

# REMEDIO Small Scale Investments and Urban Mobility

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## REMEDIO Partners

The **REMEDIO project** is a test project, basing its approach mainly on three pillars:

**#1**

## Governance Pillar

a new participative governance  
model for roads of middle sized  
Mediterranean cities, based on  
"horizontal condominium"

**#2**

## Hard Pillar

small scale investments as pilot  
measures fostering urban low  
carbon transport

**#3**

## Soft Pillar

an Integrated Modelling Tool (IMT)  
to evaluate low carbon mobility  
actions to be implemented in highly  
congested roads

The **REMEDIO project** is a test project, basing its approach mainly on three pillars:

## #2 Hard Pillar

small scale investments as pilot  
measures fostering urban low  
carbon transport

The **REMEDIO project** tested in 4 pilot cities:

**Loures**  
Portugal

**Split**  
Croatia

**Thessaloniki**  
Greece

**Treviso**  
Italy

The **REMEDIO** project **REMEDIO** is testing in 4 pilot cities:

## REMEDIO Pilot-Areas



### Loures

158 km<sup>2</sup>  
205K  
inhabitants

### Treviso

56 km<sup>2</sup>  
85K  
inhabitants

### Split

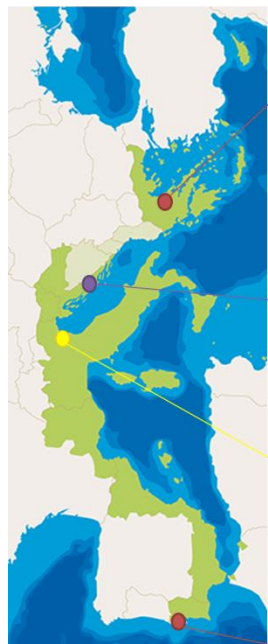
79 km<sup>2</sup>  
179K  
inhabitants

### Thessaloniki

1,455 km<sup>2</sup>  
1'110 K  
inhabitants

# REMEDIO Small scale investments

## Soft actions on Low Carbon Mobility Solutions



Thessaloniki

— redesign of the major penetration axis with a 2<sup>nd</sup> generation bus lane & green-taxiway

Split

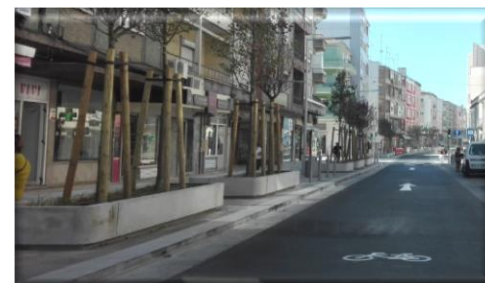
— mixed *e-bike* sharing network

Treviso

— Bike sharing network serving the pilot road

Loures

— renewal of a urban street toward an upgraded pedestrian and cycling profile of the area





# REMEDIO small scale investments

## Avenue of Moscavide

# Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance

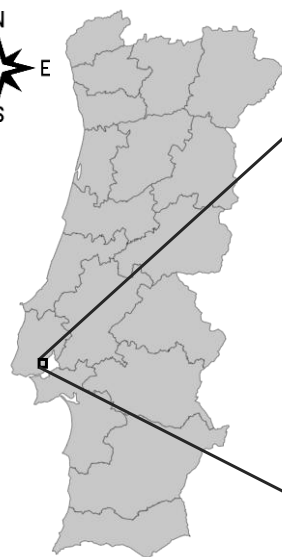
➤ REMEDIO partner: **Câmara Municipal de Loures** (with collaboration of IST)

➤ Moscavide (Loures)

- Total area of 7.75 km<sup>2</sup>
- Population density of 12.969 persons/m<sup>2</sup>

➤ Main features of the pilot zone:

- One way road, 430 m length
- Traffic flow (18:00-19:00)



# REMEDIO small scale investments

## Avenue of Moscavide

# Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance

### CHALLENGES ADDRESSED

- Principal road of Moscavide with traffic jams
- Air and noise pollution
- Lack of an intermodal transport perspective
- Possible disconnection between the phases of analysis, participation and urban design

