

Barcelona, April, 26th 2023

ZBE Metropolis Barcelona

IURC NA Webinar Low-Emission Zones



AMB

Àrea Metropolitana
de Barcelona

Index

1. Introduction
2. Motivation and implementation
3. Achievements
4. Challenges

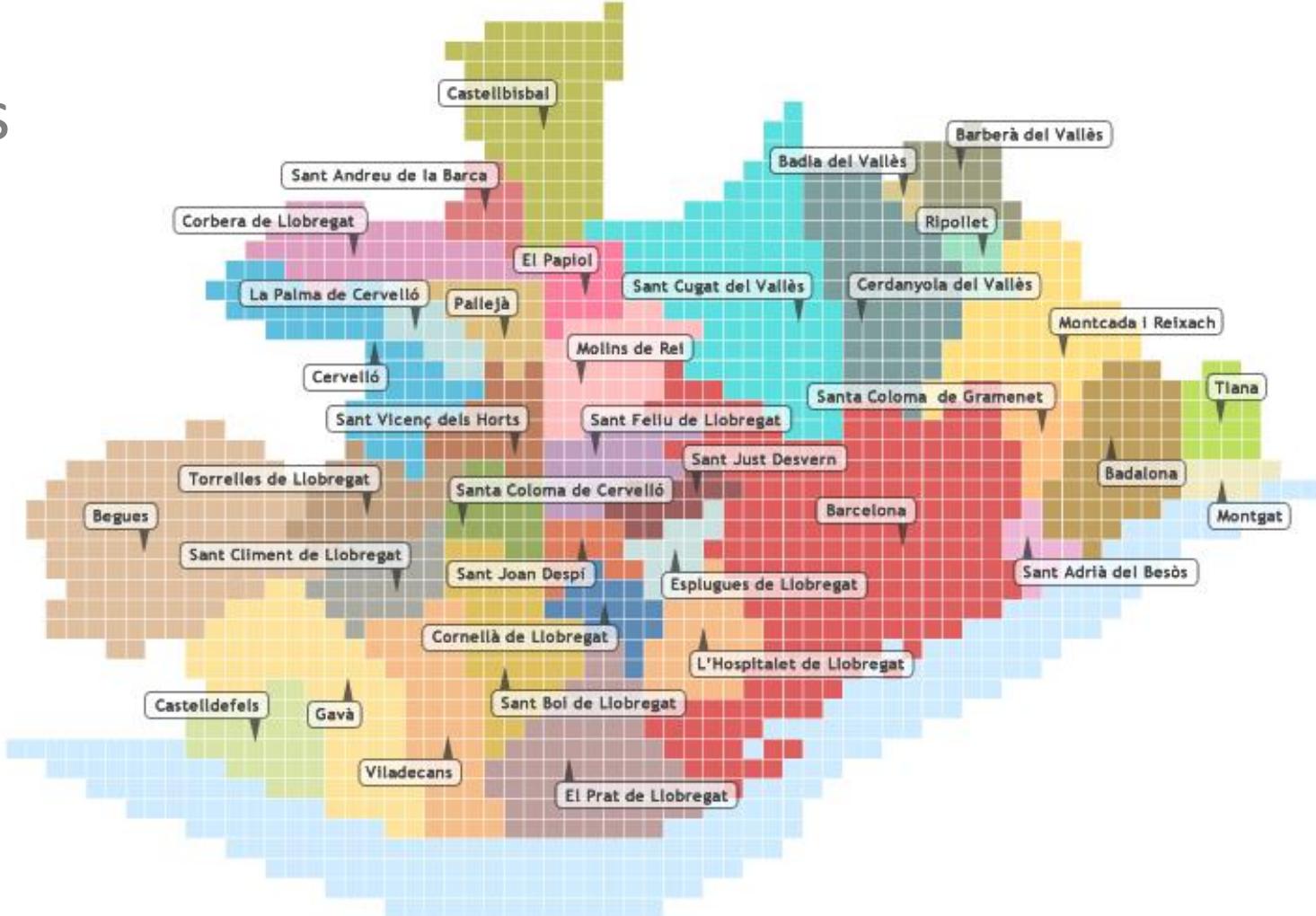


1. Introduction

3.239.337 inhabitants

36 municipalities

636 km²



2. Motivation and implementation

METROPOLITAN AREA OF BARCELONA

The metropolitan area of Barcelona **exceeds the concentration limits in annual average NO₂** (and in the case of PM10 are close) set by the EU for the protection of health.

