

# POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

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CONFERENCE

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#POLIS2022

# SCAI vehicle

An strategic and technology tool to management traffic

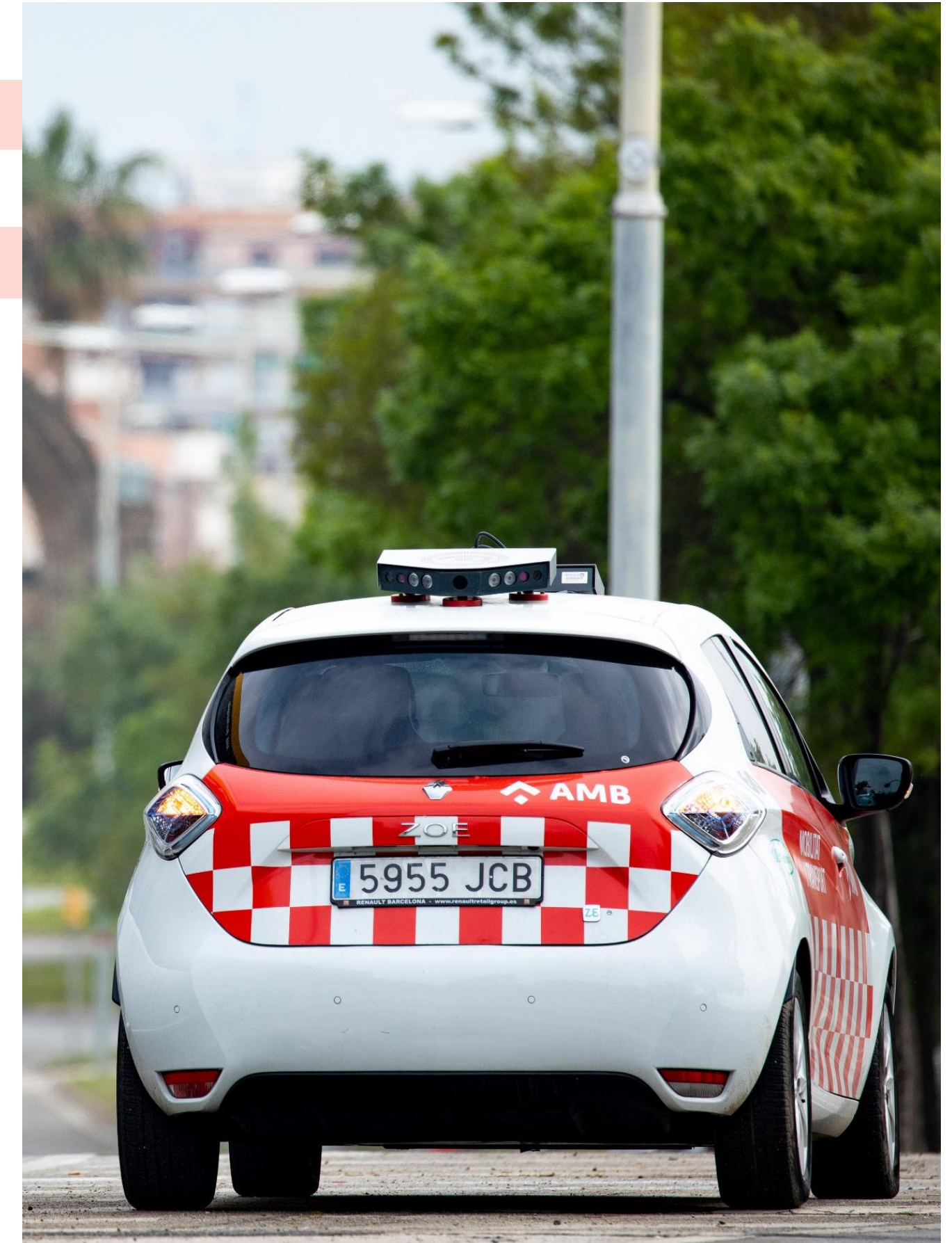
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 **AMB** : Àrea Metropolitana  
de Barcelona



