PILOTS APPLICATIONS

The integration of the platform will be supported by pilot applications demonstrating the innovative features of the platform and serving as a space for validation and testing.
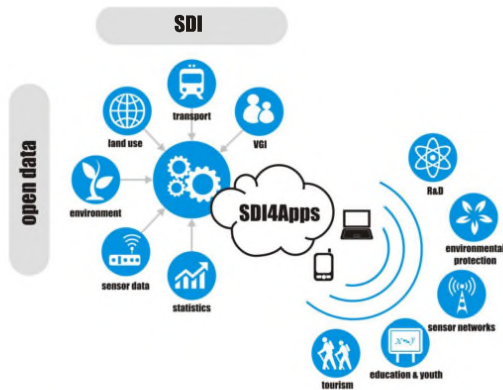

FIGURE 7: OVERALL SCHEMA OF DATA INTEGRATION AND PILOT APPLICATIONS.
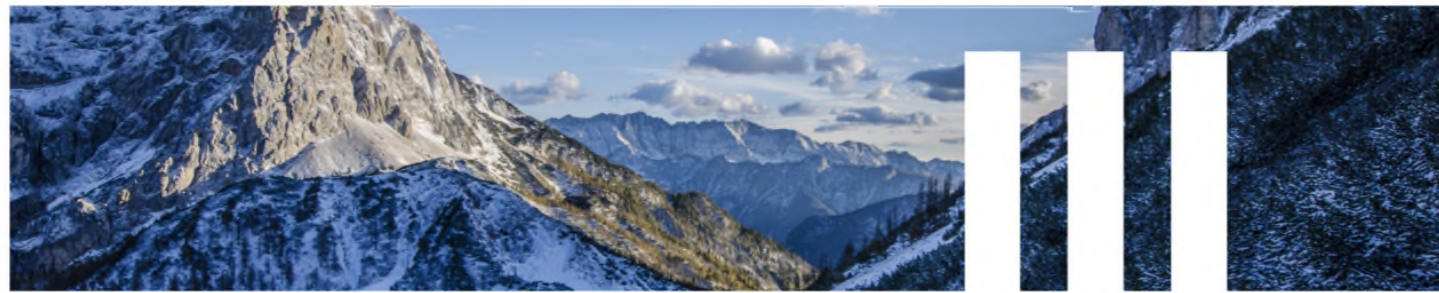

PILOT I:
Easy Data Access

The intention of the **Easy Data Access** pilot application is to adapt Open API which will support easy integration of new applications with existing SDIs. The solution will use results of the Irish pilot from Habitats provided by MAC. The pilot focused on the wider communities' identification, reporting, and recording for subsequent eradication of AIS instances as they relate to salmon and all inland and coastal native fish species conservation in Ireland and Europe, by adapting a phone app and system that involves the wider communities through awareness, using social media, crowd-sourcing and open map-based geo-data for the identification, reporting, and recording for subsequent eradication of AIS.
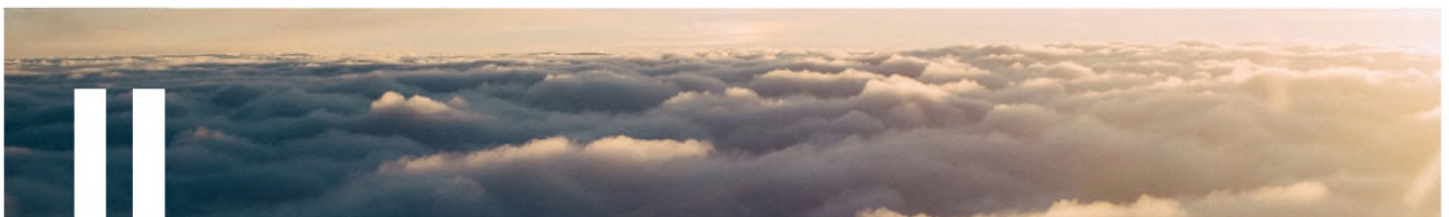
PILOT II:
Open Smart Tourist Data

Open Smart Tourist Data will interconnect user requirements and character of existing data sources. Our approach will add another components such as global and local open data sources and crowd sourcing initiatives (e.g. OpenStreetMap), own data of the partners, social media (to provide another type of information and feedback from real users) and the latest technologies and technological standards that enable to use various hardware platforms and devices to manage, collect and present data.

SDI4Apps

PILOT III:
Open Sensor Network

The aim of Open Sensors Network is to create an environment where different groups of volunteers (for example farmers) will be able to integrate low cost sensors (meteorological, quality of air, etc) into local and regional web sensor networks. The pilot application will integrate meteorological data and in-situ meteorological sensing networks based on small stations collecting agro-meteorological data to support the crop production systems. The pilot will define a framework for taking advantage of intelligent sensor webs based on the converging technologies of standard meteorological sensors, micro sensors, computers, and wireless telecommunications with data management and analysis in support of agriculture production activities such as the chemical protection, grape and wine production, fruit protection and production.

