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# The view of Barcelona

## Strategy to fight air pollution

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LIFE platform meeting on air quality

26th September 2017

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## SOME FACTS ABOUT BARCELONA

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- Population: 1.6M citizens (Greater Barcelona 3.2M)
- Area: 101,4 km<sup>2</sup>
- Density: 16.315 population/km<sup>2</sup>
- 13 M veh·km driven every day (working day)
- 65% diesel powered vehicles
- 55% of vehicles outsiders





## LOCAL CONTEXT

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Zone declared **saturated** for the pollutants NO<sub>2</sub> and PM10



Plans to abate air pollution are compulsory

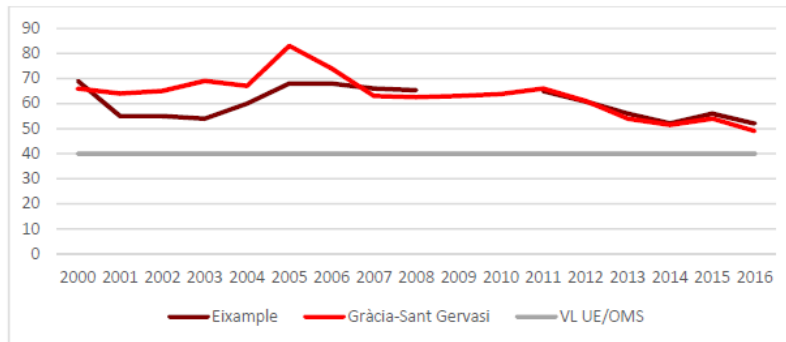
1<sup>st</sup> level of commitment: **local, regional and metropolitan** authorities collaboration



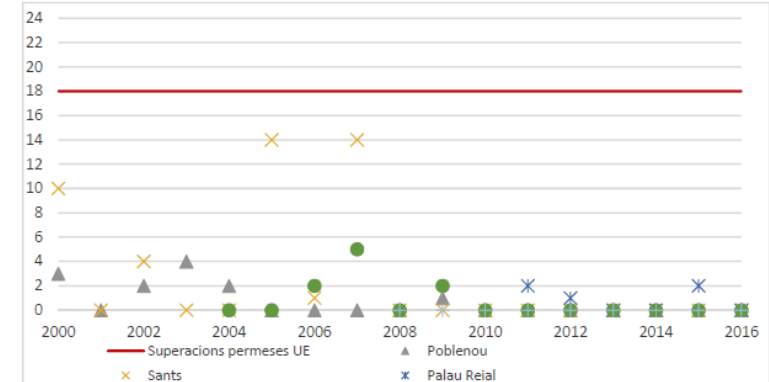
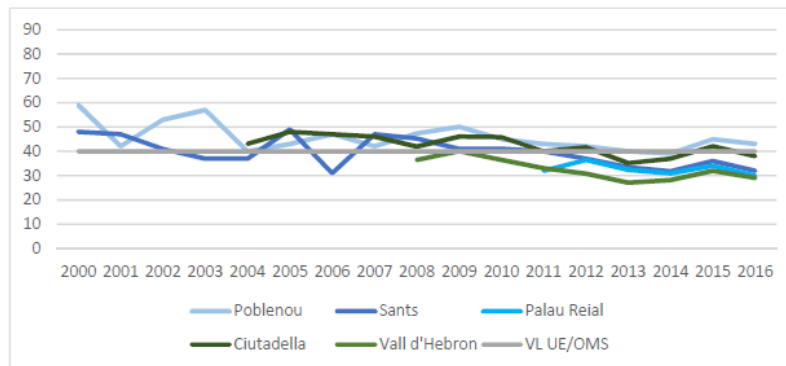
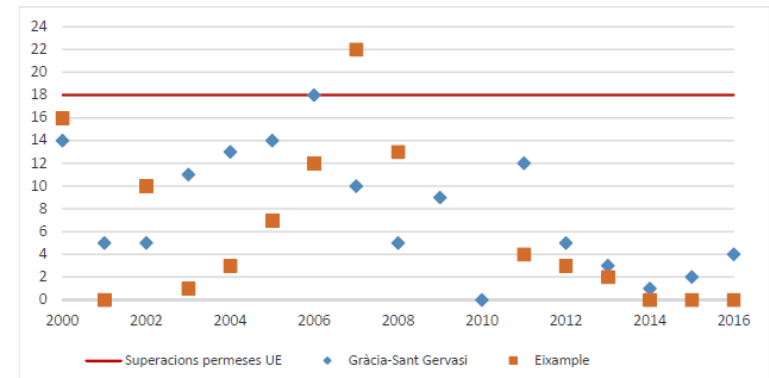
## CURRENT SITUATION

