



Info-package No. 2

ICT Platform



ICT

Introduction:

The development of Information and Communication Technology (ICT) in the last century made the production, exchange and consultation of data increase tremendously. Considering the value of this data, ICT Platforms have been built to collect, analyse and present this information. These ICT Platforms first used for some restricted or private uses are entering the unrestricted public sector of cities.

Goals:

The ICT Platforms developed in REMOURBAN are information management tools enabling the realisation of smart cities.

Gathering and analysing the different data coming from the city, specifically regarding energy and mobility, this platform delivers the relevant information in order to

- improve the use of energy (direct surplus to the district/building needing it, reduce waste),
- improve the mobility within the city,
- inform the citizens of dangers (earthquake, health risks,...),
- inform the citizens about worthwhile alternatives (free parking slots or electric charging station, car sharing or public transport instead of private car, for example, in case of congestion,...).

Progress:

Practical tests are ongoing.

The Global ICT Platform will be the central point within the REMOURBAN ICT infrastructure, gathering data from the Local ICT Platforms of other demo cities through a standard REST API¹. It will store and analyse a huge volume of measures from the different project domains (energy, mobility, ICTs...).

The Global ICT Platform provides valuable features around data analysis like charts (data comparison and prediction), reports and aggregation functions to supply time series in

¹ REpresentational State Transfer (REST), Application Programming Interface (API methods of communication between software components)

aggregated frequencies or entities. On the other hand, the Global ICT Platform can share its data with external platforms or third party services conceived to take advantage of the stored data by offering value-added services to companies and citizens or public bodies.

The Global ICT Platform will expose part of its information as open data by means of publicly accessible reports, playing a double role of information enhancer and decision-making tool. It will provide citizens with information about the effects REMOURBAN interventions will have on energy savings, encouraging citizens in general to promote green and sustainable practices.

The Global ICT Platform is Smarkia platform, a market product that provides a system for energy management to large energy consumers. The platform's functionality will be expanded and adjusted to meet REMOURBAN project's specific requirements.

At local level, Smarkia platform is also covering the function of the Local ICT Platform in Valladolid. This platform is ready to gather the measures coming from the energy and mobility local metering devices. Besides, it provides an internal procedure to send data to the Global ICT Platform, fulfilling in this way main needs and objectives of the project.

Lessons learnt:

The key point during platform's design and deployment is to make sure that all measurements coming from different IoT systems will reach the platform. In this sense, different resources for data gathering need to be enabled (data files exchange, implementation of a set of protocols for direct connection to metering devices...). The Local ICT Platform complies with this key feature.

At the same time, data stored in the platform must be sharable to make the most of it, so the development of a powerful communication API through some standard technology is essential. This is ensured by the Global ICT Platform that can exchange data through a standard REST API with other local platforms and also with external services in order to assure scalability interoperability and replicability, which are the main values of the REMOURBAN project.

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