



Ajuntament
de Barcelona

BARCELONA LOW EMISSION ZONE

June 2022

BARCELONA LOW EMISSION ZONE: AREA

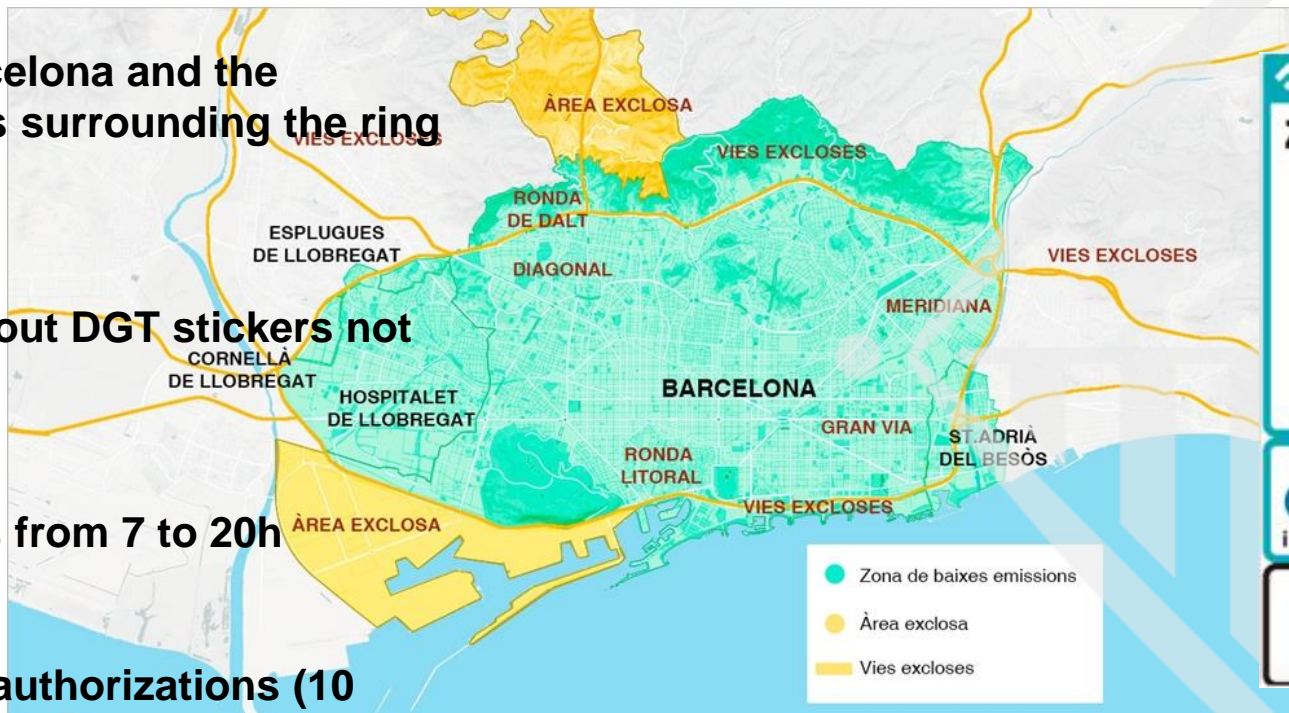
Area of 95 km²

Includes Barcelona and the municipalities surrounding the ring road

Vehicles without DGT stickers not allowed

Working days from 7 to 20h

Exemptions, authorizations (10 days/year) and grace period



BARCELONA LOW EMISSION ZONE: ENVIRONMENTAL CLASSIFICATION

Environmental classification of vehicles Sticker badge by spanish traffic authority (DGT)



