



READY4SmartCities

Coordination and Support Action

FP7 ICT-2013.6.4

Optimizing Energy Systems in Smart Cities

Raúl García-Castro

UPM

OEG meeting
30th January 2014



- Project overview
- Role of the OEG
- Synergies in the OEG

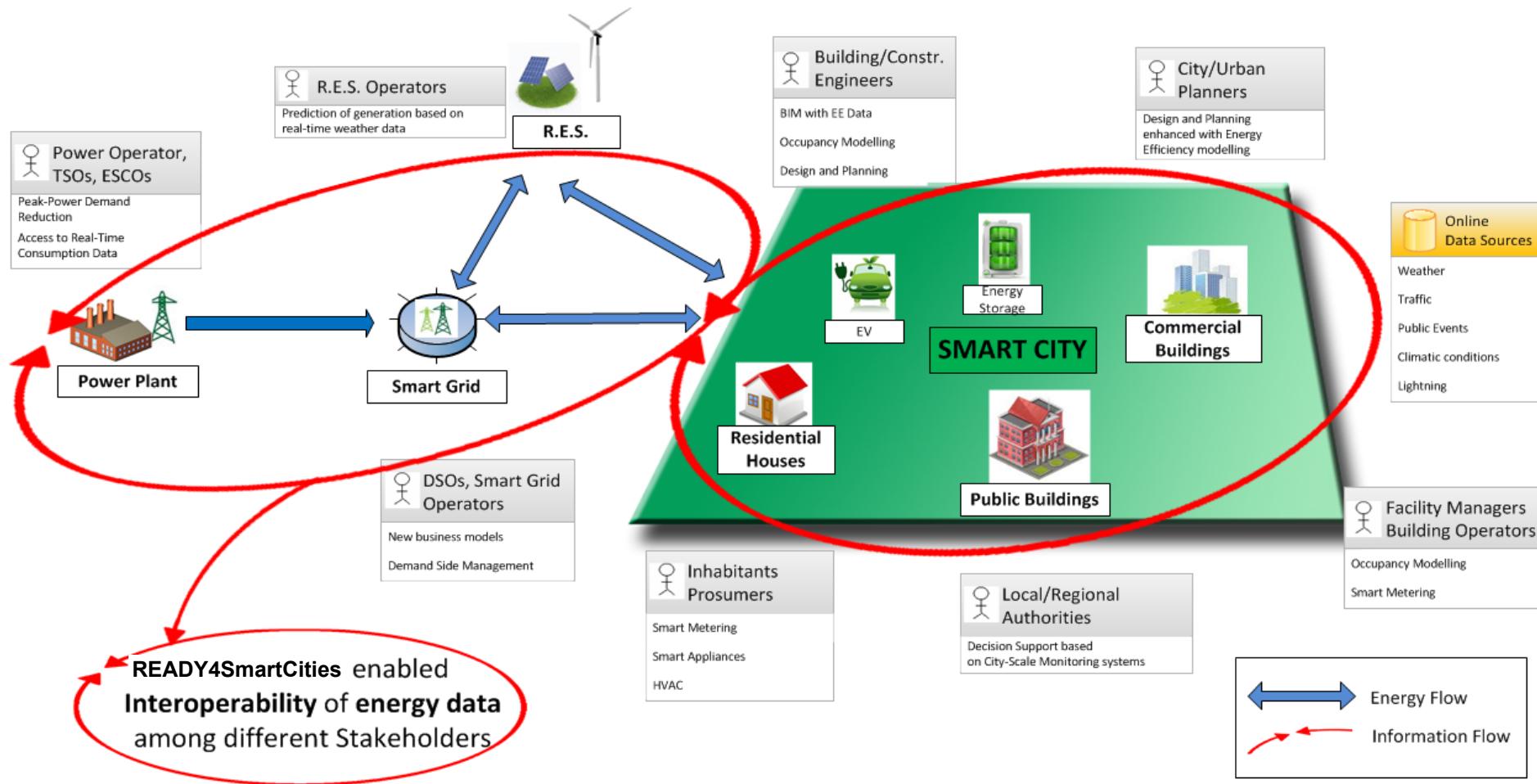
Consortium

Partner	Country
D'Appolonia SpA (Coordinator)	Italy
Universidad Politécnica de Madrid (Technical Coordinator)	Spain
