Background

PMMU 2019-2024
Metropolitan Urban Mobility Plan 2019-2024

HEALTH
Minimise the effects of mobility on the health of the population.

SUSTAINABILITY
Reduce the role of mobility in environmental impacts and the contribution to climate change.

EFFICIENCY
Improve the efficiency of the transport system, whilst guaranteeing economic and social progress.

EQUITY
Promote a fair metropolitan mobility system that guarantees access to public transport and encourages social cohesion.

Background

AXIS A. URBAN MODEL AND METROPOLITAN MOBILITY NETWORKS	A.1.	Mobility in urban planning
	A.2.	Basic road network at the service of the metropolitan mobility system
	A.3.	Metropolitan connectivity for active mobility
	A.4.	Infrastructures to consolidate metropolitan public transport
	A.5.	Metropolitan system of multimodal exchange nodes
	A.6.	Infrastructures to organise the transport of goods
AXIS B. SAFE, HEALTHY AND EQUITABLE SPACES AND STREETS	B.7.	Urban habitability and low emission zones (LEZs)
	B.8.	Accessible and inclusive high-quality public space
	B.9.	Road safety: vision zero
	B.10.	Parking and road pricing model
	B.11.	Low emission vehicles (LEV)
AXIS C. INTEGRATING, EFFICIENT AND QUALITY PUBLIC TRANSPORT	C.12.	Improving bus and rail services in the metropolitan area
	C.13.	Public transport fleets and more sustainable and efficient facilities
	C.14.	Public transport for everyone
	C.15.	Homogenisation of the image and information of mobility services
	C.16.	Pricing system sensitive to the socio-environmental context
	C.17.	Attractive and competitive metropolitan taxi
	C.18.	Bicycles on public transport
AXIS D. EFFICIENT AND FLEXIBLE GOVERNANCE OF METROPOLITAN MOBILITY	D.19.	Governance and inter-administrative agreement
	D.20.	Metropolitan integration of municipal policies
	D.21.	Metropolitan strategy for tourist mobility
	D.22.	Financing of public transport
AXIS E. INTELLIGENT MOBILITY MANAGEMENT	E.23.	Integrated information and communication systems
	E.24.	New mobility monitoring systems
	E.25.	Optimisation of the management of urban freight transport
	E.26.	New paradigms of mobility and energy transition
AXIS F. ENCOURAGING BEHAVIOURAL CHANGE	F.27.	Sustainable access to work and mobility generating centres
	F.28.	Education for sustainable mobility
	F.29.	Awareness and promotion of sustainability in mobility

