



5G CONNECTED & AUTOMATED MOBILITY

Research be-ond

One of A-to-Be's passions is exploring where mobility can take us. An everyday commitment to innovation in all our R&D projects.

Cooperative, Connected and Automated Mobility (CCAM) promises to revolutionize the transport sector. 5G opens-up new opportunities for CCAM that previous communication technologies didn't allow.

5G PT Connected vehicle

A-to-Be and IT Aveiro developed the **Portuguese 5G Connected vehicle** that took part in all ES-PT **Advanced Driving** use cases.



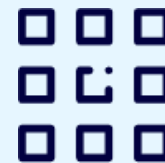
High-Definition Maps

A-to-Be produced **HD Map updates** from **vehicle sensor data** using **advanced AI solutions**. This was a **bandwidth heavy** scenario that let **autonomous vehicles drive** through **roadwork** sections.



Reuse to evolve

A key aspect of our participation in this project was the **reuse** of **A-to-Be's V2X App** and **C-ITS Center**. These were evolved with 5G integrations and support for the Advanced Driving use cases in 5G-MOBIX ES-PT cross-border corridor.



ABOUT

- EU funded innovation action
- Nov 2018 – July 2022
- 50 partners from 11 countries in Europe
- 10 non-EU funded partners from China and South Korea

OBJECTIVES

- Accelerate deployment of 5G at cross-border areas
- Define deployment scenarios & recommendations including x-border context

ACTIONS

2 cross-border corridors and **6 trial sites**.

A-to-Be powered several aspects of the **Portuguese-Spanish cross-border corridor**. Advanced Driving Use cases were trialed with Autonomous and Connected Vehicles. An urban Autonomous Shuttle was also trialed with Autonomous, Remote Driving and interactions with vulnerable road users.

One of the main aspects of this corridor was the **seamless roaming** between 5G networks from the 2 countries.