

# Madrid: fostering alternative energy vehicles for urban mobility

The improvement of Air Quality in European Union cities  
Brussels, 7 May 2019

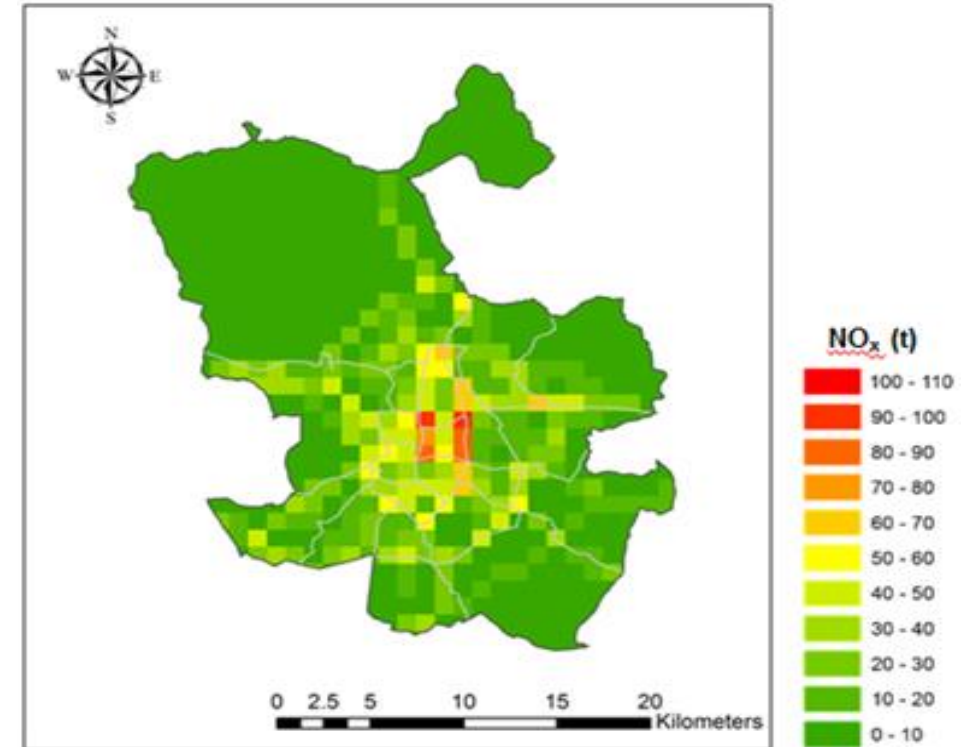


# Major sources of pollution



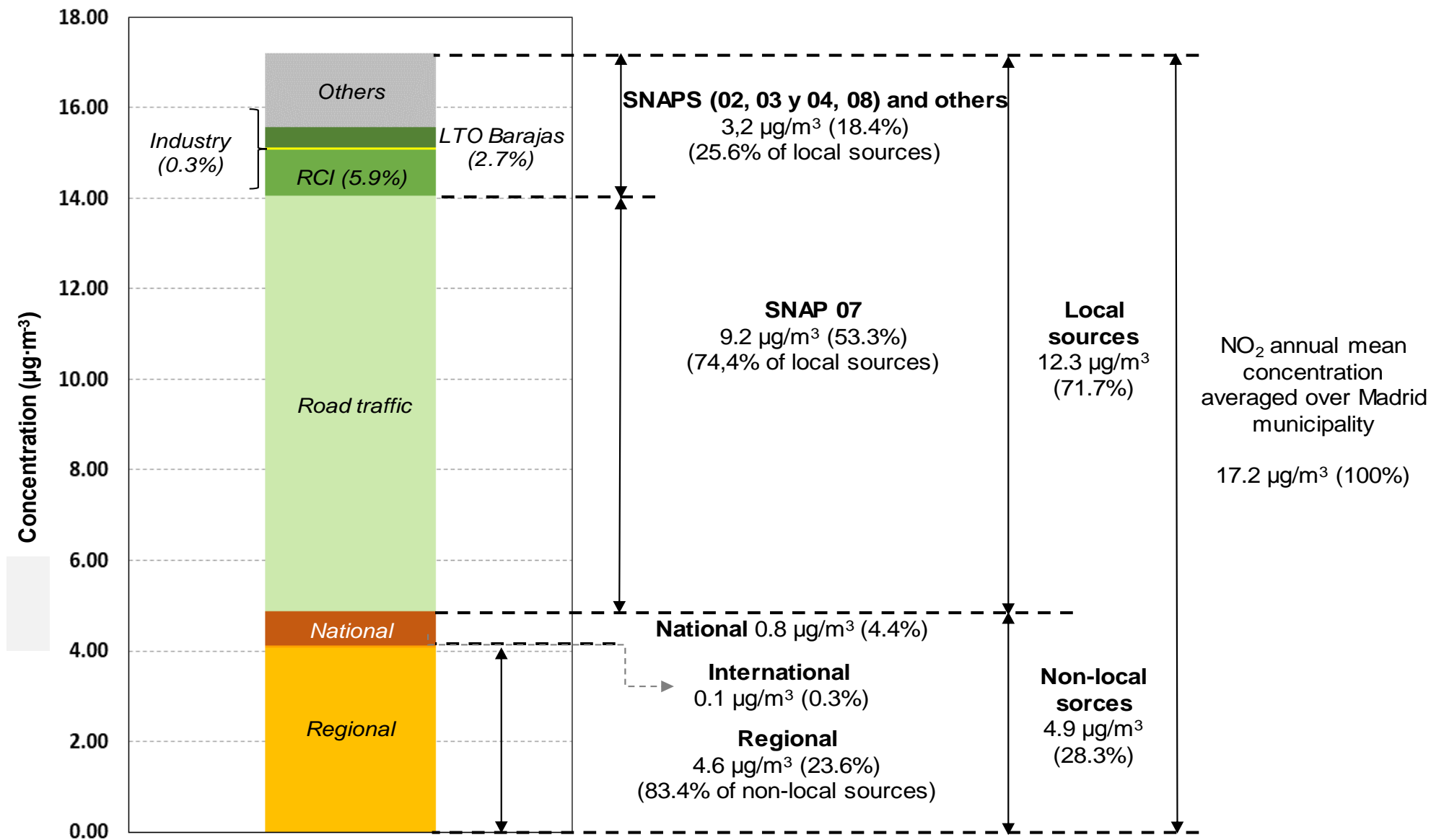
- Road traffic is the main contributor of emissions in Madrid city (year 2017):

- 46.9 % of  $\text{NO}_x$
- 52.4 % of  $\text{PM}_{2.5}$  (exhaust)



- Followed by *Non-road transport* (26,5% of NO<sub>x</sub>)

## SOURCE CONTRIBUTION NO<sub>2</sub> annual mean



Plan de  
Calidad de  aire  
y Cambio Climático

# Plan

Plan de  
Calidad de  aire  
y Cambio Climático



MADRID

September 2017



## PLAN A

- Integration of AQ and CC policies
- Public health approach
- Combined actions for a new urban model



