

GeoSmartCity

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

CIP ICT-PSP Project n. 621150

Start date 01-03-2014, duration 36 months

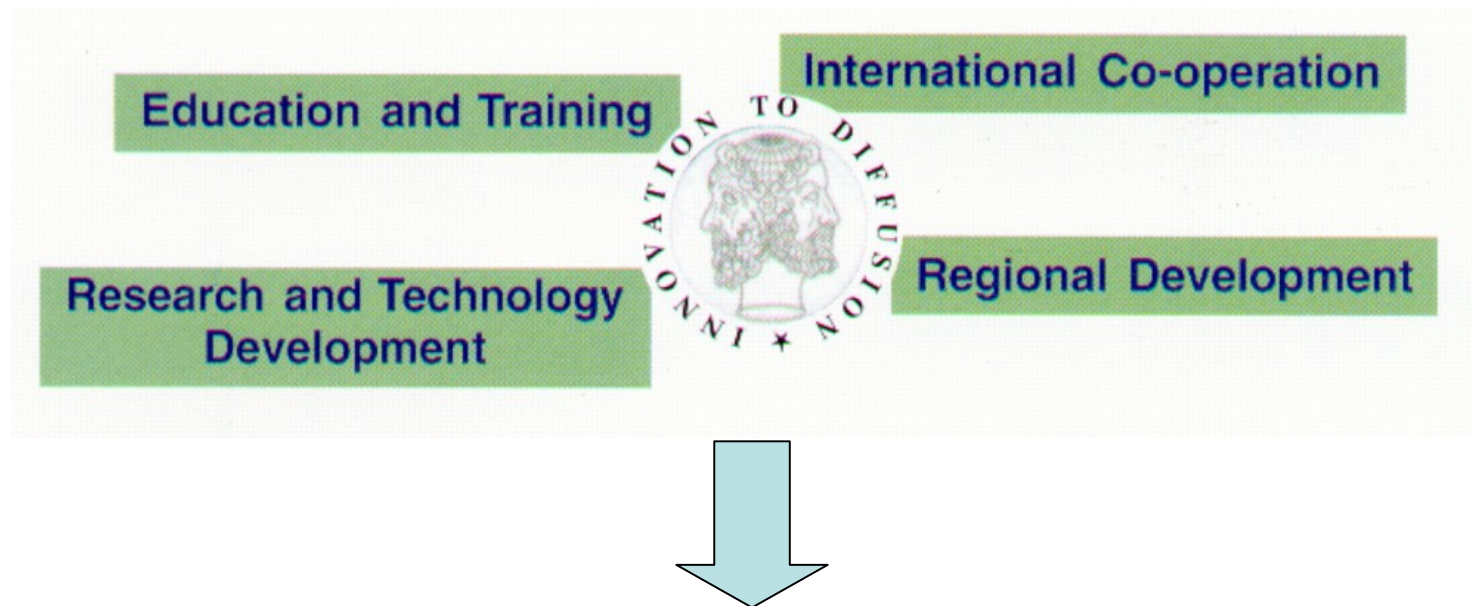
Objectives of the Association



A European Network for innovation and technology transfer in the GI sector and its application domains (territorial planning, water resources and utility networks, coastal management, nature conservation....) for:

- Sharing experience among universities, companies, National and local Bodies and users
- Promoting and developing projects of common interest, with particular reference to the EU programmes

Activity → EU Projects – Thematic Networks



- Developed initiatives and EU projects, also with the promotion of thematic networks (participated by several organisations) such as:
 - Water resources Management
 - Coastal Management
 - Nature Conservation
 -
- Applications and technical solutions in line with the EU Directives for Geographic Information (INSPIRE, SEIS Communication for a Shared Environment Information System for Europe, etc.)

GeoSmartCity implements a platform to share and public geographical open data coming from different sources, such as Public Administrations, Multi-utilities, Companies and Crowd-sourcing.

The platform includes specialized web services to integrate public geographical data with other geo-referenced data (public or private) useful for the smart management of urban infrastructures and public services in the context of the **Smart City** initiative and the **Digital Agenda** for Europe.

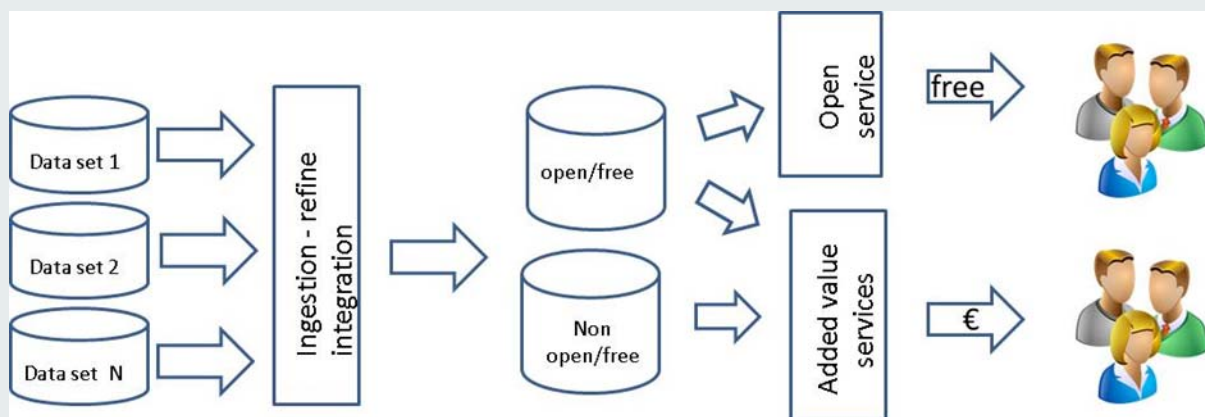
Partnership



- Support Cities to ‘open’ their data to professionals and citizens
- Establish a cross-platform, re-usable, able to publish open- (GI) data, in an urban context, but with a European dimension
- Provision of tools and facilities to integrate GI data/info with open data
- Framework and services to integrate proprietary/restricted data with open (GI) data of the City

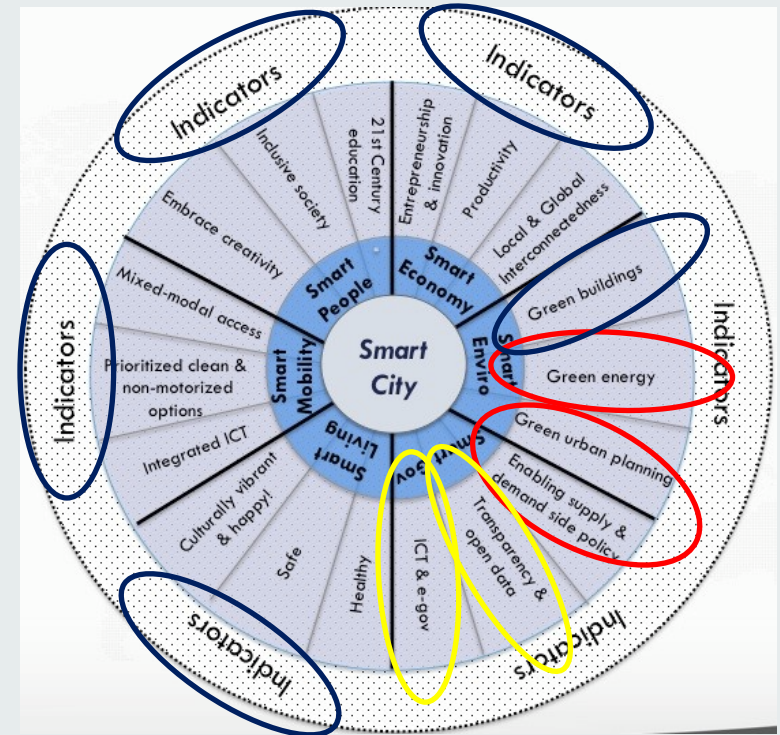


- Open infrastructure to build new business model for PAs and SMEs
- PPP (Public Private Partnerships): collaborative management of Open(GI) data
- Integration of restricted data in a secure way