Moped



Motorcycle



Gasoline car



Diesel car



Euro 1

1999

1992

1992

Euro 2

2003 

2003 

1996

1996

Euro 3

2000 

2000

Euro 4

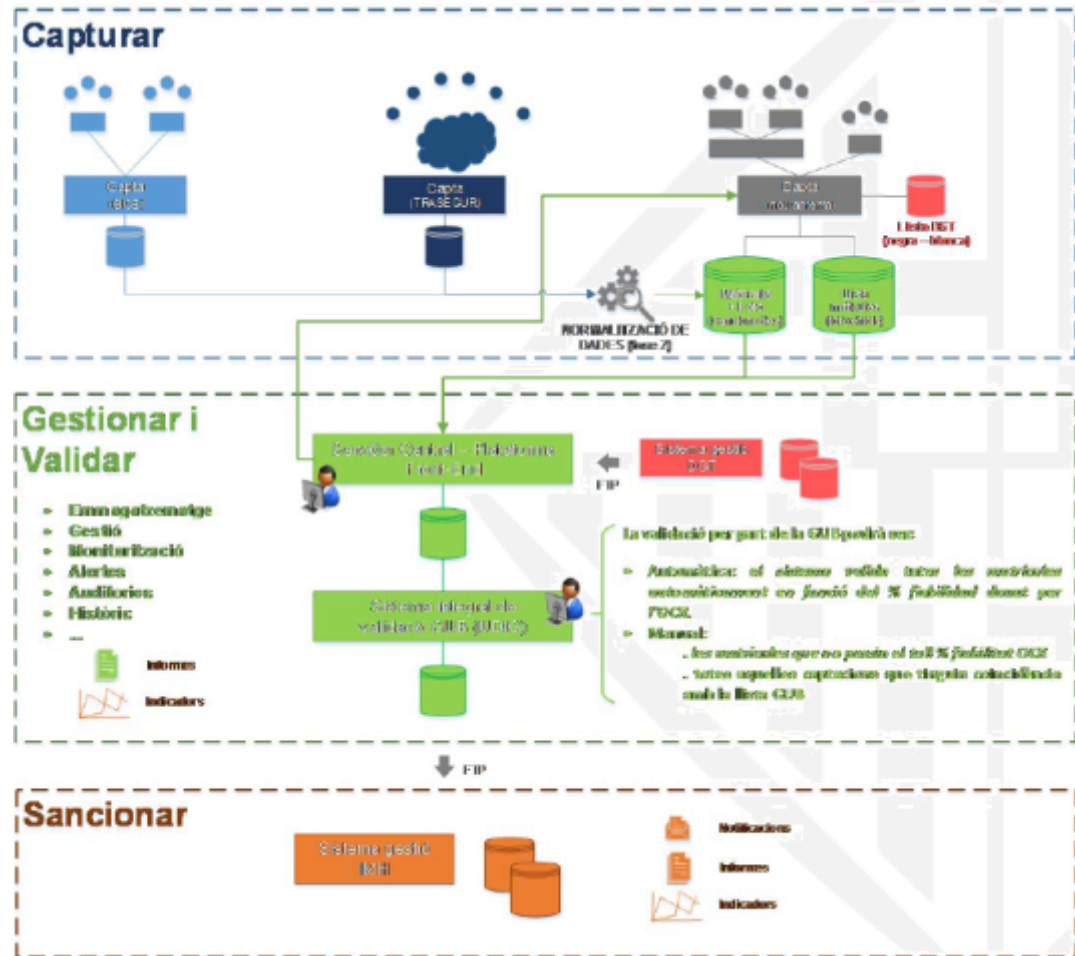
2006 

BARCELONA LOW EMISSION ZONE: MONITORING AND CONTROL SYSTEM



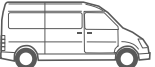


AMB



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BARCELONA LOW EMISSION ZONE: IMPLEMENTATION SCHEDULE

- **2017 Announcement of implantation**
Environmental Characterization Study of the Circulating Vehicles
- **01/12/2018 - LEZ only in high pollution episode**
- **01/04/2020 – Car, motorbike and moped LEZ**  
- **15/09/2020 - Sanctioning procedure**
- **01/04/2021 – Van LEZ** 
- **01/01/2022 – Truck LEZ** 
- **01/07/2022 – Bus LEZ** 