Background

Compensatory measures
Low Emission Zone Barcelona
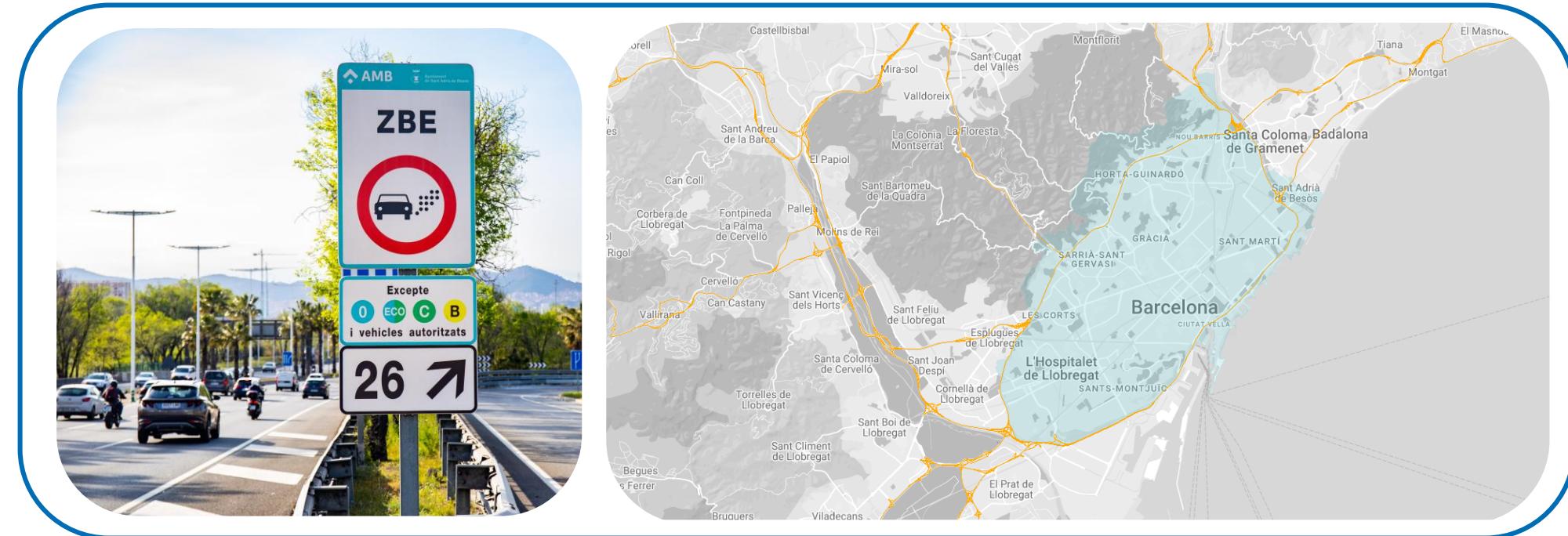
Financial grants for fleet and vehicle renewal

(AMB and other public administrations)

Free public transport to scrap a vehicle without environmental label

T-Verda
(green pass)

(+ Flat fare in whole metropolitan area of Barcelona)

Features of the T-verda

✓ The T-verda scheme ("green pass") offers a **free public transport ticket pass** for **3 years** for residents of any municipality of the Barcelona Metropolitan Transport Authority (ATM) that has scrapped an old motor vehicle.

✓ Includes **cars, motorcycles, and scooters without a Spanish DGT environmental label** (equivalent to pre-Euro 3 diesel cars, pre-Euro 3 petrol cars, and pre-Euro 2 motorcycles/scooters).

✓ Applicants can register the public transport pass **on their own** or **transfer it to their couple or child under 18 if they live in the same household.**

✓ LEZ restrictions affected the **same categories of vehicles** eligible for scrappage for the T-verda scheme.

https://www.amb.cat/es/web/amb/seu-electronica/tramits/detall/-/tramit/solicitud-de-la-tarjeta-t-verda/6546634/11696

Objectives of the survey

To assess the T-verda scheme and evaluate its impact, the AMB (Barcelona Metropolitan Area) and Barcelona Institute of Regional and Metropolitan Studies (IERMB) carried out a survey in February 2022.

- ✓ To know the **socio-demographic profile** of applicants and beneficiaries.

- ✓ To find out the **reasons for scrapping a vehicle** without an environmental label.

- ✓ To find out the **impact on their everyday mobility habits**.

- ✓ To find out **future mobility intentions** once the T-verda expires.

- ✓ To find out the **reasons for giving up the T-verda** and buying a new vehicle**.**

- ✓ **To know the level of satisfaction** with the T-verda.

- ✓ **Complementary measures (**other possible rewards for giving up a polluting vehicle.

https://iermb.uab.cat/ca/estudi/la-targeta-t-verda-metropolitana-enquesta-a-persones-usuaries-residents-a-lambit-de-lamb/

Methodology

Universe: 13,872 T-verda cards given to persons who live in the AMB (from its creation in 2017 until 2022).

