TRAFAIR

Understanding traffic flows to improve air quality

Project leader:

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MOTIVATIONS

- Environmental impacts of traffic are of major concern throughout many European metropolitan areas.
- **Air pollution causes 400,000 deaths per year in Europe**, making it first environmental cause of premature death in EU. Among the main sources of air pollution, there are road traffic, domestic heating, and industrial combustion.

TRAFAIR

- In 2013, the EU proposed a **Clean Air Policy Package** to further reduce emissions of air pollutants until 2030.
- Nowadays, **the situation is particularly critical** in some member states of Europe that cannot reach the European objectives, among which **Spain and Italy**.
- These countries fail to address repeated **breaches of air pollution limits for nitrogen dioxide (NO2)** whose most emissions result from road traffic. The European Commission urged these Member States to take action to ensure good air quality and safeguard public health.

Project Goals

The TRAFAIR project aims at **estimating the level of pollution on an urban scale** achieving four main results:

1) Definition of a standard set of metadata able to represent urban air quality maps;

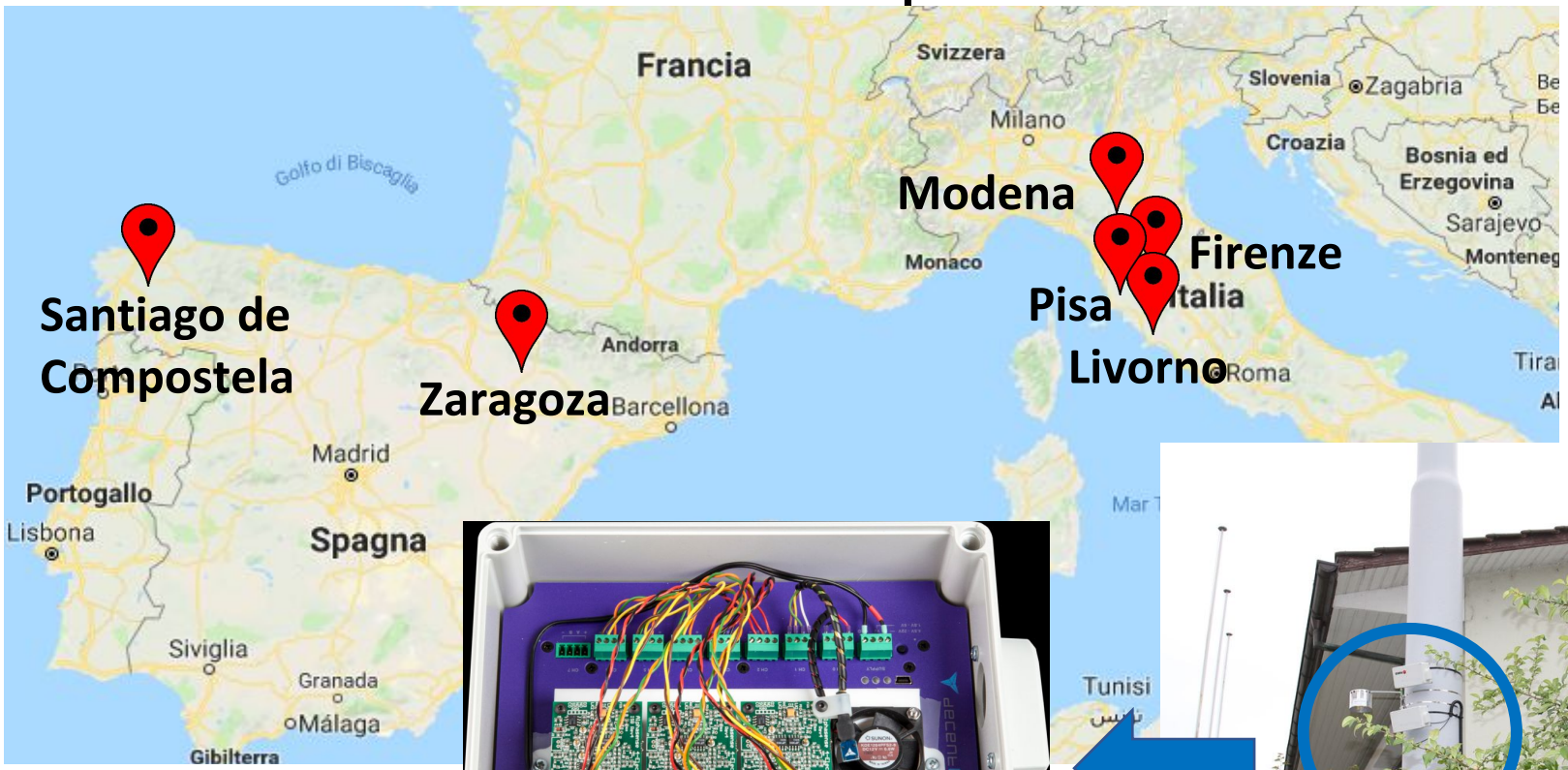
2) Provision of real time estimation on air pollution in the city on a urban scale;

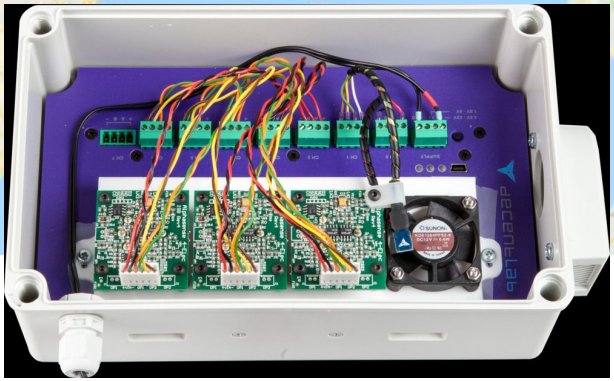
3) Development of a service for prediction of urban air quality based on weather forecast and traffic flows;

4) Publication of an open dataset describing the urban air quality maps and the prediction maps in 6 European cities of different size on which the service will run for the duration of the project:

Zaragoza (600,000 inhabitants), **Florence** (382,000), **Modena** (185,000), **Livorno** (160,000), **Santiago de Compostela** (95,000) and **Pisa** (90,000).

Monitoring urban air quality by using low-cost sensors in 6 European cities





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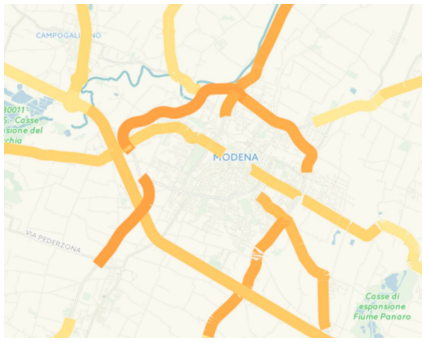
Making urban air quality predictions thanks to simulation models

TRAFFIC SENSORS

TRAFFIC MODEL

AIR POLLUTION DISPERSION MODEL

TRAFFIC FLOW



AIR QUALITY FORECAST

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The project in numbers

- 2 years - from 01/11/2018 until 31/10/2020
- 9 partners – 2 countries
  - 4 Academic Organizations
  - 4 Public Administrations
  - 1 Regional Company

- EUR 2,197,530 Total budget
- 75% Co-funded by European Union