CITY OF BARCELONA

70% of the population of Barcelona is exposed to **NO₂ levels higher than those recommended by WHO and the EU**.



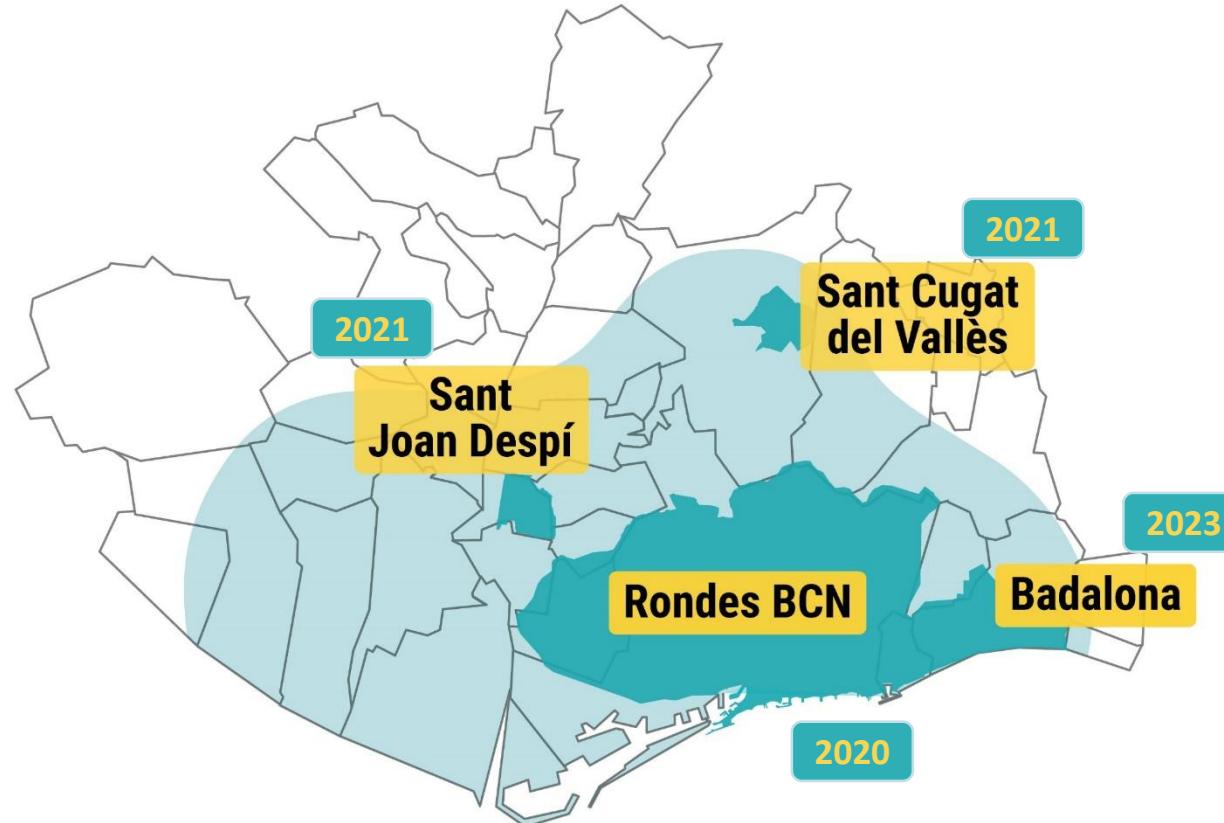
CANVIAR D'HÀBITS
ÉS TAN NECESSARI COM
L'AIRE QUE RESPIREM.



2. Motivation and implementation

permanently,
from Monday to Friday,
from 7 a.m. to 8 p.m.

only non contaminant stickers



2. Motivation and implementation

Complementary and incentive measures



Free transport for owners scrapping polluting vehicles.



Improvement of the public transport offer in terms of coverage and frequency.

