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|-------------------------|-------------------------------------------------------------------------------------------------|
| <b>Project number:</b>  | 296282                                                                                          |
| <b>Project acronym:</b> | Plan4business                                                                                   |
| <b>Project title:</b>   | A service platform for aggregation, processing and analysis of urban and regional planning data |
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|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------|
| Dissemination Level                                                                             |                                                                                      |        |
| PU                                                                                              | Public                                                                               | PU     |
| PP                                                                                              | Restricted to other programme participants (including the Commission Services)       |        |
| RE                                                                                              | Restricted to a group specified by the consortium                                    |        |
| CO                                                                                              | Confidential, only for members of the consortium (including the Commission Services) | Annex1 |



European Commission  
Information Society and Media

|                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title:</b>                                                                                                                                           |
| <b>Dissemination and Exploitation Plan – Final</b>                                                                                                      |
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| <b>Working Group:</b>                                                                                                                                   |
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| DoW, D2.4.2, D1.5.1                                                                                                                                     |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Short Description:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| The report is aiming to summarise dissemination activities undertaken by the consortium members during the project period. It provides also information on evaluation of effectiveness of these actions on the base of respective success indicators. The report introduces marketing plan for each of the elements of the commercial offer built during the project duration and defines exploitation strategy for each of the project partners in both business and scientific domains. It presents also foreseen potential of exploitation of project achievements by the European and national administration. |
| <b>Keywords:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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# 1 Introduction

Plan4business has been focussing on the development of a service platform for aggregation, processing and analysis of urban and regional planning data. Challenges of that kind of an ambitious enterprise forced the consortium for undertaking measures maximising likelihood of success of the project. Challenges were even bigger, having in mind the future commercial purpose of the platform.

The important element of both the R&D project and commercial – operational phase are activities focused on the dissemination of information about the project achievements and defining its future exploitation.

## 1.1 Aim of report

The specificity of Plan4Business initiative lies within the two main phases of its lifecycle: the first, project phase – R&D works, and the second, operational phase – commercial operation. During project phase from PM1 to PM24, it was needed to share information in the scope of project progress: development of Plan4business system, approach to spatial planning documents harmonisation and finally, considering the future competition on the market, approach for business model and analytical offer of the portal. The second phase corresponds to the operational stage of the Plan4business initiative, including commercial activity on the market. This phase should be subordinated to the business rules. Particular marketing messages should be addressed to the particular groups of costumers. It is worth to notice that costumers were considered already earlier, on the project stage. These issues are extremely important, because success of Plan4business depends not only on the technological solutions, but also on the ability to build users communities.

## 1.2 Content of report

This document provides a record of events and media outlets where the project was presented. Conferences, seminars and workshops were good opportunities for discussing the project results and measures taken to solve particular challenges. Participation in this kind of events was an important part of consortium's information policy, crucial for building wide considered community awareness before starting the commercial operation. Important tools for dissemination, like project website, social network profiles and newsletters are also described in the document. The second part of the report refers to the issues of exploitation. Exploitation is understood twofold: firstly as application of results of parallel initiatives in the Plan4business project, and secondly, as planned fields of application of the Plan4business results. Both scopes are described in this report.

Chapter 1 introduces the report objectives.

Chapter 2 provides information on evaluation of effectiveness of these actions on the base of respective success indicators.

Chapter 3 introduces the marketing plan for each of the elements of the commercial offer built during the project.

Chapter 4 defines the exploitation strategy of each of the project partners in both business and scientific domains, presenting also foreseen potential of exploitation of project achievements by the European and national administrations.

Chapter 5 summarizes the conclusions of the report.

ANNEX provides elements of business plans referring to the exploitation of the project achievements by each of the project partner.

## 2 Dissemination strategy

### 2.1 Reaching the target audience

The progress of the system development and information in its final shape were provided to circles of geoinformatics professionals, especially in the European society, interested in the issues of resources interoperability. Another target audience group reached with the message was the geospatial open software community. But the most important professional groups, which were constantly involved during the project and informed about its progress and achievements were spatial planners, spatial planning authorities and real-estates market related professionals.

Networking actions, understood as building relations with groups of potential customers and data providers, represented one of the main focuses of dissemination. Professional networks and initiatives, which became valuable multipliers, are listed below:

**Plan4all** (<http://plan4all.eu/>)

Plan4business based its activities on the results of the Plan4all project. The project was focused on defining standards for spatial planning data standardisation cross Europe in line with the INSPIRE Directive. The project created a network of more than 400 members from the spatial planning domain. This network played a crucial role in dissemination and reaching the target audience.

**European Location Framework (ELF)** (<http://www.eurogeographics.org/category/cumulus/elf>)

The E.L.F is a technical infrastructure, which delivers authoritative, interoperable, cross-border geospatial reference data for analysing and understanding information connected to places and features. It is being built on the basis of collaboration between national mapping agencies (NMA) and cadastral agencies under auspices of Eurogeographics. Plan4business was taken as on the four main pilots in ELF (Figure 1). Plan4business provided use cases for exploiting the ELF infrastructure and reference data. The availability of data and the conditions for their provision are still under negotiation between the NMAs.

The Real Estate Application (REA) led by WirelessInfo will focus on accessing public sector information on various governmental levels including local/municipal, regional, national levels. The application will target mainly at real estate agencies. Other target groups will include citizens, municipalities and investors.

REA will be based on the developments and achievements of the Plan4business project while using the ELF platform as a source of spatial data. The Plan4business project develops a platform for aggregation of spatial planning data, i.e. data related to spatial planning such as urban and spatial plans, land use data, protected areas, transport network and cadastral data. The application is focused also on non-spatial data such as economic, environmental and statistical data that can be linked to spatial planning data within the Plan4business application.

REA will reuse data such as transport network, addresses and cadastral information provided through the ELF platform to enable pan-European services for real estate applications. REA will not offer only data itself in an integrated, harmonized and thus ready-to-use form, but also offer rich analysis and visualization services via an API and an interactive web interface.



*Figure 1 Plan4business as one of the four main applications in the ELF project - WirelessInfo*

**German Umbrella Organisation for Geoinformation (DDGI) (<http://www.ddgi.de/>)**

The DDGI – Deutscher Dachverband für Geoinformation e.V. is a non-profit organisation. Its aim is to emphasise and raise the public awareness of the significance of geoinformation. It enforces the geoinformation industry with the help of political lobbying and names the issues leading to a strengthening of geoinformation both in the respective federal state and at federal level. Thus, offers, accessibility, and usability of geodata in all relevant bodies shall be optimised and the economic benefit shall be realised. The quality model initiated by the DDGI for geodata (PAS 1071) deliberately draws the attention to the quality of the data. The organisation works internationally. On the European level, the DDGI e. V. represents the German interests within the European Umbrella Organisation for Geographic Information (EUROGI) and is accredited by the European Commission as lobbying association.

The coordinator of the plan4business consortium is a member of the DDGI Advisory Board and is providing input to the strategic discussions within the organisation and is focussing on the European perspective of DDGI in cooperation with EUROGI as its European organisation.

**Networking and Cooperation among Subjects in Geoinformatics (GeoInfoNet) (<http://geoinfonet.cz/>)**

The project Networking and Cooperation among Subjects in Geoinformatics (GeoInfoNET) is supported by the Education for Competitiveness Operational Programme, under the priority axis Tertiary Education, Research and Development and in the areas of support Partnerships and Network.

The project is focused on cooperation among the parties interested in the education, research, development and the application of geoinformatics (GI). Geoinformatics, as a young application field, is going through a development and it is infiltrating into many fields of human activity. There has been a development of knowledge, but there has been no sharing of it.

The subject of the project is the strengthening of the partnership and cooperation among partner institutions. During the project, the cooperating subjects are going to create a network GeoInfoNET dealing with all areas of geoinformatics. It will increase the mutual awareness of educational, research and application activities. It will also enhance cooperation with the joint solving of tasks and the organizing of the events to share the latest knowledge.

GeoInfoNet transferred the plan4business knowledge and results to researchers and academia, an important target group.

**Czech Association for Geoinformation (CAGI) (<http://cagi.cz/>)**

CAGI is a non-profit professional national umbrella organization active continuously in Geoinformatics. Its mission is:

- To monitor, disseminate, initiate, promote, and develop progressive methods, tools and organizational processes in NSDI to get an effective production and re-use of metainformation in all level GIS in the Czech Republic.
- To obtain geodata and geoinformation more accessibly, in better and clear quality.
- To develop the GI market, to share expertise and special knowledge internationally.

CAGI plays a key role in the Czech society as a permanent monitoring body, associating GI professionals, evaluating the quality of geodata production, GI technology and services usage and active and strong disseminative and edifying stakeholder. This strategic role was also exploited during the plan4business execution. CAGI served as a connection between the project and the target audience including public authorities.

**URBAN-NEXUS (<http://www.urban-nexus.eu/>)**

URBAN-NEXUS is a coordination and support action funded by the European union under the 7th Framework Programme. This coordination and support action builds on the work of the FP6 project URBAN-NET, which formulated the themes that URBAN-NEXUS is now working on. The URBAN-NEXUS Consortium is comprised of 13 core partners, supported by 25 Strategic Partners throughout Europe.

The organisation will develop a Strategic Dialogue & Partnership Framework to organise a long-term collaboration with stakeholders in relation to the key dimensions of sustainable urban development:

- Urban Climate Resilience
- Health and Quality of Life



- Integrated Urban Management
- Integrated Data and Monitoring
- Competing for Urban Land

URBAN-NEXUS is all about urban knowledge transfer and dialogue to form long-lasting partnerships in and between cities and regions to deal with integrated sustainable urban development. In order to achieve a sustainable city, a vast range of interconnected issues need to be linked up: these include environment and urban planning, energy, water scarcity, transport, tourism, technology and innovation, governance and education, social equity and cohesion, and sustainable consumption.

Representatives of plan4business participated in two of the Urban-Nexus cafes to follow and to contribute in the discussion. The final results of Urban-Nexus will be presented at their final event in June 2014.

## 2.2 Information on Plan4business project

The goal of the Plan4business was to develop a system for harmonisation of spatial planning documents and allowing for analysis and dissemination of the spatial information. It was not a trivial challenge. It required potential user requirements collection, system design, data collection, development and finally testing and evaluation. Information on the project was dynamically changing, reflecting the progress of work. In the beginning of the project period the message was referring to the main assumptions of research and development actions as well as to previous projects conducted by consortium members. The consortium had on its disposal a heritage of two important projects: Plan4All and HUMBOLDT. The first was referring to the subject of harmonisation of spatial planning documents over Europe and the goal of the second was to elaborate a software framework for spatial data harmonisation in the semantic and geometric domains.

Parallel with the development of the Plan4business initiative and the system itself it was possible to extend a message about the project. New data sources, functionalities, and service areas were covering opportunities to address a specially tailored message to particular audiences. More precise business model of the commercial project successor, and growing number of concrete use cases gave opportunity to collect valuable feedback from events participants and web solutions users. Operational services and growing functionalities of the system allowed for including live demonstrations in the workshops agendas. Information on the project milestones, initiation of new services and the most important events found their reflection on the project website and in the form of press releases.

All means used in the process of dissemination of the project related information are named and briefly described in the following section.

## 2.3 Dissemination means and their application

The solutions developed in the Plan4business project are expected to be used by several customer groups. It was important to establish efficient and usable communication channels to reach each group with the appropriate message.

### 2.3.1 Website

In the first months of the project the website dedicated to the plan4business project was started (Figure 2). It was published under the address: <http://www.plan4business.eu>. Due to the international character of the project it was decided that, besides an English version, it should be translated to national languages of the consortium partners: German, Czech and Polish. The website provides information on the main project

assumptions and goals, in the aforementioned languages. It introduces the project consortium, and the sources of founding of the project. It also provides the functionality of registering in order to receive newsletters. Within the online platform of plan4business, the events where the project was presented are also displayed. All deliverables developed in the project, which are in public domain, are accessible through the website.