### MEASURES APPLIED

After the participative process a consensus was achieved:

- two road lanes transformed into just one
- increase of the pedestrian area
- inclusion of street furniture, small gardens and equipment

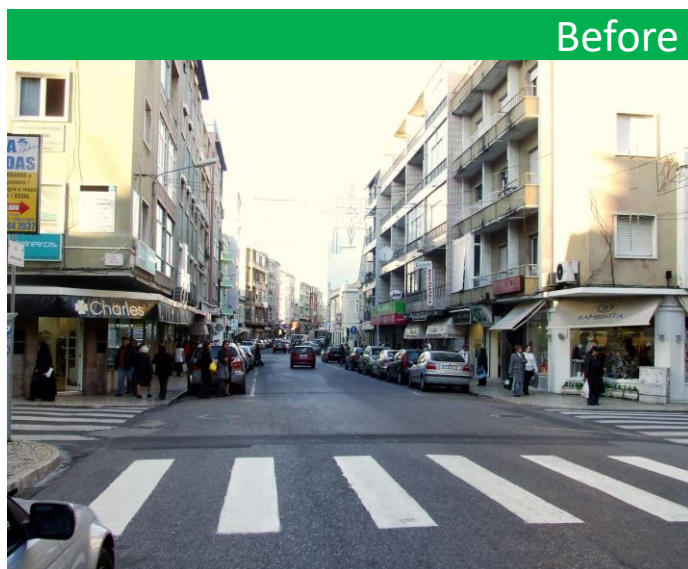


## REMEDIO small scale investments

### Avenue of Moscavide

## Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance



#### STRUCTURAL INTERVENTION:

- **Two Road lanes transformed in just one**
- Increasing of the **public sidewalk**
- Inclusion of **street furniture, small gardens and equipment**



## REMEDIO small scale investments

### FEATURES OF THE INTERVENTION

#### Street panel to interaction with citizens:

- messages to the municipality
- environmental indicators
- soft mobility
- public transportation



## Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance

- MoU with Hardlevel (Prio)
- Collaborations:
  - AESCLO
  - Moscade's Church



Sensorised container for used food oil

# REMEDIO small scale investments

## FEATURES OF THE INTERVENTION

# Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance





## REMEDIO small scale investments

### FEATURES OF THE INTERVENTION

## Case study: Loures, Portugal

Structural modifications based on SUMP  
concepts with strong participative governance