# Health protection, environmental quality, resilience

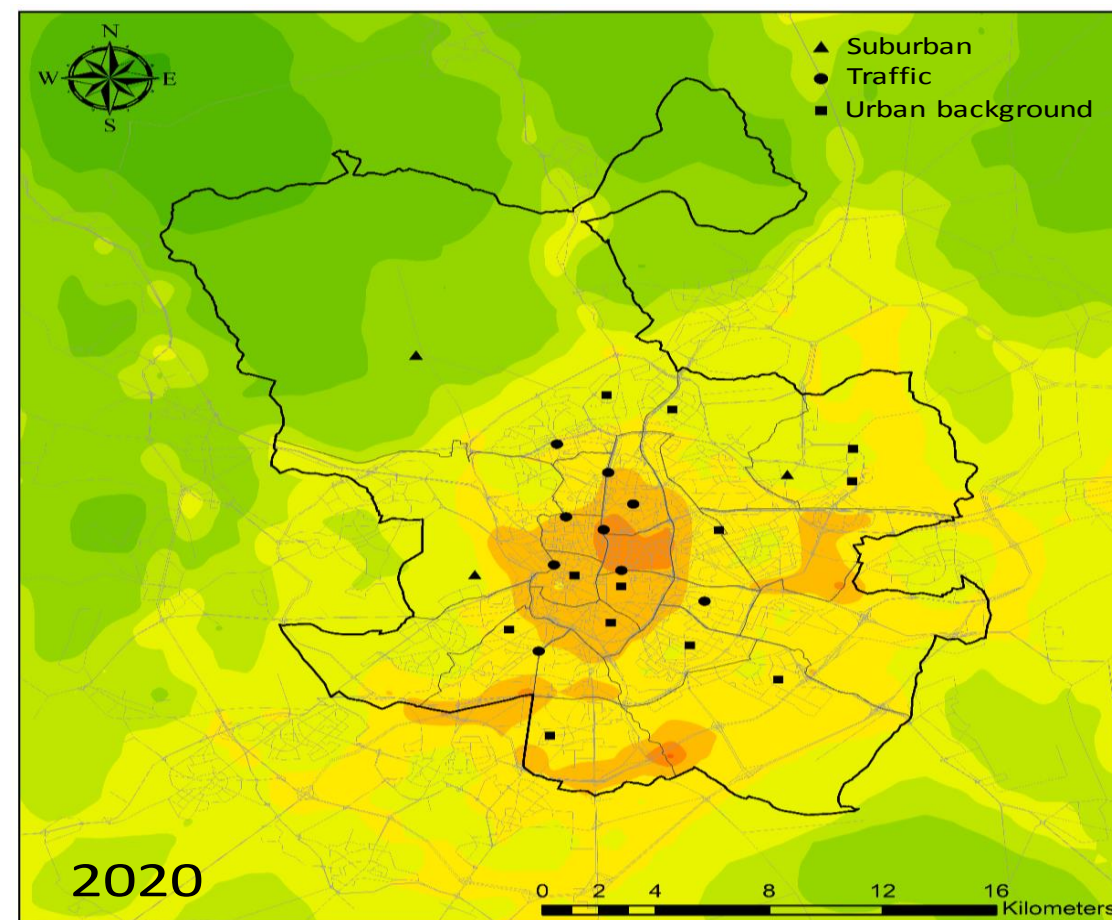
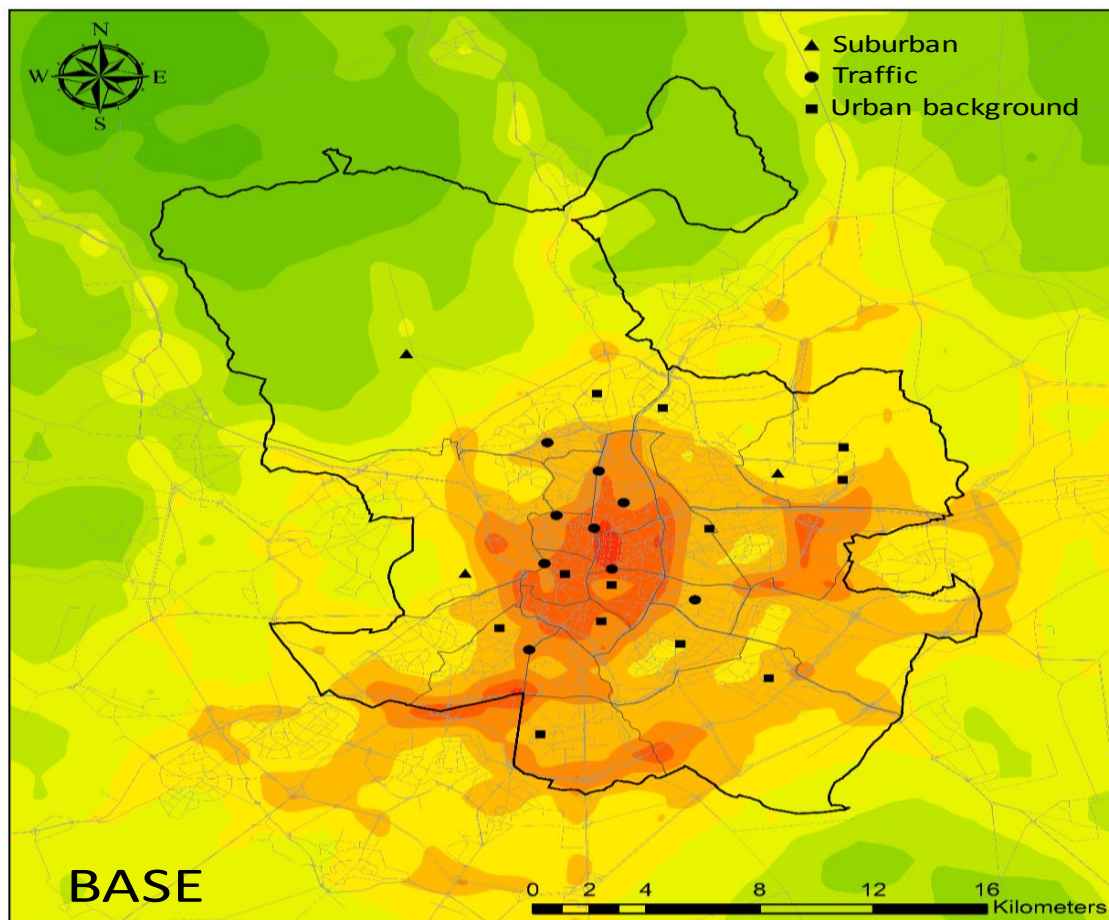