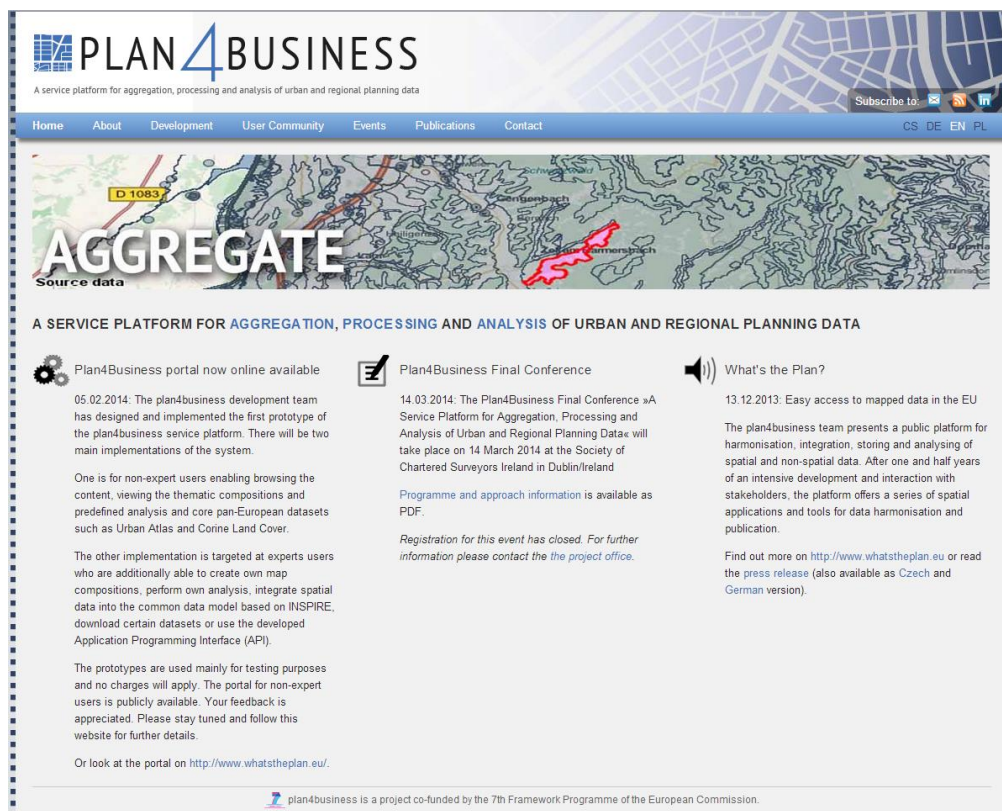


Figure 2 – The plan4business online platform. Source - <http://www.plan4business.eu>

## 2.3.2 Publications and press releases

During the project lifetime, 10 press releases were published (example – Figure 3). Several of them were translated into the national languages of the partners. All of them are available on the project website under the link: <http://www.plan4business.eu/publications/press-releases.html>. The press releases contain information on the most important events, where the plan4business project was presented, or turning points in the project's life cycle like code camps and, recently, the Final Conference.



Figure 3 – Press release (1,2) for the final event of p4b in Dublin. Source: <http://www.plan4business.eu>.

### 2.3.3 Presentations and workshops

Active conference and seminar participation were a great opportunity to raise awareness within circles of professionals from different fields. Structured and substantial information in both spoken (presentations) and written (papers) forms were disseminated. Direct contact with the audience of conferences and seminars gave also a chance of interaction, including feedback collection. The project results were presented several times during a specially organised workshop, which contained both presentations and live demonstrations of the system elements. All the presentations and workshops are named in the Table 1.

### 2.3.4 Posters, leaflets and banners

On several events the presence of the project partners was illustrated with posters. Two examples of those are presented in the Figure 4 and 5. During the first months of the project a simple, yet informative leaflet was designed (Figure 6). It was supplemented afterwards with the roll-up, ensuring satisfying equipment of the booths, which were several times organised.





A service platform for aggregation, processing and analysis of urban and regional planning data



Co-funded by the 7<sup>th</sup> Framework Programme  
Grant agreement: 296282  
Budget: 2,36 mil. EUR  
Duration: 04/2012 - 03/2014  
Website: <http://www.plan4business.eu>



**Project partners:**

1. Fraunhofer Institute for Computer Graphics Research, Germany
2. University of West Bohemia in Pilsen, Czech Republic
3. Help Service - Remote Sensing, s. r. o., Czech Republic
4. International Society of City and Regional Planners, The Netherlands
5. GEOSYSTEMS Polska, Poland
6. Asplan Viak Internet as, Norway

Heterogeneity of spatial planning data hinders their integration. Despite the great value of these data, their potential is not fully exploited. The project consortium has identified the need for data harmonisation, better accessibility and the possibility of data analyses.

*Plan4business* develops a platform for spatial planning data integration. It should serve not only as a catalogue of planning data but also as their integrator.

The main project objectives are the automation of harmonisation processes and possibilities of complex analyses. The *plan4business* project should significantly contribute to decision making processes on various governmental levels and in cross-border activities.

**The *plan4business* platform**

The *plan4business* platform is composed of three layers as depicted in Figure 1:

1. **Client layer** - user interface for performing data integration, management, analyses and visualisation.
2. **Integration and analysis layer** - engines for data harmonisation and data analyses. It includes API (Application Programming Interface) for better exploitation of the *plan4business* platform features in other applications.
3. **Storage layer** - optimised storage for data and metadata.

Figure 2: Prototype of the *plan4business* geoportal.

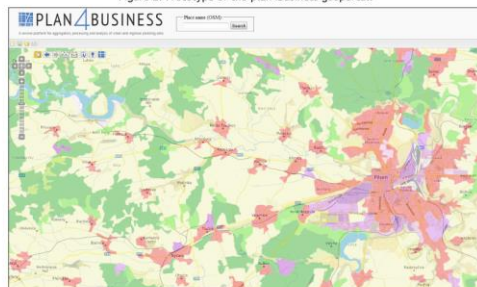
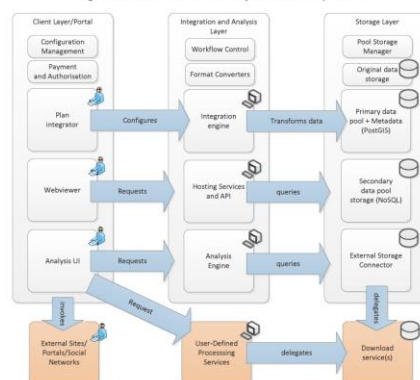


Figure 1: The architecture of the *plan4business* platform



*Plan4business* is developing a business plan to ensure better accessibility to spatial planning data, reuse of these data for various applications and analyses, and sustainable development of the *plan4business* platform. Satisfying the user needs are the main priorities.

Stay informed about project developments. Register for the *plan4business* newsletter at <http://www.plan4business.eu/newsletter.html>



[www.plan4business.eu](http://www.plan4business.eu)

Figure 4 - *Plan4Business* poster.

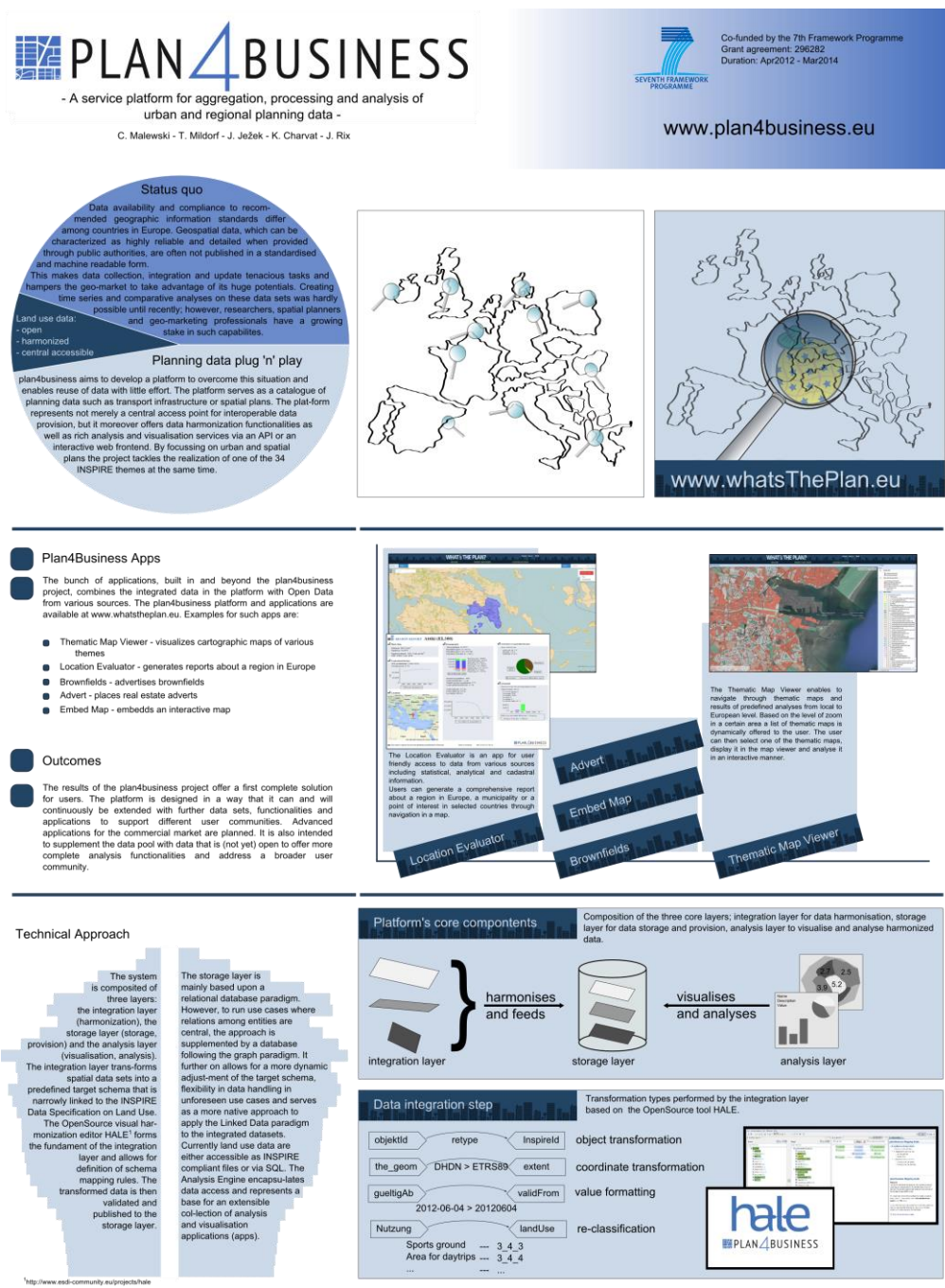


Figure 5 - Plan4Business poster prepared for the EDF 2014 conference in Athens.



Figure 6 - Plan4Business leaflet

### 2.3.5 LinkedIn.com profile

The previous years have shown the rising importance of social media. Especially portals gathering professionals are a proper mean of the most rapid communication with future co-operators and customers of Plan4business services. They are also a tool for technical discussions with other specialists interested in Plan4business portal development. The Plan4business group on LinkedIn.com was established in PM5 is available under the following address: <https://www.linkedin.com/groups?home=&qid=4559047>.

