ANCONA, ITALY

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FIWARE for Smart Cities
City of Ancona – Parking Advisor

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Mobility is one of the main challenges for Smart Cities as well as for **urban sustainability and livability** in general

Though at different scales, mobility criticalities affect both:

- Large urban and metropolitan areas
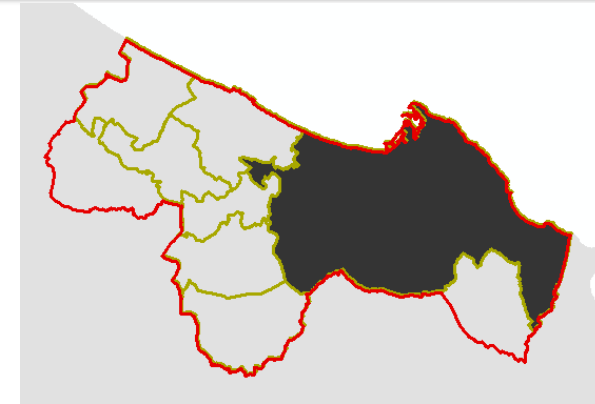
- Small and medium-sized urban areas

Ancona Parking Advisor
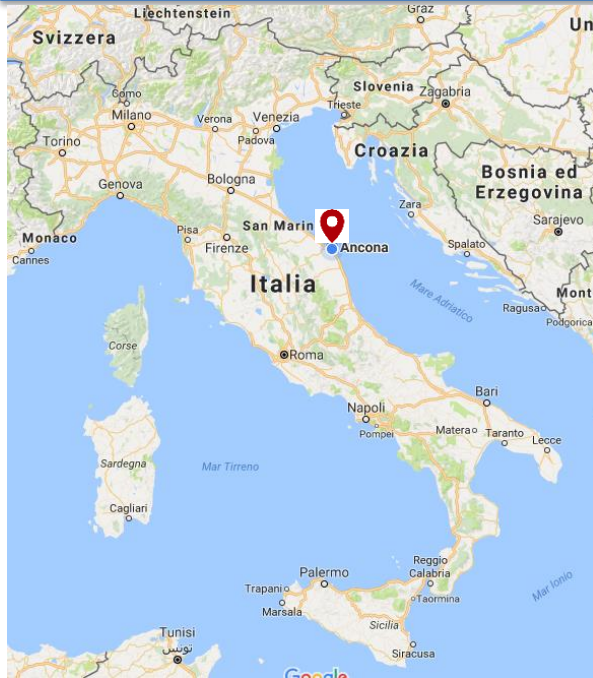
In-out traffic congestion

The Functional Urban Area of Ancona

- **City of Ancona** (black area): 100.000 inhabitants - 177.000 considering its **Urban Area** (red bordered area)

- City-port and service-led economy (mainly public and private services)

Traffic congestion is one of the main problems the city suffers from

✓ **Car commuters** during working days
  - 19.000 remain in the municipality of Ancona
  - 24.000 workers commute outward by car
  - 18.000 inward from the surrounding municipalities

✓ In addition we have to consider **the traffic generated by the port**:
  - First Italian port in term of passengers (1,5 million) and cars (about 0,5 million of cars)

  - 200.000 trucks yearly = 550 trucks daily

Ancona Parking Advisor

The high number of inflowing vehicles implies a strong **pressure on its parking system**

Given the need for **limiting private car access** in cities central areas in order to improve **urban sustainability**

...time spent in finding a parking lot may be long...

..causing externalities in terms of:

- ✓ pollution
- ✓ congestion
- ✓ wasted time

finally worsening **urban** livability as well as **the quality of the "urban lived experience"**

FIWARE
OPEN APIs FOR OPEN MINDS

UNIVERSITÀ POLITECNICA DELLE MARCHE

Comune di Ancona

ENGINEERING

Ancona Parking Advisor

What is the "Ancona Parking Advisor"?