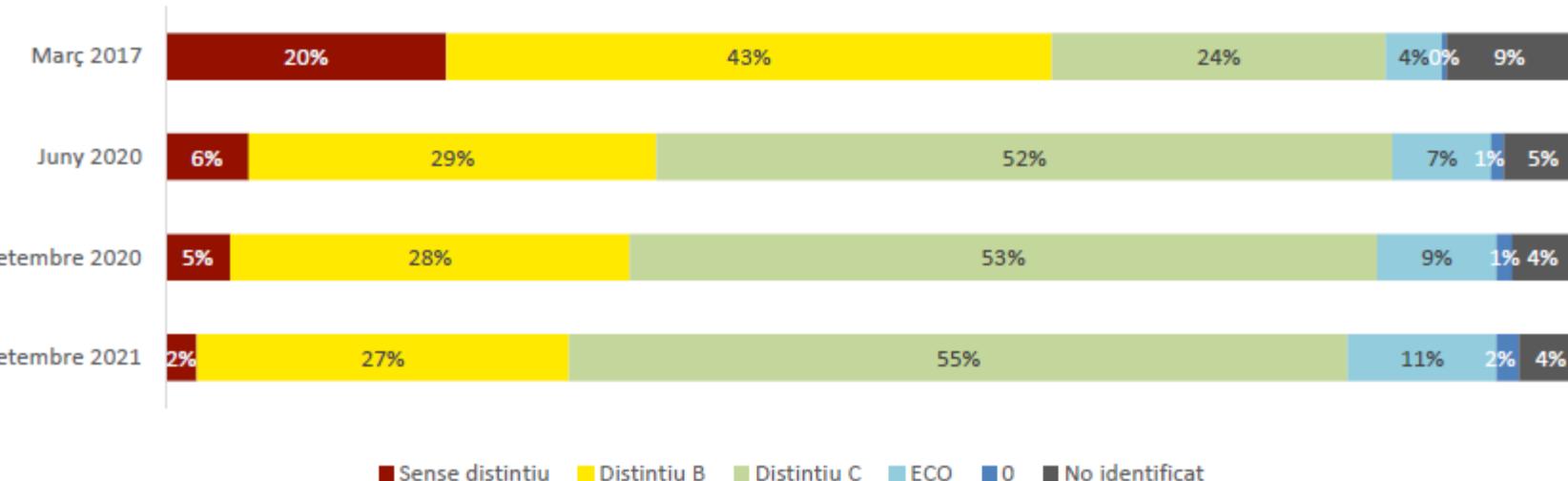


Bet on sustainable mobility models.



Environmentalization of the fleet

3. Achievements



Gràfic 1. Evolució percentual de la composició del parc circulant dins de la ZBE. Font: IERMB a partir de: Caracterització dels vehicles i les seves emissions a Barcelona i l'AMB (octubre 2017) i els informes Anàlisi de les dades de les càmeres de la ZBE 2020 i 2021. (Ajuntament de Barcelona, AMB i Barcelona Regional)

During the period of implementation of the ZBE, the rolling stock has become environmentally friendly in a remarkable way, the drastic reduction of vehicles without a badge stands out. Before the implementation of the ZBE, vehicles without a badge were 20% of the total fleet. In June 2020, when no vehicle was still sanctioned, this percentage fell to 6% of the total and in September 2021, when passenger cars, mopeds and motorcycles without badges were restricted from circulation, the circulation of these vehicles was residual (2%).

3. Achievements

Evolució del factor mig d'emissió del parc circulant a la ZBE-Rondes Contaminant [g/km]									
	Març 2017	Juny 2020	Setembre 2020	Setembre 2021	(Set'21 - Mar'17) [%]	Juny 2022	Desembre 2022	(Des'22 - Mar'17) [%]	
	Abans ZBE Permanent	ZBE Permanent en moratorìa	ZBE Permanent sancions a turismes i motocicletes	ZBE Permanent sancions a turismes, motocicletes i furgonetes		ZBE Permanent sancions a turismes, motocicletes, furgonetes, camions i autocars petits	ZBE Permanent sancions a turismes, motocicletes, furgonetes, camions i autocars petits		
NOX	0,7972	0,4741	0,4507	0,3909	-51,0%	0,3825	0,3641	-54,3%	
PM10	0,0449	0,04	0,0389	0,0366	-18,5%	0,0365	0,0363	-19,2%	
PM2,5	-	0,0257	0,0247	0,0227	-11,7%	0,0225	0,0222	-13,6%	(Jun'20 – Des'22)
Black Carbon	-	0,0081	0,0074	0,0061	-24,7%	0,0057	0,0055	-32,1%	(Jun'20 – Des'22)
CO2	-	203,67	201,51	194,22	-4,6%	196,97	194,67	-4,4%	(Jun'20 – Des'22)
Evolució dels factors d'emissió agregats dels vehicles circulants dins de la ZBE. Font: IERMB i AMB a partir de: Caracterització dels vehicles i les seves emissions a Barcelona i l'AMB (octubre 2017) i els informes Anàlisi de les dades de les càmeres de la ZBE 2020, 2021 i 2022. (Ajuntament de Barcelona. AMB i Barcelona Regional).									