At the end of the project the group had more than 200 members. Other Linked-In groups including Plan4all, Naturnet, enviroGRIDS, European Data Forum, INSPIRE, SmartOpenData - Link Open Data for environment protection in Smart Regions, Geographical Analysis, Urban Modeling Spatial Statistics, GeoPortal4everybody = 4thway 2 SDI, Open Agriculture Data Working Group, OpenTransportNet, "H2020 EULF European Location Framework" SDI, NSDI, INSPIRE & Public Sector Innovation, FOSS4G, Sustainable integrated (land-use and infrastructures) spatial planning, UNSDI and SDI-EDU were used for dissemination and feedback.

## 2.4 Dissemination events and papers published

During the project, Plan4business was presented on many events all over Europe. Subjects of conferences and seminars were different. It was important to communicate with different groups of professionals, important for the project from different reasons, but all contributing to effectively shape the final outputs of the project. Events were related to the application of geoinformation technologies, interoperability of geoinformatics solution in European context, data politics and issues of urban and spatial planning.

The main focus of held presentations and submitted papers was on the general goals of the project, developed approaches and particular project achievements. Besides information sharing, these events were good opportunities for feedback collection. Progress in the system development works allowed for demonstrations of first groups of implemented functionality. Beside internal discussions within the project team and evaluation from the side of the Stakeholders Board, presentations and demonstration for interdisciplinary circles of professionals all provided valuable contributions towards project development.

All presentations, workshops and papers submitted are listed in the Table 1.

| Organiser / Event                                            | Date / Location                                | Event's URL                                                                                                                                     | Way of dissemination         |
|--------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| UWB / Geoseminar                                             | Apr. 25, 2012 / Pilsen, Czech Republic         | No data                                                                                                                                         | Presentation                 |
| Urbancity / REAL CORP 2012                                   | May 15, 2012 / Vienna, Austria                 | <a href="http://www.corp.at">http://www.corp.at</a>                                                                                             | Presentation                 |
| LATC , LOD2, IKS, and PlanetData / European Data Forum (EDF) | Jun. 6,7, 2012 / Frederiksberg, Denmark        | <a href="http://2012.data-forum.eu/">http://2012.data-forum.eu/</a>                                                                             | Presentation                 |
| JRC / 5th INSPIRE Conference                                 | Jun. 23-27, 2012 / Istanbul, Turkey            | <a href="http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2012/">http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2012/</a> | Information                  |
| UN HABITAT / World Urban Forum 6                             | Sep. 1-7, 2012 / Naples, Italy                 | <a href="http://www.worldurbanforum.org/home">http://www.worldurbanforum.org/home</a>                                                           | Presentation                 |
| ISOCARP / ISOCARP World Congress                             | Sept. 10-12, 2012 / Perm, Russia               | <a href="http://www.isocarp.org/sites/isocarp-congress-2012/home/">http://www.isocarp.org/sites/isocarp-congress-2012/home/</a>                 | Information                  |
| CCSS and HSRS Conference                                     | September 26, 2012 / Senohraby, Czech Republic | No data                                                                                                                                         | Presentation / Demonstration |
| UWB / Geomatics in projects                                  | Oct. 03-04, 2012 / Štáhlavy, Czech Republic    | <a href="http://gis.zcu.cz/?page=geomatics-in-projects">http://gis.zcu.cz/?page=geomatics-in-projects</a>                                       | Presentation / Demonstration |
| CENIA / INSPIRUJME SE                                        | Nov. 27-28, 2012 / Praha, Cze, Czech Republic  | <a href="http://www.inspirujmese.cz">http://www.inspirujmese.cz</a>                                                                             | Presentation / Demonstration |
| Technical University of Ostrava / GIS Ostrava 2013           | Jan. 21-23, 2013 / Ostrava, Czech Republic     | <a href="http://gis.vsb.cz/gisostrava/index.php">http://gis.vsb.cz/gisostrava/index.php</a>                                                     | Paper submission             |



| Organiser / Event                                            | Date / Location                             | Event's URL                                                                                                                                     | Way of dissemination                     |
|--------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| A plan4business Customer Workshop                            | Feb. 8, 2013 / London, UK                   | No data                                                                                                                                         | Workshop                                 |
| Adaptive User Seminar                                        | May 23-24, 2012 / Oslo, Norway              | <a href="http://www.avinet.no">http://www.avinet.no</a>                                                                                         | Presentation                             |
| UDMS / UDMS 2013                                             | May 29-31, 2013 / London, UK                | <a href="http://www.udms.net/">http://www.udms.net/</a>                                                                                         | Paper submission                         |
| Urbancity / REAL CORP 2013                                   | May 20-23, 2013, Rome, Italy                | <a href="http://www.corp.at/index.php?id=1">http://www.corp.at/index.php?id=1</a>                                                               | Workshop, Presentation, Paper submission |
| Geoinformatics                                               | May 2013, Prague                            | No data                                                                                                                                         | Paper submission                         |
| OSGeo / FOSS4G                                               | Sep. 17-21, 2013 / Nottingham, UK           | <a href="http://2013.foss4g.org">http://2013.foss4g.org</a>                                                                                     | Presentation / Demonstration             |
| University of Salzburg / AGIT 25 Symposium and Expo          | July 3-5, 2013 / Vienna, Austria            | <a href="http://www.agit.at/">http://www.agit.at/</a>                                                                                           | Paper submission, presentation           |
| JRC / INSPIRE Conference 2013                                | 23-27, June 2014 / Florence, Italy          | <a href="http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2013/">http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2013/</a> | Workshop, paper submission, presentation |
| INTERGEO 2013                                                | Oct. 8-10, 2013 / Essen, Germany            | <a href="http://www.intergeo.de/en/index.html">http://www.intergeo.de/en/index.html</a>                                                         | Presentation                             |
| MIPIM                                                        | Mar 12-15th 2013 / Cannes, France           | <a href="http://www.mipim.com/">http://www.mipim.com/</a>                                                                                       | Presentation                             |
| LATC , LOD2, IKS, and PlanetData / European Data Forum (EDF) | Apr 9-10th 2013 / Dublin, Ireland           | <a href="http://2013.data-forum.eu/">http://2013.data-forum.eu/</a>                                                                             | Presentation                             |
| ISOCARP / ISOCARP Congress 2013                              | Oct. 2013, Brisbane, Australia              | <a href="http://www.isocarp.org/index.php?id=116">http://www.isocarp.org/index.php?id=116</a>                                                   | Presentation                             |
| Technical University of Ostrava / GIS                        | Jan. 21-23rd 2013 / Ostrava, Czech Republic | <a href="http://gis.vsb.cz/gisostrava/index.php">http://gis.vsb.cz/gisostrava/index.php</a>                                                     | Paper submission                         |



| Organiser / Event                                                                  | Date / Location                            | Event's URL                                                                                                                                               | Way of dissemination                     |
|------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Ostrava 2013                                                                       |                                            |                                                                                                                                                           |                                          |
| Plan4business Customer Workshop                                                    | February 8, 2013 / London, UK              | No data                                                                                                                                                   | Workshop                                 |
| Adaptive user seminar                                                              | June 4-5, 2013, Arendal / Norway           | <a href="http://www.avinet.no">http://www.avinet.no</a>                                                                                                   | Presentation                             |
| UDMS / UDMS 2013                                                                   | May 29-31, 2013 / London, UK               | <a href="http://www.udms.net/">http://www.udms.net/</a>                                                                                                   | Paper submission                         |
| Urbancity / REAL CORP 2013                                                         | May 20 – 23, 2013, Rome, Italy             | <a href="http://www.corp.at/index.php?id=1">http://www.corp.at/index.php?id=1</a>                                                                         | Workshop, presentation, paper submission |
| HANNOVER MESSE 2013                                                                | April 08-12, 2013 / Hannover, Germany      | No data                                                                                                                                                   | Exhibition                               |
| GI2013 - Forum                                                                     | April 29-30, 2013 / Dresden, Germany       | <a href="http://gdi-sn.blogspot.de/">http://gdi-sn.blogspot.de/</a>                                                                                       | Workshop                                 |
| REAL CORP 2013 - Planning Times Workshop                                           | May 20-22, 2013 / Rome, Italy              | <a href="http://www.corp.at">http://www.corp.at</a>                                                                                                       | Workshop, paper submission               |
| ERRA Regional Workshop                                                             | May 22, 23, 2013 / Vadul lui Voda, Moldova | No data                                                                                                                                                   | Presentation                             |
| Geoinformation in public administration 2013 / Geoinformace ve veřejné správě 2013 | May 27-28, 2013 / Prague, Czech Republic   | <a href="http://www.cagi.cz/konference-givs-2013">http://www.cagi.cz/konference-givs-2013</a>                                                             | Presentation                             |
| Územní plánování a GIS (Spatial Planning and GIS), Bítov 2013                      | May 29-31, 2013 / Bítov, Czech Republic    | <a href="http://upgis.cz">http://upgis.cz</a>                                                                                                             | Workshop                                 |
| Urban Data Management Society (UDMS)                                               | May 29-31, 2013 / London, United Kingdom   | <a href="http://www.udms.net/">http://www.udms.net/</a>                                                                                                   | Workshop                                 |
| INSPIRE Conference 2013                                                            | June 23-27, 2013 / Florence, Italy         | <a href="http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2013/#home">http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2013/#home</a> | Workshop, paper submission               |

| Organiser / Event                                                            | Date / Location                                     | Event's URL                                                                                                                                                                                                             | Way of dissemination       |
|------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Plan4business Workshop in Pilsen                                             | September 5,6, 2013 / Pilsen, Czech Republic        | <a href="http://www.gis.zcu.cz/kartografie/konference2013">http://www.gis.zcu.cz/kartografie/konference2013</a>                                                                                                         | Workshop                   |
| FOSS4G Nottingham                                                            | September 17, 21, 2013 / Nottingham, United Kingdom | <a href="http://2013.foss4g.org/">http://2013.foss4g.org/</a>                                                                                                                                                           | Workshop                   |
| EXPO REAL 2013                                                               | October 07, 09, 2014 / Munich, Germany              | <a href="http://www.exporeal.net/">http://www.exporeal.net/</a>                                                                                                                                                         | Workshop, paper submission |
| INTERGEO 2013                                                                | October 08, 10, 2013 / Essen, Germany               | <a href="http://www.intergeo.de/en/index.html">http://www.intergeo.de/en/index.html</a>                                                                                                                                 | Workshop                   |
| International Symposium on Environmental Software Systems                    | October 09, 11, 2013 / Vienna, Austria              | <a href="http://www.isess2013.org">http://www.isess2013.org</a>                                                                                                                                                         | Workshop                   |
| GEPRO & ATLAS - Setkání uživatelů 2013                                       | October 15, 16, 2013 / Prague, Czech Republic       | <a href="http://www.gepro.cz/uvod/setkani/">http://www.gepro.cz/uvod/setkani/</a>                                                                                                                                       | Workshop                   |
| ICT 2013 - Create, Connect, Grow                                             | November 6, 8, 2013 / Vilnius, Lithuania            | <a href="https://ec.europa.eu/digital-agenda/en/ict-2013">https://ec.europa.eu/digital-agenda/en/ict-2013</a>                                                                                                           | Presentation               |
| Workshop in JRC Ispra                                                        | November 22, 2013 / Ispra, Italy                    | No data                                                                                                                                                                                                                 | Workshop                   |
| Inspirujme se                                                                | November 27, 28, 2013 / Bratislava, Slovakia        | <a href="http://www.inspirujmese.cz/">http://www.inspirujmese.cz/</a>                                                                                                                                                   | Workshop, Presentation     |
| Plan4Business European Workshop                                              | November 29, 2013 / Brussels, Belgium               | No data                                                                                                                                                                                                                 | Workshop, Presentation     |
| Centralab & Open Data                                                        | December 09, 2013 / Prague, Czech Republic          | <a href="http://www.ccss.cz/en/?menuID=35&amp;articleID=128&amp;action=article&amp;presenter=ArticleDetail">http://www.ccss.cz/en/?menuID=35&amp;articleID=128&amp;action=article&amp;presenter=ArticleDetail</a>       | Workshop, Presentation     |
| Project Conference STATUS                                                    | December 16, 2013 / Vienna, Austria                 | <a href="http://www.status.eu">http://www.status.eu</a>                                                                                                                                                                 | Presentation               |
| Information and networking days - H2020 Work Programme 2014-2015, Connecting | January 16, 2014 / Luxembourg, Luxembourg           | <a href="http://ec.europa.eu/digital-agenda/en/news/information-and-networking-days-h2020-work-programme-2014">http://ec.europa.eu/digital-agenda/en/news/information-and-networking-days-h2020-work-programme-2014</a> | Presentation               |

