

# The role of Bicycles and E-Bikes in the future development of Intelligent Transport Systems



## Presentation Abstract

In the very near future vehicles will interact directly with each other and with the road infrastructure. The Future of Mobility will be electrified, automated and connected. In the mobility context, Bicycles and especially Electric Bicycles will play a major role in personal mobility, in recreation and in commercial transportation: they will be connected and will represent an important element of the Internet of Things ecosystem. In other words they will become “Smart”. Bikes will foresee monitoring systems for real-time usage & sensor data, and WiFi, Bluetooth, GPS and GPRS connections are going to offer the connectivity for the next generation of Bikes and E-Bike riders. From the security point of view, connectivity will provide users with theft alerts and geofencing while, on the safety side, bicycles will definitely have to communicate with the other vehicles (V2V) as well as with the road infrastructure (V2X): this interaction will allow road users and traffic managers to share information and use it to coordinate their actions. The cooperative element enabled by digital connectivity will significantly improve road safety and traffic efficiency by helping cyclists (and the other road users) to take the right decisions and adapt to the traffic situations.

At the European level, EATA (the European Automotive Telecom Alliance ) has been reiterating its commitment to developing the necessary technologies to make connected and automated driving a reality in Europe. The focus of EATA is therefore to establish the right conditions for a reliable and interoperable communications system: “Deploying the necessary technologies and boosting user uptake requires an appropriate regulatory environment”. In this context, there is the need to have in place policies and regulations that ensure the necessary connectivity levels, that foster innovation and that promote a resilient cyberspace to ensure consumer trust. The C-Roads Platform, for example, has the objective to reduce the amount of accidents via available ITS technologies that have been already tested and demonstrated on large scale: the Bicycle Industry deems that a proper deployment of harmonized C-ITS services is key to this objective and agrees that interoperability is a must: It is unacceptable that road users could die on roads because vehicles cannot "speak" to each other due to non-interoperable communication systems (e.g. non-interoperability of ITS-G5 and LTE-V2X). Safety is a priority for the Bicycle Industry. During the High-Level Road Safety Conference in Malta organized by the European Commission together with the Maltese Presidency in March 2017, several sets of topics were discussed to shape a Declaration on the road safety system, and in particular to address in the most effective way the current road safety challenges. Among those topics there are the protection of vulnerable road users and smart road solutions: the Bicycle Industry is eager to contribute to those discussions and stress the crucial role of communications among ALL vehicles. In conclusion, the Bicycle Industry would welcome the possibility to take part to the exchange of ideas that will arise in the context of the symposium “Future Networked Cars”, which will take place on the 8th March 2018 at the International Motor Show in Geneva, to provide the audience and the panel with its opinion on the current policy, regulatory and technical developments that are related to ITS and Connectivity.