



Autonomous electric vehicles for goods and passenger transport

mercamadrid



3.4 million tonnes of product.



220 hectares with more than 800 companies.



9,000 people work, 20,000 access.



15,000 vehicles per day on average.



Area of influence of 500 km and 12 million consumers.

MOBILITIES FOR EU PROJECT

Madrid – 5 pilotos



With the main objective of contributing to the transformation of cities towards climate neutrality, the aim is to demonstrate the feasibility of 5 pilots on innovative mobility solutions in a smart urban space: Mercamadrid.

ZERO EMISSION, AUTONOMOUS AND CONNECTED VEHICLE (CCAM) FOR THE TRANSPORT OF PEOPLE IN MERCAMADRID

alsa



CONTEXT OF THE MOBILITIES FOR EU PROJECT

Current situation

GLOBAL:

Lack of public transport solutions with autonomous vehicles at the international level.

In Madrid, Alsa operates the only vehicle in Spain operating in open traffic on a regular CRTM line (Cantoblanco Autonomous University campus).

The autonomous vehicles deployed so far are of low capacity (approx. 12 passengers).

MERCAMADRID:

There is no public transport solution within the complex, only 2 passing city bus lines.

Predominance of private transport.

Complex traffic environment.



PROPOSED SOLUTION

ZEV, Autonomous and Connected Vehicle (CCAM)

Regular commissioning of an electric midibus (ZEV) and autonomous (Level 4+) with more than 20 seats, located in a collaborative and interconnected environment (CCAM) within the Mercamadrid area.

This autonomous electric midibus will operate in a real open traffic space during 8-12 hours a day on a recurring basis.

Proposed interior route to connect the main mobility attraction nodes of the complex, although it is foreseen to be updated throughout the project to adapt it to the needs of people.

The know-how generated in this project will allow for its scalability to larger and more complex environments, as well as its replication in other cities internationally.



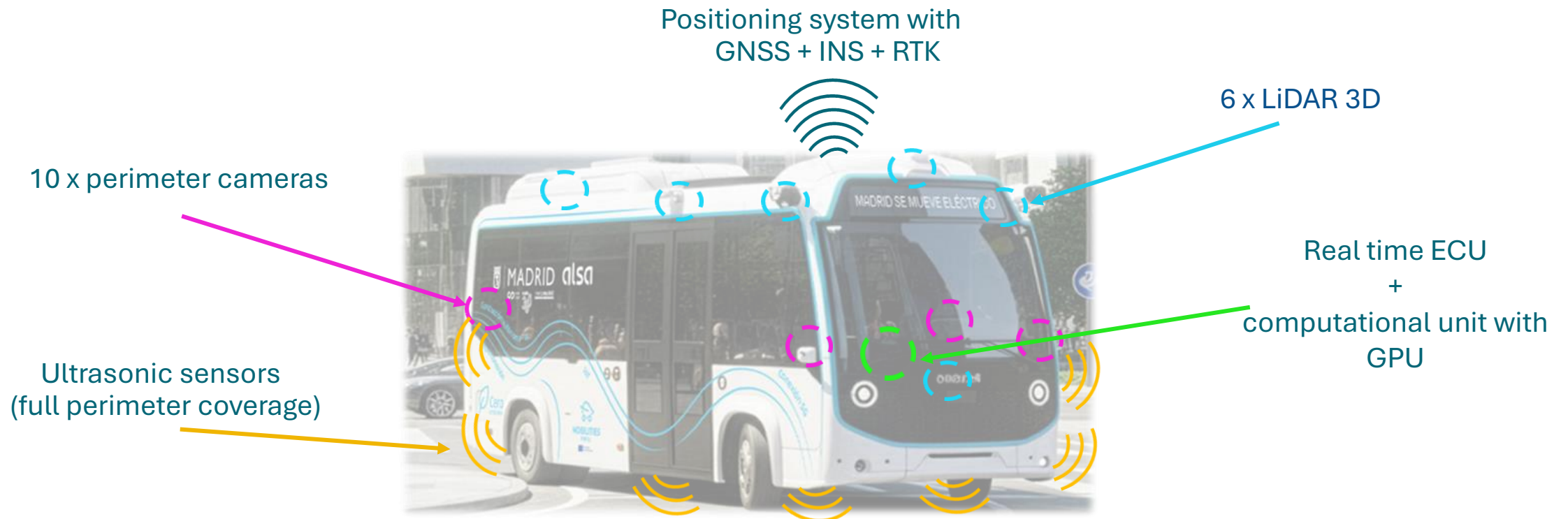
PROGRESS MADE

- ✓ International benchmarking of solutions implemented in other cities and prospecting of autonomous vehicle manufacturers.
- ✓ Definition of technical criteria for bidirectional charging points to be compatible with the EMT Madrid fleet.
- ✓ Identification of key technical signals and KPIs to feed/receive from the shared data space for all partners.
- ✓ Preliminary design of the internal route based on attraction nodes and detected potential black spots.
- ✓ Definition of baselines to measure the improvement achieved with the project.
- ✓ Purchase and reception of the autonomous vehicle.
- ✓ Technical homologation of the vehicle and special permits with regulator.
- ✓ Training and qualification of the new role of on-board assistants.
- ❑ Design of studies, surveys, and work for specialized research on mobility and people's needs regarding the new service – *First surveys ongoing.*
- ❑ Identification and installation of additional onboard equipment (information screens, people counters, cameras, etc.) – *Final stage.*



