

Project Acronym: GeoSmartCity

Project Title: Open geo-data for innovative services and user applications towards Smart Cities

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## D 7.4.2 – Dissemination and workshop material

Revision: 2.0

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WP7 - Dissemination

T7.2 - Workshops and publications

Project co-funded by the European Commission within the ICT Policy Support Programme		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

## Revision History:

Revision	Date	Author(s)	Organisation	Description
0.1	02/02/2016	Silvia Gorni, Martina Lo Grasso	GISIG	Draft
0.2	16/02/2016	Silvia Gorni, Giorgio Saio	GISIG	Updating
1.0	24/02/2016	Silvia Gorni, Giorgio Saio, Martina Lo Grasso, all partners	GISIG, all partners	Integration of partner contributions
2.0	29/02/2016	Silvia Gorni, Giorgio Saio	GISIG	Final version

## Statement of originality

*This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.*

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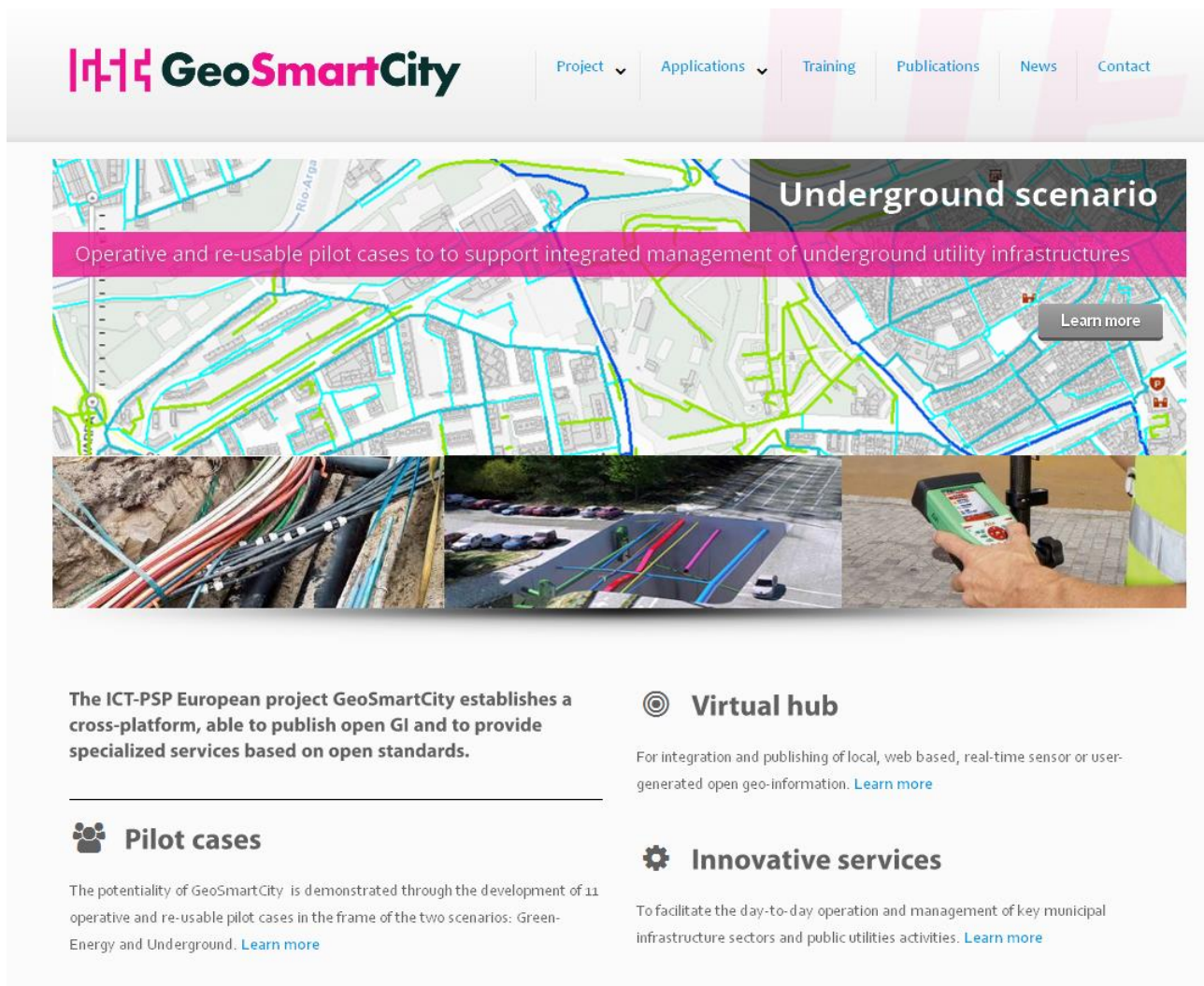
# 1 Introduction

This deliverable D7.4.2 collects with a short description the document produced by the GeoSmartCity Consortium in the second year of the project in relation to dissemination and awareness.

It includes the project web site and all the publications that are public downloadable at: <http://www.geosmartcity.eu/publications/>

They are: the GeoSmartCity Website and Social Media; the project Fact Sheet; the Poster; the GeoSmartCity Newsletters; the Workshops; the Papers presented in meetings or conference.

# 2 GeoSmartCity website



**Figure 2.1 – Home page of GeoSmartCity site**

The project's web site is based on the WordPress<sup>1</sup> Content Management System. For the Restricted and Partner area of the project, integrated project management software (Open Source Redmine<sup>2</sup>) featuring documents & files management, wiki, issue tracking, contacts, to-do lists, etc. have been set up.

Other resource available is an ICT-based training platform. The training package is available to all the project partners and external audience by means of an e-learning training platform (Open Source Moodle<sup>3</sup>).

Training material consists of all training modules included in the training curricula and a Training Platform user's manual.

All the online resources including applications are deployed using free and Open Source software.

The project website is designed basically for awareness and dissemination purposes. It represents an important persistent and continuing resource for the interested parties (stakeholders, simple users, developers).

## 2.1 Web site sections

The web site currently contains the following specific information:

- **Home page** with overall information on the project, news and focused on the available and most relevant resources;
- **Project:**
  - *Overview* with a brief introduction to the project;
  - *Mission* with an in-depth description of the various aims;
  - *Target users* who are involved in the project or who are interested in;
  - Background projects where are described the specific project contribution on GeoSmartCity;
  - *Consortium*, the list of partners working in the project, with short description, role in the project and link to the partners' web site;
- **Applications:**
  - *The HUB & Services*: introduction to the specialised services based on open standards, used into the project;
  - *Scenarios*: description of the two scenarios, Underground and Green Energy, with links to related pilots;
  - *Pilots*: the pilot applications developed in the project have a special relevance in the website. A dedicated section provides information about the context and aim of each application;
- **Training** framework with all the Modules of the Training Package;
- **Publications**: dissemination material, such as the newsletters, the project fact sheet (in different languages), the poster, the papers or articles and presentations presented in different events;
- **News** of interest for the partnership, related to the project domain of activities (i.e. events, publications, etc.);

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<sup>1</sup> <http://www.wordpress.org>

<sup>2</sup> <http://www.redmine.org/>

<sup>3</sup> <https://moodle.org/>

- **Contact** section with all contact details of key people.
- **Collaboration Area:** links to access the project Restricted Area (collaboration and project management website);

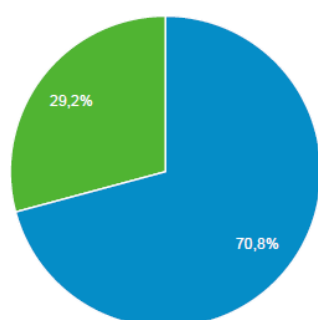
The project's web site will make available all its public deliverables in a specific "Project Deliverables" section of the Publications page. The list of public deliverable is continually updated, as these are released. In order to access the public deliverables of GeoSmartCity, the user has to fill a form; after that he/she will be redirected to the deliverables page. The resources are published in a non-proprietary format (i.e. PDF/A for textual documents) and with a CC Attribution Share Alike license.

## 2.2 Web site statistics

To keep track of the visibility of the web site, in this second year of the project we counted:

Project web site statistics	Number of unique users	<b>2.726</b>
	Number of page views	<b>10.926</b>
Available Documentation and Reference	Number of document downloaded	<b>8712</b>

■ New Visitor ■ Returning Visitor



Language	Sessions	%
en	1.253	33.0
it	918	24.2
pl	181	4.8
es	161	4.2
pt	241	6.3
de	114	3.0
fr	83	2.2

## 3 Social Networking

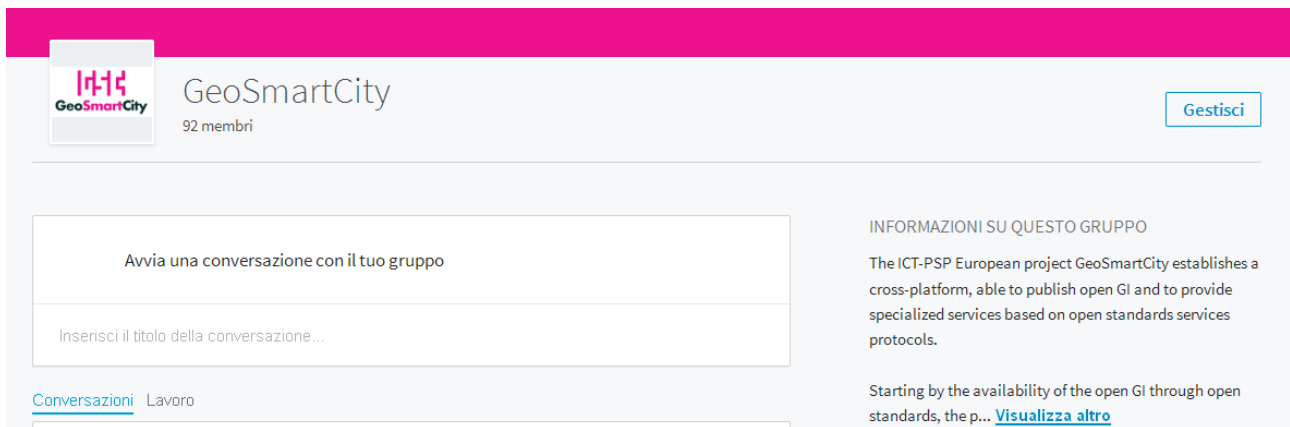
The project website will feature links to active social network channels to widely promoting the project in different communities and attracting participation of stakeholders.