| Organiser / Event                            | Date / Location                             | Event's URL                                                                                                                                                                                               | Way of dissemination   |
|----------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Europe Facility                              |                                             |                                                                                                                                                                                                           |                        |
| H2020 Info Day: Innovation and Public Sector | February 10, 2014 / Brussels, Belgium       | <a href="https://ec.europa.eu/digital-agenda/en/news/h2020-info-day-innovation-and-public-sector">https://ec.europa.eu/digital-agenda/en/news/h2020-info-day-innovation-and-public-sector</a>             | Presentation           |
| Regional geomatic seminar                    | February 12-13, 2014 / Kristiansand, Norway | <a href="http://geoforum.no/lokalavdelinger/sorlandet/arrangement/lokale-geomatikkdager-sorlandet-2014">http://geoforum.no/lokalavdelinger/sorlandet/arrangement/lokale-geomatikkdager-sorlandet-2014</a> | Presentation           |
| Cities of Tomorrow                           | February 17, 18, 2014 / Brussels, Belgium   | <a href="http://ec.europa.eu/regional_policy/conferences/urban2014/index_en.cfm">http://ec.europa.eu/regional_policy/conferences/urban2014/index_en.cfm</a>                                               | Presentation           |
| Adaptive 3 product release                   | February 18, 2014 / Oslo, Norway            | <a href="http://www.avinet.no">http://www.avinet.no</a>                                                                                                                                                   | Presentation           |
| Meeting at Masaryk University                | February 28, 2014 / Brno, Czech Republic    | No data                                                                                                                                                                                                   | Workshop               |
| Meeting with CEIT ALANOVA                    | February 28, 2014 / Schwechat, Austria      | No data                                                                                                                                                                                                   | Workshop               |
| Linking Geospatial Data                      | March 5,6, 2014 / London, UK                | <a href="http://www.w3.org/2014/03/lgd/">http://www.w3.org/2014/03/lgd/</a>                                                                                                                               | Workshop               |
| Meeting with METRUM                          | March 11, 2014 / Riga, Latvia               | No data                                                                                                                                                                                                   | Workshop               |
| Meeting at Riga Technical University         | March 12, 2014 / Riga, Latvia               | No data                                                                                                                                                                                                   | Workshop, Presentation |
| Plan4Business Final Conference               | March 14, 2014 / Dublin, Ireland            | No data                                                                                                                                                                                                   | Workshop, Presentation |
| Workshop in Aegion                           | March 17, 2014 / Aegion, Greece             | No data                                                                                                                                                                                                   | Workshop, Presentation |
| Exhibition and poster on European Data Forum | March 19, 20, 2014 / Athens, Greece         | <a href="http://2014.data-forum.eu/">http://2014.data-forum.eu/</a>                                                                                                                                       | Exhibition, Poster     |

Table 1- Events where information on the project was disseminated

## 2.5 Success indicators fulfilment

The Description of Work defines a series of success indicators. One of categories refers to dissemination and exploitation. Table 2 defines quantity criteria of success of D&E activities.

| Indicator                                        | PM12 | PM24 |
|--------------------------------------------------|------|------|
| Number of unique monthly website visitors        | 300  | 1000 |
| Number of event participants in reporting period | 300  | 500  |
| Contacts (potential users/subscribers) List Size | 3000 | 6000 |
| Number of registered users                       | 150  | 750  |
| Number of subscribers                            | 0    | 150  |
| Number of Press Releases in reporting period     | 10   | 10   |
| Number of publications in reporting period       | 6    | 12   |

*Table 2 - Dissemination and exploitation oriented success indicators*

Actual values achieved for each of the indicators are presented below:

**Number of unique monthly website visitors:** At the end of the project, the number of unique monthly visitors of the project website is above 1100.

**Number of event participants:** On the base of estimations more than 9000 individuals had a chance to get familiar with the project thanks to presentations and seminars provided during events. The list of events and the way of dissemination are described in Table 1.

**Contacts (potential users/subscribers) List Size:** Since the plan4business project builds upon achievements of the HUMBOLDT and Plan4All projects, networking conducted during both projects are being used now. HUMBOLDT projects gives connection to many potential users/subscribers, while Plan4All links to 700 more. Very important is a network provided by one of the project partner – ISOCARP. It provides access to around 2000 users. The most substantial group of potential users comes from one of the Stakeholders Board members – a representative of RICS (Royal Institution of Chartered Surveyors) and is approximately 25.000 contacts.

**Number of registered users:** Status: at the end of the project the number of registered users of the whatstheplan.eu portal achieved the level of 112.

**Number of subscribers:** The number of individuals which subscribed the newsletters is 21, whilst the number of members of the plan4business group on the linkedin.com reached 218.

**Number of Press Releases in reporting period:** Status at the end of the project the number of the press releases achieved level of 14 (including translations).

**Number of publications in reporting period:** Status at the end of the project the number of the publications achieved level of 13.

### 3 Marketing action plan

The marketing action is already conducted through presentations and seminars during thematic conferences, customers' workshops, and with the use of press releases. In the initial stage of the operational phase, direct and indirect promotion, focused on particular groups of customers, will be conducted in the countries of the pilot area: Germany, Czech Republic and Poland. Due to origin and currently conducted operations of the consortium members, marketing action will be actually feasible in these countries.

The D2.4.2 Business model - final version introduced this report as a document where the marketing plan, understood as a strategy of dissemination of information referring to the commercial offer of the project consortium successor, will be presented. This section provides comprehensive assumptions for national and international marketing action, which is planned, and partially already conducted in respect to particular offer elements.

As stated in the above-mentioned D2.4.2, the commercial offer built on the project assumptions covers several elements. Each of the elements is targeted to a different target group, has different key selling points, which need to be underlined. Due to that the marketing plan was designed in respect to particular elements of the offer separately.

The main division of the project technical achievements goes between the Open Data Platform and Commercial Platform, consisting of a series of elements - tools and services. INTEGRATOR - a tool simplifying of a process of maintenance of INSPIRE compliant dataset. LOCATION EVALUATOR generates comprehensive reports not only on European statistical and administrative division units, but also for individual buildings. TENDERS SEARCHER provides information on current real-estates offered in tenders procedures by administration, enriched with inputs for properties evaluation and analysis of business potential. ADVERT - an offer for entities, which are interested in the dissemination of information about properties for sale or rent, as well as investment zones. Uniqueness of both datasets and tools building the platform allows for incorporating non-typical services and data provision into the commercial offer. These elements of an offer will be referred in the following part of the document as CUSTOMISED DATA and SERVICES PROVISION.

Having the best overview of local markets and existing channels of communications, local representatives will be responsible for creating a marketing plan best fitting the local conditions. Local representatives will be also responsible for local customers' relationship management. Different messages need to be formulated and different channels of communication should be used to reach different customers' groups. Each element of the project's technical achievements, due to its uniqueness, requires a specific approach and a place in the marketing strategy. The baselines for marketing actions are presented below.

#### 3.1 Open Data Platform

The basic marketing strategy is adopting the so-called *freemium business model* (see D3.1 and D3.4), which assumes attracting potential customers with free, yet useful and interesting content. Described in the Section 3.3 the Open Data Platform is also understood as a feature allowing for introduction of the initiative in general and valuable paid tools, useful for particular customers' groups. The ODP should be understood as a universal marketing tool that is already operational and promotes the initiative internationally.

## 3.2 The INTEGRATOR's marketing strategy

### Target group

Spatial planners and public administrations – data authors and data owners obligated for the INSPIRE directive requirements fulfilment.

### Message

Building informational resources of the platform connected with the necessity of establishing operational cooperation with representatives of authorities responsible for spatial planning on the lowest, local level. On the one hand, this allowed collecting knowledge about their everyday practice, problems and needs, while on the other hand it built awareness of the project goals. Clear focus on spatial plans, issues of the INSPIRE implementation and data harmonisation spread already readable message about capabilities of data processing of the consortium members and usefulness of the INTEGRATOR tool, designed to be used in this process.

The solution will be offered by the spin-off company to be established by the Fraunhofer IDG in the near future. This entity will promote both the application tailored for data processing and its services which provision will be based on the technical solution. It is also planned that the marketing action and the commercial operation itself will be extended internationally. Subsequently, local representatives will be engaged in European countries giving a better overview and more efficient communication with defined target groups.

### Channels

The core of the INTEGRATOR promotion and information campaign in the international planners' community will use the network of one of the consortium partners: ISOCARP, which is part of a large network of partner organisations. Together with these partners, ISOCARP organises joint events and network activities, to strengthen the base for international cooperation between planning professionals worldwide. Great marketing opportunity is connected with the event planned to be organised in Gdynia, Poland between September 23 and 26, 2014 – the International Planning Congress. Other conferences and seminars gathering planning professionals will be also of the major concern of the team responsible on the INTEGRATOR's promotion.

To reach the urban and spatial planners group with the message introducing the INTEGRATOR tool and an offer of data processing it is foreseen to use also press and internet publications and advertisement. Planners' specific titles like the Polish "Urbanistyka.info" (<http://www.urbanistyka.info/>) or "Przegląd Urbanistyczny" (<http://www.przegladurbanistyczny.pl/>) will be used during the informational and promotional campaign.

The second target group for the tool itself and services of data processing are data owners – mainly local administration responsible for spatial planning issues. Due to limited, strictly defined number of customers in this group and simplicity of definition of departments and persons responsible for particular issues it is feasible to plan and conduct direct campaign. Two channels of communication are planned to be used in order to reach authorities – direct communication, also during various events aiming at gathering their representatives (i.e. conferences, seminars, workshops), and publications of papers in press directed to local self-governing officers. As examples of this kind of titles two Polish titles might be provided: "Wspólnota" (<http://www.wspolnota.org.pl/>) and "Gmina" (<http://www.magazynGmina.pl/>).



### 3.3 The LOCATION EVALUATOR's marketing strategy

#### Target group

Individual and institutional investors, other entities involved in the real-estate market.

#### Message

The LOCATION EVALUATOR is a web tool providing an access to information from various sources including statistical, analytical and cadastral information enriched with capability of generation of comprehensive reports about regions, municipalities or points of interest. More advanced version is enriched in capability of performing user defined analyses based on the data pool.

The services of the LE and possibility of integration of the solution with external IT systems are offered by the HSRS. The market for this solution was defined to be individual and institutional investors and other entities involved in the real-estate market. Those persons and companies are expected to benefit from comprehensive reports describing demographic and socio-economic conditions of regions municipalities and selected features of buildings. Reports provide information useful for properties valuation, as well as assessment of the location business potential and conditions for living. Since the solution uses data resources which had to be collected and integrated by partners on the current stage of development it provides detailed information for the pilot area which covers: Germany, Czech Republic and Poland. Considerable data amount was collected for other countries. However, due to little local expertise and no representation in place in countries like: Ireland, Spain, Belgium, Romania and due to uncertain market in Norway as well, the business operation is limited only to the pilot area.