1. Introduction
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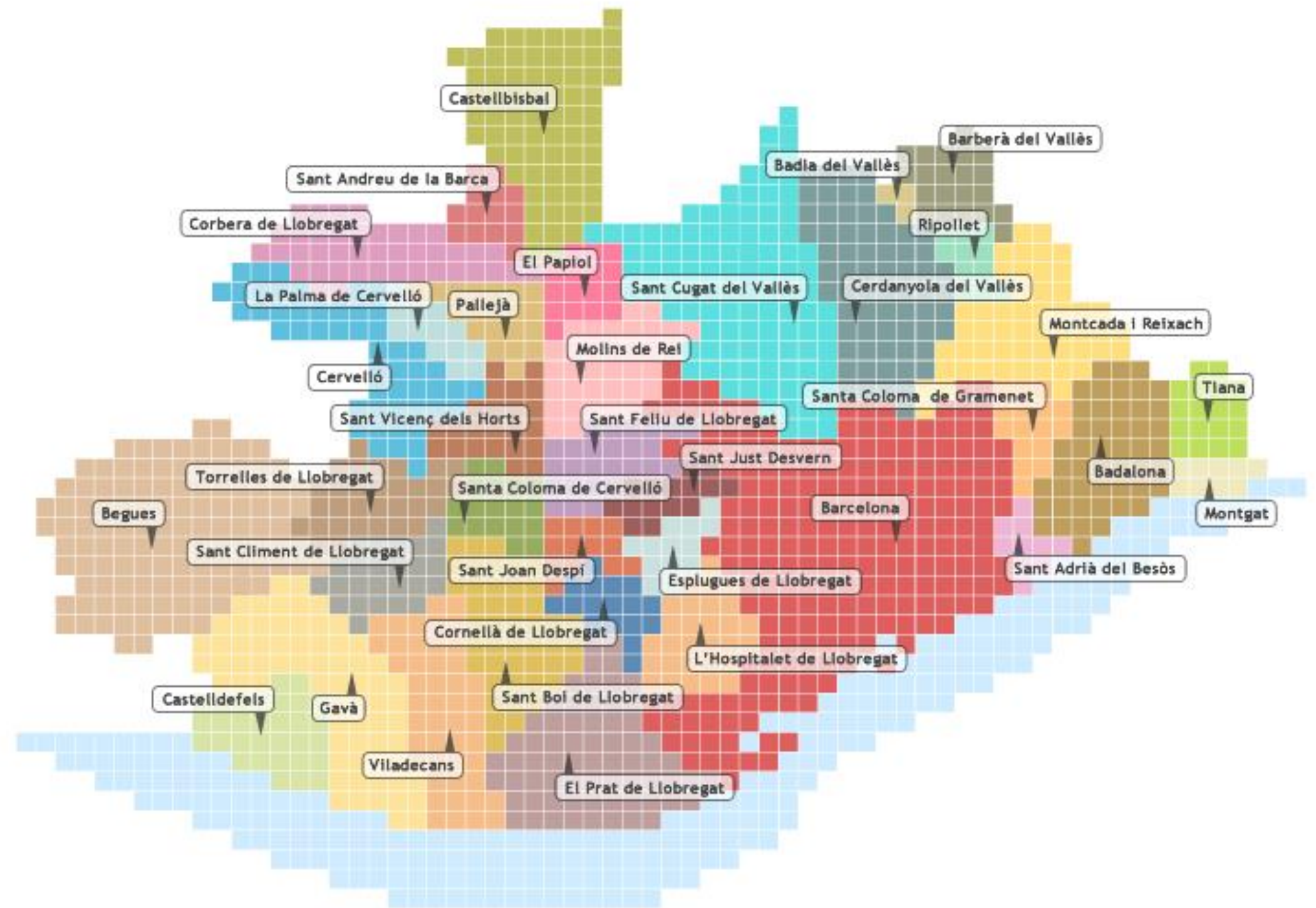


# 1. Introduction

3.239.337 inhabitants

36 municipalities

636 km<sup>2</sup>



# 1. Introduction

## Mobility Competencies



Collective urban public transport of passengers on the surface

Provision of metro and underground public transport of passengers



Regulation of the taxi service

Approval of the Urban Mobility Metropolitan Plan



Planning and management of passenger transportation with tourist and cultural purposes

Promotion of sustainable transport



Management of the basic metropolitan road network





# 2. Air quality from a metropolitan scope

**Air pollution and its impact on public health is one of the main problems of large European metropolis.** Barcelona and its metropolitan area are no exception. Until 2020, the air quality levels recorded did not comply with either the recommendations of the World Health Organisation and the legal levels established by the European Union.