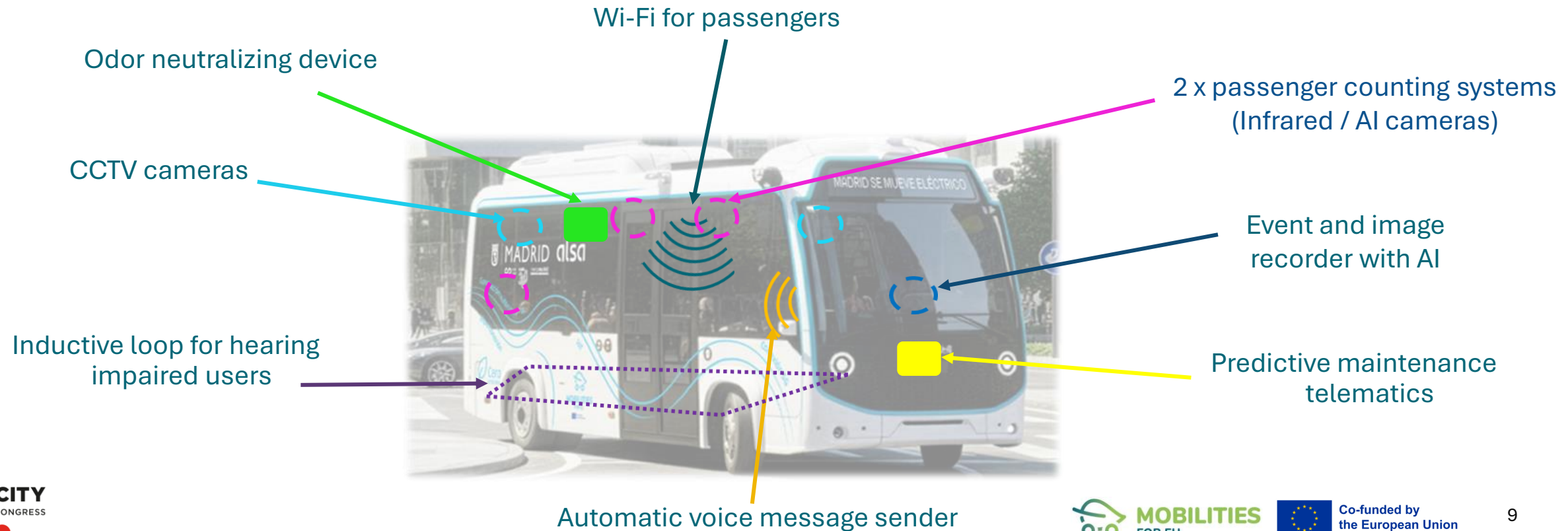
AUTONOMOUS DRIVING SENSORS

Autonomous vehicle SAE Level 4+



ADDITIONAL ONBOARD EQUIPMENT

Several safety and comfort improvements onboard



PROPOSED SOLUTION

In addition to the deployment of the CCAM vehicle itself, the Alsa-Mercamadrid project includes the following elements:

Zero Emission Mobility Plan

We are designing a Zero Emissions Mobility Plan specifically for Mercamadrid, so that the circulation of the CCAM bus can achieve a real transformative effect on mobility in coordination with other environmentally friendly modes.

Customer Centric Service Design

The new mobility system, more comprehensive and designed ad-hoc for Mercamadrid, will have people and their different needs at its core: accessibility, ease of use, suitability, proximity, availability, technology...



FINAL STEPS

In the upcoming weeks, we will have intense activity around the following lines of action:

- Final installation and testing of additional on-board equipment.
- Integration and bilateral communication with the new dataspace for MOBILITIES consortium.
- Adaptation of the road infrastructure for the operation of the vehicle (horizontal/vertical signage, etc.).
- Carrying out tests with the autonomous vehicle, at our facilities and on the real route.
- Drafting and validation of the Zero Emission Mobility Plan for Mercamadrid and the Customer-Centric Service Design associated with this new mobility solution.
- Official inauguration of the new service and carrying out dynamization and dissemination campaigns.



[HTTPS://MOBILITIES-FOR.EU/](https://mobilities-for.eu/)



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