BARCELONA LOW EMISSION ZONE: NUMBER OF REQUESTS

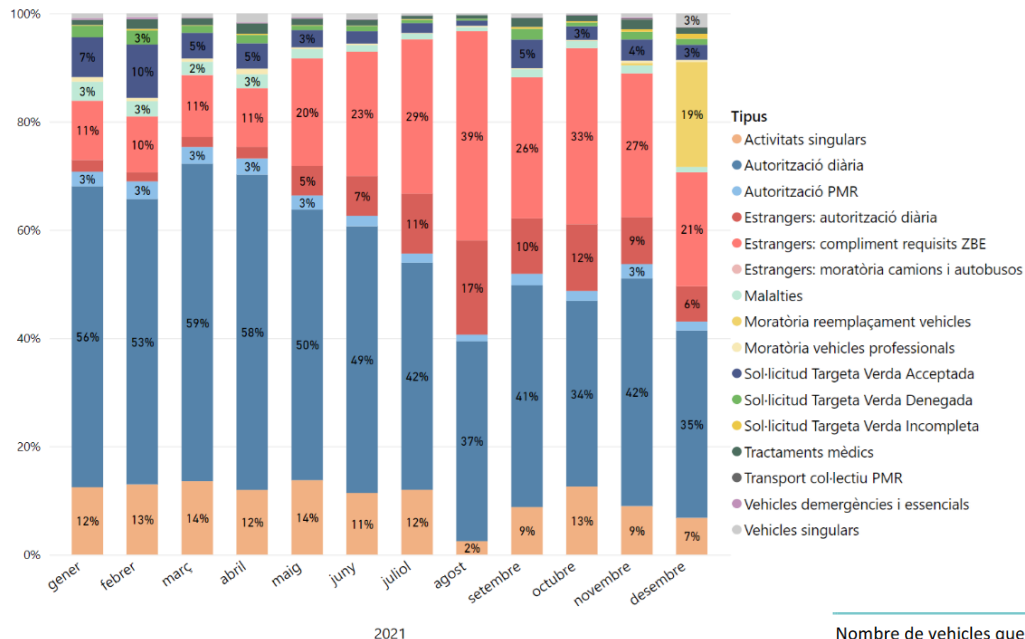


Fig. 30. Evolució del nombre de sol·licituds realitzades per tipologia.

Font: Registre ZBE

According to AMB data, the majority request during the year 2021 was the application for registration for daily authorizations, followed by vehicles with foreign registration, which has its maximum during the summer months.

	2020	2021
Nombre de vehicles que han sol·licitat autoritzacions diàries	8.896	26.644
Total autoritzacions sol·licitades	19.837	87.089
Mitjana autoritzacions sol·licitades per vehicle	2,23	3,27
Mitjana autoritzacions sol·licitades per dia	79	350

Fig. 31. Dades anuals relacionades amb el nombre de vehicles que han sol·licitat autoritzacions diàries i el nombre de sol·licituds. Font: Registre ZBE

BARCELONA LOW EMISSION ZONE: NUMBER OF REQUESTS

The green card is a free ticket that is issued when a resident of the metropolitan area has deregistered and scrapped a vehicle without an environmental label.

A total of 13,285 green cards have been issued from August 21, 2017 to December 31, 2021, involving 13,285 scrapped polluting vehicles.