Our partners are also promoting the project through their websites, different Communities and Networks, social profiles and mailing lists.

Main Social networking channels:

### LinkedIn GeoSmartCity Group

This channel, available at <https://www.linkedin.com/groups/GeoSmartCity-7400996/about> will be continuously updated to gather a significant community of followers. New posts and discussions will be published on a regular basis and mass invitations to join these groups will be sent.



**Figure 3.1 – LinkedIn Group on GeoSmartCity**

It has been created on November 7<sup>th</sup>, 2014 and it counts 92 members. It will be up to each partner to publicize the group.

## 4 GeoSmartCity factsheet

A GeoSmartCity factsheet, in the form of a leaflet, has been realized at the beginning of the project (M1) as the first mean to create awareness about the project.

The leaflet is produced in A4 folded into thirds, both in digital (distributed through the web site) and in hard-copy format, in order to assure the most possible diffusion among potential stakeholders and target users.

The leaflet has been designed to contain key information about the project, and to be as more clear and simply as possible, with the aim to encourage the readers to search for more detailed information. The leaflet doesn't say everything about the project, but report about the minimum set of background information needed to understand it, and the indications where detailed information can be found (web site and other...).

Informations are presented into a logical way, following the general schema:

- Front page is dedicated to the project title and to attract the attention of the reader with a quick view of what the project is. The web site catch the attention of the reader soon;
- The back page contains the partnership and the contacts information;
- The rest of the pages contain in logical way the key information, with details on where more precise information can be found.

The leaflet has been at first produced in [English](#). For better exploit the dissemination activities towards local stakeholders, the leaflet it has been translated in different languages; in the second year it has been also translated into [Dutch](#).

All the versions of the leaflet are available on the [website](#).

Responsible for the preparation and printing of the leaflet is GISIG, but all the partners are charged for its wide diffusion both in electronic and in hard copy format.



## Pilootprojecten

De mogelijkheden van de GeoSmartCity-toolkit worden gedemonstreerd met de ontwikkeling van 11 operationele en herbruikbare pilootprojecten in het kader van twee scenario's, namelijk Green Energy en Underground.

### Pilootprojecten Green Energy:

- Reggio nell'Emilia (IT)
- Maroussi (GR)
- Oeiras (PT)
- Turku (FI)
- Girona (ES)

### Pilootprojecten Underground:

- Genua (IT)
- Comarca de Pamplona (ES)
- Oeiras (PT)
- Vlaams Gewest/stad Aalst (BE)
- Zuid-Moravië (CZ)
- Ruda Slaska (PL)



## Partners



### Contactgegevens

GISIG - Geographical Information Systems International Group  
Via Piacenza, 54 - 16138 Genua (Italië)  
Tel.: +39 010 835 55 88  
Website: www.gisig.it  
E-mail: gisig@gisig.it



Open geodata voor  
innovatieve diensten en  
gebruikerstoepassingen  
gericht op Smart Cities



Project met financiële steun van de  
Europese Commissie  
CIP pilotacties  
Subsidieovereenkomst nr. 621150

[www.geosmartcity.eu](http://www.geosmartcity.eu)

Figure 4.1.A: the front page of the GeoSmartCity leaflet (Dutch version)

## Samenvatting

Voor Smart City-management moeten geografische gegevens van heel wat heterogene bronnen worden geïntegreerd, gaande van pan-Europese gegevenssets (bijvoorbeeld de open gegevensinfrastructuur geregeld door de richtlijnen voor overheidsinformatie en INSPIRE) tot plaatselijke gegevens met een 'zelfgemaakte' semantiek. Om geografische informatie (geodata) te analyseren en visualiseren via deze gegevenssets, moeten de gegevens geïntegreerd zijn op het vlak van formaat, toegangprotocol, referentiesysteem voor omzetting en coördinatie en gegevensharmonisatie.

Het Europese ICT-PSP-project GeoSmartCity werkt aan een overkoepelend platform dat open geodata kan publiceren en gespecialiseerde diensten kan bieden op basis van serviceprotocollen volgens open standaarden. Het platform vertrekt van de beschikbaarheid van open geodata via open standaarden en biedt de mogelijkheid deze te integreren met andere openbare of private gegevens en zo de gespecialiseerde diensten te ontwerpen die nodig zijn voor de implementatie van de twee voorgestelde Smart City-scenario's: Green Energy en Underground.

Het resultaat is een consistente verzameling van GI die ruimtelijk en semantisch overkoepelend kan worden geanalyseerd om een exact en actueel beeld te krijgen van de respectievelijke probleemgebieden.



## Scenario's

GeoSmartCity stimuleert de creatie van toegevoegde waarde door stedelijke open data te integreren met gegevens van derden (open of privé) en crowdsourced gegevens. De exploitatie van heterogene (open) geodata is mogelijk dankzij de combinatie van verschillende geconsolideerde standaarden (gekoppelde gegevens, INSPIRE, Sensor-gegevens, GNSS), waardoor gegevensverstrekkers uit verschillende sectoren openlijk kunnen samenwerken en een brede waaier van gebruikersgerichte toepassingsscenario's kunnen uitwerken. GeoSmartCity implementeert twee scenario's, waarin 11 pilootprojecten worden ontwikkeld als voorbeeld en model voor andere Smart City-toepassingen.

### Green Energy-scenario:

Om beleidsmakers voor openbare energie te steunen, om het beheer van hernieuwbare energieproductie in steden te vergemakkelijken, om het gebruiksvriendelijker maken van gebouwen te promoten (gebouwen zijn goed voor 40% van al het energieverbruik) ter ondersteuning van de energietransitiestrategie, om de CO<sub>2</sub>-uitstoot terug te dringen en om een lokale energiebesparende economie te ontwikkelen.

Het Green Energy-scenario wil de Covenant of Mayors steunen.

### Stakeholders en begunstigen:

- Overheidsdiensten
- Nutsbedrijven, energieproducenten, makelaars en leveranciers
- Kmo's in de energiesector
- Architecten, stads- en energieplanners
- Universiteiten, onderzoekscentra, opleidingsinstellingen
- Burgers en consumenten



### Underground-scenario:

Om een geïntegreerd beheer van ondergrondse nutsvoorzieningen in steden te ondersteunen in verschillende sectoren met dezelfde werkomgeving, door dezelfde geo-informatie te delen, aangemaakt en/of beheerd door openbare instellingen, en door de samenwerking tussen private en openbare instanties te bevorderen bij de planning en het beheer van stadsinfrastructuur.

Om ondergrondgegevens te integreren met territoriale gegevens en zo activa te zoeken in risicozones (hydrogeologische, hydraulische, seismische ...), die specifieke monitoring en controle nodig hebben.



### Stakeholders en begunstigen:

- Gemeenten, overheidsdiensten
- Nutsbedrijven (gas, water, energie, telecomunicatie)
- Territoriale bedrijven (bv. bedrijven die instaan voor graafwerken en wegonderhoud)
- Milieuagentschappen
- Civiele bescherming
- Burgers

Figure 4.1.B: the back page of the GeoSmartCity leaflet (Dutch version)



## 5 GeoSmartCity posters

Different posters will be issued along the project, according to the scope of the event for which it has to be designed.

A first version of the GeoSmartCity poster has been prepared on the occasion of the first workshop and the kick-off meeting. One general poster, presenting the project rationale and objectives, has been accompanied by other 11 posters (one for each pilot) which reports about the aims and the foreseen development of each local application of the GeoSmartCity infrastructure.

For the INSPIRE Conference 2015, that took place in Lisbon in May 2015, a new general poster has been prepared

**GeoSmartCity**

Open geo-data for innovative services and user applications towards Smart Cities

**Overview**

GeoSmartCity contributes to the Smart City implementation by establishing a cross-platform, re-usable and open hub able to publish open geographic information and to provide specialized services based on open standards service protocols.

The potentiality of the GeoSmartCity cross-platform toolkit will be demonstrated through the development of 11 operative and re-usable pilot cases in the frame of two scenarios: **Green-Energy** and **Underground**.

**Green-Energy scenario**

The Green Energy scenario is strictly related to the **Covenant of Mayors**. The Covenant of Mayors (CoM) is the mainstream European movement involving local and regional authorities, voluntarily committing to meet and exceed the European Union 20% CO2 reduction objective by 2020.

Together with Transportation, Energy performance of buildings represents the main focus of the overall scenario. Buildings are indeed one of the main CO2 emission sources to be considered by Municipalities and other Public Authorities aiming to reduce the overall amount of energy needed at urban level.

**Underground scenario**

In the case of the Underground scenario the common thread has been the focus on the following key aspects for the underground management:

The improvement of the efficiency of the **underground network management** (mainly in terms of integration of resources from different actors) and the **citizen involvement** (crowdsourcing mobile apps).

The use cases of this scenario refer to real operative tasks using underground data that take advantage of this integrated work environment.

**City Pilots and Scenarios**

Map showing City Pilots and Scenarios across Europe:

- Turku
- South Moravian Region
- Stara Zvezka (Kataevic area)
- Raggu nell'Emilia
- Genova
- Marseille
- Flanders Region
- Comarca of Pamplona
- Girona
- Océbas
- Océbas

**UNDERGROUND - GREEN ENERGY**

**The GeoSmartCity "Hub"**

The added value of the GeoSmartCity technical assets is that they can be easily extended to support different scenarios other than the two addressed by the project.

