

**INTEGRATED LAND ADMINISTRATION SYSTEM PROJECT
PREPARATION
(IBRD Advance no. P459-HR)**

TERMS OF REFERENCE

**SERVICE PROVISION FOR THE SUPPORT TO THE NATIONAL
SPATIAL DATA INFRASTRUCTURE (NSDI) DEVELOPMENT**

Zagreb, January 2011

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Service provision for the support to the NSDI development

1. Background information

The objective of the Integrated Land Administration System Project (ILAS Project) is to modernize the land administration system in order to improve on the government services from the point of view of efficiency, transparency and costs.

The International Bank for Reconstruction and Development (Bank) has granted to the Republic of Croatia (RoC) the Project Preparation Advance (Advance) to assist the preparation of the ILAS Project. The Ministry of Justice (MoJ) and State Geodetic Administration (SGA) are the Project implementing agencies and beneficiaries. The funds have been approved based on the past successful cooperation and completion of the Real Property Registration and Cadastre Project (2003 to June 30, 2010) that is recognized as the pillar of the "Organized Land" National Land Administration Reform Program.

The results of the reform are visible mostly in the reduced time needed for processing cases, backlog reduction and faster mortgage registration. If one adds to this also the transparency ensured by the e-Land Registry browser (over 75 million inquiries) and e-Cadastre (over 30 million inquiries), the extraordinary interest and need for this service as well as the importance of a modern land administration system for the State and its citizens become obvious.

In the past five years, there have been great improvements in the development and modernization (digitalization and open public access to data over the Internet) of both the land registration (LR) system and the cadastral system. The improvements have been achieved against an increasing number of in-coming cases. Other achievements include: LR and cadastre offices renovations and customer areas improvements; legal framework amendments to simplify and improve the laws related to the cadastre and land registries; and training of some 10,000 LR and cadastre staff. The public awareness campaign has raised public awareness and understanding of the land administration system and the reform program.

Today the land administration system reform is halfway i.e. preconditions have been created for the implementation of an efficient real property registration system and the Real Property Registration and Cadastre Joint Information System (JIS) has been completed. The JIS provides a unified database and application for keeping and maintaining the real property registration and cadastre data.

In the next phase, it is necessary to implement JIS throughout the Republic of Croatia which will streamline both the cadastre and land registry systems and simplify the business processes. Such a system will save time and money for the citizens by having the official extracts issued electronically as well as by offering numerous other functionalities. This system is, therefore, one of the key instruments in the development of e-Croatia and entrepreneurship as well as securing public trust in the registers. For this reason, it is necessary to ensure that JIS is fully used and functioning as this guarantees an efficient and

rational real property registration system. By linking JIS with other registers, systems and sub-systems in the RoC, an integrated land administration system will be ensured, satisfying the needs of both the public and the private sectors. Finally, all preconditions will be fulfilled to bring the real property register and real property management to the administrative IT level.

The new ILAS Project will represent a continuation of the Real Property Registration and Cadastre Project and will serve as the framework for financing the activities envisaged by action plans for strengthening the judiciary. It will ensure the continuity of the land administration reform as one of the priority reforms in the RoC. It should enable that all the past efforts and investments are materialized in a modern, well-functioning system of registering the real property and appertaining titles that will represent not only a strong basis for the efficient land administration system in Croatia but also a National Spatial Data Infrastructure (NSDI) multifunctional platform that will be a motor for the economic growth in Croatia within the framework of the European Union.

The projected estimated amount of the loan for the new ILAS Project amounts to EUR 15 million while the Project action plan will determine the financial framework of the loan to be defined subsequently during the loan negotiations.

In accordance with the Advance Agreement for the preparation of the ILAS Project, the funds will finance the procurement of goods and consultancy services for:

- The preparation of the Project implementation detailed plan, development of requirements for additional JIS functionalities and production of the document management strategy and digital archives strategy for the land registry.
- The pilot project for the JIS roll out including the JIS management, training and data migration as well as computer equipment.
- Project implementation including the procurement, financial management, disbursement, monitoring and evaluation.

The Project Implementation Unit (PIU) has been established for the operational execution of the preparatory phase and Project implementation.

