EU requirements for Land Administration Information

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INSPIRE initiatives are crucial EU requirements for national EU SDI’s

The INSPIRE initiatives are of crucial importance for the geo sector in Europe. They are of leading importance for the Spatial Data Infrastructures in the EU countries. The target of INSPIRE is the creation of a Spatial Data Infrastructure in Europe. This means in SDI terms the relevant base collection of technologies, policies and institutional arrangements that facilitate the availability of and access to spatial data.

Basis principles are: the data should be collected once, to combine data from different sources, collect data at one level and share at all levels and easy to discover which data are available and improve knowledge about the conditions for use.

This INSPIRE initiative defines the main EU requirements for Land Administration Information in the EU countries. The proposed Directive creates regulation for the establishment and operation of an Infrastructure for Spatial Information in Europe, for the purpose of formulating, implementing, monitoring and evaluating Community policy-making and implementation of Community policies in the Member-States at all levels and providing public information. INSPIRE focuses on environmental policy, but is open for use by and future extension to other sectors such as agriculture, transport and energy. This infrastructure shall be based on infrastructures for spatial information established and operated by the EU Member States.

The component elements of the those infrastructures include metadata, spatial data sets and spatial data services, network services and technologies, agreements on sharing, access and use and coordination and monitoring mechanism, processes and procedures.

These public spatial data in electronic format are related to the themes listed in three annexes. The first annex consists of geo-referenced data such as coordinate reference systems, geographical grid systems, geographical names, administrative units, transport networks, hydrography and protected sites. The member states create the meta data by three years.

The second annex consists of elevation data, identifiers of properties, cadastral parcels, land cover and ortho imagery. The member states create the meta data by three years.

The third themes are statistic units, buildings, soil, and geology, land use, human health and safety, utility and government service and environmental monitoring facilities, production and industrial facilities, agricultural and aquaculture facilities, population destriction and demography, area management etc, natural risk zones, atmospheric conditions, meteorological geographical features, sea regions, bio-geographical regions, habitats and biotopes and species distribution. The member states create the meta data by six years.
The European Commission will adopt implementing rules for harmonized data specifications and arrangements for the exchange of spatial data by 2 years for the first annex and 5 years for the second and third annex. Member States shall establish and operate upload services for making metadata and spatial data sets and services accessible through the services (network services). Discovery services and view services are available to the public free of charge. Download services are allowed not to be free available. Member States need to create the availability of e-commerce facilities.

The Commission shall establish an EU Geo Portal. The Member States have an obligatory task to contribute in the establishment of the Portal. The Member States shall adopt measures for the sharing of spatial data sets and services between the authorities. Member states shall organize structures and mechanisms for the coordination of the contribution with all the relevant stakeholders with an interest in the national SDI. They shall monitor the implementation and use of their infrastructures for spatial information.

In conclusion:
The EC institutes will design technical and organizational implementing rules in cooperation with the Member States. The implementing rules for metadata, network services and monitoring and reporting need to be realized ultimately in 2008. Implementing rules for the use of spatial data will be realized ultimately in 2011. The implementation of the data sharing between public bodies will be completed at the end of the year 2011 as well. The Annex I datasets are available in 2011 the Annex II data in 2012 and the Annex III data in 2013. The European Infrastructure is expected to be operational at the end of 2014.

**INSPIRE accelerates SDI development on European Scale**

INSPIRE works on two parallel lines. The legislative process and GI sector initiatives bottom up. These last initiatives had created a huge impact on the quick moving preparatory INSPIRE process.

In 2002 the INSPIRE working groups have produced Position Papers for the Architecture & Standards, implementing structures & funding position paper, reference data and meta data position paper, data policy & legal issues position paper and an Environmental Thematic User Needs Position Paper.

The Internet Consultation was a success. This illustrates a huge involvement of the GI community. Totally 185 organizations and individuals from the EU member states responded to the Internet consultation.

A large number of respondents agree with the need to establish a common data policy framework to share the spatial datasets between the public bodies and the majority of the respondents agree for the need of a general licensing framework. Some public data producers suggest a differentiating between different categories of users. It was not quite clear that the INSPIRE is complementary to Arhus Convention and the Proposal for a Directive on the reuse and commercial exploitation of public sector information. It was generally stressed that all the spatial datasets that are required, as a reference need to be free for all.