The "Hub" is a software solution that enable integration of spatial and non-spatial data across a government organization or enterprise. This re-usable cross-platform is able to publish open geographic information and to provide specialised services based on open standards services.

**Innovative services**

GeoSmartCity provides a Services platform to view, analyse and extract data from the GeoSmartCity Data "Hub".

The GeoSmartCity services are related to all data management aspects: Ingestion, discovery, view and access. Specialised services will be designed based on requirements specified for Green Energy and Underground scenarios and identified by related pilots. The overarching objective of the specialized services is to provide common re-usable functionalities.

**The Partnership**

Logos of partner organizations: European Commission, iren, SINERGIS, INTERGRAPH, capitan viok Internet, Epsilon, URM, tracasas, ENERGY, TURUN AMMATTIHOIKKIOKESKUS, TURKU UNIVERSITY OF APPLIED SCIENCES.

GISIG - Geographical Information Systems International Group  
www.gisig.eu

www.geosmartcity.eu

Figure 5.1: The Poster prepared for the INSPIRE Conference 2015 in Lisbon

## 6 GeoSmartCity Newsletters

An effective mean for communicating the project results, news and achievements are the GeoSmartCity Newsletters. They are electronically edited and automatically sent to all members of the GeoSmartCity mailing list every six months.

Apart from the electronical distribution, the Newsletters are also available through the project web site.

In this second year one issue has been produced:

Newsletter No/Date	Contents
News 3 / February 2016	<b>GeoSmartCity results at the end of the second year</b>



**Figure 6.1: Newsletter n. 3**

The GeoSmartCity newsletter is managed by MailChimp<sup>4</sup>, a very popular online email marketing solution. The newsletter Subscription Form is available on the project website.

At 29/02/2016 the number of subscribers for the GeoSmartCity online newsletter is 204.

<sup>4</sup> <http://mailchimp.com/>

## 7 Workshops

During the project, different dissemination events are planned to be organized at international and national level to raise awareness about the project objectives and results.

The dissemination workshops, organized in the second year, had the purpose to raise awareness about the project and first results.

Date	Title/Topic	Organized by
25 April, 2015	UDMS and GeoSmartCity Workshop “Open geo-data for innovative services and user applications towards Smart Cities”, Ghent (BE)	VMM/UDMS (TICASS subcontractor)/GISIG
25 May, 2015	GeoSmartyCity at INSPIRE conference 2015, Lisbon (PT)	GISIG/SINERGIS
7 October, 2015	GeoSmartyCity National Workshop, Girona (ES)	SIGTE - UdG

See Annex I for the announcement, the list of participants and the agenda for each of the workshops.

Proceedings for all the workshops are available at: [www.geosmartcity.eu/publications](http://www.geosmartcity.eu/publications)

## 8 Dissemination activities

This chapter introduces the dissemination actions that the project partners have carried out in relation to the different sectors of interest.

See also Annex II for the detailed dissemination activities.

### Dissemination at European level

GeoSmartCity has been invited by the Commission at delivering a project presentation at the Conference in Brussels on 3<sup>rd</sup> of March 2016 “From ISA to ISA<sup>2</sup>” within the session “Ensuring the last link between public administrations, businesses and citizens”.

In a clustering approach with the eENVplus project, GeoSmartCity leaflets were distributed and a short presentation of the project objectives have been delivered, by **GISIG**, during:

- Eionet NRC EIS Meeting, Copenhagen (DK) on 26/11/2015
- eENVplus Final Conference, Roma (IT) on 03/12/2015

Moreover **GISIG** contributed at the organisation of the GeoSmartCity workshop at INSPIRE Conference 2015 in Lisbon.

At the end of 2014, **SINERGIS** proposed the organization of the “Urban Energy workshop” at the INSPIRE + Geospatial World Forum conference, held in May 2015 (Lisbon, PT); several experts in energy simulation and geodata modelling were invited to discuss about “energy-related” geodata in the relationship to CityGML standard and INSPIRE rules.

Moreover, thanks to the membership of the IET Climate-KIC, SINERGIS was invited to several cross-projects meetings with projects like ACCENT (coordinated by ENGIE), RES H/C SPREAD and EMPOWERING, SIM-STADT, ... as well as through the pro-active involvement in the "CityGML Energy ADE" working group (coordinated by HFT Stuttgart).

In September 2015, within the framework of the "Pioneers into Practice" initiative (Climate-KIC) SINERGIS hosted two international grantholders from Hungary (IBM) and involved them in disseminating activities of the project at (their) national contexts.

**AVINET** has contributed to the dissemination of GeoSmartCity on European level through both conferences and cross-project meetings. AVINET provided a presentation on the architecture and concept of the GeoSmartCity Hub at the Green Energy workshop of the INSPIRE/WGF conference in Lisbon 2015 and later discussed the solution architecture at a workshop in SDI4Apps, a project that shares a number of similarities with GeoSmartCity and whose technical solution output it similar to that of GeoSmartCity.

**EPSIT** held two webinars in which presented the two data models developed for the two project scenarios:

1. GeoSmartCity Webinar: Data transformation with HALE – Green Energy scenario, on 05.06.2015<sup>5</sup>
2. GeoSmartCity Webinar: Data transformation with HALE - Underground scenario, on 29.06.2015<sup>6</sup>

and a third webinar "How to manage Code lists according to INSPIRE - An encoding example using HALE OpenSource"<sup>7</sup>, on 24.06.2015, in which provided instructions useful for both GSC scenarios.

**Tracasa** has contributed to the dissemination of GSC at European level by participating in the WS organised by the coordinator GISIG together with some other projects in a clustering approach ("*A Clustering Approach to eENVIRONMENTAL Services for Advanced Applications and Capacity Building within INSPIRE and SEIS*"). Additionally, the project and the Underground scenario was presented during INSPIRE Conference at INSPIRE Underground slot ([LINK](#))

In June 2015 Geosmartcity project was presented by **CdG** at the workshop "*International Week 2015 – Smart city and open Data*". The workshop was held at the Faculty of Economics of the University of Genoa in collaboration with the Dauphine University of Paris.

Additionally, Tracasa participated in the 52°North Sensor Web Community Workshop 2015 celebrated in Münster, 23rd November 2015. Tracasa presented the "**Dynamic Loading of Sensors in Geosmartcity Project**", where the Geosmartcity project was explained, and the perspective of the Underground services and more specifically of the sensor services was shared.

**Ticass** attended the conference „Enhancing the Integrated Maritime Policy in the Mediterranean basin" organized by the Molise Region in the framework of the COM&CAP MarInA-Med project held on 3<sup>rd</sup> and 4<sup>th</sup> March 2015 at the Committee of the Regions, Brussels (BE). Ticass took part to the conference disseminating GeoSmartCity project activities and preliminary results, distributing dissemination material. The conference, bringing together representatives of EU and EuroMed Institutions and Assemblies (DGs of the European Commission, Members of the European Parliament, the Committee of the Regions, etc.), local and regional authorities, Mediterranean networks, universities and research centers, the private sector as well as the representatives of transnational cooperation projects was very interesting by the networking point of view. More than 120 people attended the event.

**Ticass** attended the seminar "Ports towards Accessibility and Sustainable Maritime Transport in the Med", organized by the Intermediterranean Commission of the CPMR in the frame of the COM&CAP MarInA-Med

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<sup>5</sup> <https://youtu.be/BYYUFC0PxqM>

<sup>6</sup> <https://youtu.be/1wIWUw2oYxs>

<sup>7</sup> <https://youtu.be/08XbdcPqeOA>

project and in collaboration with the Junta of Andalucía, the University of Malaga and the Port Authority of Malaga, held on 13<sup>th</sup> and 14<sup>th</sup> April 2015 in Malaga (SP), to discuss several aspects of ports and their integration/relation with the city planning and the city's quality of life. Ticass took part to the conference disseminating GeoSmartCity project activities and preliminary results, distributing dissemination material. More than 70 people attended the event, including companies and organizations involved in different research and cooperation projects. Synergies and interests have been registered for GSC activities.

**Ticass** attended the "Challenges for the Integrated Maritime Policy for the Mediterranean Sea" conference organized by the Government of Catalonia on 26<sup>th</sup> May 2015 in Barcelona (SP). Ticass took part to the conference disseminating GeoSmartCity project activities and preliminary results, distributing dissemination material. More than 100 people attended the event. Complementarities between different projects and GSC project have been registered.

**Ticass** attended the Kick off meeting of the project "MARUEEB: Master Degree in Innovative Technologies in Energy Efficient Buildings for Russian & Armenian Universities and Stakeholders" on 16-17-18 February 2016, in Genova (Italy). The Erasmus + project, involving 20 partners coming from seven different countries, deals with the establishment and development of a new Master on "ENVIRONMENTAL PROTECTION AND ENERGY EFFICIENT BUILDINGS" in Russian and Armenian Universities, according to features and learning outcomes delivering graduates environmental and "green buildings" technological issues' skills. Ticass had an oral presentation at the meeting, introducing itself and its activities including GSC project information. Complementarities and interests came out especially regarding the green energy scenario. Further cross fertilization opportunities between the two projects will be exploited in the next months.

The GeoSmartCity project and **Turku** pilot under title "Building Green City with Green Choices in Traffic" has been presented by Olli Ojala, TUAS, in eChallenges e-2015 conference in Vilnius, Lithuania, in "Future Internet and Green Energy" session. The conference is the twenty-fifth in a series of annual technology research conferences supported by the European Commission and hosted by national governments. eChallenges attracts participation from senior representatives of leading government, industry and research organizations around the world. eChallenges e-2015 provides an international forum to foster ICT related entrepreneurship and innovation, share experiences, increase awareness of innovative applied ICT applications and research results, and identify opportunities for research collaboration under Horizon 2020, in the context of the new Work Programme for 2016 - 2017.