# REMEDIO small scale investments

## FEATURES OF THE INTERVENTION





# REMEDIO small scale investments

## FEATURES OF THE INTERVENTION

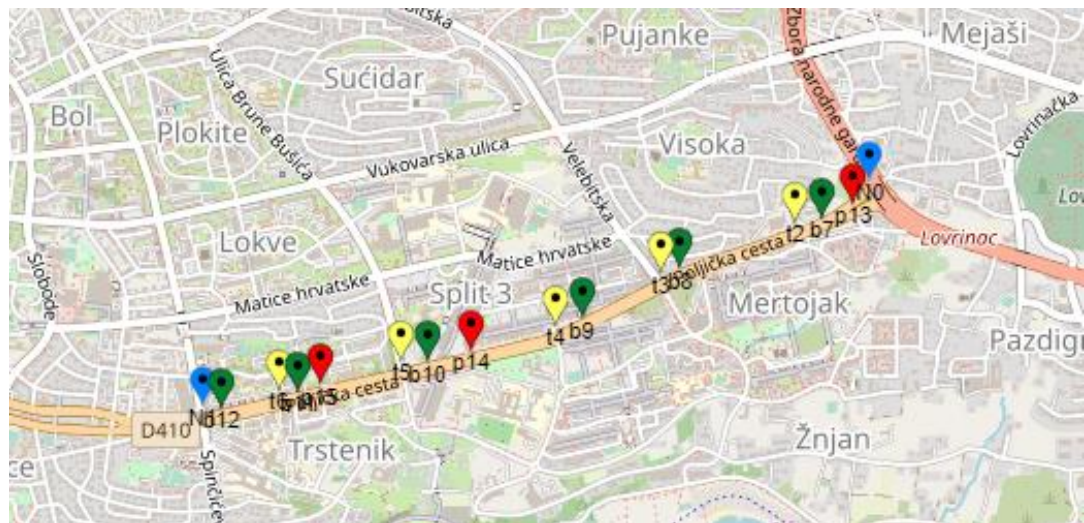


# REMEDIO small scale investments

# Case study: Split, Croatia

## Implementation of public bike system

- REMEDIO partner: **City of Split**
- 122,624 inhabitants in the surroundings of pilot zone (≈ 69% of the total)
- Main features of the pilot zone:
  - Poljička Road
  - Two-ways road of 2,3 km length
  - 3 lanes
  - 7 bus lines with 6 bus stops
  - 5 traffic lights





## REMEDIO small scale investments

## Case study: Split, Croatia

### Implementation of public bike system



The installed public bike system has

- 8 bike sharing stations
- 20 e-bikes
- 30 classic bikes

## REMEDIO small scale investments

## Case study: Split, Croatia

### FEATURES OF THE INTERVENTION

### Implementation of public bike system

#### Collaborations:

- City of Split owned public utility company “Split Parking LTD”
- HEP (Croatian State Electroenergetic Company)
- Provider of the public bike system “Sustav javnih bicikala” (Next Bike)

#### Target numbers of persons:

- **Student and high school population** (around 40.000)
- Most desirable target group for the public bike sharing system: **university city**
- **Tourists** (Split is a tourist city that makes over 700.000 tourist visits through the summer season)
- **All population of Split** (180.000 inhabitants)



# REMEDIO small scale investments

# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

## Implementation of public bike system

**Start date:** 27.03.2019

**Date of inauguration:** 11.07.2019



**REMEDIO budget:** 110K €

**City of split's budget:** 8,2K€

**Total of investment:** 118,2K€

# REMEDIO small scale investments

# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Planning



### Implementing





# REMEDIO small scale investments

# Case study: Split, Croatia

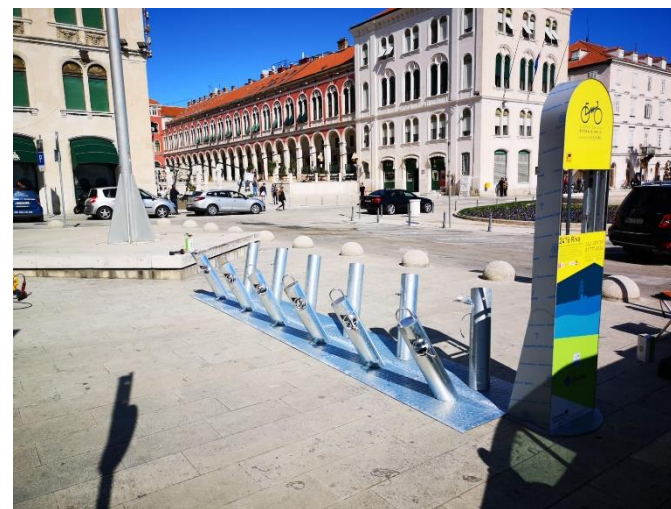
## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Planning



### Implementing



# REMEDIO small scale investments

# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Planning



### Implementing





# REMEDIO small scale investments

# Case study: Split, Croatia

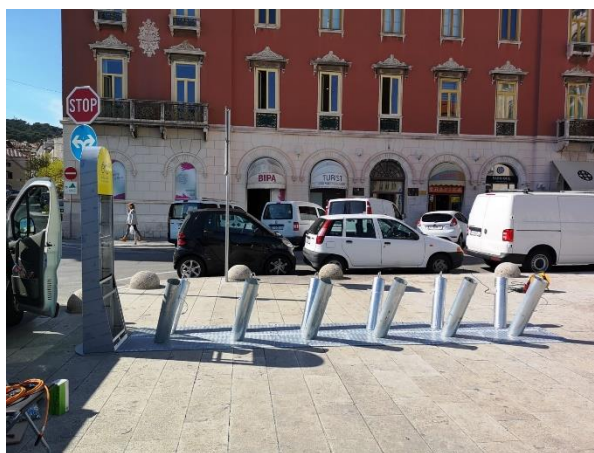
## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Planning