1.1 Introduction

The State Geodetic Administration (SGA) is a State administrative organization dealing with administrative and professional tasks from the field of geodesy, cartography, cadastre and photogrammetry. As part of its activity, the SGA also takes care of the computerization of the cadastre, geodetic and spatial system, State official cartography, geodetic and technical documentation, statistics about the real estate cadastre and spatial units and the geodetic works connected with the State border. Pursuant to the Law on State Survey and Real State Cadastre, *Official Gazette* 16/07 (Law), that came into force in February 2007, the SGA has become the Croatian NSDI coordination body. It acts as the Secretariat of the NSDI Council, coordinates all NSDI bodies and provides technical support.

The SGA consists of the Head Office in Zagreb, 20 regional cadastral offices and 112 cadastral branch offices. The total number of employees in the State Geodetic Administration is 1,100. The Head Office is divided into six sectors: sector for legal and financial affairs, for information system, for topographic survey and State maps, for cadastral system, for State survey and, since 2009, for NSDI.

1.2 Current status of the NSDI development

1.2.1 Legal aspect

The first legislation concerning the Spatial Data Infrastructure (SDI) in Croatia came into force in February 2007. A separate chapter (Chapter V) defining the SDI was included in the new Law on State Survey and Real Estate Cadastre (*Official Gazette* 16/07). The Law gives a definition of the NSDI and metadata, content of the metadata information, services, NSDI data and subjects that are obliged to participate in its establishment and maintenance. Equally important is that it provides the institutional framework and defines the NSDI bodies and their responsibilities. The SDI part of the Law is harmonized with the INSPIRE Directive whereby the main INSPIRE idea is accepted but the content represents only part of the topics comprised by the INSPIRE Directive.

Croatia as a candidate country for the European Union was not obliged to implement the INSPIRE Directive until 2009 as member States are, but the Directive is the subject of the accession treaty. The NSDI development in Croatia is conformant to the INSPIRE Directive. In 2009, the INSPIRE Directive was included for the first time in the National Program for the European Union Accession and the transposition of the INSPIRE Directive was monitored. Since 2007 no further steps have been taken with regards to the transposition of the INSPIRE Directive into national regulations.

The Working Group for Metadata has analyzed the Metadata Regulation deriving from the INSPIRE Directive and has prepared a proposal of the metadata specifications based on the INSPIRE metadata regulation to be adopted into the Croatian legislation. The NSDI Committee revised the document and proposed the metadata specifications to the NSDI Council. In August 2010, the Croatian Government adopted the Implementing Rules for Metadata (*Official Gazette* 102/10) as a set of criteria and norms for the data exchange according to Article 90 of the Law.

The Working Group for Data Sharing has produced a draft agreement for the data exchange, sharing and use between the NSDI subjects. The agreement is ready for the public discussion.

1.2.2 Managerial aspect

Institutional framework

The Law defines the SDI institutional framework for the SDI establishment. A three-tier organisation has been foreseen and is already established.

The supreme SDI governing body is the SDI Council appointed by the Croatian Government in 2008. It is the body at the highest, political level. Beside its president, the Council is comprised of 15 members coming from different ministries responsible for the environmental protection and spatial planning, defence, land registry, transport and communications, agriculture, forestry and water management, science and education, culture, State administration body responsible for e-government, State survey and real property cadastre (SGA), statistics, Croatian Hydrographic Institute, Croatian Geodetic Institute, geodetic and geoinformatics economic community, IT economic community as well as the Croatian Chamber of Architects and Civil Engineers.

At the managerial level, there is the SDI Committee appointed by the Council in 2008 and consisting of three representatives from the Council, two from the SGA and heads of working groups.

At the operational level, there are working groups. So far five working groups have been established:

- Working Group (WG) on Technical Standards
- WG Data Sharing
- WG e-Government
- WG Capacity Building
- WG Business Models.

The Working Group for Technical Standards and the Working Group for Data Sharing were established in 2008 and have already achieved some results, while another three working groups are relatively new (since July 2009).

The mission of the WG Technical Standards is to coordinate and conduct the development and maintenance of the technical implementation specifications that enable the interoperable operation of geo-services meeting the needs of Croatia's NSDI subjects. The objectives of the WG Technical Standards are to test, verify and elaborate as necessary the technical specification provided by the INSPIRE Directive with regards to the metadata and network services and also give feedback to the INSPIRE drafting teams, to provide proposals for adoption in national regulations.

