SNAP4CITY

Antwerp Pilot on Environmental Data
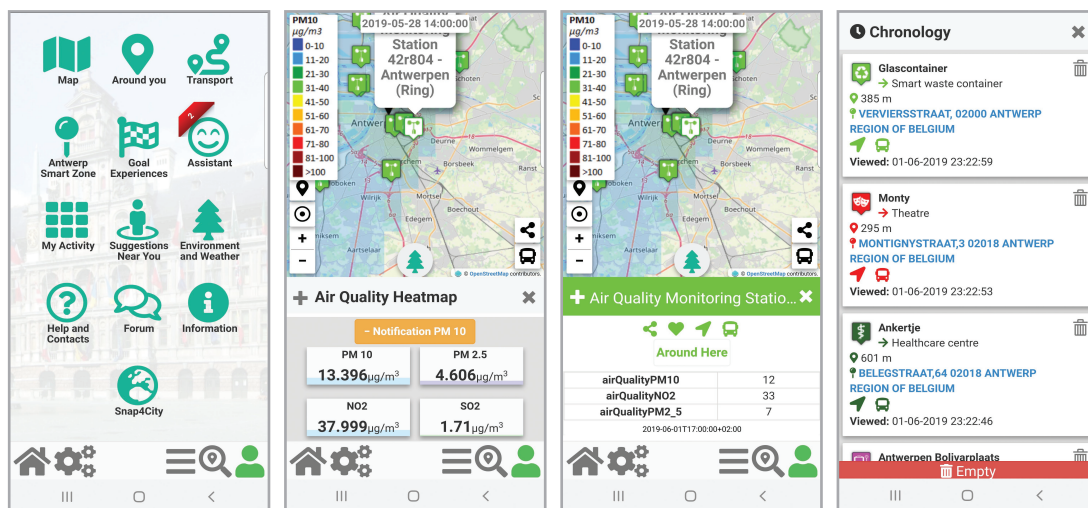
Citizens and tourists may use "Antwerp in a Snap" mobile App to access at the latest information of the city: weather forecast, air quality heatmaps, air quality sensors, weather heatmap, general services, status of the tunnels, status of the ferry, participating in the forum discussion, providing comments, ranks, and also point of interest for culture and tourism, etc. The users can:

- Become aware about environmental and weather conditions in real time;
  - controlling environmental status with Heatmaps and mini dashboard;
  - subscribe to one or more alert services attached to environmental or weather (real time and predictions);
  - see the values of specific sensors.
- Become aware about the city services, contribute to their improvement
  - shopping, restaurants, etc.;
  - see the status of characteristic Tunnel and Ferry services of Antwerp;
  - perform a travel plan to reach the POI, reach it;
  - rate one or more services, drop a comment and upload a photo for them;
- Be engaged by
  - providing suggestions to users for informing about changes in the city, events, environment requested alerts;
  - requesting contributions, stimulating comments and discussions.
- Access to a number of other information on mobility, transport, personal marking of locations, visiting city, saving personal data, sharing position with friends, etc.
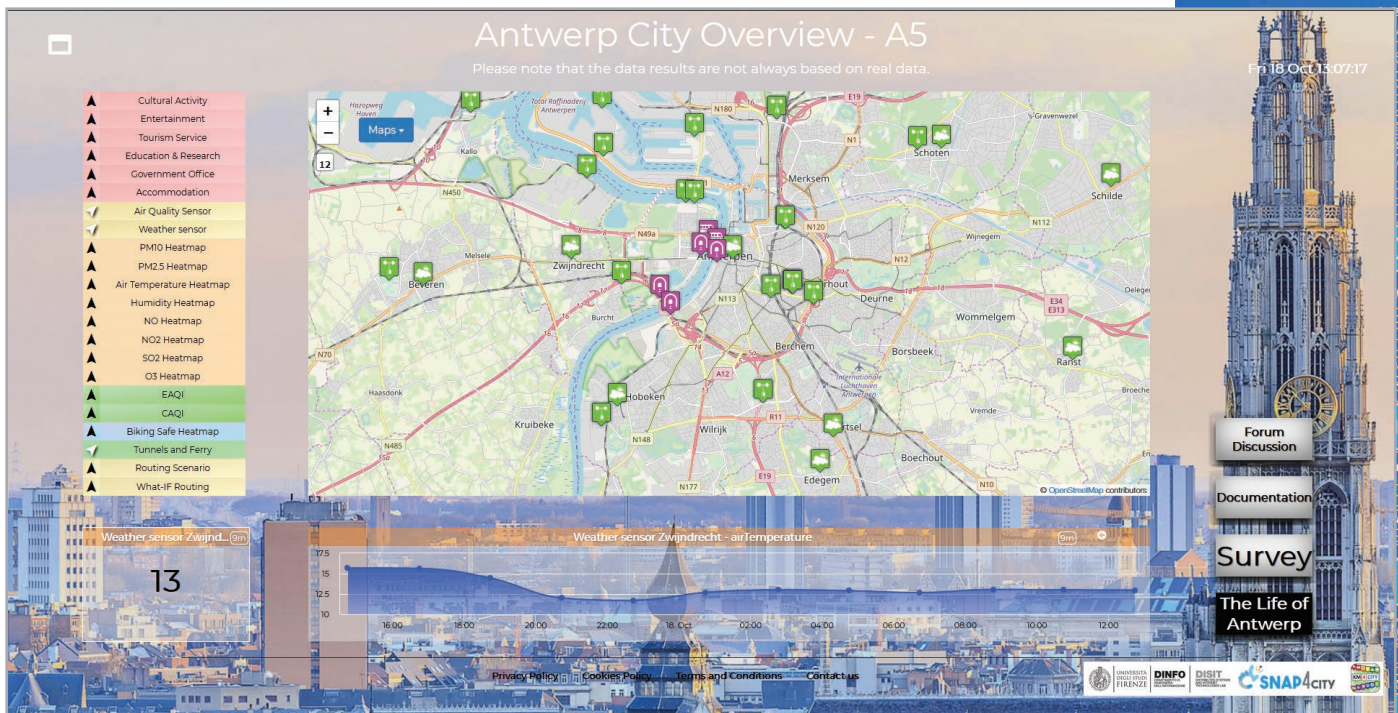

