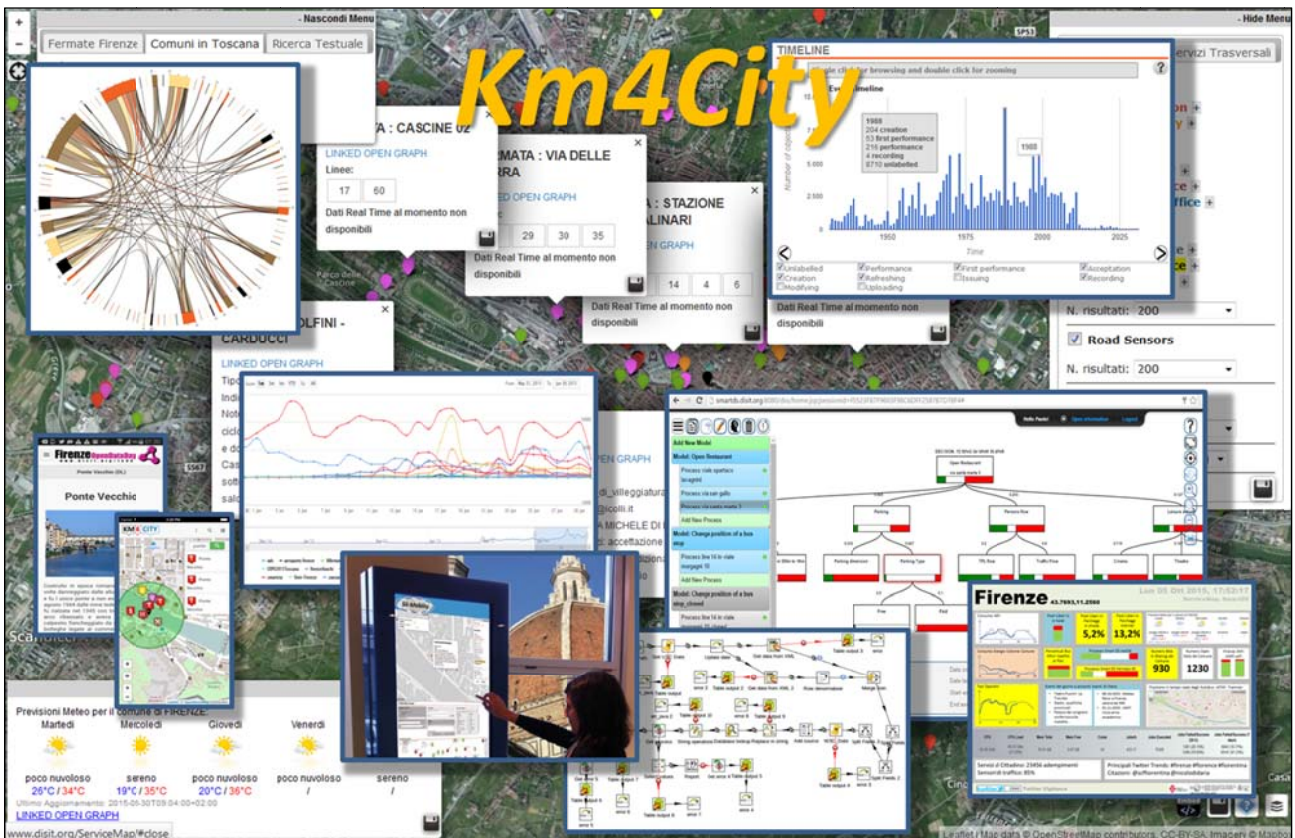


# **Km4City** Simple access to open and aggregated data for Public Administrations and Companies

Public Administrations are producing thousands of open data. They are a phenomenal leverage to produce value by enabling services, and to keep under control the evolution of municipality, the real time status of the services in the area, the current smartness and resilience of the services and city. Integration of open data and private data enable the development of various applications for security, tourism, cultural heritage, fleets monitoring, strategies on the territory, assessment of risk factors, personalized services and recommendations, etc. Actually these opportunities are very hard to be exploited for public administrations and companies. The main obstacles to their exploitation are:

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



**Km4City** low Cost solutions aggregating data is the solution by integrating open, private data with real time data, weather, events, etc., and the subsequent services for interrogation with geographical and textual queries, and proximity results may enable a large set of services. 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 allows making possible the development of mobile and web apps by using km4city services quickly and easily: search, proximity, profiling and recommendation on demand, etc.