Centre Scientifique et Technique Du Batiment	France
CERTH/ Information Technologies Institute	Greece
Teknologian Tutkimuskeskus VTT	Finland
Institut National de Recherche en Informatique et en Automatique	France
AIT Austrian Institute of Technology GmbH	Austria
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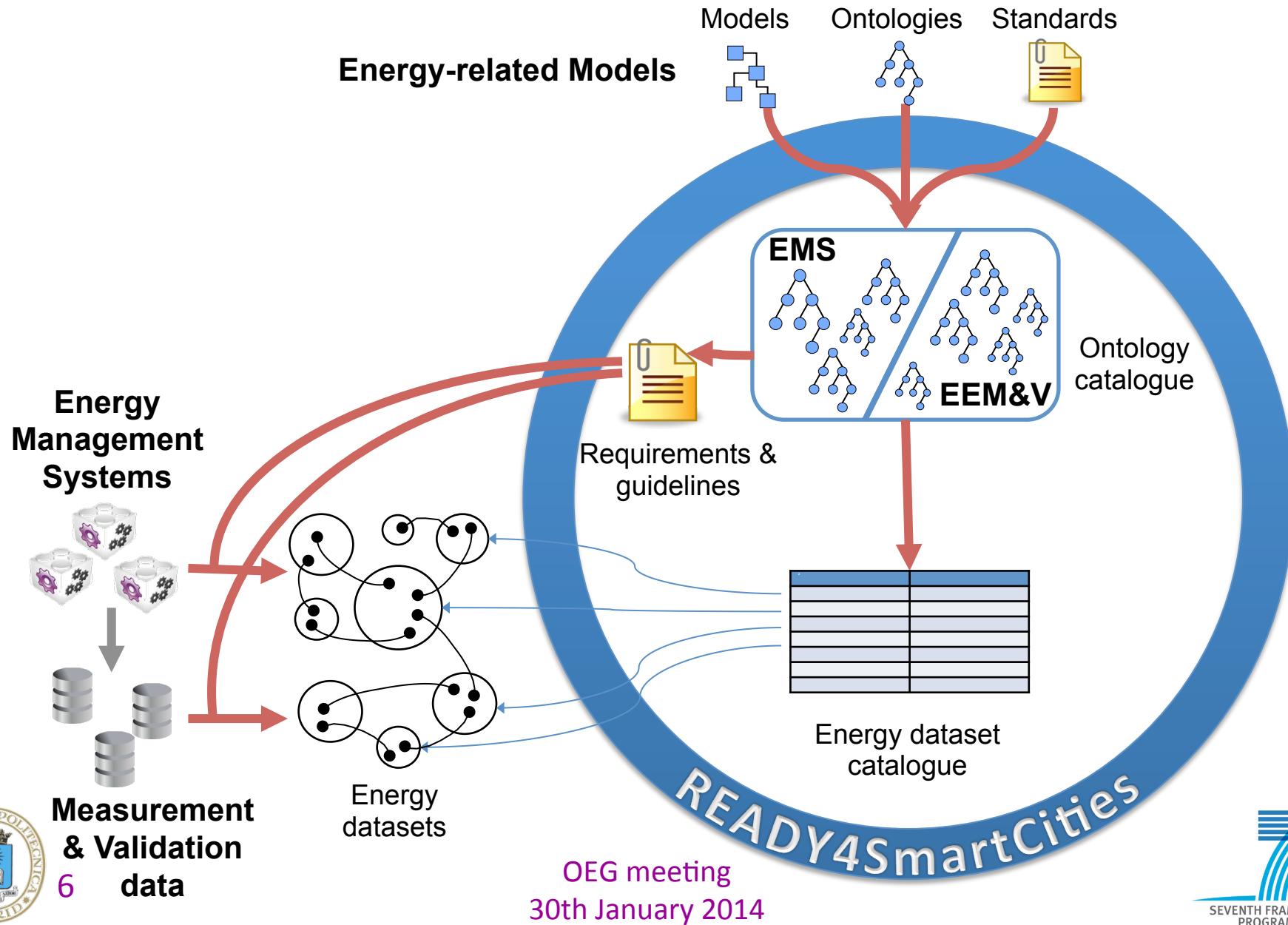
Goals

