



Una manera de hacer Europa



BUENAS PRÁCTICAS

Actuaciones Cofinanciadas

"Deployment of the low emission zone in the metropolitan area of Barcelona through a comprehensive and intelligent sustainable mobility management system"

Government of Catalonia

Programa Operativo de Cataluña

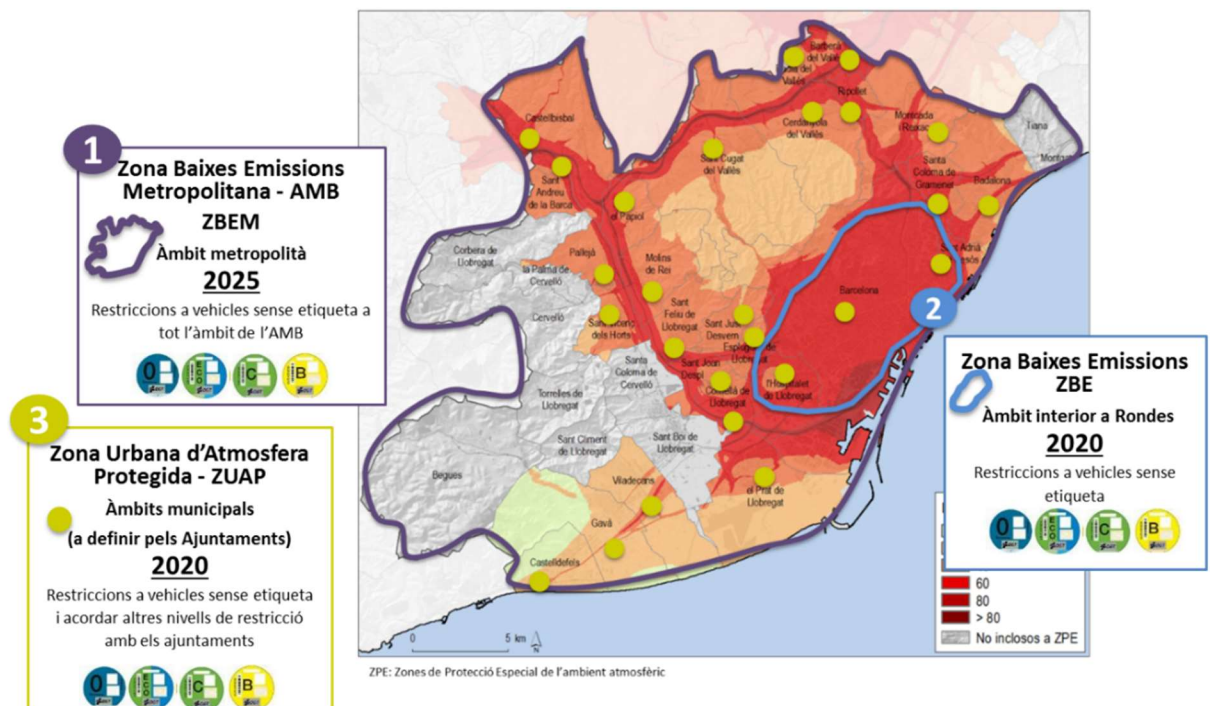
Año 2022

Fondo Europeo de Desarrollo Regional

The project "Deployment of the low emission zone in the metropolitan area of Barcelona through a comprehensive and intelligent sustainable mobility management system" is presented as a Good Practice.

The project consists in the deployment of a comprehensive and intelligent mobility management system through the Low Emission Zone (LEZ) of Barcelona's Ring Roads that allows progress in the transition towards a low carbon economy. The measure also aims to protect people and the environment from air pollution caused by the most polluting vehicles.

The LEZ Barcelona's ring roads is an area of more than 95 km² that includes Barcelona and the municipalities surrounding Barcelona's ring roads, and which entails the progressive restriction of the circulation of the most polluting vehicles.



1. Metropolitan Low Emissions Zone – AMB MLEZ, Barcelona Metropolitan Area (2025), restrictions for vehicles without a label throughout the Barcelona Metropolitan Area
2. The Barcelona Ring Roads Low Emissions Zone (ZBE Rondes Barcelona, 2020), restrictions for vehicles without a label
3. Urban Zone of Protected Atmosphere – municipal level (to be defined by the town halls, 2020), restrictions for vehicles without a label and agreeing on other restrictions with the town halls

As part of this operation, five performances have been carried out. In the first place, the studies of basic requirements and functional characterization of the technical design of the LEZ. Next, the deployment of the LEZ signs. Thirdly, the technology has been installed at the management and control points for traffic restrictions in the Barcelona Ring Roads. The fourth action is related to the development of the technological platform for the management of the LEZ of the roundabouts in relation to the control and exploitation of environmental and mobility data. Finally, measures aimed at raising citizens' awareness have been taken.