PILOT IV:
Open Land Use Map Through VGI

Land use and land management practices have a major impact on natural resources including water, soil, nutrients, plants and animals. Land use information can be used to develop solutions for natural resource management issues such as salinity and water quality. For instance, water bodies in a region that has been deforested or having erosion will have different water quality than those in areas that are forested. Forest gardening, a plant-based food production system, is believed to be the oldest form of land use in the world.

The INSPIRE land use represents scattered resources of various quality and with limited coverage in Europe. The Corine Land Cover (CLC) is land cover map, not land use map. Moreover, the map is too generalised for regional and local purposes. The Urban Atlas is only for major European cities and 19 FAO Land and Water Division CIP-ICT PSP Call 7 Pilot B SDI4Apps 16 does not cover rural areas and remote suburbs of cities. The needs for a European land use map were expressed during the collection of requirements within the plan4business project. The voluntary approach is the only way how to perform the collection of data with minimising the costs. The intention of SDI4Apps is to start support voluntary initiative for **Open Land Use Mapping**.

PILOT V:
Open INSPIRE4Youth

Open INSPIRE4Youth will support creativity, technical capabilities, skills, knowledge and also relations, through the sharing the spatial based content around environment. Using new methods of digital cartography enables to go beyond linguistic frontiers. There are a great number of geomatics applications and new communication technologies relevant to the young world: for example active collection environmental information, gaming education. Open INSPIRE4Youth will be focused on more sophisticate methods where young peoples are able to contribute to different environmental and social issues. The combination of both issues will be used as educational methodology, when students will map their territories and also collect information about historical, environmental, cultural and socio economic issues.

PILOT VI:
Ecosystem Services Evaluation (ESS Evaluation)

Ecosystem services (ESS) are the direct and indirect contributions of ecosystems to human well-being. We can distinguish between provisioning, regulating, supporting and cultural services provided by ecosystems20. The pilot will be focused on the identification of spatial representation of the outcomes of ESS Evaluation with focus on sustainable support of tourism.

In order to further compare the spatial interpretation of the ESS Evaluation outcomes from various areas on national and international level pilot web application is foreseen utilising the outcomes of Open API adopted by the project.

The project is being implemented with the concerted effort of 18 organizations across Europe.

The potential of geographic information (GI) collected by various actors ranging from public administration to voluntary initiatives of citizens is not fully exploited. The advancements of ICT technologies and shift towards Linked Open Data give floor to innovation. The establishment of SDIs has largely been driven by the "traditional" GI community and the national and European policies governing this sector. Geographic information is no longer a separate information space but finds itself part of a larger European information space where the ultimate objective is the creation of value-added services based on use and reuse of public sector information as defined by the PSI and INSPIRE directives rather than exchange of "layers" between different GIS software. Establishing an infrastructure to meet this new and wider objective puts even greater strain on local authorities and institutions that traditionally were users of GI but now find themselves in a an environment where they are expected to be data and service providers, a role that is far more demanding in terms of technical knowledge – and resources.

The main target of SDI4Apps is to bridge the 1) top-down managed world of INSPIRE, Copernicus and GEOSS and 2) the bottom-up mobile world of voluntary initiatives and thousands of micro SMEs and individuals developing applications based on GI. SDI4Apps will adapt and integrate experience from previous projects and initiatives (e.g Habitats, EnviroGrids) to build a cloud based framework with open API for data integration, easy access and provision for further reuse. The solution will be validated through six pilot applications focused on easy access to data, tourism, sensor networks, land use mapping, education and ecosystem services evaluation.

SDI4Apps will secure that users profit from INSPIRE and INSPIRE profits from different voluntary initiatives. SDI4Apps seeks to build a cloud-based framework with open API for data integration focusing on the development of six pilot applications. The project draws along the lines of INSPIRE, Copernicus and GEOSS and aspires to build a WIN-WIN strategy for building a successful business for hundreds of SMEs on the basis of European spatial data infrastructures.

For more information visit:
http://sdi4apps.eu/
http://www.linkedin.com/groups/SDI4Apps-3516067

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The University of West Bohemia, established 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 main expertise of the Geomatics section is in collecting, storing, processing, analysing and presenting big spatial data and spatial information. The research group has a vast experience in spatial data modelling (including 3D), data harmonisation and integration, SDI building (e.g. INSPIRE, GMES, GEOSS), using ontology in spatial domain, and in implementation of ISO and OGC standards for spatial information.