Data collection: Computer-assisted telephone interviewing (CATI)

Sample: 802 interviews

Type of sample: Stratified random sampling based on **gender**, **age group,** and **residence** (Barcelona and the rest of the AMB municipalities), as well as the **status of T-verda** (active or no longer active) or **applicants and beneficiaries vs beneficiaries that were not applicants.**

	UNIVERSE	SAMPLE	SAMPLING ERROR
BENEFICIARY ≠ APPLICANT	2,140	176	*7.08%*
BENEFICIARY=APPLICANT	11,732	626	*3.81%*
TOTAL	13,872	802	*3.36%*

Field work: February 2022

Questionnaire structure

1. **Questions addressed to the applicants (whether they are beneficiaries or not)**

   Social profile, features of the scrapped vehicle, satisfaction, etc.

2. **Questions addressed to the beneficiaries (whether they are applicants or not applicants)**

   Among others, mobility behaviour before and after having the pass.

In order to be able to respond to the previous objectives, some questions were formulated differently:

✓ The card was still **active** when the survey was conducted

✓ The card had **expired**

✓ The person had given up the pass **to buy a new vehicle**

T-verda card validity

Person has given
up the card
3%

Expired card
15%

Valid card
82%
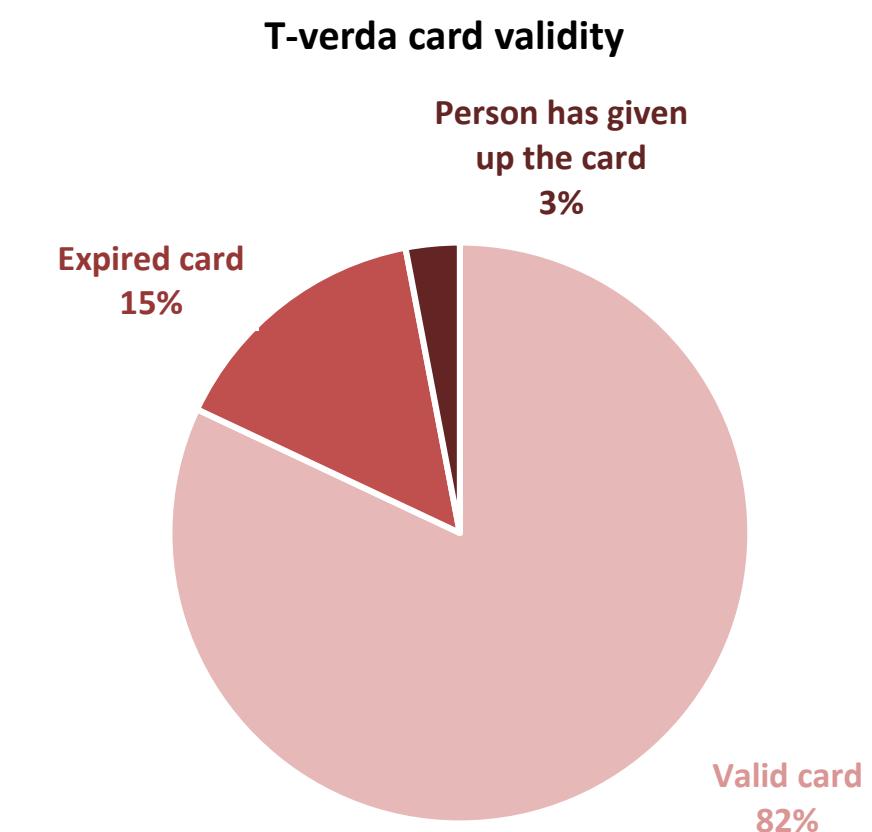
Main results

The T-verda has a moderate impact (13,872 retired vehicles from 2017 to 2021, in AMB)

83,4%	11,570 scrapped cars
11,5%	1,595 scrapped motorcycles
5,1%	707 scrapped scooters

Beneficiaries report a high level of satisfaction

✓ Most of the beneficiaries are very satisfied or fairly satisfied (85%). Only 2.3% are not satisfied at all.

Social profile

✓ 54% of applicants are men.

✓ 51% of applicants have a university degree (32% in Catalonia).