### Implementing



### Inaugurating



# REMEDIO small scale investments

# Case study: Split, Croatia

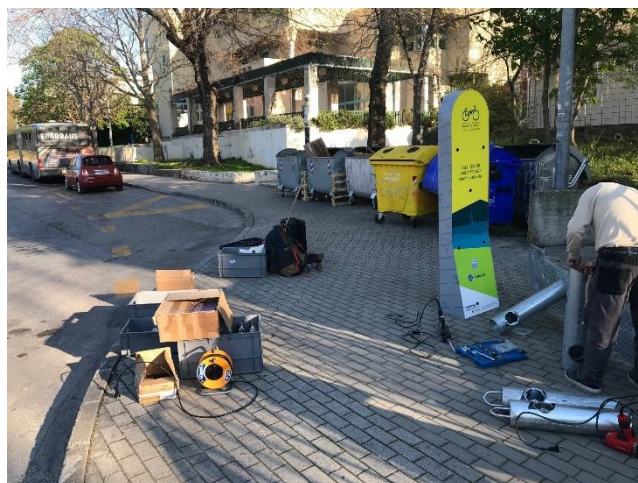
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### Implementing





# REMEDIO small scale investments

# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Planning



### Implementing



# REMEDIO small scale investments

# Case study: Split, Croatia

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### Implementing





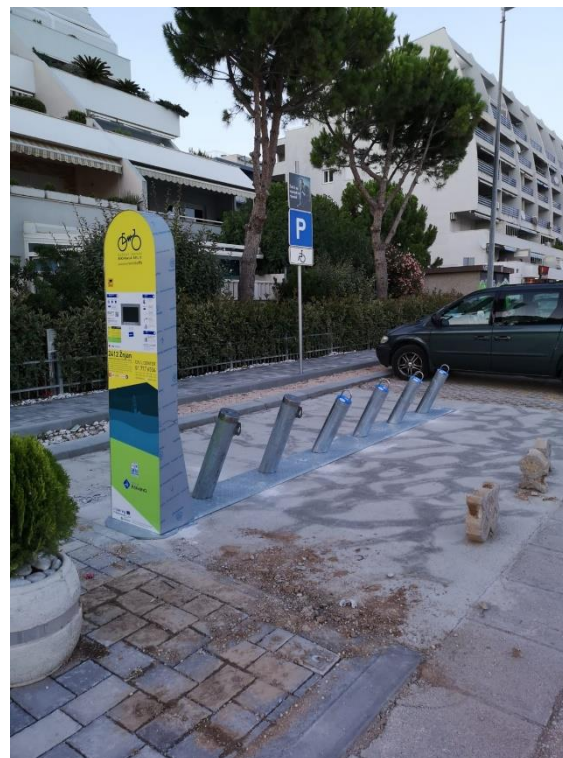
# REMEDI small scale investments

## FEATURES OF THE INTERVENTION



# Case study: Split, Croatia

## Implementation of public bike system



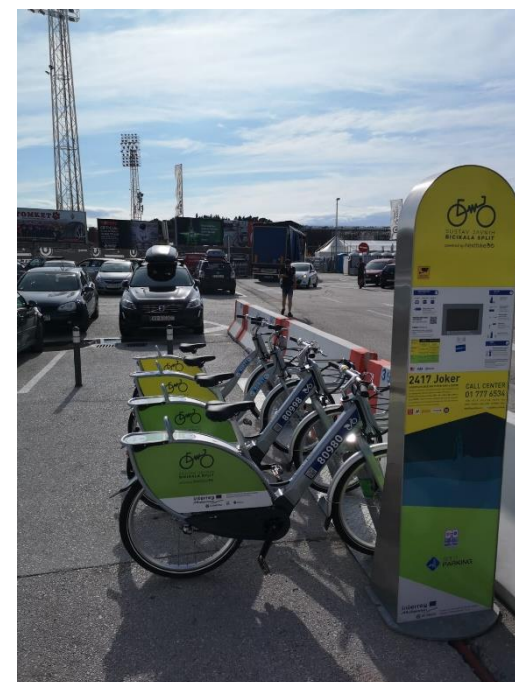
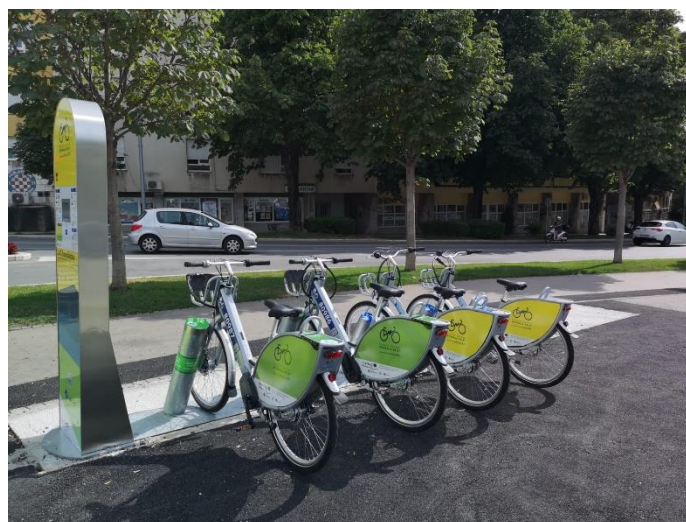
# REMEDIO small scale investments

# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

## Implementation of public bike system

### Inaugurating





# REMEDI small scale investments

# Case study: Split, Croatia

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# Case study: Split, Croatia

