



EUROPEAN CITIES AND REGIONS NETWORKING  
FOR INNOVATIVE TRANSPORT SOLUTIONS

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# **Electric mobility: Can cities lead the way?**

## **Research – investment – community building**

Ivo Cré, Deputy Director, Polis

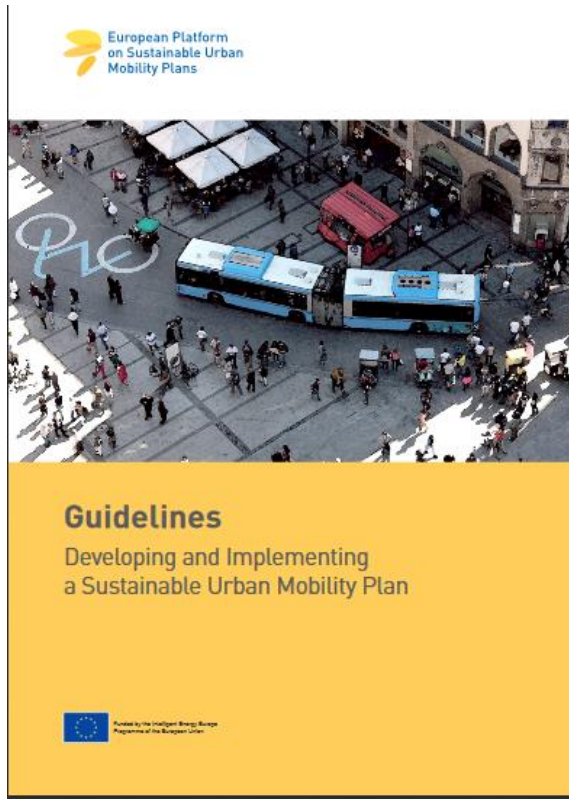


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# Cities know how to plan transition in urban mobility