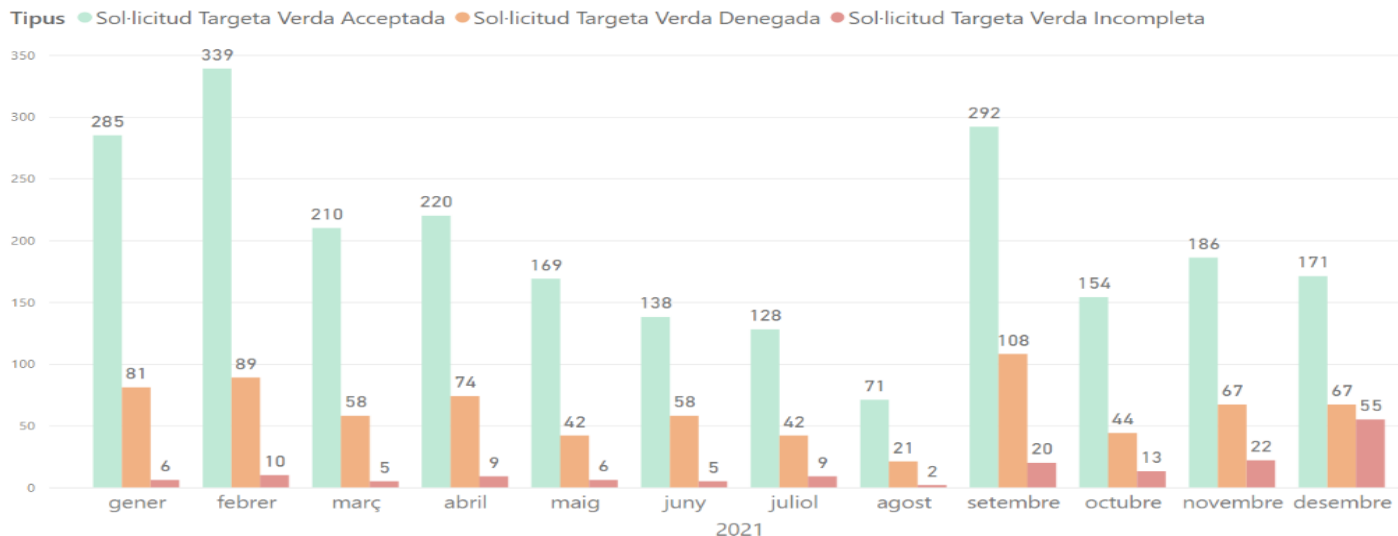


Fig. 33. Evolució del nombre de sol·licituds de targetes verdes. Font: Registre ZBE

BARCELONA LOW EMISSION ZONE: PREVIOUS AGE OF CARS

From the state statistics provided by the DGT it can be deduced how since 2006 the average age of passenger cars registered in Spain has risen to 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 that this indicator does not follow the trend of Spain.