## FEATURES OF THE INTERVENTION

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### Inaugurating



## REMEDIO small scale investments

## Case study: Split, Croatia

### RESULTS OF THE MODIFICATION

### Implementation of public bike system

**Period:** 11.07.2019 – 18.09.2019

#### Bike rentals

1997

#### Registered users

1146

#### Structure of Users

**50%**  
Tourists

**50%**  
Citizens



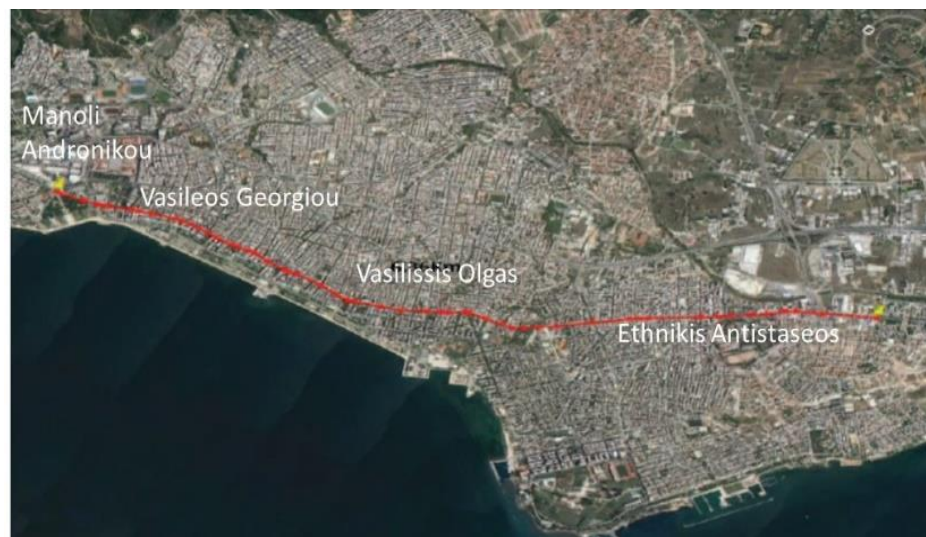
## REMEDIO small scale investments

### Eastern Horizontal Road Axis

- REMEDIO partner: **MDAT** (with collaboration of **AUTH**)
- Total number of vehicles in the city is almost 800 000 (private cars, heavy vehicles and motorcycles)
- ≈ **2.2 million passenger's daily trips**
- Public Transport share ≈ **27%**
- Main features of the pilot zone:
  - Ethnikis Antistaseos, Vasilissis Olgas, Vasileos Georgiou and Manoli Andronikou streets
  - 31 traffic lights
  - 18 bus stops
  - 9 bus lines

