

5G Connected Car

Objective: Outdoor demonstrator in a real environment (Barcelona in the surroundings of the Fira del Mobile World Congress) focused on increasing road safety and offering a more exciting on-board experience.

Description: 5G is the driver of vehicular communications, providing ultra-low latency and intelligence at the edge of the network, helping the driver to anticipate decisions to improve road safety. The three assisted driving use cases showcased were:

-Detection of a pedestrian at a zebra crossing: the traffic light detects via a thermal camera the presence of pedestrian at the zebra crossing and, via Edge Computing, alerts vehicles which will display a warning message on the dashboard if necessary.

-Right-turn cyclist detection: the bike equipped with connectivity and an ultra-precise location solution, via edge, communicates with surrounding cars to inform them of its location. In case of a possible collision, the cars will display a warning message on the dashboard. The bike is located thanks to the ultrawideband beacons that have been deployed on the road.

-Detection of a car stopped on the road in low visibility: the car stopped in a low visibility area of the road activates the hazard warning lights and automatically alerts other approaching vehicles with a message on the dashboard. This communication is done via the direct communication interface.

With these use cases, Telefónica helps vehicles, road infrastructure, bicycles, in short, all urban elements to become new sensors of the city. In addition, the implementation of Ficoso's C-V2X technology in vehicles gives drivers a "sixth sense" that will allow them to make decisions in advance and with room for manoeuvre, all aimed at making progress in the creation of safer and more efficient cities. An entertainment use case was also demonstrated, where passengers were able to enjoy streaming UHD content thanks to the high bandwidth provided by the 5G network during the journey.

[Press release](#)

