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Plan4all

Annual Report

May 2010 – April 2011

http://www.plan4all.eu

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*e*Content*plus*

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[1]   OJ L 79, 24.3.2005, p. 1.

1 Table of content

2   Project Objectives

Plan4all is a European project co-funded by the Community programme *e*Contentp*lus*.

The main aim of the project is to harmonise spatial planning data and related metadata[2] according to the INSPIRE principles. This chapter describes the problem addressed by the project to achieve the harmonisation on European level.

Spatial planning acts between all levels of government both in bottom-up and top-down directions. National, regional and local authorities face important challenges in the development of territorial frameworks and concepts every day. The situation is complicated by the diversity and overall complexity of spatial planning.

Spatial planning is a holistic activity. All the tasks and processes must be solved comprehensively with input from various sources. It is necessary to make the inputs interoperable. This allows the user to search the data, view them, download them and use them with help of IT technologies.

Plan4all will contribute to make spatial planning data more accessible, usable and exploitable. These are also the main goals of the Community *e*Contentp*lus* programme.

The Plan4all project should contribute to standardisation in the field of spatial data from spatial planning point of view. Its activities and results will become a reference material for INSPIRE initiative and other related projects. Plan4all is focused on the following **7 spatial data themes** as outlined in Annex II and III of the INSPIRE Directive[3]:
- Land cover
- Land use
- Utility and Government services
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Area management/restriction/regulation zones and reporting units
- Natural risk zones

Plan4all is a Best Practice Network. It should profit from orchestration of available solutions (best practices) in the field of spatial planning and SDI (Spatial Planning Infrastructure). The main project aims are to:

- Promote Plan4all and INSPIRE in countries, regions and municipalities;
- Design the spatial planning metadata profile;
- Design the data models (application schemas[4] in the INSPIRE terminology) for selected spatial data themes related to spatial planning;
- Design the networking architecture for sharing data and services in spatial planning;
- Validate the metadata profile, data models and networking architecture on local and regional levels;
- Establish a European portal for spatial planning data;
- Deploy spatial planning data and metadata on local and regional level.

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[2] Metadata – data about data (ISO 19115:2003)
[3] http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2007:108:SOM:EN:HTML
[4] Application schema - conceptual schema for data required by one or more applications

3 Consortium

Plan4all is a consortium of 24 partners including universities, private companies, international organisations, data providers and public administrations. The consortium covers 15 European countries (see Figure 1).
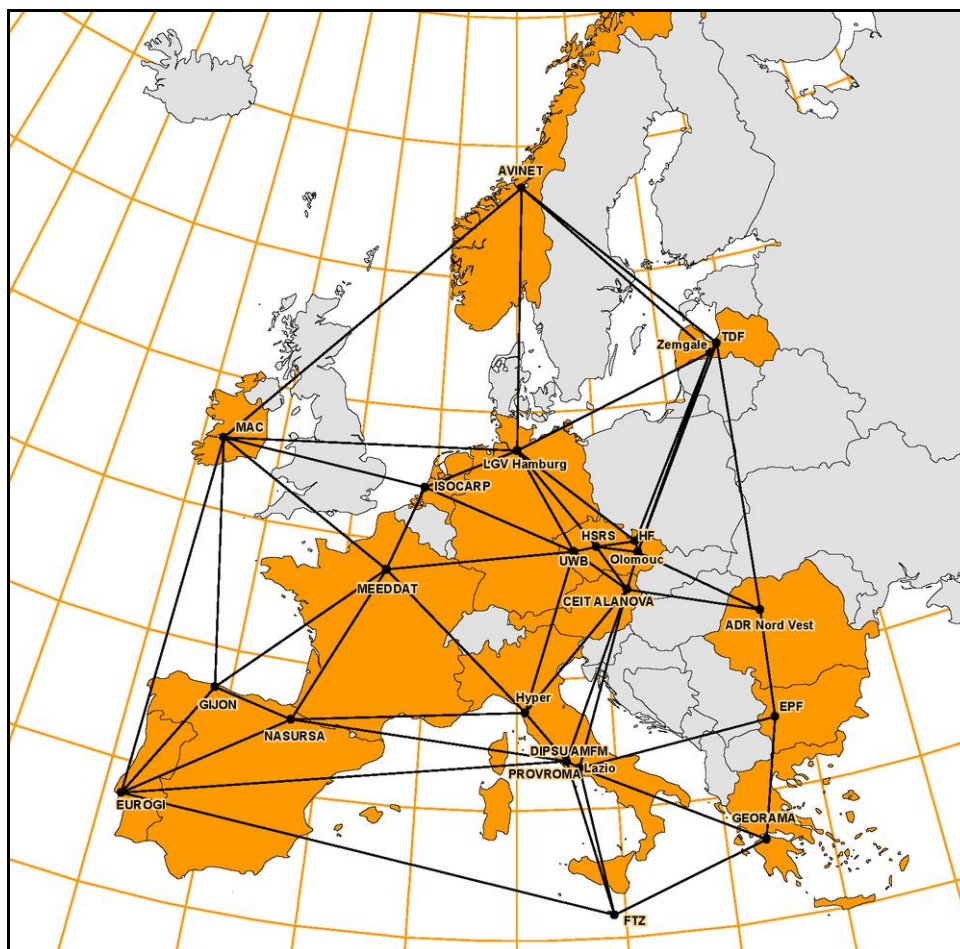

Fig. 1 – The Plan4all partners.

None of the Plan4all participants has the critical mass in human or financial terms to undertake the work alone. European collaboration increases access to pooled resources and technology transfer and emulates the 'global' marketplace. Table 1 shows the Plan4all partners and their descriptions and roles in the project.

Partner	Short name	Country	Short description and *the role in the project*
University of West Bohemia	UWB	CZ	Section of Geomatics the the UWB in Pilsen focuses on collecting, distributing, storing, analysing, processing and presenting of geographical data or geographical information. ***coordination, research, standardisation***
International Society of City and Regional Planners	ISOCARP	NL	ISOCARP is a global association of experienced, professional planners, and was founded in 1965 with a vision of bringing together recognised and highly qualified planners as well as

