

READY4SmartCities: ICT Roadmap and Data Interoperability for Energy Systems in Smart Cities

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1 The READY4SmartCities project

The READY4SmartCities (ICT Roadmap and Data Interoperability for Energy Systems in Smart Cities) European project¹ aims to increase awareness and interoperability for the adoption of ICT and semantic technologies in energy systems in order to obtain a reduction of energy consumption and CO2 emission at Smart City communities through innovative relying on RTD, innovation outcomes and ICT-based solutions. This two-year project started in October 2013 and is a Coordination and Support Action funded by the FP7 programme.

In order to achieve this goal, the project is involving the community around energy efficiency in Smart Cities through a wide coordinated set of dissemination activities (e.g., workshops, VoCamps, summer school) that will allow the community to participate in the READY4SmartCities events and will keep them informed about the project progress.

2 What will READY4SmartCities provide?

2.1 Smart City ontology and dataset catalogues

In the project we are investigating and identifying ontologies and datasets towards dynamic and interoperable energy-related systems that deal with different Smart City aspects and that can be used to achieve energy data interoperability in Smart Cities.

To this end, we have implemented two catalogues, one for ontologies² and another for datasets³, to collect metadata about those ontologies and datasets about Smart Cities, energy and other related fields.

¹ <http://www.ready4smartcities.eu/>

² <http://smartcity.linkeddata.es/>

³ <http://smartcity.linkeddata.es/datasets/>

2.2 Guidelines for energy-related data

In the project we are also defining a set of guidelines to facilitate data providers generating, publishing and exploiting their energy-related data as Linked Data. These guidelines will be based on the Linked Data principles and technologies and will be adapted to the specific characteristics of the energy domain.

Furthermore, the guidelines will be supported by two examples: the first one will be related to energy consumption in social housing scenarios, while the second one will be related to data coming from building information models.

2.3 Roadmap of ICT for energy systems in Smart Cities

Another output of the project will be a clear vision of ICT for energy systems in Smart Cities based on extrapolation beyond the state-of-the-art by envisioning of future scenarios (e.g., design methods, energy management systems, etc.). This will be achieved through the creation of a roadmap suggesting the development and innovation needs of ICTs towards holistic, planning, design, construction and operation of energy systems for Smart Cities.

The roadmap will include a set of scenarios presenting foreseen and desirable developments and innovations as well as best practices and opportunities for knowledge transfer appearing in the horizon of the next 10 years and beyond. These scenarios will exemplify possible future applications of ICT solutions for energy systems in Smart Cities mapping together the needs, aspirations and the relationships among relevant stakeholders.

3 What is READY4SmartCities looking for?

The participation of the whole community in the project activities is very important. For being informed of the project outcomes and participating in the project activities, just keep an eye on the project portal or on our twitter account (@LD4SC).

Anyone can propose ontologies or datasets to be included in the catalogues by providing the description of the ontology or dataset through an on-line form. The description is received by the curators of the catalogues (that is, the catalogue maintainers), who check, verify and complete such description if needed. Finally, the received ontology or dataset is published in the catalogue along with a set of quality indicators.

Regarding the guidelines, we are interested in discovering which requirements or restrictions exist for generating, publishing and exploiting energy-related data as Linked Data. With the feedback of the community we will be able to take real-world needs into account when elaborating the guidelines.