In addition to the GeoSmartCity workshops organized on the Geospatial Forum/INSPIRE Conference Lisbon, **VMM** presented the GeoSmartCity project in the Geohydro session on 27 May 2015 in the presentation "INSPIRE Data Specs for US as Standard for Information Exchange". The link between the new sewage data exchange model based on INSPIRE data specifications with the GeoSmartCity underground data model was explained.

**GEOBID sp. z o.o.** (Andrzej Zygmuniak) presented the GeoSmartCity project in the context of a Scientific conference which took place on November 25, 2015 in Gliwice (Poland).

During a poster session organized within the framework of the *Mining industry of sustainable development* conference there were presented outcomes of work concerning transformation of geospatial dataset file structure. A paper titled *A process of transforming the file structure concerning geospatial datasets with the use of HALE application* and related to the poster was published afterwards in a conference publication.

Presented study was based on experience gained while conducting transformation of database related to utility networks proceeded as one of the GeoSmartCity project tasks. The file was of structure determined according to the data model presented in Polish legal acts and the objective was to make it compatible with database provided in accordance to the data model presented in the Technical Guidelines issued to the INSPIRE Directive. This could serve as an example how to manage such transformations in other cases and be an inspiration when it comes to geospatial data gathered and processed within the mining industry.



The GeoSmartCity project has been presented by the **University of Girona** at FOSS4G-EU, the most important Free and Open Source Software for Geospatial event in Europe. The FOSS4G-EU was carried out in Como (Italy) from 14th to 17th July 2015.

**MUNICIPIA** has presented the GeoSmartCity project at the “AGILE 2015 18th AGILE International Conference on Geographic Information Science”, held in Lisbon, 9-12<sup>th</sup> June 2015.

### **Dissemination at National level**

GeoSmartCity has been involved within the activities concerning the technical rules on geospatial data of the Agenzia per l'Italia Digitale (the Italian authority for the National Digital Agenda). Specifically, GeoSmartCity is participating at the Working Group devoted to the definition of the standards related to the “Underground Networks” (GdL8 “Reti di Sottoservizi”), coordinated by Regione Lombardia, participated by **GISIG**, **EPSIT** and **Municipality of Genova**.

**SINERGIS** had the opportunity to disseminate the GeoSmartCity project in several national-wide events.

The major ones during the second year were:

- AMFM national conference (Livorno, July 2015)
- Smart City Exhibition (Bologna, October 2015) with Reggio-Emilia Municipality

**AVINET** is first and foremostly an entity that contributes technical expertise to the GSC consortium. However, the company's affiliation with its mother concern, the Asplan Viak group, means that AVINET indirectly has a vested interest in many of the applications of both GeoSmartCity macro scenarios. AVINET has sought to maximize the company's benefits from the projects by running awareness events between technical solution developers and green energy/underground subject matter experts in Asplan Viak.

AVINET is actively seeking opportunities to adopt GSC technological results among the company's existing customer base. As an early probe, AVINET informed of this both through targeted one-on-one meetings as well as through the company's annual user conference.

**EPSIT** published a news<sup>8</sup> on Geoforall on-line magazine, announcing the GeoSmartCity invited presentation at the Conference in Brussels on 3<sup>rd</sup> of March 2016 “From ISA to ISA<sup>2</sup>” within the session “Ensuring the last link between public administrations, businesses and citizens”.

**Tracasa** participated in the SDI annual Iberian congress celebrated in Sevilla, 4<sup>th</sup> – 6<sup>th</sup> November 2015. The dissemination activities included an interview where the basic principles of Geosmartcity and relation with INSPIRE were mentioned, and dissemination material distribution and networking.

From November 2015, Tracasa is also involved in the Spanish group of standardization (AENOR) for Smartcities, more specifically in the subgroup of Infrastructures. Its participation is based on the GSC background with the objective to align the new standards in smartcity with those from digital geographic information standardization group in which Tracasa is also involved.

GeoSmartCity, through **TUAS**, has sponsored Open Finland Challenge 2015 competition for digital innovations promoting open society. New mobility solutions challenge was addressed to both national and Southwest region competitors. The competition entries had to fulfill at least one of the following preconditions of openness: use open data, knowledge or an data interface which is either Finnish or is relevant from the perspective of Finland, the entry is published online (e.g. GitHub) as open source or with an open license, it promotes open governance or develops public services, for example by lowering the workload of citizens or

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<sup>8</sup> [www.geoforall.it/kaxrc](http://www.geoforall.it/kaxrc)

the government or by enabling new or improved public services. There were over 150 competition works submitted of which 12 were selected to final round in Southwest region. New Mobility category special awards (Parking by GeoSmartCity and Using open public transport data by Turku Region Public Traffic) were handed to three entries: Gamified Mobility by Kaj-Michael Lang, EcoCommute by Essi Airaksinen, Zuhair Iftikhar & Saara Ihanamäki and Points by Daren Tuzi, Otto Liutonen & Timo Siukkola.

**VMM** and **GISIG** organised together with the local department of UDMS and the City of Ghent a UDMS and GeoSmartCity Workshop: Open geo-data for innovative services and user applications towards Smart Cities. Besides the introduction of the GeoSmartCity project and main objectives, international keynote speakers from UDMS and speakers from national public authorities introduced different projects about Smart Cities and Urban data.

**GEOBID sp. z o.o.** took part in a Kalisz XVIII National Technical-Scientific Conference: “Current problems and perspectives of cadaster development considering The Integrated Real Estate Information System (pol. ZSIN)” which was organized on November 19-20, 2015 in Ostrow Wielkopolski (Poland).

During the conference Krzysztof Borys and Krzysztof Kaput presented in general all main goals of the GeoSmartCity project focussing on possible ways of exploiting HALE application to harmonize datasets.

GeoSmartCity project has been presented by **Municipality of Reggio Emilia** at “Smart City Exhibition”, organised by Bologna Fiere on 14-16th October 2015 in Bologna. “Smart City Exhibition” aims at continuing its path for the enhancement of cities and smart communities as enabling platforms, new governance patterns, new services and new practices of collaboration among citizens by focusing on the raw material of innovation: information.

GeoSmartCity project has been presented by **Municipality of Reggio Emilia** organised by Regione Emilia Romagna on 13th October 2015 in Bologna. The event called “Data harmonization towards INSPIRE – Examples and experiences from European projects” dealt with the passage from Buildings Registry to pseudo-INSPIRE database "Buildings" with FME.

**Municipia** as presented the GeoSmartCity Project at the conference ‘Oeiras | A Smarter Future - Let's do it', held in Oeiras at Centro de Congressos do Taguspark, on the 29<sup>th</sup> September 2015.

### **Dissemination at City level**

At city level, **SINERGIS** had the opportunity to disseminate the project mainly in the Emilia-Romagna region, within focus group organized by local stakeholders (ASTER, Regione Emilia-Romagna, ARPAE, ANCI) in the framework of the new “Regional Energy Plan”, where GeoSmartCity (Green Energy scenario) has been introduced also together with representatives of Reggio-Emilia Municipality.

**EPSIT** participated on 25.09.2015 to the event “The European Researchers’ night” held at the University of Calabria Campus, aimed at sharing among the researchers the results of research projects and initiatives. EPSIT, as one of the local companies involved in research and development activities, was invited to present the research projects and activities it is involved in. At the EPSIT stand GeoSmartCity dissemination material was widely distributed.

**Municipality of Genova** and Liguria Region gave the patronage at a mid-day workshop organized by **Ticass** and **IREN** on 18th December 2015, to promote some European Projects in progress into the Smart City field. A dedicated time slot of the event’s scheduling was reserved to GeoSmartCity project involving **GISIG** as speaker. The workshop represented an interesting opportunity to share and analyze together with institutions and citizenship the work and the results of five European projects dealing with territorial management, underground and water infrastructure, port and city integration. More than 30 people attended the workshop, including utility’s practitioners and managers, regional and municipal functionaries, University’s researchers, project managers.



**Ticass** has been invited by the Genova Smart City association to take part to the thematic work groups. During the meeting of the group dedicated to the “resilience”, held on 20 October 2015 in Genova (Italy), Ticass introduced the GSC activities to the participants. More than 20 people attended the event including researchers, municipal functionaries and company’s representatives.

**TUAS** has organised two open workshops “Crowd sourcing parking areas information” 18.1.2016 and “IoT and possibilities in GSC Green Routing” 2.2.2016 for ICT experts with the background in building mobile

**VMM** organised a meeting (on 2 April 2015) in the city of Aalst, the main local partner of VMM within GeoSmartCity. During the meeting the progress of the project was discussed together with an overview of the activities of other partners and the training modules that will be developed in the future. The meeting was attended by different employees of the city of Aalst who are responsible for GIS, data availability and/or the sewer system (operational, data technical etc.) within the city of Aalst.

**GEOBID sp. z o.o.** took part in a XXIX Technical training course „Info-Ośrodek”. It was organized on November 4-6, 2015 in Ustroń (Poland).

During the second day of the meeting there was a presentation conducted by Krzysztof Borys. It was aimed at explaining main objectives of the GeoSmartCity project. Focusing especially on the data harmonization process, Krzysztof Borys showed how the knowledge and experience gained when fulfilling the project tasks in that field can be used to harmonize geospatial data between companies specialized in a particular field of the operation (e.g. water utility networks) and Geodesic Documentation Centers (which gather all the data obtained during any kind of field surveys).

### Green Energy scenarios

GeoSmartCity project has been dealt by **Municipality of Reggio Emilia** during a technical meeting organised by “SUNSHINE” project on 25th September 2015 in Ferrara. An important exchange of experiences has been done between the projects on energy assessment of buildings at urban scale.

GeoSmartCity project has been dealt by **Municipality of Reggio Emilia** during a technical meeting organised by “ACCENT” project on 19th October 2015 in Reggio Emilia. An important exchange of experiences has been done between the projects on energy assessment of buildings and a draft agreement on energy data exchange has been initiated.

GeoSmartCity project has been dealt by **Municipality of Reggio Emilia** during a technical meeting organised on 9th December 2015 in Genova with the colleagues who work on GeoSmartCity project. An important exchange of experiences has been done between the partners on energy data and georeferencing data.