Another observation is the ambitious time line for the Inspire implementation and the huge involvement of the GI sector in this process.
The INSPIRE initiative stimulates the involvement of the GI sector in the development and implementation of national Sid’s. Reports are available with a description of the Sid’s and the state of the art. SDI’s are crucial building blocks.

The main European institutions are full in charge with the legislative process. The preparation of the INSPIRE initiative has created a huge amount of awareness on political level that an infrastructure on European scale needs to be set up in a short time. This is demonstrated in the relatively short legislative process. The Council reached a political agreement on an amended version of the INSPIRE proposal on June 24th 2005. The European Parliament had adopted the text in its first reading on June 7th 2005. The amendments were mainly focusing on technical clarifications and extra safeguards for public data providers in stimulating public access of spatial data and the sharing between the public authorities. A second reading is necessary because of the European Commission does not accept the by the data providers introduced intellectual property rights. These rights would undermine the objective to stimulate the extensive use of spatial data. It will be expected that the second reading will be take place in 2006.

Points of attention

The legal and legislative framework is less clear than suggested than the framework regulation of the draft INSPIRE Directive appears to be. This framework needs to be worked out in a practical way. It is curious to find out in which way the access to data, services can be improved with the taking into account that Intellectual property rights takes derogates in relation to public access and sharing. General guidelines are needed how these producer rights can be protected on the one hand and how the public access for citizens, private companies and public institutions can be improved at the other hand.

National Spatial Data Infrastructures play a vital role in the development and implementation of the Infrastructures of Spatial Information in Europe.

An analysis of an overview of the country reports learns that there are big differences in the status of the infrastructures in Europe. In my opinion the organizational component of National Spatial Data Infrastructures is of vital importance for the success of INSPIRE nationally and internationally. The weak point in the current situation in Europe is the enormous differences in the way in which infrastructures are developed. In Germany on federal level the NSDI has a legal status. In Belgium (Flanders) the implementation of the NSDI is regulated. In the Netherlands the NSDI has been defined and will be innovated. The Dutch government has provided the Ravi and the Dutch Geo Information sector with a grant of € 20 million. But a legal status of the NSDI is missing. This different approach is difficult for a quick implementation of European Spatial Data Infrastructure nation wide.

A third point of attention is the uncertainty what the relation is between the European Directive for the re use of public sector information and the INSPIRE directive. The PSI Directive is based on article 95 of the EC Treaty. This article handles on harmonization measures in the internal EU market. Frequent misunderstandings on the PSI directive have been made, that this regulation would primarily handle on the freedom of information legislation. That’s not the case. The PSI is based on fair competition and transparency principles. The objective of the Directive is the creation of the insight in the conditions and a clarification of the procedures for the provision of public sector information. The Directive creates a minimum set of rules to avoid the arrangements of exclusive agreements between government agencies and private companies and to calculate full recovery of costs for data producers with an unreasonable return.
of investment. It is a national responsibility of the member states to define a national data and access policy based on active accessibility of spatial data for citizens or a less active policy. The INSPIRE directive doesn’t give a clear guidance in which way e.g. the sustainable funding can be provided for the realization of the INSPIRE target and how harmonized licensing frameworks will be introduced and how the realization of improved access of the public data in the Annexes I, II and III can be improved and what the financial impact is for the citizens and private companies. The implementation of the data policy issues according to the INSPIRE Directive is very complex, because of the one hand the existing EU subsidiary principle and on the other hand the relationship with the existing Key Information Directives such as the Arhus Convention, the PSI Directive, the privacy and data protocol and the liability & fitness for purpose issue. Therefore it is necessary that an action list will be set up in short term for enlarging the transparency of the current legal and organizational policy in providing Geo information to public sector stakeholders, citizens and private companies. This is a real prerequisite for the success on the policy design of data sharing which will start in 2007 and 2008.

A fourth point is the fact that it is unclear which rules of the INSPIRE legislation will be obligatory on member state level in the future. The Directive gives a clear overview of the activities on standardization, harmonization, the development of network services and web services. But it is unclear how data sharing between the public GI suppliers in the national EU context gets form and substance.

