Km4City Simple access to open and aggregated data for Public Administrations and Companies

Public Administrations are producing thousands of open data. They are a phenomenal leverage to produce value by enabling services. Thus, solutions that aggregate data make possible the integration of low-cost private data, and the subsequent interrogation with geographical and textual queries, with location-based and proximity results.

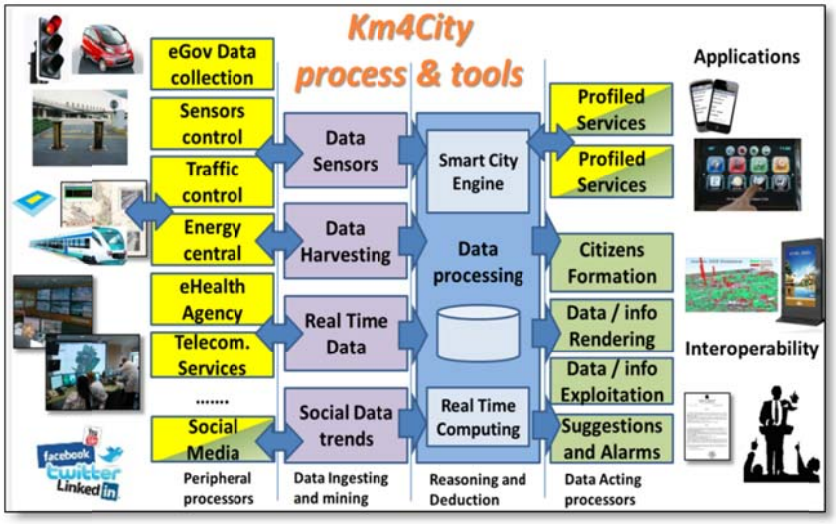
Open data and the integration of private and open data enable the development of various applications ranging from security, tourism, cultural heritage, but also monitoring of fleets, definition of strategies on the territory, the assessment of risk factors, etc. Actually these opportunities are very hard to be taken for government agencies and companies. The main obstacles to their exploitation are:

- High costs of data integration and aggregation, given the limited natural interoperability between data that are produced at different times by institutions and/or from individuals and companies;
- The difficulty to assess immediately if a given idea can produce viable and valid results in terms of use and repercussions.

With **Km4City** institutions as well as companies can integrate open data, private data, sensitive and/or critical and contextualized data with those accessible in the city with the aim to create new services for their qualified staff and/or for the citizen. Km4City allow to make possible the develop of apps and web pages using these services quickly and easily.

Km4City solves these limitations by providing public administrations and enterprises:

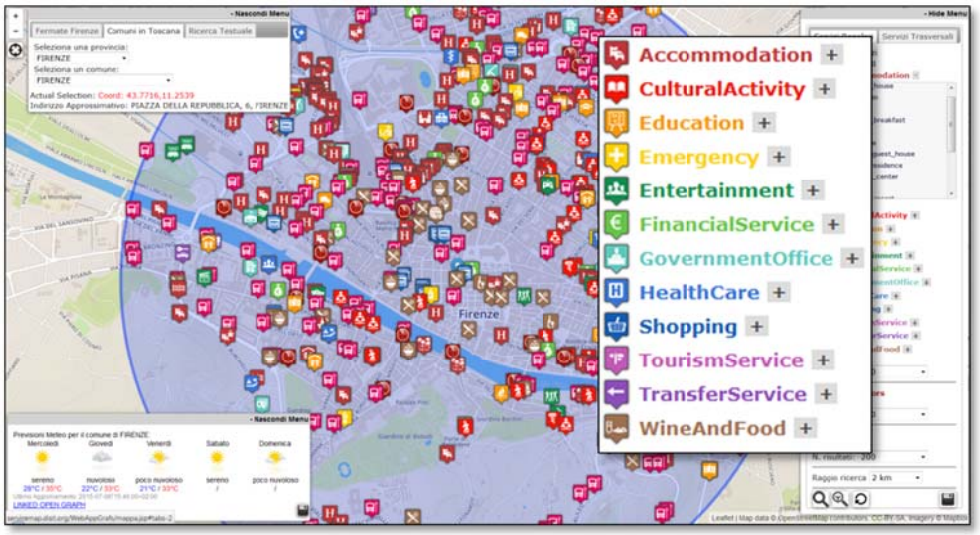
- scalable and effective solutions to quickly provide innovative services: (i) flexible Km4Ciy model; (ii) providing integrated/aggregated data, and (iii) allowing the integration of private/specific data with open data;
- Simple and effective APIs to develop mobile and web applications that use coherent data, by providing a channel with updated aggregated data.