- GHG emissions reduction over 40% in 2030, with respect to 1990 (European Climate Agenda)
- Fulfillment of the EU regulated values for all pollutants
- Fulfillment of the WHO guideline values for particulate material PM10 and PM2.5 (stricter than the European limits)
- Local commitment to get a 50% reduction of road traffic GHG emissions in 2030 with respect to 2012



# EXPECTED RESULTS OF PLAN A IN AIR QUALITY

NO<sub>2</sub> annual mean (annual limit value for the protection of human health).  
(Reduction of 23 %)



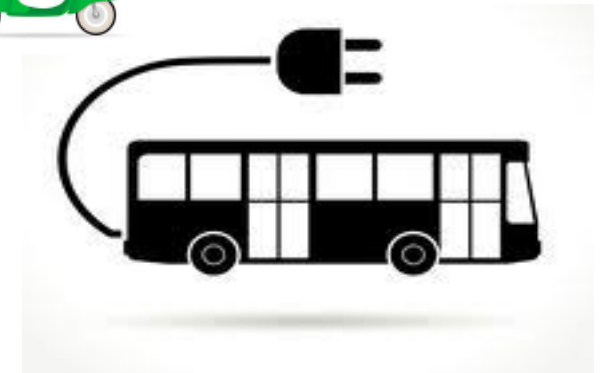
# 30 measures

## 1: Mobility (21 measures)

### Priority actions:

- To reduce intensity of private motor vehicles traffic and promote public transport and active mobility modes (pedestrian and bicycle)