### Nitrogen dioxide (NO<sub>2</sub>)

#### Annual mean concentration



#### Hourly limit exceedances

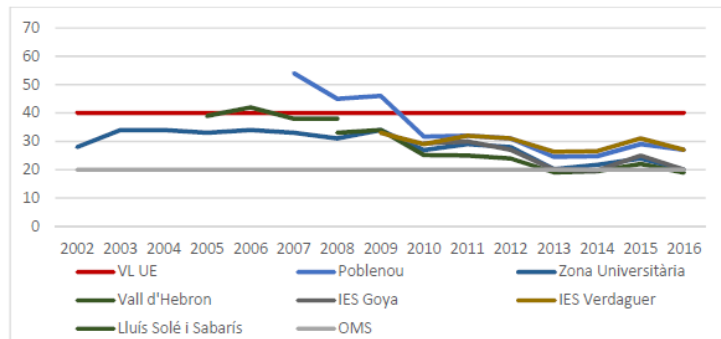
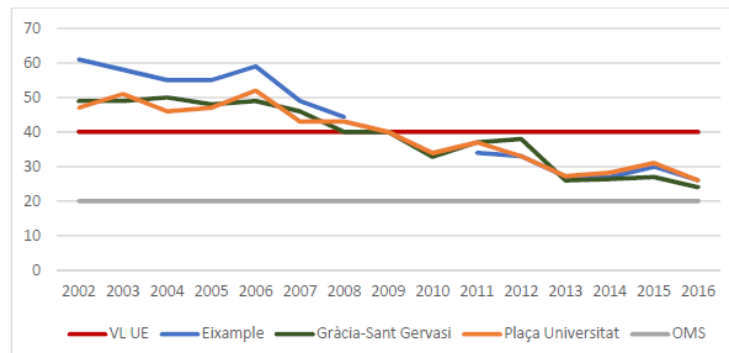




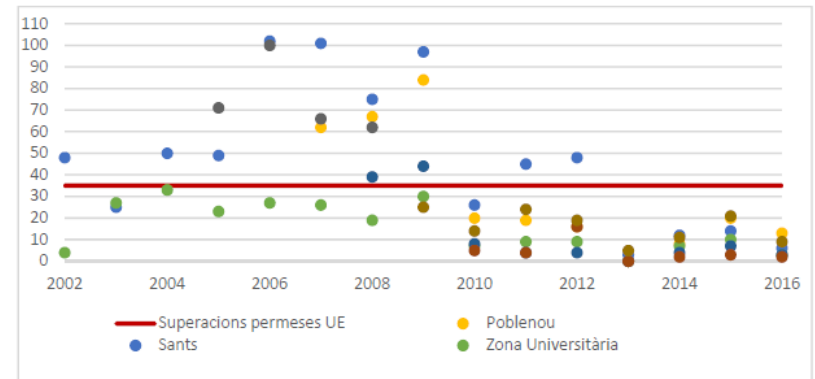
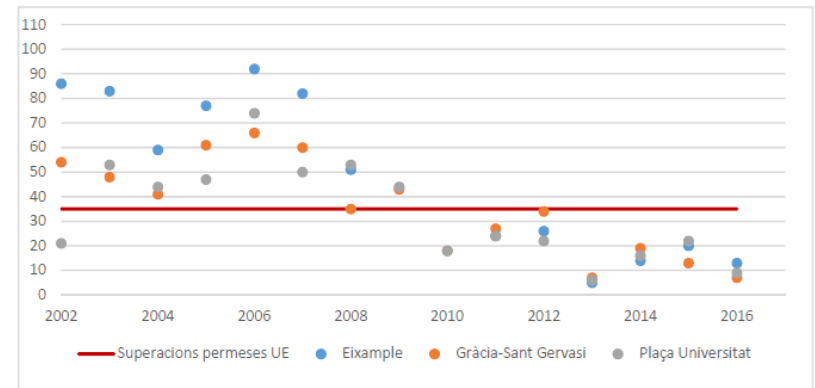
## CURRENT SITUATION