The mission of the WG Data Sharing is to coordinate and conduct the development and maintenance of an interoperable and customizable license model which is in line with the Croatian legislation and which allows NSDI Subjects to unambiguously define and publish access conditions for their data and service offers. The WG should provide a template agreement on the spatial data exchange, usage and access among all NSDI subjects. Subsequently, the WG should provide a harmonized template of rules and conditions for the data and services access and re-use by third parties. All specifications shall be in line with the INSPIRE Implementing Rules and Guidance documents.

The goal of WG e-Government is to harmonise the activities of e-Croatia and NSDI by supporting the determination and fulfillment of mutual needs. It should work on the integration of NSDI into the e-Government processes in order to connect the public sector to the spatial information.

The WG Capacity Building is dealing with the problems resulting from the lack of GI/NSDI professionals needed to expedite the NSDI establishment process as well as the readiness of user communities to utilise NSDI concepts and to adopt those concepts into their workflows. The objectives of the working group are to identify gaps, produce best practice guidelines and work on NSDI-specific curricula for geoinformatics courses at different educational levels.

The WG Business Model should develop business models for establishing sustainable partnerships and business networks and, particularly, for operating common services like catalogues, etc. Due to the complex range of tasks that make up the market-oriented provision of public spatial data, networking with technology partners, content partners and business partners is necessary.

The SGA, actually the Sector for NSDI, acts as the Secretariat of the SDI Council, coordinates all SDI bodies and provides technical support. In 2010, the SGA has been nominated as the national INSPIRE Point of Contact. Due to some obstacles (employment freeze), the Sector for NSDI is not in function at the moment (December 2010) and only the formal organisational structure has been set up. Full employment is expected in the first quarter of 2011.

Education and Awareness Campaign

In order to inform the overall geo-information society about the NSDI concept and introduce the preparations for the work of the Council and other NSDI bodies, the SGA has organized the consultancies and brought in experts from the countries where the NSDI development had been the most successful. The following four workshops were organized in order to share the experiences:

- In collaboration with the Swedish Agency for Development Cooperation (SIDA) and the Swedish Geodetic Authority (Lantmateriet), the first consultancy on the NSDI establishment was organized on May 29, 2007, for the representatives of the institutions contributing their members to the NSDI Council, and on May 30, 2007, for the representatives of all NSDI subjects (approx. 150 members).
- On September 12, 2007, the SGA organized in cooperation with the Canadian Embassy in Zagreb the presentation of the Canadian model of the NSDI establishment. The consultancy participants represented a cross-section of the geo-information society in Croatia and got the opportunity to see a new concept of the successfully established NSDI.
- In cooperation with the German Association for Technical Assistance (GTZ), a two-day consultancy was organized, presenting the NSDI system of the Federal Republic of Germany. The consultancy was held on May 26, 2008, for the members of the NSDI Council while on May 27, 2008, it was held for the representatives of all the NSDI entities. The consultancy participants had an opportunity to get familiarized with the spatial data infrastructure of Germany in the context of the European guidelines and the INSPIRE Directive as well as with a concrete example of the development of the spatial data infrastructure in the Lower Saxony.
- As part of the CRONO GIP (CROatian-NORwegian GeoInformation Project) cooperation, the fourth workshop for sharing experiences was held on November 26, 2009, in Varaždin by presenting the Norwegian model of the SDI establishment.

In cooperation with the Croatian Cartographic Society, the State Geodetic Administration organised in the framework of the cartographic conferences:

- The First Croatian NSDI and INSPIRE day, November 26, 2009 in Varaždin,
- The Second Croatian NSDI and INSPIRE day, November 25, 2010 in Opatija.

About 200 experts from various administrative structures (State, regional, local), commercial sector (public, geodetic, geo-information, IT) and education (high and higher education) as well as from abroad - who are interlinked in performing their activities involving the spatial

data and, therefore, the NSDI concept - were informed about the latest INSPIRE development as well as Croatian achievements in the NSDI field.

In May 2008, the State Geodetic Administration issued a publication on the National Spatial Data Infrastructure in the Republic of Croatia that was printed in Croatian with the circulation of 1,000 copies. The production was aided by the European Union under the Real Property Registration and Cadastre Project. The intention was to familiarize the professional audiences directly involved in the NSDI development, be it at the national, regional, local or commercial level, about the NSDI basics as well as to inform the wider audience, i.e. the users. The publication consists of two studies described below:

- Using the European Union grant under the CARDS 2002 Program as part of the Real Property Registration and Cadastre Project, the SGA ordered the production of the Study on the National Spatial Data Infrastructure in Croatia. The Study was produced by a group of foreign and Croatian experts gathered by the German company named Conterra. This study represents a comprehensive effort whereby the information on the current status of the spatial data in Croatia was collected and analyzed in a systematic and very clear way and in the context of the needs of Croatia and the expectations coming from the European Union. Based on the analysis, concrete steps were proposed regarding the NSDI establishment in Croatia.
- Before this study was materialized, the SGA – using a grant by the Foreign Office of the Great Britain and Commonwealth in cooperation with Geolink Consulting Ltd. – evaluated the study itself as well as the development of the European spatial data infrastructure which resulted in a second study entitled: “*Croatia: National Spatial Data Infrastructure and INSPIRE*”. This study upheld the conclusions of the first study and extended it with new information related to the adoption of the INSPIRE Directive.

Given the connection between the two studies leaning on each other, one publication encompassed the afore-mentioned studies in order to provide the readers with a more comprehensive overview of the NSDI establishment as well as of the activities in Europe.

1.2.3 Technical aspect

The SGA Geoportal has been in use since May 2009. It is designed as a geospatial portal according to the reference architecture of geospatial portals defined by Open GIS consortium (OGC), built on the Service Oriented Architecture (SOA) principles and in-line with ISO/OGC standards. The Geoportal offers a metadata-driven catalogue-service for publish-and-find functionality. The catalogue contains metadata descriptions of all resources and allows users and other applications/portals to query and find these resources. The metadata records are also accessible for engine-to-engine access in a standardized ISO-based structure. In the first phase (current) five data sets have been put on the Geoportal: orthophoto, cadastral maps in raster format, Croatian base map in the scale 1:5,000 and already existing geodetic points and register of spatial units systems are linked. At the same time, the Geoportal contains web sale functionality.

According to the above-mentioned Law, the SGA is responsible for the establishment and maintenance of the metadata public service on the Internet (using a geo-portal), in a way that enables NSDI subjects to interactively maintain NSDI data. NSDI subjects are responsible for the regular maintenance of the data with regards to their spatial data sets and services. At the

request of the SGA, they are obliged to make available the spatial data information under their jurisdiction or authority.

According to the INSPIRE Directive, all member States are obliged to assure access to the NSDI data through a geoportal operated by the Commission. Croatia, as an EU candidate country and future member State shall enable the access to Croatian NSDI through a Community portal operated by the Commission, as well as through Croatian access points. It is assumed that SGA's Geoportal is forerunner of the national geoportal and will soon form the basis for the NSDI Portal and thus be at least one of the national INSPIRE access points. Therefore, the SGA has already undertaken activities to analyze the current geoportal in order to achieve the full compliance of SGA's Geoportal with the relevant INSPIRE Implementing Rules and related Technical Guidance documents. One of the huge tasks for the NSDI subjects will be the production of metadata, especially in line with the INSPIRE regulations for NSDI data that are not under SGA's responsibility as well as networking among other key NSDI subjects.

2. Objectives

In general, this Project will provide technical assistance to the SGA, Sector for NSDI, and other NSDI bodies and subjects to improve the NSDI development in Croatia in line with the INSPIRE Directive.

Specifically, the Project is divided into three components:

2.1. Support to the INSPIRE Directive transposition:

Chapter 1.2.1 states that the INSPIRE directive is not fully transposed into the Croatian legislation. The main ideas are pursued in the Law on State Survey and Real State Cadastre – Chapter V (National Spatial Data Infrastructure). As a European Union candidate country, Croatia does not need to adopt the INSPIRE Directive before joining the EU (expected in 2012), which means that the proposal of the new law describing the spatial data infrastructure fully in line with the INSPIRE Directive should be finished in 2011. It is expected that the working group for transposing the INSPIRE Directive into the Croatian legislation will be established in early 2011.

2.2. NSDI strategy improvement

The NSDI strategy, as a separate document, has never been defined and formally adopted in Croatia but the Study on the National Spatial Data Infrastructure in the Republic of Croatia (State Geodetic Administration, 2008) consists of a roadmap for the NSDI establishment that forms the basis for the establishment of an institutional framework and other current activities concerning NSDI in Croatia. This study should be revised and updated, what means that a new NSDI strategy for Croatia should be produced. It should encompass the following:

- Vision
- Action areas and corresponding strategic goals
- Activities needed in order to achieve strategic goals
- Timetable for proposed activities, including the description of how the activities shall be carried out (performers, decision makers, etc.)
- Cost estimate for the proposed short-term and mid-term priorities

- Activities related to the NSDI implementation that can be supported under the ILAS Project
- Analysis of the impact of the strategy.

