Press release
Versailles, 06 February 2020

[**SELF-DRIVING**]

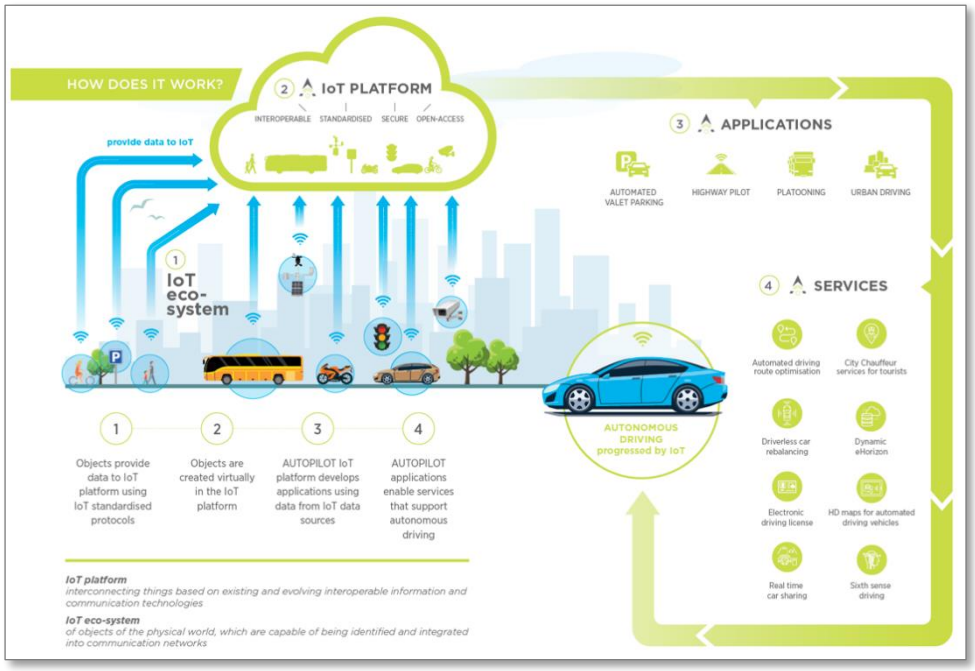
Presentation of the results of the European Autopilot project

The IoT is pushing the self-driving vehicle towards new types of mobility services

Launched in 2017 for a period of three years, the European AUTOPILOT project, devoted to the contribution of the Internet of Things (IoT) to self-driving, is completing its experimental phase. The project brings together an international consortium of 45 partners on 6 trial sites located in Europe and South Korea. The results were revealed in Versailles, one of the partner sites and the head office of VEDECOM, the coordinator of the trials. They highlight the importance of IoT technologies in improving the abilities of the self-driving vehicle in better understanding its environment, in addition to the sensors that already exist (camera, radar, lidar, etc.). This project opens the way for a new generation of mobility services associated with self-driving vehicles.

The IoT at the service of "augmented" mobility

The IoT can connect all types of device to the Internet to share information and use added-value. Autonomous vehicles are thus connected to share information from the on-board sensors, as well as from smart phones of pedestrians and cyclists, traffic sensors, parking detectors, etc. Cloud computing services use and combine all this information to enhance the data and provide added-value services to self-driving vehicles.



"The results of AUTOPILOT have confirmed the potential of the IoT to develop a new generation of mobility services and, more broadly, to understand mobility as a service. This project is contributing to the deployment of the European Commission's strategy relative to connected and automated cross-border corridors, as well as the objective of reduction to zero fatal road accidents by 2050" says François Fisher**,** Senior Manager Innovation & Deployment at Ertico-ITS Europe.

"AUTOPILOT has enabled the testing of mobility services in real-time, more reliable and more personalised – of the MaaS type. Beyond these technological innovations, the results of the project will enable the development of innovative commercial models. The aim is to enable all players in mobility – infrastructure operators, data suppliers as well as manufacturers – to develop products and services in line with the expectations and requirements of the market" emphasises Philippe Watteau, Managing Director of VEDECOM.

The IoT, for better anticipation of the driving environment

The information from the IoT received by the self-driving vehicle enhances that detected by its sensors, which enables it to **better anticipate imminent events and risks present in its environment.** The results of the AUTOPILOT project highlight:

- **improved road safety** of vehicle passengers and users: detection of pedestrians or cyclists and detection of obstacles (speed bumps, puddles, potholes, etc.);
- **better traffic fluidity**: reception by the vehicle of optimised routes to avoid congested zones or to more easily find an available parking place;
- **Improvement of driving comfort**: adaptation of the speed for smoother navigation and manoeuvring (without sudden braking);
- **reduction in the consumption of power and fuel** through optimisation of the journey, notably by reducing the time spent in traffic jams or for looking for a place.

Towards new business models for autonomous valet-parking and car-sharing services

AUTOPILOT has also enabled identification of **commercial opportunities that can be adopted on a large scale in the various European cities** which took part in the project. Business models have thus been developed – based on precise performance indicators – for two types of services: the autonomous valet parking service and car sharing.
The AUTOPILOT operating phase will enable the development of a roadmap per service, to determine the period for the commercialisation of the technology and the regulatory framework necessary to its development, to understand the new markets, etc.