The restrictions on mobility caused by the Covid-19 pandemic showed that **the solution to the air pollution problem is a modal shift from private vehicles to other more sustainable modes.**

To achieve these objectives, measures such as the increase in bus lanes and cycle lanes, road surface parking regulations and the low emission zone have been promoted in the metropolitan area. However, **for public policies to be effective, they need to be controlled and monitored.**



**A l'àrea metropolitana de Barcelona, els dies amb major contaminació hi ha més atacs de cor i més greus**

La mala qualitat de l'aire causa més de 3.000 morts cada any a la metròpolis de Barcelona

**JORDI BAÑERAS**  
Cardiòleg de l'Hospital Vall d'Hebron

Video de l'entrevista  Podcast de l'entrevista 

CANVIAR D'HÀBITS  
ÉS TAN NECESSARI COM  
L'AIRE QUE RESPIREM.





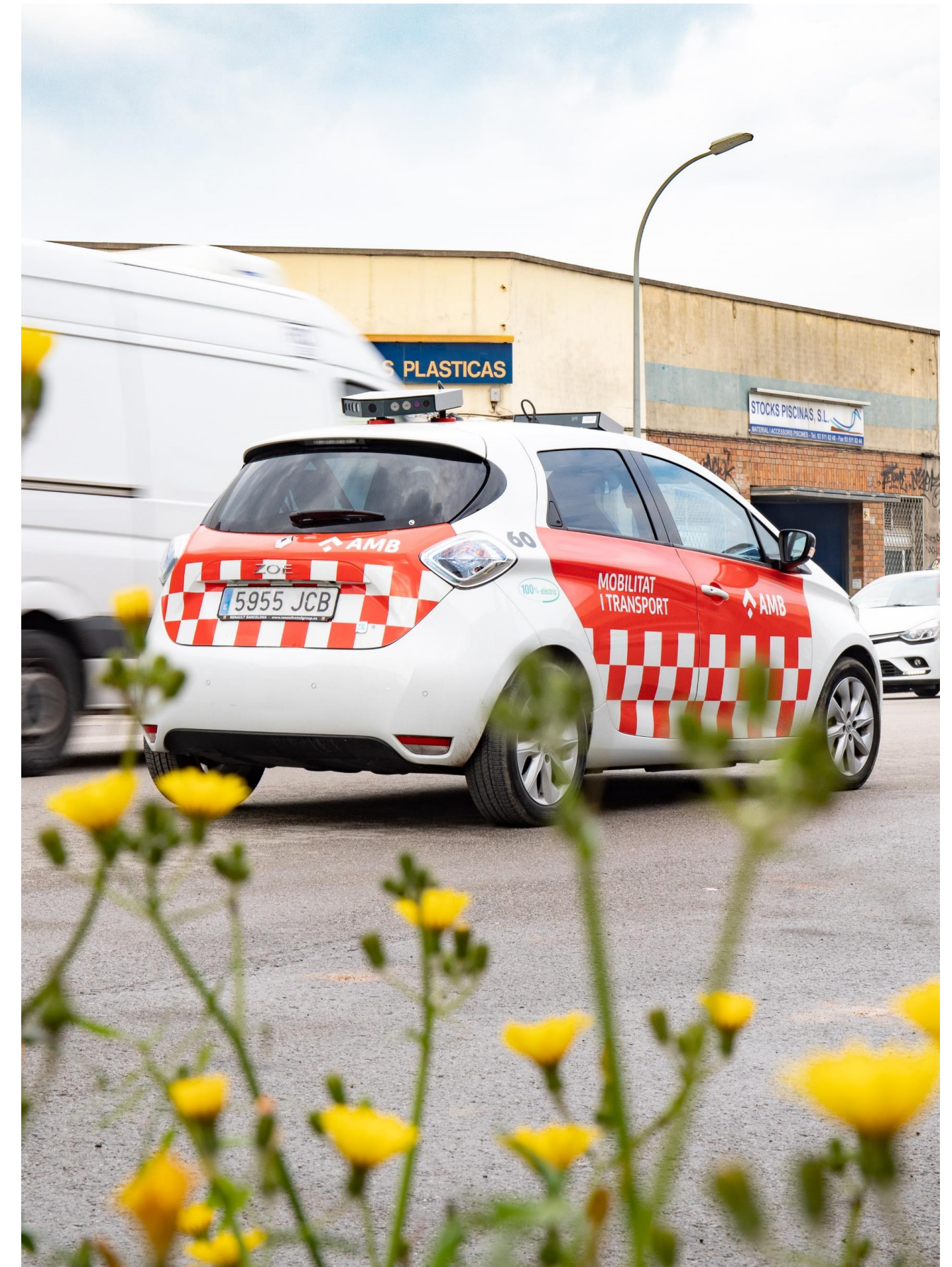
# 3. SCAI vehicle

SCAI is a **patrolling system that automatically detects traffic infractions and issues the consequent reports.**

This vehicle, provided and operated by the AMB, is a new digital tool to improve the compliance of the mobility measures.

**Reduce the number of violations by private vehicles has a positive impact on sustainable modes** of transport by improving the commercial speed of the bus or the comfort and safety of cycling and walking and go a step further towards the goal of restoring air quality in the metropolitan environment.

In addition to the control and penalty function, the SCAI vehicle has the function of creating information. All its technology allows collecting data about the vehicle fleet in the metropolitan municipalities.





# 3. SCAI vehicle

It can report traffic offences such as:

**The invasion by private vehicles of spaces for the exclusive use of public transport, such as bus lanes or bus stops.**





# 3. SCAI vehicle

It can report traffic offences such as:

**The invasion by private vehicles into spaces for the exclusive use of bicycles and pedestrians, such as bicycle lanes or pavements.**





# 3. SCAI vehicle

It can report traffic offences such as:

**Fraudulent parking in regulated parking areas, in regulated spaces for loading and unloading and/or spaces reserved for vehicles for persons with reduced mobility (PRM).**





# 3. SCAI vehicle

It can report traffic offences such as:

**Unauthorized access to Low Emission Zone.**

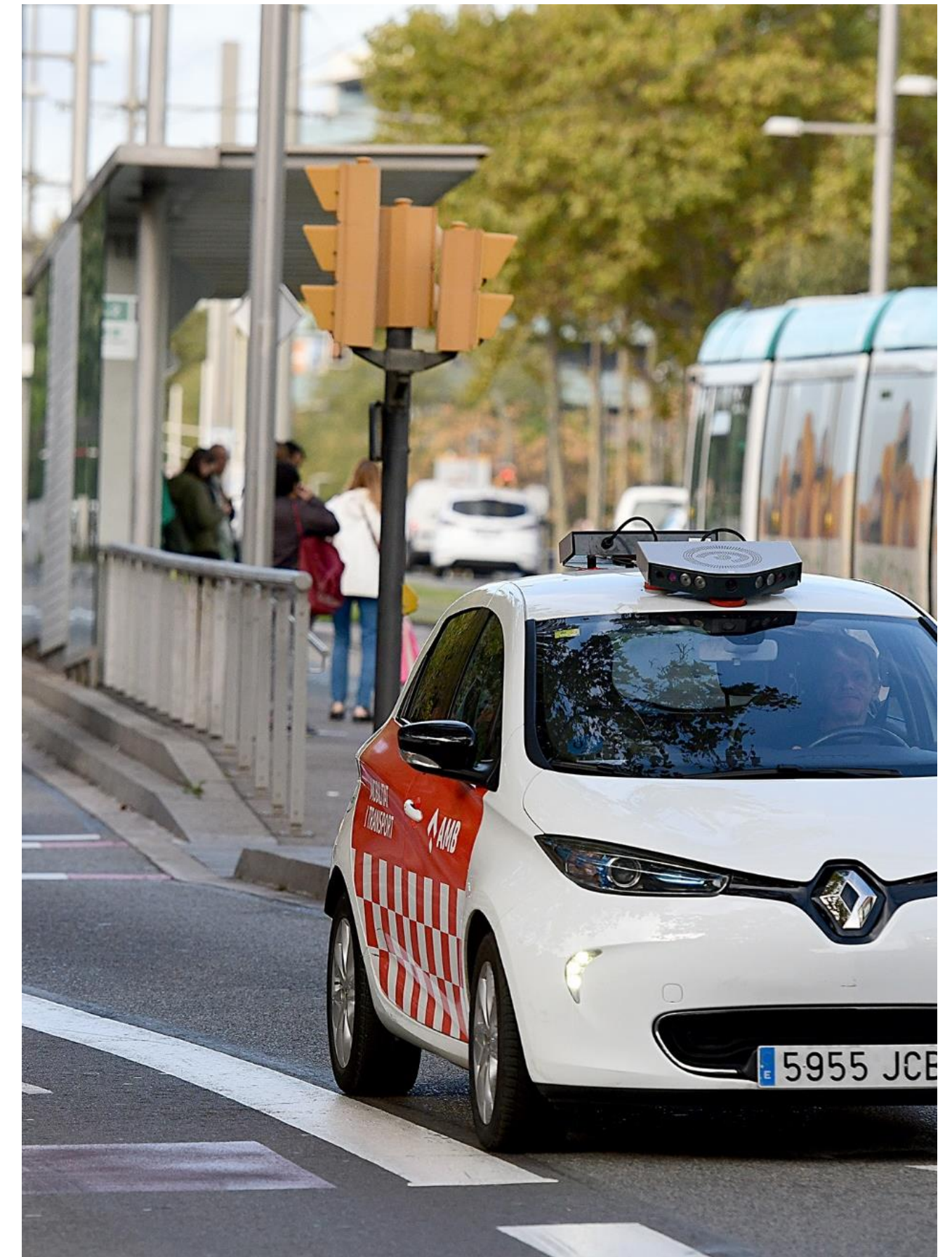




# 3. SCAI vehicle

The SCAI vehicle is **currently operating in eight municipalities** in the metropolitan area of Barcelona (among others Badalona or Santa Coloma de Gramanet with 223,006 and 119,289 inhabitants respectively), controlling infractions and collecting data on the circulating fleet.

The **data collected** by the SCAI vehicle **is useful in the planning of future mobility in the metropolitan territory**, for example, vehicle counting or traffic statistic like characterizing the circulating vehicle fleet according to vehicle type and the environmental label to prepare studies prior to the development of low-emission zones in the same municipalities.





# 3. SCAI vehicle

It is **equipped with four licence plate identification cameras**, four panoramic colour capture cameras and a back-up video surveillance camera. It can read licence plates in motion (up to 80 km/h) from vehicles also in motion or parked on each side, as well as detect foreign number plates.

The same SCAI vehicle technology makes it possible to inspect and consult the licence plate's numbers recorded in real time or to select the type of offence (ZBE, parking, etc.) via a touch screen inside the vehicle.

This system **does not require police officers** to process the sanctions, as the platform itself can manage the sanctions according to the requirements of the local sanction system, thus reducing the costs derived from these needs for local councils.