The project involves the total cost of €3,725,833.50 and an eligible cost of €3,084,928.52, with an ERDF aid of €1,542,464.26.

Since the launch of the LEZ, the main pollutants have been reduced. Particle emissions from vehicles were reduced by 20%, nitrogen dioxide (NO_x) by 50% and CO₂ by between 5 and 10%. The European Environmental Agency estimates the reduction of pollutants in the Barcelona Ring Roads LEZ at around 30%.


This operation is presented as a good practice because the following criteria are met:

1. High dissemination level among beneficiaries, potential beneficiaries and the general public

This operation has been conveniently disseminated through the following actions:

Dissemination of the project on the web pages:

<https://feder.amb.cat/>



Data sheet

Theme:	Mobilitat sostenible	State:	En curs
State detail:	Implementation period: 2015-2022	Type/Subtype:	Projectes FEDER
Budget:	€4,495,210.75 (VAT included)	Sponsor:	Directorate for Sustainable Mobility Services
Funding:	€1,860,388.74 (ERDF grant)		

Low-emission zone deployment

The low-emission zone of the metropolitan area of Barcelona (ZBE Rondes de Barcelona) is a measure aimed at restricting the circulation of the most polluting vehicles in efforts to protect air quality, reduce the high levels of air pollution and ensure the right to health as part of a healthier city.

The ZBE Rondes de Barcelona, which encompasses the municipalities of Barcelona, Sant Adrià de Besòs, L'Hospitalet de Llobregat and part of Esplugues and Cornellà de Llobregat, is an area in which the circulation of polluting vehicles is restricted to protect air quality and reduce the high levels of air pollution.

Co-financed by the ERDF, this project will include studies and the technical design of the ZBE, deployment of ZBE signs, the installation of measures for managing and controlling traffic restrictions on the Barcelona ring roads and a technological platform for managing the ZBE, in addition to information and awareness-raising campaigns targeting the general public.

Triptych:



Banners published both on social networks and in numerous digital media:



1. Pollution causes 50% of childhood asthma cases in Barcelona. There is no time to lose. The restrictions come into force on September 15th
2. At the time of entering and leaving school, the air contamination levels double. There is no time to lose. The restrictions come into force on September 15th

Advertising spots broadcast on multiple radio channels, television channels and the press:

EL MUNDO: MIÉRCOLES 10 DE DICIEMBRE DE 2020

Almacenes, último objeto de deseo

La crisis de suministros dispara la demanda y la inversión en activos logísticos en España

MANUEL HERNÁNDEZ VARGAS
Los almacenes están a punto de convertirse en el último objeto de deseo para el consumidor. El auge del comercio electrónico durante la pandemia llevó sus capacidades al límite y la crisis en la cadena de suministros ha terminado de agotar el poco margen que tenían. El hábito en la distribución mundial no solo ha disparado los precios, sino también la necesidad de espacio para guardar mercancías de futuro y más las convertidas a las nuevas y adiciones logísticas en un desafío activo para el desarrollo.

La escasez de materias primas, el bloqueo del transporte marítimo y el aumento del consumo tras el confinamiento han provocado una ruptura en la cadena global de suministros que ha afectado a países, empresas y consumidores. Muchos sectores se enfrentan a la escasez y el desabastecimiento, o a una subida sin fin de los precios, o a un aumento de los costes de transporte. Y para ello necesitan espacio donde guardarlos.

En un contexto normal, se tarda entre 12 y 18 meses desde que el activo se pone en el mercado hasta que se entregan las llaves, y ahora ese periodo se ha reducido a una horita.

En estos tres y seis meses, más del 70% de las ocasiones se está alquilando antes de tener el edificio, apunta José Pedraza, responsable de estrategias de inversión de Blackstone Real Estate. En una zona global que se repite en España, Reino Unido y los Países Bajos, los tres destacan la diferencia entre Colombia y Madrid: mientras que en Ciudad Condal las rentas por metro cuadrado son de 7,25 euros por metro cuadrado, en Madrid y a nivel de alquiler de oficinas se sitúan por encima de los 10 euros.

Los inversores se concentran en el sector a pesar de la alta volatilidad y la incertidumbre que genera la crisis. Los inversores se concentran en el sector a pesar de la alta volatilidad y la incertidumbre que genera la crisis.

