different areas, such as Internet of Things (IoT) platforms and data sharing, clean energy and connected mobility.

### AUTOPILOT

The rise in automated driving will increase road safety, provide more comfort and create new business opportunities in mobility services. The market size is expected to grow to approximately 50% of the market by 2035, and in order to remain competitive, the European automotive industry is investing in connected and automated mobility (CAM) where cars can become moving objects within an interconnected ecosystem.

Connectivity and the IoT have the ability to influence fully-automated driving along all value chains, moving us towards a global vision of smart anything everywhere. Using the eight interoperable open-

vehicle platforms and standardised software architecture developed by AUTOPILOT, the IoT ecosystem involves vehicles, road infrastructure and surrounding objects, bearing in mind the safety-critical aspects of automated driving.

The AUTOPILOT project was launched in January 2017, and it focused on increasing the use of IoT in smart mobility. Receiving an investment of approximately €20 million, this LSP brings IoT devices into the automotive world, transforming connected vehicles into a fully-automated method of transportation.

AUTOPILOT has developed various IoT services such as autonomous car sharing, automated parking, and dynamic digital maps. Self-driving cars were tested in real use cases, at four permanent pilot sites in Finland, France, the Netherlands and Italy, as well as one site in Spain and another further afield in South Korea, whose test results have all provided an insight on how IoT will affect the different levels of autonomous driving.

Each of the use cases were carried out with almost identical tests – one using IoT technology and the other not – a comparison designed to show how IoT systems can enhance the quality of our mobility. In complex scenarios like urban driving and shared mobility as a service (MaaS), IoT was demonstrated to be essential when it came to the early detection of obstacles such as pedestrians, cyclists or vulnerable road users, often beyond line-of-sight for self-driving cars.

Besides covering various traffic safety aspects, the IoT-based tests showed how to enable re-routing services to save travel time, as well as how to ensure smoother speed adaptation for bumps and other obstacles, improving the ride comfort of AUTOPILOT's connected and automated vehicles.

Visit the website of the AUTOPILOT project

## **InterConnect**

The gradual transition towards clean energy and a carbon-neutral economy is one of the greatest challenges of our time. The clean energy for all Europeans package has set the framework for more renewable energy to be integrated into the grid with an ambitious target of at least 32% by 2030, encouraging consumers to take an active role in the energy markets, and modernising electricity grids to be able to cope with volatile energy sources.

New digital technologies like IoT devices, smart appliances and smart home and buildings, connected storage solutions and electro mobility are essential for the renewables revolution and the energy transition. Advances in these areas are creating many opportunities for European citizens, giving them more choice in their homes and more flexibility to adapt their energy consumption to green sources, for example, by reducing their energy use at peak hours and consuming less when solar or wind energy is available.

InterConnect is a portfolio of six projects, jointly managed between the Commission's Directorate-General for Communications Networks, Content and Technology (DG CONNECT) and Directorate-General for Energy (DG ENER), cutting across innovations in both digital and energy markets. Launched in October 2019 and receiving around €30 million, This LSP will improve efficient energy management through interoperable technical solutions where demand-side flexibility can be properly integrated, offering many benefits to end-users inside the comfort of their own home. InterConnect is currently integrating various partners from relevant stakeholder groups: specific competences in ICT, IoT, energy, data science and software have all been included in the value chain, coming from research institutions, manufacturers, distribution system operators, retailers, ICT providers, and energy users.

In order to ensure a truly pan-European impact, several tech- and energy-related associations are also involved in InterConnect's work: seven LSPs located in Belgium, France, Germany, Greece, Italy, Netherlands and Portugal, each with different end-users, are foreseen to guarantee full representation and dimension in terms of the number of appliances and services involved. InterConnect's objective is to demonstrate a real digital market environment over electrical systems with significant amounts of demand-side flexibility, reducing operational costs that will not only benefit energy users but also help the EU in achieving its energy efficiency goals in the years to come.

Visit the website of the InterConnect project

Thanks to EU investment distributed between various IoT pilots, the digitisation of energy and mobility is already taking place, with many "made in Europe" digital solutions becoming available on the market. The digitisation of these sectors means safer driving and cleaner energy; essential when considering the context of the Green Deal and the EU's aim to become carbon neutral by the year 2050.

European, national and regional initiatives

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## Latest

Twelve innovators reach final round of the Innovation Radar prize 2020

The Commission has just launched the Innovation Radar prize 2020, the 6th edition of an initiative that celebrates high potential innovations – and the innovators behind them – developed in EU-funded research and innovation projects.  
European Commission partners with tourism

industry and leading European businesses to boost patronage voucher schemes across the EU

The tourism sector has been hit hard by COVID 19 and the European Commission is working to give patronage voucher schemes across the EU a boost in visibility. These schemes allow consumers to support their favourite hotels or restaurants by paying for a future stay or visit.

Re-open EU: Commission launches a website to safely resume travelling and tourism in the EU

The Commission has just launched 'Re-open EU', a web platform to support a safe relaunch of travelling and tourism across Europe. It will provide real-time information on borders and available means of transport and tourism services in Member States. Re-open EU will also include practical information provided by Member States on travel restrictions, public health and safety measures such as on physical distancing or wearing of facemasks, as well as other useful information on EU and national tourism offers. Commissioner Gabriel calls Central and Eastern European countries to increase support for Digital Innovation Hubs

At the Digital Innovation Hub Annual Event in Warsaw, Commissioner Gabriel asked EU countries so far underrepresented in the European network of Digital Innovation Hubs (DIHs) to step up support for DIHs in their regions.

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### **Big Picture**

Industrial platforms and large-scale pilots

Digital industrial platforms are key to placing Europe ahead in the digital transformation, linking technology building blocks and industrial applications.

### **See Also**

Large-scale pilots in the digitisation of agriculture



The Commission has set up large-scale pilots to drive the digitisation of agriculture in Europe.

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