#### Channels

Marketing instruments planned to be used in order to reach the potential customers in real-estate are web portals and internet editions of magazines for real-estate specialists.

Currently the major affords are concentrated on the offering a possibility of integration of this tool with existing solutions and portals. When offering possibility of the tool integration particular potential customers and partners are addressed directly.

### 3.4 The TENDERS SEARCHER's marketing strategy

#### Target group

Individual and institutional investors, other entities involved in the real-estate market.

#### Message

Promoting the TENDERS SEARCHER it is important to underline the simplification of access to distributed until now and non-homogenous sources of information on tenders on real estates. Expected transaction price usually achieved in these procedures is noticeably lower than on the commercial market. What could be also important for potential customers is direct cooperation between the portal's operator and the administration publishing their announcements.

#### Channels

Since the services are provided with the use of automatized internet tools, the most natural and the most effective mean to promote the platform is internet. In the future, international expansion is foreseen, but currently the portal provides information on the tenders organised by Polish authorities. This content is not only interesting for Polish customers. Structuring information on properties offered for sale and rent by

governmental and self-governmental structures, combined with location evaluation is interesting also for international investors' circles. Thus, the promotion will be conducted in Poland and abroad.

In Poland the main medium used for dissemination of information on the TS will be the third most popular web map portal – Targeo.pl (<http://www.targeo.pl/>). One of the project partners, who is the operator of the TS is also a shareholder of this portal. Due to that, this channel could be used with no additional costs to reach almost 3 million unique users monthly. It is worth to mention that Targeo.pl is widely used by professionals including real-estates specialists, which are one of the main of target groups. The promotion will be supported with use of other channels, directed precisely to selected customers. The “Property news.pl” (<http://www.propertynews.pl/en/>) will become one of them. The promotional campaign will cover both sponsored papers and advertisements.

Accordingly to the business model the TS will be beneficial for both users – investors and content providers – administration (disseminating information of properties offered by them for sale). Besides getting a better transaction prise, as a side effect, an investment in particular city or municipality could be expected. Incensement of probability of attracting new investors to locate their activity in Poland is in line with the main mission of the Polish Information and Foreign Investment Agency ([http://www.paiz.gov.pl/en?lang\\_id=17](http://www.paiz.gov.pl/en?lang_id=17)). It is planned to check a possibility of establishing cooperation with this institution.

### 3.5 The ADVERT's marketing strategy

#### Target groups

Individuals, real-estate agencies, authorities

#### Message

The growing popularity of the platforms will become key selling point of the ADVERT service. ADVERT offer will be promoted differently in respect to different customers groups. It is expected that both individual and institutional, including administrative customers will be interested in publishing information about properties for sale or rent.

#### Channels

The campaign is reasonable only after starting to offer the service by the portal operator, and this is planned for the time of gathering the reasonable audience of the portal. It planned to use the same channels which were planned for the portal itself (see section 3.4).

### 3.6 The CUSTOMISED DATA and SERVICES' marketing strategy

#### Target groups

Banks, insurance companies, energy supply services, environmental services, health services, commercial services, real-estate agencies telecommunication services, tourism and travel services, transport and logistics services, security services, planning engineers, spatial planners, spatial planning authorities and planning administrations, fiscal authorities, regional development agencies, science and academia.

#### Message

Like it was stated in the D2.4.2, other groups of customers could generate noticeable demand for customised services and datasets provision. Since it would be difficult to reach all of these groups the promotion, which has already started, press and web portals will be used related to geospatial information

technology and its applications. The message will provide information on the potential of IT systems integration (i.e. elements of the Platforms with internal customers' solutions) and data processing and harmonisation, spatial monitoring and change detection, spatial modelling and sustainable spatial planning provided accordingly with specific customers' requirements.

### **Channels**

For dissemination of information on the customised data and services, no specific marketing plan was generated. The information on possible customisation of offered products and services accordingly with potential customers needs is currently (or will become) a part of information speeded by everything built during the project on the portals and websites as well as services of all partners engaged in the project.

## 4 Exploitation plan

Exploitation is understood as an approach to utilize information on projects and initiatives conducted in parallel, which could be profitable for the Plan4business initiative. The second meaning identifies fields of application of the Plan4business initiative achievements. Both are described in the following sections.

### 4.1 Exploitation of external initiatives' results in the project

During the implementation phase of the Plan4business project, it was important to use the experience, resulting of other projects and initiatives conducted in the field of spatial planning data exploitation and harmonisation. Existing solutions of comparable functionality, i.e. spatial data integration, web GIS tools or spatial data storage solution were also inspiring for the project team.

Initiatives of the highest importance for the implementation phase of P4b project are described below. The main way to benefit from those initiatives is to observe development and to exploit their results.

#### **HUMBOLDT** (<http://www.esdi-humboldt.eu>)

Humboldt contributes to the implementation of a European Spatial Data Infrastructure (ESDI) that integrates the diversity of spatial data available for a multitude of European organisations. It has the aim to manage and advance important parts of the implementation process of this ESDI.

The main goal of the Humboldt project was to enable organisations to document, publish and harmonise their spatial information. The software tools and processes created demonstrate the feasibility and benefits of an Infrastructure for Spatial Information in Europe as planned by the INSPIRE initiative, meeting the goals of Global Monitoring for Environment and Security (GMES).

The results of the HUMBOLDT project with the rights of the open source software were transferred to the Data Harmonisation Panel (DHP). Future development is under progress by the members of the DHP, supported by different projects, like plan4business, and other contributors.

#### **DHP – Data Harmonisation Panel** (<http://www.dhpanel.eu/>)

The data harmonisation panel has been established with the goal of supporting the international community of experts and organisations that have to deal with spatial data harmonisation by disseminating, exploiting and advancing harmonisation methods and technologies such as the HUMBOLDT Tools and Services, in this context specifically the HUMBOLDT Alignment Editor (HALE).

This open source software is further developed and strongly used in the plan4business project. With the results of plan4business mainly Fraunhofer IGD will provide in cooperation with DHP additional and new services in the context of the plan4business business model and also beyond in other application areas.

#### **INSPIRE Thematic Work Group on Land Use** (<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/2>)

Achievements of the INSPIRE TWG LU are covered by developing document D2.8.III.4 Data Specification on Land Use – Draft Guidelines. The document describes official requirements of INSPIRE Data Specification for the spatial data theme Land Use. It is built in relation to the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). The Specification splits up Land Use itself into two types: The Existing Land Use (ELU) and The Planned Land Use (PLU). It introduces also the Hierarchical INSPIRE Land Use Classification System (HILUCS) as a basis for thematic harmonisation of different sources. Additionally it

provides a comprehensive set of use-cases, which involves harmonised information on ELU and PLU in particular procedures.

Plan4business is using the INSPIRE application schema for land use and the HILUCS classification schema.

**Plan4all** (<http://www.plan4all.eu>)

The Plan4all geoportal provides the means to search for spatial data sets and spatial data services with regard to spatial planning. It allows the user to view and download spatial data sets (subject to access restrictions) and related metadata.

The current version is a prototype Plan4all geoportal and allows discovery and viewing of spatial data sets and services. The prototype Plan4all geoportal currently accesses a limited number of discovery and view services.

The Plan4all achievements served as a basis for the plan4business implementation, especially concerning the technological developments (geoportal components), standards (application schema and metadata), data and the Plan4all network (dissemination and reaching the customers).

**HLandData** (<http://www.hlandata.eu/>)

The HLANDATA project, led by the Government of Navarre and TRACASA, aims to demonstrate the feasible European level harmonization of the Land Use and Land Cover datasets taking into account both the data categorization and the data models, for any of their possible uses and users, through the development of user-oriented value-added services.

Land Cover is referred to as the physical, chemical, ecological or biological categorization of the earth surface. Land Use is referred to as the categorization of the territory based on its current and future planned socio-economic purpose. Land Use and Land Cover are amongst the most important geographic information themes today.

This project is fully aligned with the INSPIRE European Directive (Land Use and Land Cover themes are included in its annexes II and III) and it follows the line of the European Directive 003/98/EC on the reuse of public sector information.

**BRISEIDE** (<http://www.briseide.eu/>)

BRISEIDE is an ICT Policy Support Programme project within EU's Competitiveness and Innovation Framework Programme.

The ICT Policy Support Programme (ICT PSP) under the Competitiveness and Innovation Programme (CIP) aims at stimulating innovation and competitiveness through the wider uptake and best use of ICT by citizens, governments and businesses, particularly Small and Medium-sized Enterprises. The approach is based on leveraging innovation in response to growing societal demands.

BRISEIDE provided a large scale testbed for interoperability of data and services between various platforms using a common set of standards. The improvements of the geoportal components were applied also within plan4business.

**I-SCOPE** (<http://www.iscopeproject.net/>)

The i-SCOPE project was planning to develop and test technologies for the so-called smart cities services based on interoperable 3D Urban Information Models (UIM). Indeed, the latest generation of UIM, created from accurate urban-scale geospatial information, can be used to create smart web services based on

geometric, semantic, morphological and structural information at urban scale level, which can be used by local governments.

i-SCOPE aims at providing a significant contribution to standards in the domain of smart city services, through contribution to the extension and wider adoption of CityGML as a key enabling open standard for 3D smart city services. Moreover, i-SCOPE will deliver an open platform on top of which to develop three smart city services.

**urbanAPI** (<http://www.urbanapi.eu/>)

The urbanAPI – Information and Communication Technology (ICT) project will provide urban planners with the tools needed to actively analyse, plan and manage the urban environment. European Network for dialogue among urban stakeholder. One topic is integrated data and monitoring. Participation in a dialogue session on above topic took place in Sept 2013. Results are available for analysis. Results of P4B might be presented to the network for dissemination.

Through the role of the coordinator there is a close link between the two projects and the results are taken into consideration in both directions and developments influence each other.

**Habitats** ([www.habitats.cz](http://www.habitats.cz))

The validation pilots, which were formed by multi-stakeholder partnerships where users actively participate in the co-design of the network services, developed on-demand for integration into the pilot service mash-up platforms. Validation pilot partnerships develop and test organisational/institutional arrangements for service sustainability and business models that underpin the project's exploitation strategy. Specific and realistic quantified indicators measure the envisaged improvements in availability, access and use.

Habitats is a finalized project, so cooperation was conducted at the level of dissemination, previous results of Habitats being analysed; some components in plan4business are based on Habitats results.

## 4.2 Results of the Plan4business initiative exploitation

This chapter introduces the plans and ambitions aiming at exploiting the project achievements, understood as IT solutions, databases, methodology, recommendations or widely considered experiences in various scopes of business, scientific, educational domains as well as by respective European, national, regional and local administrations in their practice.

### 4.2.1 Business exploitation

Business exploitation of the plan4business project achievements is described in this section. The section is divided in sub-chapters referring to the approach of each project partner for exploitation of the project results.

#### 4.2.1.1 Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. Fraunhofer IGD (Fraunhofer)

Fraunhofer IGD as applied research organisation is going to make use of the plan4business results in its future activities. Within the project, Fraunhofer IGD was mainly involved in the integration engine and the storage engine, both focussing on the data preparation and storage. The exploitation planning is two folded:

Fraunhofer IGD will use the experiences and results of the plan4business project in **further development and innovation projects**. Those results will have impact in further innovation projects of the Horizon 2020



program, where IGD applies for further developments and use of these technologies. Further the results will be used for direct projects with governmental agencies and also industrial partners. In this context IGD will also **support the common business model** with the partners of plan4business with its competencies in data harmonisation and mapping and offer its services and knowledge to the plan4business customers, mainly data providers in support of uploading harmonised data.