### PM10

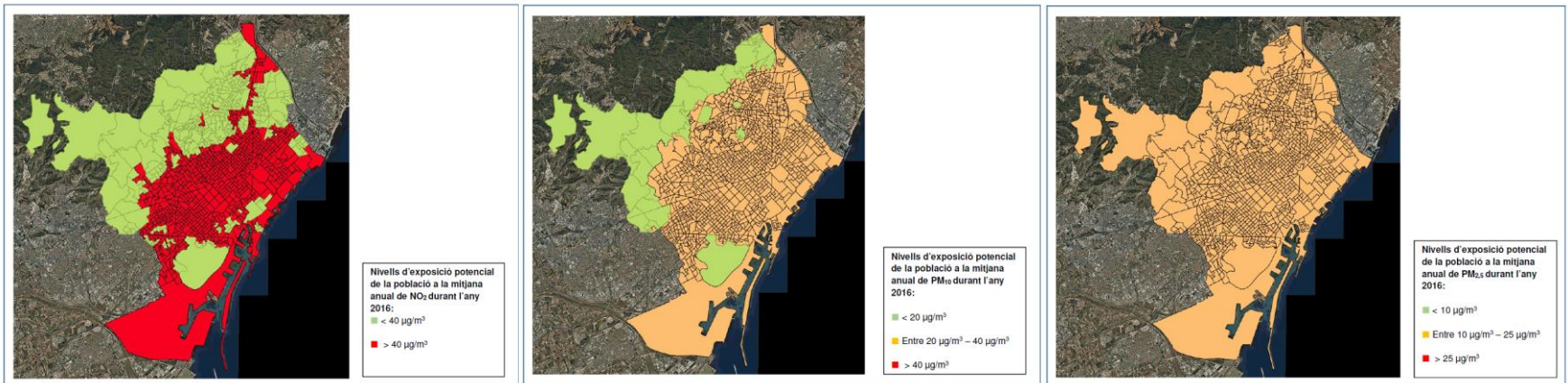
#### Annual mean concentration



#### Daily limit exceedances



## POTENTIAL EXPOSURE TO AIR POLLUTION



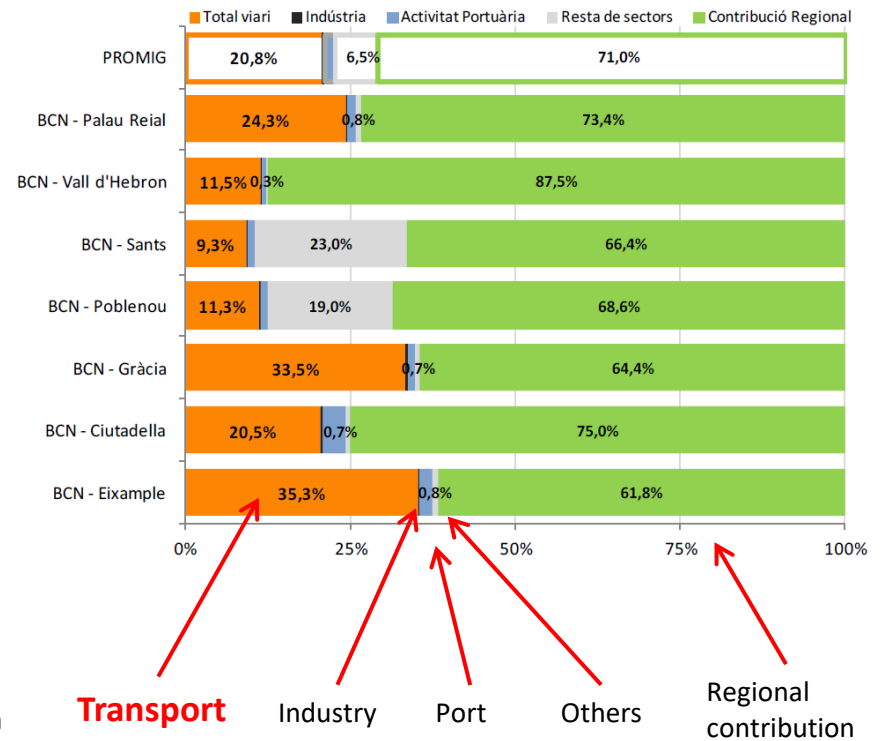
