

# High-level public transport service corridors in peripheral districts

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- Bus rapid transit corridors, bus prioritisation
- Increasing modal share of public transport
- High-quality public transport services for residents, linking the city centre to peripheral districts

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**Location:** Madrid, Spain

**Organisations involved:** [Madrid Regional Transport Consortium \(CRTM\)](#)

[Municipal Transport Enterprise for Madrid \(EMT\)](#)

## What is the solution?

Currently, standard bus services provided in the peripheral suburbs of Madrid show speed data well below the city average, due to traffic congestion and illegal parking. There is significant potential to increase commercial speed through traffic light optimisation as, on average, some 25% of the journey time is stopped waiting for a green light.

The specific objectives of the measure are as follows:

1. At the city policy level, the measure will develop some of the actions envisaged in the Air Quality and Climate Change Plan for the city of Madrid (2017) and Sustainable Urban Mobility Plan (2013), as well as the Region's Transport Strategy (Vision 2025), in what refers to the expansion of the bus network in peripheral districts. It will, therefore, contribute to the city's goal of increasing the modal share of public transport, reduce emission levels and thereby improve air quality.
2. At the strategic level, the measure will identify the most suitable design and operational options to improve the efficiency of bus services by increasing the commercial speed and regularity levels of public transport. It will also improve the environmental performance of the bus fleet. Overall, the corridor is expected to provide higher quality and more attractive bus services, that are competitive with private cars, and result in an increase in public transport patronage.
3. Regarding the measure itself, it is expected to increment the use of the bus on the pilot section as a result of the improvement in commercial speed (around 10%) and the regularity of the service (around 9% in the regularity rate).

## How does it work?

This measure is in fact the first step for the implementation of the high level bus service corridors in the outer city areas, partly included in Madrid's 'living lab' (South-East Corridor) - two south-eastern peripheral districts: Puente de Vallecas and Villa de Vallecas. The measure will be critical for the subsequent design and implementation of the whole corridor. Therefore, a pilot section of approximately 3.7 km will be implemented connecting the living lab with the districts of Moratalaz, San Blas-Canillejas and Ciudad Lineal, all of them in the Eastern periphery of Madrid.

This new corridor will be connected to intermodal facilities to ease modal transfer between public transport services. The bus stops will also be adapted in order to provide boarding times in line with the high level of service standards. Additionally, existing routes will be redefined to accommodate the new high-level service corridor.

In order to increase the use and efficiency of public transport in Madrid, a relevant number of previous studies of different urban corridors were carried out in the last years. During the Research and Planning phase of the measure, two new studies were carried out in order to update the previous ones. As part of the new studies, an inventory of the physical characteristics of the corridor was carried out. This inventory identified the most relevant constraints that could condition the proposed solutions. Based on these constraints and their potential impacts on the action (technical and economic), as well as on the strategies of the different administrations involved, the definitive section to be developed in the construction project was chosen.

The drafting of the construction project finished in September 2018, and it defines in detail the following aspects: reorganization of intersections, parking areas, new signalling, adaptation of bus stops, connection with other intermodal areas of public transport, etc.



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As the construction project of the pilot section is already finished, the next step would be to include the action in the budget of Madrid City Council in order to be able to tender the construction works of the pilot section within the expected period of the ECCENTRIC project. However, it is currently not possible to execute the measure on time due to the complex administrative procedures of the City Council. The corridor will therefore be included within the new SUMP, currently in the process of being reviewed, as an infrastructure to be built in the near future.

## Expected results

The main expected impact is an increase in bus usage in the pilot section of the corridor, as a result of an increase in commercial speed (reaching at least 13 km/h), and an increase in the regularity of the service (reaching an average of 94%).

At the city policy level, the measure is expected to:

- Increase the modal share for public transport by 4%.
- Reduce emission levels and improve air quality by 30% (energy consumption and emissions) to be in line with the Air Quality Plan objectives.

At the strategic level, the measure will facilitate the identification of the design and most suitable operation options to:

- Improve the efficiency of the public transport service, by increasing commercial speed and regularity.
- Increase in bus usage and reliability of the public transport services in the demonstration area.
- Increase the environmental performance of the bus fleet.
- Achieve a new more attractive offer of public transport services, which can better compete with the private vehicle.

## Business model

Madrid City Council is the administrative body responsible for the works that are executed in the streets of the city, being also responsible for its maintenance. Therefore, the implementation of the measure will be financed by Madrid City Council.

On the other hand, EMT, the company that operates public bus services in Madrid, is owned by Madrid City Council and is integrated into the Madrid Regional Transport Consortium.

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