Partner	Short name	Country	Short description and *the role in the project*
			other stakeholders involved in the development and maintenance of the built environment in an international network. *evaluation, standardisation, dissemination, analyzing*
City of Olomouc	OLOMOUC	CZ	The City of Olomouc is a local authority creating a land-use plan on the level of municipality as well as settlement plans. *content provider, testing, validating*
Technology Development Forum	TDF	LV	The mission of TDF is to facilitate the development of high-tech innovation according to the national and EU programming documents, and to promote the implementation of innovations and development of high value added production. *analysing, testing, content provider, validating*
Help service remote sensing s.r.o.	HSRS	CZ	HSRS has large experiences with SDI for Urban Planning, it is responsible for management of system and in some cases also for Web hosting for 20 municipalities HSRS is responsible for Czech national metadata and catalogue system, it cooperate on definition of Czech national INSPIRE profile and also on profile for Urban Planning. *content provider, technology provider, standardisation*
Landesbetrieb Geoinformation und Vermessung	LGV Hamburg	DE	LGV Hamburg, an agency under the supervision of the Ministry of Urban Development and Environment, is responsible for the production and publication of the official maps and for keeping the official land register of the Free and Hanseatic City of Hamburg. *content provider, standardisation. testing, validating*
European Umbrella Organisation for Geographic Information	EUROGI	NL	In order to ensure good governance, economic and social development, environmental protection and sustainability, and informed public participation, the mission is to maximise the availability and effective use of GI throughout Europe. *evaluation, standardisation, dissemination, analyzing*
Zemgale Planning Region	ZPR	LV	Zemgale Planning Region is under control of The Ministry of Regional Development and Local Government existent derivative public person, that provides development planning, coordination of region, collaboration of municipalities and state administration institution. *content provider analysing, testing, validating*
Provincia di Roma	PROVROMA	IT	The Province of Rome is the second tier local authority in the Italian decentralized government (NUTS III). It is an intermediate authority between municipalities and regions. The Province of Rome has taken over many functions as concern the environment, cultural heritage, transport, education, hunting, fishing, technical and administrative assistance to local authorities, professional training. *content provider, analysing, testing, validating*
Fondazzjoni Temi Zammit	FTZ	MT	Based at the University of Malta, the Fondazzjoni Temi Zammit (FTZ) is Malta's leading local development agency. *content provider, analysing, testing, validating*

Partner	Short name	Country	Short description and *the role in the project*
GEORAMA	GEORAMA	GR	Development Greek organization focused on EU integration and international development co-operation. *content provider, analysing, testing, validating*
Navarra de Suelo Residencial S.A.	NASURSA	ES	NASURSA is a public enterprise attached to the Spatial Planning and Housing Department of the Regional Government of Navarre. Its main aim is to consolidate sustainable territorial development in Navarre. *content provider, analysing, testing, validating*
Hyperborea s.c.	HYPER	IT	The company is well situated in the public administration market sector with many public administrations customers (Local and Regional Authorities) supplying products and services including waste management procedures, CMS, automated procedures on Workflow management systems. *standardisation, implementation, validating, testing*
AYUNTAMIENTO DE GIJON	GIJON	ES	Gijón is a local authority with 275.000 inhabitants and occupies an area of 181,7 square kilometers, which lies at the coastline in the north of Spain. *.content provider, analysing, testing, validating*
The National Microelectronics Applications Centre Ltd	MAC	IE	The National Microelectronics Applications Centre (MAC) provides consultancy and complete innovative electronic, software and e-business/e-government technological solutions. *content provider, technology provider, standardisation*
CEIT ALANOVA gemeinnützige GmbH	CEIT ALANOVA	AT	The Central European Institute of Technology (CEIT) is an Applied Research and Development Establishment founded in 2006 and located in the City of Schwechat, next to Vienna International Airport. *technology provider, standardisation*
Asplan Viak Internet as	AVINET	NO	Avinet is a consultancy company specialized in Internet based map and database solutions. *technology provider, standardisation*
Dipartimento di Studi Urbani - Università degli Studi di Roma Tre	DIPSU	IT	Department of Urban Studies of Rome III University - research on urban contemporary development and design, spatial organization and policies. *designing, research, standardisation*
Euro Perspectives Foundation	EPF	BG	The Euro Perspectives Foundation is an institutional structure able to address public interest in an enlarged Europe and to bring endogenous capacities to cross fertilize through Territorial Cooperation with Regional stakeholders in EU and outside for added value Regional polices and EU Integration. *content provider, analysing, testing, validating*
Agentia de Dezvoltare Regionala Nord-Vest	ADR Nord-Vest	RO	The North-West Regional Development Agency (NW RDA) is a non-government, non-profit organization of public utility that operates in the field of regional development, representing the executive body of the Regional Development Council of the North-West Development Region.

Partner	Short name	Country	Short description and *the role in the project*
			content provider, analysing, testing, validating
Regione Lazio - Direzione Regionale Territorio e Urbanistica	Lazio	IT	Lazio Region is a local autonomous authority involving health sector, social welfare, training, vocational education, town planning, public housing, economic development, tourism and cultural activities, agriculture, forestry, mining, regional public transport, public works, environment, and implementation of EU regulations and policies. *content provider, analysing, testing, validating*
Help forest s.r.o.	HF	CZ	The company focused its activities to agriculture, forestry, ecology and to municipality collaboration as well. Help forest provides data collection direct in terrain, support for forest management planning and geo-data management for agriculture. *content provider, testing, technology provider*
AMFM GIS ITALIA	AMFM	IT	AM/FM GIS Italy is a non-profit organization created to promote the exchange of knowledge and experience between the public and private sectors of Geographic Information Systems and Geographic Information and promote the development of applications for the government of land use and the management of services and infrastructure. *content providing facilitator, analysing, dissemination, validating, capacity builder*
Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning	MEEDDM	FR	The Ministry of Ecology, Energy, Sustainable Development and Town and Country Planning is in charge of the French policies related to its field of competence. The General Planning, Housing and nature general Directorate deals among others with matters related to planning and with the development of the usage of geographical information in the area of land and town planning. *content provider, analysing, testing, validating*

Table 1 – The Plan4all partners and their descriptions roles in the project.

4 Project Results/Achievements

The **Plan4all work-plan** is divided into 9 work packages:

WP1   **Project management and coordination**

WP2   **State of the art analysis**

- the identification of leading regional and local administrations in spatial planning and SDI;
- the identification of innovation challenges and the framework structure for analysing relevant technology developments and trends;
- the INSPIRE requirements; and
- the analysis of standard metadata, data models, networking technologies and user requirements for planning systems.

WP3   **Design of Plan4all metadata profiles** – defines metadata profiles for selected INSPIRE spatial data themes (listed below) as a combination of national legislation for spatial planning and the INSPIRE profile.

WP4   **Plan4all data model definition** – focuses on the national models and their combinations and translations into common models.

WP5   **Networking architecture** – extends the INSPIRE networking principles for the purpose of European Spatial Planning.

WP6   **Large scale testbed** - aims at demonstrating the technological feasibility of designed models from WP3, WP4 and WP5.

WP7   **Content deployment** - populates the Plan4all spatial data repositories using semantically rich, multilingual metadata.

WP8   **Validation** – provides the quality framework for the evaluation of the outputs.

WP9   **Dissemination, clustering, consensus building and sustainability planning** – includes activities to promote and valorise the project results. A major aim is to achieve wide dissemination at multiple levels.