- Promoting alternative energy vehicles





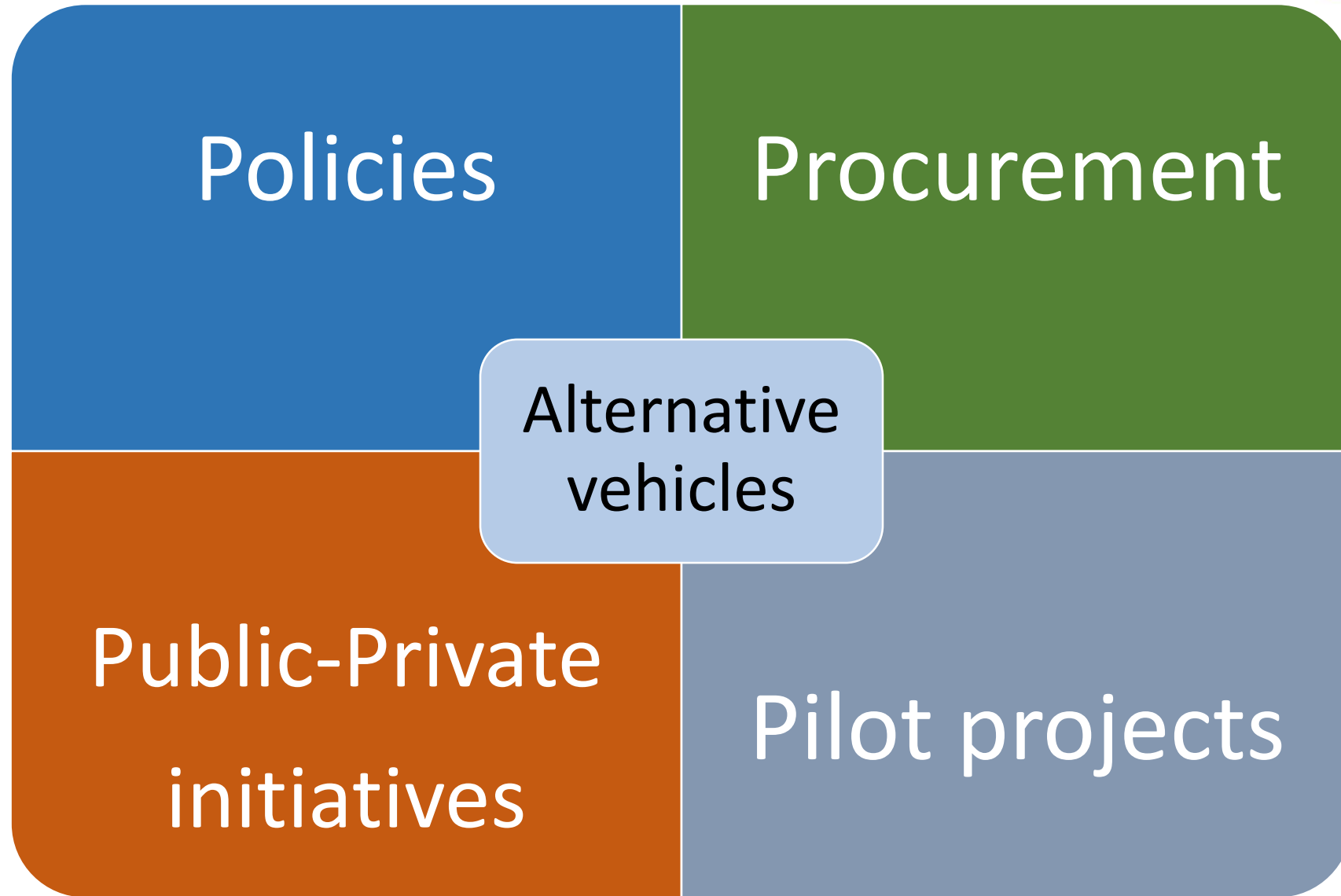


**2:** Urban regeneration/ Low emissions urban management (7 measures)

**3:** Nature based solutions for Climate Change adaptation

**4:** Information, raising public awareness and cooperation with others administrations





# POLICIES AND REGULATIONS



## ON STREET PARKING POLICIES WITH ENVIRONMENTAL CRITERIA



-Cero emisiones:



-ECO:



-C:



-B:







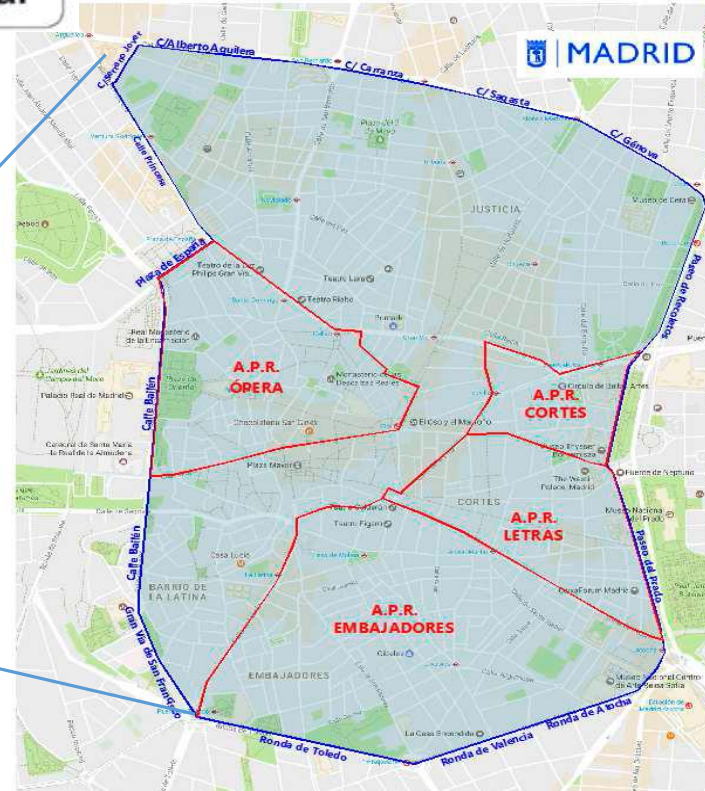
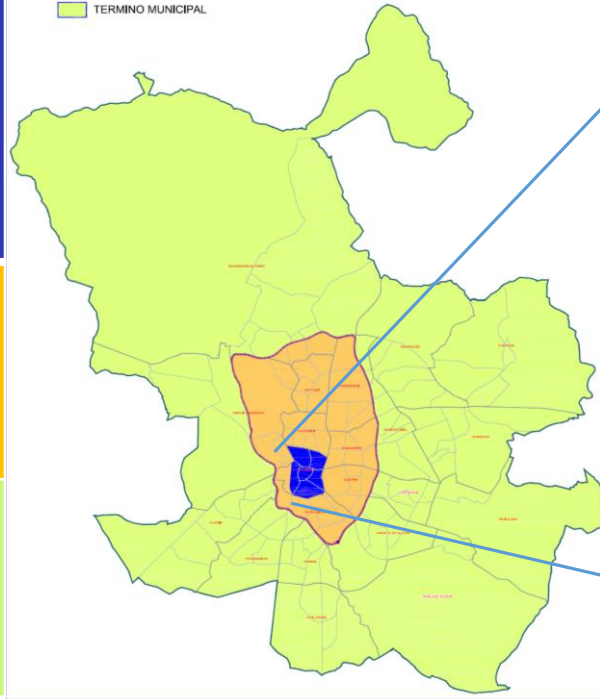


# LEZ Madrid Central



PLAN DE CALIDAD DEL AIRE Y CAMBIO CLIMÁTICO

- AREA CENTRAL CERO EMISIONES
- ZONA SER M-30
- TERMINO MUNICIPAL



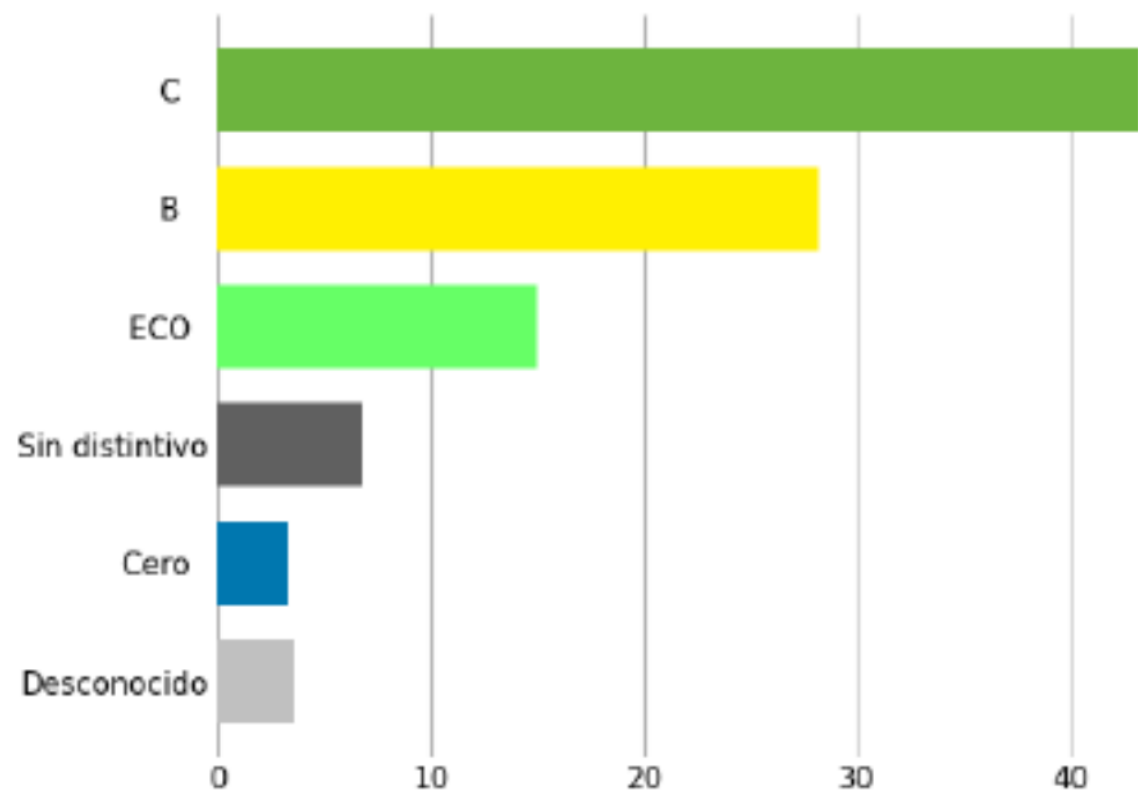
- ✓ 480 ha (vs. current 200 ha APR)
- ✓ Affecting the most pollutant vehicles
- ✓ Simplicity and resources saving (permits ) by City Council
- ✓ Easy identification and comprehensive by citizens: less mistakes and fines
- ✓ Scalability and flexibility
- ✓ Coherence with the High Pollution Episodes' Protocol