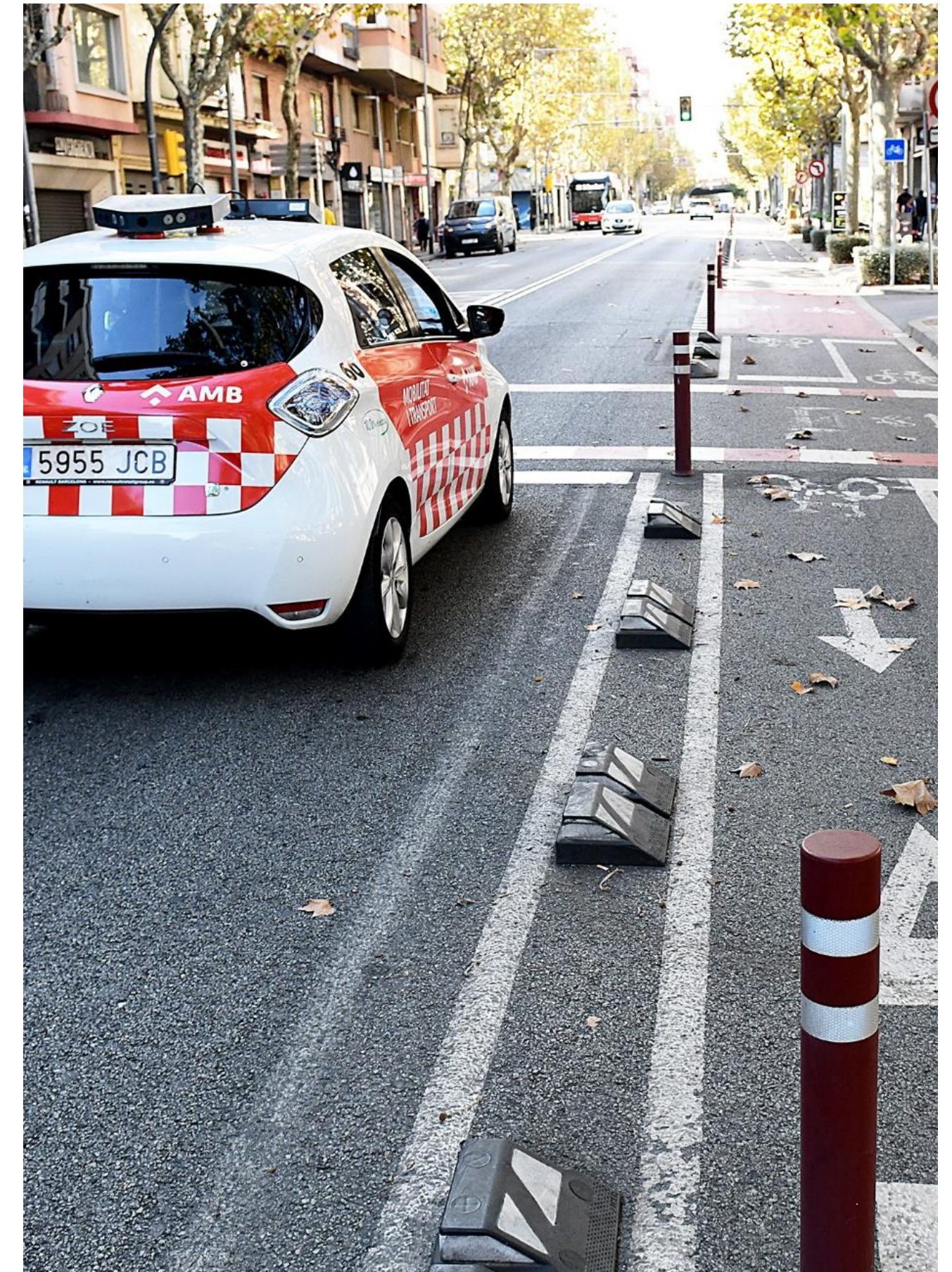


# 4. Lessons learned

During the process of implantation of the SCAI vehicle, we learned the importance of:

- To **make the vehicle fully operational**, it is necessary a good political and technical disposition between different local and regional administrations.
- There is a **high legal complexity in the management of the cameras** and in the protection of the data collected by the vehicle.
- To validate the whole process, the cameras must have **sufficient GPS accuracy**.

One of the things to be careful about is that not all people like this control measure. There have been acts of incivism against the vehicle.





# Thank you for your attention!

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Sustainable Mobility Managing Services

Mobility, Transport and Sustainability Area