El sector podría cerrar con 2.300 millones de inversión, un 50% más que en 2020

cuando a la crisis de suministros, «Aunque una gran preocupación entre las empresas es que se repita la ruptura de stock de hace unos meses y que se repita la crisis de suministros, especialmente de cara a las próximas fiestas, apunta Pedraza. «La oferta de construcción de almacenamiento es la mejor de los últimos 10 años y las nuevas producciones que se están desarrollando no se hacen con tanta urgencia, sino que son proyectos de largo plazo y se construyen a lo largo de años».

OPORTUNIDAD PARA INVERSORES:
Se alquila PARCELA URBANA con Licencia Urbanística para ESTACIÓN DE SERVICIO en GETAFE (Madrid). Inicio de obras inmediata. EXCELENTE UBICACIÓN. T: 609 245 954. Sr. Joaquín Muñoz.

AL GENER IMPULSEM LES MORATÒRIES

AMB LA ZBE REDUÏM LA CONTAMINACIÓ PER PROTEGIR LA SALUT DE TOT HOM

CAMIONS I AUTOCARS PETITS SENSE DISTINTIU AMBIENTAL

La contaminación de l'aire no es veu, però es respira.

INFORMA-TE'N zbe.barcelona

CIRCULACIÓ PERMESA

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Unió Europea Fons Europeu de Desenvolupament Regional

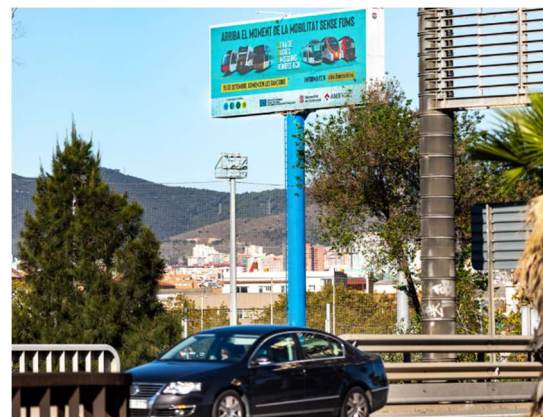
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CIRCULACIÓ PERMESA

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Billboards, screens, signs and exteriors integrated into the means of transport:



2. The incorporation of innovative elements



The ZBE Rondes Barcelona itself is an innovative and reference policy for all the cities of the state.

Three aspects stand out among the actions financed by ERDF. Firstly, the labeling used, which has been a pioneer in Catalonia and later recognized by the General Directorate of Traffic as a model throughout the State. Secondly, it is worth highlighting the Metropolitan Registry, which has been designed from the beginning as a 100% digital citizen portal allowing citizens to carry out LEZ procedures completely online. Likewise, alliances have been created with third parties to extend the face-to-face capabilities in the area without the need to deploy additional resources.



The establishment of the LEZ Registry has meant a true transformation of metropolitan procedures, with 90% of all procedures done remotely. Finally, it is also worth highlighting the control system of

the ZBE Rondes Barcelona, which has started and materialized from the Technological Platform, developed with ERDF Funds.

This platform is the “brain” of all the cameras installed in the different municipalities that allows automatic validation of compliance with the standard and, at the same time, the intelligent use of Big Data to improve knowledge of mobility and establish more effective mobility policies.

3. Evaluation of the results obtained from the operation against the established objectives

The objective of the operation is to achieve a 30% reduction in emissions associated with road traffic within 15 years. During the LEZ implementation period, the circulating fleet, that is, the composition of the vehicles that circulate, has been significantly “greened” with a drastic reduction of the most polluting circulating vehicles, that is, those vehicles that do not have a DGT environmental label.

Before the LEZ was implemented, the most polluting vehicles, that is, those without an environmental label, represented 20% of the total fleet. At the end of 2022, the circulation of these vehicles is residual.

The renewal of the circulating fleet resulting from the reduction of vehicles without labels, has led to an evolution in the emission factors of the circulating vehicles throughout the entire fleet in the ZBE Rondes for each pollutant. In September 2021, a reduction of 51.0% was registered in NO_x levels and 18.5% in the case of suspended particles known as PM₁₀, which are solid or liquid particles of dust, ashes, soot, metallic particles, cement or pollen, dispersed in the atmosphere, and whose diameter varies between 2.5 and 10 µm. Prolonged or repetitive exposure to PM₁₀ can cause harmful effects on the respiratory system of people.

One last example of the positive effect of the LEZ related to the renewal of the car park is the evolution of the average age of the vehicles registered in the city of Barcelona, lower than the state average, which does not follow the negative trend of the Spanish state.