✓ 74% women in case of non-applicant beneficiaries.

Bar chart:
- Very satisfied: 65,7%
- Fairly satisfied: 18,8%
- Moderately satisfied: 10,5%
- Little bit satisfied: 2,5%
- Not satisfied at all: 2,3%
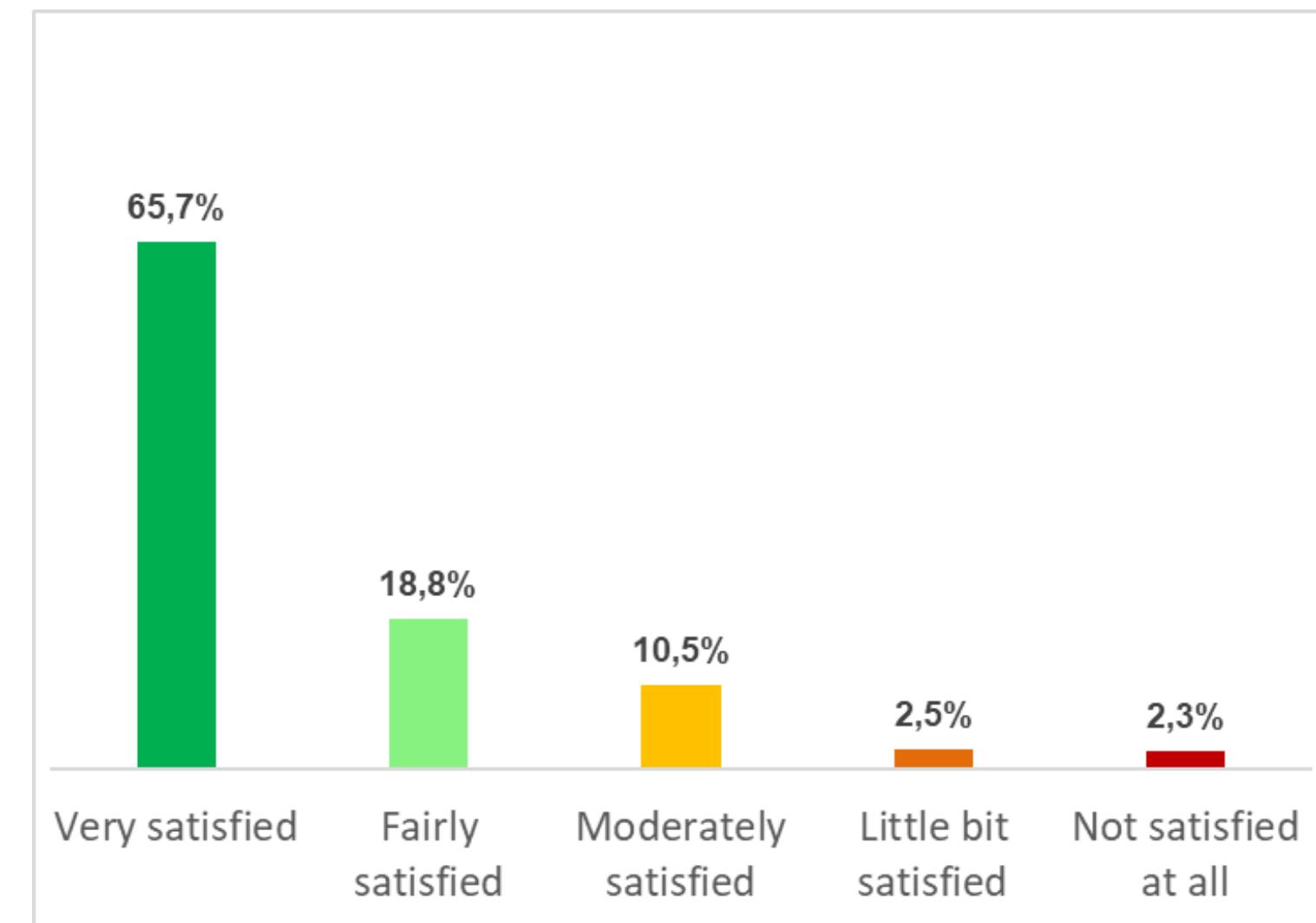
Main results

*T-verda can be seen as a good complement to the establishment of LEZ versus cash replacement measure.*

- ✓ Most applications were made in **2020** (33% in 2020), **matching the introduction of the LEZ Rondes Barcelona**.