## Km4City solves these limitations by providing public administrations and enterprises:

### Developers tools:

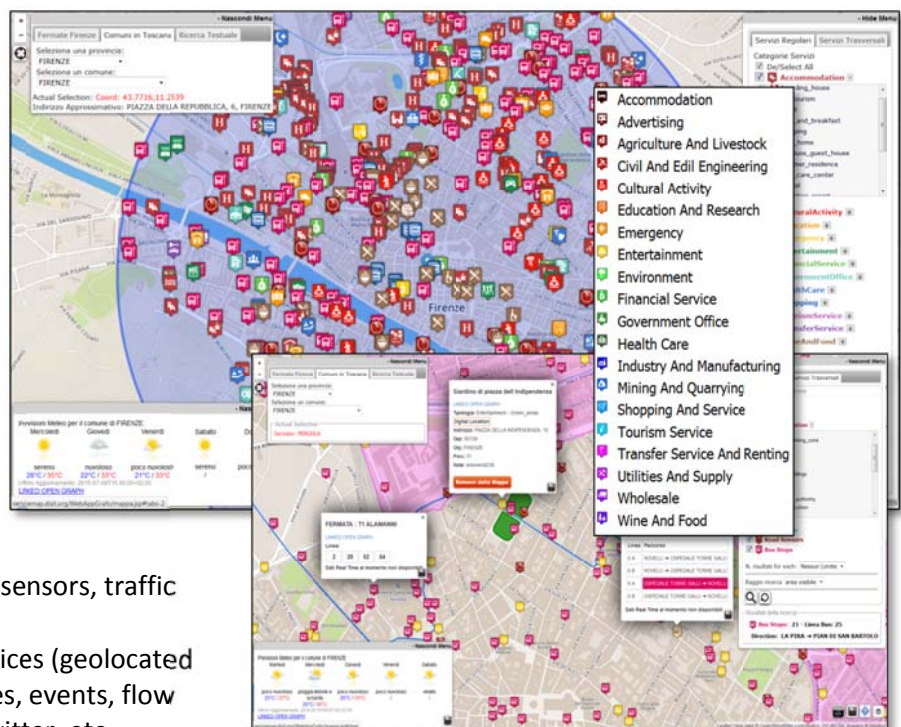
- Flexible Km4City model, ontology documentation: <http://www.disit.org/km4city>;
- Simple and effective APIs to develop mobile and web applications that use coherent data, by providing a channel with updated aggregated data <http://www.disit.org/6597>
- Tool for developing web and mobile applications: **ServiceMap** <http://servicemap.disit.org>
- Tools for RDF store navigation: **LOG: Linked Open Graph** <http://log.disit.org>, <http://log.disit.org/spqlquery/>;
- Demo tools in open source: **Firenze Open Data Day**: <http://www.disit.org/6595>

**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>), and REPLICATE H2020 Smart City project. **Km4City** has been evaluated with a high rank by Ready4SmartCity FP7 (<http://smartcity.linkeddata.es>) and it is considered as one of the most interesting Smart City models (<http://cognitive-science.info/community/weekly-update/>). Km4city has also mobile applications on Google Play, Apple Store and Windows Market.

## Km4City Development Tool and API

**ServiceMap** allows to visually develop searches and to receive via email the programming code for the production of web and mobile applications exploiting Km4City API:

- Search and visualization by municipality;
- Search of services near a location, position
- Search and visualization by free text;
- Search and visualization by type of services;
- Search and visualization of transversal services (digital locations, Wi-Fi, shops, sensors, bus stops, parking, bicycle path, green areas, busses and trains paths, events in the city, etc.);
- Monitoring real time busses, sensors, traffic flows, events, etc.
- Access to statistical data services (geolocated services) and real time; busses, events, flow sensors, weather forecast, twitter, etc.
- Identify data for the control room of the smart city.



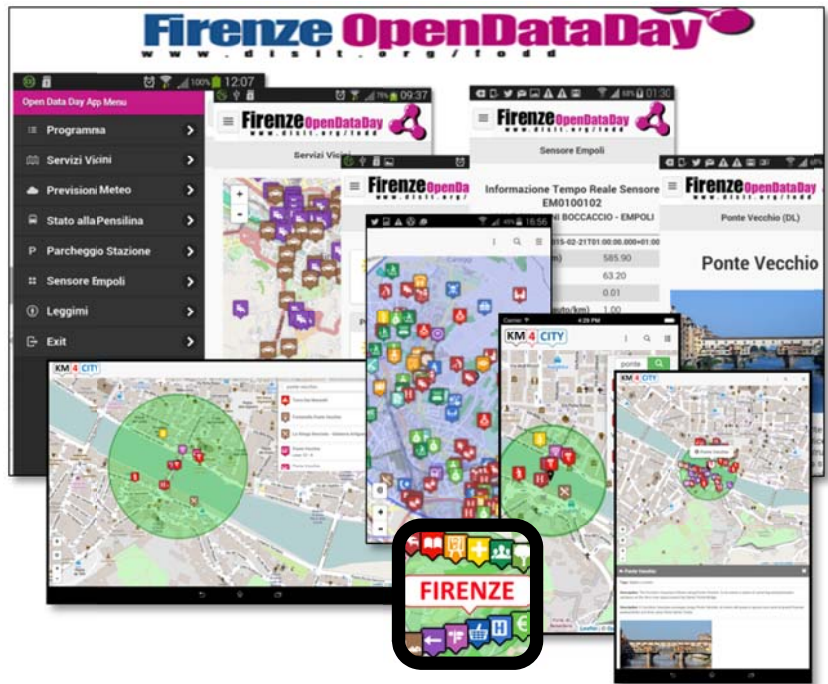
These accessible data are described here <http://www.disit.org/6726> were over than 100.000 services, mainly in Florence and Tuscany all. They are coming from MIIC of Tuscany Region, LAMMA consortium, transport and traffic observatory, Florence Municipality, etc. These data are about mobility and transport, cultural heritage, hospitals, environment, services, emergencies, shops, tourism, wine and food services, education, wellness, etc.