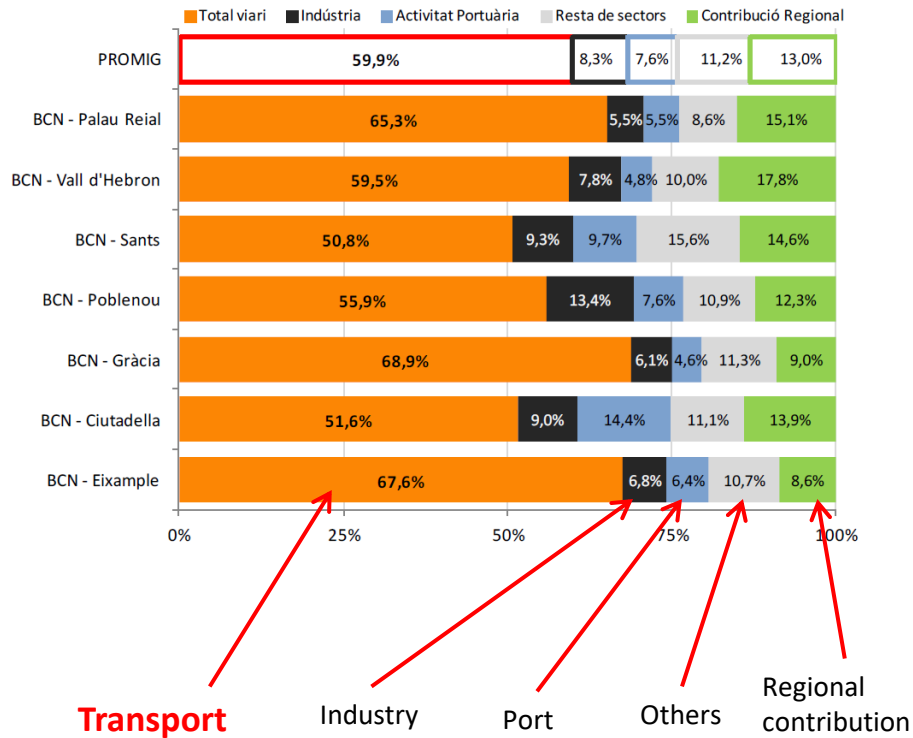
Over the **97% of the Barcelonians** are potentially exposed to annual mean concentrations of PM above the WHO guidelines.

In the case of NO<sub>2</sub> are the 68%.

