PLATOON

Digital platform and analytics tools for energy

12/05/2020

PRESS RELEASE

Digitalising the energy sector with disruptive technologies

How PLATOON brings a digital platform and analytics tools to the industry

The H2020 EU-funded PLATOON project provides new approaches and analytics tools for Energy Big Data, thus supporting the zero-carbon transition and developing new services in the energy domain. In an increasingly complex and heterogeneous environment, PLATOON enables the evolution from a classical centralised energy sector to a more distributed one, with intermittent renewable energy sources and new extended digital capabilities. While contributing to artificial intelligence, interoperability, data privacy and security, PLATOON adheres to the standards of the International Data Spaces Association (IDSA), aiming thus to realise the first IDS-compliant Data Marketplace for the Energy sector. The project will be validated in 7 pilots in 5 countries (France, Spain, Italy, Belgium and Serbia), addressing real Energy Big Data cases. PLATOON's pilots cover the whole range of energy services along the energy supply chain, such as energy efficiency, electricity balance and predictive maintenance of wind farms, smart cities, buildings and office hubs, with the objective to increase operation performance with physical models and AI algorithms. Moreover, PLATOON's pilots focus on electricity grid stability, connectivity and life extension, advanced energy management systems and energy management of microgrids. PLATOON will facilitate the technology transfer to the market by a well-established tendering process via open calls.

The digitalisation of the energy sector enables higher levels of operational excellence with the adoption of disrupting technologies. The Energy Big Data framework of the modern smart energy networks provides the ideal ecosystem for knowledge exploitation from data. ENGIE is heavily invested in making zero-carbon transition possible for corporates and local authorities at a global scale. To implement this transition, **ENGIE** offers integrated solutions as a service in order to reduce energy consumption and improve energy efficiency. ENGIE coordinates the PLATOON project via its Lab CRIGEN. The **ENGIE Lab CRIGEN** is ENGIE Group's corporate center for R&D and forms part of the ENGIE Labs network. According to the **Coordinator of the PLATOON Project, Dr. Philippe Calvez, Head of the Lab for Computer Science and Artificial Intelligence (CSAI Lab)**, the PLATOON project will allow ENGIE to reinforce the development of its ambitious strategy, to explore new business models, to develop interoperable smart solutions and advanced, embedded decision tools, while interacting with the stakeholders involved in this ecological and energy revolution.

As stated by **Erik Maqueda**, Data Analyst at **TECNALIA** and Technical Lead of the project "*PLATOON will effectively integrate and enhance already existing **digital platforms in the energy sector** by **developing an interoperability layer, data governance modules and an easy to use data analytics toolbox**. This will enable a truly digitalised and integrated energy sector where data*

from various stakeholders is shared and exploited, thus enabling more efficient network management, increasing consumer participation and creating new data-driven business models and services."

PLATOON will deploy distributed edge processing and data analytics technologies for optimised real-time energy system management in a simple way for the energy domain. The data governance among the different stakeholders for multi-party data exchange, coordination and cooperation in the energy value chain will be guaranteed via a data governance framework, which complies with the standards of the **International Data Spaces Association (IDSA)**. This exchange environment will be evolved into an **open and trusted data marketplace** enabling secure data exchange and the guarantee of data sovereignty, in line with the **IDSA principles**. The IDS framework formed by data containers, brokers and the market itself, as part of the PLATOON reference architecture, guarantees the data governance and secure transfer from data owner to technology provider. According to the **Fraunhofer Institute for Intelligent Analysis and Information Systems** (**IAIS**), the PLATOON project enables the application of innovative data architectures that can facilitate the merging and processing of distributed data owned by various stakeholders in a marketplace setup. Furthermore, the project will develop and use the flexible capabilities of the interoperable **Comprehensive Architecture for Smart Grid (COSMAG)** to build and deploy **scalable and replicable energy management solutions**. COSMAG enables interoperability of heterogeneous data sources, formats and interfaces, while guaranteeing data governance and security of multiple data owners and providers as well as ease of use by energy domain experts without deep mathematical knowledge.