# EVs are part of several planning streams



# Air quality policy is a key driver



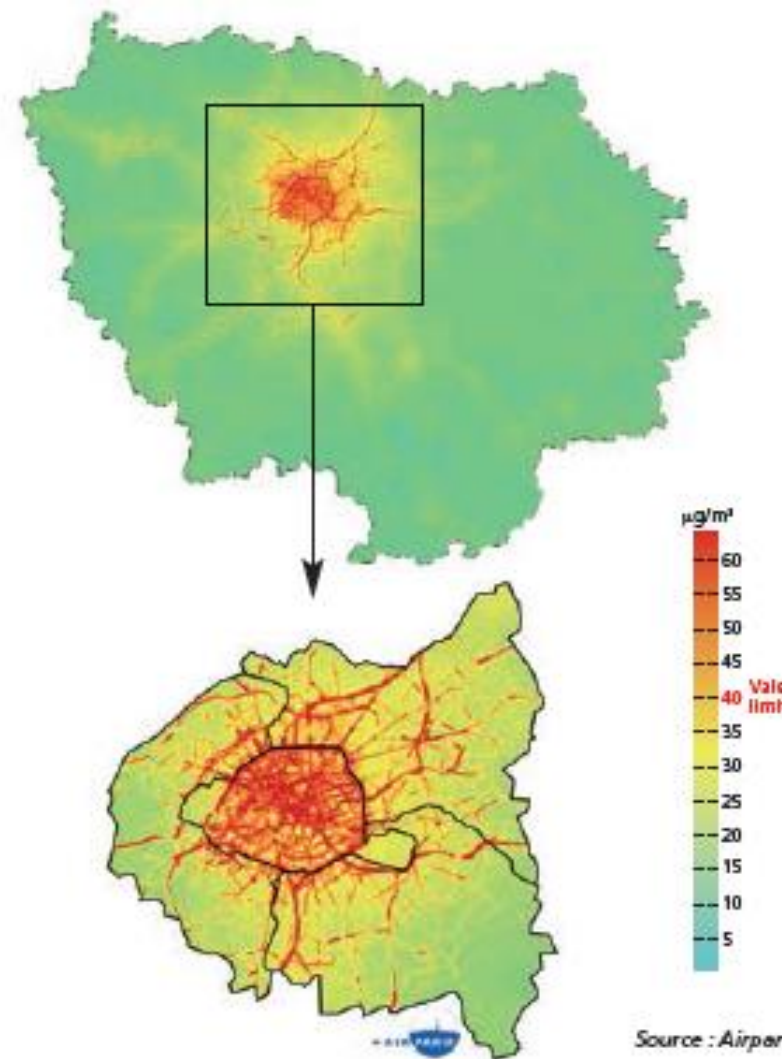
# Air quality: the Paris region case

## ➤ Road transport (passenger cars and freight transport):

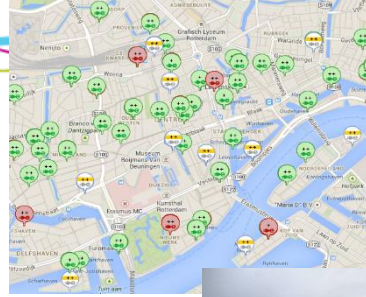
- 55 % of nitrogen oxides emissions
- 25% of particulate emissions
- Daily trips: under 10 km in average
- Private fleet: about 4,8 million vehicles, 60% of which are diesel cars