- Definition of a **new energy data ecosystem in Smart Cities** that will accommodate cross-domain data and will allow the interoperability and exploitation of such data at global scale
- Identification of a set of **ontologies and datasets relevant to Smart Cities** in the context of Energy Management Systems and Energy Measurement and Validation
- Elaboration of **guidelines on how to generate, publish and exploit energy data in Smart Cities** following the Web standards
- A **holistic and shared vision of ICT for energy systems in Smart Cities**, allowing feasible step-by-step action plans for city authorities and other relevant stakeholder groups

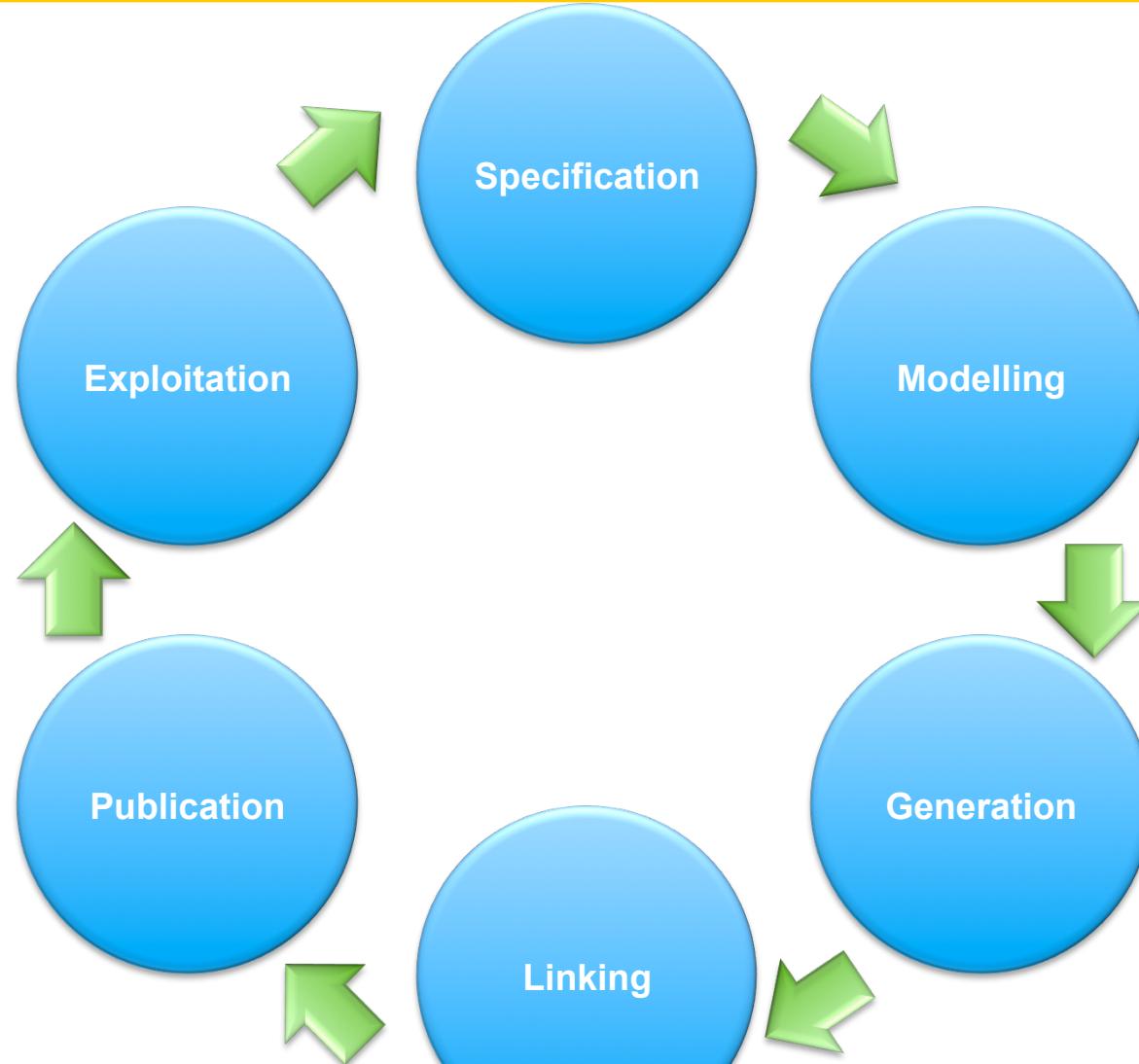
New Energy Data Ecosystem



Enabler 1: Ontologies and Datasets



Enabler 2: Guidelines for Energy Data



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Enabler 3: Strategic Vision



E2B

Energy Efficient Buildings



ICT4E2B
Forum



Smart Buildings

IREEN



Smart Districts



Smart Cities

- Project overview
- **Role of the OEG**
- Synergies in the OEG

Role of the OEG

- Spread the vision of energy-related data interoperability through web standards
- Build stakeholders network
- Organize and participate in events:
 - VoCamps
 - Summer schools
 - Etc.



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Catalogues in the energy domain

- Ontology catalogue
- Dataset catalogue

energy.linkeddata.es

Here you can find a list of relevant ontologies for energy efficiency. This effort is part of the [Ready4SmartCities](#) project.

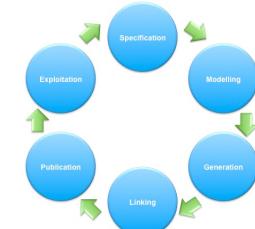
Ontologies

Ontology	License	Ontology Language	Syntax	Domain	Natural Language