- Open infrastructure extendable to different SmartCity contexts

- Two application scenarios:
 - ✓ Green Energy (5 pilot cases)
 - ✓ Underground (6 pilot cases)



- Harmonised environment to integrate different operational protocols and standards, based on existing infrastructures
- Re-use of specialized services based on open standards
- Integration of new base/specialized services
- Ingestion and data integration engine composed by:
 - Harmonised data storage (based on GI standard, open data format)
 - a set of ingestion and data relation services:
 - Ingestion toolkit of GI data (open/restricted)
 - Ingestion toolkit of not-GI data (open/restricted)
 - Refine and reconcile toolkit to link and interconnect data
 - Crowd-sourcing base services based on location services

1. GI Open Data Repository and Target Data Models

Open and proprietary datasets including geo-spatial information in an interoperable infrastructure based on open standards.

2. GeoSmartCity Hub

A cross-platform, re-usable and open hub able to publish open geographic information and to provide specialised services based on open standards services.

3. Innovative Services

Services platform to View, analyze, extract data from the GeoSmartCity OpenData Hub; Universal Discovery Services; BI and Geoprocessing service platform; Ingestion and data integration engine.

4. Green Energy Scenario

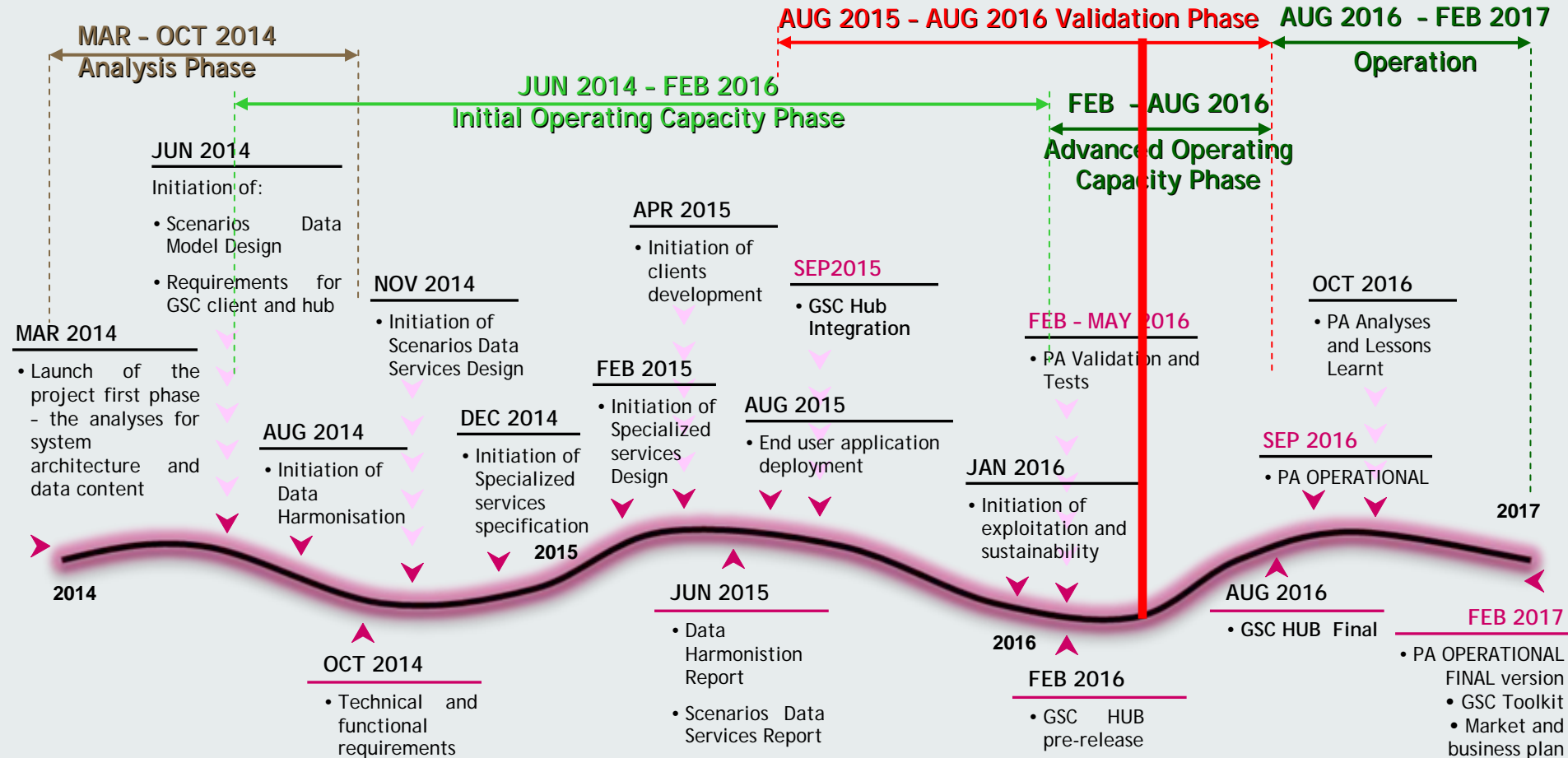
Operative and re-usable pilot cases to facilitate diffusion and management of renewable energy within cities.

5. Underground Scenario

Operative and re-usable pilot cases to support integrated management of underground utilities infrastructures

6. GeoSmartCity Training Framework

Designed in order to make available existing knowledge and transfer the outcomes of the project towards the target groups of users. The Training Framework complements and support dissemination and exploitation, fostering Capacity Building