GeoSmartCity project has been dealt by **Municipality of Reggio Emilia** during the final conference organised by “SUNSHINE” project on 14th January 2016 in Bologna. Networking activities have been done among the projects on energy assessment of buildings.

### Underground scenarios

**Intergraph** GSC project and open data principles were shortly mentioned during key note “Open data of Prague” by Jiří Čtyroký (Prague institute of planning and development) at national geospatial conference Geoforum 2015, on September 21 2015, near Brno, in the Czech Republic. The conference is annual national geospatial conference.

**Ticass** organized and managed four local seminars in strict collaboration with **Municipality of Genova (CDG)** and the SME ITEC-Engineering (active in the underground asset management), involving the three

following professionals associations: engineers, architects and geologists. The three association published seminars leaflet on their websites and through their mailing lists spreading project's information to the relative communities (<http://www.formazioneconi.it/>; <http://www.ordineingegneri.genova.it/>; <http://www.ge.archiworld.it/>; [www.geologiliguria.it](http://www.geologiliguria.it/)). The three associations showed their interest into the project approach and contents and they recognized professional training credits (CFP) to the above seminars. More than 70 professionals attended to the seminars held in Genova on 19<sup>th</sup> and 26<sup>th</sup> of June 2015 and on 3<sup>rd</sup> and 10<sup>th</sup> of July 2015 at Ticass headquarters.

**GEOBID sp. z o.o.** took part in a meeting organized in the City Hall of Ruda Śląska on August 25, 2015.

Krzysztof Borys from Geobid met with Grzegorz Ogórek - geodesist of the city of Ruda Śląska. The meeting was connected with taking form the Municipality the data needed to test the data harmonization with HALE.

Also there was a discussion during the meeting about problems which can occur because of the planned changes in the Polish law.

**GEOBID sp. z o.o.** took part in a meeting organized in the City Hall of Ruda Śląska on January 27, 2016.

The meeting was organized due to the necessity of changing the structure of GESUT (Geodesic Register of Utility Networks) database which is to be done in accordance to the newly presented legal act – the decree issued by Ministry of Administration and Digitalization on October 21, 2015 concerning GESUT databases at the local and national level.

There was made an agreement that the Pilot (the City of Ruda Śląska) will exploit for the GeoSmartCity purposes appropriate datasets reorganized and processed according to the abovementioned new regulations which came into force on January 1, 2016. However, due to the limited funds, the Municipality will be able to make such redefined datasets available only in reference to Kochłowice quarter instead of the whole area of the city.

**GEOBID sp. z o.o.** wrote an article titled "Utility comparison between data model provided for GESUT and the one for utility networks as part of Technical Guidelines issued to the INSPIRE Directive" which was published in "Motrol. Commission of motorization and energetics in agriculture".

This is a scientific article published in an international journal on operation of farm and agri-food industry machinery by P. Sikora PhD and A. Zygmuniak MS. The article provides a comparison between data model provided within Polish decree describing the way in which Geodesic Register of Utility Networks shall be organized and managed, and the one described in Technical Guidelines issued to the INSPIRE Directive.

Authors described the most important differences visible when considering approach on managing geospatial data related to utility networks realized in Poland in comparison to the one demanded by the EU regulations. These are a serious threat for the interoperability of Polish geospatial databases when it comes to share it with European partners.

## Annex I – GeoSmartCity workshops

### GeoSmartCity National Workshop, Ghent, 24<sup>th</sup> April 2015

**Title:** Open geo-data for innovative services and user applications towards Smart Cities

#### Announcement

\*\* In Dutch \*\* - e-mail to list of contacts by VMM and UDMS (City of Ghent)

Beste,

Graag nodigen we u uit voor de **UDMS en GeoSmartCity Workshop: "Open geo-data for innovative services and user applications towards Smart Cities" op vrijdag 24 april 2015 in het STAM te Gent.**

De workshop is gratis en start om 9u30 (9u registratie), na afloop van de workshop om 15u bieden de stad Gent en UDMS de mogelijkheid tot een gratis bezoek aan het museum en de tijdelijke tentoonstelling 'Maquettes. Verbeelding op schaal.' (<http://www.stamgent.be/nl/activiteiten/detail/p/maquettes-2>).

De agenda en het registratieformulier met meer praktische info vind U in bijlage. Gelieve om praktische redenen te **registreren voor 19 april 2015** (via het registratieformulier in bijlage).

Indien u denkt andere geïnteresseerden te kennen, mag u deze uitnodiging aan hen overmaken.

Wij hopen u alvast te ontvangen.



#### Translation:

Dear,

We invite you to the UDMS and GeoSmartCity Workshop: "Open geo-data for innovative services and user applications towards Smart Cities" on Friday, April 24th, 2015 at STAM Ghent.

The workshop is free and starts at 9:30 am (9 am registration), after the workshop at 15h Ghent and UDMS offer the possibility of a free visit to the museum and the temporary exhibition "Models. Imagination to scale."  
([Http://www.stamgent.be/nl/activiteiten/detail/p/maquettes-2](http://www.stamgent.be/nl/activiteiten/detail/p/maquettes-2)).

The agenda and the registration form with more practical information can be found in the attachment. We ask you to register, for practical reasons, within April 19, 2015 (via the registration form attached).

If you think you know other interested parties, would you please forward this call.

We hope to receive the registration.

## List of participants

No.	Name	Surname	Organisation
1	Mohamed Amin	Alub Abdallah	MSA University
2	Katia	Beringhs	VMM
3	Rudi	Boudry	City of Ghent
4	Maria	Cabello	TRACASA
5	Piergiorgio	Cipriano	SINERGIS
6	Volker	Coors	University of Applied Sciences, Stuttgart
7	Sven	Daese	City of Ghent
8	Michiel	De Keyzer	PwC Enterprise Advisory cbca/srcl
9	Mathias	De Schrijver	Flemish Government
10	Karel	De Visscher	VMM
11	Koen	De Witte	VMM
12	Juliette	Dujardin	VMM
13	Claire	Ellul	University College London
14	Tiina	Ferm	TUAS
15	An	Heirman	GIM nv
16	Adam	Kaput	GEOBID
17	Krzysztof	Kaput	GEOBID
18	Petr	Kubicek	Intergraph CZ
19	Robert	Laurini	UDMS
20	Giacomo	Martirano	EPSIT
21	Mario	Matthys	City of Ghent
22	Helena	Mecha	GEOBID
23	Katleen	Miserez	VMM
24	Olli	Ojala	TUAS
25	Jonathan	Peeters	VMM
26	Philippe	De Maeyer	University Ghent
27	Hugo	Poelman	European commission, DG Regional and Urban Policy
28	Justyna	Prukop	GEOBID
29	Lieven	Raes	Dept. Informatie Vlaanderen
30	Bart	Rosseau	City of Ghent
31	Massimo	Rumor	UDMS
32	Giorgio	Saio	GISIG
33	Thimo	Thoeve	City of Ghent
34	Noël	Van Herreweghe	Vlaamse overheid
35	Stefaan	Van Mieghem	VMM
36	Jo	Van Valckenborgh	AGIV
37	Dirk	Van Wittenberghe	City of Ghent
38	Joris	Verbeken	Stad Aalst
39	John	Vermaut	City of Ghent
40	Sisi	Zlatanova	TuDelft UDMS

## Agenda

<b>UDMS and GeoSmartCity Workshop</b>	
9:00 - 9:30	Registration
9:30 – 9:45	Welcome (City of Ghent, UDMS, GeoSmartCity and VMM) – <i>Massimo Rumor (president UDMS)</i>
<b>UDMS session</b>	
9:45 – 11:00	<b>Keynote speeches by UDMS</b> <ul style="list-style-type: none"> <li>- Citizen Science and the Science of Cities - Claire Ellul (University College London)</li> <li>- Urban Energy Demand and Supply Simulation Based on 3D City Models - Volker Coors (University of Applied Sciences, Stuttgart)</li> <li>- Urban data - Hugo Poelman (European commission, DG Regional and Urban Policy)</li> </ul>
11:00 – 11:15 Coffee break	
<b>GeoSmartCity session</b>	
11:15 - 12:00	<ul style="list-style-type: none"> <li>- GeoSmartCity: Presentation of the project – Giorgio Saio (GISIG)</li> <li>- Application scenarios and Pilots (Underground and Green Energy) – María Cabello (TRACASA)</li> <li>- The GeoSmartCity technical approach (SINERGIS-AVINET)</li> </ul>
<b>Underground data model</b>	
12:00-12:30	<ul style="list-style-type: none"> <li>- The GeoSmartcity Underground Data model and Data harmonization– Giacomo Martirano (Epsilon Italia)</li> <li>- Flemish Data model for the Utilities-Sewage – Katia Beringhs (VMM)</li> </ul>
12:30-13:30 Lunch	
<b>National Belgian experience towards Smart Cities</b>	
13:30 -14:30	<ul style="list-style-type: none"> <li>- Philippe De Maeyer (University Ghent)</li> <li>- Open data and e-strategy - Bart Rosseau (City of Ghent)</li> <li>- “Ghent in Multi-D” – Mario Matthys (City of Ghent)</li> <li>- 3D-GRB – Jo Van Valckenborgh (AGIV)</li> </ul>
<b>Networking and conclusions</b>	
14:30 - 15:00	Exploitation towards Thematic Communities, Training Framework and stakeholders involvement - G. Saio (GISIG) Discussion and workshop conclusions

## Proceedings:

Workshop's proceedings are available on the web site:

<http://www.geosmartcity.eu/publications/geosmartcity-national-workshop-ghent/>

## Event outcomes:

The scope of this workshop was to present some aspects towards Smart Cities and especially some open geo-data for innovative services and user application.

The workshop was opened by Mario Matthys of the City of Ghent, Giorgio Saio of GISIG and by Robert Laurini, vice-president of UDMS.