Via PLATOON's well-established tendering process through open calls, the technology transfer to the market is systematically enabled. This presents a key opportunity to verify the actual business impact of the project, demonstrating the maturity and impact of novel technologies to energy agents. Thus, the creation of an open ecosystem/market for advanced analytical solutions in Europe will be fostered, allowing utilities to capitalise on the value of energy data. During the last decade, the Consortium Partner **Minsait as an Indra company,** being a major technological player in Europe, has already integrated relevant technologies in its energy management products. For the **Institute Mihajlo Pupin**, PLATOON will provide the opportunity to deploy project outcomes for reliable energy production and consumption forecast to deliver efficient smart grid, user-oriented services. Pupin has a predominant market share in **Serbia** in terms of control and supervision of power production by hydropower, thermal power and photovoltaic plants, wind farms, as well as power transmission and dispatching.

The digitalisation of the energy sector is demanding new local specific solutions in regulation with real-time data processing. *"By participating in different PLATOON pilots, we aim to develop new algorithms and address different on-site scenarios*" explains **Andrej Čampa**, **Independent Development Engineer at ComSensus**. **Pau Joan Cortés Forteza, Head of the Research Department, Sampol Ingenieria y obras**, stated that "*PLATOON will integrate solutions related to digitalisation joining Industry 4.0 solutions with energy experts, drawing the smart grid of the future. Digitalisation will play an important role in this road, monitoring and analysing every watt waste. The EU is guiding us, with projects as PLATOON, to a responsible energy consumption and more advanced society, where eco-friendliness is a commodity*." **Jose I. Hormaeche, General Manager of the Basque Energy Cluster (CEPV)** shares that "*In our opinion as a cluster organisation, the results of PLATOON will be key to facilitate data access and use in the energy sector. The architecture to be defined, the analytical tools to be developed and the data governance standards to be implemented should allow companies at the different segments of the energy value chain to share data and cooperate in order to obtain real value out of the data collected from the energy assets.*"

PLATOON has an undoubtable potential towards enabling the modernization of the European energy grids through the introduction of innovative solutions. By introducing new implementations of distributed/edge processing and data analytics, PLATOON seeks to build upon data as a resource for the maximisation of energy efficiency. Given that PLATOON's approach seeks to address all elements of the value chain, the protection of the interests of the end-users and the generation of trust

is a key requirement to ensure that this project has a positive impact and its results can be adopted by the EU energy sector. Adrian Quesada Rodriguez, Project Manager and DPO at **Mandat International** confirmed that "*In this context, we will focus on ensuring compliance with relevant ethical and legal requirements (with a particular focus on personal data protection). We seek to enable end-user trust in PLATOON by building upon the experiences obtained throughout a long trajectory of successful H2020 research projects and the multidisciplinary expertise that has always characterised our organisation."If you would like to find out more about PLATOON or become an associated partner, mentor or ambassador, please contact us.*

About PLATOON

The H2020 project PLATOON has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872592. The project started in 2020 and has a duration of three years. The project will reinforce the European efforts for the modernisation of the European electricity grid and offer access to cheaper and sustainable energy for consumers while maximising social welfare. Together with ENGIE, the following institutions and companies also participate in the project: TECNALIA Research and Innovation, University of Bonn, Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS), Engineering, University of Brussels (VUB) with its OWI-Lab, Institute Mihajlo Pupin, Giroa as member of VEOLIA Group, SISTEPLANT, SAMPOL Ingeniería y Obras S.A., Leibniz Information Centre for Science and Technology, University Library (TIB), Politecnico di Milano, the Municipality of Rome, Poste Italiane, Mandat International, FundingBox Accelerator (FBA), Minsait (an Indra company), ComSensus, the Basque Energy Cluster (CEPV) and UDG Alliance.

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872592. Any dissemination of results here presented reflects only the consortium view. The Commission is not responsible for any use that may be made of the information it contains.