The Strategy should be based on the following guiding principles:

- following in the footsteps of the INSPIRE Directive
- in line with national regulations related to spatial information
- NSDI development in the framework of the e-Government programme
- national and international cooperation
- capacity building and education
- awareness raising

and should cover all of the following aspects:

- technical (including geo-portal and metadata catalogue)
- legal
- organisational.

2.3. Metadata profile definition

The task encompasses the definition of the draft metadata national profile. The profile should satisfy the needs of all NSDI subjects and should be based on the existing specifications and standards i.e. Implementing Rules for Metadata (*Official Gazette* 102/10), HRN EN ISO 19115 Metadata, HRN EN ISO 19119 Services and all other relevant ISO standards. It should also be harmonized with the INSPIRE Implementing Rules for Metadata. The metadata national profile should be simple and interoperable with regards to the INSPIRE and designed in such a way for the individual NSDI subjects to be able to extend and define themselves, in line with their needs, the metadata profiles for their respective datasets.

3. Tasks

3.1 Specific activities

3.1.1. Component 1: Support to the INSPIRE Directive transposition

In the framework of this Project, the following activities are expected to be carried out:

1. Analyse at least three most successful transpositions of the INSPIRE Directive into the national legislation of EU countries;
2. Analyse other EU directives connected to the INSPIRE and the status of their transposition and implementation in Croatia as well as the influence of these directives on the INSPIRE Directive transposition and implementation (i.e. PSI and Database directives, etc.)
3. Analyse the current situation in Croatia concerning the intellectual property rights in the public sector with reference to INSPIRE Annexes I and II
4. Based on the above-mentioned analyses, give recommendations for the transposition of the INSPIRE Directive into the Croatian legislation, bearing in mind the obligations of the EU accession and the actual circumstances in Croatia

5. Give recommendation for the follow-up activities connected to the implementation of the INSPIRE Directive in Croatia in line with the INSPIRE roadmap.
6. Give support to the working group for transposing the INSPIRE Directive into the Croatian legislation (expected to be established in early 2011). In case the working group is not established until the start of the contract execution, the role of the working group shall be taken over by the Sector for NSDI, SGA.

3.1.2 Component 2: NSDI strategy improvement

In the framework of this Project, the following activities are expected to be carried out:

1. Update the information on requests, regulations and achievements in the EU related to the spatial data infrastructure with a special emphasis on the INSPIRE Directive
2. Update the information on requests, regulations and achievements in Croatia related to the spatial data infrastructure
3. Undertake consultations with more significant NSDI subjects in Croatia (national, regional and local representatives) in order to obtain relevant information on the requests regarding the spatial information and the current SDI development status at all levels
4. Analyze the previous study (publication on the National Spatial Data Infrastructure in the Republic of Croatia, SGA, 2008) and the current NSDI development status in Croatia and give an overview of the situation as well as the missing elements, including the proposal for the most efficient problem solving
5. Produce a proposal for the updated NSDI strategy in Croatia, in line with the principles stated in Chapter 2.2 and containing all elements and covering all issues stated in Chapter 2.2.
6. Ensure that the proposed strategy for the NSDI development in Croatia adheres to the EU principles and standards and is in line with the e-Government programme.

3.1.3 Component 3: Metadata profile establishment

1. Draft the metadata national profile conformant with the Implementing Rules for Metadata (*Official Gazette* 102/10) and other existing specifications and standards in Croatia and the European Union
2. Develop the metadata national profile in Croatian
3. Offer a solution for the metadata national profile to satisfy the needs of the contact point for the INSPIRE geoportal at the level of specifications
4. Ensure the feedback from the NSDI subjects (sample of at least 20 subjects at various levels) at the proposal of the metadata national profile by conducting a poll or organizing a workshop
5. Ensure the feedback of the NSDI subjects in cooperation with the Sector for NSDI for public discussion – publication of documents at the NSDI or SGA web page
6. Analyze comments from the subjects and, based on the analysis, produce the final proposal for the metadata national profile

7. Offer recommendations for further implementation of the metadata national profile in terms of producing the most effective formulation and maintaining the metadata national catalogue to satisfy also the needs of the INSPIRE geoportal.

