**ADAS&ME**

Faced with the development of the technology that will allow for autonomous driving, the ADAS&ME project works in order to automatically associate this driving mode with the condition of the driver and the surrounding.

The car industry considers that most of the traffic accidents are due, to a greater or lesser extent, to human error (depending on the study, the percentage of accidents with a direct involvement of the human error is between 80% and 90%), largely above other aspects, such as the vehicle or the infrastructure.

One of the challenges of driving automation is to make it contribute to correcting the human error in order to reduce the road accident rate and increase the efficiency of transport.

The transition between manual and automatic driving still requires a lot of research in order to be accepted by users. The ADAS&ME project develops advances driving assistances systems (ADAS) that include information (achieved in a non-invasive way) about the following aspects:

- Condition of the driver: attention level, if he/she is sleepy, stressed, etc.
- Driving context: behaviour of other road users, traffic condition, etc.
- Adaptive interaction with the vehicle systems: analysing whether the human/machine interface (HMI) adapts to the specific conditions of each case of use and the individual characteristics of the driver.

These data should make it possible to transfer the control of the vehicle automatically in certain situations (activation of different autonomous driving levels according to the condition of the driver and his/her surrounding) in order to be able to increase the levels of comfort and safety. All of this by means of the implementation and demonstration of different cases of use with the participation of all types of vehicles (conventional car and electric car, truck, bus or motorcycle).

Associating the condition of the driver and his/her surrounding automatically to the activation of different automation levels is the most complex and ambitious target pursued by the ADAS&ME project.