

PAsCAL

An interdisciplinary approach to assessing and enhancing driver behaviour and public acceptance of connected and autonomous vehicles



INSPIRATION

At the dawn of Connected and Autonomous Vehicles (CAV), a number of issues arise when it comes to taking into account complex human-machine interactions. Whether as a car occupant or pedestrians, people will face new situations for which their behavioural responses are currently not well known.

Indeed, research initiatives have been mainly focused on a technology-driven approach, leading to a lack of human-behaviour characterisation that is nevertheless, essential to ensure sustainable implementation of this future mobility. In addition, recent studies have shown that the majority of the population appear to be reluctant to CAVs. There is therefore an urgent need to define, assess and analyse driver behaviour, as well as European public acceptance of CAV, in order to address these social challenges.

INNOVATION

The [PAsCAL](#) project, funded by the European Commission, aims to assess the acceptance level of European citizens towards future CAV through an interdisciplinary approach combining innovative human science and technology tools. The objective of this international project, coordinated by LIST, is to develop an unprecedented platform gathering reliable and designed specifications for every users' profiles: from manufacturers to public authority and citizens.

To do this, LIST and its partners will capture the public's acceptance and attitude, analyse and assess their concerns, model and simulate realistic scenarios for hands-on practices, and validate the research innovation in a number of trials in the real world.

LIST will be in charge of realistic scenarios simulation aiming to measure individual reactions with eye-tracking, biosensors, as well as behavioural analyses. LIST researchers will make use of their readily transportable low-immersive car simulator to perform the trials, and will also make it available to their partners. In parallel, they will test people's reactions as pedestrians through a cognitive environment.

IMPACT

This innovative project will significantly contribute to the current state-of-art, and also bring a better understanding on key psychological approaches closely linked to public acceptance of CAV, such as the locus of control concept. As a result, it will develop the path to new recommendations to enhance both driver behaviour and public acceptance.

[PAsCAL](#) will enable the creation of Guide2autonomy, a unique European platform providing specifications to all the different users profiles. It will be of great interest either for CAV manufacturing as for urban planning or raising citizens awareness about this future mobility.

For more information, visit the official [PAsCAL website](#).

Partners

RealDolmen (Belgium) , Union Européenne des Aveugles (France) , E-Bus competence center (Luxembourg) , University of Mannheim (Germany) , Examotive (Luxembourg) , Université de Bourgogne Franche-Comté (France) , University of Leeds (United Kingdom) , Etelätär Innovation Oü (Estonia) , RDS Driving Services Limited (United Kingdom) , LuxMobility (Luxembourg) , Automobile Club d'Italia (Italy) , University of Liverpool (UK)

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