Versailles, a pilot site for "platooning" or self-driving vehicles moving in platoons

The AUTOPILOT project continues the economic development work undertaken by the Versailles Grand Parc Intermunicipal Partnership around Versailles Satory.
The aim of this trial – carried out on the open road in Versailles between Avenue de Paris and Boulevard de la Reine – is to facilitate the work of players in the development area such as the VEDECOM Institute.
This partnership enables the conurbation and its municipalities to improve their competence and better understand future mobility issues.

PLATOONING, AN APPLICATION TO SERVE FLEET REBALANCING

Platooning, "or driving in a platoon", can physically or digitally connect several vehicles so that they can move as a group in self-driving mode, guided by a lead vehicle. **As part of the AUTOPILOT project, this technology was tested to optimise the management of fleets for car sharing.** In the scenario tested at Versailles, between the Hôtel de Ville and the Parc du Château, these were used for a shared car service (of the Autolib' type), available in several places in the town, to move visitors from one tourist site to another. The results of the project showed that the car sharing stations could be resupplied optimally in real-time according to requirements. The presence of a single driver – in the lead vehicle – can convoy a fleet of vehicles that follow in self-driving mode and thus quickly bring a large number of vehicles to the station.

Watch the Autopilot film, filmed in Versailles on VEDECOM's YouTube page: https://youtu.be/HGHeqMafO7w

ABOUT THE AUTOPILOT PROJECT

Launched on 1 January 2017 for a period of 3 years, AUTOPILOT is a large-scale pilot project of the Horizon 2020 programme of the European Commission, aiming to use the IoT (Internet of Things) to improve the level of autonomy of vehicles and evaluate their impact. This project enabled measurement of the value added by technologies arising from the IoT for self-driving, notably through trials under real conditions.
The AUTOPILOT project consortium brings together 45 partners from 15 European countries and South Korea. They are actors involved in the development of self-driving and connected vehicles, the development of the IoT, data and evaluation of systems and their potential impact from a technological, economic and human point of view; but they are also organisations that will use the results of the project to develop innovative services. The trials took place on 6 sites: Brainport (Netherlands), Daejeon (South Korea), Livorno (Italy), Tampere (Finland), Vigo (Spain) and Versailles (France).
Amongst them:
- the **VEDECOM** Institute, which coordinated the driving activities on the 6 pilot sites;
- the **Versailles Grand Parc Intermunicipal Partnership**, with Versailles, which is the French pilot town responsible for evaluating the benefits of connected objects in the urban environment for self-driving vehicle functionalities;
- as well as **ERTICO – ITS Europe** acting as the coordinator for the AUTOPILOT project.

ABOUT ERTICO

ERTICO – ITS Europe is a public-private partnership of 120 companies and organisations representing Service Providers, Suppliers, Traffic and Transport Industry, Research, Public Authorities, Users, Mobile Networks Operators and Vehicle Manufacturers. ERTICO innovates, promotes and deploys Intelligent Transport Systems and Services (ITS) through a variety of activities that includes European co-funded projects, Innovation Platforms, International Cooperation, Advocacy and Events. ERTICO's four focus areas are Connected & Automated Driving, Urban Mobility, Clean Mobility, and Transport & Logistics. ERTICO is also the organiser of the ITS European and World Congresses, which take place every year in a different city.

About VEDECOM

The VEDECOM Institute for the Energy Transition is a public-private partnership foundation based on an unprecedented collaboration between 58 players engaged in innovative and durable mobility, meaning more environmentally-friendly, more autonomous and with improved sharing. It brings together industrialists, infrastructure operators and mobility services, services companies, academic establishments and local authorities in the Ile-de-France. VEDECOM's research and development work covers three areas: electrification, self-driving and connected vehicles, new mobility solutions and shared energy. Created in 2014 as part of the "Investing in the Future Programme", VEDECOM is contributing to the "Self-driving Vehicle Plan" that forms part of the New Industrial France project.

VEDECOM has 400 publications and 80 theses to its credit, as well as 2,500 persons trained as part of its training programme. With an annual budget of €30M, it has more than 200 employees. Its 10 founding members are: Cetim, ESIGELEC, ESTACA, IFPEN, IFSTTAR, Groupe PSA, Groupe Renault, Safran, UVSQ, and Valeo.

ABOUT VERSAILLES GRAND PARC

Versailles Grand Parc, an Intermunicipal Partnership with an international reputation, comprehensive transport networks, cultural and sporting facilities and an exceptional quality of life, has positioned itself as a leading centre in innovative mobility. Driven in December 2015 by the signature of a framework agreement with the main players of the sector established in the conurbation, the action relies on all of the competences of Versailles Grand Parc, for example:

- in the field of **Urban Planning**, by creating places of innovation, notably at Satory, the innovative mobility district of Paris-Saclay, to enhance the ecosystem of the conurbation;
- in the field of **Economic Development**, highlighting the know-how of our companies through demonstrators and trials;
- in **Transport** by integrating innovative services.

The conurbation is a leader in various fields, such as urban ecology, health and digital technology, as well as the industrial high-technology sector.

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