Example	All rights reserved	SKOS	RDF/XML N3	time buildings space	es en
The W3C PROV Ontology	MIT	OWL	RDF/XML	Provenance	en
Time Ontology	Unknown	OWL	RDF/XML	time	Unknown

Built with [Bootstrap](#)
Brought to you by [María Poveda](#)
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Latest revision February 2014



Guidelines for energy data



- Technology catalogue
- Guidelines
 - Do not reinvent the wheel

W3C Working Group Note

 W3C

Best Practices for Publishing Linked Data

W3C Working Group Note 09 January 2014

This version:

<http://www.w3.org/TR/2014/NOTE-lb-bp-20140109/>

Latest published version:

<http://www.w3.org/TR/lb-bp/>

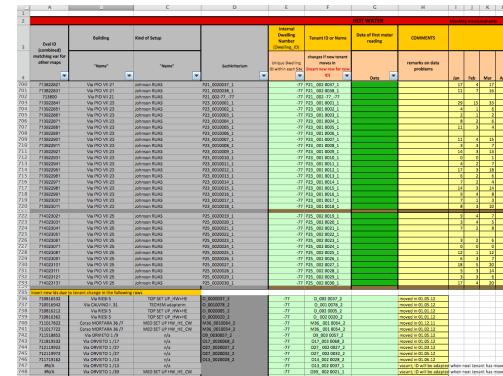
Editors:

Bernadette Hyland, 3 Round Stones, Inc.

Ghislain Atemezing, EURECOM

Boris Villazón-Terrazas, ISOCO, Intelligent Software Components S.A.

- Running example in social housing



The screenshot shows a Microsoft Excel spreadsheet with a title bar "Best Practices for Publishing Linked Data" and "W3C Working Group Note". The main content consists of a large grid of data and formulas. The columns are labeled from A to M, and the rows are numbered 1 through 25. Row 1 contains column headers such as "Event ID", "Building", "Kind of Setup", "Identifier", "Event ID or Name", "Best practice reading", "Comments", and "General". Rows 2 through 25 contain specific data entries, many of which include formulas like =IF(D2>C2, "New result", "Old") and =IF(D2>C2, "New result", "Old"). The background is white, and the text is black. Some cells contain colored backgrounds, such as green for some rows and red for others.