**Interaction between the national initiatives and INSPIRE process needed**

National Spatial Data Infrastructures play a very important role in the implementation of the INSPIRE Directive. For the creation of National Spatial Data Infrastructures four conditions in organizational prospective are important, namely leadership, a vision, communication channels and the way in which the GI data providers are involved in the implementation of the NSDI. I’m using these indicators in my research activities in measuring the maturity of SDI’s. These indicators are the four critical organizational components of a SDI. The SDI needs a problem owner, which coordinates the development of the SDI. A vision is necessary shared by the stakeholders, communication and interaction between the stakeholders and the leader is necessary and. The ability of the self-organization of the community can be explained by the problem solving ability of the GI community. The maturity of SDI can be measured by the way in which the stages and the indicators are developed. Every EU country should define such a kind of analysis for developing the right organizational activities and interaction with the INSPIRE community.

In the Netherlands we have defined our National Spatial Information Infrastructure almost ten years ago. This Dutch Cadastre is an important stakeholder in the implementation of our NSDI. In the Netherlands Council for Land Information Ravi we have defined the structure plan and it has been approved by the Council of Ministers in 1993. Our recommendations were derived from a very complex inventory of Ravi in the beginning of the nineties. We facilitated the implementation of the Dutch NSDI and the exchange of the core data between the most important GI public data producers of our NSDI. The definition of organizational indicators is crucial in this process.

**Initiatives for interaction between the Dutch GI society and INSPIRE community**

Actions for the coming years
In my opinion an inventory under which conditions the INSPIRE data sharing ambition can be fulfilled in each member state and which stakeholders the “driving forces” are.

The first step is that the public GI suppliers need to set up an action list in every EU country under which data policy conditions the public data in the three annexes will be provided to other public authorities regionally, nationally and on pan European basis. For the realization of this step the joint GI producers. Every EU country needs to create a vision on how the GI data exchange should be approved.

A second parallel step is focused on the fast establishment of coordinating mechanisms in every EU member state. This is one of the obligations formulated in the draft INSPIRE Directive that I strongly support. In these national coordinating platforms the joint producers of the INSPIRE core datasets (Annexes 1, 2 and 3) should formulate a national legal framework vision how the sharing between the public bodies will be implemented. The INSPIRE directive doesn’t give any direction on how this policy will be executed. Another urgent action is the creation of a common vision, which data policy steps need to be taken for the development of the establishment of the European Geo Portal.

A third parallel step on national level is the necessity for regulation of the coordination on national level and the regulation of the National Spatial Data Infrastructure in accordance to the INSPIRE ambition.

In my opinion these “bottom-up” national initiatives are of crucial importance for the realization of the INSPIRE process because of the EU subsidiary principle and a stimulus for an optimal involvement of the GI producers in the creation of a European Geo Information Infrastructure.

The current initiatives on standardization and Meta data are necessary and the EC Staff takes the right initiatives for making a quick start of the activities on technical level. But at the other hand national initiatives need to be taken improving public access, sharing and exchanging the data with other public stakeholders, handling with existing rights of data producers and pricing and funding issues.

Challenging and active roles of the land information executives in this process are of vital importance and underexposed in the current INSPIRE approach. National initiatives have to be taken. The current regulative status of INSPIRE is challenging for the sector to take initiatives on national level and stimulates an interaction between the member states and EC level on short and longer term.

REFERENCES


Dufourmont, H. - ESTAT (2004), Inspire Results Task Force XIA, ESTAT


Inspire (2003), Consultation Paper on a Forthcoming EU Legal Initiative on Spatial Information for Community Policy-making and Implementation, Inspire

Inspire (2003), Report on the feedback of the Internet consultation on a forthcoming EU initiative establishing a framework for the creation of an Infrastructure for Spatial Information in Europe, Inspire

Kok, B. & van Loenen, B. (2004), Spatial data infrastructure and policy development in Europe and the United States, Delft University Press

Kok, B. & van Loenen, B., (2005), How to assess the success of National Spatial Data Infrastructures Computers, Environment and Urban Systems, Elsevier