Nitrogen oxide in the Ile-de-France Region - 2010



# Transition is multi-faceted



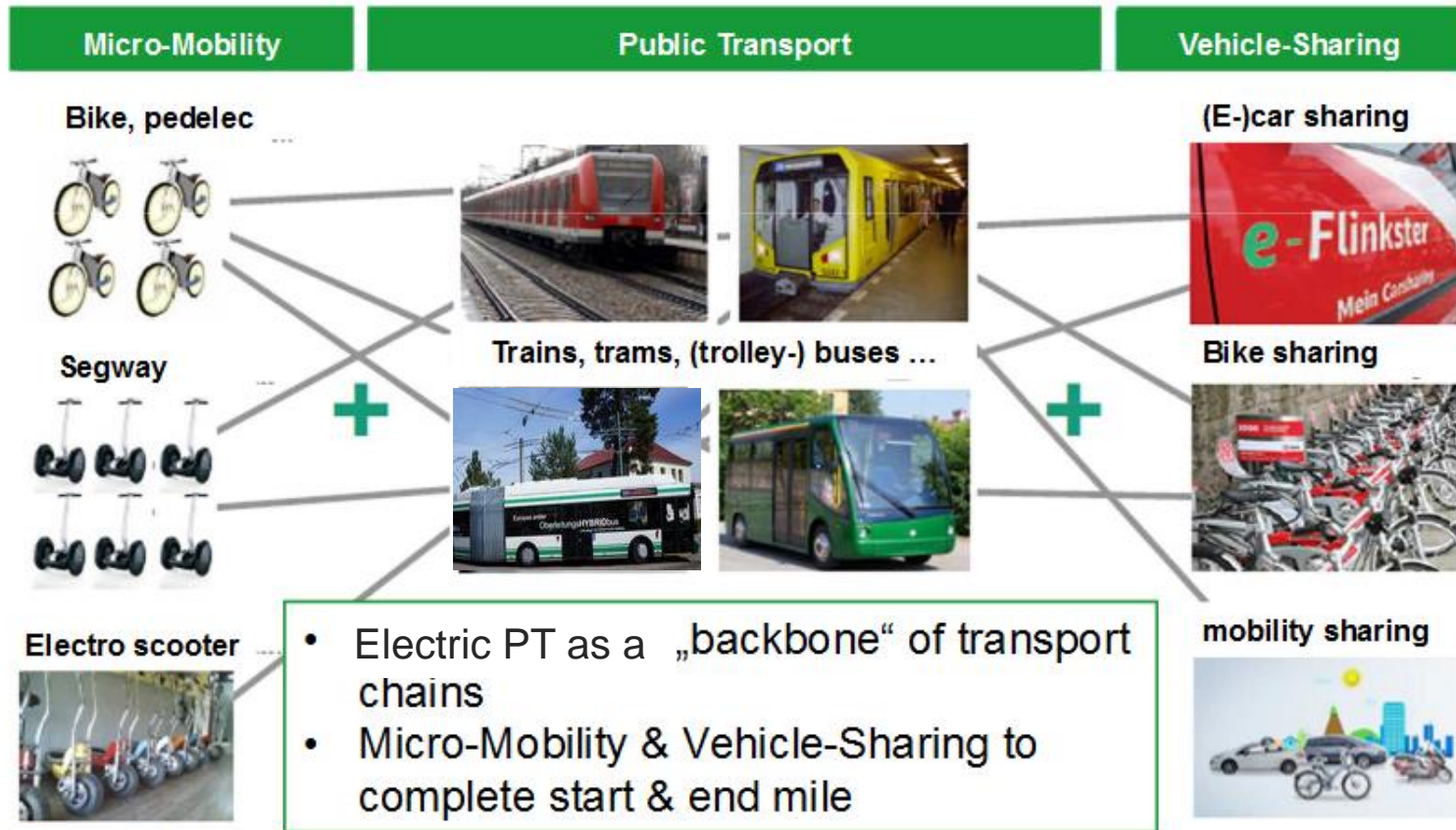


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# Cities know how to manage energy

# Using existing electric public transport infrastructure as backbone for EV strategies



Source: Spath, IAO, 2011







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# Cities manage access to their road networks

A key incentive to EVs

# Access for Evs: the Oslo/Norwegian case (courtesy of IC-VUE)

- Free access on toll roads (1997)  
In Oslo € 3,5 – 5, National roads and tunnels up to € 20.
- Free parking (1999)  
€ 2 – 5 per hour
- Access to use bus and taxi lanes (2003)  
Saves 20 min -1 hour per day
- Free transport on ferries (2009)  
€ 12 – 24 each way



Toll Road	
 3,5t	Kr 75
	Kr 25
 EL	Kr 0



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**Cities are genuine innovators**

# Vehicles procurement: Stockholm

- EV joint procurement (2011-2015)
  - Framework agreement
  - 3000 buying organisations
  - 900 vehicles in operation
  - If not=Many small municipalities no EVs
  - Important: vehicle policy with requirements for energy efficiency or fuel



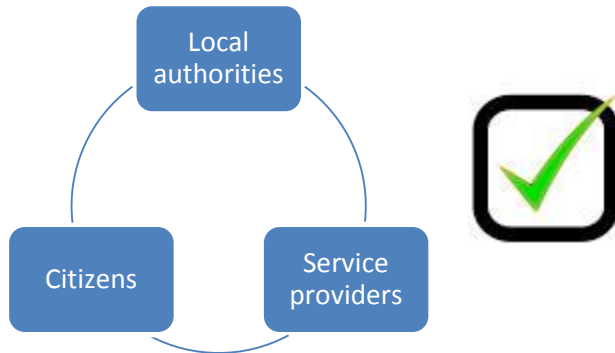
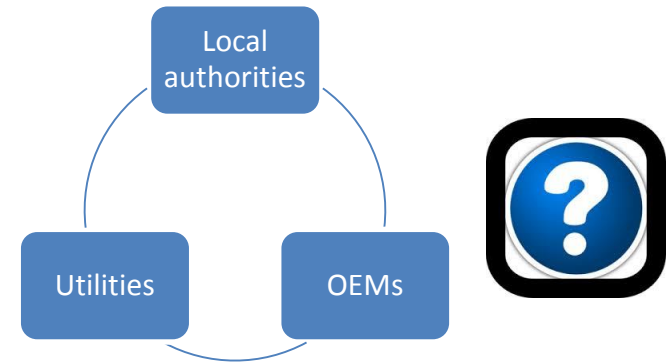
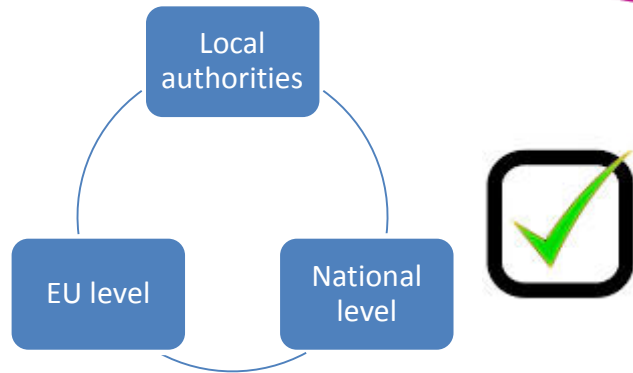