## Case study: Thessaloniki, Greece

Redesign/upgrade of an urban axis based on the principles of SUMP with a high-participatory approach



# REMEDIO small scale investments

# Case study: Thessaloniki, Greece

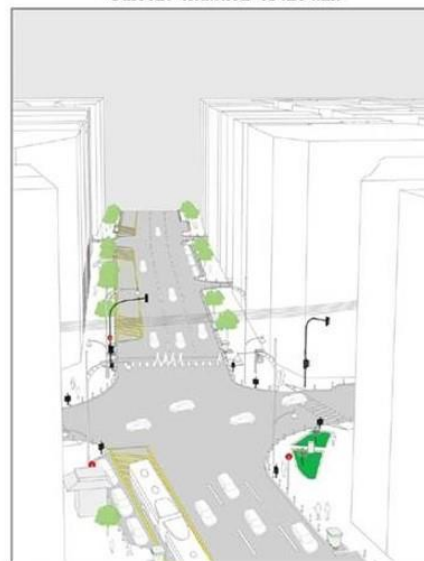
## FEATURES OF THE INTERVENTION

Redesign/upgrade of an urban axis based on the principles of SUMP with a high-participatory approach

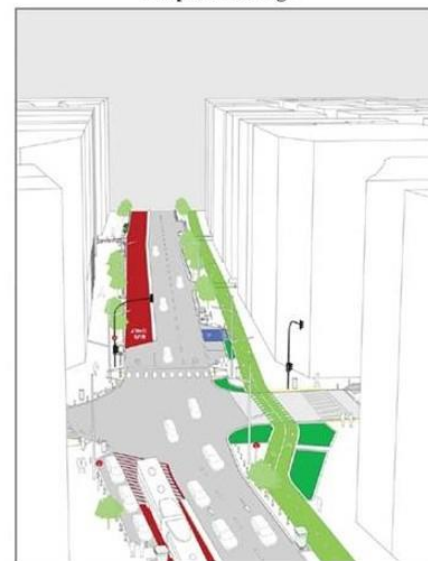
The redesign aimed to:

- increase the visibility and separation of the bus lane introducing a 2-way bicycle path
- serve taxis, waste collection and loading/unloading needs
- increase parking spaces
- extend the existing pavement and reduce the length of pedestrian crossings by up to 30% proposing to: upgrade PT and infrastructure introducing e-buses, building bus stops, installing bus priority in traffic signals and surveillance systems
- improve the quality of materials used for pavements and using the bus lanes in emergency situations

Current situation of the axis



Proposed redesign



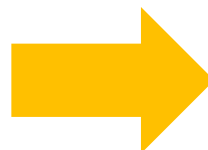
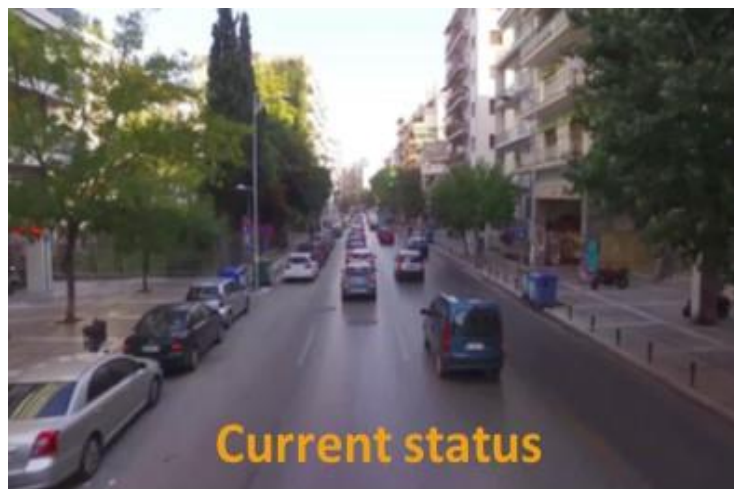