- ✓ 71.4% of the applicants are residents in the LEZ area.

- ✓ The **main reason** for scrapping a vehicle is the fact that **the vehicle does not comply with the access requirement of the LEZ** (26.3%).

Main reason for scrapping the vehicle

| Reason	Percentage
The vehicle does not comply with the access requirement of…	26,3%
The vehicle was too old	20,3%
The vehicle was an economic expense for me	18,0%
I wanted to apply T-verda	15,0%
I no longer needed the vehicle	11,0%
It was too difficult to drive my vehicle	3,5%
I wanted to travel more sustainably	3,1%
Due to age or mobility problems	1,6%
For safety	0,6%
I had difficulty parking the vehicle	0,6%

Main results

After having the pass, 59% of applicants stated that they do not have another car at home.

In the case of motorbikes and mopeds, the percentage rises to 86% and 97% respectively.

Other cars at home

2 or more	4,3%
1	36,3%
none	59,4%

Other motorbikes at home

2 or more	1,6%
1	12,8%
none	85,6%

Other mopeds at home

2 or more	0,2%
1	2,4%
none	97,4%
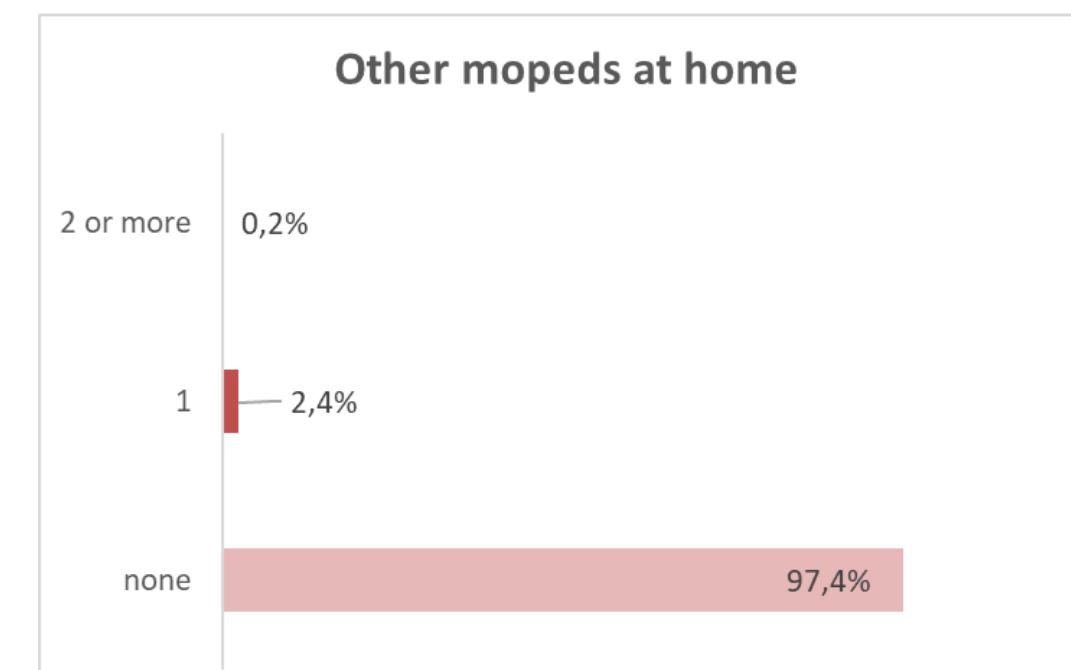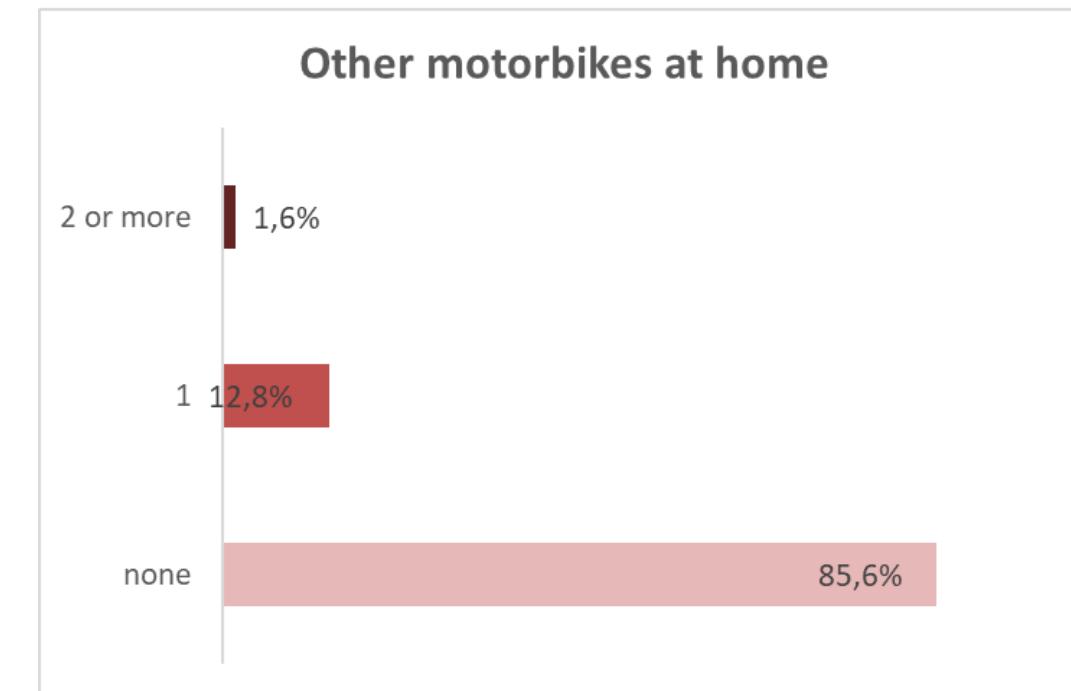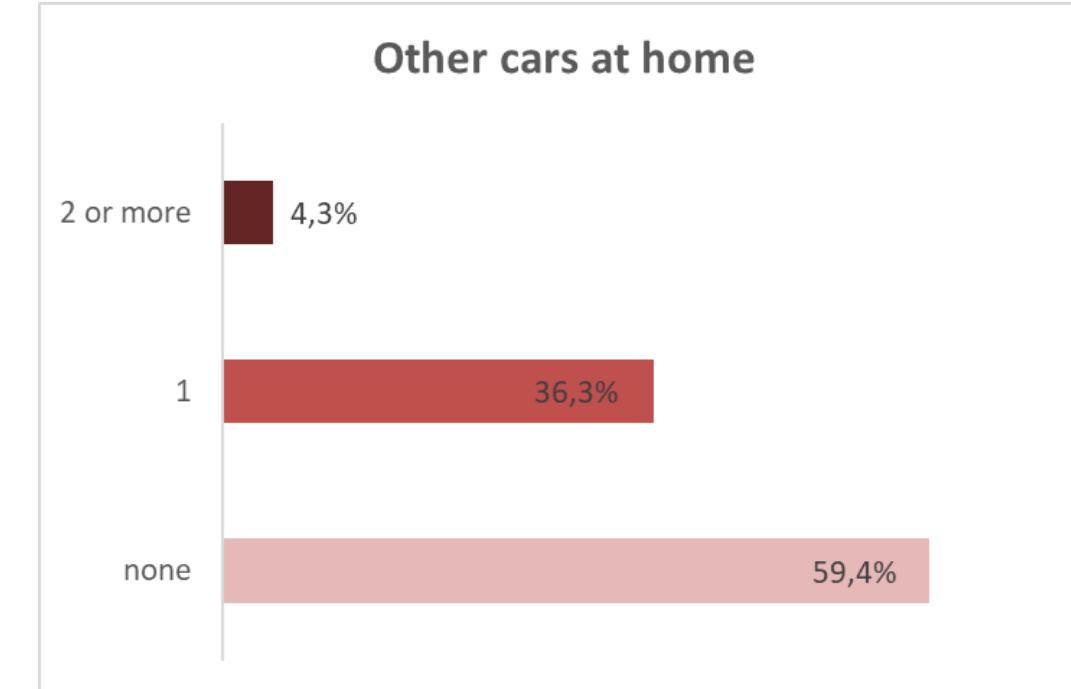
Main results