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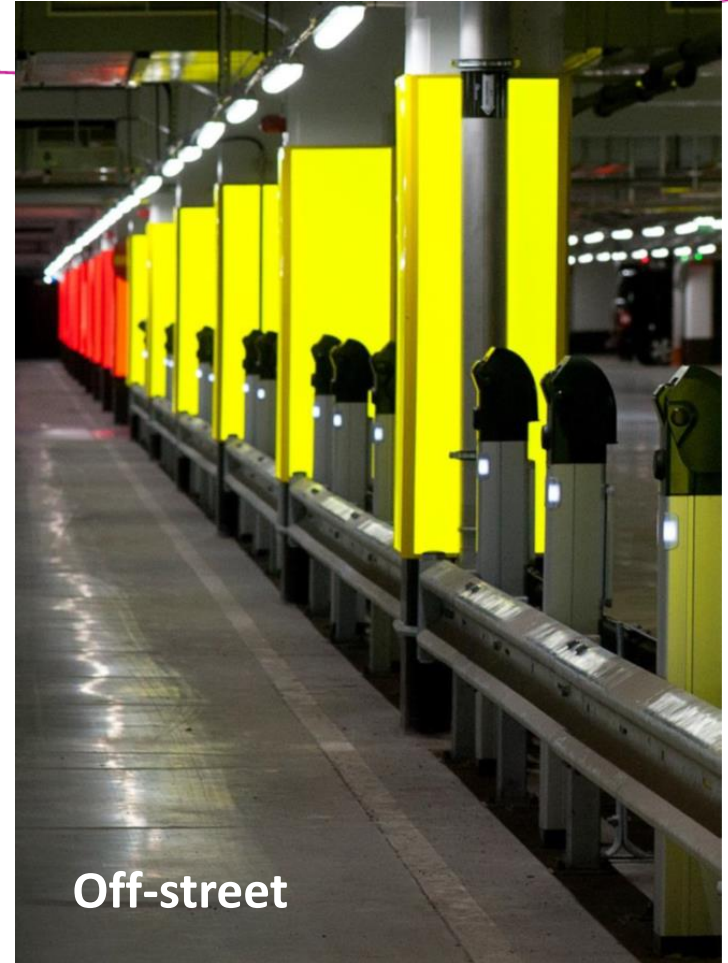
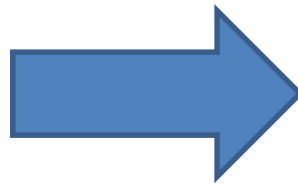
**But... Challenges remain**

# Complex stakeholder maps



PLATFORM  
FOR  
electromobility

# Complex relation with parking policy

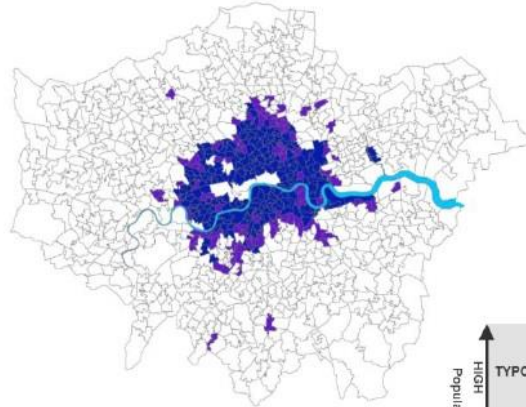




# Parking/Population typologies

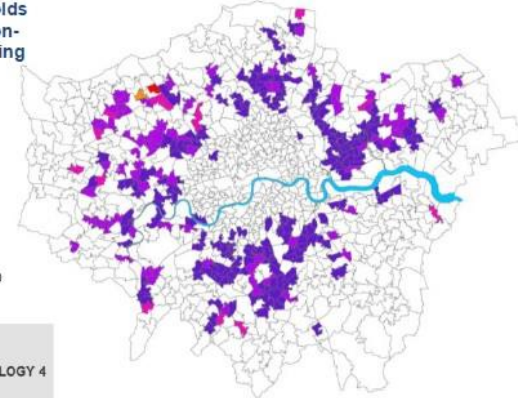
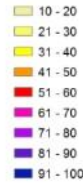
Population  
Density High