3<sup>rd</sup> level of commitment: **the society**



# THE DIAGNOSIS



## THE VIEW OF BARCELONA

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- Barcelona is immerse in an important transformation
- New paradigm is being established, replanning the principles from a city meant for the vehicles to a city meant for the people
- New vision: new use of the streets, less private pollutant mobility and more public transport will bring better air quality and health



## PROGRAMME OF MEASURES TO ABATE AIR POLLUTION (h2020)

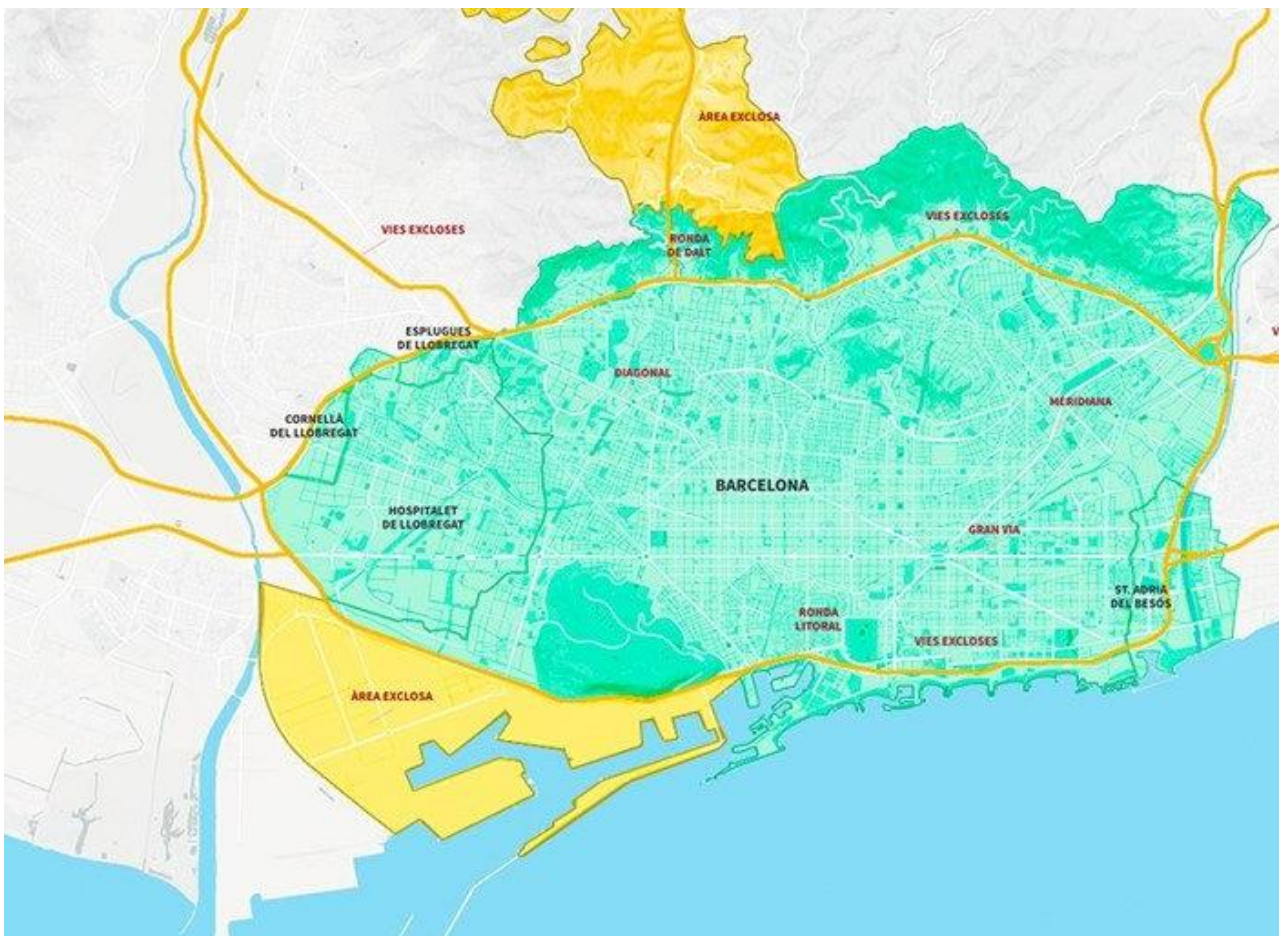
- Double pillar strategy: to reduce the traffic intensity and to make the resting fleet the cleanest as possible
- Strategy complementary to the regional and metropolitan planning
- Global response:
  - Mobility
  - Urban Planning
  - Urban services
  - Public awareness and commitment