The T-Verda implies a change in mobility behaviour in favour of public transport and to the detriment of private vehicles.

- ✓ **56%** of beneficiaries say that they use public transport more often since they have the T-verda.
- ✓ Having **another vehicle** at home does **not affect** the trend to use public transport more frequently.
- ✓ The frequency of **driving a car daily or almost daily, decreases from 33.2% to 3.2%.**
- ✓ The frequency of use of the **active mobility** has no **relevant variations** before and after T-verda.

Chart showing:
Increased use of public transport: 59,6% (Availability of another car/van at home), 53,1% (Not abaibility of another car/van at home)
Less use of public transport: 7,5% (Availability of another car/van at home), 11,2% (Not abaibility of another car/van at home)
Same use of public transport: 32,2% (Availability of another car/van at home), 35,1% (Not abaibility of another car/van at home)

■ Availability of another car/van at home   ■ Not abaibility of another car/van at home

Main results

Future intentions (T-verda is valid)

✓ When the T-verda expires, **76.5%** of users state that they **will continue using public transport** for the trips they now make with the T-verda.

✓ Many beneficiaries (72.3%) whose T-verda has not expired believe that they **will not purchase a new vehicle** when it is no longer valid.

✓ 40.8% of beneficiaries believe, when the T-verda expires, that **they will buy a travel pass** that will allow them to make unlimited trips on public transport.

Real facts (T-verda has expired)

✓ Most people, whose T-verda has expired, state that **they continue using public transport** (76.4%).

✓ Slight increase in car use (9%). Intention for future use was 3.5%.

Main results

Cycling and shared mobility are the most demanded measures as complements to the T-verda pass. There is a clear commitment to preserve sustainable and healthy mobility patterns among T-verda users.

✓ Access to **bicycle services** (free Bicing and E-bicibox passes), and access to a subsidy for the purchase of a bicycle are very popular options as a complement to the T-verda (60%). There is a clear commitment to preserve sustainable and healthy mobility patterns among T-verda users.

✓ **Shared mobility** (car and motorbike) is a complement in demand. 17% stated that it would be positive to have access to discounts to access these services on an occasional basis.

✓ Only **1.3%** of beneficiaries state **direct aid for the purchase of a cleaner vehicle** as an alternative.