The renewal of the rolling stock has led to an evolution in the emission factors of the vehicles in circulation for the entire fleet in the ZBE-Rondas for each pollutant. The amount of pollutants per kilometer emitted by vehicles has suffered a substantial decrease from before the implementation of the LEZ until present. The reduction of 54.3% in the case of NOX and 19.2 % of PM10 are too.

3. Achievements



Fig. 47 Edat mitjana dels turismes censats a Espanya

Font: DGT

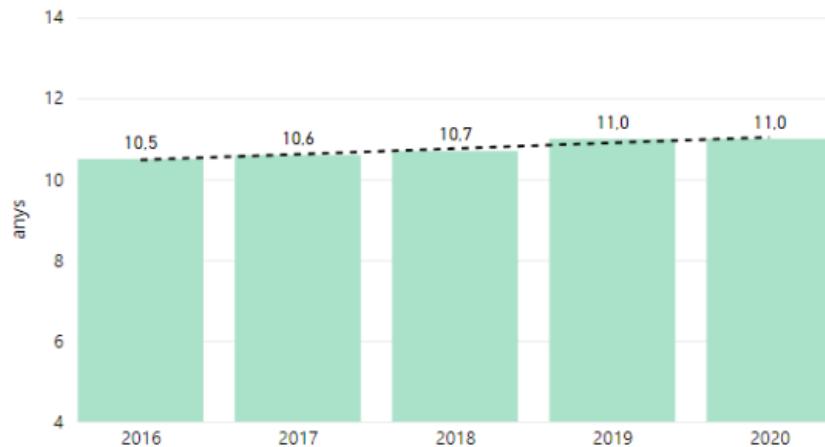


Fig. 48. Edat mitjana dels turismes censats a Barcelona.

Font: Departament d'Estadística Ajuntament de BCN

From the state statistics provided by the Spanish traffic authority (DGT) it is possible to extract how since 2006 the average age of registered passenger cars in the Spanish state went up until reaching 12.65 years in 2019 and 13.11 years in 2020 (doubling the value of the slope compared to previous years, most likely due to the COVID-19 pandemic).

If we refer instead to the average age of vehicles registered in the city of Barcelona, we see how this indicator does not follow the trend of the Spanish state.

4. Challenges.

Political agreement

The AMB, as an administration with competences in the protection of the environment and in mobility, has carried out initiatives, in collaboration with other administrations, to alleviate the effects of pollution on the health of the population.

In the Political Agreement for the improvement of air quality in the conurbation of Barcelona (2017) it was agreed to launch the *ZBE-Rondas de Barcelona* and, it established other LEZ not started.

- LEZ in Area 40 (Zone of special protection of the atmospheric environment)
- Metropolitan LEX (Municipalities of the AMB outside the ring of Barcelona)

On July 25, 2017, the AMB approved the conditions for traffic restrictions in the Low Emission Zone of the Ring of Barcelona in the event of a pollution episode from December 2017. On January 1, 2020, the ZBE Rondas de Barcelona came into operation permanently.



4. Challenges. Social side: authorizations and exemptions

People



People on low incomes

Temporary authorisation for vehicles of low-income persons.

Health



Medical conditions or disabilities

Vehicles for people with health requirements or recognized disabilities.

Business



Grace period for replacement

Vehicles replaced for a new one can have a temporary authorization to access in the ZBEs.

City life



Dynamic tests in repair workshops

Vehicles in dynamic tests in authorised maintenance and repair workshops.



Daily permits

Registration of vehicles to be able to request up to 24 driving permits per year



People with reduced mobility

For vehicles transporting people with reduced mobility.



Professionals approaching retirement age

Vehicles in categories M2, M3, N1, N2 and N3 whose owners are retiring within five years.



Activities with municipal authorization

Vehicles with municipal authorization to provide service in singular activities or events on public roads.



Periodic medical treatments

Vehicles that transport persons to undergo periodic medical treatments within the ZBEs.



Special vehicles

Adapted vehicles used for the provision of special services which need temporary access.



Emergency services and other essential services

Medical services, funeral services, civil protection, firefighters, police and law enforcement agencies.



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Sustainable Mobility Managing Services
Mobility, Transport and Sustainability Area