2<sup>nd</sup> level of commitment: **the city council itself**





# LOW EMISSION ZONE



- Elèctrics de bateria (BEV).
- Elèctrics d'autonomia estesa (REEV).
- Elèctrics híbrids endollables amb 40 km d'autonomia mínima (PHEV).
- De pila de combustible (FCEV).



- Elèctrics híbrids endollables amb autonomia inferior a 40 km (PHEV).
- Elèctrics híbrids no endollables (HEV).
- De gas (GLP, GNC o GNL).
- En tots els casos, han de complir les condicions d'antiguitat de l'etiqueta C.



### Gasolina Euro 4, 5 i 6

Matriculats a partir d'1/01/2006

### Gasolina i dièsel Euro 6

Matriculats a partir del 31/12/2013

### Dièsel Euro 6

Matriculats a partir d'1/09/2015  
   
Matriculats a partir d'1/09/2016

### Gasolina i dièsel Euro 4 i 5

Matriculats entre l'1/10/2006 i el 30/12/2013

### Gasolina Euro 3

Matriculats entre l'1/01/2001 i el 31/12/2005

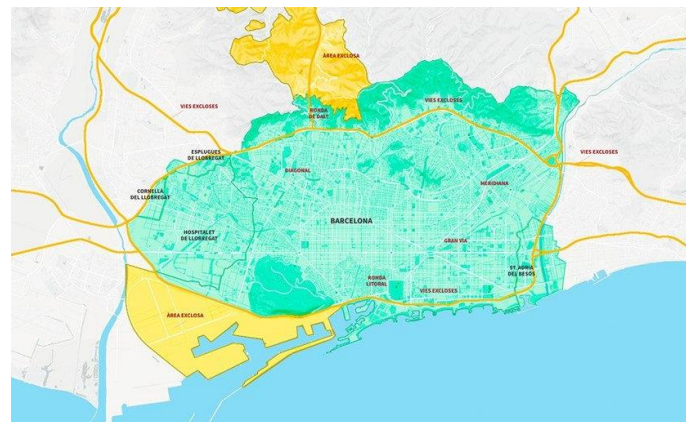
### Dièsel Euro 4 i 5

Matriculats entre l'1/01/2006 i el 31/08/2015  
   
Matriculats entre l'1/01/2006 i el 31/08/2016

## LOW EMISSION ZONE

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- Progressive deployment until January 2020
- From 07:00h to 20:00h on working days
- Based on the Spanish vehicle ecolabelling system
- Controlled by a technologic platform: automatic plate recognition system and infraction management
- Strengthen of the current public transport system
- Several exceptions considered