In the UDMS session, Claire Ellul, from the University College London, gave an overview about “Citizen Science and the Science of Cities” in which she defined a smart city as a city with digital overlay characterized by the 4 V’s (Volume, Velocity, Variety and Veracity). Then she detailed some aspects about citizen participation. Then Volker Coors from the University of Applied Sciences, Stuttgart delivered a paper dealing with urban energy demand and supply; he proposed to design simulation as a new type of service. Finally Hugo Poelman of the European Commission, DG Regional and Urban Policy, talked about urban global indicators.

After, there was a first specific GeoSmartCity session in which several papers were presented dealing with underground network management through intelligent service with various contributions from Spain, Italy and Belgium.

Then a second session was dedicated to 3D modeling and in-door wayfinding.

The workshop was closed after a discussion about the perspectives in which Robert Laurini, as editor of a new series of books on smart cities (WILEY-ISTE publishing company) opens the opportunity to write a book on smart cities, perhaps on smart underground networks.

The relation between UDMS and GeoSmartCity was strengthened during this workshop. Keynote speakers of UDMS presented different international projects, local authorities presented national/regional (Flanders) projects. The international starting point helped the local stakeholders to identify opportunities and enlarge their view on urban data and smart cities. For all it was an opportunity to compare national and international strategies.

Of course the GeoSmartCity sessions also contributed to identify new opportunities. More than that, the GeoSmartCity session really showed how to get to work. With on the one hand, practical examples of the underground data model using existing standards to guarantee usefulness and understanding. On the other hand, the technical approach showed how different components could work together working with data to create smarter cities. Finally the explanation of the training framework made sure that everyone got the chance of learning from experiences within the GeoSmartCity project. The local stakeholders can use this information to encourage policy makers to get to work on the Smart City concept.

## GeoSmartCity Workshop at ISPIRE Conference 2015, Lisbon, 25 May 2015

**Title:** The Urban Energy workshop - “GeoSmartCity Hub: a data platform for supporting the Covenant of Mayors initiative”

### Announcement

The objective of the workshop is twofold:

- to discussing about the need for open and harmonized spatial data to support energy policies and local energy plans (e.g. Covenant of Mayors): the GeoSmartCity “hub” represents a set of services to publish, discovery and access detailed information about spatial data related to energy action plans at local scale
- to present the OGC CityGML Energy Application Domain Extension (ADE) developed by an international and interdisciplinary working group, aiming to facilitate and promote urban energy modelling

The first part of the workshop is dedicated to the GeoSmartCity project ([www.geosmartcity.eu/](http://www.geosmartcity.eu/)), with the proposal for a reusable platform where to collect and share detailed and harmonised data, with spatial components related to specific themes like buildings, road networks and underground utility networks.

### List of participants

No.	Name	Surname	Organisation
1	Giorgio	Saio	GISIG
2	Francesco	Pignatelli	EC- JRC
3	MT	Borzacchiello	EC- JRC
4	Leire	Leoz	TRACASA
5	Maria	Cabello	TRACASA
6	Jeans Marie	Bahu	EIFER
7	Heiwo	Rudolf	M.O.S.S. Gmbh
8	Katia	Beringhs	VMM
9	Katleen	Miserez	VMM
10	Koen	De Witte	VMM
11	Fazilah	Mat Yatim	Tenaga nasional berhad
12	Ewa	Kiysocka	GUGIK, Poland
13	Vincenzo	Giannotti	IUAV University (IT)
14	Umberto	Di Staso	Fondazione Graphitech
15	Roman	Nouvel	HFT Stuttgart
16	Bart	de lathouwer	OGC
17	Piergiorgio	Cipriano	Sinergis



No.	Name	Surname	Organisation
18	Thorsten	Reitz	
19	Stefano	Menegon	ISMAR CNR
20	Foster	Mensah	CERSGIS University of Ghana
21	Benjamin	A. Quaye	Ministry of land and natural resources Ghana
22	Mathew	Ababio	Ministry of land and natural resources Ghana

## Agenda

- Welcome and introduction to the workshop (Piergiorgio Cipriano and Luca Giovannini)
- The GeoSmartCity project (Giorgio Saio)
- European Union Location Framework (Francesco Pignatelli)
- Importance of location information for energy policies (Albana Kona and Maria Teresa Borzachiello)
- The need for open and harmonized spatial data (Giacomo Martirano)
- The “hub” to support the monitoring of local energy plans (Stein Runar Bergheim)

## Proceedings:

Workshop’s proceedings are available on the web site:

<http://www.geosmartcity.eu/publications/geosmartcity-workshop-at-ispire-conference-2015-lisbon/>

## Event outcomes:

Giorgio Saio (GISIG, Italy - coordinator) introduced GeoSmartCity, a R&D project co-funded by EU in the CIP-PSP programme. One of the two scenarios of the project is related to “Green Energy”, and it involves 5 pilot cities that already signed the Covenant of Mayors (Girona, Maroussi, Oeiras, Reggio-Emilia, Turku).

One of the goals of GeoSmartCity is to provide a robust and open source service platform to facilitate the collection, integration, harmonization and delivery of urban geodata useful to monitor the performance and/or the real consumption of energy at urban level, with geodata based on buildings and transport network.

One of the members of the Advisory Board of the GeoSmartCity project is the Institute for Environment and Sustainability (IES) of Joint Research Centre (European Commission), represented by Francesco Pignatelli. He briefly presented the European Union Location Framework (EULF), one of the main actions of the ISA Programme<sup>9</sup>. EULF will complement existing INSPIRE Technical Guidance documents to facilitate the introduction and use of the infrastructure in new thematic sectors.

One of the first sectors considered by EULF is energy: the importance of location information for energy policies was presented by Maria Teresa Borzachiello (JRC-IES), with a presentation on a feasibility study report implemented by the JRC (yet to be published). The main findings of the study are:

<sup>9</sup> [http://ec.europa.eu/isa/actions/02-interoperability-architecture/2-13action\\_en.htm](http://ec.europa.eu/isa/actions/02-interoperability-architecture/2-13action_en.htm)

- Public authorities can rely only on basic reporting tools and aggregated data to perform their monitoring obligations related to energy efficiency
- There is a general need for a more harmonised approach to ease the burden for public authorities and to support the needs of policy makers
- The requirements from EPBD and EED are semantically richer than INSPIRE requirements (Buildings data theme): therefore there is the need for extension of INSPIRE data models
- Geospatial technologies can support energy efficiency policy, increasing the efficiency of data collection, elaboration and sharing, and the effectiveness of stakeholders' decision
- A future EULF pilot project is planned to address these points

Giacomo Martirano (Epsilon Italia, Italy) explained the need for open and harmonized spatial data in the context of the GeoSmartCity project: a first example of extension of INSPIRE “Buildings” data models has already been defined in the project for three different pilot cities (Reggio-Emilia, Maroussi and Oeiras) with new properties, codelists and values defined to fulfill energy-related use cases like the estimation of the energy performance or CO2 at building level, or the calculation of a “zero-balance energy” layer.

Stein Runar Bergheim (Asplan Viak Internet, Norway) concluded the presentation of GeoSmartCity project introducing the idea of a “hub” to support the monitoring of local energy plans, with a special focus on technological issues and open source for collecting, harmonizing, processing, describing and publishing geodata for “urban energy” policies.

The “hub” is seen as “a manageable geospatial platform”, with all geospatial modules based on Free Open Source Software (FLOSS) components, with the support of multiple data infrastructures, scalable and extensible to support larger volumes of data, easy to update and maintain, and with a clear separation of applications from data.

## GeoSmartCity National Workshop, Girona, 7 October 2015

**Title:** Open geo-data for innovative services and user applications towards SmartCities

### Announcement

The project aims to establish a final platform capable of integrating geographic information from various sources (local, European, crowdsourcing ...) through open standards under the Smart City scenarios:

- Green Energy: supporting decision making in the public related to energy (energy consumption at buildings, mobility ...)
- Underground: supporting the integrated management of the underground infrastructure of public services at local scale.

The project will test the platform through 11 pilot cases in Girona (Spain), Reggio Emilia (Italy), Maroussi (Greece), Oeiras (Portugal), Turku (Finland), Genoa (Italy), Region of Pamplona, Flanders (Belgium), South Moravian Region (Czech Republic) and Ruda Slaska (Poland).

GeoSmartCity is a project funded by the 'Competitive and Innovation Framework - CIP' program of the European Commission.

### List of participants

	Name	Surname	Organization	Country
1	Carmelo	ATTARDO	GISIG	Italia
2	Gianni	BARROTTA	Sinergis	Italy
3	Katia	BERINGHS	VMM	Belgium
4	Sara	BINI	Comune of Genova	Italy
5	Gemma	BOIX	SIGTE-UdG	Spain
6	Maria	CABELLO	Tracasa	Spain
7	Pere	CASAS VALL-LLOSERA	Ajuntament de Girona - Mobilitat	Spain
8	Sara	CEPOLINA	Ticass	Italy
9	Piergiorgio	CIPRIANO	Sinergis	Italy
10	Marco	D'ORAZI	Comune of Genova	Italy
11	Jaume	FELIU	Universitat de Girona. Dep. Geografia	Spain
12	Tiina	FERM	TUAS	Finland
13	Nadia	FERRARI	Comune di Reggio Emilia	Italia
14	Susanna	FERRARI	Comune di Reggio Emilia	italia
15	Francesca	GAMBARELLI	Comune di Reggio Emilia	italia
16	Marc	HAUPT	Exestudiant UdG	Spain
17	Adam	KAPUT	GEOBID	Poland
18	Petr	KUBICEK	Intergraph	Czech Republic
19	Giacomo	MARTIRANO	Epsilon Italia	Italia
20	Joao	MELO	Municipia	Portugal