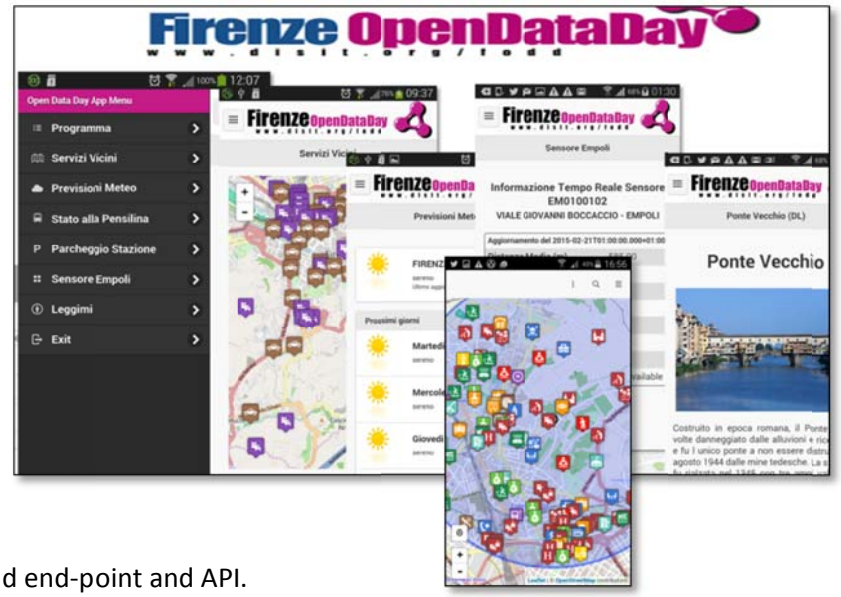
Km4City includes development and production tools and it is based on the Km4City model (http://www.disit.org/km4city) and on tools that have been developed and are actually used by the Florence aggregator developed by DISIT Lab, accessible via http://servicemap.disit.org (but also via API). **Km4City** solution is at the basis of the Sii-Mobility national project on smart cities (http://www.sii-mobility.org), and RESOLUTE H2020 project (http://www.resolute-eu.org). **Km4City** has been evaluated with a high rank by Ready4SmartCity FP7 (http://smartcity.linkeddata.es) and it is considered by IBM as one of the most interesting Smart City models (http://cognitive-science.info/community/weekly-update/). Km4city has also mobile applications on Google Play and Apple Store.

Km4City provides

A broad quantity of Open Data. Many Open data of Tuscany cities are available, particularly from Florence, http://servicemap.disit.org. These accessible data are described here http://www.disit.org/6726 and in July 2015 there were 9500 services in Florence, 1000 in Pisa, 800 in Prato, 460 in Pistoia, 420 in Arezzo, 180 in Empoli, etc. So that these date are referred to the whole Tuscany Region, mainly Florence municipality. They are coming from MIIC of Tuscany Region, LAMMA consortium, transport and traffic observatory, Florence Municipality, etc. These data are about mobility and transport, cultural heritage, hospitals, weather, services, emergencies, shops, tourism, wine and food services, education, wellness, etc.



A simple tool to create Web and mobile applications



These can be used to create simple API to: make geographical and textual queries, to access real time data, like those accessible via http://servicemap.disit.org

- A demo open source app is provided as example, with video tutorial and slides: http://www.disit.org/6595 for iOS, Android and Windows Phone.
- API are accessible as described here: http://www.disit.org/6597
- Publication of data via RDF Store and end-point and API.

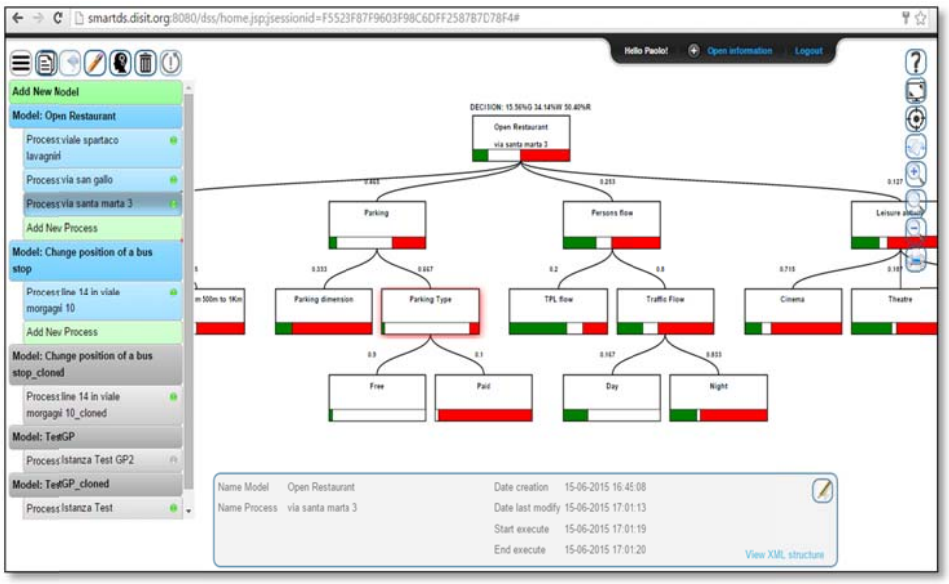
A simple tool to generate complex views to be embedded in your web pages, see for example http://servicemap.disit.org

A channel to add data of your interest in Km4City, static data or produced in real time. Those data can be provided in any format or protocol you have.