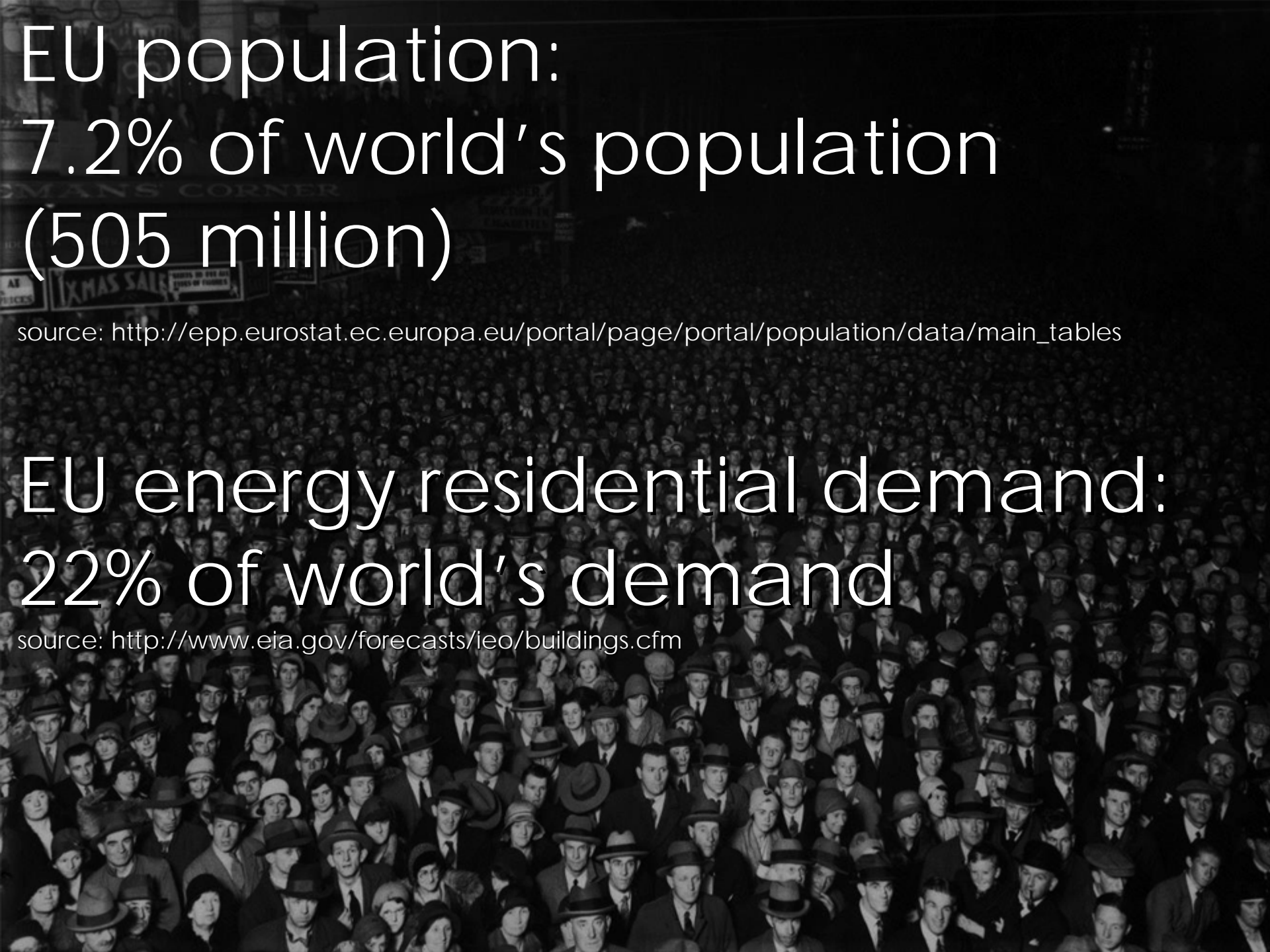


The Green Energy Scenario

**few (but big) numbers
and contest**

Piergiorgio Cipriano





EU population:
7.2% of world's population
(505 million)

source: http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/main_tables

EU energy residential demand:
22% of world's demand

source: <http://www.eia.gov/forecasts/ieo/buildings.cfm>



In 2020, the European
consumption of energy will be
25 trillion kWh
(25,000,000,000,000)

In 2040 it will rise to 28 trillion kWh

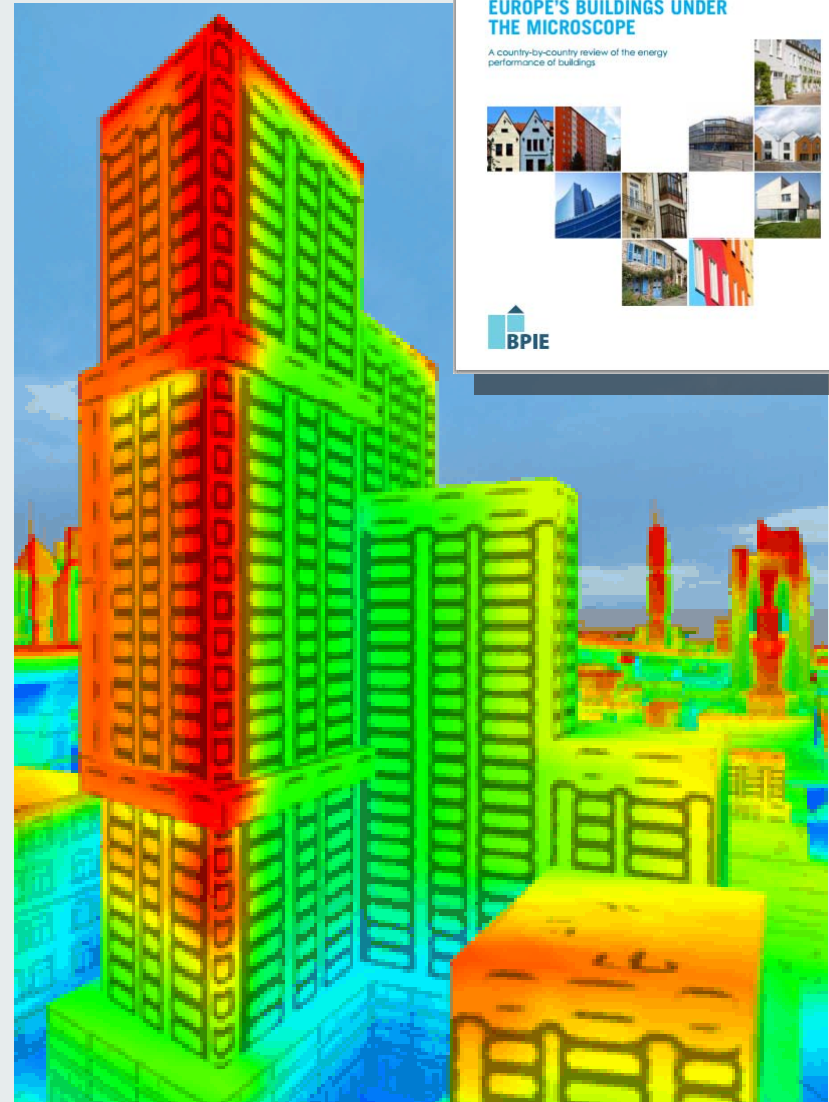
10 In terms of energy consumption,
buildings represent around 40%



European households are responsible for **68%** of the total final energy use in buildings, for:

- heating (**70%**)
- cooling
- hot water
- cooking
- appliances

The most used fuel is gas.



What next

Policies with highest impact on climate change mitigation in 2020

in tonnes CO₂ equivalent

CATEGORIES:

Energy production

Transport

Other regulations

Global treaties

Land & forests

EU renewables¹

EU Covenant of Mayors^{*2}

EU buildings³

Brazil forest preservation⁴

Brazil ethanol⁵

China enterprise energy efficiency⁶

China renewables⁷

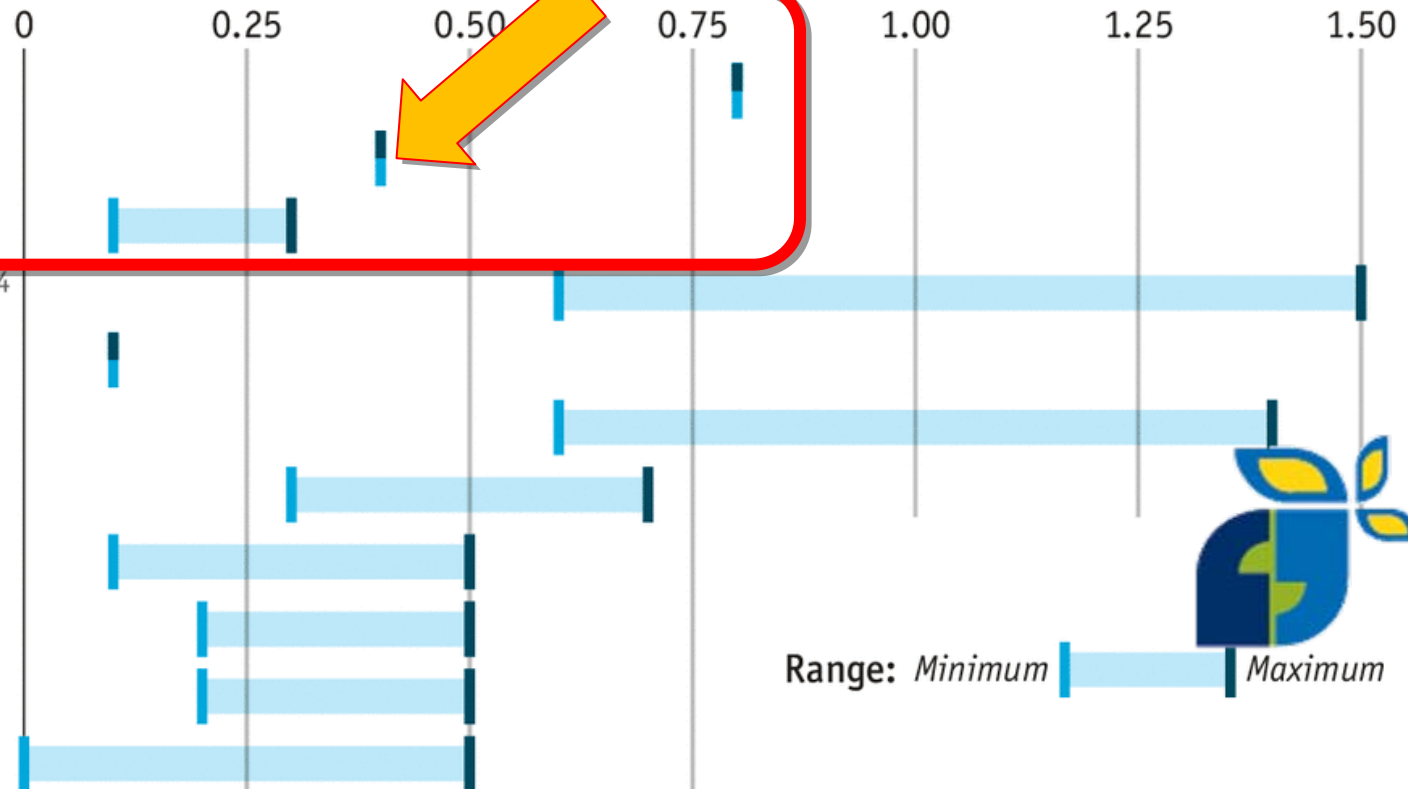
US vehicle standards⁸

US appliances codes⁹

US SNAP^{†10}

Clean development mechanism¹¹

See following panel for sources and explanations



^{*}Urban targets over and above EU or national law

[†]Determines substitutes for gases replaced under Montreal protocol



What next

Policies with highest impact on climate change mitigation in 2020

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CATEGORIES:

Energy
production

Transport

Other
regulations

Global
treaties

Land &
forests

2

EU renewables¹

EU Covenant of Mayors^{*2}

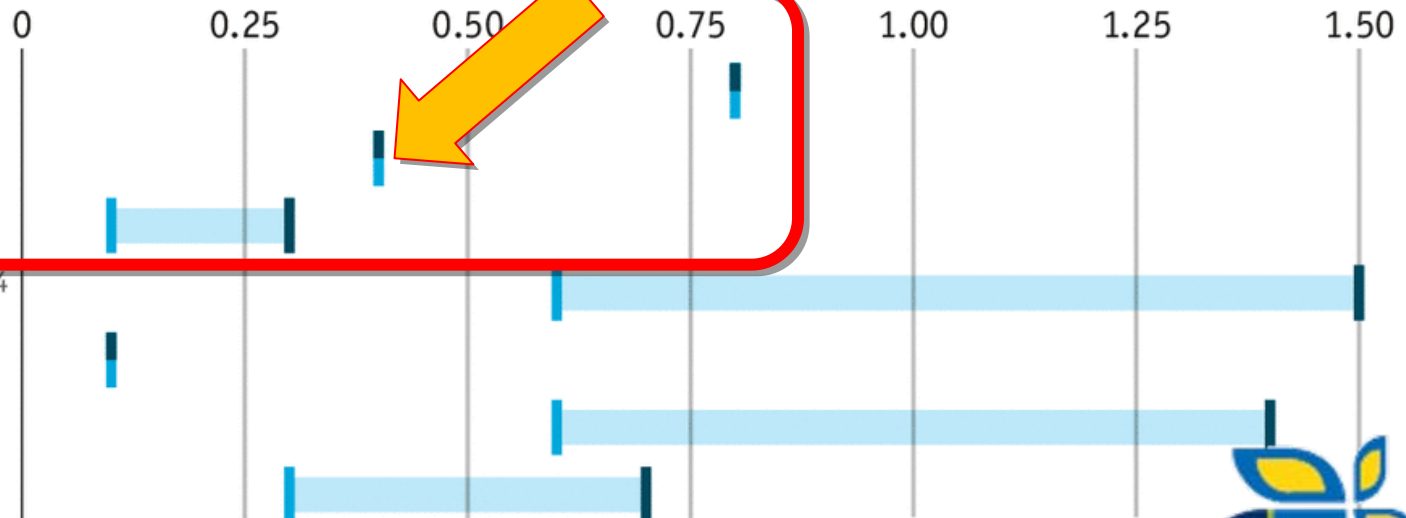
EU buildings³

Brazil forest preservation⁴

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China enterprise
energy efficiency⁶

China renewables⁷



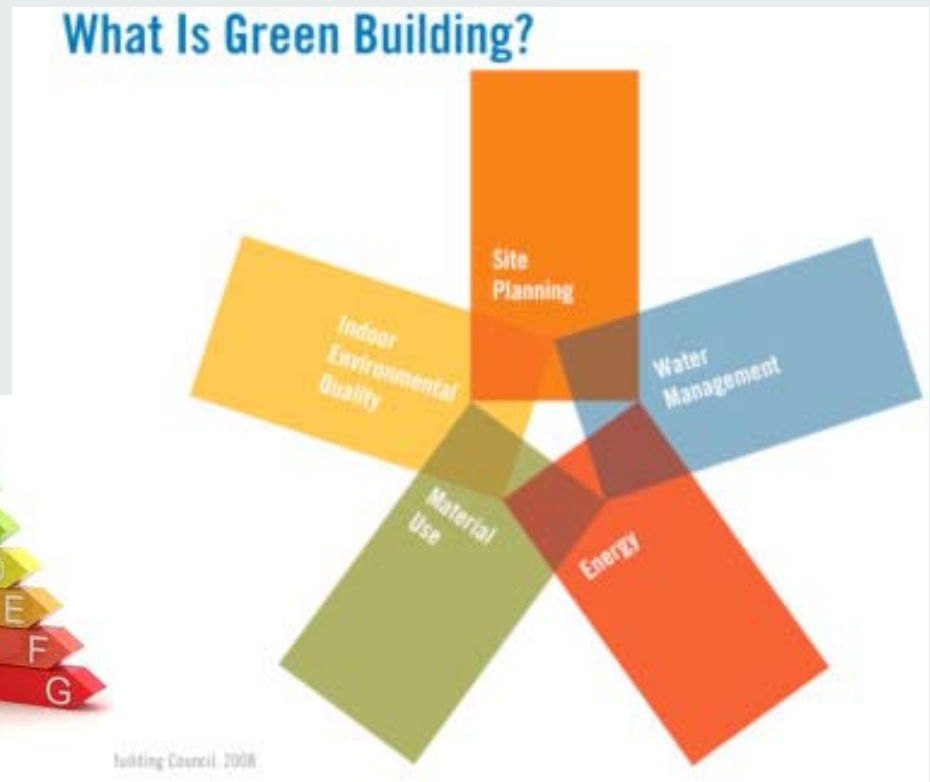
In September 2014 the Economist listed the Covenant of Mayors among '*policies with highest impact on climate change mitigation*'