**TYPOLGY 3: High population density, low availability of off-street parking**

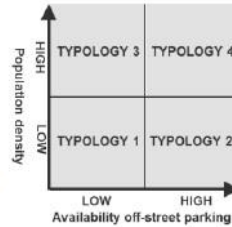
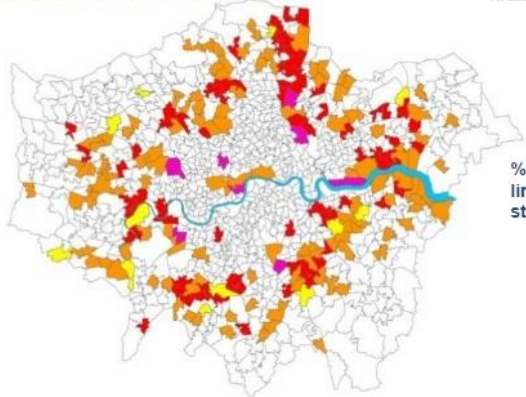


**TYPOLGY 4: High population density, high availability of off-street parking**

% households limited to on-street parking

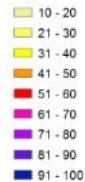


**TYPOLGY 1: Low population density, low availability of off-street parking**



**TYPOLGY 2: Low population density, high availability of off-street parking**

% households limited to on-street parking



Population  
Density Low

Low off-street  
Capacity

High off-street  
Capacity

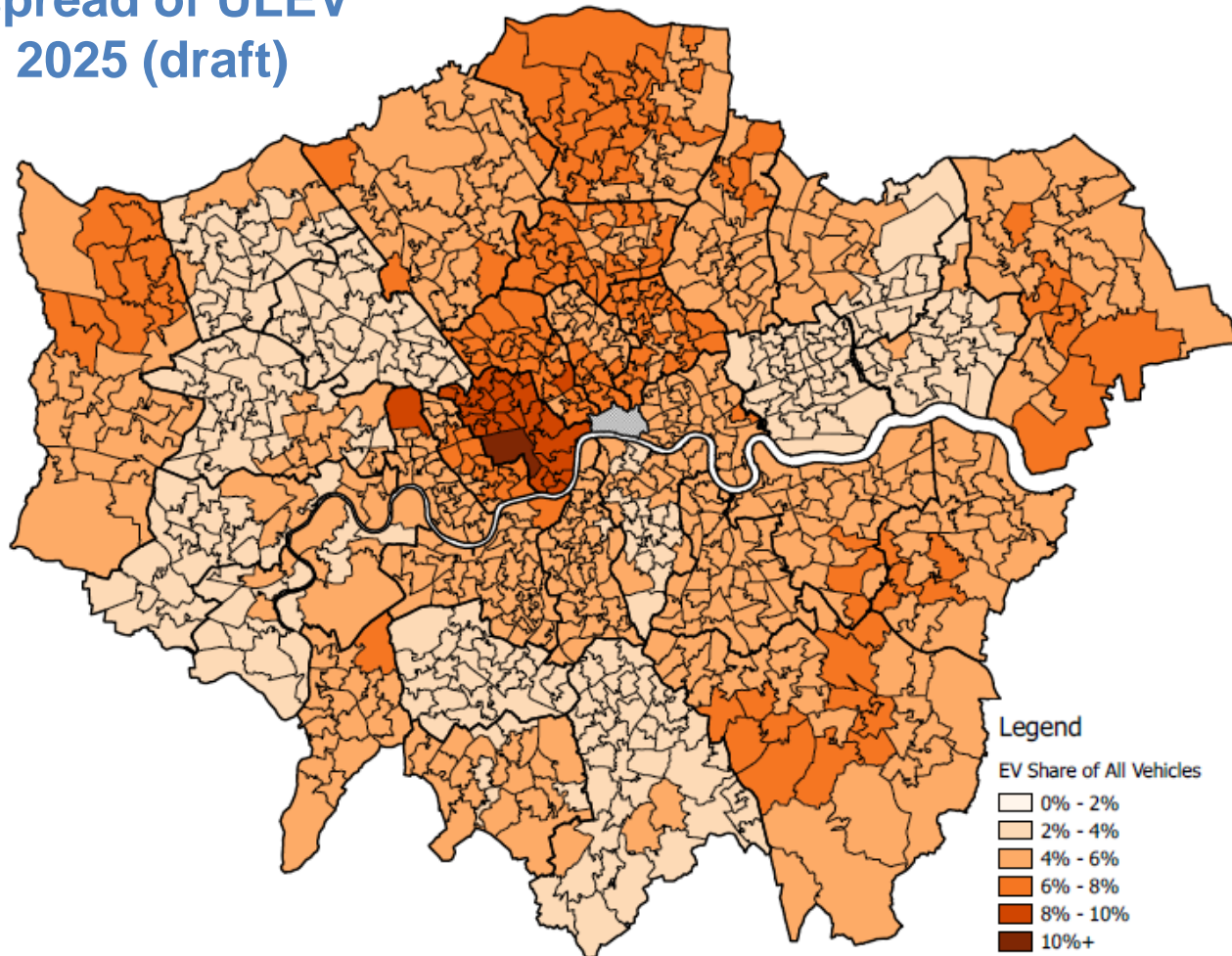


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[www.polisnetwork.eu](http://www.polisnetwork.eu)

# Understanding the geography of EVs

Estimated spread of ULEV uptake in 2025 (draft)



# Equity and fairness

- “It [Source London website] asks me what type of connection I'm looking for: '2 Pin Domestic (E/F); 3 Pin Domestic (G); 4 Pin Type 4; 5 Pins Type 1; 7 Pin Type 2'?... I have absolutely no idea what that means! At least you know what 'unleaded' and 'diesel' are”

(Disabled driver asked to look at Source London website)

- “With my arthritis, using the pumps at garages is tricky. Plugging in to charge the Mitsubishi is much easier for me.”

(Disabled PHEV owner)

# Urban Freight

- Lack of vehicle supply: particularly in medium goods category and above (> 3.5t)
- Warranty/maintenance issues
- Financing: higher costs vehicles, infrastructure
- Electricity supply: increasing constraints on grid capacity



FR<sub>evue</sub> Electric Vehicles in Urban Europe