21	Nelson	MILEU	Municipia	Portugal
22	Núria	MUSSONS OLIVELLA	UdG	Spain
23	Olli	OJALA	TUAS	Finland
24	Rosa	OLIVELLA	SIGTE-UdG	Spain
25	Tor Gunnar	ØVERLI	Asplan Viak Internet AS	Norway
26	Javier	RUIZ	Tracasa	Spain
27	Giorgio	SAIO	GISIG	Italy
28	Pep	SITJAR	SIGTE-UdG	Spain
29	Roman	SZTURC	Intergraph CS	Czech Republic
30	Anestis	TRYPITSIDIS	EPSILON INTERNATIONAL	Greece
31	Stefaan	VAN MIEGGHEM	VMM	Belgium
32	Lluís	VICENS	SIGTE-UdG	Spain
33	Andrzej	ZYGMUNIAK	GEOBID	Poland

## Agenda

9:00 - 9:30	Registration
9:30 – 9:45	Welcome
<b>GeoSmartCity session</b>	
09:45 – 10:45	<ul style="list-style-type: none"> <li>- GeoSmartCity: Presentation of the project - G. Saio (<i>GISIG</i>)</li> <li>- Application scenarios and Pilots (Underground and Green Energy)</li> <li>- The GeoSmartCity technical approach (<i>SINERGIS-AVINET</i>)</li> </ul>
10:45 – 11:15 Coffee break	
<b>Green Energy data model</b>	
11:15-12:15	<ul style="list-style-type: none"> <li>- The GeoSmartcity Data model and Data harmonization <i>G. Martirano (Epsilon Italia)</i></li> <li>- Girona Pilot description (<i>SIGTE-UdG</i>)</li> </ul>
<b>Networking and conclusions</b>	
12:15 - 13:00	Exploitation towards Thematic Communities, Training Framework and stakeholders involvement - <i>G. Saio (GISIG)</i>  Discussion and workshop conclusions
13:00-14:00 Lunch	

## Proceedings:

Workshop's proceedings are available on the web site:

<http://www.geosmartcity.eu/publications/geosmartcity-national-workshop-girona/>

## Event outcomes:

Girona City is taking a significant commitment as regards measures that help to more efficient operations in medium-sized city contexts. More efficient operations, both by individuals and by mechanisms (of CO2 consumption, for example). In this sense there is a significant commitment to actions within the framework of the Smart City and the Open Data. The GeoSmartCity workshop held in Girona helped to identify the challenges that the city can be found in its Smart City projects in terms of OpenGeodata management, specifically those related to mobility, as part of the pilot that from the project will be implemented.

The challenges both technological or data harmonization, its approach and management processes established within the framework of the project are interesting aspects of the city of Girona in his own process of development of its Open Data portal (<http://terra.girona.cat/opendata/>) with related geodata and implementation of the pilot tied with its strategy of mobility and sustainability. Other aspects that the workshop has motivated are how to deal with data in real time as key data in the context of SmartCity.

## Annex II – Dissemination activity of the second year

DISSEMINATION ACTIONS AT CONFERENCES / WORKSHOPS			
PARTNER	DATE	EVENT & PLACE	DISSEMINATION ACTION (Poster, paper, material distribution, etc.)
Ticass	3-4.03.2015	"Enhancing the Integrated Maritime Policy in the Mediterranean basin" - Brussels	Material distribution & networking
TUAS	04.03.2015	Avoin data uusien palvelujen ja sovellusten kehittämisessä (Building new services and business opportunities using open data).  Participants: Olli Ojala (TUAS), Kalle Luhtinen Turku Science Park, Sanna Jokela, Regional Council of Southwest Finland / GI Centre for Southwest Finland, Lounaispaikka	presentation (oral)
CRE	10/03/2015	Working table on «Regional Energetic Database» of Emilia Romagna Region Emilia Romagna Region Office - Hall C, Viale Aldo Moro 50, Bologna – Italy	Slide presentation
UdG	16-17.03.2015	JORNADAS SIG LIBRE, Girona (SPAIN)	Poster
VMM	02.04.2015	Meeting with the City of Aalst.	Oral presentation
Ticass	13-14.04.2015	"Ports towards Accessibility and Sustainable Maritime Transport in the Med" - Malaga	Material distribution & networking
INGR	22.04.2015	Technical meeting, D2.4 outcomes, Ghent	Presentation
EPSIT	24.04.2015	Joint GeoSmartCity UDMS Workshop, Gent (BE)	Oral presentation
VMM/GISIG /UDMS	24/04/2015	GeoSmartCity and UDMS Workshop : 'Open geo-data for innovative services and user applications towards Smart Cities', City Museum Ghent, Belgium	All GeoSmartCity presentations (and all other) were disseminated to all participants.
SINERGIS/ GEOBID/ TRACASA/ GISIG/VMM /EPSIT	24.04.2015	GeoSmartCity workshop at UDMS (Ghent, BE)	Oral Presentation
VMM	24.04.2015	Flemish Data model for the Utilities-Sewage	Presentation
TUAS	27.04.2015	Smart City in Turku strategy workshop (Digitaaliset ratkaisut) Auriga center, Turku. Organizers: City of Turku, Teleste	presentation (oral, PowerPoint mock-up), GSC fact sheet delivered
TUAS	6.05.2015	Open Public Spaces Discussion (city of Turku), open citizen discussion on city centre development strategy, green parking requirements and Smart Mobility.	presentation (oral, PowerPoint mock-up)
SINERGIS	12.05.2015	Presentation of Buildings data model at CityGML Energy ADE working group (Sophia Antipolis, FR), with contribution of EPSIT	Presentation <a href="http://en.wiki.energy.sig3d.org/index.php/Workshop_Sophia_Antipolis_2015">http://en.wiki.energy.sig3d.org/index.php/Workshop_Sophia_Antipolis_2015</a>

EPSIT	13-14.05.2015	Forum Technologyforall, Rome (IT)	Oral presentation, material distribution
SINERGIS	25.05.2015	Organisation of 'Urban Energy Workshop' at the INSPIRE+GWF conference (Lisbon, PT)	Workshop, presentations
AVINET	25.05.2015	World Geospatial Forum / INSPIRE 2015, Lisbon, Portugal	Presentation at workshop session
GISIG	25-29.05.2015	Geospatial World Forum 2015 & INSPIRE Conference 2015,Lisbona (PT)	Oral presentation
EPSIT	25-29.05.2015	Geospatial World Forum 2015 & INSPIRE Conference 2015,Lisbona (PT)	Oral presentation
Ticass	26.05.2015	"Challenges for the Integrated Maritime Policy in the Mediterranean Sea" - Barcelona	Material distribution & networking
TRACASA	27.05.2015	GWF-INSPIRE 2015, Lisbon (PT)	Oral presentation
VMM	27.05.2015	Geospatial World Forum 2015 & INSPIRE Conference 2015,Lisbona (PT) Presentation „INSPIRE Data Specs for US as Standard for Information Exchange“	Oral presentation
TUAS	3.06.2015	Open Finland Challenge kick-off and workshop, organizers, GeoSmartCity challenge - parking as part of smart mobility.	presentation (oral)
EPSIT	05.06.2015	GeoSmartCity Webinar: Data transformation with HALE – Green Energy scenario	Webinar
CdG	8-9.06.2015	Workshop 'International Week 2015 – Smart city and open Data'	Project presentation
MUNICIPIA	9 – 12.06.2015	AGILE 2015 18th AGILE International Conference on Geographic Information Science	Oral presentation and Short paper
TUAS	15.06.2015	Workshop Web interface for parking open data handling in GeoSmartCity project.	presentation, mock-up (www-page, green parking)
CdG	19.06.2015	UNDERGROUND ASSETS MANAGEMENT LEGISLATION FRAMEWORK training workshop. - Genoa -	Flyers, Poster
EPSIT	24.06.2015	GeoSmartCity Webinar: How to manage Code lists according to INSPIRE - An encoding example using HALE OpenSource	Webinar
EPSIT	29.06.2015	GeoSmartCity Webinar: Data transformation with HALE - Underground scenario	Webinar
EPSIT/SINERGIS	01.07.2015	AMFM National Conference, Livorno (IT)	Oral presentation
UdG	14-17.07.2015	FOSS4G-EU, Como (ITALY)	Presentation. <a href="https://drive.google.com/file/d/0B46kztqdEkOHSzAyQnY5SjN2S00/view">https://drive.google.com/file/d/0B46kztqdEkOHSzAyQnY5SjN2S00/view</a>
SINERGIS/GISIG	14-17.07.2015	FOSS4G-EU, Como (ITALY)	Abstract for the GeoSmartCity presentation with UdG
SINERGIS	15.07.2015	Presentation at workshop on Regional Energy Plan with Regione Emilia-Romagna, ASTER, GSE, ERVET, ARPAE (Bologna, IT)	Presentation at regional meeting
CRE	15.07.2015	Working table on «Regional Energetic Database» of Emilia Romagna Region Emilia Romagna Region Office –(Bologna (IT)	Slide presentation