See following panel for
sources and explanations

^{*}Urban targets over and above EU or national law

[†]Determines substitutes for gases replaced under Montreal protocol

- “The Covenant of Mayors” to increase energy efficiency and use of renewable energy sources on their territories (> 6.000 signatories for over 190 Mln people).
- Sustainable Energy Action Plan (SEAP) → CO2 reduction target by 2020
- Related information:
 - Buildings
 - Environmental info
 - Energy Infrastructure
 - Planning
 - Smart grids



Energy strategy:



- *A 20% reduction in EU greenhouse gas emissions from 1990 levels;*
- *Raising the share of EU energy consumption produced from renewable resources to 20%;*
- *A 20% improvement in the EU's energy efficiency.*



- ☐ *Reducing greenhouse gas emissions by at least 40%*
- ☐ *Increasing the share of renewable energy to at least 27%*
- ☐ *Increasing energy efficiency by at least 27%*



- *Reducing greenhouse gas emissions by 85 - 90%*
- *About 2/3 of the energy should come from renewable sources*

To achieve these goals, significant investments need to be made in new low-carbon technologies, renewable energy, energy efficiency and grid infrastructure

From: <http://ec.europa.eu/energy/en/topics/energy-strategy>

Objectives:

- To provide the PAs with instruments for the definition and management of their “smart energy” policies
- Support the process of energy transition (traditional to renewable) and to provide the needed knowledge
- Demonstrate the importance of data integration to optimize and improve the use of energy resources: real time sensors (enviro/climate/energy consumption), smart metering, smart grid
- To activate and test, on real use cases with high added value, new public-private collaborations
- To create an environment which favours the economic development at territorial level by exploiting the opportunities from the energy transition and the ICT potentiality

5 pilot cases (IT, GR, PT, FI, ES)

UNDERGROUND SCENARIO



Maria Cabello
mcabello@tracasa.es

- Different infrastructure under the same area
- Unconnected information for the management of assets and systems (damages during maintenance activities)
- Environmental \leftarrow impact \rightarrow infrastructure
- Safety and security




Objectives: enforce the dialogue between utility companies and Public Administrations to improve the sharing of underground data and the data flow toward and from the Public Administration.

Benefits:

- access to updated data, to speed up the planning process, the development and the control of works
- Integration of underground data with territorial data to search for pipelines located in risk zones (hydrogeologic, hydraulic, seismic...) and that need a specific monitoring
- Availability of Apps and Augmented Reality in the daily management of utility networks and to optimize emergency interventions
- Involvement of citizens which are asked to signal, through their smartphones, possible failures of the utility networks (crowd-sourcing)

6 pilot cases (ES, IT, **PT, BE, CZ, PL)**






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Scenarios

Green energy and underground scenario

GeoSmartCity has its main objective in creating a framework in which Geo Open Data from the cities are exploited toward the Smart City paradigm allowing the development of various added value applications and new specialized services. GeoSmartCity aims at developing an first such a virtuous framework and a line of activity supporting the European Cities in their Smart process. To be effective, GeoSmartCity will implement with various pilot applications two very important strategic scenarios for a Smart City: Green Energy and Underground. It's clear that the added value of GeoSmartCity Hub can be easily extended to support different scenarios other than the two addressed by the project. The proposed approach enables the proposed solution extendable to other important Smart processes and scenarios like culture, geotourism, mobility, transport, urban planning, environment/health impact, etc.


Green energy



Underground scenario



The scenario follow "The Covenant of Mayors" movement to increase energy efficiency and use of renewable energy sources on their territories (4,400 signatories for over 160 million people)

Sustainable Energy Action Plan (SEAP) → CO₂ reduction target by 2020

Unrelated information: buildings, environmental info, planning and infrastructure



Different infrastructure under the same area

Unrelated information: for the management of utilities and systems (emergencies during maintenance activities)

Environmental → impact → infrastructure

Safety and security

Pilot cases

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

Objective
Impact
Stakeholders and Beneficiaries

The objectives of the GeoSmartCity Green Energy scenario are:

- to develop services to count the buildings energy usage (i.e. defining of model and services to monitor and analyse solar irradiation and other factors influencing energy production and consumption);
- to make available services to support the smart energy use for each stakeholder;
- to support public administrators and local authorities to define and adapt policy in order to identify the best use and the reduction of fossil fuels; and to increase local job opportunities adopting energy transition plans involving public and private players.

In this scenario open data (openly geographically data and real or near real time generated data) and the related new enabling technologies (GDA, Big data, IT and GeosIT, smart monitoring) are key enablers of the green energy strategies.

Underground scenario


Pilot cases

ES Comarca de Pamplona
IT Girona
PT Oeiras
PT South Moravia Region
CZ Oeiras
CZ South Moravia Region
PL Ruda Slaska
BE Flanders region

Objective
Impact
Stakeholders and Beneficiaries

Underground management is a key aspect for getting efficiency in the cities avoiding public works duplication and citizens' annoyance. Specialised services will be designed based on requirements specified for underground scenarios and identified by related pilots. The benefits will be:

- Instant access to updated data, all up the planning process, the development and the control of works
- Integration of environmental data with technical data to search for the optimal installation and avoid their interference
- Instant access to updated data, to speed up the planning process, the development and the control of works
- Integration of underground data with territorial data to search for pipelines located in risk zones (hydrogeologic, hydraulic, seismic...) and that need a specific monitoring
- Availability of Apps and Augmented Reality in the daily management of utility networks and to optimize emergency interventions
- Involvement of citizens which are asked to signal, through their smartphones, possible failures of the utility networks (crowd sourcing)



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Pilot cases

Operative pilot cases in the frame of underground and green energy scenarios

Together with the GI open data repository and the GeoSmartCity hub, it will be the availability of a set of 11 operative and re-usable pilot cases in the frame of Green Energy and Underground scenarios demonstrating the possibility to replicate the proposed pilot cases in different area and municipalities, guaranteeing the exploitability and the long term viability of the proposed solution. The pilot will build added value services based on the GeoSmartCity hub that will be locally exploited.