Km4City is available as service e and can be declined in different contexts by providing management tools like: SCE (Smart City Engine), Data Ingestion Manager, Smart Decision Support System, etc. (see http://www.disit.org/km4city) **Km4city** has also mobile applications on **Google Play and Apple Store**.

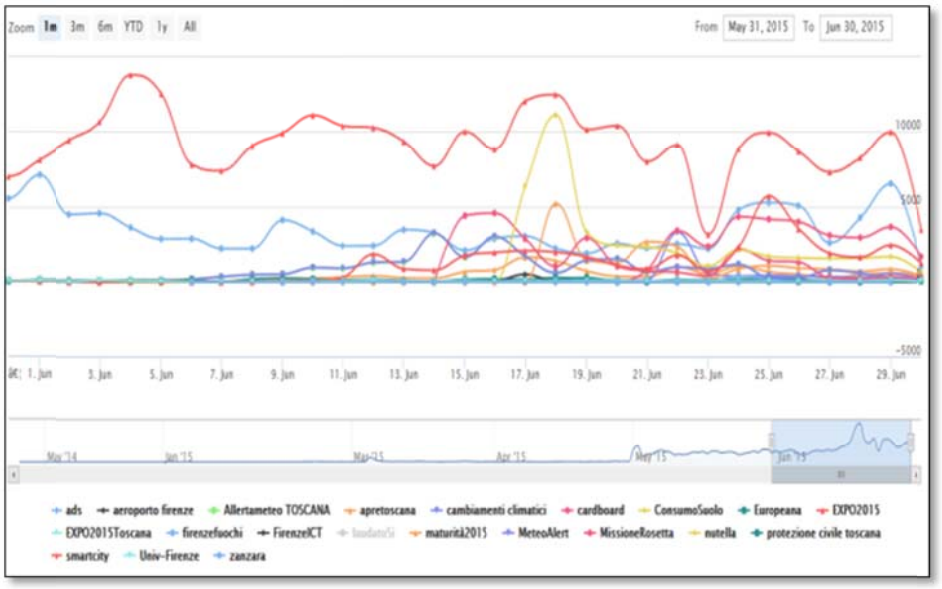
Tools integrating Km4City solution

Automation of decision support with System Thinking model: http://smartds.disit.org it allows to develop decision models (in a cooperative or reserved manner, by using and integrating information from your databases and from social) that can be used in different point in the city, for example for determining: displacements of stops, changes of direction, opening of new services such as restaurants, relocate services, etc.



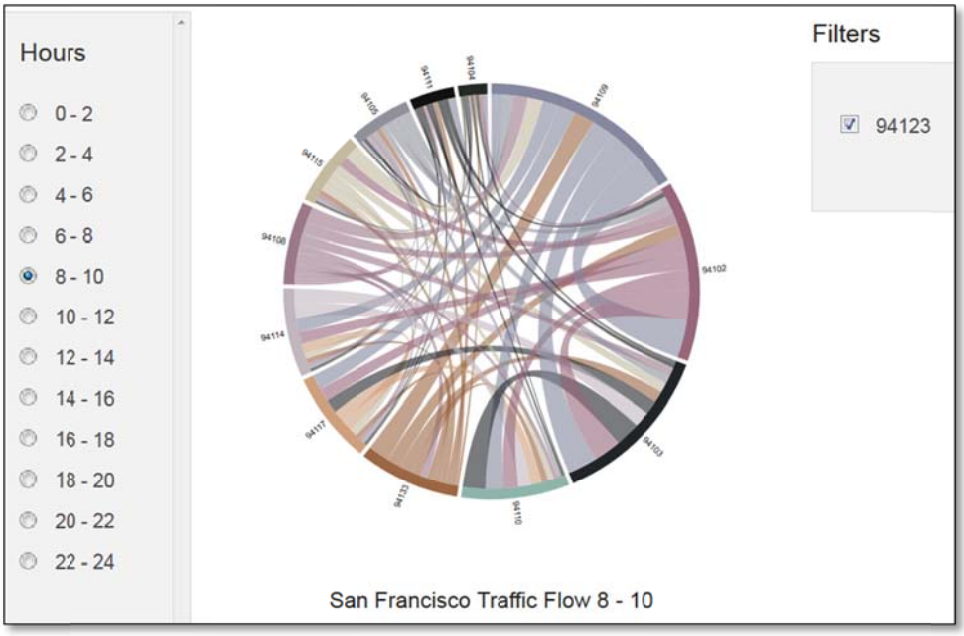
Solution for Twitter channels monitoring: http://www.disit.org/tv

It identifies critical conditions on the territory, qualifies and evaluates the sources, evaluates the ambient and weather critical conditions (by reducing costs for sensors), understands moods of citizens in relation to services, includes consumer responses with respect to certain products, etc.



Solutions for analyzing Smart City flows and user behavior: http://www.disit.org/6694

It allows to understand with are the most used areas, streets, and it provides suggestions on how to have better coverage of the monitoring system and it poses the basis for adapt services, stimulate the use of alternative streets to reduce flow peaks, enhance mobility and transport services but also those distributed on the city.



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