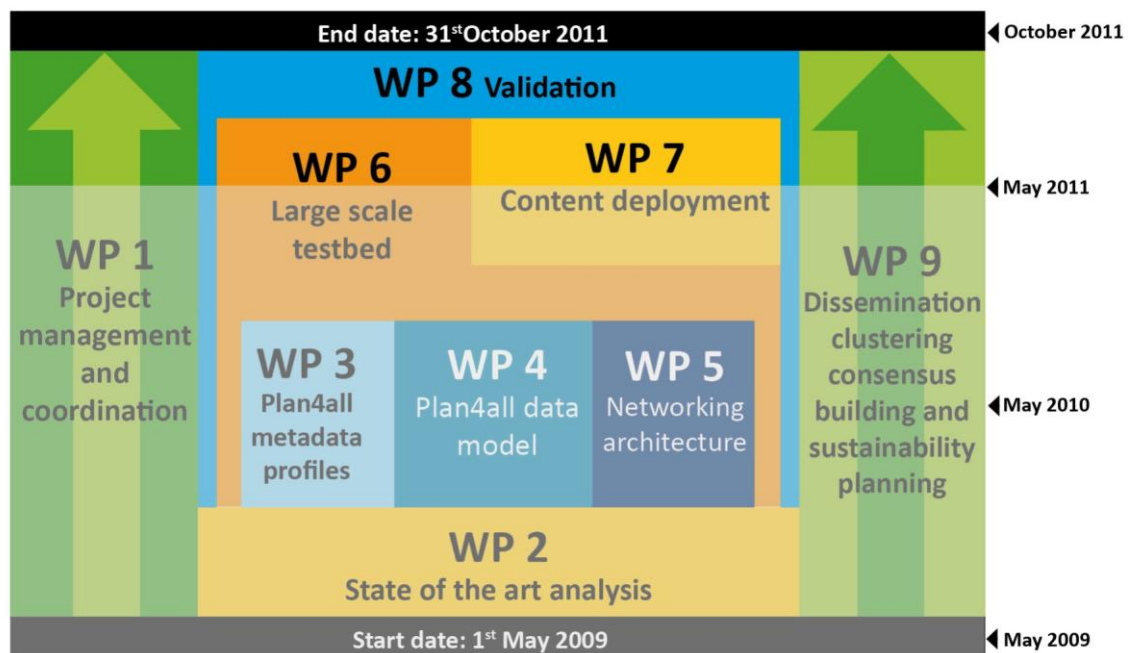Please see the work package & workflow overview in Figure 2.

Fig. 2 – Work package & work-flow overview.

Major achievement of the second year of the Plan4all project was the **completion of the three building blocks including metadata profile (WP3), data models (WP4) and networking architecture (WP5)**. These were thoroughly verified and validated. First attempts to harmonise data according to these standards were made.

Plan4all Metadata Profile (WP3) – Plan4all finished the European spatial planning metadata profile.

The Plan4all metadata profile reflects the requirements given by national legislation on metadata and spatial planning and user requirements for spatial planning metadata. It is presented as platform independent list of metadata elements in tabular form, ISO19139 and INSPIRE mapping. There is no extension beyond ISO 19115/19119 to enable users to maximise the interoperability across different software platforms.

The Plan4all metadata profile is intended not only for discovery but also as documentation of spatial plans (evaluation, use), its components (datasets) and corresponding services. Particular components are logically related / coupled and some links are set to map these relations.

Plan4all metadata records may be multilingual. From the perspective of European spatial planning activities it is recommended to provide metadata at least bilingual – in national language and in English.

For more details please see the deliverable D3.2.2 – Plan4all Metadata Profile - Final version at: http://www.plan4all.eu/simplecms/?menuID=37&action=article&presenter=Article

Plan4all Data Models (WP4) - The aim of the WP4 Plan4all data model definition was to define conceptual data models for the following spatial data themes defined in the INSPIRE Directive (INSPIRE, 2007):
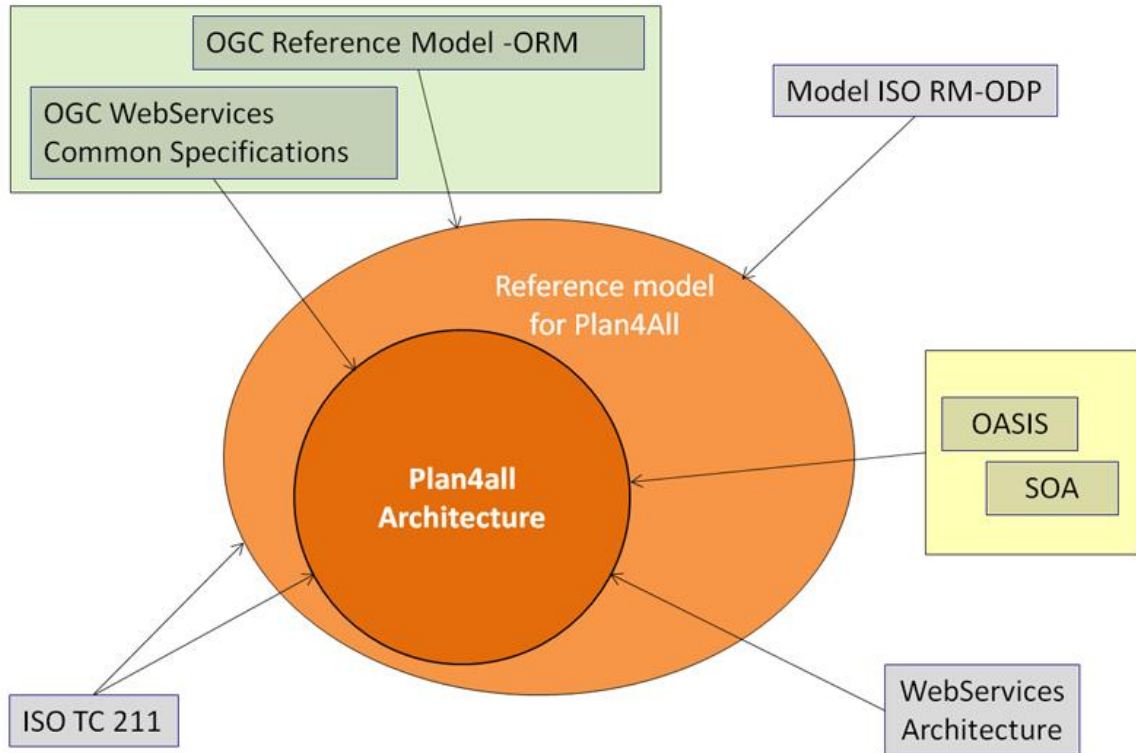
•   Land cover

•   Land use

•   Utility and Governmental services

•   Production and industrial facilities

•   Agricultural and aquaculture facilities

•   Area management/restriction/regulation zones and reporting units

•   Natural risk zones

The work of the second part of WP4 – Task 4.2 Conceptual data model definition for selected Themes was a design and construction of conceptual data models based on analyses of data models for selected themes used in single countries and on results of previous project task. The definition of Plan4all conceptual data models results from the methodology used for INSPIRE data specification.

Networking Architecture (WP5) - The intended objective of Plan4all Task 5.2 was to define the interfaces by which the different parties (the public sector and all the user groups involved in the planning process and results) can exchange the spatial planning data. The defined architecture is platform neutral and it is intended to provide the following services:

- discovery;
- access to data and visualisation;
- machine-to-machine communication;
- work flow following the "publish-find-bind" design pattern;
- processing services;
- Geo-RM services.