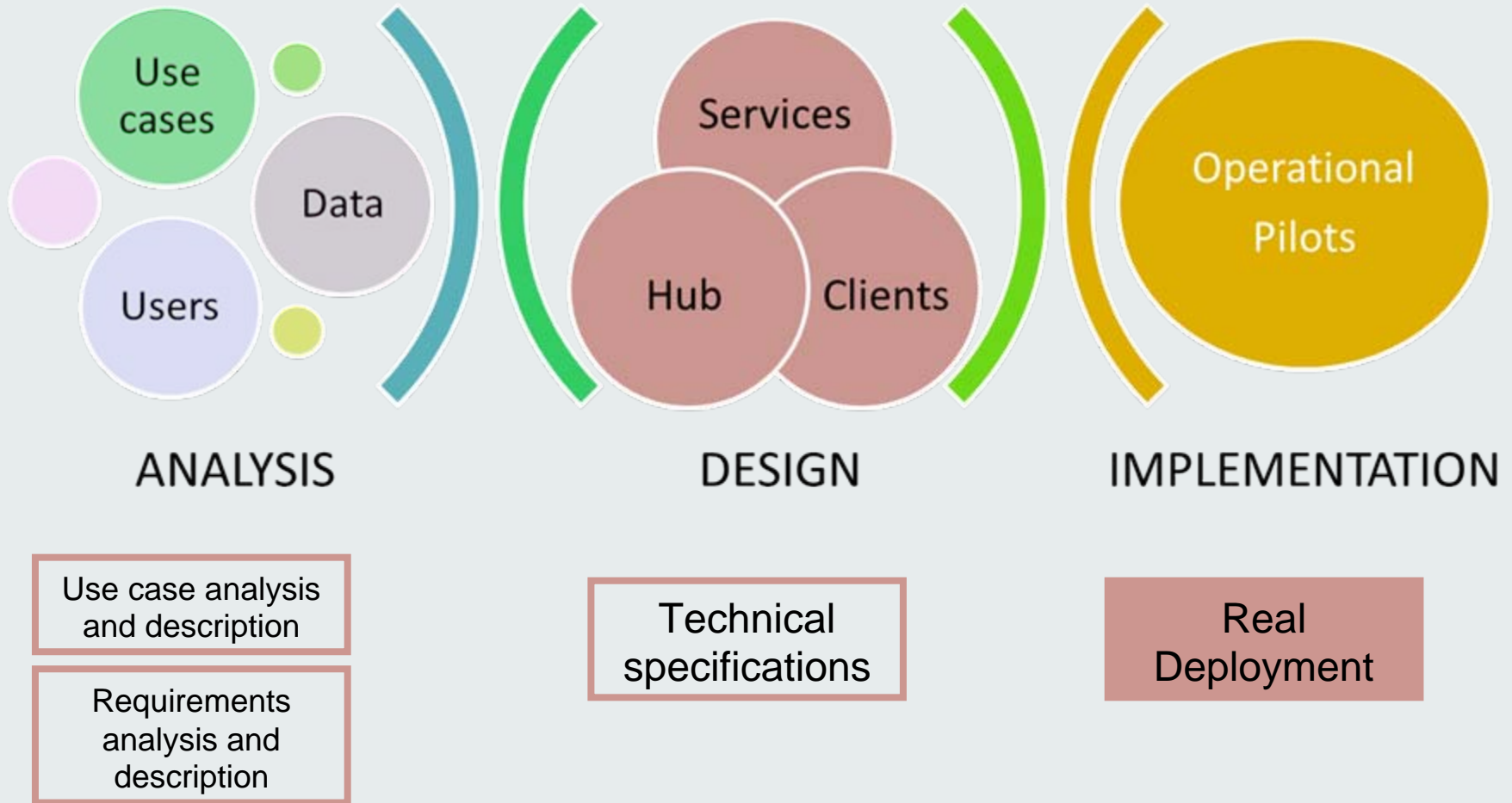
Overall 11 Cities/Regions (with centralized management of services for the cities in the region) are involved in the project. Each City will implement a pilot in the frame of one of the above scenarios.

That will allow to apply and validate the two scenarios in different National and urban and geographical context, as well as a comparison of the different experiences and the share of good practices and lessons in the different cities.

Reggio nell'Emilia	Maroussi	Turku	Girona	Oeiras
IT Green Energy	GR Green Energy	FI Green Energy	ES Green Energy	PT Green Energy and Underground
CRE	EPSILON INTERNATIONAL	TUAS	UdG	MUNICIPIA
SINERGIS s.r.l.	Read more	Read more	Read more	Read more
Read more				

Flanders region	Genova	Comarca de Pamplona	South Moravia	Ruda Slaska
BE Underground	IT Underground	ES Underground	CZ Underground	PL Underground
VMM	TICASS	TRACASA	INTERGRAPH CS	GEOBID
Read more	CDG	Read more	SRO	Read more
	GISIG		Read more	
	IREN Acqua Gas			
	Read more			

Use Cases and Requirements



5 pilot cities involved in this scenario

- Reggio Emilia (Italy)
- Maroussi (Greece)
- Oeiras (Portugal)
- Turku (Finland)
- Girona (Spain)

13 Use Cases collected

59 requirements (functional, non-functional, generic)

Use cases

- Publication of energy performance of municipal buildings
- Publication of energy performance of other buildings

General objectives

- Integrate geodata and energy data for strategic purposes
- Provide integrated open geodata

Main requirements

- Estimate energy performance and CO2 emissions
- Energy maps and reports, interoperable access to data

Use cases

- Data collection via field survey and crowdsourcing
- Energy map creation
- Data publication

General objectives

- Enable citizens and SMEs to make valuable comments and enhance their energy consumption behavior

Main requirements

- Mobile app for editing buildings' properties
- Searching capabilities for buildings
- Provide open geodata through the hub

Use cases

- Urban sustainable planning tool
- Zero-balance calculation
- Calculation of energy performance of buildings

General objectives

- Monitor energy consumption in public buildings
- Achieve a balance between various urban areas

Main requirements

- Calculate solar potential and electric balance
- Reports, statistics

Use cases

- Selecting green route
- Green driving
- Green parking

General objectives

- Shift from private to public transportation in commuter traffic
- Acquire real-life information that can be utilized in city planning and decision making

Main requirements

- Bike routing, bus timetables, paths for commuters
- Estimation of fuel consumption, collect stats

Use cases

- “I want to ride my bicycle, I want to ride it where I like”
- Find healthy bike route

General objectives


- Encourage alternative/light transportation
- Involve city users and stakeholders in data integration

Main requirements

- Provide updates to OpenStreetMap
- Estimate pollution, calculate bike routing



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Green Energy scenario

Operative and re-usable pilot cases to facilitate diffusion and management of renewable energy within cities

[Learn more](#)



The ICT-PSP European project GeoSmartCity establishes a cross-platform, able to publish open GI and to provide specialized services based on open standards.



Pilot cases

The potentiality of GeoSmartCity is demonstrated through the development of 11 operative and re-usable pilot cases in the frame of the two scenarios: Green-Energy and Underground. [Learn more](#)



Virtual hub

For integration and publishing of local, web based, real-time sensor or user-generated open geo-information. [Learn more](#)



Innovative services

To facilitate the day-to-day operation and management of key municipal infrastructure sectors and public utilities activities. [Learn more](#)

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Reggio nell'Emilia

Italy



Objectives






The pilot will use geodata internally (to help politicians for strategic purposes, and technicians in daily work), and open/disseminate information about municipal buildings to the public.

Open data will be related to municipal buildings used for public services, to be provided also as map services and dashboard, as well as pre-defined reports. A second use case will consider the same services about "other" buildings.

Municipality of Reggio Emilia will use GeoSmartCity HUB to control the city SEAP (Sustainable Energy Action Plan).


Data providers are mainly public authorities at local, regional and national level.



- ✓ [Poster](#) (1.021Kb) 
- ✓ [Piano Clima 2013](#) (3.736Kb) 
- ✓ [Collana Ambiente Bilancio Ambientale](#) (804Kb) 
- ✓ [Collana Ambiente Verde](#) (1.748Kb) 
- ✓ [Collana Ambiente Rifiuti](#) (727Kb) 
- ✓ [Collana Ambiente Linee intervento](#) (954Kb) 


Comune di Reggio Emilia

www.municipio.re.it 

 Piazza Prampolini, 1

42121 Reggio Emilia

Italy

 $44^{\circ}42'0''N, 10^{\circ}38'0''E$

E

Scenario

 Green Energy

Responsible partners





Maroussi

Greece



Objectives

The objective of the pilot is to enable citizens and SMEs to make valuable comments and enhance their energy consumption behavior.