Further Fraunhofer IGD has **set up the spin-off company wetransform GmbH** in this context. Building on the open source tool HALE and the related services it is planned to extend the approach taken with HALE and provide an infrastructure and consulting services to support data harmonisation, schema mapping and transformation. The focus at the beginning is the INSPIRE implementation, with extension to other application fields planned over time. The business plan is under development supported by an internal funding of the Fraunhofer Venture Group. The spin-off company will also get involved in the plan4business business model as one of its service providers to support the customers.

Regarding the exploitation, Fraunhofer will focus on two main aspects:

- Utilising the plan4business platform and data to implement value-added services and applications,
- and building upon the project results, to develop user friendly solutions for collaborative online data integration.

Especially the later will mainly be performed in the newly founded spin-off company *wetransform GmbH*. It is planned to use the new developments to in turn improve and extend the plan4business platform. An elaborated business plan is still in development.

In the Annex an overview on the extended range of planned products and services is given, as well as an overview on the target market and a first financial assessment.

#### 4.2.1.1.1 Action plan

Fraunhofer IGD

- Q3/2014
  - Acquire further data sets in Germany
- Q4/2014
  - Plan4all association membership
  - Support of Open Data Platform
  - Support the commercial services on request

Fraunhofer spin-off wetransform GmbH

- Q2/2014
  - Registration of the company
- Q3 –Q4/2014
  - Business plan development
  - Product development
- Q4/2014

- Offer first services
- Support of plan4business
- Q1/2015
  - Extend business plan to further application fields

#### 4.2.1.2 University of West Bohemia (UWB)

**The Open Data Platform (ODP)** is a data hub containing open data, management and harmonising tools (HALE, Layment, MICKA – for more details on these tools please refer to D4.1.2 Operational System V2) and open applications (Open Land Use Map, Thematic Map Viewer). All these services are available for free with no restrictions. Any party can access the data pool and make commercial or non-commercial apps based on these data. The use of the data must be in line with data licences.

The Open Data Platform is operated under the umbrella of the Plan4all association (see the constitution in Figure 7.) which is being currently set up by the University of West Bohemia, Help Service Remote Sensing and Czech Centre for Science and Society.

The Open Data Platform (ODP) is managed by the Open Data Platform administrator (the first three year by HSRS as an in-kind contribution, furthermore referred to as ODP administrator). All the data traffic within the Open Data Platform (every transaction) is moderated by the ODP administrator. The ODP administrator verifies every transaction. All data in the hub are published as open data.

All the apps/tools provided by the Open Data Platform are available for free. Any party can access the data pool and make commercial or non-commercial apps based on these data. The use of the data must be in line with data licences. Some of the apps can be accessed only when registered and logged-in.

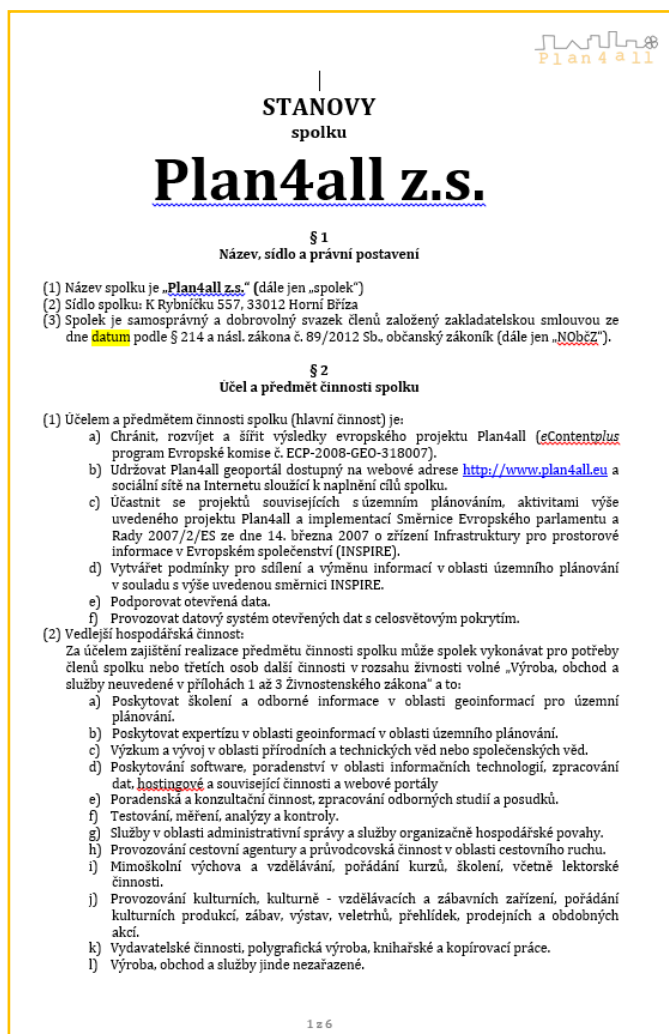


Figure 7. The Plan4all constitution (in Czech)

#### 4.2.1.2.1 UWB action plan

The UWB action plan and its timescale are indicated in the following list:

1. Set-up the Plan4all association (September 2014) – consortium of 3 Czech partners.
2. Translate the Plan4all association constitution into English (September 2014)
3. Install the Open Data Platform under one of the plan4all.eu subdomains (November 2014).
4. Call for partners and projects – an open call for partner and projects interested to become members of the Plan4all association and contribute to its objectives as data or service provider or consumer (September – December 2014). At this moment, there is an interest of several EU projects including SDI4Apps, OpenTransportNet, FOODIE and SmartOpenData.
5. Fill up the Open Data Platform with open data that will be available at that time and harmonise them, this should be done in cooperation with associated projects and partners (December 2014 – June 2015)

6. Organisation of Hackathons and competitions using the data from the Open Data Platform to increase the visibility of the platform and show its potential (from January 2015).

#### **4.2.1.3 Help Service - Remote Sensing Sro (HSRS)**

##### **4.2.1.3.1 HSRS OpenData activities**

HSRS, being the operator of the Open Data Platform – the [whatstheplan.eu](http://whatstheplan.eu) portal, integrating all the tools, applications and data resources, plans to extend its current commercial offer with particular elements.

HSRS is founder of Plan4all Association. Through Plan4all, HSRS expects to support large extensions of current Open Databases. Open Databases are already included as basic data hub for other projects like SDI4Apps, SmartOpenData and OpenTransportNet. Cooperation with these projects, which covers countries, previously not participating in Plan4business will support the extension of the existing database about data from other regions, but also other thematic databases. These activities will also strongly support the extension of OpenLandUse as one key database for real estate analysis. Another focus is on turning this data into form of Linked Open Data (LOD), which will support easy integration with other data sets.

##### **4.2.1.3.2 Location Evaluator**

The LOCATION EVALUATOR (LE), having already noticed the business potential, will be exploited twofold. The first way of exploitation assumes direct offering of the services through the web portal. It is expected to maintain three levels of services, including one offered for free (freemium business model). The second field of application of the LE technology is its integration with costumers' systems.

Currently HSRS is starting to integrate also commercial data sets to LE and start to offer customer services combining different data. These services are now offered in Czech Republic and include not only classical real estate business services, but services for other type of organisations like Water Management Companies, Investors into renewable energy, investment and assessment of potential for agriculture and tourism. These services are agreed for individual costs and will be important part of HSRS incomes in future. There will be cooperation with other data holders like commercial data holders.

Open version of Location Evaluator will be offered now in mobile form through Google play with advertisement. Here has HSRS already experiences from previous applications for cadastre search. LE will extend possibilities of this application, which is successful on Czech Market

Other elements of the [whatstheplan.eu](http://whatstheplan.eu) portal will be also used in future implementations. It will be realisation of the customised services provision, one of the elements of the planned commercial.

HSRS has signed an agreement with real estate agency Vasmajetek.cz and starts publishing their offer as part of reports (advertisement). In the future HSRS is planning to start offering such services also to other agencies. Currently, Vasmajetek reports are Linked Open objects on their pages. Also this is part of HSRS strategy. Other products that will be offered on the market are embedded objects. We expect that with Thematic Maps, we will be able to compete with existing mapping services. In the testing are also now mobile reports. Mobile reports will be part of the exploitation strategy for offering advertisement.

The goal of HSRS`activities with LE is to reach in the first year a turnover of 50,000 Euro and in three years reach 200,000 Euro. This assessment is mainly based on negotiation with potential partners and customers.

#### **4.2.1.3.3 Thematic Map Viewer**

Thematic Map viewer is generally part of the Open Platform. HSRS is going to introduce an extendable version of an embed system with Open API, allowing external programming and including this thematic maps into other applications. Together with providers of commercial data, the new set of services will be offered to organisations not having capacity for their own data management. We are planning to include a set of commercial data sets, data from E.L.F - other commercial data and offer solutions for municipalities, NGOs and other organisations. The potential market for such is only in Czech hundreds of applications. Our potential estimation of such services is 20,000 Euro for 2014, 40,000 Euro for 2015 and then we expect to grow this market to 100,000 Euro.

#### **4.2.1.3.4 Mobile Thematic Map Viewer**

After the end of the project, development of new applications started to guarantee accessibility of thematic maps on Android clients. There will be a version dealing with open Data, but also a commercial version offering commercial data and an advanced API for third parties development. This is a large potential market for the next years. Current estimation of this market is too early to be provided.

#### **4.2.1.3.5 Real Estate Business**

HSRS is now integrating Location evaluator and Thematic Map viewer into a new portal, which is HSRS ordering for advertisement of real estate. Currently, the market in Czech includes 200,000 real estate objects. Not any system offers advertising real estate objects with a detailed assessment of the object, its municipality and regions. Also maps offered by these systems are basic, without any thematic content. Our idea is to offer our portal for advertisement for other real estate companies. The goal is to reach 20 percent of market in two years. In the future we expect to grow also on foreigner markets.

#### **4.2.1.3.6 Utilisation of components developed as part of Plan4business for other application**

For HSRS ad software integrator represents one of its most important incomes. We are planning to include developed components as part of Plan4business solution into our current application. Most of our applications towards municipalities and regions require now updates of components. Tools developed by HSRS as part of Plan4business will be integrated into current applications. These are mainly Map Composer, Thematic Map Viewer and Laymen. Only integration of these components in current applications guarantees income higher than 150,000 Euro.

### **4.2.1.4 The International Society of City and Regional Planners (ISOCARP)**

#### **4.2.1.4.1 ISOCARP activities**

ISOCARP as international Society of individuals, urban and spatial planners, is going to make use of the plan4business results in its future activities, as it is representing a growing international circle of high qualified experts in spatial planning worldwide. Within the project, ISOCARP was involved in the user requirements of the platform, the feedback from end-users regarding the different services proposed and also dissemination activities.

ISOCARP will use the experience and results of the plan4business project in further research and development activities and projects, but also disseminate the project information and results to the members, as ISOCARP is convinced that the plan4business platform is an essential tool for urban planners.

As an example, ISOCARP will involve the project results in conferences and congresses, such as the next Gdynia World Congress in September 2014.

The project results will be integrated in future R&D projects, where ISOCARP is involved, such as new innovation projects of Horizon2020. ISOCARP has also developed in the past several cooperation agreements, e.g. with EUROGI, the European Association, and the OGC Consortium, which is going to be in the future a strategic partner of ISOCARP.

ISOCARP is integrated in the business model with the other plan4business partners as knowledge partner, and will be involved in offering services and knowledge to customers.

Furthermore, ISOCARP will set up in September 2014 a research Institute: the "ISOCARP Institute". This new research body with Headquarters in the Netherlands is planned to provide the necessary infrastructure for the further development of consultation services, project research, education and training courses. The Institute will work closely with the Spin-Off Company of Fraunhofer IGD, wetransform GmbH.