The adopted approach is based on the standard Reference Model of Open Distributed Processing (RM-ODP) (which is the architecture reference model used also within ISO/TC 211 "Geographic Information – Reference model") and on the Open Geospatial Consortium Reference Model (ORM). The following diagram gives an overview on how some reference standards and specifications play a role in the Plan4all reference model.

Overview on how some reference standards and specifications play a role in the Plan4all reference model.

The RM-ODP allows to define an overall conceptual framework for building distributed systems in an incremental and coordinated manner. It is a widely used international standard for designing open, distributed processing systems. It provides a short, clear and explicit specification of concepts and constructs that define semantics, independently from the representation, methodologies, tools and processes used for the development of open distributed applications.

RM-ODP identifies five viewpoints, or perspectives, which address different aspects of a system: the Enterprise, Information, Computational, Engineering and Technology viewpoints.
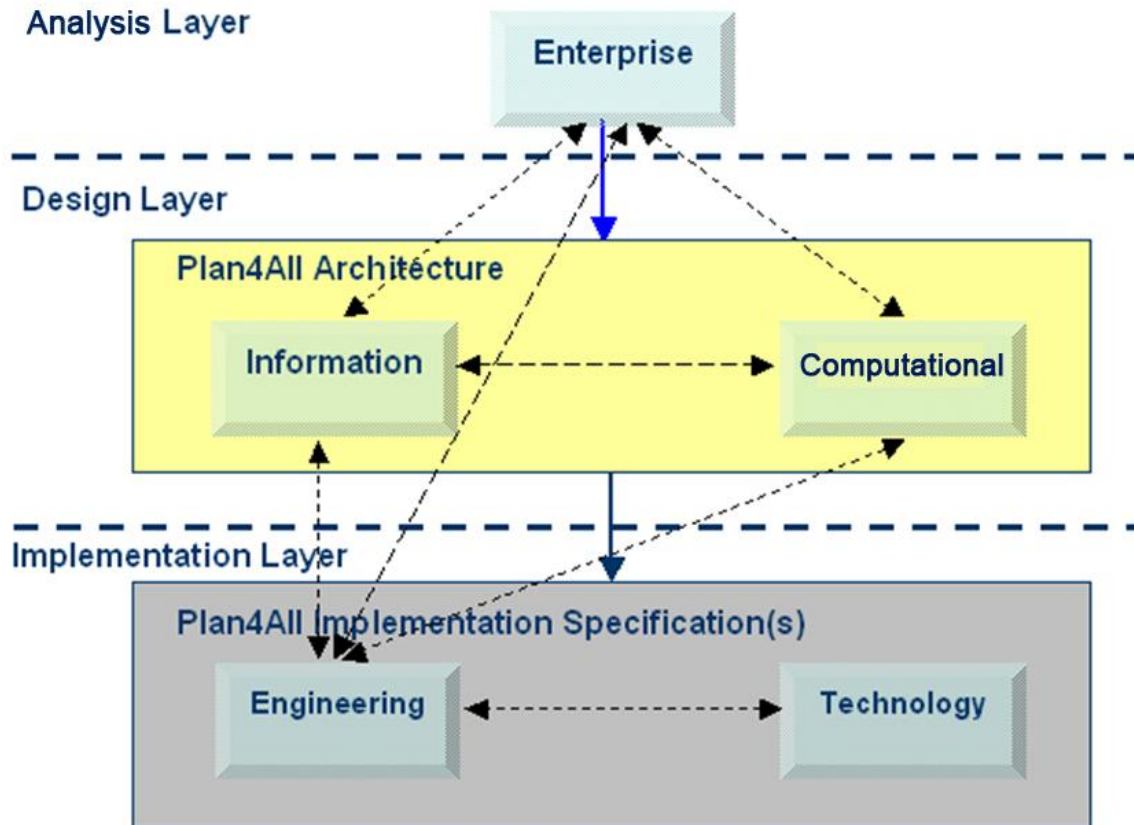
Relationships between the five RM-ODP viewpoints within the Plan4all Networking Architecture.

Further information can be found in the deliverable D5.2 Plan4all Networking Architecture is available at http://www.plan4all.eu/simplecms/?menuID=37&action=article&presenter=Article

Validation & verification (WP8) – the proposed Plan4all standards including metadata profile, data models and networking architecture were verified and validated. Number of stakeholders took part in the evaluation process.

Large scale testbed (WP6) – All the content providers in the Plan4all consortium implemented local systems for publishing their data through web services based on OGC. A large scale testbed has been performed and publication of data and metadata through Web Map Services (WMS), Web Feature Services (WFS) and Catalogue Services for Web (CSW) was tested.

A Pan European Plan4all Platform (Plan4all geoportal) was designed and implemented on the basis of analysis and architecture design in D5.2. From the architectural point of view, the system must have the following characteristics:

- service oriented;
- loosely coupled integration;
- persistent identifiers;
- trusted infrastructures.

The system design is based on the principles of the Service Oriented Architecture (SOA) and is INSPIRE compliant. The INSPIRE requirements give to the overall system architecture a loosely coupled integration based on OGC standard usage, which allows to use any OGC-compliant software