The focus is on "energy performance of buildings" with use cases about data collection (crowd/mobile) and energy map processing.

The emphasis is related to the role of so-called "Neo-geographers", being citizens, students and other categories to be involved to collect new (or add value to existing) geodata. The processing of energy maps is also related to the goal of publishing open data about energy certificates, with a clear benefit for public administration that will have a detailed overview of energy performance at large scale.

Data providers are both public authorities (buildings footprints and some properties) as well as citizens in a crowdsourcing approach for enriching information.



Maroussi

www.maroussi.gr

9 Vas. Sofias 8

Dim. Mosxa

GR-15124 Maroussi

Greece

38° 3' 7.47" N, 23° 48'

31.8024" E

Scenario

Green Energy

Responsible partners





✓ Poster (1.021kb)

✓ Piano Clima 201

✓ Collana Ambientale (804)

✓ Collana Ambientale (1.748kb)

✓ Collana Ambientale (1.748kb)

✓ Collana Ambientale intervento (954kb)

Maroussi

Greece



✓ Poster (939kb)

Turku

Finland



✓ Poster (2.176kb)

Objectives

Use cases are linked to a national challenge (apps4finland.fi) about transportation, focusing on bike routing (healthy route), commuter (private+public transport) and parking.

Routing functionality will consider weather and air quality parameters, as well as calculate fuel consumption and emissions at route level; for commuters, routes information will be also enhanced with public transport timetables data.



Turku

www.turku.fi

Turku

Finland

60° 27' 6.5268" N, 22°

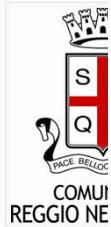
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Scenario

Green Energy

Responsible partners

TURKUN AMMATTIOPISTO
Turku University of Applied Sciences



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Ambientale (804)

✓ Collana Ambienti
(1.748kb) 

✓ Collana Ambienti


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intervento (954kb)

Maroussi

Greece



✓ Poster (939kb) 

Turku

Finland



✓ Poster (2.176kb) 

Girona

Spain



✓ Poster (1.263kb) 


Objectives

The pilot will demonstrate how to create an integrated system from pre-existing and disconnected data in a context easily transferable to other cities.

Open data about "bike" (sharing, racks, lanes, shops/repairers, ...) will be made available to GSC hub and Open Street Map.

Real-time information to bikers about pollution and "healthy" paths will be provided. Data providers are mainly local transportation companies and bike sharing manager.


Girona

www.sigte.udg.edu 

 Pl. Ferrater Mora, 1

17071 Girona

Spain

 41° 59' 06.94" N, 2° 49'

39.84" E

Scenario

 Green Energy

Responsible partners



 **SERVEI D'INFORMACIÓ I TELEDESENVOLUPAMENT**
Universitat de Girona



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Ambientale (804)

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Finland



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Girona
Spain



✓ Poster (1.263kb)

Oeiras
Portugal



✓ Poster Green Energy (766kb)

✓ Poster Underground (1.405kb)

Object
The pilot
and disco

Open data
available!

Real-time
provided,
sharing m



Objectives

Scenario: Green Energy

The overall objective is to monitor energy consumption in public buildings and thus achieve to set goals for reducing consumption. Data will be provided/uploaded by registered householders/occupants. Owners and other Urban Developers will provide information about energy efficiency and calculate solar potential.

Scenario: Underground

The Oeiras Municipality wants to implement an event management platform. This platform will take shape in a mobile crowdsourcing app for characterization and location of ruptures in water network.

Oeiras

www.municipia.pt

Taguspark Ed. Ciência II
n.º11, 3.ºB 2740-120 Porto Salvo
Portugal
38° 44' 13.8264" N, -9°
18' 18.0828" E

Scenario

- Green Energy and
- Underground

Responsible partners



Links of interest

- Panoramic view

Status

- 6 pilot sites in EU
- 12 Use cases
- 53 User/System Requirements

Commonalities

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



Use cases:

- Consulting real-time data of the water supply and sanitation systems in a GIS viewer.
- Check smart sensor values or incidents in networks

General Objectives:

- They want to improve the water and sewage GIS existing platform:
- Integrating **real-time information** provided by smart sensors through a SCADA system (a computer system for gathering and analyzing real time data)
- Consult a map with values from sensors or incidents from SCADA

Main requirements:

- The SCADA system should be linked to the GIS through standardized protocols
- An interface should enable the user to communicate with the SCADA system to consult the real-time data
- The platform should enable the user to generate thematic maps (geoprocessing)



Use cases:

- Underground Cadastre
- Field works
- Underground networks and environmental hazards

General Objectives:

- Integrate different underground information layers from different actors (mainly Municipality and Multi-utilities)
- Include **INSPIRE** compliant data in the city underground data management workflow (Harmonisation of gas, water and sewer datasets)
- Use of mobile client for data management
- Use of advanced visualization techniques such as **Augmented Reality**
- Use of a high precision positioning (**GNSS**) device integrated with mobile client for field works
- Intersection between Underground Network and **Environmental Hazard information**



Use cases:

- Underground Event Management

General Objectives:

- The Municipality wants to implement an event management platform.
- This platform will take shape in a mobile **crowdsourcing** app for characterization and location of **ruptures in water network**.
- The System shall serve as a Metadata and Open Data provider through Web Services (WMS, WCS, ...).

Main requirements:

- An authenticated user must approve the crowdsourcing inputs to appear on the map.
- The web client should ensure different authentication levels depending on user roles.
- Open data: All information must be available to be used by applications from other stakeholders.



Use cases:

- Mobile application

General Objectives:

- Focus the provision or **volunteered geographic information** (VGI) through a mobile app to report a problem on the public underground infrastructure.
- Use of mobile clients by municipalities and companies technicians (equipped with innovative visualization features such as **Augmented Reality**) to support the management and update of existing data on the field.

Main requirements:

- Take a picture, determine local position, user comment and send it to appropriate service.
- Read data from dedicated WFS and display them in AR environment.



Use cases:

- An integrated WebGIS platform giving the ability to verify/update basic information on the underground networks and to share the data in order to clarify the ownership issues.

General Objectives:

- Similar to the Genova case, this pilot also focuses on the **integration and harmonization of the underground network** data coming from the municipality and the Utility companies.
- Data and specialized services will be integrated in existing GIS platform supporting an integrated approach on the management and maintenance of the networks.

Main requirements:

- Mobile and web clients
- Authenticated access to information and permission roles



Use cases:

- Mobile application for the management of the sewage database
- Crowd-sourcing tool




General Objectives:


- Focus on the conformance of the Flanders sewer network data to **INSPIRE** specifications
- Manage sewage network from a **mobile/web client** application
- Integrate in the system a **crowdsourcing** component so the sewage database can be consulted by the public in order to report possible anomalies or remarks.

Main requirements:

- The application must give the opportunity to professionals to enter data, upload different files and to propose changes to geodata.
- The updates (by the users) are live but will only be implemented in the sewage database after validation.