## REMEDIO small scale investments

## Case study: Thessaloniki, Greece

### FEATURES OF THE INTERVENTION

Redesign/upgrade of an urban axis based on the principles of  
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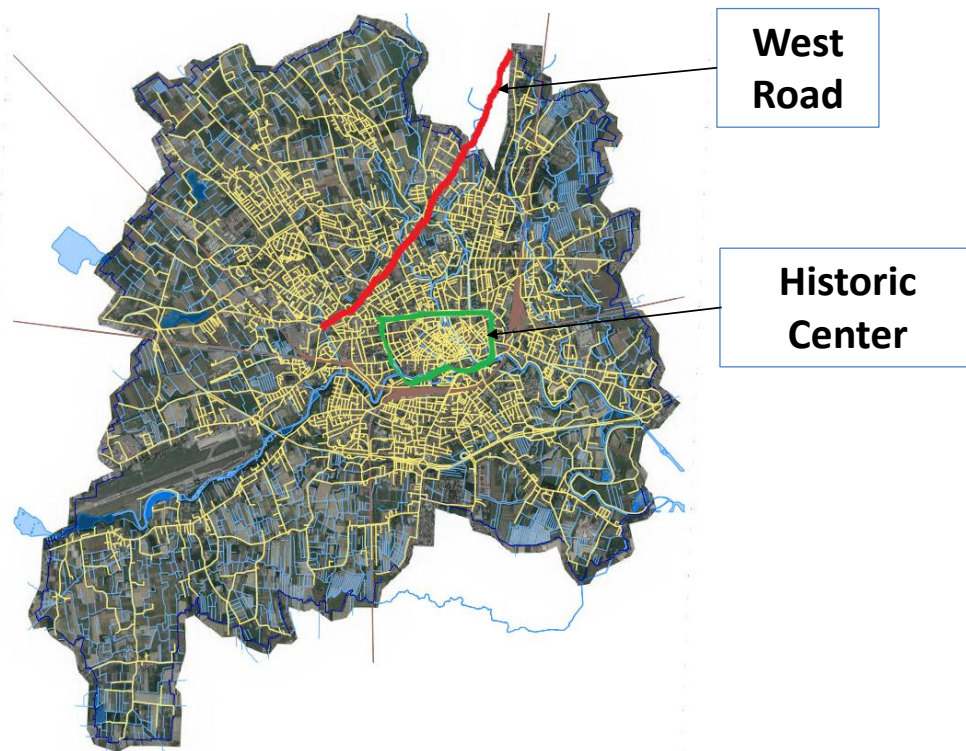
# REMEDIO small scale investments

## Road axis “West Road”

## Case study: Treviso, Italy

### Extension of the urban bike-sharing system

- REMEDIO partner: **MUNICIPALITY OF TREVISO** (with collaboration of **ARPAV**)
- Municipality of Treviso:
  - 85752 inhabitants
  - 56 Km<sup>2</sup> with a population density of 1543 persons/m<sup>2</sup>
- Main features of the pilot zone:
  - two-ways road of 5,5 Km length
  - 2 bus lines with 8 bus stops
  - 6 traffic lights
  - 1 roundabout





# REMEDIO small scale investments

## Road axis “West Road”

## Case study: Treviso, Italy

### Extension of the urban bike-sharing system

#### CHALLENGES ADDRESSED

- Traffic congestion (especially during the winter)
- Air and noise pollution
- Social exclusion of peripheral communities of middle sized urban areas
- Ownership of urban community of a peripheral area to the city



#### MEASURES APPLIED

**Bike share system**  
14 stations  
108 docking collumns

**Bike share system**  
+8 stations  
+120 docking collumns

**REMEDIO**  
+9 stations  
+72 docking collumns

2010

2014

2018

#### Treviso's Bike share system (TvBike)

- 31 stations
  - 300 docking collumns
  - 135 bicycles
- (current situation in 2019)