component and easy replace it with another if necessary. In order to achieve interoperability, the main software interface among each particular component has to be based on ISO standards and OGC specifications, following the INSPIRE Directive. The Plan4all geoportal is accessible at http://www.plan4all.eu/.
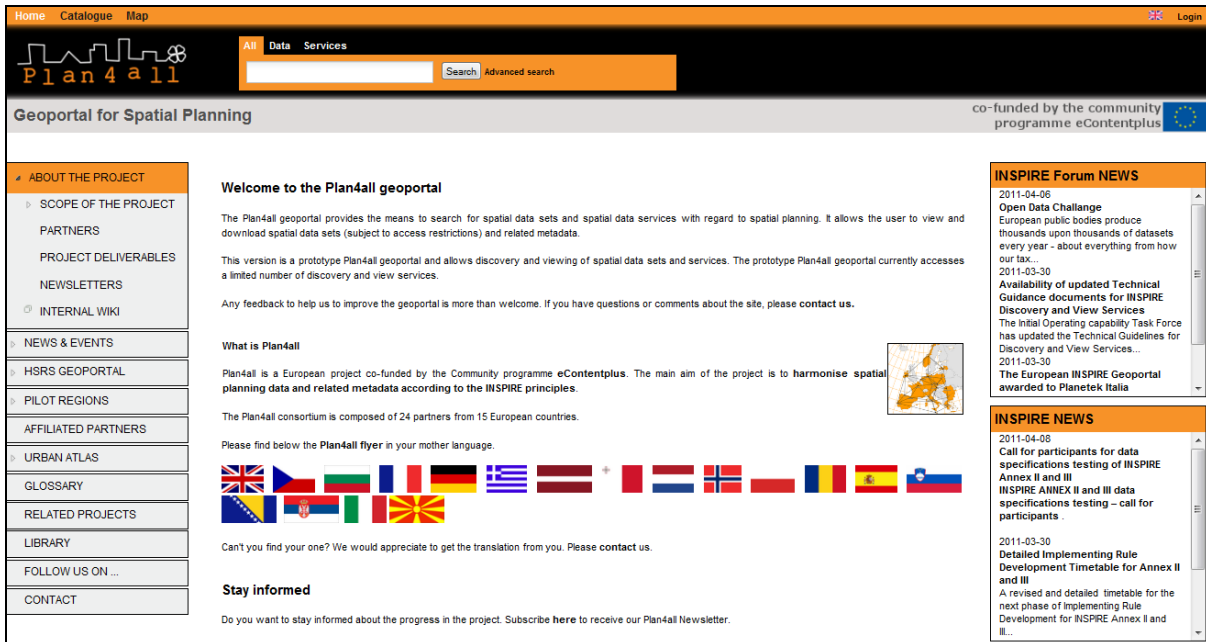
Data harmonisation (WP7) - Spatial planning data exist in very different formats and data structures in European countries. Plan4all team proposed the harmonisation process where the source data from countries is converted into the general data structure. This data structure is created on the basis of Plan4all conceptual models. In this stage of the project, the harmonised data are presented as map layers in web map clients or through web services.
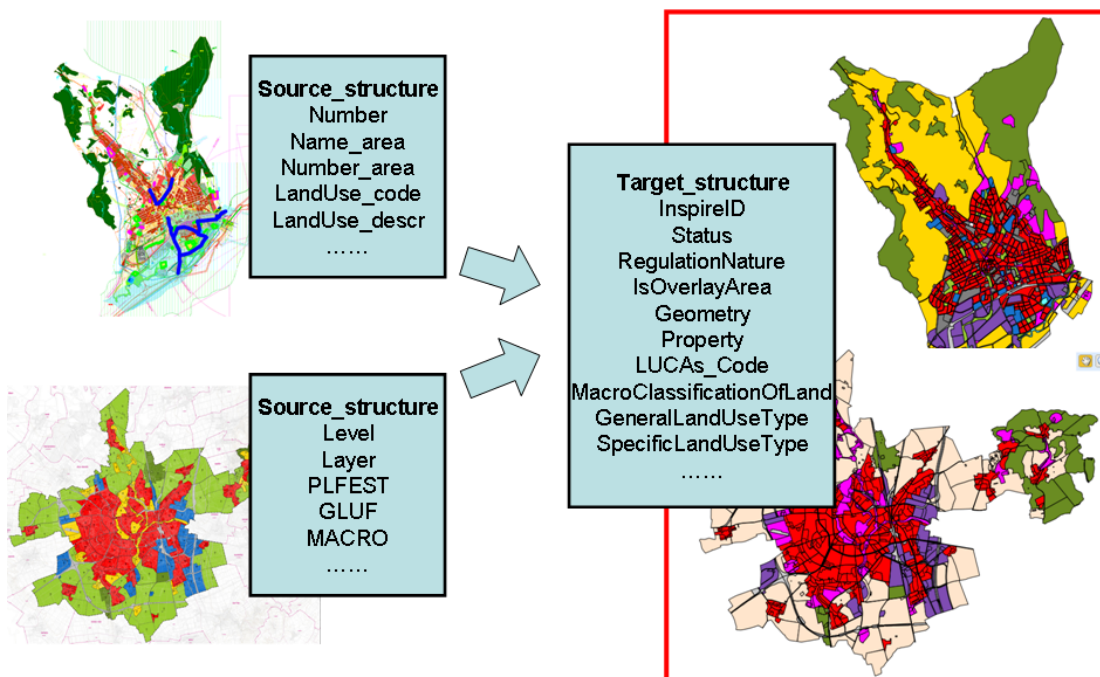
Dissemination activities performed in the frame of WP9 are ongoing activities that give to the project the needed feedback from our target users. The main tools for dissemination include:

- Plan4all website[5];
- Plan4all newsletters;
- Plan4all discussion forum[6];
- Plan4all workshops and conferences;
- Plan4all multilingual flyers;
- publications and presentations.

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[5] http://www.plan4all.eu
[6] http://inspire-forum.jrc.ec.europa.eu/pg/groups/1892/plan4all/

5 Target Users & their Needs

The Plan4all user groups can be defined according to the level they mainly act on:

- **On local level of the project partners:** Politicians and decision makers in the field of SDI and for relevant land use requirements like e.g. risk prevention as well as stakeholders like investors for building projects; regional and local governments, local agents, architects, city councils, investors

- **On regional and interregional level:** public authorities, stakeholder and private companies which have a need to know where and how to get spatial planning data for their projects with the aim of improving their possibilities to invest in a sustainable way according to concerted regional/national sustainable land use strategies; associations, trades unions, universities, emergency services, technical experts, surveyors, regional Consortiums, public companies, private companies, real estate business

- **On national and European level:** European Commission, its projects including INSPIRE, Humboldt, GMES, GEOSS and SEIS. Expert panels on basic issues of spatial planning, professional associations, universities and other relevant research centres as well as managing authorities and security and defence organisations.

As Plan4all is based on a bottom-up approach, a very important part of the communication plan is the involvement and feedback of target groups to define their requirements and to validate the project results. This includes project partners of Plan4all as well as external planning institutions and other private and public users and target groups. Communication with those groups will take place via questionnaires, papers and articles, internet and events.

Affiliated Partners

Affiliated Partner means any entity that is interested in the activities of the Plan4all project including training, exploitation of results, and sustainability. Plan4all is creating a network of Affiliated Partners. These partners will be our primary target users. They will have the possibility to validate, test and comment our results and to exploit our solutions.

Communication and Dissemination Workshops

EUROGI launched a call among the EUROGI members for organizing of communication and dissemination workshops (approx. 10 workshops, from May 2010 to March 2011). One of the points of the workshops is that the key issues and findings of each workshop will be reported.

6   Underlying Content

As it was already mentioned in the first chapter, the aim of the Plan4all project as well as the eContentplus programme is to make digital content in Europe more accessible, usable and exploitable.

Plan4all is focused on the following seven spatial data themes as outlined in Annex II and III of the INSPIRE Directive[7]:

- Land cover
- Land use
- Utility and Government services
- Production and industrial facilities
- Agricultural and aquaculture facilities
- Area management/restriction/regulation zones and reporting units
- Natural risk zones

The Plan4all consortium consists of 20 data providers. They will provide their data for the Plan4all purposes. The criteria for selection of the content were the data sets and related metadata that fall into one of the above mentioned spatial data themes and deals with spatial planning.

The content will be used for data and metadata deployment that will be performed in the second half of the project.

The Plan4all project covers 15 European countries. The existing content for spatial planning exists in all of these countries and the project will demonstrate possibilities how this content could be standardised. Annex I provides a list of the digital content contributed to the project.

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[7] http://eur-lex.europa.eu/JOHtml.do?uri=OJ:L:2007:108:SOM:EN:HTML

7 Summary of Activities

The Plan4all project has finished its second year of its activities. Major achievement of the second year of the Plan4all project was the completion of the three building blocks including metadata profile, data models and networking architecture. These were thoroughly verified and validated. The underlying rules and standards were tested and the deployment of local systems and pan European system for data publishing were achieved. First attempts to harmonise data according to these standards were made.

