

ICLEI-Eurocities Workshop 2022

Sustainable Urban Logistics

Grenoble, France

Monday, 9th of May – Tuesday, 10th of May

Madrid City Experience



Highlights of Madrid



- Capital and largest city of Spain (3,3 million inhabitants).
- Second most populous proper city in the European Union (7% of total Spain population, more than 6,6 million at a regional level).
- Key role in the economy of the country (12% of the total GDP of the country, up to 19,3% at metropolitan level).
- 605.77 km².
- 21 districts (128 neighbourhoods).
- Belonging to 2 TEN-T corridors.

Key facts about logistics and e-commerce in Madrid

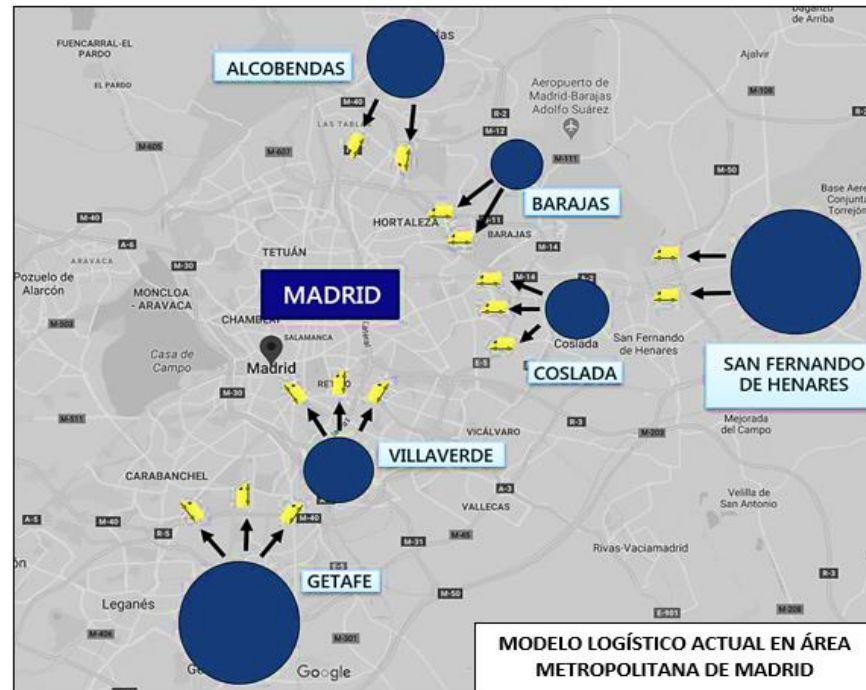
- Madrid is the capital and largest city of Spain:
 - 3,3 million inhabitants.
 - 605.77 km2. 21 districts (128 neighbourhoods).
- In the city of Madrid there are 13.5 million total daily journeys.
- Urban distribution of goods accounts for 15-20% of the traffic.
- Online commerce has doubled during the COVID crisis.
- 35% of Madrid residents shop online every week (an increase of 15 points compared to before the pandemic).
- 57% of Madrid families spend between 50 and 250 euros a month on online commerce, 10 points higher than before the pandemic.
- E-commerce purchases correspond to: household products, fashion, technology and home delivery food.

How Madrid deals with the urban distribution of goods

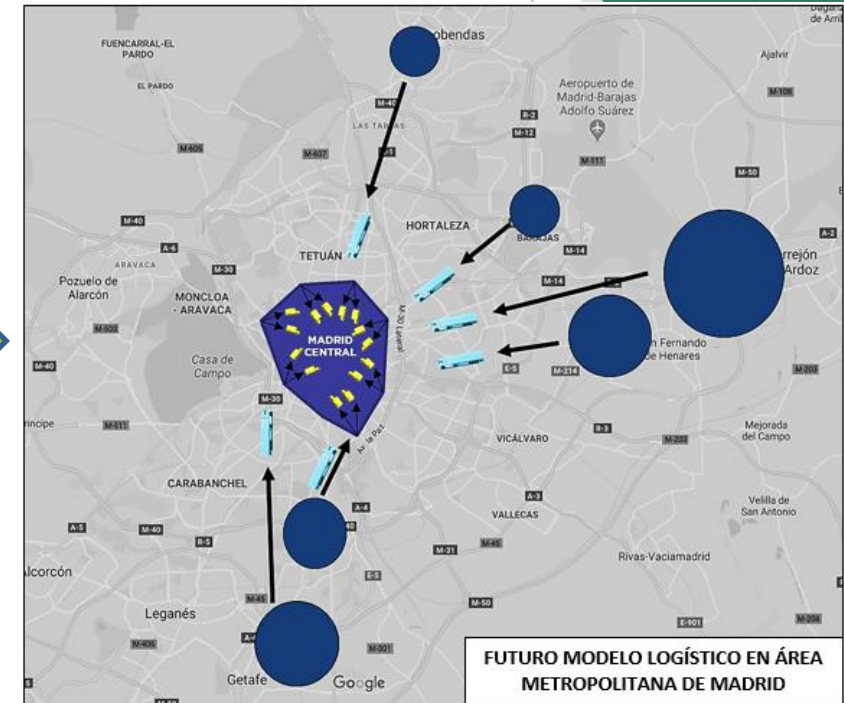
- Mobility in Madrid is governed by the Madrid 360 Strategy (presented in September 2019) and its different regulations: Sustainable Mobility Ordinance (approved in September 2021) and the new Sustainable Mobility Plan that is about to be approved in the next months.
- Madrid City is currently working on the development of a Strategy for the urban distribution of goods, which develops and better defines the measures to be implemented derived from the Madrid360 Strategy and the Mobility Plan.
- It is clear that in order to achieve a sustainable mobility, it is essential to act in all areas of mobility, both for passengers and freight.
- The Madrid 360 Strategy, the Ordinance and the new Plan all address the urban distribution of goods, including measures to decarbonize, optimise and technify it.