Mobile App on Google Play and Apple Store

On the other hand, City Officials needs to understand with a more technical view how much pollution affects the quality of the air that citizens breath in order to properly regulate urban mobility and give to all the awareness that they are living in a city sensitive to the quality of life. To this end, specific solutions and sensors become fundamental, such as: air quality parameters, weather forecasts, pollution forecast, etc., together with the knowledge of the city structure, prediction model for environmental variables. In the Dashboard, the operator can see trends of sensors, perform drill down on their values, observe the heatmaps, perform the animations, and finally perform routing and what-if analysis.

Dashboard with values and heatmaps of environmental parameters in cities such as that reported in the following Figure. In order to assess the air quality in each part of the city, the level of pollution aspects have to be measured, for example: SO2, NO, NO2, O3, CO, CO2, PM10, PM2.5, EAQI, CAQI, etc.

The Snap4City has created Antwerp organization in the platform, ingested the data and realized the data analytics, created the Mobile App "Antwerp in a Snap" on all stores, the MicroApplications, the Dashboards and the all the tools needed to create the solution and put in production. Snap4City semantically aggregates any kind of data coming from any sources and semantically aggregates them in compliance with the smart city ontology Km4City (https://www.km4city.org). Snap4City has been developed in the context of Select4Cities PCP mainly managed by DIGIPOLIS in the context of Antwerp.

The mobile app can be installed from Google Play or Apple Store, the Dashboards are accessible from Https://www.snap4city.org in the public set, at the link reported. On the dashboards, you can navigate on predictions, in past and future and you can see the 24H animation of the next and past days. And:

- https://www.snap4city.org/dashboardSmartCity/view/index.php?iddasboard=M-Tc1Ng==
- https://www.snap4city.org/dashboardSmartCity/view/index.php?iddasboard=MjIwMQ==
- https://www.snap4city.org/dashboardSmartCity/view/index.php?iddasboard=M-TcwNg==

Extended version accessible from: https://www.snap4city.org/526
Contact: https://www.snap4city.org
Partners: Select4Cities, DIGIPOLIS, IMEC

Dashboards for City Operators: Environment, Mobility, Transport, User Behavior, User Engagement, etc.

Multiple heatmaps. Environmental data, social data, mobility, culture and tourism