SINERGIS	21.07.2015	Presentation to ARPAE (Bologna, IT)	Presentation at regional meeting
Intergraph	21. – 22. 9.2015	GeoForum 2015 – Open data of Prague	Conference and presentations of applications.
UdG	25.09.2015	European Researchers' Night in Girona	Project presentation at the website of the event
EPSIT	25.09.2015	The European Researchers' night at the University of Calabria Campus	Distribution of GSC dissemination material
MUNICIPIA	29.09.2015	Oeiras   A Smarter Future - Let's do it'	Oral presentation
EPSILON INTERNATIONAL S.A.	6.10.2015	'SUNSHINE' Project - Technical Meeting in Athens	Oral presentation
GISIG/UdG/ EPSIT	7.10.2015	GeoSmartCity National Workshop at UdG (Girona)	Presentations
CRE	13.10.2015	Conference "Data harmonization towards INSPIRE – Examples and experiences from European projects" – Regione Emilia Romagna, Bologna, Italy	Slide presentation
CRE	14.-16.10.2015	Fair "Smart City Exhibition" – Bologna, Italy	Slide presentation
SINERGIS	22.10.2015	Smart City Exhibition	Presentation with Reggio-Emilia Municipality
TUAS	30.10.2015	Commuting to ICT-City 1/2 follow-up and survey closure.	Oral presentation
TRACASA	4 – 5.11.2015	Iberian SDI Congress	Interview Dissemination Material distribution & networking
GEOBID	4-6.11.2015	XXIX Technical training course „Info-Ośrodek”, Ustroń (Poland)	Slide presentation
CdG	13.11.2014	Plenary meeting of the Working Group of the Italian authority for the National Digital Agenda coordinated by Lombardia Region (GdL8) devoted to the definition of the standards related to the "Underground Networks"	Presentation, Flyers
GEOBID	19-20.11.2015	Kalisz XVIII National Technical-Scientific Conference: "Current problems and perspectives of cadaster development considering The Integrated Real Estate Information System (pol. ZSIN)", Ostrów Wielkopolski (Poland)	Slide presentation
TRACASA	23.11.2015	52°North Sensor Web Community Workshop 2015 Münster, 23rd November 2015	Presentation 'Dynamic Loading of Sensors in GeoSmartCity Project'
GEOBID	25.11.2015	"A process of transforming the file structure concerning geospatial datasets with the use of HALE application" in the context of a Scientific conference: „Mining industry of sustainable development", Gliwice (Poland)	Poster session, publication
GISIG	26.11.2015	Eionet NRC EIS Meeting, Copenhagen (DK)	Leaflet distribution and short presentation of the GeoSmartCity project
TUAS	25-26.11.2015	eChallenges e2015 conference, Vilnius, Lithuania	Presentation

SINERGIS	30.11.2015	Presentation of GSC registry at CityGML Energy ADE working group (Sophia Antipolis, FR)	Presentation <a href="http://en.wiki.energy.sig3d.org/index.php/2015_Minutes_of_the_Workshop">http://en.wiki.energy.sig3d.org/index.php/2015_Minutes_of_the_Workshop</a>
TUAS	3.12.2105	Open Finland Challenge –gala	Presentation of GeoSmartCity awards
GISIG	3.12.2105	eENVplus Final Conference, Roma (IT)	Leaflet distribution and short presentation of the GeoSmartCity project
Ticass/IREN	18.12.2015	“Innovation, technologies and projects for the sustainable development of the Liguria region”, Genova, Italy	Conference organization, oral presentation, material distribution & networking
GISIG	18.12.2015	“Innovation, technologies and projects for the sustainable development of the Liguria region”, Genova, Italy	Oral presentation, material distribution & networking
TUAS	18.1.2016	Workshop “Crowd sourcing parking areas information”	workshop
TUAS	22.1.2016	Commuting to ICT-City 2/2 follow-up and survey closure.	Oral presentation
TUAS	2.2.2016	Workshop “IoT and possibilities in GSC Green Routing”	Workshop
TUAS	19.2.2016	Aluetietofoorumi (Digitalizing and opening public data nationally and regionally)	Oral presentation and networking

<b>OTHERS (MEETINGS, PRESS RELEASE, ETC.)</b>		
<b>PARTNER</b>	<b>DATE</b>	<b>DISSEMINATION ACTION</b>
TUAS	6.3.2015	Skype, presentation (oral, GSC project web-page). Open Data Workshop preparation, dissemination and exploitation possibilities of GSC in Riga, Latvia.  Participants: Guntis Eiduks (Lattelecom), Tiina Ferm
TUAS	9.3.2015	Working lunch, city strategy on open data concerning buildings and parking areas.  Participants: Jouko Turto (kiinteistöliikelaitos), Tiina Ferm (TUAS)
SINERGIS	10.03.2015	Presentation of GeoSmartCity to Regione Emilia-Romagna
VMM	02.04.2015	Revise of the brainstorm sessions with regard to technical functionalities in the pilot with the City Aalst
TUAS	16.4.2015	Innovation™ Global Network, Innovation Leader Members Networking Meeting, GeoSmartCity: citizen innovation and acceptance in official municipal planning processes, Turku pilot case, online presentation on current work.
TUAS	17.4.2015	Open Southwest Finland Challenge 2015 competition preparation.
TRACASA	30.04.2015	Meeting with MCP, main stakeholder to inform about the project evolution and the use of EPANET in the project
CRE	12.05.2015	Slide presentation within “Laboratori di Innovazione” - Open Data <sup>10</sup>
EPSIT	19.05.2015	Participation to the meeting of the Working Group 8 of AGID (Digital Italian Agency) on Utility Networks, Milan (IT)
AVINET	22.05.2015	Presentation for Asplan Viak Utilities Engineering and Energy Consulting divisions

<sup>10</sup> <http://www.municipio.re.it/retectivica/urp/reticivi.nsf/DocumentID/DDF670D46A1492EAC1257E4B004621F2?Opendocument>

		– a major Norwegian consultancy in GeoSmartCity pilot domains
EPSILON INTERNATIONAL S.A.	08.06.2015	Data transformation on HALE webinar tutorial by EPSIT, has been disseminated in EPSILON INTERNATIONAL S.A.'s website ( <a href="http://www.epsilon.gr/projects/65">http://www.epsilon.gr/projects/65</a> ) and website news ( <a href="http://www.epsilon.gr/news/209">http://www.epsilon.gr/news/209</a> )
EPSILON INTERNATIONAL S.A.	17.06.2015	Data transformation on HALE webinar tutorial by EPSIT, has been disseminated through EPSILON INTERNATIONAL S.A.'s mailing lists
Ticass - CdG	19.06.2015	Dissemination Seminar "Underground Assets Management Legislation Framework"
EPSILON INTERNATIONAL S.A.	24/06/2015	Data transformation on HALE webinar tutorial by EPSIT, has been presented to the GIS department of the Municipality of Maroussi
SINERGIS	24.06.2015	Meeting at ASTER Emilia-Romagna to present GeoSmartCity and links with Climate KIC initiatives
Ticass	26.06.2015	Dissemination Seminar "Urban Drainage And Sewerage"
Ticass	3.07.2015	Dissemination Seminar "Water Supply System"
Ticass	10.07.2015	Dissemination Seminar "Operation And Maintenance Of Underground Assets"
AVINET	13-17.07.2015	Presentation at SDI4Apps, Pizen Czech Republic Presentation
SINERGIS	15.07.2015	Meeting at Regione Emilia-Romagna on "Regional Energy-related databases", with Reggio-Emilia
TUAS	25.8.2015	Submitted and accepted paper (eChallenges2015 conference 25-27.11.2015) review and presentation preparation.
GEOBID	25.08..2015	Meeting connected with taking form the Municipality the data needed to test the data harmonization with HALE
TRACASA	17.09.2015	Meeting with MCP, main stakeholder to discuss about the access to the real time data
UdG	October 2015	Pres release on the occasion of the Girona GeoSmartCity workshop and technical meeting
AVINET	13.10.2015	Presentation of GSC preliminary results and envisaged concept for Rogaland County Council.
TICASS	20.10.2015	Genova Smart City meeting dedicated to the "resilience"
UdG	26.10.2015	Degree in Geography. Project presentation to the Degree in Geography students
UdG	November 2015	UNIGIS Girona Master online. Project dissemination to the GIS Master online estudents from UNIGIS Girona
UdG	4.11.2015	Smart City Master. Project presentation to the Smart City Master students
UdG	5.11.2015	Meeting related to real-time data availability with Mobility and Sustainability areas from the Municipality of Girona
AVINET	4-5.11.2015	Presentation at annual AVINET user conference
GEOBID	27.01.2016	Meeting organized in the City Hall of Ruda Śląska due to the necessity of changing the structure of GESUT (Geodesic Register of Utility Networks) database which is to be done in accordance to the newly presented legal act.
TICASS	16-18.02.2016	MARUEEB kick off meeting, project dissemination and networking

Author(s)/Organisation	Publication title	Reference/Date
Ticass	“Open geo-data for innovative services and user applications towards smart city” in Report of Activities 2012/2014 Three years of commitment in research and technology transfer activities on energy and environment issues in Liguria Region.	March 2015
GISIG/VMM	GeoSmartCity: Open geodata voor innovatieve diensten en gebruikerstoepassingen gericht op Smart Cities	24/04/2015 – GSC Website, Dutch version of Leaflet
M. Cabello/TRACASA	<a href="http://geospatialworldforum.org/speaker/SpeakersImages/%20Maria%20Cabello.pdf">http://geospatialworldforum.org/speaker/SpeakersImages/%20Maria%20Cabello.pdf</a>	May 2015
MUNICIPIA	Open geo-data for innovative services and user applications towards Smart Cities. The GeoSmartCity portuguese pilot	June 2015
PIERGIORGIO CIPRIANO (SINERGIS)	<a href="http://www.slideshare.net/pgcipriano/ricetta-del-baccal-alla-livornese-conferenza-amfm-2015">http://www.slideshare.net/pgcipriano/ricetta-del-baccal-alla-livornese-conferenza-amfm-2015</a>	2015-07-01
LUCA GIOVANNINI PIERGIORGIO CIPRIANO (SINERGIS)	<a href="http://geospatialworldforum.org/speaker/SpeakersImages/Luca%20Giovannini.pdf">http://geospatialworldforum.org/speaker/SpeakersImages/Luca%20Giovannini.pdf</a>	2015-07-25
TUAS	“Building Green City with Green Choices in Traffic” Ojala, Olli & Ferm, Tiina in IIMC International Information Management Corporation Ltd; 2015; ISBN:978-1-905824-52-6;	November 2015
ANDRZEJ ZYGMUNIAK (GEOBID)	“A process of transforming the file structure concerning geospatial datasets with the use of HALE application”	25.11.2015
Paweł Sikora, Andrzej Zygmuniak (GEOBID)	“Utility comparison between data model provided for GESUT and the one for utility networks as part of Technical Guidelines issued to the INSPIRE Directive” published in “Motrol. Comission of motorization and energetics in agriculture”.	2015, Vol. 17. No.1. 115-120