How urban distribution of goods is done

Current situation



Ideal situation



Main measures that Madrid is developing to optimize and technify urban freight distribution and e-commerce

Promotion of microhubs for last mile delivery with e-vehicles

Creation of parcel lockers for e-commerce in public car parks and intermodality hubs

Smart reserve system for loading and unloading

Encouraging the shift to cleaner vehicles

Restrictions on entry to Madrid for polluting vehicles (LEZ)

Promotion of microhubs for last mile delivery with e-vehicles

In October 2021, the Madrid City Council launched a pilot initiative for the sustainable distribution of goods through a logistics center located in the Plaza Mayor car park, with an electric fleet specially adapted for urban distribution and e-commerce.



Creation of parcel lockers for e-commerce in public car parks and intermodality hubs

To date, there are 12 lockers installed in public car parks and 4 more to be installed soon.



Smart reserve system for loading and unloading areas with an intelligent system (in tendering process)

The system will operate through the use of a mobile application (App) by the user.

All loading and unloading reservations in the city will be clearly identified by a six-digit numerical code: BBBNNNN (first three for the neighbourhood and next three for the booking number within the neighbourhood).

The user will download the App and proceed to register their vehicle(s).

Once registered, for subsequent operations, they will only have to choose the registration number of the vehicle for which they are making the reservation (if they have several vehicles).

The user will instantly obtain a free authorisation for the maximum time established by entering the identification code of the vehicle in the App or by choosing it directly from a map of the city.

Encouraging the shift to cleaner vehicles

- Financial aid for the renewal of vans, light trucks, bicycles and light delivery vehicles.
- Financial aid for the installation of electric vehicle recharging points.

Restrictions on entry to Madrid for polluting vehicles (LEZ)

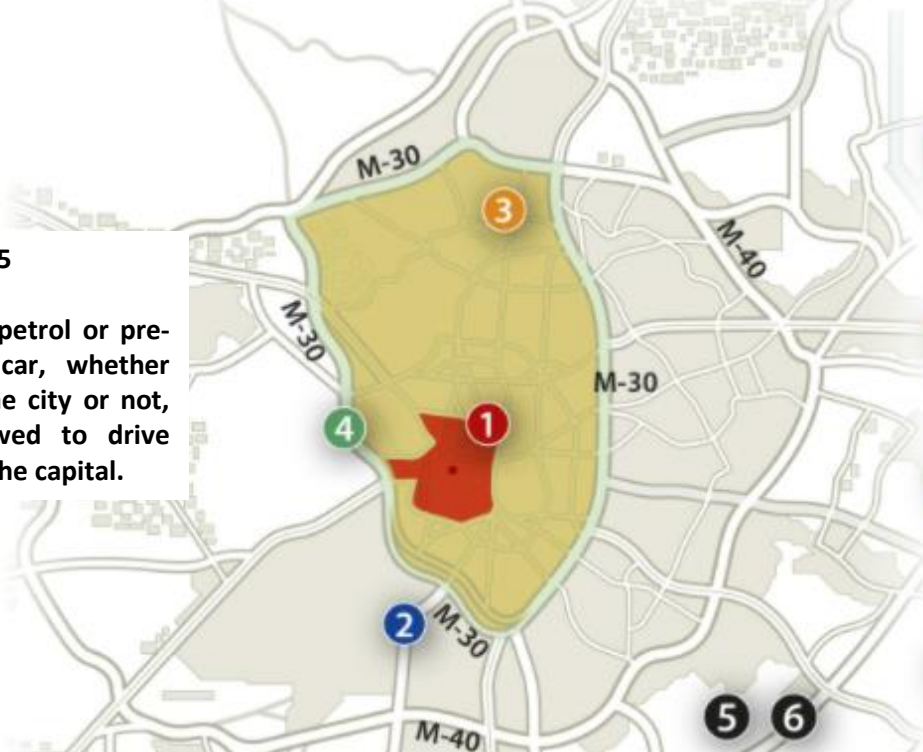
On 1 January 2022, the progressive implementation of Madrid LEZ started, which will become the largest low emission zone in Europe by 2025.