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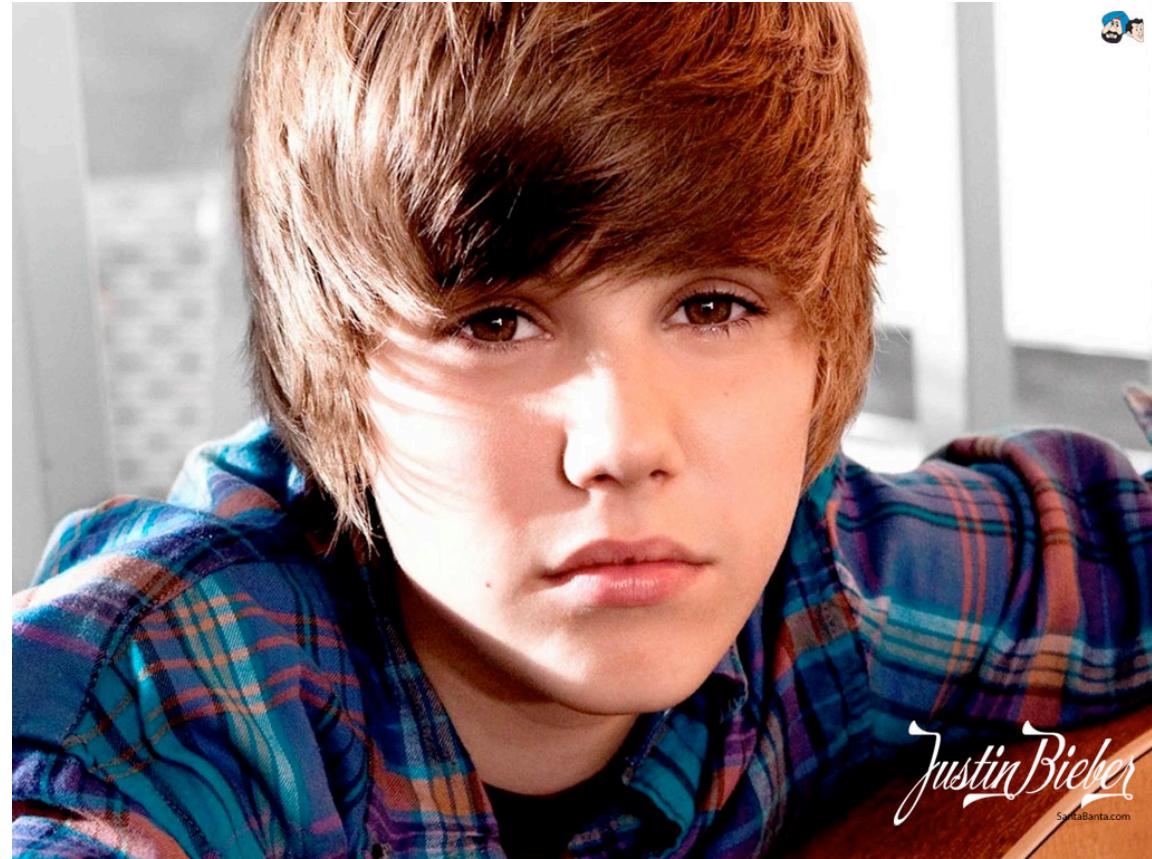
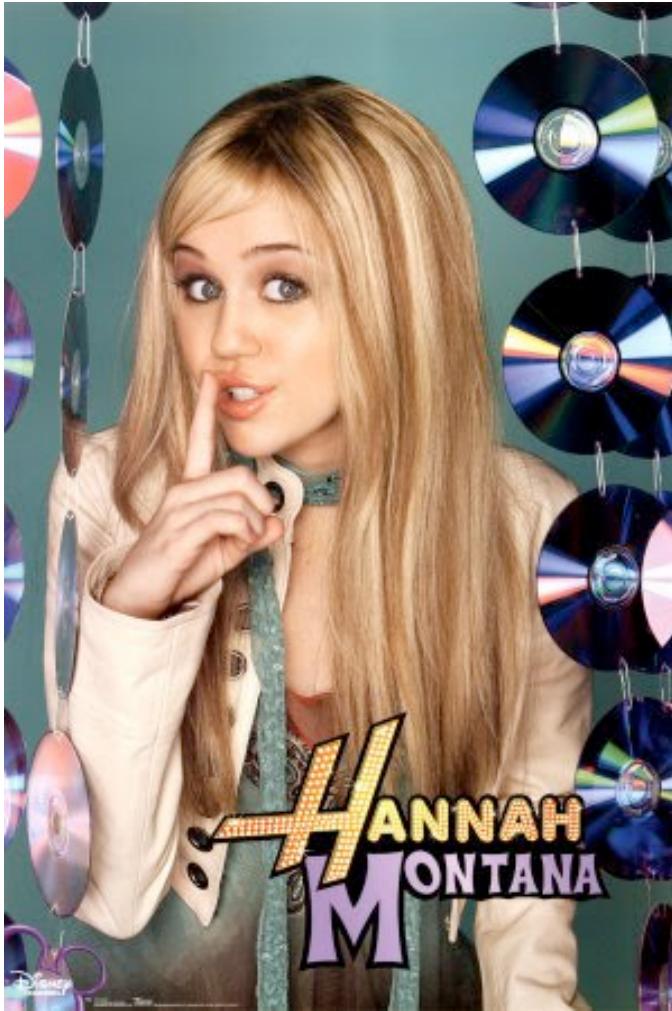
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R4SC and the OEG