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Underground scenario

Operative and re-usable pilot cases to support integrated management of underground utility infrastructures

[Learn more](#)




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Oeiras

Portugal



✓ [Poster Green Energy](#) (766Kb)

✓ [Poster Underground](#) (1.405Kb)



Objectives

Scenario: Green Energy

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Oeiras

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n.º11, 3.ºB 2740-120 Porto Salvo

Portugal

38° 44' 13.8264" N, -9°

18° 19.0828" E

Scenario

Green Energy and

Underground

Responsible partners



Links of interest

♦ [Panoramic view](#)

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Oeiras
Portugal



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[Applications](#)
[Training](#)
[Publications](#)
[News](#)
[Contact](#)

Home / Pilot cases / Flanders region - Belgium

Flanders region

Belgium



Objectives

This pilot focus on the conformance of the Flanders sewer network data to the INSPIRE specifications.

Sewage database is managed from a mobile client application available for different professionals able to perform different kind of operations

The Pilot also have a crowdsourcing component since is foreseen that the sewage database can be consulted by the public in order to report possible anomalies or remarks.



Characterization and location of manholes in water network.

Flanders region

Belgium

51° 5' 42.6864" N, 4° 36' 52.015" E

Scenario

Underground

Responsible partners



Genova

Italy



✓ Poster (1.43KiB)

Objectives

This Pilot consists in 4 use cases. The first one refers to an aspect of great political and strategic importance for the city of Genova: The integrated management of the Utility networks.

In this context, GeoSmartCity plays an important role as driver for achieving an effective and efficient cooperation between the Municipality and the Multi Utility company.

The other cases are included in this strategic context and they refer to real operative tasks and more detailed actions using underground data that take advantage of this integrated work environment.

For the first time, and thanks to the GeoSmartCity HUB and the project Harmonisation resources, INSPIRE compliant data will be included in the city underground data management workflow.

Furthermore, other technological aspects of great interest will be added to the everyday underground network management work, like improved excavation procedures, the use of high precision outdoor positioning devices and the use of advanced visualisation techniques (such as 3D and Augmented Reality) in mobile clients used on field works.



Comune di Genova

<http://www.comune.genova.it/>



Palazzo Tursi

Via Garibaldi 9

16124 Genova

Italy

44° 24' 29.4122" N, 8°

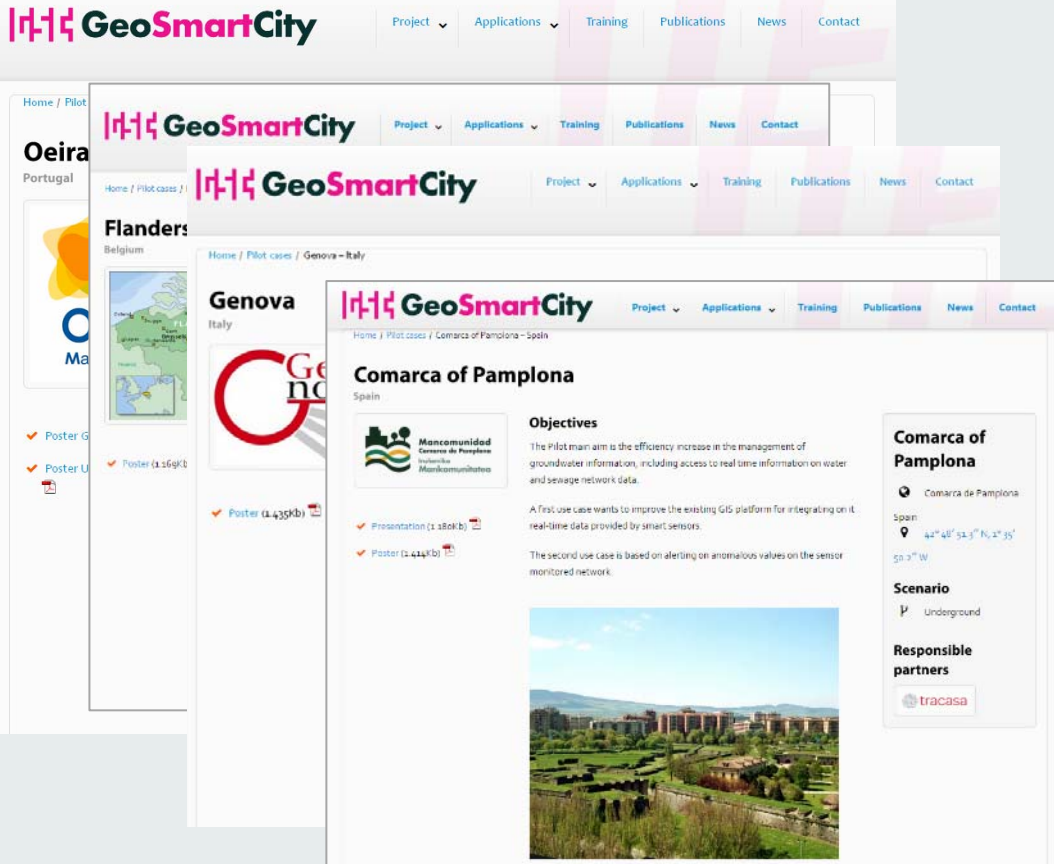
55° 55.675" E

Scenario

Underground

Responsible partners





The screenshot displays the GeoSmartCity website interface. The main navigation bar includes links for Project, Applications, Training, Publications, News, and Contact. The left sidebar shows a list of pilot cases: Oeiras (Portugal), Flanders (Belgium), Genova (Italy), and Comarca of Pamplona (Spain). The main content area is focused on the 'Comarca of Pamplona' project, which is part of the 'Mancomunidad Comarca de Pamplona' initiative in Spain. The page details the project's objectives, which are to improve groundwater management efficiency and provide real-time information on water and sewage network data. It also lists the project's goals, such as integrating GIS platforms and providing real-time data. A large image of a cityscape is featured at the bottom of the main content area. On the right side, there is a sidebar with additional information, including the project's location (Spain, 42° 48' 52.9" N, 2° 35' 50.3" W), the scenario (Underground), and the responsible partners (tracasa).



Objectives

This pilot focus on two aspects. The first one is the provision or volunteered geographic information (VGI) to report a problems on the public underground infrastructure.

The second is based on the use of mobile clients by municipalities and companies technicians (equipped with innovative visualization features such as Augmented Reality) to support the management and update of existing data on the field.



South Moravian Region

South Moravian Region

Czech Republic

48° 57' 16.9308" N, 16° 46' 3.684" E

Scenario

Underground

Responsible partners

INTERGRAPH



Objectives

This pilot focus on two aspects: geographic information (VGI) infrastructure.

The second is based on the technicians (equipped with a Reality) to support the main



Objectives

This pilot focuses on the integration and harmonization of the underground network data coming from the municipality and the Utility companies.

Data and specialized services will be integrated in existing GIS platform supporting an integrated approach on the management and maintenance of the networks data.



Ruda Śląska

Ruda Śląska

Poland

50° 15' 20.9838" N, 18° 51' 20.052" E

Scenario

Underground

Responsible partners



See more in the next presentations...

11:15-12:15	Smart cities in Portugal <ul style="list-style-type: none"> • <i>Urban Analytics – accelerating the development of smart cities – Miguel Castro Neto (Nova IMS)</i> • <i>Oeiras Urban Analytics Hub – Silvia Breu (Municipality of Oeiras)</i> • <i>Gendering Smart Cities. Time-spaces in Lisbon Metropolitan Area - Margarida Queirós (IGOT)</i>
12:15 - 13:00	Networking and conclusions <ul style="list-style-type: none"> • <i>Exploitation towards Thematic Communities, Training Framework and stakeholders involvement - G. Saio (GISIG)</i> • <i>Discussion and workshop conclusions - Nelson Mileu & João Melo (Município)</i>