- The objective of these measures, included in the Madrid 360 Sustainable Mobility Strategy, is to optimize the logistics chain to reduce the impact of polluting emissions and noise generated by urban loading and unloading



Restrictions on entry to Madrid for polluting vehicles (LEZ)

Mapa de las restricciones al tráfico hasta 2025 (Map of traffic restrictions until 2025)



6

1 January 2025

No pre-2000 petrol or pre-2006 diesel car, whether resident in the city or not, will be allowed to drive anywhere in the capital.

1

22 September 2021

- The 15,000 shopkeepers in the central district will have the same access as residents.
- The ban on vehicles without tag would continue to apply to non-residents in the city centre and B and C vehicles that do not go to car parking.

2

22 December 2021

- Non-resident vehicles without tag in Plaza Elíptica square will not be able to pass through the new low emission area (LEZ).

3

1 January 2022

- Access and circulation forbidden to cars without tag inside the M-30 ringroad.

4

1 January 2023

- The ban on cars without an environmental tag also extends the access and circulation on the M-30 ringroad itself.

5

- 1 January 2024 - Cars without tag will not be allowed to circulate throughout the municipality, except those registered in the capital.

New Strategy for the urban distribution of goods

Some of the measures that will be included in the new strategy, and which are complementary to those considered in the rest of the regulations, are as follows:

- Proposed resizing of loading and unloading zones (according to land use, equidistance, type of commerce, etc.), with the aim of improving what is currently in place and unifying criteria for the definition of loading and unloading zones.
- Promotion of last-mile logistics centers located in markets, parkings, multimodal platforms...
- Proposals of establishments to serve during the daytime period.
- Regulation of loading/unloading in pedestrian zones and/or pedestrian priority.

Quick analysis of ecommerce in Spain

- The turnover of electronic commerce in Spain increased in the second quarter of 2020 by 0.2% year-on-year to reach 12,020 million euros, according to the latest electronic commerce data available on the CNMCDData portal.
- The sectors of activity with the highest income were clothing, with 9.4% of the total turnover; the subscription of television channels, with 4.5% and hypermarkets, supermarkets and food stores, in third place, with 4.1%.
- If we look at the number of transactions, in the second quarter of 2020 more than 244 million transactions were recorded.
- In terms of geographic segmentation, e-commerce websites in Spain accounted for 40.6% of revenues in the second quarter of 2020. The remaining 59.4% corresponded to purchases originating in Spain made from commerce websites electronic mail abroad (transnational imports)
- The turnover of transactions originating in Spain and directed abroad was 7,143 million euros, 27.9% more than in the second quarter of the previous year. 60.2% of purchases from Spain abroad went to the European Union.

GRENOBLE



E-commerce revenue within Spain (purchases made in Spain from Spanish websites) increased by 0.7% year-on-year to 3,819 million euros. They led the turnover within Spain, appliances, image and sound (9.7%), followed by hypermarkets, supermarkets and food stores (8.8%).



Main logistical problems due to ecommerce in Madrid

- According to data from Citet (Innovation Center for Logistics and Freight Transport), in more than 65% of establishments, operations take place outside the area dedicated to loading and unloading, either in a double queue or in a car park of the BE zone. The widespread non-compliance in certain areas of the city leads to greater traffic congestion, largely because the operations coincide with the hours of greatest traffic during the mornings.
- "There is so much freight vehicle traffic circulating through a neighbourhood, a neighborhood with narrow streets and hardly any physical space, that the consequences for the residents are beginning to be unacceptable: damage to roads and public furniture (sunken pavement and sidewalks, bollards and signs uprooted); damage to buildings (some elements of the facades have been uprooted in the case of trucks); even some neighbors have been physically assaulted by certain madmen," says Esteban Benito, spokesman for the Chueca Neighborhood Association (centre neighborhood of Madrid).
- Many neighborhood associations in the central neighborhoods of Madrid, with narrow streets, complain about the lack of loading and unloading spaces, since transport vehicles are forced to stop in the middle of the road and paralyze traffic in streets of a lane only.



Loading and unloading tasks on Calle Infantas, Centro district.
TW: @MADRID_UTOPICUS "Somos Chueca"

Due to the lack of parking spaces for loading and unloading, images like the following are repeated in the city center.



Without a suitable place to stop, vehicles occupy the road and public spaces, holding up traffic and making mobility difficult for private vehicles and public transport



Vehicles unload in the middle of the Plaza Mayor. Image: Jorge Paris

According to city hall data, more than 100,000 establishments located in the capital make use of these squares, which allow up to 45,000 daily delivery operations. The increase in the urban distribution of goods in the city has been exponential in recent years and has worsened after the pandemic due to the rise of online commerce and the home delivery service in local businesses. In addition, delivery in the hotel industry is experiencing a time of unstoppable growth. In parallel, and consequently, the loading and unloading places have not stopped increasing. Since 2008, 3,955 new ones have been created, reaching the current 8,227 as of March 2022.

THANK YOU VERY MUCH

Pedro Fernandez
Head of Mobility International Projects Dept.
Madrid City Council