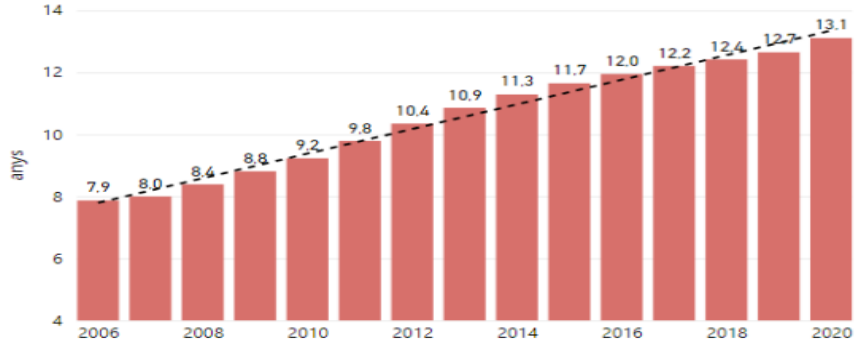


Fig. 47 Edat mitjana dels turismes censats a Espanya
Font: DGT

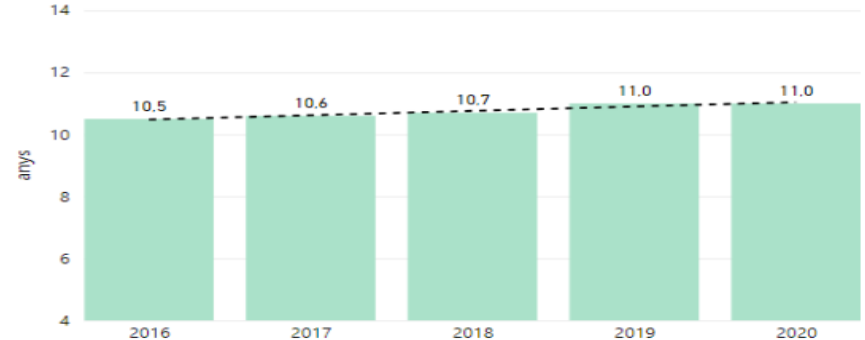
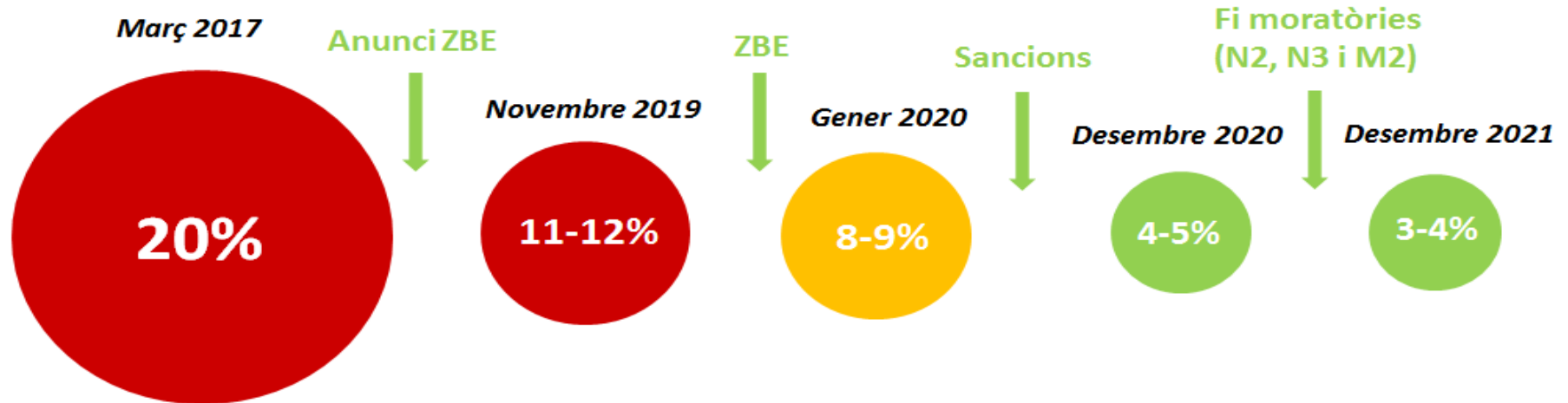


Fig. 48. Edat mitjana dels turismes censats a Barcelona.
Font: Departament d'Estadística Ajuntament de BCN

BARCELONA LOW EMISSION ZONE

The percentage of unlabeled vehicles circulating has been gradually reduced with the implementation of the ZBE. Particular note are the declines in unmarked passenger cars and vans when the sanctioning regime came into force on 15 September 2020 and 1 April 2021, respectively.

The fleet of unlabeled vehicles has gone from almost 20% in 2017 to 3-4% with data from December 2021.