## Development tools to create web and mobile applications

**Km4City** can be used to create services for qualified personnel and/or for citizen, with App and web pages using ServiceMap services.

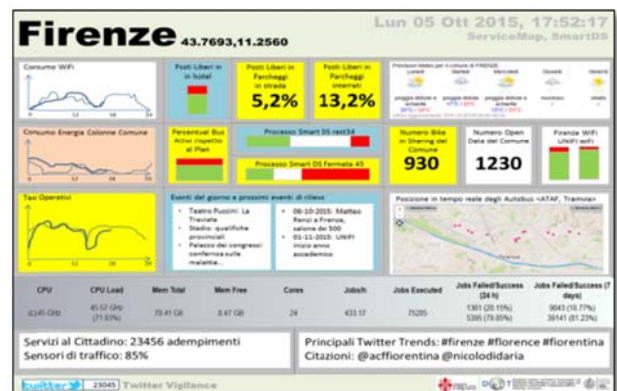
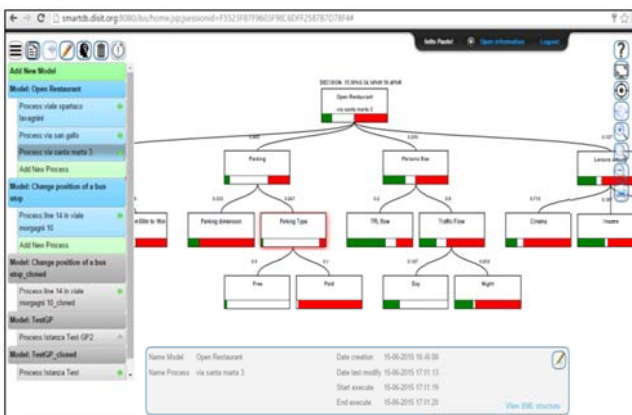
- API accessible as described here: <http://www.disit.org/6597>
- open source app FODD is provided as example, with video tutorial and slides: <http://www.disit.org/6595> for iOS, Android and Windows Phone.
- Firenze where, what... App is accessible on all stores.
- Publication of data via RDF Store 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, Apple Store and Windows Market**.

## Km4City solutions for monitoring city and taking decisions

**Smart City dashboards for administrators and managers.** Data coming from ICT, mobility, environment, energy, etc.



**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.

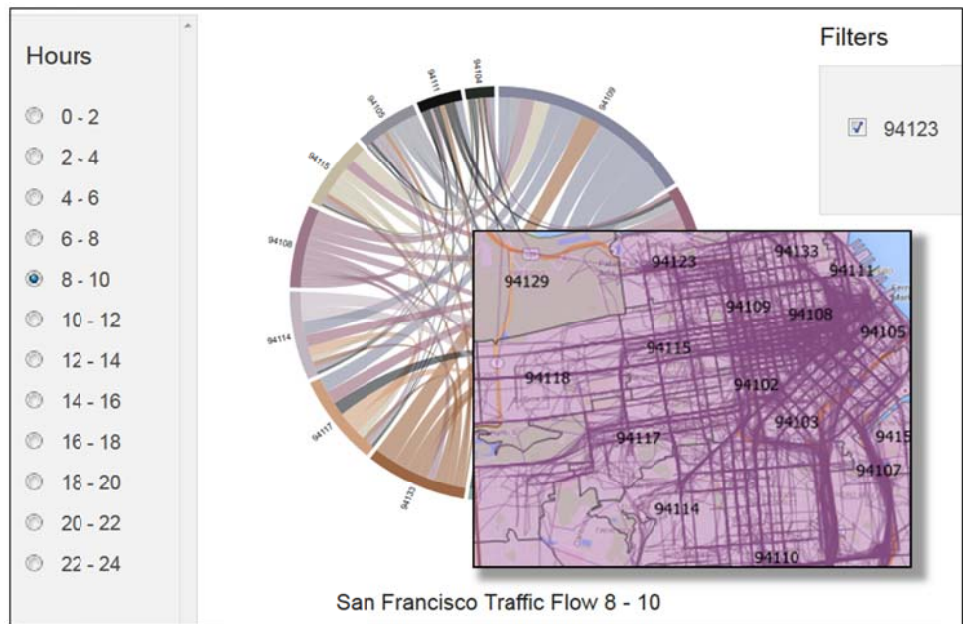
**Twitter Vigilance: monitoring channels** <http://www.disit.org/tv>

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



**Analyzing traffic and people flows, 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.



**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>)

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