Measure	Percentage
Multi-person T-verda pass	0,7%
Grants to buy a car	1,3%
Extend the validity period of the T-verda	2,0%
Free subscription or discounts for public transport	2,6%
Free e-bicibox memebership	10,5%
Others, none or doesn't know	15,8%
Discounts for car or moto sharing services	17,6%
Grant to buy a bicycle	21,3%
Free Bicing membership	28,2%
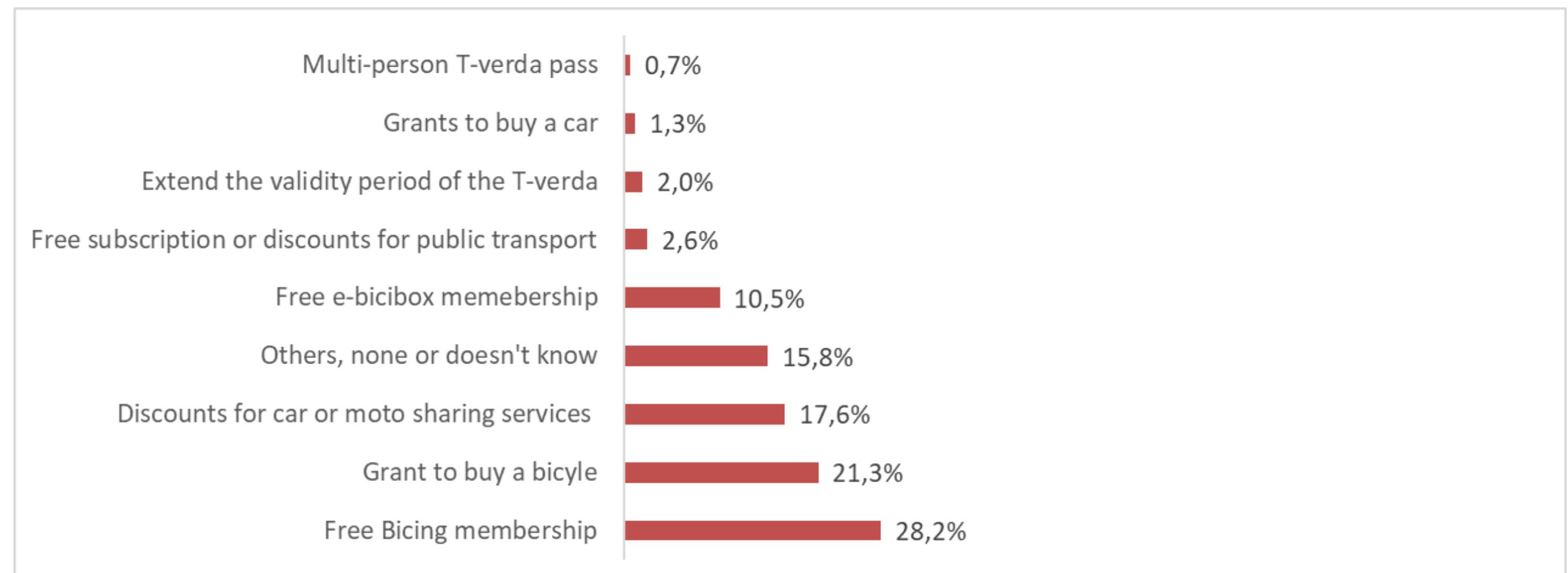
Takeaway messages

- ✓ **Accelerated vehicle retirement or scrappage programs are standard policy measures** to achieve environmental or economic objectives **(reducing air pollution or stimulating demand for new and more "clean" vehicles)**

- ✓ These policies share the aspiration to **retire old motor vehicles**, but **they also directly promote the acquisition of new motor vehicles with cash for replacement**.

- ✓ **T-verda scheme** wants to be a **compensatory measure to the LEZ** that induces a **modal shift in front of a cash replacement measure**.

- ✓ **Moderate impact** (13,872 retired vehicles in AMB).

- ✓ **Changes in mobility behaviour, in favour of public transport.**

- ✓ It's necessary to **check** whether T-verda would be **effective in environments with fewer public transport**.

- ✓ **With the same LEZ driving restrictions**, there may be a **stagnation** of T-verda applications.

- ✓ **Free-fare public transport** in Spain may minimise the impact of the measure.

- ✓ **Assessing the impact of sustainable mobility policies** is key to understanding their **effectiveness** and making changes if necessary.

Thank you for your attention!

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