BARCELONA LOW EMISSION ZONE

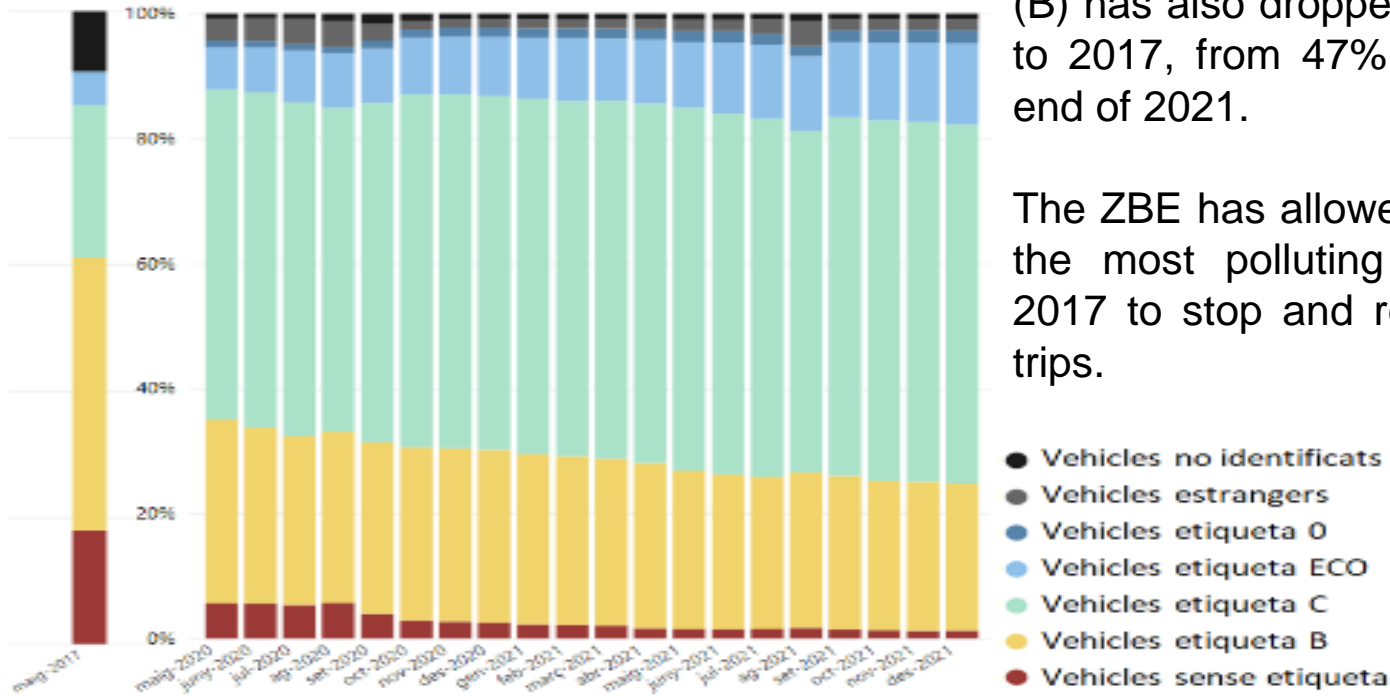


Fig. 41. Anàlisi del parc circulant per etiqueta ambiental.

Font: Barcelona Regional amb dades de les càmeres de la ZBE.

The number of vehicles with a yellow label (B) has also dropped significantly compared to 2017, from 47% in 2017 to 24% at the end of 2021.