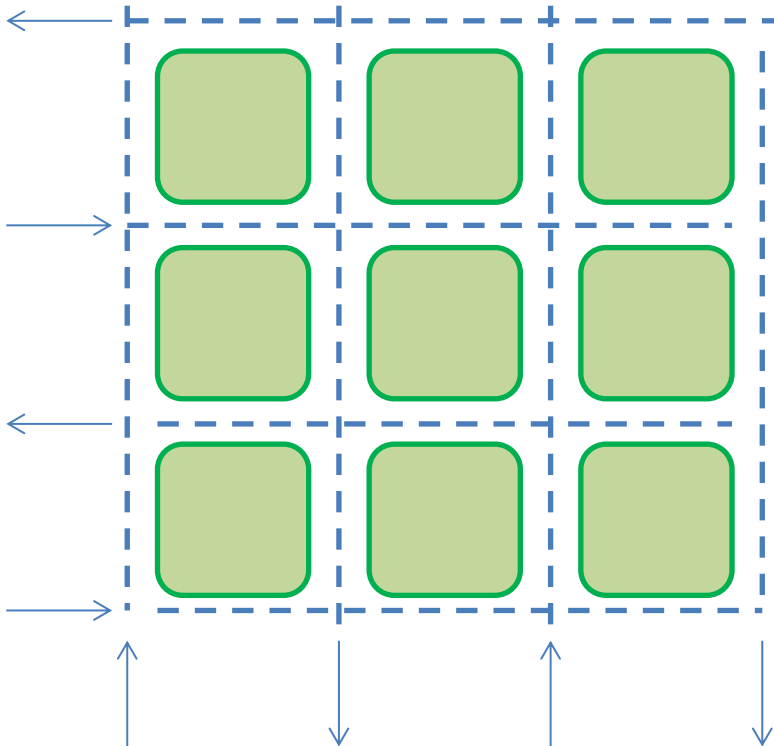




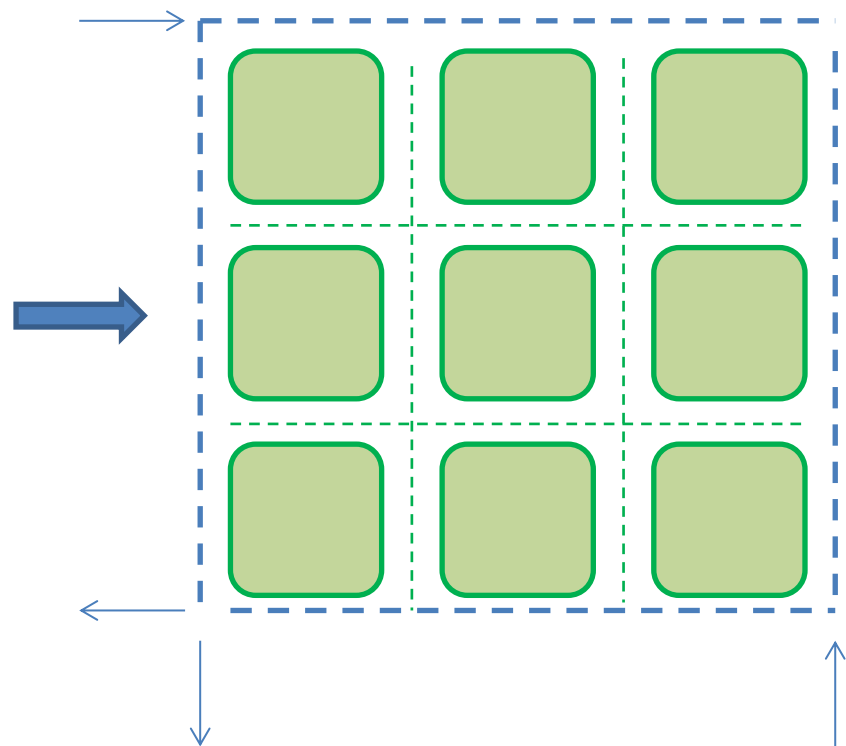
## SUPERBLOCK STRATEGY

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Typical Barcelona's downtown  
orthogonal traffic network



Superblock concept





## SUPERBLOCK STRATEGY

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- Sustainable mobility
- Revitalize public space
- Promotion of the biodiversity and urban green infrastructure
- Citizenship involvement with city governance





**Ajuntament  
de Barcelona**

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