The Institute will include a Task Force focussing on Spatial Data services for urban planners, including new technologies and INSPIRE implementation services. The Institute will also be involved in the INTEGRATOR promotion, and support solution development by professional consultancy.

As for the exploitation of the plan4business project, ISOCARP will focus therefore on the capitalisation of the project results by disseminating the information to the members, making the portal and services accessible as well as using the project experience in the research institute.

#### **4.2.1.4.2 ISOCARP Action plan**

The action plan for ISOCARP is as follows:

Q3/2014:

- Set up of the ISOCARP Institute and business plan, dissemination of plan4business results

Q4/2014:

- Further development of the business plan
- Capitalisation of results, dissemination via Events and conference, building of database reference tools
- Consultancy Services preparation, expert team establishment

Q1/2015:

- Services development
- Support of plan4business structure

Q2/2015:

- Continuing deployment of services



#### 4.2.1.5 GEOSYSTEMS Polska Sp. z o.o. (GEOSYS)

The plan4business project gave GEOSYSTEMS Polska an opportunity of focusing on issues of spatial planning, location potential assessment and real-estates valuation. During the project, many methodologies were collected and developed. Several data sources were analysed and datasets were collected and processed in order to increase its value. Finally several solutions were developed aiming on fulfilling strictly defined informational needs of particular customers groups. GEOSYSTEMS Polska, responsible in the project for planning commercial exploitation of all the achievements, sees a noticeable commercial potential in many aspects of the project.

##### 4.2.1.5.1 TENDERS SEARCHER (AskWhere.eu) action plan

The aim of the askwhere.eu portal is to collect in one place, catalogue and assure intelligibility of announcements on tenders for real-estate held in Poland and in further perspective, in other European states. Owing to systematizing information about offered real-estates and tenders themselves it is also possible to search properties by desired location, type of real-estate, as well as the asking price and the land area or usable area. The share of state and local governments in the ownership of lands, buildings and premises in the Eastern part of the EU is still significant, despite of the intensive process of privatization. As a consequence the public institutions are the most serious entities offering properties for sale and rent. The tender procedure, announced and conducted by a property owner or an entity designated for this task, assumes submitting written, undisclosed offers, from which the one with the highest price is selected. Typically, asking price is also indicated, which constitutes the minimum acceptable, from the owner's the point of view transaction price. In turn, transactional prices achieved in tender procedures are significantly lower than those on the commercial market. This may indicate the attractiveness of tenders organized by the administration for investors.

Collected and catalogued information about tenders for real-estates can be filtered with use of the convenient searcher. Searching within the tenders database provides a list of offers that meet his expectations, entered before as search criteria. By selection of one of the offers from the list a report referring to chosen tender is displayed. The report describes the tender, the property offered, but also provides analytically derived information about the surroundings of the real-estate.

**Technical development** (planned time span for this task: April – September 2014)

The project period allowed to achieve the technological readiness on the level of 75%. Before starting the commercial operation still particular development works are foreseen. These works will be concentrated on the **limitation of the workload** needed to be provided on the daily basis in order to maintain the portal. The expected level of **integration with other GeoSys technologies** is still not satisfactory. Extension of this integration is the other scope of further planned development works. The third scope of planned development works is connected with **application of collected feedback** of potential customers and partners.

##### **Limitation the workload needed for TS maintenance**

- further development of the off-line analytical component basing on the *PostgreSQL/PostGIS* technology, and preparation to turn it to an on-line solution, and further efficiency improvement,
- developing interfaces for operators for faster data entering,
- developing interfaces for self-governments allowing for information on tenders announcements,
- building mechanisms allowing for embedding searching interfaces to real-estates offers database.

### Integration with other GeoSys technologies

- displaying a layer of harmonised spatial plans with use of Targeo.pl technology and internally established geospatial services server,
- application of registration and subscription including elaboration and implementation of business procedures (i.e. automatic invoices generation)

### Application of collected feedback

- tenders database update to achieve the current status published announcement for Poland
- adaptation of the analytical part of reports to various properties usage scenarios (commercial, residential, industrial, tourism and agriculture/forestry),
- other collected feedback application

### Marketing action plan (planned time span for this task: starting from October 2014)

**Target group** planned to be reached with informational and marketing campaign are generally individual and institutional investors, other entities involved in the real-estate market, like properties evaluators and investments advisors.

During the first months of campaign the TS operator will disseminate a **message** underlining the simplification of access to distributed until now and non-homogenous sources of information on tenders on real-estates. Expected transaction price usually achieved in these procedures is noticeably lower than on the commercial market. What could be also important for potential customers is direct cooperation between the portal's operator and the administration publishing their announcements.

Since the services are provided with the use of automatized internet tools, the most natural and the most effective **channel** to promote the platform is internet. In the future, international expansion is foreseen, but currently the portal provides information on the tenders organised by Polish authorities. This content is not only interesting for Polish customers. Structuring information on properties offered for sale and rent by governmental and self-governmental structures, combine with location evaluation is interesting also for international investors' circles. Due to that, the promotion will be conducted in Poland and abroad.

In Poland the main medium used for dissemination of information on the TS will be the third most popular web map portal – Targeo.pl (<http://www.targeo.pl/>). GeoSys, which is the operator of the TS is also a shareholder of this portal. Due to that, this channel could be used with no additional costs to reach almost 3 million unique users monthly. It is worth to mention that Targeo.pl is widely used by professionals including real-estates specialists, which are one of the main of target groups. The promotion will be supported with use of other channels, directed precisely to selected customers. The "Property news.pl" (<http://www.propertynews.pl/en/>) will become one of them. The promotional campaign will cover both sponsored papers and advertisements.

Accordingly to the business model, the TS will be beneficial for both users – investors and content providers – administration (disseminating information of properties offered by them for sale). Besides getting a better transaction prise, as a side effect an investment in particular city or municipality could be expected. Incensement of probability of attracting new investors to locate their activity in Poland is in line with the main mission of the Polish Information and Foreign Investment Agency ([http://www.paiz.gov.pl/en?lang\\_id=17](http://www.paiz.gov.pl/en?lang_id=17)). It is planned to check a possibility of establishing cooperation with this institution.

#### 4.2.1.5.2 CUSTOMISED DATA and SERVICES action plan

Knowledge collected in the project is unique. The GEOSYSTEMS Polska team had an opportunity to process vector datasets of local plans of spatial management for 25 biggest Polish cities and several municipalities. Accordingly to the knowledge of the team nothing comparable was done before. All collected data were processed in respect to the INSPIRE data specification, including topological issues solvation and semantic harmonisation. It gave the team knowledge about current status of this kind of datasets in Poland. The experience collected during this exercise refers to the actually applied coding of zoning elements. Basing on this work the mapping schema between existing and required by the INSPIRE coding system was developed. All these experiences, huge amount of data and already established communication with the administration responsible for spatial development issues give the opportunity of offering trainings in the scope of INSPIRE implementation in the theme of land use and general data processing. It is planned to connect this trainings campaign with the INTEGRATOR (HALE) promotion.

**Thematic spatial databases**, elaborated during the project as collateral databases, usually integrating information from different input data sources. They present increased value and are widely applicable in different fields. They also seem to be promising and were incorporated in the business plan as data offering. Also **methodologies of data integration** developed in order to increase data value will be used in the future to update the datasets, but also to provide customised services for clients.

**Technical development** (planned time span for this task: continuous operation, started already)

Differentiate needs of real-estate business customers and investors' needs could not be fully satisfied with one specialised portal providing information on specific part of properties offers. However, development of this portal gives a noticeable advantage of collection of applicable methodology and datasets. Planned steps of technical development are directly connected with the closest steps of the Tenders Searcher evolution. All named action are planned to be finished until the end of August, however the methodology will be the subject of constant development.

- Elaboration of the structure of location evaluation reports towards structures reflecting in the most accurate way the actual planned properties usage
- Elaboration of methodologies for missing reports items
- Collection and integration of missing datasets (statistical and geospatial)
- Elaboration of the quantification system of the attractiveness of location for particular business activity

**Marketing action plan** (planned time for this task: continuous operation, started already)

Operational start-up and promotion of the Tenders Searcher under the name of AskWhere.eu will give GeoSys an opportunity to reach new markets and new customers. On the portal detailed information regarding the scope of potential support in the field of properties evaluation and valuation is provided. Furthermore, the portal provides information that accelerates the process of evaluating the process of exploitation potential and makes it easier to compare different locations. Contents of the report have been designed to meet the needs of the widest range of users of the askwhere.pl portal. However, it is possible to significantly extend the evaluation of the potential of the property in relation to a number of specific scenarios for its intended application. Such a report, which takes individual needs of the investor into account, can be supplemented with the professional evaluation of the real estate.

In the current pre-operational stage the promotion of the customised data and services is already started and uses existing channels to promote new capabilities and resources, elaborated in the plan4business project. During the promotion of the TS many new contacts with the new customer segments will be established which will be an opportunity for dissemination of information on the company and their partners.

#### **Coming events and planned activities:**

- **Consultations with the Ministry of Infrastructure and Regional Development** (Presentation of the polish context of the assumptions of the project in the scope of spatial planning data collection, processing and harmonisation), September 2014.
- **Informational seminar** (the spatial planning context of the project will be organised with The Institute of the Spatial Management and Housing, and directed to the spatial planners community), September 2014.
- **Publication of sponsored papers and advertisements** (informational campaign of regular publications directed to the departments responsible for spatial planning and investors support), Since September 2014.
- **International promotion** (ISOCARP Congress in Gdynia, Poland. The event gathering urban planners from all around the world will be an opportunity to present applications of harmonised spatial databases for supporting investment decisions), September 2014.

#### **4.2.1.6 Asplan Viak Internet as. (AVINET)**

Plan4Business has given Avinet broader knowledge, competence and increased their competitiveness in the Norwegian as well as the European market. Avinet will utilise the process and results of plan4business in different ways:

- Plan4all association;
- Marketing;
- New products and services in Norway;
- Competence and network;
- Operation and management of services.

**Plan4all association** - Avinet will be an associated partner to the open data platform, ref. section 3.1 - plan4all association, contributing with in-kind services and open data from Norway and utilising the data and products available from the project. The relevance of the plan4business platform is in itself limited for the Norwegian marked as this is characterised by existing well-functioning services and products that plan4business does not fully meet. However, access to such open data and services on European scale is limited in Norway and an area Avinet will establish commercial services combined with our own portal technology. Through plan4business and plan4all association, competent resources may also be available at a cost level highly competitive for the Norwegian marked. Avinet will assess the possibility to outsource certain activities to the association for increasing our own competitiveness.

**Marketing** - Avinet is a small enterprise in the Norwegian market. Our participation in highly profiled and research oriented EU funded projects gives us an added marked value, proving our competence and profile as a company with focus outward. One of Avinet´s main characteristics is our focus on open data and open

software and we will exploit plan4business and our participation in this project as proof of our involvement in European initiative related to this, e.g. INSPIRE.

**New products and services in the Norwegian market** - New products and services are instrumental for growth and sustainable economy for Avinet, whose participation in plan4business and earlier plan4all presented also the opportunity to be members of INSPIRE Thematic Working Groups for specifying the INSPIRE thematic specifications. This has given Avinet a unique position in the private market in Norway as the only commercial provider of consultancy services related to INSPIRE. Avinet has already undertaken consultancy work in this respect and will continue to market and provide such services.

Avinet is developing the web-based geoportal solution Adaptive. Knowledge and experience gained from the plan4business development work, including user requirements, design and functionality are being disseminated within Avinet and are core elements in our commercial development processes.

Providing harmonised data for Europe for the Norwegian market is a product area we have defined as strategic important for 2014, combined with the release of our new Adaptive portal. Data and services from the plan4all association will be the foundation for this strategy.

