



Enhance driver behaviour & Public Acceptance  
of Connected & Autonomous vehicles



## PAsCAL Pilots: Citizens explore the future of automated vehicles

### The context

The PAsCAL (Enhance driver behaviour and Public Acceptance of Connected and Autonomous vehicles) project, funded within the H2020 programme of the European Commission, has officially launched its pilot testing phase. Each of the 5 pilots will focus on different aspects of Connected Automated Vehicles (CAVs) within existing transportation networks. An array of effects on social, economic, safety and inclusive key performance indicators will be analysed and considered to further advance the development and improve the available solutions on the market today and guarantee the wide market uptake of the solutions. Furthermore, the general public's awareness of these technologies as well as of any potential use-cases both today and in the future.

In order to correctly evaluate and capture the participant's sentiments and opinions on these key issues, the PAsCAL partners rely on user-related data, public opinion surveys and feedback from participants and partners alike.



### The pilots

The pilot deployments will give a unique and novel insight into the way humans interact with CAVs and assess the importance humans play within the network ranging from passengers to training needs of drivers and driving instructors. In particular, the challenges and potentials of CAVs for vulnerable passengers with disabilities or mobility constraints is of great interest and has never been considered in such a scope before.

Every participant in one of the pilots will be asked to fill out a questionnaire, which has been carefully constructed following the FESTA methodology as well as fresh insights from the PAsCAL partners. The common pilot methodology design ensures that all pilots will be feasible and most importantly comparable. Furthermore, the partners considered an inexhaustible list of readily available questionnaires and adapted their questionnaires to the key factors of the successful surveys (simple and direct language, short questionnaires). While authoring the questionnaires, special attention has been paid to ensure that each question is FAIR (Findable, Accessible, Interoperable and Reusable) and easily understandable by any participant, regardless of their social, economic, educational or linguistic background. To complete all criterions to qualify as a Field Operational Test (FOT), further measurements and observations (in form of Incident Report Forms for managers, video recordings, interviews, focus discussion groups and HMLs) will be also documented to ensure the objective and detailed evaluation of the pilot technologies and propose viable and effective improvements.



Five pilots have been planned and scheduled to take place over the course of nine months in 2021 using an iterative wave approach to guarantee the easy adaptability and expandability of the pilots and Key Performance Indicators:

## High-capacity autonomous bus operations:

This pilot evaluates and tests the Volvo 7900 electric autonomous bus in Luxemburg and Sweden under normal day-to-day traffic conditions. In particular, passengers, drivers and other road users will give their feedback on their acceptance of the service before and after testing the bus service themselves and deliver insights into the overall acceptance of a commercial bus service offering.

Pilot location: Luxemburg and Sweden.

## Autonomous driving training:

The pilot validates the project outcomes on capacity building & training education in a real CAV environment, namely the adequacy of the developed training modules for trainers, new drivers and professional drivers. The validation tests compare trained and untrained drivers by checking if there is a difference in acceptance between a simulated and a real situation, how difficult and stressful it is to accept such change, and the eventual differences in acceptance across different driver categories.

Pilot location: ACI Vallelunga Safe Driving Centre in Lainate (Italy).

## SMEV (Smart Emergency Response):

This pilot focusses on an ITS cooperative system, which enables free corridors for emergency responders by reorganising traffic dynamics via traffic control centres. The traffic lights in Madrid will be accessed and controlled by the system using the traffic control centre of the city. The system's effect on road users as well as emergency vehicle operators will be assessed and analysed and their feedback will be used to further ameliorate the service and adapt it to the city's traffic system.

Pilot location: Madrid (Spain)

## Shared connected transport:

This pilot explores the role of CAVs within commercial shared mobility businesses in close cooperation with Luxembourgian car-sharing operator moovee to explore the viability and profitability of the integration of CAVs into their offering. In particular, this pilot seeks to explore the possibility of a wide market uptake of automated vehicles within existing fleets in urban environments.

Pilot location: Luxemburg

## Experience of vulnerable travellers with connected transport environment:

This pilot will explore the inclusivity- and safety needs of vulnerable passengers using CAVs. The Apertum platform will be tested in Madrid, Spain, which acts as a smart step-free routing algorithm for the local transportation network for people with mobility constraints. In addition, several focus discussion groups in Rome, Italy will be held including persons with sensory impairments in close collaboration with the European Blind Union (EBU).

Pilot location: Madrid (Spain) and Rome (Italy)