The Plan4all project was invited to participate in the testing of the INSPIRE Data Specification for the themes listed in Annex II and III of the INSPIRE Directive. Plan4all will participate in the testing and provide a feedback to the INSPIRE Team. INSPIRE is a top-down initiative and the need of the bottom-up approach, taken by Plan4ll, is needed. The participation in the INSPIRE testing will enable to influence the data specification from spatial planning point of view and with expertise gained during our project.

Cooperation was set-up with the GEOSS project. GEOSS stands for Global Earth Observation System of Systems. It should provide decision-support tools to a wide variety of users. As with the Internet, GEOSS is a global and flexible network of content providers allowing decision makers to access an extraordinary range of information at their desk. More information can be found at http://www.earthobservations.org/geoss.shtml

The expected results and activities that will be completed within the final period of the Plan4all project are:

- Data and metadata harmonisation according to the Plan4all and INSPIRE principles.
- To complete the validation of the Plan4all geoportal.
- To disseminate the project results in conferences, workshops and mainly by the planned Plan4all book.

8   Impact & Sustainability

The problem of spatial planning, its governance, participation of all stakeholders and open decision processes is very important in Europe. With the EU enlargement its importance increases. There exist many cases, where low participation at all levels of government, low involvement of NGOs, stakeholders and citizens lead to non transparent processes, which in future phases of implementation can effectively block important investment opportunities.

The conception of planning is interaction both between various levels of government in a region and between public authorities, business and citizens. A specific regional framework allows parties to weigh the influence of investment or administrative control by public agencies. At the same time, there are the benefits of legitimacy and transparency and public participation.

On the other hand, Spatial Data Infrastructures (SDIs) are being created thanks to the INSPIRE Directive, and these SDIs are beginning to open doors to the release and exploitation of key Public Sector Information (PSI). Common spatial data catalogues can be queried from multiple locations and thus provide a consistent coverage and availability of spatial data to all relevant decision makers, even if linked virtually. Spatial data duplication is minimized and decision contexts are harmonized.

The spatial planning objectives are as follows:

- Town and country planning deals systematically and globally with land use, sets the principles of area arrangement and co-ordinates the construction and other activities influencing the land development as to their time and contents.

- Planning provides the background for sustaining the permanent harmony of all natural, civilisation and cultural values within an area, particularly with respect to the care of environment and the preservation of its elements - soil, water and air.

- Planning in its objectives emphasises the principles of complexity in using the land and changing its use, principles of consistence and continuity, and takes into account all social, economic, and cultural impacts of land development. It also respects the principle of sustainable land development.

- Planning creates a framework for private investment   (including internationals) and regeneration that promotes economic, environmental and social well being for the area;

From the technological requirements point of view, the main demands are:

- on data collection from different GIS and CAD systems,
- data management,
- data harmonisation from different formats and from different data models,
- providing metadata fulfilling INSPIRE requirements and national requirements for spatial planning guaranteeing the access to spatial planning data for planners
- data publishing in the form that will be understandable to citizens, but also to international investors.

Plan4all is addressing some of these issues.

The Plan4all solution should facilitate cross border use and data integration. The project consortium mainly consists of administrative bodies (content providers) which have significant experience in collecting, storing and publishing spatial data. The European dimension of the Plan4all initiative is to put together experiences for creation of a consensual platform and identifying commonly agreed tools.

9   Further Information

Further information about the project activities, its objectives and results can be found at the project's website:

<p align="center">http://www.plan4all.eu</p>

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Annex I of the Annnual Report

May 2009 – April 2010

Underlying Content

The Plan4all project covers 15 European countries. The existing content for spatial planning exists in all of these countries and the project will demonstrate possibilities how this content could be standardised. The table below provides a list of the digital content contributed to the project.

Quantity and Quality of the Content								
Provider	Type	Quantity & Definition	Format & Quality	IPR	Current Use	Existing Metadata	Language	Additional comments
Olomouc - ÚPnSÚ	maps	10 km^2 ;66MB – 90 layers;	*.dgn,	Public domain	Olomouc municipal office	NO	Czech	Municipal Plan of the Olomouc Urban Unit (Local plan)
Olomouc - ÚPnSÚ	text	Cca 300 pages of text	*.doc	Public domain	Olomouc municipal office	NO	Czech	Municipal Plan of the Olomouc Urban Unit (Local plan)
Olomouc – RP MPR	maps	0.8 km^2; 30MB	*.dgn	Public domain	Olomouc municipal office	NO	Czech	Regulatory plan of Urban Conservation Area
Olomouc – RP MPR	text	100 pages	*.doc	Public domain	Olomouc municipal office	NO	Czech	Regulatory plan of Urban Conservation Area
Olomouc -	maps ÚAP-	45 km^2	*.shp; *.dgn	Public domain	Olomouc	ISO 19115	Czech	planning

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					municipal office			analytical materials
ÚAP								
Olomouc - ÚAP	graphics ÚAP-adjusted data from different providers	45 km^2	*.shp	corporate/restricted	Olomouc municipal office	ISO 19115	Czech	planning analytical materials
Olomouc - ÚP	maps	10 km^2	format of vector graphic not decided	Public domain	-	ISO 19115	Czech	Concept of new Local plan To come in 2009
Olomouc – Cenová mapa	map	1 layer; 10 km^2	*.dgn	Public domain	Olomouc municipal office	NO	Czech	Price mp of building plots
Government of Navarre- POT	Text, image	10.421km^2	PDF	Public domain	Government of Navarre- Navarre Region	NO	Spanish	Regional Spatial planning Programme
Government of Navarre- PEDP	Text, image	1.894 km^2, 291 pages	PDF	Public domain	Government of Navarre- Pyrenees	NO	Spanish	Pyrenees Development Plan
Government of Navarre-Grisi4soho	Text, image, cartography	1.894 km^2, 21 scanned maps, 91 pages	PDF	Public domain	Government of Navarre- Pyrenees	NO	Spanish	Interreg IIIC Subproject
Government of Navarre- SIUN	Text, image, cartography	10.421km^2, 272 scanned maps and 272 texts	PDF	Public domain	Government of Navarre- Navarre	NO	Spanish	Urban Information System of Navarre
Government of Navarre- ETN	Text, image, cartography	10.421 km2, 191 pages	PDF	Public domain	Government of Navarre- Navarre	NO	Spanish	Territorial Strategy of Navarre
Government of Navarre- SITNA	Text, image, cartography	10.421 km^2, 191 layers		Public/corporate/restricted	Government of Navarre- Navarre	ISO 19115	Spanish, English	Land Information System of Navarre
Government of	Data, graphs	10.421 km2, several data		Public domain	Government of	ISO 19115	Spanish	Statistical