20% traffic reduction, 37% reduction in veh-km  
almost 40% reduction in NOx



Madrid  
Central

## DISTINTIVOS AMBIENTALES DE LOS TRÁNSITOS (%)





# PROCUREMENT



- ❑ 275 E-Vehicles
- ❑ 23 E-motorbikes
- ❑ 242 charging points in 58 facilities







- ❑ 1.340 CNG buses (65,3 % of the fleet)
- ❑ 18 mini-bus and 20 electric buses
- ❑ + 35 electric buses in 2019
- ❑ Electric depot (La Elipa) construction approval





# PUBLIC-PRIVATE PARTNERSHIPS



- ❑ Public land granting for natural gas stations
- ❑ 10 CNG stations of public access
- ❑ 29 LPG supply points in petrol stations





# PUBLIC-PRIVATE PARTNERSHIPS



- ❑ 18 municipal rapid charging points in private sites (agreement for use)
- ❑ 24 rapid charging points on Street managed by private operators



# PILOT PROJECTS



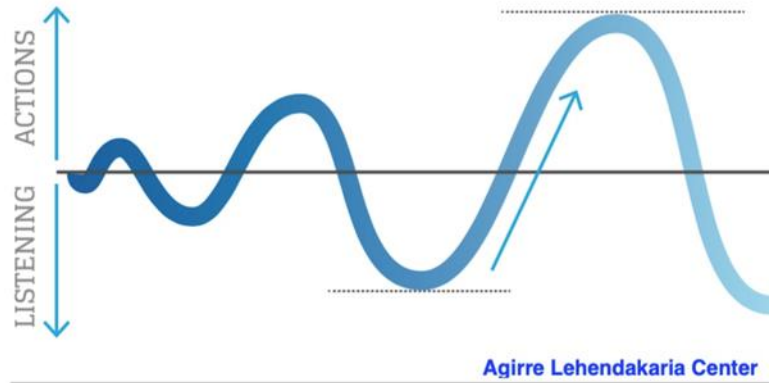
## ECCENTRIC



WP title
INCLUSIVE URBAN PLANNING & MOBILITY MANAGEMENT
MOBILITY AS A SERVICE FOR AND BY ALL
ENABLING SAFE WALKING AND CYCLING
EFFICIENT AND CLEAN PUBLIC TRANSPORT SOLUTIONS
PROMOTING THE UPTAKE OF ELECTRIC VEHICLES
TOWARDS ZERO EMISSIONS URBAN FREIGHT LOGISTICS

# PILOT PROJECTS

The deeper the listening, the more transformative the actions



Madrid Air Quality and Climate Change Plan (Plan A)



- Adaptive capacity – learning by doing
- Space for new public –private collaboration, co-creation
- Triggers for systemic change through community listening
- Communication and social engagement
- Technical support with social perspective of large projects



Portfolio of options for decision makers based on solid foundation





THANK YOU

[www.madrid.es/contaminacion](http://www.madrid.es/contaminacion)  
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