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# Urban Electric Mobility Initiative (UEMI)

Initiated by UN Habitat and SOLUTIONS the Urban Electric Mobility Vehicles Initiative (UEMI) aims to:

**UN HABITAT**  
FOR A BETTER URBAN FUTURE

- Decreasing urban CO<sub>2</sub> emissions by increasing the market share of electric vehicles in cities to 30% of annual vehicle sales (incl. LDV and motorized 2-3 wheelers)
- Integrate electric mobility into a wider concept of sustainable urban transport that achieves a 30% reduction of GHG emissions in urban areas by 2030
- The UEMI was launched at the UN Climate Summit in New York in September 2014



Eltis, UN

# SOLUTIONS network

**SOLUTIONS is an international partnership based on a EU funded project, which aims to:**

## ➤ **Deployment of innovative sustainable transport solutions**

- Feasibility studies
- Knowledge sharing events
- Development of project proposals
- Identify key innovations and examine transferability

## ➤ **For selected cities implementation concepts will be developed, including:**

- Technical and political feasibility
- Finance (scalable projects, starting with pilots)
- Integration in existing activities (added value of

the solutions)

[info@urban-mobility-solutions.eu](mailto:info@urban-mobility-solutions.eu)



# Knowledge sharing and training

**City Engagement Kick-off:**

- Thematic cluster session
- Twinning session

Paris

Brussels

**SUMP Training event**  
(SOLUTIONS/  
TIDE/CH4LLENGE)  
EV-workshop  
(UEMI/SOLUTIONS)

Barcelona

Mexico City

**CITS**  
Trainings:

- City logistics
- Integrated Transport Systems / Public Biking Systems
- Public Transport