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Navarre- IEN					Navarre- Navarre			Institute Of Navarre
Government of Navarre. Geographical grid systems (harmonised multi-resolution grid)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Geographical names	Maps	10.421km^2	JPG	Public/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Administrative units (local, regional and national boundaries)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Addresses	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Cadastral parcels	Maps	10.421km^2	JPG	Public/corporate/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Transport networks (road, rail, air, water and links between networks)	Maps	10.421km^2	JPG	Public/corporate/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Hydrography (including marine areas, all	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	

water bodies, river basins, etc.)								
Government of Navarre. Protected sites (designated by national, EU or international legislation)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Elevation (land, ice and ocean surfaces; terrestrial elevation, bathymetry, shoreline)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Land cover (physical and biological)	Maps	10.421km^2	JPG	Public/corporate	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Orthoimagery (geo-referenced image data)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Geology (including bedrock, aquifers and geomorphology)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	NO	Spanish	
Government of Navarre. Statistical units (for	Maps	10.421km^2,	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	

dissemination or use of statistical data)								
Government of Navarre. Buildings (geographical location of buildings)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Soil (and sub-soil characteristics)	Maps	10.421km^2	JPG	Public/corporate	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Land use (e.g. residential, industrial, commercial, etc.)	Maps	10.421km^2	JPG	Public/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Human health and safety	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Utility and governmental services (sewage, waste management, energy, etc.)	Maps	10.421km^2	JPG	Public/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Environmental monitoring facilities (emissions, ecosystem parameters)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of	Maps	10.421km^2	JPG	Public/restricted	Government of	ISO 19115	Spanish	

Navarre. Production and industrial facilities (water abstraction, mining, storage sites)					Navarre- Navarre			
Government of Navarre. Agricultural and aquacultural facilities	Maps	10.421km^2	JPG	Restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Area management / restrictions / regulation zones / reporting units	Maps	10.421km^2	JPG	Public/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Natural risk zones (e.g. atmospheric, hydrologic, seismic, volcanic, wildfire)	Maps	10.421km^2	JPG	Public/restricted	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Meteorological geographical features (weather conditions, measurements)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Bio-geographical regions (areas with homogeneous	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	

ecological conditions)								
Government of Navarre. Habitats and biotopes (geographical areas for specific ecological conditions)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	ISO 19115	Spanish	
Government of Navarre. Species distribution (geographical boundaries for animal and plant species)	Maps	10.421km^2	JPG	Public domain	Government of Navarre- Navarre	NO	Spanish	
Province of Rome	Raster Data	5 Bases topographical 4 Mosaics from orthophotos 17 satellite imagery	TIFF, ECW 300<r<400 dpi 1<r<3 meters	public domain while respecting the constraints of copyright	Private, Public Administrations and all registered users to the website	Maximum of 28 fields subset of ISO 19115	Italian	
Province of Rome	Vector Data	700 layer	ORACLE DBMS	public domain while respecting the constraints of copyright	Private, Public Administrations and all registered users to the website	Maximum of 28 fields subset of ISO 19115	Italian	
GEORAMA	Text	Emergency Plans (3) Municipal Management Plan (1)	Doc, paper	Public domain	Deciders and technical personnel	Under preparation	Greek	
Zemgale Planning region	Maps Image / vector data	Zemgale Region territory 10739,096 km2	*.dgn *.doc *.shp	No	Zemgale Planning Region	ISO 19115	Latvian	Zemgale Planning Spatial Plan Industrial territories
Gijón City Council	Maps	181 Km2	*.dgn	corporate/restricted	Gijón municipal office	NO	Spanish	Municipal Plan of Gijón
Gijón City	Text	424 Mb	*.doc	Public domain	WebSite &	No	Spanish	PGOU

Council					municipal offices			
Gijón City Council	Maps	9 files 29,9 Mb	*.pdf	Public domain	WebSite	No	Spanish	Maps of districts
Gijón City Council	Maps	27 files 23,7 Mb	*.pdf	Public domain	WebSite	No	Spanish	Industrial Areas
Gijón City Council	Maps	835 Mb	*.pdf 1/4000 1/2000 and 1/1000	Public domain	WebSite & municipal offices	No	Spanish	PGOU
Gijón City Council	Maps	15 MB	*.jpg	Public domain	WebSite & municipal offices	No	Spanish	Topographic, Hydrographic, 3D
Gijón City Council	Maps	4,52 Gb	*.jpg	Public domain	WebSite & municipal offices	No	Spanish	Orthophoto 2006, Orthophoto 2002
FHH/BSU (Free and Hanseatic City of Hamburg Ministry of Urban Development and Environment)	Image / vector data	OGC Web Map Service (raster images of protected sites, hydrography, geology, natural risk zones, noise emissions, urban landuse plans, land cover, administrative and social governmental services in Hamburg), Web Feature Service (vector data for selected data sets), Web Feature Gazetteer Service (eg. Address Register)	Format: GIF, PNG, JPG, TIFF, BMP, SVG, GML & Quality: colored images	Public (limited access to data, free of charge), licensed (for registered users, on the bases of agreement, for payment)	public authorities and residents of the federal states of Hamburg, Schleswig-Holstein and Lower Saxony	yes; based on the software 'Environmental Data Catalogue'	German	
Topographic map	Tiff, WMS	All Latvia	PosGIS	Public	Public	Yes	LV	No
Grisi plus data for Latvia	WMS, WFS	Bauska. Jelgava region	PosGIS	Public	Public	Yes	LV	No
FTZ-Malta	Text	10,000 pages	PDF	License	None	None available	English	
FTZ	Image	15,000 pictures and maps	JPEG, 300 dpi	License	None	None available	English	
FTZ	Video	500 clips	Qicktime	License	None	None available	English	
Limerick County Council, Ireland,	Maps	Thousands, various definitions from county-	MapGuide (.mwf) with	Public/Corporate Restricted	Web-based public planning	No	English	Used with iPlan and other

working with MAC		wide to specific building planning map.	some GeoMedia (.pmf)		applications.			planning web applications.
Cork County Council, Ireland, working with MAC	Maps	Thousands, various definitions from county-wide to specific building planning map.	MapGuide (.mwf) with some GeoMedia (.pmf)	Public/Corporate Restricted	Web-based public planning applications.	No	English	Used with iPlan and other planning web applications.
Irish Spatial Data Exchange (ISDE) online data portal www.isde.ie, working with MAC	The Irish Spatial Data Exchange (ISDE) online data portal to information on numerous environmental, geological and related government agencies, is an Irish Government initiative, led by the Marine Institute. ISDE operates as an interdepartmental and cross agency online service allowing the public to search multiple databases. Users can quickly search and locate meta-data catalogues operated by each of the partner	Various Databases addressing the Plan4all INSPIRE themes of • Land Use, • Utility & Governmental Service, • Production & Industrial facilities, • Agricultural & Aquaculture facilities, • Area Management/restriction / regulation zone & reporting units and • Natural Risk Zones, as well as marine and geology data.	Various formats, operating through the exchange.	Public/ Corporate Restricted	Web-based public access to various databases. All metadata is provided freely and without constraint, with data being provided subject to the constraints imposed by each data owner.	ISDE is based around OGC & ISO standards (it is ISO 19115 compliant). An ISDE Community Profile is being developed (that the Plan4all experience will help to finalise). Currently updating the ISDE Catalogue Services to CSW 2.0.2 and its Network view services "wrapper" to OGC WMS 1.3. Its Download	English	The ISDE is currently being adapted to expose one of its catalogues to the Plan4all Portal. The ISDE INSPIRE layer CSW API is being updated & debugged, and will expose all of ISDE's Catalogues as one Irish Catalogue on the Plan4all Portal. Subsequently the Planning Authorities ePlan Land Use data (see below) will be made INSPIRE complaint & available through the ISDE, using its Community Profile that is currently being developed.