4. Contribution to solving a regional problem or weakness

In the Barcelona metropolitan area, as something common to urban agglomerations, there is an excess concentration of suspended particles (PM₁₀) and nitrogen dioxide (NO₂), surpassing the legally established values with relative frequency.

In December 2014, the regional government of Catalonia (Generalitat de Catalunya) approved the Action Plan for the improvement of air quality in areas of special protection of the atmospheric environment (PAMQA), Horizon 2020, with the aim of reducing the level of nitrogen oxide emissions and suspended particles with a diameter of less than 10 microns.



Due to the advanced state of the operation and the recent data collection, it can be stated that the operation has reached the objective of reducing NO₂ levels by 11%, thus contributing to improving air quality.

Another point to highlight is the estimate that the changes in the vehicle fleet and the implementation of the LEZ contribute to avoiding 125 deaths per year and reducing new cases of other diseases such as childhood asthma or lung cancer.

5. Degree of coverage of the population to which it is addressed

The operation is aimed at improving air quality for the entire population of the Barcelona metropolitan area. The establishment of the LEZ has contributed decisively to socialize the problem of air quality in the public health of citizens. In this way, 95% of those surveyed in the latest OMNIBUS survey in the AMB say that pollution is a major problem in the Barcelona metropolitan area.

The different studies on the impact of the scale of the LEZ indicate that between 16 and 17% of the population of the Barcelona metropolitan area has been affected by the restriction of traffic in the LEZ. That is why they have had to change their mobility habits (going on foot, by public transport, by bicycle, etc.) or changing the vehicle.

All studies, internal and external, indicate approximately 70% acceptance of the measure by the metropolitan population.



6. Compliance with horizontal principles (sustainable development, equality between men and women and the principle of non-discrimination) and environmental regulations

The purpose of the ZBE is to comply with the European limit values for NO_x and PM₁₀ in the metropolitan environment, in accordance with Directive 2008/50/CE.

The benefits of improving air quality are universal, regardless of age, social class, or state of health. It is true that this benefit may be greater at the extremes of life, for people with health problems or for the groups of population with greater social disadvantages, but these differences suggest that those people who have more difficulty adhering to the changes promoted by LEZ are also the ones that can get the most benefit.

In fact, there are socioeconomic inequalities in terms of exposure levels and attributable health burdens. Despite not necessarily having a greater exposure to pollution, in the most disadvantaged areas of Barcelona the mortality attributable to ultrafine particles (known as PM 2.5) tends to be higher (1.22 times) compared to less disadvantaged areas. This suggests that the most disadvantaged groups suffer the most from exposure to these environmental health hazards. Ultimately, it should be noted that the European Public Health Alliance points out that low emission zones are the most effective measures to reduce pollution from local toxic PM10 and NOx.

It is worth mentioning that due to the deployment of the LEZ, social studies have been carried out on the impacts of the measure. These works verified that the impact of the restrictions affects to a lesser degree the low-income social classes and the female gender.

On the other hand, the AMB as a public administration complies with the obligations established in the applicable regulations on equality, as well as on the reservation of places for disabled people.

7. Synergies with other policies or public intervention instruments

LEZs must be integrated into the framework of sustainable mobility policies of municipalities, metropolitan areas and regions. Beyond being a reference for compliance with the aforementioned air quality directive, LEZs are also becoming a key policy to advance in harmony with the European directives aimed at reducing CO2 emissions. It should also be noted that the LEZ is a fundamental action within the NextGeneration framework, and therefore, positions the metropolitan territory in a privileged situation in terms of the deployment of mobility policies in line with European policies (green pact, NGEU, etc.). The LEZ is not a single, rigid measure, but rather a framework that allows for the inclusion of multiple measures that can accommodate changes in knowledge and circumstances. Thus, they can be implemented in the different levels of limitation and the corresponding perimeters; and it can be done by including actions aiming at gradually achieving zero emission zones, such as around schools.

The ZBE Rondes Barcelona has gone from becoming a pioneering policy in the state to a benchmark policy. The State, through Law 7/2021 on Climate Change and Energy Transition, has established the legal obligation to establish LEZs in all cities with more than 50,000 inhabitants. The metropolitan model has been the reference throughout the country. In this sense, it should be noted that the road signs designed by ZBE Rondes and co-financed by ERDF has been adopted by the General Traffic Directorate (DGT) as a reference regulatory sign (Instruction MOV 21/3). The AMB has published a technical guide with the Spanish Federation of Municipalities and Provinces (FEMP) and the DGT and currently conducts various training courses and seminars to contribute to the deployment of LEZ in other cities.



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