Chengdu

**Michelin Challenge**  
**Bibendum**  
Trainings:

- Network Management
- Clean Vehicles
- Public Transport

Istanbul

**CODATU**  
Trainings:

- Clean vehicles
- SUMP
- City logistics

Casablanca

**CIVITAS Forum**  
Trainings:

- Transport infrastructure
- SUMP
- Public Transport

Rio

**Webinars & eLearning:**

- Over 1800 participants of eLearning courses and webinars





# Take-up cities



**Belo Horizonte, Brazil**

Belo Horizonte, situated in the state of Minas Gerais in the south-eastern region of Brazil, is one of Brazil's most populous cities with around 5 million inhabitants.



**Guiyang, China**

Guiyang, situated in the Guizhou province in Southwest China, has a population of 4.4 million.



**Kochi, India**

Kochi, situated on the west coast of India in the state of Kerala, is a densely populated city with a population of 2.1 million.



**León, Mexico**

León is located in Guanajuato state of Mexico, with a population of 1.4 million.



**Kocaeli, Turkey**

Kocaeli province lies in Marmara region of Turkey with an urban population of 1.6 million.

# City actions

## Recent updates from take-up cities

### Belo-Horizonte, Brazil:

- The pilot project in Belo Horizonte started with a speed limit (30 km/h) zone

### Kochi, India

- The first car-free day in Kochi (India) to raise awareness for sustainable transportation
- Development of a mobility pilot zone as part of a Smart Cities project

### Tools and guidelines

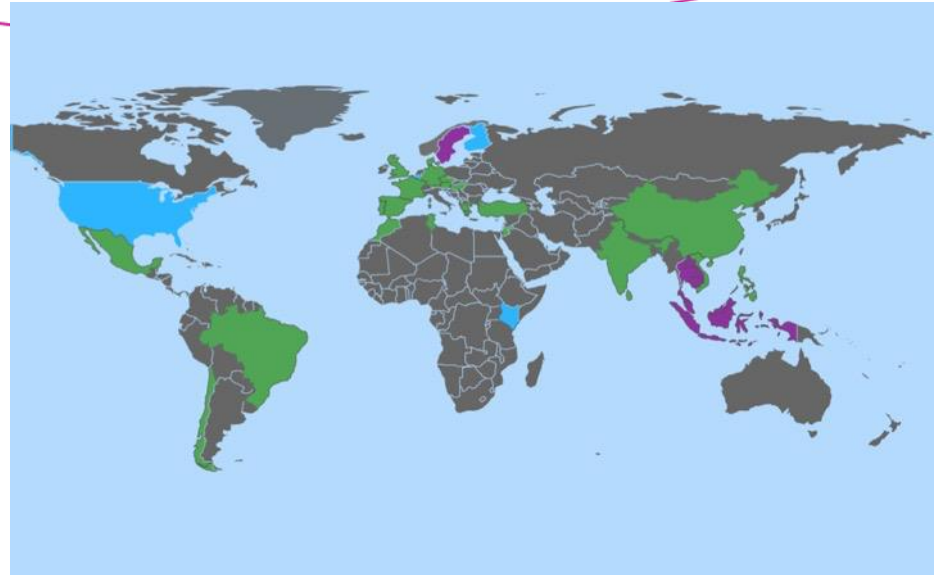
- The team is currently working on a set of assessments, guides and tools that will help developing and integrating sustainable mobility solutions



**Join the partnership!**

[www.uemi.net](http://www.uemi.net)

[www.urban-mobility-solutions.eu](http://www.urban-mobility-solutions.eu)



# Thank you!

Gabriela Barrera: [gbarrera@polisnetwork.eu](mailto:gbarrera@polisnetwork.eu)

Ivo Cré: [icre@polisnetwork.eu](mailto:icre@polisnetwork.eu)

[www.polisnetwork.eu](http://www.polisnetwork.eu)

[www.tide-innovation.eu](http://www.tide-innovation.eu)

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<http://frevue.eu/>

<http://zeeus.eu/>

<http://www.covenantofmayors.eu>

<http://www.eltis.org/mobility-plans>

<http://eu-smartcities.eu/>