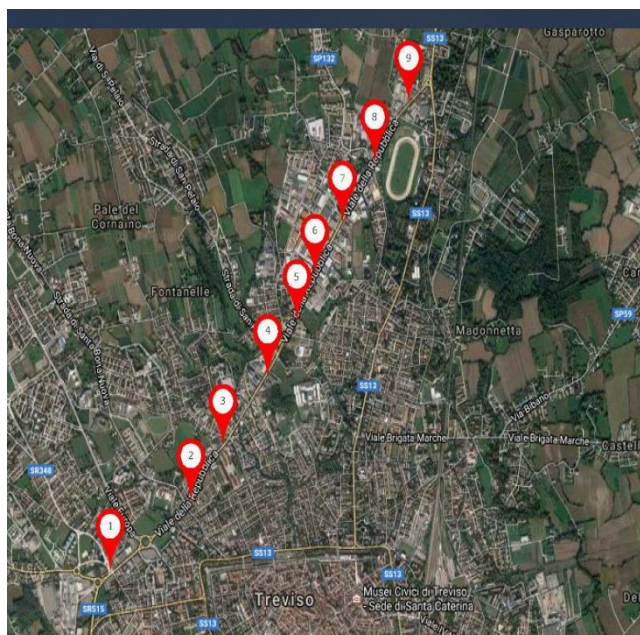
# REMEDIO small scale investments

## West Road

# Case study: Treviso, Italy

## Extension of the urban bike-sharing system

- 9 new bike stations along West Road





# REMEDIO small scale investments

# Case study: Treviso, Italy

## FEATURES OF THE INTERVENTION

## Extension of the urban bike-sharing system

**Date of inauguration: 10.11.2018**



# REMEDIO small scale investments

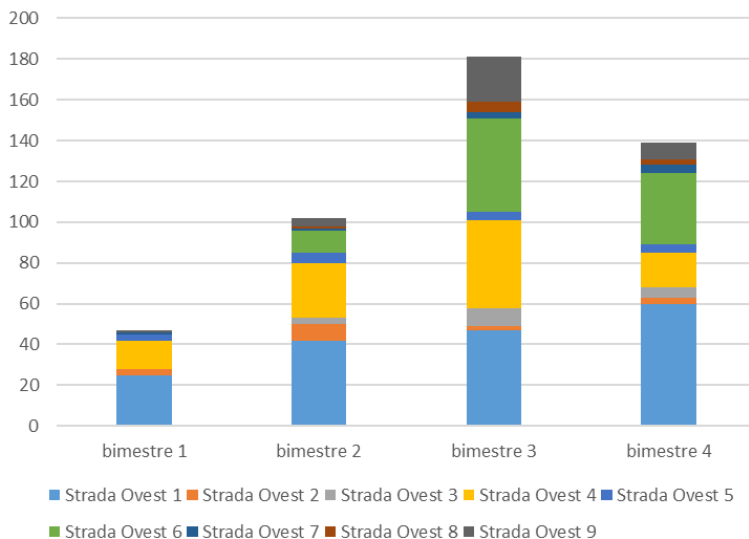
# Case study: Treviso, Italy

## RESULTS OF THE EXTENSION

## Extension of the urban bike-sharing system

**Period:** 10.11.2018 – 10.09.2019

**Bike use in the 9 new stations**



**Total of 469 bikes used**



# REMEDIO small scale investments

# Conclusions

The **REMEDIO project** approach based on the hard pillar allowed to:

## #2 Hard Pillar

small scale investments as pilot  
measures fostering urban low  
carbon transport

➤ Two main types of small scale investments:

- Bike sharing system

**Treviso**  
Italy

**Split**  
Croatia

- Street Renewal

**Loures**  
Portugal

**Thessaloniki**  
Greece

➤ Relying in a **Horizontal Condominium approach**, the **small scale investments** applied by REMEDIO aimed to **foster urban low carbon transport** and **improve citizens' life**.

## REMEDIO small scale investments

# Thanks for your attention!

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