- ✓ Mobile application helping citizens to find a free park – if available - as near as possible to their destination

"Ancona Parking Advisor": the architecture
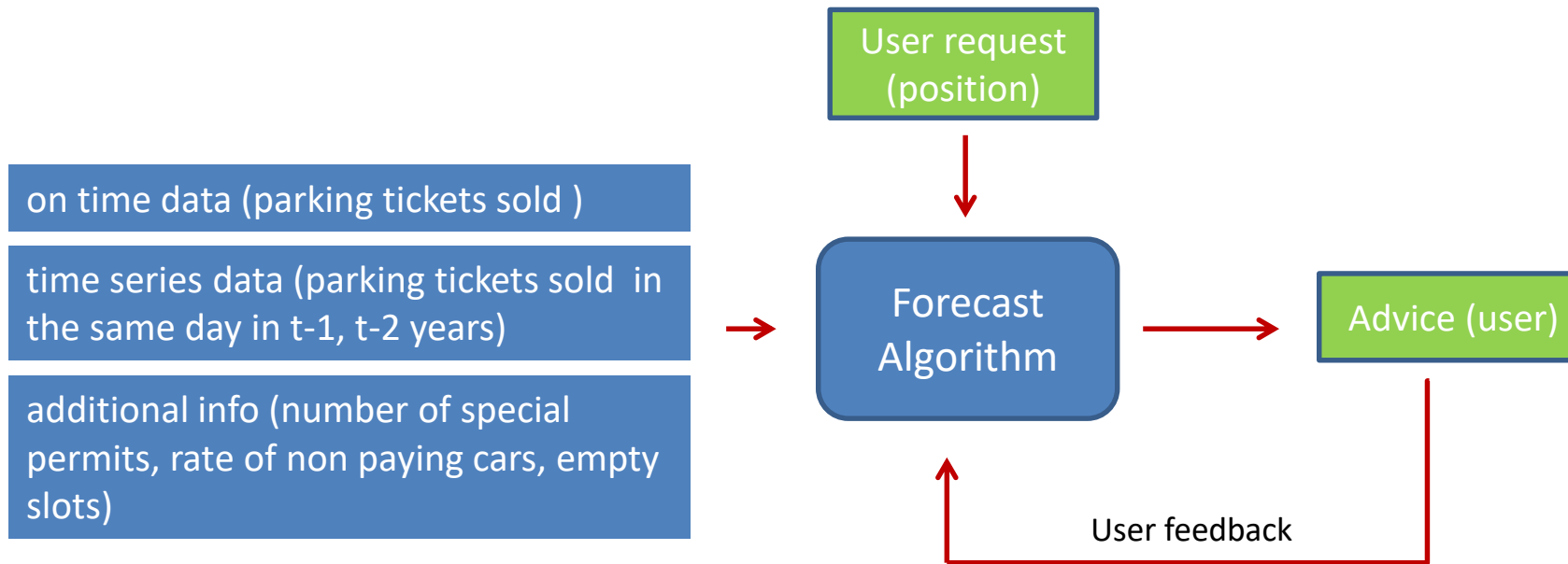
Demo (end user perspective)

The user will query the mobile app that will provide a colored map according with:
- the different parking areas
- the different likelihood of finding a free parking slot in the different areas in five minutes

List of the parking with likelihood to find a free slot : high: **green**; medium: **orange;** low: **red**

satisfaction level in using the app

Ancona Parking Advisor

"Ancona Parking Advisor": main strengths

✓ It is based on the **FIWARE platform** which means:

  • Taking part of the **FIWARE Community**, an independent open community whose members are committed to materialize the FIWARE mission: "to build an open sustainable ecosystem around public, royalty-free and implementation-driven software platform standards that will ease the development of new Smart Applications in multiple sectors"… which means interoperability and exportability of best practices

✓ It contributes to enlarge this **community,** by involving

  • Local institutions (Ancona Municipality – data provider)
  • Private partners (Engineering – algorithm definition and app development)
  • Research centers (University – algorithm definition)
  • Citizens (passive role - sensors; active role – feedbacks providers)

"Ancona Parking Advisor": main strengths

✓ It optimizes public investments:

- Data transmission from parking meters had yet been planned and its implementation is still ongoing. No additional infrastructural investments (e.g. sensors) are required
- It processes available data :
  - on time data (parking tickets sold)
  - time series data (parking tickets sold in the same day in t-1, t-2 years)
  - additional info provided by traffic wardens (number of special permits, rate of non paying cars)

✓ It increases local institutions' contextual knowledge
- by better understanding person-place relationships
- ...finally improving their urban planning capabilities

Ancona Parking Advisor

The application has been calibrated and tested in a limited central parking area

Next steps:

- The process of replacing former parking meters with on-line parking meters is still on-going

- Integrating the app with data from the entire central urban area

- Integrating the app with Local Public Transport timetables

Thank you for your attention

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