	organisations. The ISDE architecture is distributed with a light central mediation service and is evolving towards full INSPIRE compliance to become the Irish National Geo-Portal.					(WFS) and Transformation services will be then updated		
ePlan, spatial planning applications tracking system from the Irish Local Government Management Agency (LGMA) - www.lgma.ie working with MAC.	The ePlan system is used by most Planning Authorities in Ireland to administer and provide public web access to the local spatial planning applications process in Ireland.	The Plan4all INSPIRE primary Land Use data in Ireland is held by the local Planning Authorities, as part of their management of the Irish public planning process. Most of those Authorities use the ePlan system.	Various – but mainly MapInfo, MapGuide with some GeoMedia.	Public/ Corporate Restricted	ePlan is a web-based Planning Application tracking facility, that allows the public easy access to information on the status of planning applications and to interrogate the planning files for a number of planning authorities simultaneously.	No.	English	The Councils (e.g. starting with DCC & LCC below) will link their Land Use Catalogue into ISDE and through its INSPIRE CSW API to the Plan4all portal (as above). The ISDE Community Metadata profile will be explored with DCC and LCC (see below), to be then provided by the LGMA to all Councils to achieve INSPIRE compliance for their Land Use

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								Catalogues.
Limerick County Council, Ireland, working with MAC	Maps	Thousands, various definitions from county-wide to specific building planning map. Mainly related to the Plan4all INSPIRE theme of Land Use.	MapGuide (.mwf) with some GeoMedia (.pmf)	Public/Corporate Restricted	Web-based public planning applications.	No	English	Used with ePlan, other planning web applications and the ISDE as above.
Donegal County Council, Ireland, working with MAC	Maps	Thousands, various definitions from county-wide to specific building planning map. Mainly related to the Plan4all INSPIRE theme of Land Use.	MapGuide (.mwf) with some GeoMedia (.pmf)	Public/Corporate Restricted	Web-based public planning applications.	No	English	Used with ePlan, other planning web applications and the ISDE as above.
DipSU	Vector Data	About 20 layers	*.shp	public domain while respecting the constraints of copyright	Province of Rieti (Lazio Region)	NO	Italian	Geographic information system for the development plan of the tiber valley (the availability to be confirmed)
DipSU	Vector data	land use, land cover	*.shp	public domain while respecting the constraints of copyright	Lazio Region	YES	Italian	Geographic information system ofor the landscape territorial plan
DipSU	Vector Data	land use, land cover, natural risk zones	*.shp	public domain while respecting the constraints of copyright	Municipality of Montalto Uffugo	NO	Italian	Geographic information system for the local plan
SFCM	GIS-data,	County wide, 10 themes x	Shapefiles,	SFCM + National	Offline, web atlas	ISO 19115	Norwegian	

	planning	26 municipalities	<> 1:5 000	mapping authorities				
SFCG	GIS-data, environment	County wide, 8 themes x 26 municipalities	Shapefiles <> 1: 5000	SFCG + Directorate of Nature Preservation + National mapping authorities	Offline, web atlas	ISO 19115	Norwegian	
Lazio Region	image	Technical cartography, entire Region	TIFF, 1:10.000, grayscale	public domain	public and private	yes	Italian	
Lazio Region	image	Technical cartography, provinces of Rome, Latina, Viterbo	TIFF, 1:5000, colour	Public domain	public and private	yes	Italian	cartographies for remaining Provinces are ongoing
Lazio Region	vector	Technical cartography, provinces of Rome, Latina, Viterbo	shape, 1:5000	licensed	public	yes	Italian	numerical data or remaining Provinces are ongoing
Lazio Region	vector	administrative boundaries, entire Region	shape, 1:10000	Public domain	public and private	yes	Italian	
ISTAT	vector	statistical and administrative boundaries, entire Region	shape, 1:10000	Public domain	public and private	yes	Italian	
Lazio Region	vector	DBPrior, entire Region	shape, 1:10.000	Public domain	public and private	yes	Italian	
Lazio Region	vector	Corine Land Cover, entire Region	shape, 1:25000	Public domain	public and private	yes	Italian	
Lazio Region	vector	Regional Land Use, entire Region	shape, 1:10000	Public domain	public and private	yes	Italian	
Lazio Region	vector	Environmental plan, entire Region	shape, 1:10000	public domain	public and private	yes	Italian	
Tevere's Basin Authority	vector	Hydro-geological safety plan	shape, 1:10000	public domain	public and private	yes	Italian	
Lazio Region	vector	Geological maps, entire Region	shape, 1:25000	public domain	public and private	yes	Italian	
Lazio Region	vector	Burned areas, entire region	shape, 1:10000	public domain	public and private	yes	Italian	
TIME	Text, Images	Municipal plan for regional	Doc, paper	Public domain	Accessible for the	Yes	Bulgarian	

		development(1) Municipal Master plan (2)	(1&2) TIFF(2)		public (including online), Deciders and technical personnel			
TIME	Basic geographical data (digital)	Municipality - 1/10000, aerial photographs, Quick bird Satellite Images	Geodatabase, raster	Public domain	Deciders and technical personnel	Under preparation	Bulgarian	
TIME	Planning data (digital)	Land cover and Landuse, special zones, infrastructure	Geodatabase	Public domain	Deciders and technical personnel	Under preparation	Bulgarian	
AMFM	Vector maps, ortophotos, alphanumeric data, images, text	Regional plans Maps, Regional plans rules, statistical associated data, obtainable from AMFM members	DWG, SHP, DBF, MDB, ORACLE DBMS, JPEG, WMS, WFS	public domain while respecting the constraints of copyright of the specific provider	Public Administrations, professionals, interested citizens	Subset of ISO 19115	Italian	AMFM members will be called to contribute with data to PLAN4ALL project
HSRS	Vector maps, WMS	CLC2000, CLC2006	Postgres	Licence for research purposes	Public administration	ISO19115/ISO19119	English	Land cover
HSRS	Raster data	IMAGE2000 IMAGE2006	Postgres	Licence for research purposes	Public administration	ISO19115/ISO19119	English	Ortophoto
HSRS	Vector maps, WMS	Murbandy	Postgres	Licence for research purposes	Public administration	ISO19115/ISO19119	English	Land cover
HSRS	Vector maps, WMS	Complex Land use for 20 municipalities	Postgres	Public domain	Public administration, investors	ISO19115/ISO19119	Czech	Land use, utilities, protected areas
Help Forest	Vector maps, WMS	Complex Land use for 2 municipalities	Postgres	Public domain	Public administration, investors	ISO19115/ISO19119	Czech	Land use, utilities, protected areas