**Competence and network** - Participating in plan4business has increased our team's competence in a broad range of areas, e.g. technology such as XML, RDF and semantic web, competence in the finance and property market and data design and modelling. Gained competence is the most important asset for a know-how company such as Avinet and will continue to ensure our attractiveness.

Participation in plan4business has broadened our professional network, both with the other partners, stakeholders and other involved. A sound and broad network is a key for Avinet's future, for developing new products, services and projects. The network will be maintained through the plan4all association and through new projects.

**Operation and management of services** - Avinet operates and manages services on behalf of our clients. The plan, design and implementation of an operational setup for plan4business have provided valuable competence and experience for our commercial services. Avinet will offer operational services through the open data platform / plan4all association as a result of plan4business.

## 4.2.2 Scientific and educational exploitation

Scientific exploitation of the plan4business project achievements are described in this section. The section is divided in sub-chapters referring to each project partner planning to get involved into the scientific and educational actions basing on the project methodologies and solutions.

### 4.2.2.1 Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. Fraunhofer IGD (Fraunhofer)

Fraunhofer IGD is well involved in the scientific community. With the results of the plan4business project some scientific publications were published already and we are planning also further publication building on the final results. In the long term, one or 2 PhD thesis will build on those results with future research.

Those results on data harmonisation and schema mapping are also part of the educational program of the IGD lecturer at the Technical University of Darmstadt and will be basis for further research with students' Master thesis or other research topics to be developed. Fraunhofer IGD also applies for new research projects at the national, but also at the European level. Current and future calls in 2014 and 2015 are open

or announced where the next level of research questions are addressed and IGD can build on those experiences.

Educational courses or training sessions are in our program to educate and train data providers from government agencies or industrial firms. In the context of the INSPIRE directive this is an essential part to fulfil the directive by all governmental level. The next course is planned in cooperation with GDI-DE, the German coordination office for the national INSPIRE implementation, with state level representatives in May 2014.

#### 4.2.2.2 University of West Bohemia (UWB)

The University of West Bohemia intends to use the plan4business results in three ways:

In the **educational activities** of the Geomatics section at UWB – to improve its teaching courses and to introduce students with the state-of-the-art technology, techniques and opportunities in using spatial planning and open data. The team members can provide support for your developers and researchers.

The University of West Bohemia, established through the merger of the Institute of Technology and the Faculty of Education in 1991, has 8 faculties with more than 60 departments and three institutes of higher education. Nearly 19,000 students can choose from a wide range of Bachelor, Master and PhD study programmes.

The Geomatics (geos: Earth, matics: informatics) section under the Department of Mathematics, Faculty of Applied Sciences, is one of the lead research groups in geomatics in the Czech Republic. The Geomatics section provides education in the following specialisations: geodesy, geographic information systems (GIS), cadastre, cartography and spatial planning.

The results of plan4business will be used as starting point (background) for **new projects and research** performed by the Geomatics section. The research activities of the Geomatics section at UWB are supported by experiences and knowledge gained from international or national projects (e.g. Plan4all <http://www.plan4all.eu/> and BRISEIDE <http://www.briseide.eu/>). Other than that, the Geomatics is involved in national projects and research activities and cooperates with many institutions on local and regional level. As an example, a (3D) model of cultural heritage at the Kozel castle can be mentioned. The results of the plan4business project will enhance the techniques and practices used in such projects.

There is a long term research activity of Geomatics focused on interoperability of data in spatial planning. In this area, UWB is preparing proposals into the Horizon2020 programme of the European Commission. Plan4business including Plan4all and other projects will be a basis for these projects. An important aspect is to make sure that results of research activities are used in practice. Cooperation of UWB with external companies and organisations ensure the link with practical applications. An example is the involvement in the Geoinformation Strategy of the Czech Republic where project results and ideas are transferred into national strategy concerning spatial data and services.

An impact of plan4business is provision of spatial data for end user apps. Most apps are developed by students and researchers at universities and research institutes. The Open Data Platform provides reference and thematic data for such applications.

#### 4.2.2.3 Help Service - Remote Sensing Sro (HSRS)

Future development of the platform and its various applications, being based on features, constantly collected and updated data resources are closely connected with planned R&D activities of the HSRS.



The research and development plan includes the following projects:

- SmartOpenData – focusing on standard setting and popularising of integration of linked data resources with geospatial information with use of technology of Uniform Resource Identifiers (URIs) and/or Globally Unique Identifier (GUIDs),
- SDI4Apps – applying procedures of participatory data validation, and opening the spatial data infrastructure for external developers,
- OpenTransportNet – aiming to make open transport-related data from variety of sources more accessible and usable for business innovations and the public sector by creating collaborative, virtual service hubs and aggregate, harmonise and visualise the data,
- FOODIE – expected to build a framework for integration multi-source, multi-temporal data (incl. spatial) for future agriculture knowledge management systems.

Currently conducted and already planned R&D activities of the HRSR already involved in the plan4business project guarantee constant development of the platform.

#### **4.2.2.4 The International Society of City and Regional Planners (ISOCARP)**

ISOCARP is intending to make the datasets and services available to the members community, by linking the international website to the platform.

Also the datasets and services will be used in the new Research Institute entity, for development of new initiatives and capitalisation opportunities. As an example, ISOCARP has cooperation agreements with private sector companies, such as GDF-SUEZ, an international company active in the urban infrastructure sector. Other agreements with Microsoft, Oracle, Prognoz, etc. will be used for further developments.

The inputs will be also used in a COST project, where knowledge exchange between international planning networks will be developed.

#### **4.2.2.5 GEOSYSTEMS Polska Sp. z o.o. (GEOSYS)**

Several datasets and methods developed during the project are directly applicable in currently conducted R&D activities. GEOSYSTEMS Polska is involved in the project **GECCO** - *space-derived GEoinformation for Crisis management and Coordination*, being founded by the European Space Agency. Transportation related issues analysed in the plan4business project, including transport means accessibility and network analysis leading to isochrones generation are important for crisis management. Additionally, reliable modelling of population distribution and real-estates or infrastructure value modelling are all useful in hazard analysis planned to be conducted in the GECCO project.

#### **4.2.2.6 Asplan Viak Internet as. (AVINET)**

Avinet is partner of two CIP-pilots projects, SDI4Apps and GeoSmartCities, that both are to commence in March / April 2014. In both projects, the results and experiences learned from plan4business will be utilised and taken onward. The open data hub from plan4all association will form an important backbone for our activities in both projects.

### **4.2.3 Exploitation by national and European administration**

From a technical perspective, one of the most important and powerful tools, building Plan4business platform's functionality, represents the facilitating of planning data harmonization and integration. This toolset

allows for building unified, harmonized informational layers describing planned or/and existing land use. Data sources used in this process are local development zoning plans, collected from local authorities across Europe. European-wide data harmonization is one of the basic assumptions of the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). The Directive was transposed into national law of EU member states and is in its implementation phase. One of themes planned to be integrated into the European SDI is Land Use. Technical guidance referring to elaboration of standardized INSPIRE compliant Land Use data set is contained in the document, being constantly developed by INSPIRE Thematic Working Group Land Use: D2.8.III.4 INSPIRE Data Specification on Land Use – Draft Guidelines. The Plan4business consortium based operation of harmonization and integration of planning documents, accordingly to requirements of this specification.

- **Harmonized planned land use layer** (accordingly to mentioned specification - PLU) is very demanding for production. Thanks to the Plan4business business model, it is feasible to collect needed input data from local authority partners, and process it using knowledge and experience of local spatial planners. Having in mind that process of implementation of INSPIRE directive in many countries is behind the schedule, the dataset elaborated by Plan4business initiative could become interesting for authorities of regional, national and EU levels.
- **Mapping scenarios** allows for transformation of local LU classification systems into the HILUCS classification system, required by INSPIRE. The mapping scenarios applied during planning data harmonization in the Plan4Business platform will be stored for future operations. After executing harmonization procedures of data from significant portion of regions and countries, the database of mapping scenarios was built. This database is being used for automation of next operations. It could also have noticeable value for the authorities responsible for INSPIRE Directive implementation.

#### 4.2.3.1 National level, regional and local level

The project influence on institutions on the national and sub-national level in their practice related to spatial and non-spatial data usage could be illustrated by an example of the University of West Bohemia activities in the Czech Republic. UWB is a member of the Working Group for the Geoinformation Strategy in the Czech Republic. The incentive to create such a strategy was the heterogeneity and non-operability of spatial datasets that are collected by public authorities. The costs to collect spatial data can be estimated as 80% of total costs for spatial database management. Other costs include software and hardware costs. The Geoinformation Strategy aims to make data from various sources interoperable and consistent in order to avoid extra costs for data collection but also to avoid inconsistency issues leading to for example ownership problems. Plan4business and its services are becoming part of this Geoinformation Strategy, in particular apps concerning linking spatial and non-spatial data such as economic, demographic and real estate data. The impact of the Geoinformation Strategy will be on all governmental levels including local, regional and national ones.

#### 4.2.3.2 European level

Comparison of regions divided by national borders is difficult without having data harmonised and integrated. Plan4business is enabling comparison of regions, cities and other areas in trans-boundary context.

The INSPIRE initiative is in its implementation phase. Access to and harmonisation of data is crucial for achieving the INSPIRE goals. Plan4business is providing business cases concerning land use and other

data and therefore motivation for data providers to make their data accessible. Plan4business also provides tools for data harmonisation.

## 5 Conclusions

The Plan4business project touches very deeply upon problems of interoperability in the process of spatial planning, as well as in applications of spatial planning data in Europe. It refers to geospatial information, its exchange and capabilities of analytical usage in cross regional and pan-European analysis. Due to that fact, the project development and achievements are important for many circles of professionals and European citizens. The idea of the Plan4business platform for integration, aggregation and analysis involves both local governments and industry as necessary actors of the business model. These facts are purposes of an intensive and comprehensive information campaign conducted during the project and planned for the future.

The informational campaign uses all available dissemination tools and has been divided into two separate waves. The first one refers to the research and development work conducted during the project period, disseminating information on the project and its achievements. The second one is a part of the commercial operation. It is directed to the entities important for the business based on the platform application: administration (networking), and industrial investors (marketing).

The Plan4business platform is expected to serve a wide range of users. It will increase efficiency of information exchange between different groups of entities, allowing for better cooperation. It will bring them new quality of analysis and new kinds of data to be further applied in business, administration and science.

Apart from the platform itself different assets and know-how collected and elaborated during the project appeared to be so valuable that allowed for planning new commercial operations on new fields or to apply innovative business models. Each of the project partners expressed their deep interest in further exploitation of the project achievements and presented respective action plans leading to start-up of continuing commercial operations.

Products and services planned to be offered by the consortium partners show a great diversity. From the idea of research institute through open social geo-network platform, new services for the real-estate market to new spin-off active in the spatial data processing field. ISOCARP, being an international association, is setting-up a new entity of different character, a research institute, which will be better suited and staffed for conducting R&D projects and offering consultation and education services. The University of West Bohemia along with other Czech institutional partners decided to create an association. This form of entity is expected to fulfil more comprehensively a role of an operator of the open internet platform joining geo-data owners and users in a form of a cooperating network. Huge German scientific institute Fraunhofer IGD established a spin-off company for further development and commercial offering solutions and services of spatial data processing. Three companies participating in the project HSRS, GEOSYSTEMS Polska and Avinet, being well established entities on their national markets are extending their current offer without changing the form of activity.

For every partner, sustainability of its activities is the basic concern. The ANNEX describes the main business activities of each partner including target users, products, market potential and financial assessment. This serves as a starting point for the business activities as well as indicators of its success in the future. The pricing models and related business cases are included in the deliverable D3.4 Service Pricing.

## **ANNEX 1 (business plans / confidential)**