4. Expected outputs

4.1. Outputs of the Specific Activities

Component 1: Support to INSPIRE Directive transposition

- Report on the lessons learned and manner of transposing the INSPIRE directive in the EU member States, including the recommendations for the most efficient transposition and implementation of the Directive in Croatia, bearing in mind the obligations of the EU accession related to the activities 1-5 in Chapter 3.1.1 of the ToR.
Deadline for the report is 6 weeks from the contract signing.
- Hold at least 3 meetings with the members of the working group for the INSPIRE Directive transposition (once a month or as needed, in agreement with the working group) and produce the reports on the meetings held on the status of the legislative preparations, including further recommendations by the consultants for the work of the working group and the performance of tasks related to the drafting of the laws on the spatial data infrastructure pursuant to the INSPIRE Directive (link to activity no. 6. in Chapter 3.1.1 of the ToR).

The reports and other documents related to this component may be either in English or in Croatian.

Component 2: NSDI strategy improvement

- Report on requests, regulations and achievements related to the spatial data infrastructure in the European Union and Croatia, including the recommendations for further NSDI development in Croatia as well as the concrete steps for solving the missing elements or further improvements (link to activity 1 - 4 in Chapter 3.1.2 of the ToR).
- Draft NSDI strategy in Croatia, including the timeline for the completion of the envisaged activities (link to activities 5 and 6 in Chapter 3.1.2 of the ToR).

The reports, strategy and other documents related to this component may be either in English or in Croatian.

Component 3: Metadata profile establishment

- Metadata national profile harmonized with the Croatian Implementing Rules for Metadata and the INSPIRE Implementing Rules for Metadata as well as with other relevant specifications and standards (link to activities 1 and 2 and partly 6 in Chapter 3.1.3 of the ToR)

- Report on the development of the metadata national profile, including the analysis of the feedback of the NSDI subjects and recommendations for further implementation and production of the metadata national catalogue (link to activities 3 through 7 in Chapter 3.1.3 of the ToR)
- Specifications offering the solution on upgrading the metadata national profile that will satisfy the needs of the contact point for the INSPIRE geoportal

The national profile shall be developed in Croatian while the Report and Specifications may be in English and Croatian.

5. Planned duration of the Consultant's engagement and reporting timeline

The Consultant is planned to be engaged in the period between April 2011 and October 2011. The total estimated number of working days is 91 working days, out of which approx. 58 working days should be spent in Croatia.

The Submission of Reports and Other Deliverables:

- Within the first four weeks after commencing the service, the Consultant shall submit the Inception Report
- Three weeks before finishing the Project, the Consultant shall submit a draft of the Final Report
- At the end of the work, the Consultant shall submit the Final Report

The Inception Report and the Final Report shall be in English. Three copies of the draft final report and the Final Report shall be submitted in hardcopy and also on CD.

6. Client's support

The Client shall provide the Consultant with the following:

- Contact person at the SGA:
Ljerka Rašić, department head
Horvatova 82, 10000 Zagreb
phone: 01/6165-424
e-mail: ljerka.rasic@dgu.hr
- All the existing SGA documents related to the current NSDI development status in Croatia in Croatian or English, depending on the availability.
- Liaise between the NSDI bodies and subjects.
- Ensure a domain for the publication of the documents related to the Project on the internet for the purpose of the public discussion.
- Ensure premises at the SGA for holding the appropriate workshops.

7. Criteria/Minimum Requirements

The Consultant shall have the following profile:

Team Leader - SDI legal and strategy requirements expert:

- University degree in geodesy, geoinformatics, law or similar.
- At least 5 years of experience in the field of geographic information
- Minimum of 2 assignments involving the SDI, carried out within the past 5 years and lasting no less than 2 weeks each.
- Minimum of 2 assignments in the field of EU legal requirements, particularly the INSPIRE Directive carried out within the past 5 years and lasting no less than 2 weeks each.
- Minimum of 1 assignment involving the SDI strategy drafting, carried out within the past 5 years and lasting no less than 4 weeks.
- Good written and oral proficiency in English and good communication skills.

The Team Leader should take the responsibility for the coordination of all activities

SDI technical standards expert:

- University degree in geodesy, geoinformatics or similar.
- At least 5 years of experience in the field of geographic information
- Minimum of 2 assignments involving the SDI and the INSPIRE Directive, carried out within the last 5 years.
- Minimum of 1 assignment in the field of EU and national technical standards involving the spatial data, particularly the metadata.
- Good written and oral proficiency in English and good communication skills.