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Virgin territory...?





... or not?



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R4SC and the OEG

- **First step** in the energy field
 - With ramifications to smart cities
- **Show of our excellence** in Ontological Engineering and Linked Data



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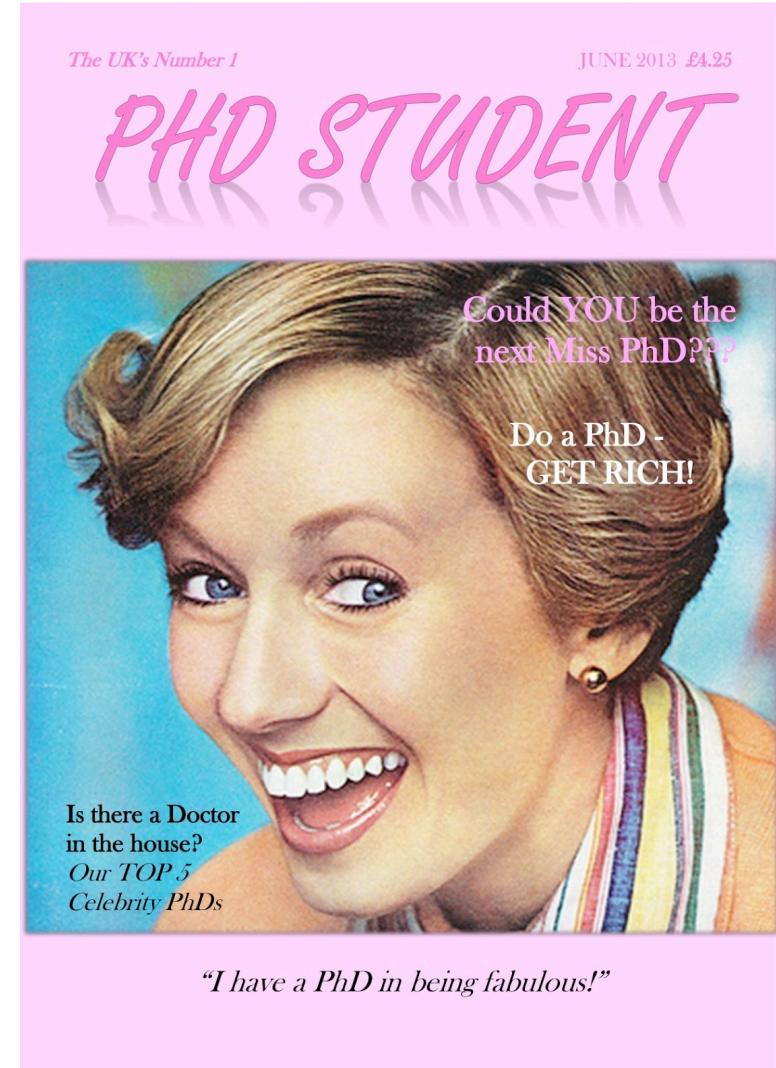
R4SC and the OEG projects

- Domain of Smart City
 - Ciudad 2020
- Ellaboration of guidelines for LD
 - LIDER
 - PlanetData
- Technology catalogue for LD
 - LIDER
 - PlanetData
- Others?



R4SC and the OEG members

- Opportunity to **showcase and apply** your research to an **industrial audience**:
 - Ontologies
 - Linked Data technology
 - ...
- Source of **new use cases**
- Source of **new data**
- ...





Thank you for your attention!



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