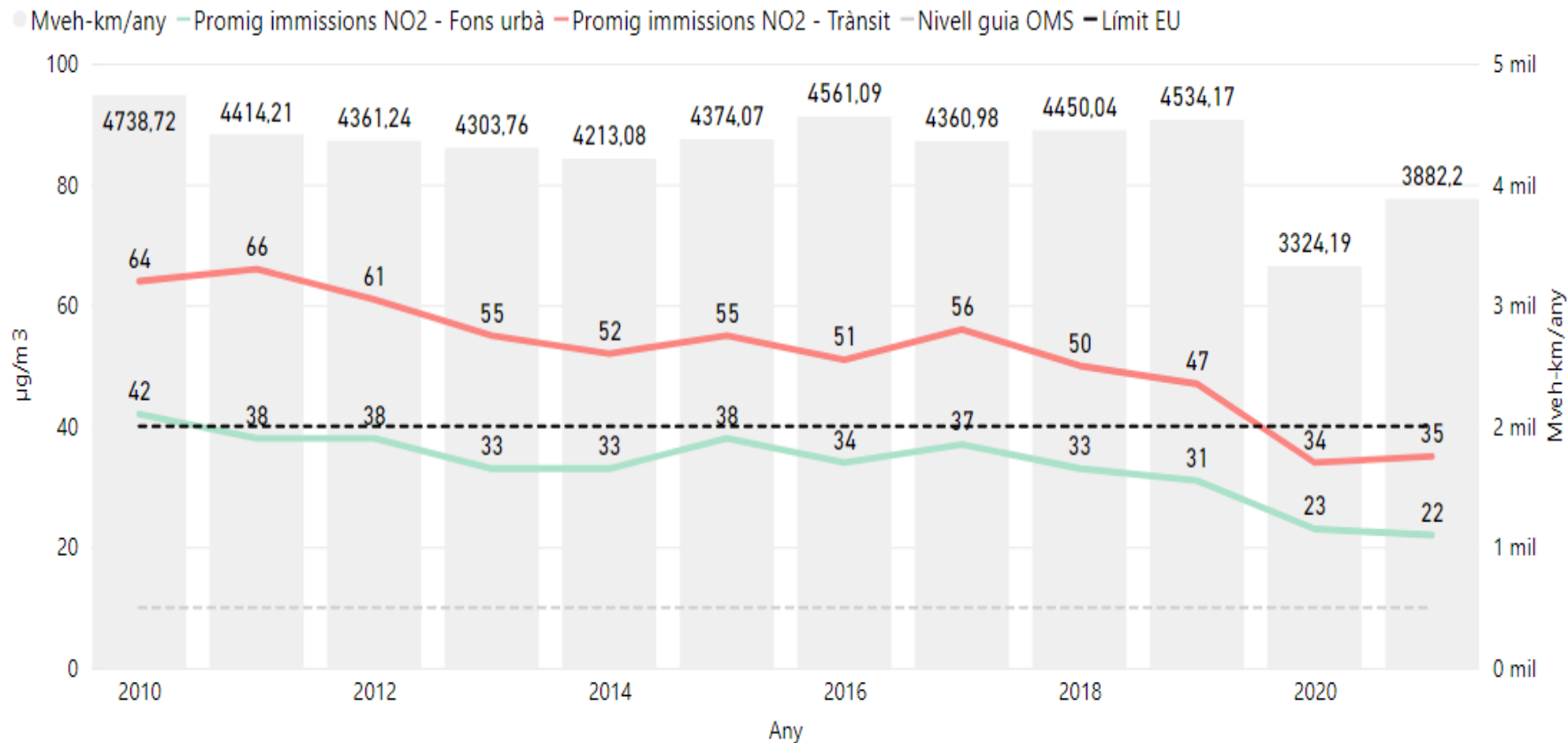
The ZBE has allowed approximately 40% of the most polluting vehicles circulating in 2017 to stop and represent about 609,000 trips.

BARCELONA LOW EMISSION ZONE: IMPACT ON EMISSIONS

Emissions of air pollutants

	2017		2018		2019		2020		2021
NOx (tn/any)	2757	3%	2687	11%	2388	33%	1598	4%	1657
PM10 (tn/any)	208	4%	200	6%	188	31%	129	12%	144
PM2.5 (tn/any)	145	6%	136	10%	123	33%	82	9%	89
BC(tn/any)	54	6%	51	18%	42	43%	24	4%	23
Veh-km/any	4.360.981.510	2%	4.450.043.334	2%	4.534.174.426	27%	3.324.186.300	17%	3.882.200.269

BARCELONA LOW EMISSION ZONE: IMPACT ON IMMISSION LEVELS



Evolution of the annual average NO₂ [$\mu\text{g}/\text{m}^3$] emissions and mobility [Mveh-km/year]

BARCELONA LOW EMISSION ZONE: IMPACT ON IMMISSION LEVELS

- The December 2021 data show that the reduction in the Eixample station, (a heavy traffic station), was about **8,6 $\mu\text{g}/\text{m}^3$** , and the level of the whole city was **4,3 $\mu\text{g}/\text{m}^3$** .
- **The LEZ** complies with the **planned reductions in NO_2 concentration**, achieving the goal of **reducing city-level levels by 11%**, helping to improve the city's air quality.
- It is estimated that changes in the fleet and the commissioning of the LEZ will help to **prevent 125 deaths each year** and reduce new cases of other diseases such as childhood asthma or lung cancer.



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<https://www.zbe.barcelona/>

June 2022
